



CITTÀ DI LEGNAGO

COMUNE DI LEGNAGO -VR

SETTORE 3° LL.PP. ED URBANISTICA
Via XX Settembre, 29 – 37045 Legnago (Verona)
tel. 0442 634900-634925

Responsabile del procedimento e
Direttore di esecuzione del contratto

Ing. Giacomo Masiero


**M4 C1 I3.3 - CO-FINANZIATO
DALL'UNIONE EUROPEA NEXT
GENERATION EU**

INTERVENTO PER LA RIGENERAZIONE ED IL
POTENZIAMENTO DEL COMPLESSO SCOLASTICO DI VIA
RAGAZZI DEL '99 NEL QUARTIERE DI PORTO DI LEGNAGO

**1^ FASE. DEMOLIZIONE E RICOSTRUZIONE SCUOLA
SECONDARIA DI 1° GRADO "G.B.CAVALCASELLE"**

capogruppo RTP / responsabile della progettazione integrata e coordinata

**Atelier(s) Alfonso Femia s.r.l.**

via cadolini 32/48, 20137 milano tel. 02.54019701 fax 010.54115512
via interiano 3/11, 16124 genova tel. 010.540095 fax 010.5702094
55 rue des petites écuries, 75010 paris tel +331.42462894
milano@atelierfemia.com www.atelierfemia.com

Mandante RTP / progettazione strutturale e impiantistica - prevenzione incendi

**Sertec engineering consulting s.r.l.**

strada provinciale 222, n.31, 10010 Loranze, Torino
tel 0125 1970499
info@sertec-engineering.com

Mandante RTP / progettazione paesaggistica

arch. Michelangelo Pugliese

via Vito Inferiore 39/A, 89122 Reggio Calabria
tel. 389 9687867
arch.michelangelopugliese@gmail.com

Progetto esecutivo



codice documento

STReTrel002c

scala

-

oggetto

Allegati di calcolo delle opere strutturali

tipo elaborato

Strutture

data di consegna

09 giugno 2023

percorso

Server_Atelier/01_2 INCARICHI ATELIER/01_IN CORSO/00_1 5+1AA SRL
INCARICHI_MI/LSF (Legnago Scuola Fattibilità)/08 LSF Ae ESECUTIVO

commessa

rev.	data	redatto	verificato	approvato	oggetto revisione
a	15/12/2021	A.V.	F.T.	D.G.	prima consegna
b	06.06.23	D.K.	FT	DG	seconda revisione
c	22.06.23	D.K.	FT	DG	terza revisione

ELEVAZIONI CORPO A

Sommario

Verifiche e armature pilastri.....	2
Pilastrata n. 1.....	3
Pilastrata n. 2.....	5
Pilastrata n. 3.....	6
Pilastrata n. 4.....	8
Pilastrata n. 5.....	9
Pilastrata n. 6.....	10
Pilastrata n. 7.....	12
Pilastrata n. 8.....	13
Pilastrata n. 9.....	15
Pilastrata n. 10.....	16
Pilastrata n. 11.....	17
Pilastrata n. 12.....	19
Pilastrata n. 23.....	20
Pilastrata n. 24.....	22
Pilastrata n. 25.....	24
Pilastrata n. 26.....	26
Pilastrata n. 27.....	28
Pilastrata n. 30.....	30
Pilastrata n. 31.....	31
Pilastrata n. 32.....	32
Pilastrata n. 33.....	34
Pilastrata n. 34.....	35
Pilastrata n. 35.....	36
Pilastrata n. 36.....	37
Pilastrata n. 37.....	39
Pilastrata n. 38.....	40
Pilastrata n. 49.....	41
Pilastrata n. 50.....	43
Pilastrata n. 51.....	45
Pilastrata n. 52.....	47
Pilastrata n. 60.....	48
Pilastrata n. 61.....	50
Pilastrata n. 62.....	51
Pilastrata n. 63.....	52
Pilastrata n. 64.....	54
Pilastrata n. 65.....	55
Pilastrata n. 68.....	56
Pilastrata n. 69.....	58
Pilastrata n. 70.....	60
Pilastrata n. 71.....	62
Pilastrata n. 72.....	64
Verifiche e armature solette/platee.....	65
Armatura soletta a quota 2.34.....	66
Armatura soletta a quota 4.68.....	66
Armatura soletta rampa 2.....	67
Armatura soletta rampa.....	68
Verifiche aste in acciaio.....	69

Verifiche e armature pilastri

Simbologia

Δ_{sm}	=Distanza media tra le fessure
E_{syrd}	=Deformazione di snervamento dell'acciaio
Φ_{eq}	=Diametro equivalente delle barre
α	=Angolo asse neutro a rottura
α_e	=Coefficiente di efficacia del confinamento
α_y	=Fattore di amplificazione momenti M_y per gerarchia delle resistenze
α_z	=Fattore di amplificazione momenti M_z per gerarchia delle resistenze
ε_r	=Deformazione nell'acciaio (*1000)
ε_{sm}	=Deformazione unitaria media dell'armatura (*1000)
λ	=Snellezza massima
λ^*	=Snellezza limite
$\mu\Phi_c$	=Capacità della duttilità di curvatura
$\mu\Phi_d$	=Domanda della duttilità di curvatura
σ_c	=Tensione nel calcestruzzo
σ_f	=Tensione nel ferro
σ_s	=Tensione nell'acciaio nella sezione fessurata
σ_{hd}	=Rapporto meccanico dell'armatura trasversale di confinamento all'interno della zona dissipativa
$A_{c\ eff}$	=Area di calcestruzzo efficace
A_s	=Area complessiva dei ferri nell'area di calcestruzzo efficace
A_{fC}	=Area di ferro compressa
A_{fT}	=Area di ferro tesa
A_{s1}	=Area di ferro superiore delle travi incidenti sulla faccia
A_{s2}	=Area di ferro inferiore delle travi incidenti sulla faccia
A_{sh}	=Area totale della sezione della staffa
B	=Base
B_j	=Larghezza effettiva utile del nodo
Br_y	=Numero bracci in dir. Y locale
Br_z	=Numero bracci in dir. Z locale
$Br.$	=Numero bracci
CC	=Combinazione delle condizioni di carico elementari e = eccentricità aggiuntiva in caso di compressione o pressoflessione α = amplificazione per gerarchia delle resistenze TG = taglio da gerarchia delle resistenze
C_f	=Copriferro
Cl_s	=Tipo di calcestruzzo
$Conf.$	=Nodo confinato S = Sì N = No
El	=Elemento (asta) in cui viene effettuato il progetto/verifica (progressivo sul numero di aste)
F	=Identificativo faccia del nodo Y+ = Faccia sul lato positivo Y locale pilastro Z+ = Faccia sul lato positivo Z locale pilastro Y- = Faccia sul lato negativo Y locale pilastro Z- = Faccia sul lato negativo Z locale pilastro
F_{cd}	=Resistenza di calcolo a compressione del calcestruzzo
$F_{cd} (Inc)$	=Resistenza di calcolo a compressione del calcestruzzo per verifica al fuoco
F_{ck}	=Resistenza caratteristica cilindrica a compressione del calcestruzzo
F_{ctd}	=Resistenza di calcolo a trazione del calcestruzzo
F_{ctk}	=Resistenza caratteristica a trazione del calcestruzzo
F_{yd}	=Resistenza di calcolo dell'acciaio
F_{yk}	=Tensione caratteristica di snervamento dell'acciaio
H	=Altezza
H_{jc}	=Distanza tra armature pilastro
H_{jw}	=Distanza tra armature trave
K_2	=Coefficiente per distribuzione deformazioni
$M'_{ydy,s}$	=Momento resistente massimo in campo sostanzialmente elastico (ridotto per stabilità) intorno all'asse Y
$M'_{ydz,s}$	=Momento resistente massimo in campo sostanzialmente elastico (ridotto per stabilità) intorno all'asse Z
MR_{dy}	=Momento resistente allo stato limite ultimo intorno all'asse Y
$MR_{dy,s}$	=Momento resistente allo stato limite ultimo (ridotto per stabilità) intorno all'asse Y
MR_{dz}	=Momento resistente allo stato limite ultimo intorno all'asse Z
$MR_{dz,s}$	=Momento resistente allo stato limite ultimo (ridotto per stabilità) intorno all'asse Z
$Mod.$	=Modalità di verifica faccia I = Interna E = Esterna
M_y	=Momento flettente intorno all'asse Y
$M_y\ ver.$	=Momento flettente di verifica intorno all'asse Y
M_z	=Momento flettente intorno all'asse Z
$M_z\ ver.$	=Momento flettente di verifica intorno all'asse Z
N	=Sforzo normale
$Nodo$	=Numero del nodo
Nu	=Sforzo normale ultimo
R	=Raggio
$Sez.$	=Numero della sezione
$Sic.$	=Sicurezza
$Staff.$	=Staffatura adottata
TCC	=Tipo di combinazione di carico SLU = Stato limite ultimo SLE R = Stato limite d'esercizio, combinazione rara SLE F = Stato limite d'esercizio, combinazione frequente SLE Q = Stato limite d'esercizio, combinazione quasi permanente SLD = Stato limite di danno SLV = Stato limite di salvaguardia della vita SLU I = Stato limite di resistenza al fuoco SND = Stato limite di salvaguardia della vita (non dissipativo)
$Tipo$	=Tipologia Cir. = Circolare L = Sezione a L Ldx = L destra R = Rettangolare Is = I stondata
Tp	=Tipo di acciaio
VR_{cd}	=Taglio ultimo lato calcestruzzo
$VR_{cd,y}$	=Taglio ultimo lato calcestruzzo in dir. Y
$VR_{cd,z}$	=Taglio ultimo lato calcestruzzo in dir. Z
VR_{sd}	=Taglio ultimo lato armatura
$VR_{sd,y}$	=Taglio ultimo lato armatura in dir. Y
$VR_{sd,z}$	=Taglio ultimo lato armatura in dir. Z
V_{sdu}	=Taglio agente nella direzione del momento ultimo
$V_{sdu,y}$	=Taglio agente in dir. Y

Relazione di calcolo

Vsdu,z

=Taglio agente in dir. Z

Wk

=Ampiezza caratteristica delle fessure

X

=Coordinata progressiva rispetto al nodo iniziale

X0

=Coordinata progressiva (dal nodo iniziale) dell'inizio del tratto

X1

=Coordinata progressiva (dal nodo iniziale) della fine del tratto

Xg

=Coordinata progressiva (dal primo nodo) in cui viene effettuato il progetto/verifica

b_c/b₀

=Rapporto tra la larghezza minima della sezione trasversale lorda e la larghezza del nucleo confinato

b_w

=Larghezza membratura resistente al taglio

b_{w,y}

=Larghezza membratura resistente al taglio in dir. Y

b_{w,z}

=Larghezza membratura resistente al taglio in dir. Z

c

=Ricoprimento dell'armatura

ctgθ

=Cotangente dell'angolo di inclinazione dei puntoni di calcestruzzo

ctgθ_y

=Cotangente dell'angolo di inclinazione dei puntoni di calcestruzzo in dir. Y

ctgθ_z

=Cotangente dell'angolo di inclinazione dei puntoni di calcestruzzo in dir. Z

l₀

=Lunghezza libera di inflessione

s

=Distanza massima tra le barre

v_d

=Forza assiale adimensionalizzata di progetto

Pilastrata n. 1

Nodi: -39 -63 -1338

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	R <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
8	Cir.			25.00	4.90	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
1	R	45.00	45.00		5.30	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Verifiche zone a sezione circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _r	Sic.
0.709	SLV	1	8	70.00	-26225.10	-14441.10	-14441.10	-3165.23	-3165.23	-26225.10	-22350.30	-4493.98	191.25	5.79	1.542	
0.709	SLV	1	8	70.00	-26225.10	-14441.10	-14441.10	-3165.23	-3165.23	-26225.10	-22350.30	-4493.98	191.25	5.79	1.542	
4.3813	SLV	1	8	438.00	-24972.90	-3775.49	-3775.49	-14883.10	-14883.10	-24972.90	-5388.05	-21930.90	255.94	5.92	1.471	

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
0.70	23	SLE R	1	8	70.00	-31470.60	-2786.88	-5796.01	14.07	16.09	66.97	802.12
0.70	21	SLE R	1	8	70.00	-30485.40	-2671.34	-5822.88	14.07	16.09	66.91	794.34
0.70	29	SLE Q	1	8	70.00	-28042.80	-2013.01	-4597.28	14.07	16.09	52.31	631.87
0.70	23	SLE R	1	8	70.00	-31470.60	-2786.88	-5796.01	14.07	16.09	66.97	802.12
0.70	21	SLE R	1	8	70.00	-30485.40	-2671.34	-5822.88	14.07	16.09	66.91	794.34
0.70	29	SLE Q	1	8	70.00	-28042.80	-2013.01	-4597.28	14.07	16.09	52.31	631.87
4.38	39	SLE R	1	8	438.00	-31306.50	-10145.10	859.06	18.10	12.06	107.79	1646.96
4.38	24	SLE R	1	8	438.00	-29739.20	-10137.20	943.03	18.10	12.06	107.78	1697.41
4.38	29	SLE Q	1	8	438.00	-26236.30	-10237.10	-1001.12	16.09	14.07	109.01	1808.66

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
0.70	29	SLE Q	1	8	70.00	-28042.80	-4597.28	-2013.01	44.00	82.33	0.50	16.00	133.13	6.03	170.15	459.69	0.13	0.03
0.70	25	SLE F	1	8	70.00	-28402.60	-5016.53	-2215.66	44.00	82.33	0.50	16.00	136.49	6.03	182.81	556.52	0.16	0.04
0.70	29	SLE Q	1	8	70.00	-28042.80	-4597.28	-2013.01	44.00	82.33	0.50	16.00	133.13	6.03	170.15	459.69	0.13	0.03
0.70	25	SLE F	1	8	70.00	-28402.60	-5016.53	-2215.66	44.00	82.33	0.50	16.00	136.49	6.03	182.81	556.52	0.16	0.04
4.38	29	SLE Q	1	8	438.00	-26236.30	-1001.12	-10237.10	44.00	82.33	0.50	16.00	139.40	8.04	258.36	1808.66	0.69	0.16
4.38	28	SLE F	1	8	438.00	-26685.70	-971.84	-10533.70	44.00	82.33	0.50	16.00	139.48	8.04	258.75	1871.61	0.62	0.15

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	b _w <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/ 6	32	SLV	0.35	4440.65	2.50	24856.60	27061.50	5.598
0.70	1.31	ø6/ 6	13 (TG)	SLV	0.35	13703.40	2.50	24856.60	25495.10	1.814
1.31	3.77	ø6/14	34	SLV	0.35	4253.31	2.50	10652.80	27066.80	2.505
1.31	3.77	ø6/14	9 (TG)	SND	0.35	9702.61	2.50	10652.80	25801.30	1.098
3.77	4.38	ø6/12	20	SLV	0.35	3898.17	2.50	12428.30	26739.00	3.188
3.77	4.38	ø6/12	9 (TG)	SLV	0.35	12319.30	2.50	12428.30	25232.20	1.009
3.77	4.38	ø6/12	1 (TG)	SLV	0.35	12369.60	2.50	12428.30	25536.40	1.005

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _r	Sic.
0.70	46	SLU I	1	8	70.00	-28042.80	-4597.28	-2013.01	-28042.80	-15096.50	-6498.44	203.91	38.12	3.285
0.70	46	SLU I	1	8	70.00	-28042.80	-4597.28	-2013.01	-28042.80	-15096.50	-6498.44	203.91	38.12	3.285
4.38	46	SLU I	1	8	438.00	-26236.30	-1001.12	-10237.10	-26236.30	-1469.15	-16553.90	264.38	34.28	1.616

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
4.68	5.45	ø6/15	2	246	SLU I	0.35	2941.15	2.50	7000.38	48626.90	0.35	1417.83	2.50	7000.38	48626.90	2.380	
5.45	5.53	ø6/20	2	246	SLU I	0.35	2941.15	2.50	5250.28	48566.40	0.35	1417.83	2.50	5250.28	48566.40	1.785	

Relazione di calcolo

8.53	9.30	ø6/15	2	246	SLU I	0.35	2941.15	2.50	7000.38	48324.50	0.35	1417.83	2.50	7000.38	48324.50	2.380
------	------	-------	---	-----	-------	------	---------	------	---------	----------	------	---------	------	---------	----------	-------

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/ 6	46	SLU I	0.26	2439.13	2.50	8216.07	23026.50	3.368
1.31	3.77	ø6/14	46	SLU I	0.26	2439.13	2.50	3186.80	23002.60	1.307
3.77	4.38	ø6/12	46	SLU I	0.26	2439.13	2.50	3970.10	22906.70	1.628

Verifiche zone a sezione non circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
4.68	30	SLU	2	1	0.00	-9442.13	13374.00	13374.00	21403.00	21403.00	-9442.13	21943.60	35555.90	56.25	3.88	1.656
4.68	30	SLU	2	1	0.00	-9442.13	13374.00	13374.00	21403.00	21403.00	-9442.13	21943.60	35555.90	56.25	3.88	1.656
9.30	33	SLU	2	1	462.00	-8037.87	-11811.00	-11811.00	-12045.00	-12045.00	-8037.87	-28824.20	-28824.40	225.00	3.86	2.416

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _t <daN/cmq>
4.68	35	SLE R	2	1	0.00	-6731.75	14991.10	9165.16	40.72	31.67	130.85	2120.92
4.68	29	SLE Q	2	1	0.00	-3850.46	11232.80	4481.26	40.72	31.67	83.96	1415.08
4.68	35	SLE R	2	1	0.00	-6731.75	14991.10	9165.16	40.72	31.67	130.85	2120.92
4.68	29	SLE Q	2	1	0.00	-3850.46	11232.80	4481.26	40.72	31.67	83.96	1415.08
9.30	38	SLE R	2	1	462.00	-5483.73	-8193.27	-8027.22	49.76	22.62	88.64	1394.75
9.30	29	SLE Q	2	1	462.00	-1511.58	-2355.32	-2069.13	45.24	27.14	24.17	380.48

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
4.68	29	SLE Q	2	1	0.00	-3850.46	4481.26	11232.80	44.00	115.00	0.50	24.00	139.62	9.05	194.59	1415.08	0.55	0.13
4.68	25	SLE F	2	1	0.00	-4075.86	6137.12	12442.30	44.00	115.00	0.50	24.00	134.89	9.05	176.79	1663.17	0.61	0.14
4.68	29	SLE Q	2	1	0.00	-3850.46	4481.26	11232.80	44.00	115.00	0.50	24.00	139.62	9.05	194.59	1415.08	0.55	0.13
4.68	25	SLE F	2	1	0.00	-4075.86	6137.12	12442.30	44.00	115.00	0.50	24.00	134.89	9.05	176.79	1663.17	0.61	0.14
9.30	29	SLE Q	2	1	462.00	-1511.58	-2069.13	-2355.32	44.00	115.00	0.50	24.00	113.81	13.57	145.98	380.48	0.11	0.02
9.30	25	SLE F	2	1	462.00	-1736.98	-2914.45	-3036.34	44.00	115.00	0.50	24.00	113.54	13.57	144.43	515.95	0.15	0.03

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
4.68	5.45	ø6/15	2	232	SLU	0.45	8034.94	2.50	13143.90	40427.40	0.45	6229.34	2.50	13143.90	40427.40	1.636	
4.68	5.45	ø6/15	2	23 (TG)	SND	0.45	2964.25	2.50	13143.90	39595.20							4.434
4.68	5.45	ø6/15	2	23 (TG)	SLV							0.45	11056.30	2.50	13143.90	39190.60	1.189
4.68	5.45	ø6/15	2	23 (TG)	SND	0.45	2964.25	2.50	13143.90	39595.20							4.434
4.68	5.45	ø6/15	2	23 (TG)	SLV							0.45	11058.10	2.50	13143.90	39254.70	1.189
4.68	5.45	ø6/15	2	25 (TG)	SND	0.45	3773.27	2.50	13143.90	39589.20							3.483
4.68	5.45	ø6/15	2	25 (TG)	SLV							0.45	9673.04	2.50	13143.90	39194.20	1.359
5.45	8.53	ø6/20	2	232	SLU	0.45	7647.06	2.50	9857.91	40358.20	0.45	5842.45	2.50	9857.91	40358.20	1.289	
5.45	8.53	ø6/20	2	27 (TG)	SND	0.45	3719.88	2.50	9857.91	39552.00							2.650
5.45	8.53	ø6/20	2	27 (TG)	SLV							0.45	9834.16	2.50	9857.91	39216.60	1.002
5.45	8.53	ø6/20	2	27 (TG)	SND	0.45	3719.88	2.50	9857.91	39552.00							2.650
5.45	8.53	ø6/20	2	27 (TG)	SLV							0.45	9834.79	2.50	9857.91	39228.70	1.002
5.45	8.53	ø6/20	2	25 (TG)	SND	0.45	3773.27	2.50	9857.91	39589.20							2.613
5.45	8.53	ø6/20	2	25 (TG)	SLV							0.45	9673.04	2.50	9857.91	39194.20	1.019
8.53	9.30	ø6/15	2	233	SLU	0.45	6607.70	2.50	13143.90	40183.40	0.45	4716.90	2.50	13143.90	40183.40	1.989	
8.53	9.30	ø6/15	2	23 (TG)	SND	0.45	2964.25	2.50	13143.90	39595.20							4.434
8.53	9.30	ø6/15	2	23 (TG)	SLV							0.45	11056.30	2.50	13143.90	39190.60	1.189
8.53	9.30	ø6/15	2	23 (TG)	SND	0.45	2964.25	2.50	13143.90	39595.20							4.434
8.53	9.30	ø6/15	2	23 (TG)	SLV							0.45	11058.10	2.50	13143.90	39254.70	1.189
8.53	9.30	ø6/15	2	25 (TG)	SND	0.45	3773.27	2.50	13143.90	39589.20							3.483
8.53	9.30	ø6/15	2	25 (TG)	SLV							0.45	9673.04	2.50	13143.90	39194.20	1.359

Altre verifiche

Dettagli costruttivi per la duttilità

- CC=9 α_e=0.86533 ω_{wd}=0.1063 μΦ_d=7.08596 ν_d=0.093411 E_{sy,d}=0.0018995 b_c/b₀=1.17925 μΦ_c=20.2292 0.09198 >= 0.00948 [7.4.29]
- CC=9 α_e=0.86533 ω_{wd}=0.1063 μΦ_d=7.58384 ν_d=0.093411 E_{sy,d}=0.0018995 b_c/b₀=1.17925 μΦ_c=20.2292 0.09198 >= 0.01261 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
-----------	----	-----	----	------	-----------	------------	--------------	--------------	-------------	----------------	----------------	-------------	----------------	------

Relazione di calcolo

4.68	46	SLU I	2	1	0.00	-3850.46	4481.26	11232.80	-3850.46	12053.20	31219.90	67.50	27.16	2.767
4.68	46	SLU I	2	1	0.00	-3850.46	4481.26	11232.80	-3850.46	12053.20	31219.90	67.50	27.16	2.767
9.30	46	SLU I	2	1	462.00	-1511.58	-2069.13	-2355.32	-1511.58	-20866.70	-23876.30	229.22	24.71	10.116

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _w _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	b _w _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
4.68	5.45	ø6/15	2	2	46	SLU I	0.35	2941.15	2.50	7000.38	48626.90	0.35	1417.83	2.50	7000.38	48626.90	2.380
5.45	8.53	ø6/20	2	2	46	SLU I	0.35	2941.15	2.50	5250.28	48566.40	0.35	1417.83	2.50	5250.28	48566.40	1.785
8.53	9.30	ø6/15	2	2	46	SLU I	0.35	2941.15	2.50	7000.38	48324.50	0.35	1417.83	2.50	7000.38	48324.50	2.380

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	b _w <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/ 6	46	SLU I	0.26	2439.13	2.50	8216.07	23026.50	3.368
1.31	3.77	ø6/14	46	SLU I	0.26	2439.13	2.50	3186.80	23002.60	1.307
3.77	4.38	ø6/12	46	SLU I	0.26	2439.13	2.50	3970.10	22906.70	1.628

Pilastrata n. 2

Nodi: -1786 -1788 16 -1321 -1471

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
	1R	45.00	45.00	3.50	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
	1R	45.00	45.00	5.20	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
	1R	45.00	45.00	5.40	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	1	SLV	1	1	70.00	-17903.80	12929.40		12929.40	-2571.51		-2571.51	-17903.80	34800.80	-6894.67	345.94	5.06	2.691
0.70	1	SLV	1	1	70.00	-17903.80	12929.40		12929.40	-2571.51		-2571.51	-17903.80	34800.80	-6894.67	345.94	5.06	2.691
1.00	1	SLV	1	1	100.00	-17752.00	9003.63		9003.63	-4236.96		-4236.96	-17752.00	30584.10	-14247.30	330.47	4.16	3.391
1.00	1	SLV	2	1	0.00	-17752.00	9003.63		9003.63	-4236.96		-4236.96	-17752.00	30584.10	-14247.30	330.47	4.16	3.391
1.94	15(α)	SLV	2	1	94.00	-23236.20	-7134.23	4.01	-28631.60	-10708.50	1.00	-10708.50	-23236.20	-32393.40	-12311.80	205.31	4.19	1.134
2.34	5(α)	SLV	3	1	0.00	-23103.50	-8658.19	3.03	-26205.30	-16946.70	1.00	-16946.70	-23103.50	-28075.50	-17752.10	216.56	3.88	1.064
4.38	13	SLV	3	1	204.00	-22482.70	9286.77		9286.77	-15891.70		-15891.70	-22482.70	16597.20	-28023.30	299.53	3.96	1.769
4.68	17	SLU	4	1	0.00	-6508.15	2344.86		2344.86	16217.60		16217.60	-6508.15	4936.29	32814.20	81.56	5.62	2.025
4.68	17	SLU	4	1	0.00	-6508.15	2344.86		2344.86	16217.60		16217.60	-6508.15	2534.96	17428.90	84.38	10.79	1.075
9.30	33(e)	SLU	4	1	462.00	-6703.13	-101.30		-154.84	-6611.36		-6611.36	-6703.13	-352.47	-17477.90	269.30	13.63	2.643

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
0.70	37	SLE R	1	1	70.00	-37231.90	586.08	5216.09	19.01	34.21	41.16	509.56
0.70	29	SLE Q	1	1	70.00	-29767.70	-813.92	1613.16	0.00	53.22	21.34	280.57
0.70	37	SLE R	1	1	70.00	-37231.90	586.08	5216.09	19.01	34.21	41.16	509.56
0.70	29	SLE Q	1	1	70.00	-29767.70	-813.92	1613.16	0.00	53.22	21.34	280.57
1.00	37	SLE R	1	1	100.00	-37080.00	-1361.71	2661.24	3.80	49.42	31.24	402.00
1.00	29	SLE Q	1	1	100.00	-29615.90	-2382.07	282.84	0.00	53.22	22.71	295.78
1.00	37	SLE R	2	1	0.00	-37080.00	-1361.71	2661.24	3.80	49.42	31.24	402.00
1.00	29	SLE Q	2	1	0.00	-29615.90	-2382.07	282.84	0.00	53.22	22.71	295.78
1.94	24	SLE R	2	1	94.00	-31862.40	-8667.91	-5002.45	26.61	26.61	93.91	1102.32
1.94	21	SLE R	2	1	94.00	-29540.00	-8438.91	-5166.05	26.61	26.61	93.38	1129.88
1.94	29	SLE Q	2	1	94.00	-29140.00	-7295.62	-3885.51	22.81	30.41	76.93	874.37
2.34	21	SLE R	3	1	0.00	-26090.20	-9128.11	-4956.44	30.41	22.81	96.74	1273.18
2.34	29	SLE Q	3	1	0.00	-24501.20	-6663.47	-2152.21	26.61	26.61	61.09	692.41
4.38	24	SLE R	3	1	204.00	-26442.40	-8908.40	6113.90	30.41	22.81	102.96	1350.52
4.38	29	SLE Q	3	1	204.00	-23468.50	-9043.79	4749.39	30.41	22.81	94.71	1292.51
4.68	21	SLE R	4	1	0.00	-4734.93	11492.50	1494.91	30.41	22.81	86.08	1728.57
4.68	29	SLE Q	4	1	0.00	-3542.33	8252.97	-1704.17	34.21	19.01	66.51	1295.42
4.68	21	SLE R	4	1	0.00	-4734.93	11492.50	1494.91	13.63	9.61	115.84	3152.67
4.68	29	SLE Q	4	1	0.00	-3542.33	8252.97	-1704.17	13.63	9.61	90.61	2352.43
9.30	35	SLE R	4	1	462.00	-3421.31	-3389.43	-933.13	13.63	9.61	39.89	913.55
9.30	38	SLE R	4	1	462.00	-4553.06	-4474.04	-25.93	13.63	9.61	38.92	1040.20
9.30	29	SLE Q	4	1	462.00	-1203.46	-1107.78	609.31	17.44	5.81	16.37	345.77

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
1.94	29	SLE Q	2	1	94.00	-29140.00	-3885.51	-7295.62	44.00	113.34	0.50	22.00	160.09	3.80	124.56	854.05	0.25	0.07
1.94	25	SLE F	2	1	94.00	-28467.40	-4479.36	-7729.25	44.00	113.34	0.50	22.00	161.77	3.80	127.46	983.72	0.29	0.08
2.34	29	SLE Q	3	1	0.00	-24501.20	-2152.21	-6663.47	44.00	113.34	0.50	22.00	179.59	3.80	158.26	692.32	0.20	0.06
2.34	25	SLE F	3	1	0.00	-24491.70	-3545.20	-7772.23	44.00	113.34	0.50	22.00	173.28	3.80	147.35	976.12	0.28	0.08
4.38	29	SLE Q	3	1	204.00	-23468.50	4749.39	-9043.79	44.00	113.34	0.50	22.00	175.16	3.80	150.61	1292.51	0.40	0.12
4.38	28	SLE F	3	1	204.00	-23927.60	4768.86	-9352.95	44.00	113.34	0.50	22.00	176.47	3.80	152.87	1329.68	0.39	0.12
4.68	29	SLE Q	4	1	0.00	-3542.33	-1704.17	8252.97	44.00	113.34	0.50	22.00	148.38	11.40	313.00	1295.42	0.46	0.12
4.68	25	SLE F	4	1	0.00	-3563.82	-39.30	9635.66	44.00	113.34	0.50	22.00	150.10	15.21	429.21	1350.77	0.40	0.10
4.68	29	SLE Q	4	1	0.00	-3542.33	-1704.17	8252.97	44.00	170.03	0.50	20.40	214.82	5.81	361.31	2352.43	0.80	0.29
4.68	28	SLE F	4	1	0.00	-3543.34	-1692.56	8490.27	44.00	170.03	0.50	20.40	216.34	5.81	365.64	2415.35	0.70	0.26
9.30	29	SLE Q	4	1	462.00	-1203.46	609.31	-1107.78	44.00	170.03	0.50	20.40	198.17	3.80	205.30	345.77	0.10	0.03

Relazione di calcolo

9.30	27	SLE F	4	1	462.00	-1663.03	720.02	-1564.43	44.00	170.03	0.50	20.40	208.47	3.80	224.48	465.07	0.14	0.05
------	----	-------	---	---	--------	----------	--------	----------	-------	--------	------	-------	--------	------	--------	--------	------	------

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.94	ø6/10	2	2	32	SLU	0.45	9132.11	2.50	19715.80	46141.50	0.45	12225.40	2.50	19715.80	46141.50	1.613
0.70	1.94	ø6/10	2	2	30	SLU	0.45	9958.89	2.50	19715.80	45496.60	0.45	11482.10	2.50	19715.80	45496.60	1.717
0.70	1.94	ø6/10	2	2	7(TG)	SND	0.45	6673.73	2.50	19715.80	44425.00						2.954
0.70	1.94	ø6/10	2	2	7(TG)	SLV						0.45	16821.10	2.50	19715.80	43801.90	1.172
0.70	1.94	ø6/10	2	2	5(TG)	SND	0.45	7301.76	2.50	19715.80	45622.80	0.45	15699.50	2.50	19715.80	45622.80	1.256
2.34	2.79	ø8/15	2	2	17	SLU	0.45	1490.01	2.50	23366.90	43965.00	0.45	8557.18	2.50	23366.90	43965.00	2.731
2.34	2.79	ø8/15	2	2	32	SLU	0.45	2992.15	2.50	23366.90	44290.30	0.45	3039.74	2.50	23366.90	44290.30	7.687
2.34	2.79	ø8/15	2	2	9	SLV	0.45	5344.08	2.50	23366.90	42583.30	0.45	13338.10	2.50	23366.90	42583.30	1.752
2.34	2.79	ø8/15	2	2	13	SLV	0.45	9564.05	2.50	23366.90	42553.10	0.45	9317.22	2.50	23366.90	42553.10	2.443
2.79	3.93	ø8/25	2	2	17	SLU	0.45	1490.01	2.50	14020.10	43924.60	0.45	8557.18	2.50	14020.10	43924.60	1.638
2.79	3.93	ø8/25	2	2	32	SLU	0.45	2765.46	2.50	14020.10	44249.90	0.45	3039.74	2.50	14020.10	44249.90	4.612
2.79	3.93	ø8/25	2	2	9	SLV	0.45	5344.08	2.50	14020.10	42552.20	0.45	13338.10	2.50	14020.10	42552.20	1.051
2.79	3.93	ø8/25	2	2	13	SLV	0.45	9564.06	2.50	14020.10	42522.00	0.45	9317.22	2.50	14020.10	42522.00	1.466
3.93	4.38	ø8/15	2	2	17	SLU	0.45	1490.01	2.50	23366.90	43822.10	0.45	8557.18	2.50	23366.90	43822.10	2.731
3.93	4.38	ø8/15	2	2	32	SLU	0.45	2191.20	2.50	23366.90	44147.40	0.45	3039.74	2.50	23366.90	44147.40	7.687
3.93	4.38	ø8/15	2	2	9	SLV	0.45	5344.08	2.50	23366.90	42473.30	0.45	13338.10	2.50	23366.90	42473.30	1.752
3.93	4.38	ø8/15	2	2	13	SLV	0.45	9564.06	2.50	23366.90	42443.20	0.45	9317.22	2.50	23366.90	42443.20	2.443
4.68	5.45	ø6/10	2	2	17	SLU	0.45	4266.22	2.50	19715.80	39905.30	0.45	745.72	2.50	19715.80	39905.30	4.621
4.68	5.45	ø6/10	2	2	32	SLU	0.45	5608.58	2.50	19715.80	40251.80	0.45	11.82	2.50	19715.80	40251.80	3.515
4.68	5.45	ø6/10	2	2	1(TG)	SLV	0.45	6480.87	2.50	19715.80	39169.20	0.45	5404.26	2.50	19715.80	39169.20	3.042
4.68	5.45	ø6/10	2	2	1(TG)	SLV	0.45	6489.43	2.50	19715.80	39191.50	0.45	5406.25	2.50	19715.80	39191.50	3.038
4.68	5.45	ø6/10	2	2	13(TG)	SLV	0.45	7918.17	2.50	19715.80	39191.50	0.45	1463.94	2.50	19715.80	39191.50	2.490
5.45	8.53	ø6/15	2	2	17	SLU	0.45	4266.22	2.50	13143.90	39836.10	0.45	745.72	2.50	13143.90	39836.10	3.081
5.45	8.53	ø6/15	2	2	32	SLU	0.45	5220.69	2.50	13143.90	40182.60	0.45	11.82	2.50	13143.90	40182.60	2.518
5.45	8.53	ø6/15	2	2	1(TG)	SLV	0.45	6480.87	2.50	13143.90	39169.20	0.45	5404.26	2.50	13143.90	39169.20	2.028
5.45	8.53	ø6/15	2	2	1(TG)	SLV	0.45	6489.43	2.50	13143.90	39191.50	0.45	5406.25	2.50	13143.90	39191.50	2.025
5.45	8.53	ø6/15	2	2	13(TG)	SLV	0.45	7918.17	2.50	13143.90	39191.50	0.45	1463.94	2.50	13143.90	39191.50	1.660
8.53	9.30	ø6/10	2	2	17	SLU	0.45	4266.22	2.50	19715.80	39559.30	0.45	745.72	2.50	19715.80	39559.30	4.621
8.53	9.30	ø6/10	2	2	19	SLU	0.45	4334.61	2.50	19715.80	39791.10	0.45	26.82	2.50	19715.80	39791.10	4.548
8.53	9.30	ø6/10	2	2	1(TG)	SLV	0.45	6480.87	2.50	19715.80	39169.20	0.45	5404.26	2.50	19715.80	39169.20	3.042
8.53	9.30	ø6/10	2	2	1(TG)	SLV	0.45	6489.43	2.50	19715.80	39191.50	0.45	5406.25	2.50	19715.80	39191.50	3.038
8.53	9.30	ø6/10	2	2	13(TG)	SLV	0.45	7918.17	2.50	19715.80	39191.50	0.45	1463.94	2.50	19715.80	39191.50	2.490

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez .	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	46	SLU I	1	1	70.00	-29767.70	1613.16	-813.92	-143489.00	23460.60	-11340.50	329.06	25.63	4.820
0.70	46	SLU I	1	1	70.00	-29767.70	1613.16	-813.92	-143489.00	23460.60	-11340.50	329.06	25.63	4.820
1.00	46 (e)	SLU I	1	1	100.00	-29615.90	282.84	-2382.07	-143489.00	6708.64	-25592.60	284.06	25.71	4.845
1.00	46 (e)	SLU I	2	1	0.00	-29615.90	282.84	-2382.07	-143489.00	6708.64	-25592.60	284.06	25.71	4.845
1.94	46	SLU I	2	1	94.00	-29140.00	-3885.51	-7295.62	-29140.00	-11679.40	-22229.40	244.69	26.25	3.040
2.34	46	SLU I	3	1	0.00	-24501.20	-2152.21	-6663.47	-24501.20	-7762.30	-24808.60	253.12	26.35	3.716
4.38	46	SLU I	3	1	204.00	-23468.50	4749.39	-9043.79	-23468.50	11406.20	-21870.60	295.31	27.03	2.416
4.68	46	SLU I	4	1	0.00	-3542.33	-1704.17	8252.97	-3542.33	-4833.10	25639.20	95.62	34.23	3.096
4.68	46	SLU I	4	1	0.00	-3542.33	-1704.17	8252.97	-3542.33	-2372.07	11090.90	101.25	49.01	1.346
9.30	46	SLU I	4	1	462.00	-1203.46	609.31	-1107.78	-1203.46	5517.90	-9780.23	298.12	37.84	8.885

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.94	ø6/10	2	2	46	SLU	0.35	5227.17	2.50	10500.60	52648.60	0.35	4434.41	2.50	10500.60	52648.60	2.009
2.34	2.79	ø8/15	2	2	46	SLU	0.35	1166.82	2.50	12605.50	51831.30	0.35	3383.14	2.50	12605.50	51831.30	3.726
2.79	3.93	ø8/25	2	2	46	SLU	0.35	1166.82	2.50	7563.31	51796.00	0.35	3383.14	2.50	7563.31	51796.00	2.236
3.93	4.38	ø8/15	2	2	46	SLU	0.35	1166.83	2.50	12605.50	51706.40	0.35	3383.14	2.50	12605.50	51706.40	3.726
4.68	5.45	ø6/10	2	2	46	SLU	0.35	2026.14	2.50	10500.60	48579.10	0.35	500.75	2.50	10500.60	48579.10	5.183
5.45	8.53	ø6/15	2	2	46	SLU	0.35	2026.14	2.50	7000.38	48518.60	0.35	500.75	2.50	7000.38	48518.60	3.455
8.53	9.30	ø6/10	2	2	46	SLU	0.35	2026.14	2.50	10500.60	48276.60	0.35	500.75	2.50	10500.60	48276.60	5.183

Pilastrata n. 3

Nodi: -1319 -1767 -1318 -1317 -1352

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
	1R	45.00	45.00	3.50	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
	1R	45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
	1R	45.00	45.00	5.20	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	α _y	My ver. <daNm>	Mz <daNm>	α _z	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	9	SLV	1	1	70.00	-19464.70	-11667.90		-11667.90	-5832.76		-5832.76	-19464.70	-26134.60	-13302.80	210.94	4.32	2.248
0.70	9	SLV	1	1	70.00	-19464.70	-11667.90		-11667.90	-5832.76		-5832.76	-19464.70	-26134.60	-13302.80	210.94	4.32	2.248

Relazione di calcolo

1.001	SLV	1	1	100.00	-17190.80	8979.01		8979.01	-7105.26		-7105.26	-17190.80	22060.00	-17800.60	317.81	4.16	2.476
1.001	SLV	2	1	0.00	-17190.80	8979.01		8979.01	-7105.26		-7105.26	-17190.80	22060.00	-17800.60	317.81	4.16	2.476
1.947 (α)	SLV	2	1	94.00	-24860.90	5449.08	5.42	29514.90	-8157.43	1.00	-8157.43	-24860.90	29669.40	-8161.53	341.72	4.84	1.005
2.3411 (α)	SLV	3	1	0.00	-24083.20	12403.00	2.44	30255.00	-6010.51	1.00	-6010.51	-24083.20	30602.90	-6169.13	345.94	5.19	1.012
4.381	SLV	3	1	204.00	-22401.50	-19167.30		-19167.30	2054.78		2054.78	-22401.50	-31378.90	3839.04	171.56	5.96	1.640
4.6830	SLU	4	1	0.00	-8677.44	9110.43		9110.43	9728.41		9728.41	-8677.44	18382.20	20241.00	50.62	4.41	2.051
4.6830	SLU	4	1	0.00	-8677.44	9110.43		9110.43	9728.41		9728.41	-8677.44	12579.80	13347.50	46.41	5.40	1.376
9.3033	SLU	4	1	462.00	-7949.10	-3765.91		-3765.91	-9844.26		-9844.26	-7949.10	-6564.92	-16761.80	251.72	7.16	1.708

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _g <daN/cmq>
0.70	21	SLE R	1	1	70.00	-30525.00	-3124.93	-2290.16	9.42	34.56	40.11	494.27
0.70	29	SLE Q	1	1	70.00	-28821.40	-3340.35	-537.78	12.57	31.42	30.77	387.03
0.70	21	SLE R	1	1	70.00	-30525.00	-3124.93	-2290.16	9.42	34.56	40.11	494.27
0.70	29	SLE Q	1	1	70.00	-28821.40	-3340.35	-537.78	12.57	31.42	30.77	387.03
1.00	39	SLE R	1	1	100.00	-32994.00	-3461.63	1228.61	12.57	31.42	36.31	456.09
1.00	21	SLE R	1	1	100.00	-30373.10	-4049.24	-432.65	15.71	28.27	35.27	437.80
1.00	29	SLE Q	1	1	100.00	-28669.50	-4099.04	441.05	15.71	28.27	35.45	436.02
1.00	39	SLE R	2	1	0.00	-32994.00	-3461.63	1228.61	12.57	31.42	36.31	456.09
1.00	21	SLE R	2	1	0.00	-30373.10	-4049.24	-432.65	15.71	28.27	35.27	437.80
1.00	29	SLE Q	2	1	0.00	-28669.50	-4099.04	441.05	15.71	28.27	35.45	436.02
1.94	21	SLE R	2	1	94.00	-29897.20	-6945.42	5387.53	21.99	21.99	91.65	1079.34
1.94	29	SLE Q	2	1	94.00	-28193.60	-6476.27	3508.04	18.85	25.13	74.43	851.48
2.34	35	SLE R	3	1	0.00	-28723.70	-6534.20	7340.55	25.13	18.85	102.88	1295.79
2.34	29	SLE Q	3	1	0.00	-25078.40	-5860.76	2565.38	21.99	21.99	63.02	721.73
4.38	39	SLE R	3	1	204.00	-29243.00	724.67	-13045.40	21.99	21.99	96.37	1498.16
4.38	29	SLE Q	3	1	204.00	-24045.70	-158.14	-11249.90	21.99	21.99	79.03	1272.06
4.68	35	SLE R	4	1	0.00	-6178.18	6852.18	6436.25	28.27	15.71	100.33	1782.49
4.68	29	SLE Q	4	1	0.00	-3655.12	3929.13	5813.48	28.27	15.71	72.54	1320.17
4.68	35	SLE R	4	1	0.00	-6178.18	6852.18	6436.25	15.43	7.82	129.70	2752.85
4.68	29	SLE Q	4	1	0.00	-3655.12	3929.13	5813.48	15.43	7.82	94.39	2082.52
9.30	38	SLE R	4	1	462.00	-5380.77	-6636.19	-2575.75	13.63	9.61	86.53	1968.62
9.30	29	SLE Q	4	1	462.00	-1316.25	-1395.61	-1002.33	15.43	7.82	23.20	490.80

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
1.9429	SLE Q	2	1	1	94.00	-28193.60	3508.04	-6476.27	44.00	114.00	0.50	20.00	166.31	3.14	123.02	827.08	0.24	0.07
1.9425	SLE F	2	1	1	94.00	-28022.30	4417.31	-6591.42	44.00	114.00	0.50	20.00	164.76	3.14	120.57	950.40	0.28	0.08
2.3429	SLE Q	3	1	1	0.00	-25078.40	2565.38	-5860.76	44.00	114.00	0.50	20.00	172.04	3.14	132.01	693.87	0.20	0.06
2.3425	SLE F	3	1	1	0.00	-25074.50	4066.47	-6296.24	44.00	114.00	0.50	20.00	167.86	3.14	125.44	927.73	0.27	0.08
4.3829	SLE Q	3	1	1	204.00	-24045.70	-11249.90	-158.14	44.00	85.50	0.50	20.00	136.31	15.71	379.45	1272.06	0.46	0.11
4.3842	SLE F	3	1	1	204.00	-24607.10	-11542.80	-198.48	44.00	85.50	0.50	20.00	136.06	15.71	377.47	1310.06	0.41	0.09
4.6829	SLE Q	4	1	1	0.00	-3655.12	5813.48	3929.13	44.00	85.50	0.50	20.00	140.87	6.28	166.09	1320.17	0.48	0.11
4.6825	SLE F	4	1	1	0.00	-3557.46	6102.87	4879.63	44.00	85.50	0.50	20.00	188.96	3.14	158.59	1503.11	0.44	0.14
4.6829	SLE Q	4	1	1	0.00	-3655.12	5813.48	3929.13	44.00	170.03	0.50	20.40	192.50	3.80	194.72	2082.52	0.72	0.24
4.6825	SLE F	4	1	1	0.00	-3557.46	6102.87	4879.63	44.00	170.03	0.50	20.40	185.90	3.80	182.42	2358.83	0.74	0.23
9.3029	SLE Q	4	1	1	462.00	-1316.25	-1002.33	-1395.61	44.00	170.03	0.50	20.40	187.53	3.80	185.47	490.80	0.14	0.05
9.3027	SLE F	4	1	1	462.00	-1901.58	-1088.94	-2053.14	44.00	170.03	0.50	20.40	201.81	3.80	212.08	648.87	0.19	0.06

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.94	ø6/15	2	217		SLU	0.45	4274.10	2.50	13143.90	44783.50	0.45	8875.22	2.50	13143.90	44783.50	1.481
0.70	1.94	ø6/15	2	232		SLU	0.45	5409.51	2.50	13143.90	45046.60	0.45	5019.48	2.50	13143.90	45046.60	2.430
0.70	1.94	ø6/15	2	234		SLU	0.45	5428.09	2.50	13143.90	45320.30	0.45	6176.82	2.50	13143.90	45320.30	2.128
0.70	1.94	ø6/15	2	29		SLV	0.45	4464.62	2.50	13143.90	44519.60	0.45	12198.60	2.50	13143.90	44519.60	1.077
0.70	1.94	ø6/15	2	213		SLV	0.45	6472.75	2.50	13143.90	44139.10	0.45	8473.60	2.50	13143.90	44139.10	1.551
2.34	2.79	ø6/10	2	232		SLU	0.45	4241.31	2.50	19715.80	44726.40	0.45	14173.40	2.50	19715.80	44726.40	1.391
2.34	2.79	ø6/10	2	217		SLU	0.45	5765.74	2.50	19715.80	44150.80	0.45	11765.20	2.50	19715.80	44150.80	1.676
2.34	2.79	ø6/10	2	21		SLV	0.45	4614.32	2.50	19715.80	42673.00	0.45	17224.70	2.50	19715.80	42673.00	1.145
2.34	2.79	ø6/10	2	25		SLV	0.45	7110.05	2.50	19715.80	42658.80	0.45	12394.70	2.50	19715.80	42658.80	1.591
2.79	3.93	ø6/10	2	232		SLU	0.45	4797.19	2.50	19715.80	44686.00	0.45	14173.40	2.50	19715.80	44686.00	1.391
2.79	3.93	ø6/10	2	217		SLU	0.45	5765.74	2.50	19715.80	44110.40	0.45	11765.20	2.50	19715.80	44110.40	1.676
2.79	3.93	ø6/10	2	21		SLV	0.45	4614.32	2.50	19715.80	42641.90	0.45	17224.70	2.50	19715.80	42641.90	1.145
2.79	3.93	ø6/10	2	25		SLV	0.45	7110.04	2.50	19715.80	42627.70	0.45	12394.70	2.50	19715.80	42627.70	1.591
3.93	4.38	ø6/10	2	232		SLU	0.45	5016.62	2.50	19715.80	44583.50	0.45	14173.40	2.50	19715.80	44583.50	1.391
3.93	4.38	ø6/10	2	217		SLU	0.45	5765.74	2.50	19715.80	44007.90	0.45	11765.20	2.50	19715.80	44007.90	1.676
3.93	4.38	ø6/10	2	21		SLV	0.45	4614.32	2.50	19715.80	42563.00	0.45	17224.70	2.50	19715.80	42563.00	1.145
3.93	4.38	ø6/10	2	25		SLV	0.45	7110.04	2.50	19715.80	42548.90	0.45	12394.70	2.50	19715.80	42548.90	1.591
4.68	5.45	ø6/10	2	230		SLU	0.45	4438.88	2.50	19715.80	40201.50	0.45	2822.21	2.50	19715.80	40201.50	4.442
4.68	5.45	ø6/10	2	232		SLU	0.45	5072.12	2.50	19715.80	40389.40	0.45	2743.77	2.50	19715.80	40389.40	3.887
4.68	5.45	ø6/10	2	213(TG)		SLV	0.45	4434.81	2.50	19715.80	39211.60	0.45	6846.91	2.50	19715.80	39211.60	2.880
4.68	5.45	ø6/10	2	25(TG)		SLV	0.45	6712.40	2.50	19715.80	39211.60	0.45	4477.20	2.50	19715.80	39211.60	2.937
5.45	8.53	ø6/15	2	230		SLU	0.45	4213.60	2.50	13143.90	40132.30	0.45	2822.21	2.50	13143.90	40132.30	3.119
5.45	8.53	ø6/15	2	232		SLU	0.45	4696.66	2.50	13143.90	40320.20	0.45	2743.77	2.50	13143.90	40320.20	2.799
5.45	8.53	ø6/15	2	213(TG)		SLV	0.45	4434.81	2.50	13143.90	39211.60	0.45	6846.91	2.50	13143.90	39211.60	1.920
5.45	8.53	ø6/15	2	25(TG)		SLV	0.45	6712.40	2.50	13143.90	39211.60	0.45	4477.20	2.50	13143.90	39211.60	1.958
8.53	9.30	ø6/10	2	230		SLU	0.45	3312.48	2.50	19715.80	39855.50	0.45	2822.21	2.50	19715.80	39855.50	5.952
8.53	9.30	ø6/10	2	233		SLU	0.45	3647.04	2.50	19715.80	40171.20	0.45	2728.76	2.50	19715.80	40171.20	5.406

Relazione di calcolo

8.53	9.30	ø6/10	2	2	13 (TG)	SLV	0.45	4434.81	2.50	19715.80	39211.60	0.45	6846.91	2.50	19715.80	39211.60	2.880
8.53	9.30	ø6/10	2	2	5 (TG)	SLV	0.45	6712.40	2.50	19715.80	39211.60	0.45	4477.20	2.50	19715.80	39211.60	2.937

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	46 (e)	SLU I	1	1	70.00	-28821.40	-537.78	-3340.35	-143489.00	-3827.39	-23827.10	262.97	30.09	4.979
0.70	46 (e)	SLU I	1	1	70.00	-28821.40	-537.78	-3340.35	-143489.00	-3827.39	-23827.10	262.97	30.09	4.979
1.00	46 (e)	SLU I	1	1	100.00	-28669.50	441.05	-4099.04	-143489.00	3244.97	-23930.80	275.62	31.11	5.005
1.00	46 (e)	SLU I	2	1	0.00	-28669.50	441.05	-4099.04	-143489.00	3244.97	-23930.80	275.62	31.11	5.005
1.94	46	SLU I	2	1	94.00	-28193.60	3508.04	-6476.27	-28193.60	10847.90	-19813.50	295.31	27.07	3.070
2.34	46	SLU I	3	1	0.00	-25078.40	2565.38	-5860.76	-25078.40	9048.21	-20467.90	291.09	27.73	3.502
4.38	46 (e)	SLU I	3	1	204.00	-24045.70	-11249.90	-158.14	-24045.70	-25434.40	670.68	177.19	33.74	2.260
4.68	46	SLU I	4	1	0.00	-3655.12	5813.48	3929.13	-3655.12	18122.30	11880.20	37.27	29.44	3.088
4.68	46	SLU I	4	1	0.00	-3655.12	5813.48	3929.13	-3655.12	9245.23	6166.69	30.94	37.12	1.584
9.30	46	SLU I	4	1	462.00	-1316.25	-1002.33	-1395.61	-1316.25	-6221.37	-8837.08	236.25	37.75	6.291

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.94	ø6/15	2	2	46	SLU I	0.35	2528.97	2.50	7000.38	52501.70	0.35	3262.76	2.50	7000.38	52501.70	2.146
2.34	2.79	ø6/10	2	2	46	SLU I	0.35	2795.40	2.50	10500.60	51920.90	0.35	6772.20	2.50	10500.60	51920.90	1.551
2.79	3.93	ø6/10	2	2	46	SLU I	0.35	2795.40	2.50	10500.60	51885.50	0.35	6772.20	2.50	10500.60	51885.50	1.551
3.93	4.38	ø6/10	2	2	46	SLU I	0.35	2795.40	2.50	10500.60	51796.00	0.35	6772.20	2.50	10500.60	51796.00	1.551
4.68	5.45	ø6/10	2	2	46	SLU I	0.35	1152.54	2.50	10500.60	48596.60	0.35	1475.28	2.50	10500.60	48596.60	7.118
5.45	8.53	ø6/15	2	2	46	SLU I	0.35	1152.54	2.50	7000.38	48536.10	0.35	1475.28	2.50	7000.38	48536.10	4.745
8.53	9.30	ø6/10	2	2	46	SLU I	0.35	1152.54	2.50	10500.60	48294.20	0.35	1475.28	2.50	10500.60	48294.20	7.118

Pilastrata n. 4

Nodi: -49 -78 -1351

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fcd (Inc) <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
1	R	45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	1	SLV	1	1	70.00	-42390.30	13383.50	13383.50	-8605.07	-8605.07	-42390.30	16724.50	-10638.00	326.25	4.25	1.246
0.70	1	SLV	1	1	70.00	-42390.30	13383.50	13383.50	-8605.07	-8605.07	-42390.30	16724.50	-10638.00	326.25	4.25	1.246
4.38	1	SLV	1	1	438.00	-40527.30	-11148.50	-11148.50	2347.62	2347.62	-40527.30	-20015.40	4289.42	167.34	5.81	1.797
4.68	32	SLU	2	1	0.00	-12508.80	3502.06	3502.06	10983.70	10983.70	-12508.80	5175.34	16145.90	74.53	7.49	1.471
4.68	32	SLU	2	1	0.00	-12508.80	3502.06	3502.06	10983.70	10983.70	-12508.80	5175.34	16145.90	74.53	7.49	1.471
9.30	33	SLU	2	1	462.00	-10500.10	-1666.52	-1666.52	-12337.00	-12337.00	-10500.10	-2280.44	-16385.90	264.38	10.67	1.329

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm q>	σ _f <daN/cm q>
0.70	37	SLE R	1	1	70.00	-48492.10	-5856.57	3577.99	7.16	13.45	82.09	995.82
0.70	29	SLE Q	1	1	70.00	-42989.00	-6256.91	519.73	8.29	12.31	61.45	751.20
0.70	37	SLE R	1	1	70.00	-48492.10	-5856.57	3577.99	7.16	13.45	82.09	995.82
0.70	29	SLE Q	1	1	70.00	-42989.00	-6256.91	519.73	8.29	12.31	61.45	751.20
4.38	37	SLE R	1	1	438.00	-46629.10	5711.40	-4119.44	7.16	13.45	85.75	1030.69
4.38	29	SLE Q	1	1	438.00	-41126.00	1602.10	-2258.37	0.00	20.61	38.61	503.55
4.68	37	SLE R	2	1	0.00	-8764.13	7512.31	2451.41	12.31	8.29	99.08	2289.01
4.68	29	SLE Q	2	1	0.00	-3998.60	2476.36	1880.43	13.45	7.16	44.80	911.57
4.68	37	SLE R	2	1	0.00	-8764.13	7512.31	2451.41	12.31	8.29	99.08	2289.01
4.68	29	SLE Q	2	1	0.00	-3998.60	2476.36	1880.43	13.45	7.16	44.80	911.57
9.30	38	SLE R	2	1	462.00	-7113.19	-8325.71	-1130.31	12.31	8.29	90.70	2406.62
9.30	29	SLE Q	2	1	462.00	-1659.73	-1780.86	-342.50	12.31	8.29	20.65	523.90

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm ² >	ε _{sm}	Wk <mm>	
4.68	29	SLE	Q	2	1	0.00	-3998.60	1880.43	2476.36	44.00	171.01	0.50	18.86	194.12	3.14	176.79	911.57	0.27	0.09
4.68	42	SLE	F	2	1	0.00	-4585.32	1951.82	3274.05	44.00	171.01	0.50	18.86	207.02	3.14	198.28	1125.12	0.33	0.12
4.68	29	SLE	Q	2	1	0.00	-3998.60	1880.43	2476.36	44.00	171.01	0.50	18.86	194.12	3.14	176.79	911.57	0.27	0.09
4.68	42	SLE	F	2	1	0.00	-4585.32	1951.82	3274.05	44.00	171.01	0.50	18.86	207.02	3.14	198.28	1125.12	0.33	0.12
9.30	29	SLE	Q	2	1	462.00	-1659.73	-342.50	-1780.86	44.00	171.01	0.50	18.86	221.25	5.15	364.06	523.90	0.15	0.06
9.30	42	SLE	F	2	1	462.00	-2246.45	-516.87	-2593.79	44.00	171.01	0.50	18.86	220.57	5.15	362.23	774.66	0.23	0.08

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <cm>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <cm>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	32	SLU	0.45	3202.49	2.50	39431.60	46819.90	0.45	3072.92	2.50	39431.60	46819.90	12.313
0.70	1.31	ø6/ 5	2	2	19	SLU	0.45	3819.17	2.50	39431.60	46819.90	0.45	1044.51	2.50	39431.60	46819.90	10.325
0.70	1.31	ø6/ 5	2	2	1 (TG)	SLV	0.45	4123.87	2.50	39431.60	44550.70	0.45	11805.60	2.50	39431.60	44550.70	3.340

Relazione di calcolo

0.70	1.31	ø6/ 5	2	215 (TG)	SLV	0.45	9744.21	2.50	39431.60	44650.80	0.45	6322.23	2.50	39431.60	44650.80	4.047
1.31	3.77	ø6/15	2	232	SLU	0.45	5737.49	2.50	13143.90	46819.90	0.45	3072.92	2.50	13143.90	46819.90	2.291
1.31	3.77	ø6/15	2	21 (TG)	SLV	0.45	4123.87	2.50	13143.90	44550.70	0.45	11805.60	2.50	13143.90	44550.70	1.113
1.31	3.77	ø6/15	2	215 (TG)	SLV	0.45	9744.21	2.50	13143.90	44650.80	0.45	6322.23	2.50	13143.90	44650.80	1.349
3.77	4.38	ø6/10	2	232	SLU	0.45	6371.25	2.50	19715.80	46819.90	0.45	3072.92	2.50	19715.80	46819.90	3.095
3.77	4.38	ø6/10	2	21 (TG)	SLV	0.45	4123.87	2.50	19715.80	44550.70	0.45	11805.60	2.50	19715.80	44550.70	1.670
3.77	4.38	ø6/10	2	215 (TG)	SLV	0.45	9744.21	2.50	19715.80	44650.80	0.45	6322.23	2.50	19715.80	44650.80	2.023
4.68	5.45	ø6/10	2	232	SLU	0.45	7320.09	2.50	19715.80	40724.70	0.45	1195.91	2.50	19715.80	40724.70	2.693
4.68	5.45	ø6/10	2	29 (TG)	SLV	0.45	4776.34	2.50	19715.80	39256.50	0.45	5482.57	2.50	19715.80	39256.50	3.596
4.68	5.45	ø6/10	2	215 (TG)	SLV	0.45	7101.97	2.50	19715.80	39273.90	0.45	1784.05	2.50	19715.80	39273.90	2.776
5.45	8.53	ø6/15	2	232	SLU	0.45	6524.45	2.50	13143.90	40655.50	0.45	1195.91	2.50	13143.90	40655.50	2.015
5.45	8.53	ø6/15	2	29 (TG)	SLV	0.45	4776.34	2.50	13143.90	39256.50	0.45	5482.57	2.50	13143.90	39256.50	2.397
5.45	8.53	ø6/15	2	215 (TG)	SLV	0.45	7101.97	2.50	13143.90	39273.90	0.45	1784.05	2.50	13143.90	39273.90	1.851
8.53	9.30	ø6/10	2	232	SLU	0.45	3341.92	2.50	19715.80	40378.70	0.45	1195.91	2.50	19715.80	40378.70	5.900
8.53	9.30	ø6/10	2	233	SLU	0.45	3736.18	2.50	19715.80	40519.60	0.45	1084.15	2.50	19715.80	40519.60	5.277
8.53	9.30	ø6/10	2	29 (TG)	SLV	0.45	4776.34	2.50	19715.80	39256.50	0.45	5482.57	2.50	19715.80	39256.50	3.596
8.53	9.30	ø6/10	2	215 (TG)	SLV	0.45	7101.97	2.50	19715.80	39273.90	0.45	1784.05	2.50	19715.80	39273.90	2.776

Dettagli costruttivi per la duttilità

- CC=9 $\alpha_e=0.36817$ $\omega_{wd}=0.14257$ $\mu\Phi_d=7.08596$ $v_d=0.12967$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=9.84033$
0.05249 >= 0.028 [7.4.29]
- CC=9 $\alpha_e=0.36817$ $\omega_{wd}=0.14257$ $\mu\Phi_d=7.58384$ $v_d=0.12967$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=9.84033$
0.05249 >= 0.03243 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	46 (e)	SLU I	1	1	70.00	-42989.00	519.73	-6256.91	-42989.00	-2293.70	-14691.40	258.75	33.17	2.351
0.70	46 (e)	SLU I	1	1	70.00	-42989.00	519.73	-6256.91	-42989.00	-2293.70	-14691.40	258.75	33.17	2.351
4.38	46	SLU I	1	1	438.00	-41126.00	-2258.37	1602.10	-143489.00	-11249.10	8137.81	147.66	28.63	3.489
4.68	46	SLU I	2	1	0.00	-3998.60	1880.43	2476.36	-3998.60	6064.83	8231.48	53.44	37.64	3.287
4.68	46	SLU I	2	1	0.00	-3998.60	1880.43	2476.36	-3998.60	6064.83	8231.48	53.44	37.64	3.287
9.30	46	SLU I	2	1	462.00	-1659.73	-342.50	-1780.86	-1659.73	-1823.61	-9961.36	261.56	55.53	5.586

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _{,y}	Vsdu _{,y}	ctgθ _{,y}	VRsd _{,y}	VRcd _{,y}	bw _{,z}	Vsdu _{,z}	ctgθ _{,z}	VRsd _{,z}	VRcd _{,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
0.70	1.31	ø6/ 5	2	246	SLU I	0.35	2135.60	2.50	21001.10	54700.10	0.35	754.92	2.50	21001.10	54700.10	9.834	
1.31	3.77	ø6/15	2	246	SLU I	0.35	2135.60	2.50	7000.38	54652.00	0.35	754.92	2.50	7000.38	54652.00	3.278	
3.77	4.38	ø6/10	2	246	SLU I	0.35	2135.60	2.50	10500.60	54459.20	0.35	754.92	2.50	10500.60	54459.20	4.917	
4.68	5.45	ø6/10	2	246	SLU I	0.35	921.48	2.50	10500.60	48649.90	0.35	481.15	2.50	10500.60	48649.90	11.395	
5.45	8.53	ø6/15	2	246	SLU I	0.35	921.48	2.50	7000.38	48589.40	0.35	481.15	2.50	7000.38	48589.40	7.597	
8.53	9.30	ø6/10	2	246	SLU I	0.35	921.48	2.50	10500.60	48347.50	0.35	481.15	2.50	10500.60	48347.50	11.395	

Pilastrata n. 5

Nodi: -35 -77 -1350

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fcd (Inc) <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
1	R	45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	9	SLV	1	1	70.00	-33990.50	-15481.80	-15481.80	-9728.84	-9728.84	-33990.50	-22438.90	-14242.00	213.75	4.04	1.454
0.70	9	SLV	1	1	70.00	-33990.50	-15481.80	-15481.80	-9728.84	-9728.84	-33990.50	-22438.90	-14242.00	213.75	4.04	1.454
4.38	9	SLV	1	1	438.00	-32127.50	17775.10	17775.10	2277.80	2277.80	-32127.50	28087.10	3707.17	8.44	5.73	1.581
4.68	30	SLU	2	1	0.00	-9631.16	-10124.60	-10124.60	8952.10	8952.10	-9631.16	-18232.90	16509.20	137.81	4.64	1.820
4.68	30	SLU	2	1	0.00	-9631.16	-10124.60	-10124.60	8952.10	8952.10	-9631.16	-18232.90	16509.20	137.81	4.64	1.820
9.30	33	SLU	2	1	462.00	-9110.39	2458.39	2458.39	-10963.30	-10963.30	-9110.39	5679.05	-24823.00	282.66	6.39	2.266

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cmq>	σ_f <daN/cmq>
0.70	24	SLE R	1	1	70.00	-41046.50	-7021.54	-2427.18	16.34	20.36	73.14	869.33
0.70	29	SLE Q	1	1	70.00	-36477.30	-6213.19	-2356.71	16.34	20.36	66.24	786.40
0.70	24	SLE R	1	1	70.00	-41046.50	-7021.54	-2427.18	16.34	20.36	73.14	869.33
0.70	29	SLE Q	1	1	70.00	-36477.30	-6213.19	-2356.71	16.34	20.36	66.24	786.40
4.38	24	SLE R	1	1	438.00	-39183.50	2124.00	8354.67	18.35	18.35	81.56	946.89
4.38	29	SLE Q	1	1	438.00	-34614.30	1013.99	8015.65	18.35	18.35	70.47	812.25
4.68	35	SLE R	2	1	0.00	-6828.49	6172.33	-7109.32	23.50	13.19	107.29	1983.06
4.68	29	SLE Q	2	1	0.00	-3781.38	2681.28	-5778.61	22.37	14.33	66.99	1323.50
4.68	35	SLE R	2	1	0.00	-6828.49	6172.33	-7109.32	23.50	13.19	107.29	1983.06
4.68	29	SLE Q	2	1	0.00	-3781.38	2681.28	-5778.61	22.37	14.33	66.99	1323.50
9.30	38	SLE R	2	1	462.00	-6169.46	-7397.36	1706.41	22.37	14.33	70.21	1437.05
9.30	29	SLE Q	2	1	462.00	-1442.51	-1570.23	1012.23	23.50	13.19	20.70	386.39

Stato limite d'esercizio - Verifiche a fessurazione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	c	s	K ₂	Φ_{eq}	Δ_{sm}	A _s	A _{c eff}	σ_s	ϵ_{sm}	W _k
----	----	-----	----	------	---	---	----	----	---	---	----------------	-------------	---------------	----------------	--------------------	------------	-----------------	----------------

Relazione di calcolo

<m>					<cm>	<daN>	<daNm>	<daNm>	<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cm>		<mm>
0.70	29	SLE Q	1	1	70.00	-36477.30	-2356.71	-6213.19	44.00	86.53	0.50	17.82	144.56	3.14	99.72	525.49	0.15	0.04
0.70	25	SLE F	1	1	70.00	-36291.90	-2225.21	-6339.22	44.00	86.53	0.50	17.82	147.61	3.14	105.10	535.71	0.16	0.04
0.70	29	SLE Q	1	1	70.00	-36477.30	-2356.71	-6213.19	44.00	86.53	0.50	17.82	144.56	3.14	99.72	525.49	0.15	0.04
0.70	25	SLE F	1	1	70.00	-36291.90	-2225.21	-6339.22	44.00	86.53	0.50	17.82	147.61	3.14	105.10	535.71	0.16	0.04
4.38	29	SLE Q	1	1	438.00	-34614.30	8015.65	1013.99	44.00	86.53	0.50	17.82	147.00	7.16	237.19	737.66	0.21	0.05
4.38	27	SLE F	1	1	438.00	-35257.00	7998.64	1168.35	44.00	86.53	0.50	17.82	164.17	5.15	220.25	734.99	0.21	0.06
4.68	29	SLE Q	2	1	0.00	-3781.38	-5778.61	2681.28	44.00	86.53	0.50	17.82	159.67	5.15	207.25	1323.50	0.41	0.11
4.68	25	SLE F	2	1	0.00	-3692.77	-6478.56	3352.83	44.00	86.53	0.50	17.82	156.61	5.15	198.39	1547.38	0.45	0.12
4.68	29	SLE Q	2	1	0.00	-3781.38	-5778.61	2681.28	44.00	86.53	0.50	17.82	159.67	5.15	207.25	1323.50	0.41	0.11
4.68	25	SLE F	2	1	0.00	-3692.77	-6478.56	3352.83	44.00	86.53	0.50	17.82	156.61	5.15	198.39	1547.38	0.45	0.12
9.30	29	SLE Q	2	1	462.00	-1442.51	1012.23	-1570.23	44.00	86.53	0.50	17.82	148.70	5.15	175.51	386.39	0.11	0.03
9.30	27	SLE F	2	1	462.00	-2086.09	1130.54	-2278.23	44.00	86.53	0.50	17.82	155.64	5.15	195.57	513.66	0.15	0.04

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/10	4	4	20	SLU	0.45	3500.30	2.50	39431.60	46819.90	0.45	4142.78	2.50	39431.60	46819.90	9.518
0.70	1.31	ø6/10	4	4	19	SLU	0.45	3649.45	2.50	39431.60	46729.70	0.45	3798.35	2.50	39431.60	46729.70	10.381
0.70	1.31	ø6/10	4	4	1(TG)	SLV	0.45	2970.03	2.50	39431.60	43448.10	0.45	17085.00	2.50	39431.60	43448.10	2.308
0.70	1.31	ø6/10	4	4	5(TG)	SLV	0.45	12088.90	2.50	39431.60	43576.50	0.45	9920.28	2.50	39431.60	43576.50	3.262
0.70	1.31	ø6/10	4	4	5(TG)	SLV	0.45	12172.70	2.50	39431.60	43954.40	0.45	9978.45	2.50	39431.60	43954.40	3.239
1.31	3.77	ø6/15	4	4	20	SLU	0.45	3500.30	2.50	26287.80	46819.90	0.45	4142.78	2.50	26287.80	46819.90	6.345
1.31	3.77	ø6/15	4	4	32	SLU	0.45	4970.26	2.50	26287.80	46819.90	0.45	1612.45	2.50	26287.80	46819.90	5.289
1.31	3.77	ø6/15	4	4	1(TG)	SLV	0.45	2970.03	2.50	26287.80	43448.10	0.45	17085.00	2.50	26287.80	43448.10	1.539
1.31	3.77	ø6/15	4	4	5(TG)	SLV	0.45	12088.90	2.50	26287.80	43576.50	0.45	9920.28	2.50	26287.80	43576.50	2.175
1.31	3.77	ø6/15	4	4	5(TG)	SLV	0.45	12172.70	2.50	26287.80	43954.40	0.45	9978.45	2.50	26287.80	43954.40	2.160
3.77	4.38	ø6/10	4	4	20	SLU	0.45	3500.30	2.50	39431.60	46614.30	0.45	4142.78	2.50	39431.60	46614.30	9.518
3.77	4.38	ø6/10	4	4	32	SLU	0.45	5493.64	2.50	39431.60	46796.50	0.45	1612.45	2.50	39431.60	46796.50	7.178
3.77	4.38	ø6/10	4	4	1(TG)	SLV	0.45	2970.03	2.50	39431.60	43448.10	0.45	17085.00	2.50	39431.60	43448.10	2.308
3.77	4.38	ø6/10	4	4	5(TG)	SLV	0.45	12088.90	2.50	39431.60	43576.50	0.45	9920.28	2.50	39431.60	43576.50	3.262
3.77	4.38	ø6/10	4	4	5(TG)	SLV	0.45	12172.70	2.50	39431.60	43954.40	0.45	9978.45	2.50	39431.60	43954.40	3.239
4.68	5.45	ø6/10	4	4	17	SLU	0.45	2608.61	2.50	39431.60	39999.70	0.45	2950.85	2.50	39431.60	39999.70	13.363
4.68	5.45	ø6/10	4	4	32	SLU	0.45	6322.95	2.50	39431.60	40567.60	0.45	2298.01	2.50	39431.60	40567.60	6.236
4.68	5.45	ø6/10	4	4	1(TG)	SLV	0.45	4281.67	2.49	39340.20	39340.20	0.45	10685.60	2.49	39340.20	39340.20	3.682
4.68	5.45	ø6/10	4	4	13(TG)	SLV	0.45	10206.10	2.49	39275.70	39275.70	0.45	4057.60	2.49	39275.70	39275.70	3.848
5.45	8.53	ø6/15	4	4	17	SLU	0.45	2608.61	2.50	26287.80	39930.50	0.45	2950.85	2.50	26287.80	39930.50	8.909
5.45	8.53	ø6/15	4	4	32	SLU	0.45	5665.88	2.50	26287.80	40498.40	0.45	2298.01	2.50	26287.80	40498.40	4.640
5.45	8.53	ø6/15	4	4	1(TG)	SLV	0.45	4281.67	2.50	26287.80	39274.20	0.45	10685.60	2.50	26287.80	39274.20	2.460
5.45	8.53	ø6/15	4	4	13(TG)	SLV	0.45	10206.10	2.50	26287.80	39163.30	0.45	4057.60	2.50	26287.80	39163.30	2.576
5.45	8.53	ø6/15	4	4	13(TG)	SLV	0.45	10215.80	2.50	26287.80	39274.20	0.45	4233.26	2.50	26287.80	39274.20	2.573
8.53	9.30	ø6/10	4	4	17	SLU	0.45	2608.61	2.50	39431.60	39653.70	0.45	2950.85	2.50	39431.60	39653.70	13.363
8.53	9.30	ø6/10	4	4	33	SLU	0.45	3501.69	2.50	39431.60	40329.80	0.45	2568.79	2.50	39431.60	40329.80	11.261
8.53	9.30	ø6/10	4	4	1(TG)	SLV	0.45	4281.67	2.49	39340.20	39340.20	0.45	10685.60	2.49	39340.20	39340.20	3.682
8.53	9.30	ø6/10	4	4	13(TG)	SLV	0.45	10206.10	2.49	39275.70	39275.70	0.45	4057.60	2.49	39275.70	39275.70	3.848

Dettagli costruttivi per la duttilità

- CC=1 α_e=0.5339 ω_{wd}=0.10692 μΦ_d=7.08596 v_d=0.11591 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_c=11.5867
0.05709 >= 0.02132 [7.4.29]
- CC=1 α_e=0.5339 ω_{wd}=0.10692 μΦ_d=7.58384 v_d=0.11591 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_c=11.5867
0.05709 >= 0.02527 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	46	SLU I	1	1	70.00	-36477.30	-2356.71	-36477.30	-7385.78	-19465.80	248.91	27.82	3.138
0.70	46	SLU I	1	1	70.00	-36477.30	-2356.71	-36477.30	-7385.78	-19465.80	248.91	27.82	3.138
4.38	46	SLU I	1	1	438.00	-34614.30	8015.65	-34614.30	21831.10	2822.54	5.62	32.97	2.724
4.68	46	SLU I	2	1	0.00	-3781.38	-5778.61	-3781.38	-16373.30	7811.37	154.69	33.10	2.848
4.68	46	SLU I	2	1	0.00	-3781.38	-5778.61	-3781.38	-16373.30	7811.37	154.69	33.10	2.848
9.30	46	SLU I	2	1	462.00	-1442.51	1012.23	-1442.51	9504.33	-14433.80	302.34	32.93	9.253

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/10	4	4	46	SLU I	0.35	1963.91	2.50	21001.10	53689.70	0.35	2818.57	2.50	21001.10	53689.70	7.451
1.31	3.77	ø6/15	4	4	46	SLU I	0.35	1963.91	2.50	14000.80	53641.50	0.35	2818.58	2.50	14000.80	53641.50	4.967
3.77	4.38	ø6/10	4	4	46	SLU I	0.35	1963.91	2.50	21001.10	53448.80	0.35	2818.58	2.50	21001.10	53448.80	7.451
4.68	5.45	ø6/10	4	4	46	SLU I	0.35	920.24	2.50	21001.10	48616.20	0.35	1469.88	2.50	21001.10	48616.20	14.288
5.45	8.53	ø6/15	4	4	46	SLU I	0.35	920.24	2.50	14000.80	48555.70	0.35	1469.88	2.50	14000.80	48555.70	9.525
8.53	9.30	ø6/10	4	4	46	SLU I	0.35	920.24	2.50	21001.10	48313.70	0.35	1469.88	2.50	21001.10	48313.70	14.288

Pilastrata n. 6

Nodi: -37 -76 -1349

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm>	Fctk <daN/cm>	Fcd <daN/cm>	Fcd (Inc) <daN/cm>	Fctd <daN/cm>	Tp	Fyk <daN/cm>	Fyd <daN/cm>
1	R	45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.709	SLV	1	1	1	70.00	-33992.20	-14397.90	-14397.90	-6844.12	-6844.12	-33992.20	-28695.20	-13604.40	203.91	3.91	1.992
0.709	SLV	1	1	1	70.00	-33992.20	-14397.90	-14397.90	-6844.12	-6844.12	-33992.20	-28695.20	-13604.40	203.91	3.91	1.992
4.385	SLV	1	1	1	438.00	-32919.40	-5413.65	-5413.65	-17348.10	-17348.10	-32919.40	-10150.10	-33392.30	247.50	4.21	1.920
4.6832	SLU	2	1	1	0.00	-8366.01	728.40	728.40	13782.80	13782.80	-8366.01	1735.20	34702.40	87.19	7.88	2.517
4.6832	SLU	2	1	1	0.00	-8366.01	728.40	728.40	13782.80	13782.80	-8366.01	746.73	16106.80	88.59	13.58	1.168
9.301(e)	SLV	2	1	1	462.00	-1564.26	-2749.25	-2749.25	-2.15	-36.13	-1564.26	-14971.70	-0.04	180.00	16.51	5.445

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
0.7023	SLE R	1	1	1	70.00	-39392.80	-2649.82	-1221.85	0.00	50.27	31.66	411.90
0.7029	SLE Q	1	1	1	70.00	-36379.40	-2296.47	-1241.81	0.00	50.27	29.11	378.91
0.7023	SLE R	1	1	1	70.00	-39392.80	-2649.82	-1221.85	0.00	50.27	31.66	411.90
0.7029	SLE Q	1	1	1	70.00	-36379.40	-2296.47	-1241.81	0.00	50.27	29.11	378.91
4.3839	SLE R	1	1	1	438.00	-39320.20	-10403.10	-1144.70	25.13	25.13	77.46	894.62
4.3829	SLE Q	1	1	1	438.00	-34516.40	-10116.60	223.57	25.13	25.13	68.30	780.76
4.6835	SLE R	2	1	1	0.00	-5472.11	9470.98	-750.23	28.27	21.99	63.19	1267.16
4.6829	SLE Q	2	1	1	0.00	-3554.46	6388.37	966.56	28.27	21.99	46.53	905.47
4.6835	SLE R	2	1	1	0.00	-5472.11	9470.98	-750.23	12.31	8.29	96.24	2785.39
4.6837	SLE R	2	1	1	0.00	-5979.21	9699.19	500.19	12.31	8.29	95.15	2792.35
4.6829	SLE Q	2	1	1	0.00	-3554.46	6388.37	966.56	12.31	8.29	70.78	1958.81
9.3037	SLE R	2	1	1	462.00	-3640.34	-11.19	-1434.87	12.31	8.29	13.48	274.60
9.3029	SLE Q	2	1	1	462.00	-1215.58	-2.57	-479.41	12.31	8.29	4.49	91.78

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
4.3829	SLE Q	1	1	1	438.00	-34516.40	223.57	-10116.60	44.00	132.95	0.50	20.00	120.02	6.28	100.57	762.47	0.26	0.05
4.3828	SLE F	1	1	1	438.00	-35253.20	312.97	-10463.70	44.00	68.40	0.50	20.00	121.23	18.85	313.18	803.24	0.23	0.05
4.6829	SLE Q	2	1	1	0.00	-3554.46	966.56	6388.37	44.00	68.40	0.50	20.00	128.72	15.71	319.81	905.47	0.31	0.07
4.6842	SLE F	2	1	1	0.00	-3818.68	1128.25	6830.51	44.00	68.40	0.50	20.00	137.31	12.57	309.85	977.81	0.28	0.07
4.6829	SLE Q	2	1	1	0.00	-3554.46	966.56	6388.37	44.00	171.01	0.50	18.86	178.44	8.29	397.76	1958.81	0.68	0.21
4.6825	SLE F	2	1	1	0.00	-3581.14	-192.25	7208.44	44.00	171.01	0.50	18.86	194.41	8.29	468.02	2090.83	0.61	0.20
9.3029	SLE Q	2	1	1	462.00	-1215.58	-479.41	-2.57	44.00	171.01	0.50	18.86	183.49	8.29	419.98	91.78	0.03	0.01
9.3042	SLE F	2	1	1	462.00	-1479.80	-759.60	-3.62	44.00	171.01	0.50	18.86	187.93	8.29	439.52	165.73	0.05	0.02

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	b _{w,y}	V _{sd_y}	ctgθ _y	V _{Rsd,y}	V _{Rcd,y}	b _{w,z}	V _{sd_z}	ctgθ _z	V _{Rsd,z}	V _{Rcd,z}	Sic.	
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>		
0.70	1.31	ø6/10	2	232	SLU	0.45	4537.81	2.50	19715.80	46527.90	0.45	1781.82	2.50	19715.80	46527.90	4.345		
0.70	1.31	ø6/10	2	29 (TG)	SLV	0.45	6172.21	2.50	19715.80	43403.90	0.45	17691.10	2.50	19715.80	43403.90	1.114		
0.70	1.31	ø6/10	2	29 (TG)	SLV	0.45	6214.01	2.50	19715.80	44055.80	0.45	17860.10	2.50	19715.80	44055.80	1.104		
0.70	1.31	ø6/10	2	213 (TG)	SLV	0.45	19631.20	2.50	19715.80	43511.80	0.45	6750.51	2.50	19715.80	43511.80	1.004		
1.31	3.77	ø6/15	2	232	SLU	0.45	4016.80	2.50	13143.90	46472.80	0.45	1781.82	2.50	13143.90	46472.80	3.272		
1.31	3.77	ø6/15	2	25 (TG)	SND	0.45	10378.70	2.50	13143.90	44340.10						1.266		
1.31	3.77	ø6/15	2	25 (TG)	SLV							0.45	12456.40	2.50	13143.90	43511.80	1.055	
1.31	3.77	ø6/15	2	25 (TG)	SND	0.45	10378.70	2.50	13143.90	44340.10						1.266		
1.31	3.77	ø6/15	2	25 (TG)	SLV							0.45	12509.10	2.50	13143.90	43943.30	1.051	
1.31	3.77	ø6/15	2	25 (TG)	SLV	0.45	13100.40	2.50	13143.90	43511.80						1.003		
1.31	3.77	ø6/15	2	25 (TG)	SND							0.45	5474.62	2.50	13143.90	44340.10	2.401	
1.31	3.77	ø6/15	2	25 (TG)	SLV	0.45	13139.70	2.50	13143.90	43943.30						1.000		
1.31	3.77	ø6/15	2	25 (TG)	SND							0.45	5474.62	2.50	13143.90	44340.10	2.401	
3.77	4.38	ø6/15	2	232	SLU	0.45	1932.78	2.50	13143.90	46252.30	0.45	1781.82	2.50	13143.90	46252.30	6.801		
3.77	4.38	ø6/15	2	220	SLU	0.45	3186.31	2.50	13143.90	46486.40	0.45	453.56	2.50	13143.90	46486.40	4.125		
3.77	4.38	ø6/15	2	25 (TG)	SND	0.45	10378.70	2.50	13143.90	44340.10						1.266		
3.77	4.38	ø6/15	2	25 (TG)	SLV							0.45	12456.40	2.50	13143.90	43511.80	1.055	
3.77	4.38	ø6/15	2	25 (TG)	SND	0.45	10378.70	2.50	13143.90	44340.10						1.266		
3.77	4.38	ø6/15	2	25 (TG)	SLV							0.45	12509.10	2.50	13143.90	43943.30	1.051	
3.77	4.38	ø6/15	2	25 (TG)	SLV	0.45	13100.40	2.50	13143.90	43511.80						1.003		
3.77	4.38	ø6/15	2	25 (TG)	SND							0.45	5474.62	2.50	13143.90	44340.10	2.401	
3.77	4.38	ø6/15	2	25 (TG)	SLV	0.45	13139.70	2.50	13143.90	43943.30						1.000		
3.77	4.38	ø6/15	2	25 (TG)	SND							0.45	5474.62	2.50	13143.90	44340.10	2.401	
4.68	5.45	ø6/10	2	232	SLU	0.45	4949.12	2.50	19715.80	40159.00	0.45	612.45	2.50	19715.80	40159.00	3.984		
4.68	5.45	ø6/10	2	25 (TG)	SLV	0.45	3742.66	2.50	19715.80	39202.80	0.45	4725.44	2.50	19715.80	39202.80	4.172		
4.68	5.45	ø6/10	2	215 (TG)	SLV	0.45	3962.79	2.50	19715.80	39185.70	0.45	3861.28	2.50	19715.80	39185.70	4.975		
5.45	8.53	ø6/15	2	232	SLU	0.45	4295.04	2.50	13143.90	40089.80	0.45	612.45	2.50	13143.90	40089.80	3.060		
5.45	8.53	ø6/15	2	25 (TG)	SLV	0.45	3742.66	2.50	13143.90	39202.80	0.45	4725.44	2.50	13143.90	39202.80	2.782		
5.45	8.53	ø6/15	2	215 (TG)	SLV	0.45	3962.79	2.50	13143.90	39185.70	0.45	3861.28	2.50	13143.90	39185.70	3.317		
8.53	9.30	ø6/10	2	232	SLU	0.45	1678.68	2.50	19715.80	39813.00	0.45	612.45	2.50	19715.80	39813.00	11.745		
8.53	9.30	ø6/10	2	217	SLU	0.45	2480.53	2.50	19715.80	39546.80	0.45	578.71	2.50	19715.80	39546.80	7.948		
8.53	9.30	ø6/10	2	25 (TG)	SLV	0.45	3742.66	2.50	19715.80	39202.80	0.45	4725.44	2.50	19715.80	39202.80	4.172		
8.53	9.30	ø6/10	2	215 (TG)	SLV	0.45	3962.79	2.50	19715.80	39185.70	0.45	3861.28	2.50	19715.80	39185.70	4.975		

Dettagli costruttivi per la duttilità

- CC=9 α_e=0.42561 ω_{wd}=0.0891 μΦ_d=7.08596 ν_d=0.11543 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_c=9.21414 0.03792 >= 0.02108 [7.4.29]

- CC=9 α_e=0.42561 ω_{wd}=0.0891 μΦ_d=7.58384 ν_d=0.11543 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_c=9.21414 0.03792 >= 0.02502 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Relazione di calcolo

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	46	SLU I	1	1	70.00	-36379.40	-1241.81	-2296.47	-143489.00	-12454.60	-22060.60	233.44	25.19	3.944
0.70	46	SLU I	1	1	70.00	-36379.40	-1241.81	-2296.47	-143489.00	-12454.60	-22060.60	233.44	25.19	3.944
4.38	46(e)	SLU I	1	1	438.00	-34516.40	223.57	-10116.60	-34516.40	2910.38	-29945.20	275.62	30.01	2.967
4.68	46	SLU I	2	1	0.00	-3554.46	966.56	6388.37	-3554.46	4477.19	27368.30	78.75	34.85	4.291
4.68	46	SLU I	2	1	0.00	-3554.46	966.56	6388.37	-3554.46	1569.92	10287.10	82.97	56.22	1.610
9.30	46(e)	SLU I	2	1	462.00	-1215.58	-479.41	-2.57	-1215.58	-10432.50	443.76	177.19	65.39	21.742

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/10	2	2	46	SLU I	0.35	2125.02	2.50	10500.60	53674.50	0.35	398.20	2.50	10500.60	53674.50	4.941
1.31	3.77	ø6/15	2	2	46	SLU I	0.35	2125.02	2.50	7000.38	53626.30	0.35	398.20	2.50	7000.38	53626.30	3.294
3.77	4.38	ø6/15	2	2	46	SLU I	0.35	2125.02	2.50	7000.38	53433.60	0.35	398.20	2.50	7000.38	53433.60	3.294
4.68	5.45	ø6/10	2	2	46	SLU I	0.35	1383.32	2.50	10500.60	48581.00	0.35	312.98	2.50	10500.60	48581.00	7.591
5.45	8.53	ø6/15	2	2	46	SLU I	0.35	1383.32	2.50	7000.38	48520.50	0.35	312.98	2.50	7000.38	48520.50	5.061
8.53	9.30	ø6/10	2	2	46	SLU I	0.35	1383.32	2.50	10500.60	48278.50	0.35	312.98	2.50	10500.60	48278.50	7.591

Pilastrata n. 7

Nodi: -38 -57 -1524

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fcd (Inc) <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
1R		45.00	45.00	5.50	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
1R		45.00	45.00	5.30	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	13	SLV	1	1	70.00	-31009.60	10397.40	10397.40	-15328.60	-15328.60	-31009.60	24230.50	-34428.40	306.56	3.51	2.273
0.70	13	SLV	1	1	70.00	-31009.60	10397.40	10397.40	-15328.60	-15328.60	-31009.60	24230.50	-34428.40	306.56	3.51	2.273
4.38	5	SLV	1	1	438.00	-26591.60	4420.50	4420.50	-19519.70	-19519.70	-26591.60	10586.50	-44597.80	286.88	4.08	2.290
4.68	30	SLU	2	1	0.00	-10054.00	-13757.80	-13757.80	22639.40	22639.40	-10054.00	-21964.50	35574.30	123.75	3.87	1.578
4.68	30	SLU	2	1	0.00	-10054.00	-13757.80	-13757.80	22639.40	22639.40	-10054.00	-21964.50	35574.30	123.75	3.87	1.578
9.30	33	SLU	2	1	462.00	-8969.57	14516.10	14516.10	-13388.30	-13388.30	-8969.57	30497.80	-27196.90	317.81	3.85	2.069

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
0.70	37	SLE R	1	1	70.00	-33932.00	-2220.24	9561.54	36.19	36.19	67.12	769.10
0.70	29	SLE Q	1	1	70.00	-29732.10	-2644.16	5359.91	31.67	40.72	46.42	548.65
0.70	37	SLE R	1	1	70.00	-33932.00	-2220.24	9561.54	36.19	36.19	67.12	769.10
0.70	29	SLE Q	1	1	70.00	-29732.10	-2644.16	5359.91	31.67	40.72	46.42	548.65
4.38	39	SLE R	1	1	438.00	-32796.10	-10705.70	-1245.11	36.19	36.19	67.52	765.32
4.38	29	SLE Q	1	1	438.00	-27869.10	-11219.00	1627.24	36.19	36.19	71.42	868.34
4.68	35	SLE R	2	1	0.00	-7158.83	15848.70	-9450.26	40.72	31.67	136.97	2221.83
4.68	29	SLE Q	2	1	0.00	-4097.00	11569.40	-5138.22	40.72	31.67	89.57	1496.61
4.68	35	SLE R	2	1	0.00	-7158.83	15848.70	-9450.26	40.72	31.67	136.97	2221.83
4.68	29	SLE Q	2	1	0.00	-4097.00	11569.40	-5138.22	40.72	31.67	89.57	1496.61
9.30	38	SLE R	2	1	462.00	-6124.05	-9116.02	9886.49	45.24	27.14	103.79	1639.03
9.30	29	SLE Q	2	1	462.00	-1758.12	-2681.25	2848.62	49.76	22.62	30.20	477.28

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
0.70	29	SLE Q	1	1	70.00	-29732.10	5359.91	-2644.16	44.00	115.00	0.50	24.00	133.56	4.52	85.87	342.61	0.10	0.02
0.70	25	SLE F	1	1	70.00	-30074.00	5772.02	-2903.47	44.00	115.00	0.50	24.00	136.25	4.52	90.96	395.13	0.12	0.03
0.70	29	SLE Q	1	1	70.00	-29732.10	5359.91	-2644.16	44.00	115.00	0.50	24.00	133.56	4.52	85.87	342.61	0.10	0.02
0.70	25	SLE F	1	1	70.00	-30074.00	5772.02	-2903.47	44.00	115.00	0.50	24.00	136.25	4.52	90.96	395.13	0.12	0.03
4.38	29	SLE Q	1	1	438.00	-27869.10	1627.24	-11219.00	44.00	115.00	0.50	24.00	132.75	13.57	253.04	868.34	0.30	0.07
4.38	28	SLE F	1	1	438.00	-28355.00	1598.74	-11557.70	44.00	115.00	0.50	24.00	133.72	13.57	258.55	893.97	0.26	0.06
4.68	29	SLE Q	2	1	0.00	-4097.00	-5138.22	11569.40	44.00	115.00	0.50	24.00	136.95	9.05	184.55	1496.61	0.59	0.14
4.68	25	SLE F	2	1	0.00	-4306.48	-6807.05	12822.30	44.00	115.00	0.50	24.00	133.51	9.05	171.57	1751.30	0.66	0.15
4.68	29	SLE Q	2	1	0.00	-4097.00	-5138.22	11569.40	44.00	115.00	0.50	24.00	136.95	9.05	184.55	1496.61	0.59	0.14
4.68	25	SLE F	2	1	0.00	-4306.48	-6807.05	12822.30	44.00	115.00	0.50	24.00	133.51	9.05	171.57	1751.30	0.66	0.15
9.30	29	SLE Q	2	1	462.00	-1758.12	2848.62	-2681.25	44.00	115.00	0.50	24.00	113.02	13.57	141.48	477.28	0.15	0.03
9.30	27	SLE F	2	1	462.00	-2346.80	3731.70	-3457.35	44.00	115.00	0.50	24.00	113.60	13.57	144.74	619.60	0.18	0.03

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø8/15	2	2	32	SLU	0.45	3773.09	2.50	23366.90	45542.00	0.45	5320.45	2.50	23366.90	45542.00	4.392
0.70	1.31	ø8/15	2	2	9(TG)	SLV	0.45	9291.49	2.50	23366.90	42603.20	0.45	23215.30	2.50	23366.90	42603.20	1.007
0.70	1.31	ø8/15	2	2	9(TG)	SLV	0.45	9303.34	2.50	23366.90	43017.00	0.45	23303.60	2.50	23366.90	43017.00	1.003
0.70	1.31	ø8/15	2	2	1(TG)	SLV	0.45	23267.70	2.50	23366.90	42627.30	0.45	10958.10	2.50	23366.90	42627.30	1.004
0.70	1.31	ø8/15	2	2	1(TG)	SLV	0.45	23347.80	2.50	23366.90	43041.10	0.45	10954.20	2.50	23366.90	43041.10	1.001
1.31	3.77	ø8/25	2	2	32	SLU	0.45	3440.78	2.50	14020.10	45486.90	0.45	5012.28	2.50	14020.10	45486.90	2.797
1.31	3.77	ø8/25	2	2	34	SLU	0.45	3539.39	2.50	14020.10	45635.90	0.45	4164.05	2.50	14020.10	45635.90	3.367
1.31	3.77	ø8/25	2	2	15(TG)	SND	0.45	9189.79	2.50	14020.10	43201.40						1.526
1.31	3.77	ø8/25	2	2	15(TG)	SLV						0.45	12737.30	2.50	14020.10	42723.20	1.101

Relazione di calcolo

1.31	3.77	ø8/25	2	2	15 (TG)	SND	0.45	9189.79	2.50	14020.10	43201.40						1.526
1.31	3.77	ø8/25	2	2	15 (TG)	SLV						0.45	12745.10	2.50	14020.10	42897.10	1.100
1.31	3.77	ø8/25	2	2	9 (TG)	SLV	0.45	13982.30	2.50	14020.10	43017.00						1.003
1.31	3.77	ø8/25	2	2	9 (TG)	SND						0.45	7445.76	2.50	14020.10	43401.30	1.883
3.77	4.38	ø8/15	2	2	30	SLU	0.45	1932.18	2.50	23366.90	45172.80	0.45	3804.73	2.50	23366.90	45172.80	6.142
3.77	4.38	ø8/15	2	2	20	SLU	0.45	3020.94	2.50	23366.90	45190.90	0.45	2682.89	2.50	23366.90	45190.90	7.735
3.77	4.38	ø8/15	2	2	9 (TG)	SLV	0.45	9291.49	2.50	23366.90	42603.20	0.45	23215.30	2.50	23366.90	42603.20	1.007
3.77	4.38	ø8/15	2	2	9 (TG)	SLV	0.45	9303.34	2.50	23366.90	43017.00	0.45	23303.60	2.50	23366.90	43017.00	1.003
3.77	4.38	ø8/15	2	2	1 (TG)	SLV	0.45	23267.70	2.50	23366.90	42627.30	0.45	10958.10	2.50	23366.90	42627.30	1.004
3.77	4.38	ø8/15	2	2	1 (TG)	SLV	0.45	23347.80	2.50	23366.90	43041.10	0.45	10954.20	2.50	23366.90	43041.10	1.001
4.68	5.45	ø6/15	2	2	33	SLU	0.45	8417.21	2.50	13143.90	40656.60	0.45	5454.23	2.50	13143.90	40656.60	1.562
4.68	5.45	ø6/15	2	2	32	SLU	0.45	8659.57	2.50	13143.90	40515.00	0.45	4608.17	2.50	13143.90	40515.00	1.518
4.68	5.45	ø6/15	2	2	7 (TG)	SND	0.45	4078.03	2.50	13143.90	39591.80						3.223
4.68	5.45	ø6/15	2	2	7 (TG)	SLV						0.45	12250.60	2.50	13143.90	39249.20	1.073
4.68	5.45	ø6/15	2	2	7 (TG)	SND	0.45	4078.03	2.50	13143.90	39591.80						3.223
4.68	5.45	ø6/15	2	2	7 (TG)	SLV						0.45	12252.60	2.50	13143.90	39266.10	1.073
4.68	5.45	ø6/15	2	2	13 (TG)	SND	0.45	4421.48	2.50	13143.90	39620.60						2.973
4.68	5.45	ø6/15	2	2	13 (TG)	SLV						0.45	11195.90	2.50	13143.90	39230.90	1.174
5.45	8.53	ø6/20	2	2	33	SLU	0.45	8166.90	2.50	9857.91	40587.40	0.45	6382.76	2.50	9857.91	40587.40	1.207
5.45	8.53	ø6/20	2	2	32	SLU	0.45	8242.38	2.50	9857.91	40445.80	0.45	6155.73	2.50	9857.91	40445.80	1.196
5.45	8.53	ø6/20	2	2	1 (TG)	SND	0.45	3363.35	2.50	9857.91	39640.40	0.45	2334.53	2.50	9857.91	39640.40	2.931
5.45	8.53	ø6/20	2	2	13 (TG)	SND	0.45	4421.48	2.50	9857.91	39620.60	0.45	2056.72	2.50	9857.91	39620.60	2.230
8.53	9.30	ø6/15	2	2	33	SLU	0.45	7165.65	2.50	13143.90	40310.60	0.45	6614.90	2.50	13143.90	40310.60	1.834
8.53	9.30	ø6/15	2	2	7 (TG)	SND	0.45	4078.03	2.50	13143.90	39591.80						3.223
8.53	9.30	ø6/15	2	2	7 (TG)	SLV						0.45	12250.60	2.50	13143.90	39249.20	1.073
8.53	9.30	ø6/15	2	2	7 (TG)	SND	0.45	4078.03	2.50	13143.90	39591.80						3.223
8.53	9.30	ø6/15	2	2	7 (TG)	SLV						0.45	12252.60	2.50	13143.90	39266.10	1.073
8.53	9.30	ø6/15	2	2	13 (TG)	SND	0.45	4421.48	2.50	13143.90	39620.60						2.973
8.53	9.30	ø6/15	2	2	13 (TG)	SLV						0.45	11195.90	2.50	13143.90	39230.90	1.174

Dettagli costruttivi per la duttilità

- CC=1 $\alpha_e=0.28244$ $\omega_{nd}=0.08494$ $\mu\Phi_d=7.08596$ $v_d=0.093218$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20968$ $\mu\Phi_c=9.17989$
0.02399 >= 0.01053 [7.4.29]
- CC=1 $\alpha_e=0.28244$ $\omega_{nd}=0.08494$ $\mu\Phi_d=7.58384$ $v_d=0.093218$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20968$ $\mu\Phi_c=9.17989$
0.02399 >= 0.01373 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.	
0.70	46	SLU	I	1	1	70.00	-29732.10	5359.91	-2644.16	-143489.00	30565.10	-14557.90	334.69	24.67	4.826
0.70	46	SLU	I	1	1	70.00	-29732.10	5359.91	-2644.16	-143489.00	30565.10	-14557.90	334.69	24.67	4.826
4.38	46	SLU	I	1	1	438.00	-27869.10	1627.24	-11219.00	-27869.10	4964.19	-36547.10	282.66	26.27	3.255
4.68	46	SLU	I	2	1	0.00	-4097.00	-5138.22	11569.40	-4097.00	-13612.60	30422.10	115.31	27.01	2.633
4.68	46	SLU	I	2	1	0.00	-4097.00	-5138.22	11569.40	-4097.00	-13612.60	30422.10	115.31	27.01	2.633
9.30	46	SLU	I	2	1	462.00	-1758.12	2848.62	-2681.25	-1758.12	23422.90	-21410.10	317.81	24.38	8.113

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø8/15	2	2	46	SLU I	0.35	2330.13	2.50	12605.50	52643.00	0.35	1014.31	2.50	12605.50	52643.00	5.410
1.31	3.77	ø8/25	2	2	46	SLU I	0.35	2330.13	2.50	7563.31	52594.80	0.35	1014.31	2.50	7563.31	52594.80	3.246
3.77	4.38	ø8/15	2	2	46	SLU I	0.35	2330.13	2.50	12605.50	52402.10	0.35	1014.31	2.50	12605.50	52402.10	5.410
4.68	5.45	ø6/15	2	2	46	SLU I	0.35	3084.55	2.50	7000.38	48665.20	0.35	1728.75	2.50	7000.38	48665.20	2.269
5.45	8.53	ø6/20	2	2	46	SLU I	0.35	3084.55	2.50	5250.28	48604.70	0.35	1728.75	2.50	5250.28	48604.70	1.702
8.53	9.30	ø6/15	2	2	46	SLU I	0.35	3084.55	2.50	7000.38	48362.70	0.35	1728.75	2.50	7000.38	48362.70	2.269

Pilastrata n. 8

Nodi: -31 -56 -1345

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fcd (Inc) <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
1R		45.00	45.00	5.40	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
1R		45.00	45.00	5.20	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	13	SLV	1	1	70.00	-24781.30	8632.82	8632.82	-18381.90	-18381.90	-24781.30	14359.40	-31537.20	300.94	3.99	1.706
0.70	13	SLV	1	1	70.00	-24781.30	8632.82	8632.82	-18381.90	-18381.90	-24781.30	14359.40	-31537.20	300.94	3.99	1.706
4.38	13	SLV	1	1	438.00	-22918.30	-1161.93	-1161.93	22936.40	22936.40	-22918.30	-1520.60	38043.50	92.81	6.93	1.658
4.68	20	SLU	2	1	0.00	-4841.23	-2246.18	-2246.18	-10631.90	-10631.90	-4841.23	-6815.01	-34255.60	255.94	5.72	3.214
4.68	20	SLU	2	1	0.00	-4841.23	-2246.18	-2246.18	-10631.90	-10631.90	-4841.23	-3279.06	-15373.00	261.56	10.28	1.447
9.30	13	SLV	2	1	462.00	329.44	3.03	3.03	3930.29	3930.29	329.44	-0.13	14650.50	90.00	16.96	3.728

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
0.70	39	SLE R	1	1	70.00	-36625.60	-1461.58	7223.78	23.31	29.59	61.91	726.72
0.70	37	SLE R	1	1	70.00	-35251.90	-514.48	7938.50	26.45	26.45	60.96	707.18
0.70	29	SLE Q	1	1	70.00	-31793.90	-2323.42	5109.38	20.17	32.74	51.83	616.29

Relazione di calcolo

0.70	39	SLE R	1	1	70.00	-36625.60	-1461.58	7223.78	23.31	29.59	61.91	726.72
0.70	37	SLE R	1	1	70.00	-35251.90	-514.48	7938.50	26.45	26.45	60.96	707.18
0.70	29	SLE Q	1	1	70.00	-31793.90	-2323.42	5109.38	20.17	32.74	51.83	616.29
4.38	21	SLE R	1	1	438.00	-31797.50	9421.64	-1810.13	26.45	26.45	73.15	831.42
4.38	29	SLE Q	1	1	438.00	-29930.90	8870.12	-297.93	26.45	26.45	58.90	670.86
4.68	24	SLE R	2	1	0.00	-3568.34	-7588.95	-1549.96	29.59	23.31	56.50	1068.80
4.68	29	SLE Q	2	1	0.00	-2778.44	-7533.40	-708.30	29.59	23.31	49.13	992.05
4.68	24	SLE R	2	1	0.00	-3568.34	-7588.95	-1549.96	12.31	8.29	89.14	2426.68
4.68	29	SLE Q	2	1	0.00	-2778.44	-7533.40	-708.30	12.31	8.29	77.83	2312.51
9.30	38	SLE R	2	1	462.00	-2565.63	2543.31	9.04	12.31	8.29	23.51	668.74
9.30	29	SLE Q	2	1	462.00	-439.56	1857.77	2.21	12.31	8.29	16.88	559.45

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
0.70	29	SLE Q	1	1	70.00	-31793.90	5109.38	-2323.42	44.00	113.67	0.50	20.85	137.47	3.80	90.20	379.69	0.11	0.03
0.70	42	SLE F	1	1	70.00	-32152.00	5577.84	-1956.76	44.00	113.67	0.50	20.85	146.12	3.80	105.98	405.98	0.12	0.03
0.70	29	SLE Q	1	1	70.00	-31793.90	5109.38	-2323.42	44.00	113.67	0.50	20.85	137.47	3.80	90.20	379.69	0.11	0.03
0.70	42	SLE F	1	1	70.00	-32152.00	5577.84	-1956.76	44.00	113.67	0.50	20.85	146.12	3.80	105.98	405.98	0.12	0.03
4.38	29	SLE Q	1	1	438.00	-29930.90	-297.93	8870.12	44.00	113.67	0.50	20.71	117.96	6.94	100.46	644.02	0.21	0.04
4.38	25	SLE F	1	1	438.00	-30179.80	-1049.24	9124.33	44.00	68.61	0.50	20.71	138.86	10.08	247.67	734.99	0.21	0.05
4.68	29	SLE Q	2	1	0.00	-2778.44	-708.30	-7533.40	44.00	68.61	0.50	20.71	125.30	20.17	363.23	992.05	0.36	0.08
4.68	25	SLE F	2	1	0.00	-2892.18	-1458.95	-6741.93	44.00	68.61	0.50	20.71	144.35	10.08	274.38	963.44	0.28	0.07
4.68	29	SLE Q	2	1	0.00	-2778.44	-708.30	-7533.40	44.00	171.02	0.50	18.86	186.74	8.29	434.28	2312.51	0.83	0.26
4.68	25	SLE F	2	1	0.00	-2892.18	-1458.95	-6741.93	44.00	171.02	0.50	18.86	221.89	5.15	365.82	2184.00	0.64	0.24
9.30	29	SLE Q	2	1	462.00	-439.56	2.21	1857.77	44.00	171.02	0.50	18.86	199.09	8.29	488.59	559.45	0.16	0.06
9.30	27	SLE F	2	1	462.00	-712.54	3.26	2092.08	44.00	171.02	0.50	18.86	198.46	8.29	485.84	619.12	0.18	0.06

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø8/15	2	232	SLU		0.45	3004.02	2.50	23366.90	45765.90	0.45	4077.97	2.50	23366.90	45765.90	5.730
0.70	1.31	ø8/15	2	220	SLU		0.45	4794.91	2.50	23366.90	45827.20	0.45	2700.27	2.50	23366.90	45827.20	4.873
0.70	1.31	ø8/15	2	21(TG)	SLV		0.45	11814.30	2.50	23366.90	42877.60	0.45	15641.30	2.50	23366.90	42877.60	1.494
0.70	1.31	ø8/15	2	213(TG)	SLV		0.45	22552.70	2.50	23366.90	42146.10	0.45	1651.45	2.50	23366.90	42146.10	1.036
0.70	1.31	ø8/15	2	25(TG)	SLV		0.45	23240.50	2.50	23366.90	44061.30	0.45	2037.36	2.50	23366.90	44061.30	1.005
1.31	3.77	ø8/20	2	232	SLU		0.45	3004.02	2.50	17525.20	45710.70	0.45	3653.89	2.50	17525.20	45710.70	4.796
1.31	3.77	ø8/20	2	220	SLU		0.45	4794.91	2.50	17525.20	45772.10	0.45	2700.27	2.50	17525.20	45772.10	3.655
1.31	3.77	ø8/20	2	21(TG)	SLV		0.45	11814.30	2.50	17525.20	42877.60	0.45	15641.30	2.50	17525.20	42877.60	1.120
1.31	3.77	ø8/20	2	23(TG)	SLV		0.45	16517.90	2.50	17525.20	43059.30	0.45	11158.20	2.50	17525.20	43059.30	1.061
1.31	3.77	ø8/20	2	213(TG)	SND		0.45	16685.20	2.50	17525.20	44585.20						1.050
1.31	3.77	ø8/20	2	213(TG)	SLV							0.45	6874.89	2.50	17525.20	42146.10	2.549
3.77	4.38	ø8/15	2	217	SLU		0.45	4519.33	2.50	23366.90	45164.30	0.45	2930.31	2.50	23366.90	45164.30	5.170
3.77	4.38	ø8/15	2	220	SLU		0.45	4794.91	2.50	23366.90	45551.60	0.45	2700.27	2.50	23366.90	45551.60	4.873
3.77	4.38	ø8/15	2	21(TG)	SLV		0.45	11814.30	2.50	23366.90	42877.60	0.45	15641.30	2.50	23366.90	42877.60	1.494
3.77	4.38	ø8/15	2	213(TG)	SLV		0.45	22552.70	2.50	23366.90	42146.10	0.45	1651.45	2.50	23366.90	42146.10	1.036
3.77	4.38	ø8/15	2	25(TG)	SLV		0.45	23240.50	2.50	23366.90	44061.30	0.45	2037.36	2.50	23366.90	44061.30	1.005
4.68	5.45	ø6/10	2	232	SLU		0.45	2757.66	2.50	19715.80	39897.90	0.45	1964.28	2.50	19715.80	39897.90	7.149
4.68	5.45	ø6/10	2	233	SLU		0.45	3005.91	2.50	19715.80	39951.30	0.45	1016.98	2.50	19715.80	39951.30	6.559
4.68	5.45	ø6/10	2	21(TG)	SLV		0.45	6903.26	2.50	19715.80	39054.20	0.45	1617.66	2.50	19715.80	39054.20	2.856
4.68	5.45	ø6/10	2	21(TG)	SLV		0.45	6901.40	2.50	19715.80	39124.40	0.45	1618.94	2.50	19715.80	39124.40	2.857
4.68	5.45	ø6/10	2	25(TG)	SLV		0.45	7193.56	2.50	19715.80	39181.60	0.45	183.23	2.50	19715.80	39181.60	2.741
5.45	8.53	ø6/15	2	232	SLU		0.45	2757.66	2.50	13143.90	39828.70	0.45	1431.87	2.50	13143.90	39828.70	4.766
5.45	8.53	ø6/15	2	233	SLU		0.45	3005.91	2.50	13143.90	39882.10	0.45	697.53	2.50	13143.90	39882.10	4.373
5.45	8.53	ø6/15	2	21(TG)	SLV		0.45	6903.26	2.50	13143.90	39054.20	0.45	1617.66	2.50	13143.90	39054.20	1.904
5.45	8.53	ø6/15	2	21(TG)	SLV		0.45	6901.40	2.50	13143.90	39124.40	0.45	1618.94	2.50	13143.90	39124.40	1.905
5.45	8.53	ø6/15	2	25(TG)	SLV		0.45	7193.56	2.50	13143.90	39181.60	0.45	183.23	2.50	13143.90	39181.60	1.827
8.53	9.30	ø6/10	2	232	SLU		0.45	2757.66	2.50	19715.80	39551.90	0.45	1230.18	2.50	19715.80	39551.90	7.149
8.53	9.30	ø6/10	2	233	SLU		0.45	3005.91	2.50	19715.80	39605.40	0.45	899.69	2.50	19715.80	39605.40	6.559
8.53	9.30	ø6/10	2	21(TG)	SLV		0.45	6903.26	2.50	19715.80	39054.20	0.45	1617.66	2.50	19715.80	39054.20	2.856
8.53	9.30	ø6/10	2	21(TG)	SLV		0.45	6901.40	2.50	19715.80	39124.40	0.45	1618.94	2.50	19715.80	39124.40	2.857
8.53	9.30	ø6/10	2	25(TG)	SLV		0.45	7193.56	2.50	19715.80	39181.60	0.45	183.23	2.50	19715.80	39181.60	2.741

Dettagli costruttivi per la duttilità

- CC=5 α_e=0.36804 ω_{nd}=0.10617 μΦ_d=7.08596 v_d=0.11544 E_{sy,d}=0.0018995 b_c/b₀=1.20968 μΦ_c=9.30829 0.03908 >= 0.02139 [7.4.29]
- CC=5 α_e=0.36804 ω_{nd}=0.10617 μΦ_d=7.58384 v_d=0.11544 E_{sy,d}=0.0018995 b_c/b₀=1.20968 μΦ_c=9.30829 0.03908 >= 0.02535 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _x	Sic.
0.70	46	SLU I	1	1	70.00	-31793.90	5109.38	-2323.42	-31793.90	22652.90	-10098.80	340.31	26.00	4.422
0.70	46	SLU I	1	1	70.00	-31793.90	5109.38	-2323.42	-31793.90	22652.90	-10098.80	340.31	26.00	4.422
4.38	46(e)	SLU I	1	1	438.00	-29930.90	-297.93	8870.12	-29930.90	2581.98	30566.00	84.38	30.62	3.444
4.68	46	SLU I	2	1	0.00	-2778.44	-708.30	-7533.40	-2778.44	-2637.42	-28781.10	262.97	35.45	3.820
4.68	46	SLU I	2	1	0.00	-2778.44	-708.30	-7533.40	-2778.44	-957.59	-10599.70	264.38	57.03	1.407
9.30	46(e)	SLU I	2	1	462.00	-439.56	2.21	1857.77	-439.56	-66.08	10363.40	90.00	75.94	5.578

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
-----------	-----------	--------	-----------------	-----------------	----	-----	-------------------------	----------------------------	-------------------	----------------------------	----------------------------	-------------------------	----------------------------	-------------------	----------------------------	----------------------------	------

Relazione di calcolo

0.70	1.31	ø8/15	2	246	SLU I	0.35	3041.72	2.50	12605.50	52963.00	0.35	1469.38	2.50	12605.50	52963.00	4.144
1.31	3.77	ø8/20	2	246	SLU I	0.35	3041.72	2.50	9454.14	52914.80	0.35	1469.38	2.50	9454.14	52914.80	3.108
3.77	4.38	ø8/15	2	246	SLU I	0.35	3041.72	2.50	12605.50	52722.00	0.35	1469.38	2.50	12605.50	52722.00	4.144
4.68	5.45	ø6/10	2	246	SLU I	0.35	2032.72	2.50	10500.60	48460.60	0.35	153.79	2.50	10500.60	48460.60	5.166
5.45	8.53	ø6/15	2	246	SLU I	0.35	2032.72	2.50	7000.38	48400.10	0.35	153.79	2.50	7000.38	48400.10	3.444
8.53	9.30	ø6/10	2	246	SLU I	0.35	2032.72	2.50	10500.60	48158.10	0.35	153.79	2.50	10500.60	48158.10	5.166

Pilastrata n. 9

Nodi: -24 -55 -1348

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
1R		45.00	45.00	5.30	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
1R		45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	εy	Sic.
0.70	5	SLV	1	1	70.00	-19988.70	8501.33	8501.33	17203.80	17203.80	-19988.70	14417.70	29363.00	57.66	4.14	1.705
0.70	5	SLV	1	1	70.00	-19988.70	8501.33	8501.33	17203.80	17203.80	-19988.70	14417.70	29363.00	57.66	4.14	1.705
4.38	5	SLV	1	1	438.00	-18125.70	-2570.57	-2570.57	-19890.90	-19890.90	-18125.70	-4045.33	-34989.20	261.56	6.09	1.756
4.68	30	SLU	2	1	0.00	-8645.51	-8729.24	-8729.24	7352.25	7352.25	-8645.51	-22993.50	19316.70	144.84	4.25	2.631
4.68	30	SLU	2	1	0.00	-8645.51	-8729.24	-8729.24	7352.25	7352.25	-8645.51	-12875.60	10653.90	140.62	5.74	1.464
9.30	33	SLU	2	1	462.00	-7889.72	11762.60	11762.60	-2197.75	-2197.75	-7889.72	15871.70	-3231.10	351.56	9.89	1.354

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σc <daN/cm²>	σf <daN/cm²>
0.70	37	SLE R	1	1	70.00	-28896.30	2792.84	9495.06	28.27	21.99	88.55	1162.70
0.70	29	SLE Q	1	1	70.00	-26283.60	1025.38	5621.15	21.99	28.27	48.75	568.69
0.70	37	SLE R	1	1	70.00	-28896.30	2792.84	9495.06	28.27	21.99	88.55	1162.70
0.70	29	SLE Q	1	1	70.00	-26283.60	1025.38	5621.15	21.99	28.27	48.75	568.69
4.38	35	SLE R	1	1	438.00	-26375.30	-6191.15	-4328.41	25.13	25.13	72.78	833.45
4.38	29	SLE Q	1	1	438.00	-24420.60	-5432.15	-1484.54	21.99	28.27	47.13	551.53
4.68	35	SLE R	2	1	0.00	-6190.32	5131.12	-5986.57	31.42	18.85	78.70	1334.02
4.68	29	SLE Q	2	1	0.00	-4008.95	3868.71	-2266.33	31.42	18.85	42.17	703.00
4.68	35	SLE R	2	1	0.00	-6190.32	5131.12	-5986.57	13.45	7.16	116.22	2535.67
4.68	29	SLE Q	2	1	0.00	-4008.95	3868.71	-2266.33	15.46	5.15	63.01	1396.52
9.30	38	SLE R	2	1	462.00	-5374.61	-1468.69	7954.21	12.31	8.29	91.48	2433.72
9.30	29	SLE Q	2	1	462.00	-1670.07	-304.38	1853.27	12.31	8.29	20.85	539.72

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K2	Φeq	Δsm <mm>	As <cm²>	Ac eff <cm²>	σs <daN/cm²>	εsm	Wk <mm>
0.70	29	SLE Q	1	1	70.00	-26283.60	5621.15	1025.38	44.00	132.94	0.50	20.00	211.51	3.14	194.01	461.22	0.13	0.05
0.70	42	SLE F	1	1	70.00	-26487.30	6234.12	1372.02	44.00	132.94	0.50	20.00	208.22	3.14	188.84	578.40	0.17	0.06
0.70	29	SLE Q	1	1	70.00	-26283.60	5621.15	1025.38	44.00	132.94	0.50	20.00	211.51	3.14	194.01	461.22	0.13	0.05
0.70	42	SLE F	1	1	70.00	-26487.30	6234.12	1372.02	44.00	132.94	0.50	20.00	208.22	3.14	188.84	578.40	0.17	0.06
4.38	29	SLE Q	1	1	438.00	-24420.60	-1484.54	-5432.15	44.00	68.40	0.50	20.00	169.19	3.14	127.53	432.60	0.13	0.04
4.38	25	SLE F	1	1	438.00	-24107.40	-2557.80	-5303.40	44.00	68.40	0.50	20.00	156.51	3.14	107.62	528.86	0.15	0.04
4.68	29	SLE Q	2	1	0.00	-4008.95	-2266.33	3868.71	44.00	68.40	0.50	20.00	138.84	6.28	159.71	703.00	0.20	0.05
4.68	25	SLE F	2	1	0.00	-3876.13	-3556.54	4351.01	44.00	68.40	0.50	20.00	135.29	6.28	148.56	940.71	0.27	0.06
4.68	29	SLE Q	2	1	0.00	-4008.95	-2266.33	3868.71	44.00	171.02	0.50	18.86	211.95	3.14	206.50	1396.52	0.41	0.15
4.68	25	SLE F	2	1	0.00	-3876.13	-3556.54	4351.01	44.00	171.02	0.50	18.86	196.59	3.14	180.91	1835.43	0.53	0.18
9.30	29	SLE Q	2	1	462.00	-1670.07	1853.27	-304.38	44.00	171.02	0.50	18.86	174.53	8.29	380.57	539.72	0.16	0.05
9.30	25	SLE F	2	1	462.00	-1537.25	2244.93	-630.57	44.00	171.02	0.50	18.86	206.15	5.15	322.82	722.21	0.21	0.07

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	b _{w,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø8/15	2	232	SLU	0.45	3804.58	2.50	23366.90	44528.90	44528.90	0.45	6206.12	2.50	23366.90	44528.90	3.765
0.70	1.31	ø8/15	2	211(TG)	SLV	0.45	7135.87	2.50	23366.90	42283.90	42283.90	0.45	17293.70	2.50	23366.90	42283.90	1.351
0.70	1.31	ø8/15	2	211(TG)	SLV	0.45	7149.04	2.50	23366.90	42619.30	42619.30	0.45	17393.60	2.50	23366.90	42619.30	1.343
0.70	1.31	ø8/15	2	213(TG)	SLV	0.45	20660.10	2.50	23366.90	41692.40	41692.40	0.45	3435.19	2.50	23366.90	41692.40	1.131
0.70	1.31	ø8/15	2	213(TG)	SLV	0.45	21204.10	2.50	23366.90	43210.80	43210.80	0.45	3586.16	2.50	23366.90	43210.80	1.102
1.31	3.77	ø8/20	2	232	SLU	0.45	3804.58	2.50	17525.20	44473.70	44473.70	0.45	5843.75	2.50	17525.20	44473.70	2.999
1.31	3.77	ø8/20	2	211(TG)	SLV	0.45	7135.87	2.50	17525.20	42283.90	42283.90	0.45	17293.70	2.50	17525.20	42283.90	1.013
1.31	3.77	ø8/20	2	211(TG)	SLV	0.45	7149.04	2.50	17525.20	42619.30	42619.30	0.45	17393.60	2.50	17525.20	42619.30	1.008
1.31	3.77	ø8/20	2	29(TG)	SLV	0.45	16888.30	2.50	17525.20	42173.80	42173.80	0.45	9598.33	2.50	17525.20	42173.80	1.038
1.31	3.77	ø8/20	2	29(TG)	SLV	0.45	16993.80	2.50	17525.20	42729.50	42729.50	0.45	9656.84	2.50	17525.20	42729.50	1.031
3.77	4.38	ø8/15	2	230	SLU	0.45	3244.33	2.50	23366.90	44118.50	44118.50	0.45	4596.02	2.50	23366.90	44118.50	5.084
3.77	4.38	ø8/15	2	232	SLU	0.45	3804.58	2.50	23366.90	44253.30	44253.30	0.45	4394.28	2.50	23366.90	44253.30	5.318
3.77	4.38	ø8/15	2	211(TG)	SLV	0.45	7135.87	2.50	23366.90	42283.90	42283.90	0.45	17293.70	2.50	23366.90	42283.90	1.351
3.77	4.38	ø8/15	2	211(TG)	SLV	0.45	7149.04	2.50	23366.90	42619.30	42619.30	0.45	17393.60	2.50	23366.90	42619.30	1.343
3.77	4.38	ø8/15	2	213(TG)	SLV	0.45	20660.10	2.50	23366.90	41692.40	41692.40	0.45	3435.19	2.50	23366.90	41692.40	1.131
3.77	4.38	ø8/15	2	213(TG)	SLV	0.45	21204.10	2.50	23366.90	43210.80	43210.80	0.45	3586.16	2.50	23366.90	43210.80	1.102
4.68	5.45	ø6/10	2	233	SLU	0.45	1937.03	2.50	19715.80	40509.10	40509.10	0.45	3759.26	2.50	19715.80	40509.10	5.245
4.68	5.45	ø6/10	2	230	SLU	0.45	2099.78	2.50	19715.80	40197.10	40197.10	0.45	3345.35	2.50	19715.80	40197.10	5.893
4.68	5.45	ø6/10	2	23(TG)	SLV	0.45	2025.27	2.50	19715.80	39241.60	39241.60	0.45	6917.29	2.50	19715.80	39241.60	2.850
4.68	5.45	ø6/10	2	25(TG)	SLV	0.45	6599.66	2.50	19715.80	39321.30	39321.30	0.45	3155.83	2.50	19715.80	39321.30	2.987
5.45	8.53	ø6/15	2	233	SLU	0.45	1937.03	2.50	13143.90	40439.90	40439.90	0.45	4851.10	2.50	13143.90	40439.90	2.709
5.45	8.53	ø6/15	2	230	SLU	0.45	2099.78	2.50	13143.90	40127.90	40127.90	0.45	4437.19	2.50	13143.90	40127.90	2.962

Relazione di calcolo

5.45	8.53	ø6/15	2	23(TG)	SLV	0.45	2025.27	2.50	13143.90	39241.60	0.45	6917.29	2.50	13143.90	39241.60	1.900
5.45	8.53	ø6/15	2	25(TG)	SLV	0.45	6599.66	2.50	13143.90	39321.30	0.45	3155.83	2.50	13143.90	39321.30	1.992
8.53	9.30	ø6/10	2	232	SLU	0.45	2031.29	2.50	19715.80	40012.60	0.45	5281.90	2.50	19715.80	40012.60	3.733
8.53	9.30	ø6/10	2	230	SLU	0.45	2099.78	2.50	19715.80	39851.20	0.45	4710.15	2.50	19715.80	39851.20	4.186
8.53	9.30	ø6/10	2	23(TG)	SLV	0.45	2025.27	2.50	19715.80	39241.60	0.45	6917.29	2.50	19715.80	39241.60	2.850
8.53	9.30	ø6/10	2	25(TG)	SLV	0.45	6599.66	2.50	19715.80	39321.30	0.45	3155.83	2.50	19715.80	39321.30	2.987

Dettagli costruttivi per la duttilità

- CC=13 $\alpha_e=0.36488$ $\omega_{nd}=0.10617$ $\mu\Phi_d=7.08596$ $v_d=0.096916$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20968$ $\mu\Phi_c=11.0375$
0.03874 \geq 0.01234 [7.4.29]
- CC=13 $\alpha_e=0.36488$ $\omega_{nd}=0.10617$ $\mu\Phi_d=7.58384$ $v_d=0.096916$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20968$ $\mu\Phi_c=11.0375$
0.03874 \geq 0.01567 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.	
0.70	46	SLU	I	1	1	70.00	-26283.60	5621.15	1025.38	-26283.60	25081.50	4759.56	9.84	28.44	4.467
0.70	46	SLU	I	1	1	70.00	-26283.60	5621.15	1025.38	-26283.60	25081.50	4759.56	9.84	28.44	4.467
4.38	46	SLU	I	1	1	438.00	-24420.60	-1484.54	-5432.15	-24420.60	-7042.01	-27171.60	250.31	29.16	4.991
4.68	46	SLU	I	2	1	0.00	-4008.95	-2266.33	3868.71	-4008.95	-12530.90	21173.70	126.56	28.39	5.486
4.68	46	SLU	I	2	1	0.00	-4008.95	-2266.33	3868.71	-4008.95	-5220.88	9155.90	118.83	38.20	2.350
9.30	46	SLU	I	2	1	462.00	-1670.07	1853.27	-304.38	-1670.07	10015.40	-1564.71	352.97	57.56	5.398

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctg θ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctg θ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø8/15	2	246	SLU	I	0.35	1754.77	2.50	12605.50	52107.90	0.35	1930.90	2.50	12605.50	52107.90	6.528
1.31	3.77	ø8/20	2	246	SLU	I	0.35	1754.77	2.50	9454.14	52059.70	0.35	1930.90	2.50	9454.14	52059.70	4.896
3.77	4.38	ø8/15	2	246	SLU	I	0.35	1754.77	2.50	12605.50	51867.00	0.35	1930.90	2.50	12605.50	51867.00	6.528
4.68	5.45	ø6/10	2	246	SLU	I	0.35	903.26	2.50	10500.60	48651.50	0.35	891.69	2.50	10500.60	48651.50	11.625
5.45	8.53	ø6/15	2	246	SLU	I	0.35	903.26	2.50	7000.38	48591.00	0.35	891.69	2.50	7000.38	48591.00	7.750
8.53	9.30	ø6/10	2	246	SLU	I	0.35	903.26	2.50	10500.60	48349.10	0.35	891.69	2.50	10500.60	48349.10	11.625

Pilastrata n. 10

Nodi: -17 -54 -1347

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm ² >	Fctk <daN/cm ² >	Fcd <daN/cm ² >	Fcd (Inc) <daN/cm ² >	Fctd <daN/cm ² >	Tp	Fyk <daN/cm ² >	Fyd <daN/cm ² >
1	R	45.00	45.00	5.20	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	13	SLV	1	1	70.00	-36280.30	9618.11	9618.11	-16422.70	-16422.70	-36280.30	12309.00	-20430.10	302.34	4.10	1.253
0.70	13	SLV	1	1	70.00	-36280.30	9618.11	9618.11	-16422.70	-16422.70	-36280.30	12309.00	-20430.10	302.34	4.10	1.253
4.38	13	SLV	1	1	438.00	-34158.20	-2607.09	-2607.09	12486.10	12486.10	-34158.20	-5189.64	24334.80	102.66	5.35	1.951
4.68	9	SLV	2	1	0.00	-3410.23	-6010.87	-6010.87	-1297.59	-1297.59	-3410.23	-20958.50	-4711.83	192.66	7.15	3.493
4.68	9	SLV	2	1	0.00	-3410.23	-6010.87	-6010.87	-1297.59	-1297.59	-3410.23	-20958.50	-4711.83	192.66	7.15	3.493
9.30	33	SLU	2	1	462.00	-8261.43	9990.78	9990.78	210.34	210.34	-8261.43	22369.90	736.01	1.41	10.35	2.240

Stato limite d'esercizio - Verifiche tensionali

Xg	CC	TCC	El	Sez.	X	N	Mz	My	AfT	AfC	σ_c	σ_f	
<m>					<cm>	<daN>	<daNm>	<daNm>	<cmq>	<cmq>	<daN/cmq>	<daN/cmq>	
0.70	37	SLE	R	1	1	70.00	-40350.50	1321.84	9235.88	15.21	15.21	88.03	1001.67
0.70	29	SLE	Q	1	1	70.00	-36164.80	-486.65	5654.73	11.40	19.01	51.44	622.14
0.70	37	SLE	R	1	1	70.00	-40350.50	1321.84	9235.88	15.21	15.21	88.03	1001.67
0.70	29	SLE	Q	1	1	70.00	-36164.80	-486.65	5654.73	11.40	19.01	51.44	622.14
4.38	38	SLE	R	1	1	438.00	-39237.10	-501.60	-2460.59	0.00	30.41	30.94	408.65
4.38	21	SLE	R	1	1	438.00	-36483.80	143.59	-2823.09	0.00	30.41	29.86	392.28
4.38	29	SLE	Q	1	1	438.00	-34301.80	427.19	-1391.76	0.00	30.41	23.11	312.65
4.68	21	SLE	R	2	1	0.00	-5203.50	-866.98	-3493.53	19.01	11.40	36.94	720.48
4.68	29	SLE	Q	2	1	0.00	-3739.71	-469.69	-1963.96	19.01	11.40	20.59	375.15
4.68	21	SLE	R	2	1	0.00	-5203.50	-866.98	-3493.53	19.01	11.40	36.94	720.48
4.68	29	SLE	Q	2	1	0.00	-3739.71	-469.69	-1963.96	19.01	11.40	20.59	375.15
9.30	38	SLE	R	2	1	462.00	-5605.22	166.19	6758.63	19.01	11.40	55.78	1355.46
9.30	29	SLE	Q	2	1	462.00	-1400.83	219.34	1663.72	19.01	11.40	15.59	355.15

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
0.70	29	SLE Q	1	1	70.00	-36164.80	5654.73	-486.65	44.00	170.00	0.50	22.00	191.56	3.80	178.94	302.12	0.09	0.03
0.70	25	SLE F	1	1	70.00	-36093.90	5821.16	-389.98	44.00	170.00	0.50	22.00	204.78	3.80	201.79	323.01	0.09	0.03
0.70	29	SLE Q	1	1	70.00	-36164.80	5654.73	-486.65	44.00	170.00	0.50	22.00	191.56	3.80	178.94	302.12	0.09	0.03
0.70	25	SLE F	1	1	70.00	-36093.90	5821.16	-389.98	44.00	170.00	0.50	22.00	204.78	3.80	201.79	323.01	0.09	0.03
4.68	29	SLE Q	2	1	0.00	-3739.71	-1963.96	-469.69	44.00	170.00	0.50	22.00	167.58	7.60	275.03	375.15	0.11	0.03
4.68	25	SLE F	2	1	0.00	-3706.86	-2481.09	-627.10	44.00	170.00	0.50	22.00	169.38	7.60	281.24	512.78	0.15	0.04
4.68	29	SLE Q	2	1	0.00	-3739.71	-1963.96	-469.69	44.00	170.00	0.50	22.00	167.58	7.60	275.03	375.15	0.11	0.03

Relazione di calcolo

4.68	25	SLE F	2	1	0.00	-3706.86	-2481.09	-627.10	44.00	170.00	0.50	22.00	169.38	7.60	281.24	512.78	0.15	0.04
9.30	29	SLE Q	2	1	462.00	-1400.83	1663.72	219.34	44.00	170.00	0.50	22.00	159.99	11.40	373.18	355.15	0.10	0.03
9.30	27	SLE F	2	1	462.00	-2014.16	2385.71	232.09	44.00	170.00	0.50	22.00	163.89	11.40	393.38	498.66	0.15	0.04

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	32	SLU	0.45	963.82	2.50	39431.60	46748.50	0.45	5749.82	2.50	39431.60	46748.50	6.858
0.70	1.31	ø6/ 5	2	2	3(TG)	SLV	0.45	5222.14	2.50	39431.60	43749.00	0.45	13559.20	2.50	39431.60	43749.00	2.908
0.70	1.31	ø6/ 5	2	2	5(TG)	SLV	0.45	14931.20	2.50	39431.60	43720.20	0.45	2400.19	2.50	39431.60	43720.20	2.641
1.31	3.77	ø6/15	2	2	32	SLU	0.45	963.82	2.50	13143.90	46693.40	0.45	5260.07	2.50	13143.90	46693.40	2.499
1.31	3.77	ø6/15	2	2	3(TG)	SLV	0.45	5861.58	2.50	13143.90	43749.00	0.45	13069.60	2.50	13143.90	43749.00	1.006
1.31	3.77	ø6/15	2	2	13(TG)	SLV	0.45	13121.70	2.50	13143.90	43720.20	0.45	5029.17	2.50	13143.90	43720.20	1.002
3.77	4.38	ø6/10	2	2	19	SLU	0.45	185.28	2.50	19715.80	46387.10	0.45	3590.88	2.50	19715.80	46387.10	5.491
3.77	4.38	ø6/10	2	2	32	SLU	0.45	963.82	2.50	19715.80	46472.90	0.45	3301.06	2.50	19715.80	46472.90	5.973
3.77	4.38	ø6/10	2	2	3(TG)	SLV	0.45	5222.14	2.50	19715.80	43749.00	0.45	13559.20	2.50	19715.80	43749.00	1.454
3.77	4.38	ø6/10	2	2	5(TG)	SLV	0.45	14931.20	2.50	19715.80	43720.20	0.45	2400.19	2.50	19715.80	43720.20	1.320
4.68	5.45	ø6/10	2	2	19	SLU	0.45	362.70	2.50	19715.80	40318.00	0.45	2839.55	2.50	19715.80	40318.00	6.943
4.68	5.45	ø6/10	2	2	17	SLU	0.45	385.88	2.50	19715.80	39998.50	0.45	2269.61	2.50	19715.80	39998.50	8.687
4.68	5.45	ø6/10	2	2	11(TG)	SLV	0.45	944.75	2.50	19715.80	39167.20	0.45	10219.90	2.50	19715.80	39167.20	1.929
4.68	5.45	ø6/10	2	2	13(TG)	SLV	0.45	8275.69	2.50	19715.80	39229.10	0.45	5016.37	2.50	19715.80	39229.10	2.382
5.45	8.53	ø6/15	2	2	33	SLU	0.45	307.08	2.50	13143.90	40490.70	0.45	3842.84	2.50	13143.90	40490.70	3.420
5.45	8.53	ø6/15	2	2	17	SLU	0.45	385.88	2.50	13143.90	39929.30	0.45	2269.61	2.50	13143.90	39929.30	5.791
5.45	8.53	ø6/15	2	2	11(TG)	SLV	0.45	944.75	2.50	13143.90	39167.20	0.45	10219.90	2.50	13143.90	39167.20	1.286
5.45	8.53	ø6/15	2	2	13(TG)	SLV	0.45	8275.69	2.50	13143.90	39229.10	0.45	5016.37	2.50	13143.90	39229.10	1.588
8.53	9.30	ø6/10	2	2	32	SLU	0.45	235.04	2.50	19715.80	40061.10	0.45	4387.22	2.50	19715.80	40061.10	4.494
8.53	9.30	ø6/10	2	2	17	SLU	0.45	385.88	2.50	19715.80	39652.50	0.45	2269.61	2.50	19715.80	39652.50	8.687
8.53	9.30	ø6/10	2	2	11(TG)	SLV	0.45	944.75	2.50	19715.80	39167.20	0.45	10219.90	2.50	19715.80	39167.20	1.929
8.53	9.30	ø6/10	2	2	13(TG)	SLV	0.45	8275.69	2.50	19715.80	39229.10	0.45	5016.37	2.50	19715.80	39229.10	2.382

Dettagli costruttivi per la duttilità

- CC=1 α_e=0.37393 ω_{wd}=0.14257 μΦ_d=7.08596 v_d=0.10864 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_e=11.8551
0.05331 >= 0.01778 [7.4.29]
- CC=1 α_e=0.37393 ω_{wd}=0.14257 μΦ_d=7.58384 v_d=0.10864 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_e=11.8551
0.05331 >= 0.02149 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	46(e)	SLU I	1	1	70.00	-36164.80	5654.73	-486.65	-36164.80	18416.70	2470.82	11.25	30.72	3.249
0.70	46(e)	SLU I	1	1	70.00	-36164.80	5654.73	-486.65	-36164.80	18416.70	2470.82	11.25	30.72	3.249
4.38	46(e)	SLU I	1	1	438.00	-34301.80	-1391.76	427.19	-143489.00	-14755.60	8739.24	151.17	28.30	4.183
4.68	46	SLU I	2	1	0.00	-3739.71	-1963.96	-469.69	-3739.71	-14474.00	-3323.51	196.88	38.42	7.355
4.68	46	SLU I	2	1	0.00	-3739.71	-1963.96	-469.69	-3739.71	-14474.00	-3323.51	196.88	38.42	7.355
9.30	46	SLU I	2	1	462.00	-1400.83	1663.72	219.34	-1400.83	14766.80	2118.45	11.25	43.05	8.889

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	46	SLU I	0.35	248.33	2.50	21001.10	53641.20	0.35	1914.81	2.50	21001.10	53641.20	10.968
1.31	3.77	ø6/15	2	2	46	SLU I	0.35	248.33	2.50	7000.38	53593.00	0.35	1914.81	2.50	7000.38	53593.00	3.656
3.77	4.38	ø6/10	2	2	46	SLU I	0.35	248.33	2.50	10500.60	53400.30	0.35	1914.81	2.50	10500.60	53400.30	5.484
4.68	5.45	ø6/10	2	2	46	SLU I	0.35	149.14	2.50	10500.60	48609.70	0.35	785.21	2.50	10500.60	48609.70	13.373
5.45	8.53	ø6/15	2	2	46	SLU I	0.35	149.14	2.50	7000.38	48549.20	0.35	785.21	2.50	7000.38	48549.20	8.915
8.53	9.30	ø6/10	2	2	46	SLU I	0.35	149.14	2.50	10500.60	48307.30	0.35	785.21	2.50	10500.60	48307.30	13.373

Pilastrata n. 11

Nodi: -10 -53 -1346

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
1R		45.00	45.00	5.40	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
1R		45.00	45.00	5.20	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	13	SLV	1	1	70.00	-22229.10	11132.50	11132.50	-15162.30	-15162.30	-22229.10	21248.20	-29337.10	312.19	3.74	1.926
0.70	13	SLV	1	1	70.00	-22229.10	11132.50	11132.50	-15162.30	-15162.30	-22229.10	21248.20	-29337.10	312.19	3.74	1.926
4.38	13	SLV	1	1	438.00	-20366.10	-3211.46	-3211.46	17250.70	17250.70	-20366.10	-7112.85	39827.00	104.06	4.88	2.306
4.68	17	SLU	2	1	0.00	-5023.85	-4506.46	-4506.46	-7577.06	-7577.06	-5023.85	-18067.50	-31331.10	233.44	4.12	4.103
4.68	17	SLU	2	1	0.00	-5023.85	-4506.46	-4506.46	-7577.06	-7577.06	-5023.85	-8135.07	-13753.40	243.28	6.72	1.813
9.30	33	SLV	2	1	462.00	-5523.08	7637.97	7637.97	2856.99	2856.99	-5523.08	15022.60	5613.52	16.88	7.85	1.967

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
0.70	37	SLE R	1	1	70.00	-32241.60	1296.27	8822.16	30.41	30.41	68.25	777.14
0.70	29	SLE Q	1	1	70.00	-29247.60	-383.26	5311.99	22.81	38.01	39.96	477.02

Relazione di calcolo

0.70	37	SLE R	1	1	70.00	-32241.60	1296.27	8822.16	30.41	30.41	68.25	777.14
0.70	29	SLE Q	1	1	70.00	-29247.60	-383.26	5311.99	22.81	38.01	39.96	477.02
4.38	24	SLE R	1	1	438.00	-30037.80	3392.03	-1980.54	19.01	41.81	35.32	434.89
4.38	29	SLE Q	1	1	438.00	-27384.60	3468.33	-1095.21	19.01	41.81	30.20	374.00
4.68	21	SLE R	2	1	0.00	-3757.46	-5243.23	-3144.11	38.01	22.81	52.01	851.69
4.68	29	SLE Q	2	1	0.00	-3422.71	-3275.62	-1748.79	34.21	26.61	31.04	489.04
4.68	21	SLE R	2	1	0.00	-3757.46	-5243.23	-3144.11	15.46	5.15	86.72	1999.17
4.68	29	SLE Q	2	1	0.00	-3422.71	-3275.62	-1748.79	15.46	5.15	51.34	1146.02
9.30	38	SLE R	2	1	462.00	-3778.42	1935.47	5167.75	12.31	8.29	71.48	1736.14
9.30	29	SLE Q	2	1	462.00	-1083.83	751.00	1249.95	15.46	5.15	20.64	466.63

Stato limite d'esercizio - Verifiche a fessurazione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	c	s	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	Wk
<mm>					<cm>	<daN>	<daNm>	<daNm>	<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cmq>		<mm>
0.70	29	SLE Q	1	1	70.00	-29247.60	5311.99	-383.26	44.00	132.16	0.50	22.00	216.00	3.80	221.17	279.24	0.08	0.03
0.70	27	SLE F	1	1	70.00	-29679.60	5401.55	-366.77	44.00	132.16	0.50	22.00	217.78	3.80	224.24	283.29	0.08	0.03
0.70	29	SLE Q	1	1	70.00	-29247.60	5311.99	-383.26	44.00	132.16	0.50	22.00	216.00	3.80	221.17	279.24	0.08	0.03
0.70	27	SLE F	1	1	70.00	-29679.60	5401.55	-366.77	44.00	132.16	0.50	22.00	217.78	3.80	224.24	283.29	0.08	0.03
4.68	29	SLE Q	2	1	0.00	-3422.71	-1748.79	-3275.62	44.00	68.00	0.50	22.00	133.45	7.60	157.06	489.04	0.14	0.03
4.68	25	SLE F	2	1	0.00	-3031.93	-2245.56	-4134.28	44.00	68.00	0.50	22.00	134.63	7.60	161.13	644.60	0.19	0.04
4.68	29	SLE Q	2	1	0.00	-3422.71	-1748.79	-3275.62	44.00	171.02	0.50	18.86	217.60	3.14	215.91	1146.02	0.33	0.12
4.68	25	SLE F	2	1	0.00	-3031.93	-2245.56	-4134.28	44.00	171.02	0.50	18.86	220.13	3.14	220.13	1523.51	0.44	0.17
9.30	29	SLE Q	2	1	462.00	-1083.83	1249.95	751.00	44.00	171.01	0.50	18.86	212.22	3.14	206.95	466.63	0.14	0.05
9.30	27	SLE F	2	1	462.00	-1534.09	1805.15	846.16	44.00	171.01	0.50	18.86	229.32	3.14	235.44	627.13	0.18	0.07

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	b _{w,y}	V _{sd_y}	ctgθ _y	VR _{sd,y}	VR _{cd,y}	b _{w,z}	V _{sd_z}	ctgθ _z	VR _{sd,z}	VR _{cd,z}	Sic.
<mm>	<mm>						<mm>	<daN>		<daN>	<daN>	<mm>	<daN>		<daN>	<daN>	
0.70	1.31	ø8/15	2	2	32	SLU	0.45	143.92	2.50	23366.90	45158.30	0.45	5254.78	2.50	23366.90	45158.30	4.447
0.70	1.31	ø8/15	2	2	20	SLU	0.45	1420.13	2.50	23366.90	45088.50	0.45	3045.42	2.50	23366.90	45088.50	7.673
0.70	1.31	ø8/15	2	2	3(TG)	SLV	0.45	3536.86	2.50	23366.90	42820.30	0.45	22131.40	2.50	23366.90	42820.30	1.056
0.70	1.31	ø8/15	2	2	3(TG)	SLV	0.45	3236.80	2.50	23366.90	42923.10	0.45	22148.60	2.50	23366.90	42923.10	1.055
0.70	1.31	ø8/15	2	2	7(TG)	SLV	0.45	23188.90	2.50	23366.90	42139.90	0.45	5446.64	2.50	23366.90	42139.90	1.008
1.31	3.77	ø8/20	2	2	32	SLU	0.45	143.92	2.50	17525.20	45103.20	0.45	4909.82	2.50	17525.20	45103.20	3.569
1.31	3.77	ø8/20	2	2	20	SLU	0.45	1420.13	2.50	17525.20	45033.40	0.45	3045.42	2.50	17525.20	45033.40	5.755
1.31	3.77	ø8/20	2	2	1(TG)	SLV	0.45	11143.50	2.50	17525.20	42450.80	0.45	17480.70	2.50	17525.20	42450.80	1.003
1.31	3.77	ø8/20	2	2	1(TG)	SLV	0.45	11497.40	2.50	17525.20	43292.60	0.45	17495.40	2.50	17525.20	43292.60	1.002
1.31	3.77	ø8/20	2	2	9(TG)	SLV	0.45	17215.90	2.50	17525.20	42219.30	0.45	12866.90	2.50	17525.20	42219.30	1.018
1.31	3.77	ø8/20	2	2	9(TG)	SLV	0.45	17332.10	2.50	17525.20	43061.20	0.45	12956.70	2.50	17525.20	43061.20	1.011
3.77	4.38	ø8/15	2	2	32	SLU	0.45	143.92	2.50	23366.90	44882.70	0.45	3529.97	2.50	23366.90	44882.70	6.620
3.77	4.38	ø8/15	2	2	20	SLU	0.45	1420.13	2.50	23366.90	44812.90	0.45	3045.42	2.50	23366.90	44812.90	7.673
3.77	4.38	ø8/15	2	2	3(TG)	SLV	0.45	3536.86	2.50	23366.90	42820.30	0.45	22131.40	2.50	23366.90	42820.30	1.056
3.77	4.38	ø8/15	2	2	3(TG)	SLV	0.45	3236.80	2.50	23366.90	42923.10	0.45	22148.60	2.50	23366.90	42923.10	1.055
3.77	4.38	ø8/15	2	2	7(TG)	SLV	0.45	23188.90	2.50	23366.90	42139.90	0.45	5446.64	2.50	23366.90	42139.90	1.008
4.68	5.45	ø6/10	2	2	19	SLU	0.45	2099.74	2.50	19715.80	39997.20	0.45	2297.94	2.50	19715.80	39997.20	8.580
4.68	5.45	ø6/10	2	2	17	SLU	0.45	2349.58	2.50	19715.80	39702.60	0.45	1881.57	2.50	19715.80	39702.60	8.391
4.68	5.45	ø6/10	2	2	1(TG)	SLV	0.45	2322.84	2.50	19715.80	39223.40	0.45	6760.23	2.50	19715.80	39223.40	2.916
4.68	5.45	ø6/10	2	2	13(TG)	SLV	0.45	6688.92	2.50	19715.80	39195.10	0.45	2200.15	2.50	19715.80	39195.10	2.948
4.68	5.45	ø6/10	2	2	13(TG)	SLV	0.45	6688.92	2.50	19715.80	39195.10	0.45	2200.15	2.50	19715.80	39195.10	2.948
5.45	8.53	ø6/15	2	2	33	SLU	0.45	2080.83	2.50	13143.90	40116.80	0.45	3136.36	2.50	13143.90	40116.80	4.191
5.45	8.53	ø6/15	2	2	17	SLU	0.45	2349.58	2.50	13143.90	39633.40	0.45	1881.57	2.50	13143.90	39633.40	5.594
5.45	8.53	ø6/15	2	2	1(TG)	SLV	0.45	2322.84	2.50	13143.90	39223.40	0.45	6760.23	2.50	13143.90	39223.40	1.944
5.45	8.53	ø6/15	2	2	13(TG)	SLV	0.45	6688.92	2.50	13143.90	39195.10	0.45	2200.15	2.50	13143.90	39195.10	1.965
8.53	9.30	ø6/10	2	2	32	SLU	0.45	1938.60	2.50	19715.80	39735.20	0.45	3553.09	2.50	19715.80	39735.20	5.549
8.53	9.30	ø6/10	2	2	17	SLU	0.45	2349.58	2.50	19715.80	39356.60	0.45	1881.57	2.50	19715.80	39356.60	8.391
8.53	9.30	ø6/10	2	2	1(TG)	SLV	0.45	2322.84	2.50	19715.80	39223.40	0.45	6760.23	2.50	19715.80	39223.40	2.916
8.53	9.30	ø6/10	2	2	13(TG)	SLV	0.45	6688.92	2.50	19715.80	39195.10	0.45	2200.15	2.50	19715.80	39195.10	2.948
8.53	9.30	ø6/10	2	2	13(TG)	SLV	0.45	6688.92	2.50	19715.80	39195.10	0.45	2200.15	2.50	19715.80	39195.10	2.948

Dettagli costruttivi per la duttilità

- CC=5 α_e=0.36804 ω_{wd}=0.10617 μΦ_d=7.08596 v_d=0.10789 E_{sy,d}=0.0018995 b_c/b₀=1.20968 μΦ_e=9.96032
0.03908 >= 0.0177 [7.4.29]

- CC=5 α_e=0.36804 ω_{wd}=0.10617 μΦ_d=7.58384 v_d=0.10789 E_{sy,d}=0.0018995 b_c/b₀=1.20968 μΦ_e=9.96032
0.03908 >= 0.0214 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	Nu	MR _{dy}	MR _{dz}	α	ε _y	Sic.
<mm>					<cm>	<daN>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
0.70	46(e)	SLU I	1	1	70.00	-29247.60	5311.99	-383.26	-143489.00	28799.30	-3883.06	351.56	27.26	4.906
0.70	46(e)	SLU I	1	1	70.00	-29247.60	5311.99	-383.26	-143489.00	28799.30	-3883.06	351.56	27.26	4.906
4.38	46	SLU I	1	1	438.00	-27384.60	-1095.21	3468.33	-143489.00	-9127.49	29681.70	112.50	27.19	5.240
4.68	46	SLU I	2	1	0.00	-3422.71	-1748.79	-3275.62	-3422.71	-13350.00	-24630.80	233.44	27.37	7.547
4.68	46	SLU I	2	1	0.00	-3422.71	-1748.79	-3275.62	-3422.71	-4899.49	-9327.25	244.69	39.02	2.838
9.30	46	SLU I	2	1	462.00	-1083.83	1249.95	751.00	-1083.83	8846.17	5117.77	29.53	39.05	7.007

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	b _{w,y}	V _{sd_y}	ctgθ _y	VR _{sd,y}	VR _{cd,y}	b _{w,z}	V _{sd_z}	ctgθ _z	VR _{sd,z}	VR _{cd,z}	Sic.
<mm>	<mm>						<mm>	<daN>		<daN>	<daN>	<mm>	<daN>		<daN>	<daN>	
0.70	1.31	ø8/15	2	2	46	SLU I	0.35	1046.63	2.50	12605.50	52567.80	0.35	1741.09	2.50	12605.50	52567.80	7.240
1.31	3.77	ø8/20	2	2	46	SLU I	0.35	1046.63	2.50	9454.14	52519.70	0.35	1741.09	2.50	9454.14	52519.70	5.430
3.77	4.38	ø8/15	2	2	46	SLU I	0.35	1046.63	2.50	12605.50	52326.90	0.35	1741.09	2.50	12605.50	52326.90	7.240

Relazione di calcolo

4.68	5.45	ø6/10	2	246	SLU I	0.35	871.56	2.50	10500.60	48560.50	0.35	649.08	2.50	10500.60	48560.50	12.048
5.45	8.53	ø6/15	2	246	SLU I	0.35	871.56	2.50	7000.38	48500.00	0.35	649.08	2.50	7000.38	48500.00	8.032
8.53	9.30	ø6/10	2	246	SLU I	0.35	871.56	2.50	10500.60	48258.10	0.35	649.08	2.50	10500.60	48258.10	12.048

Pilastrata n. 12

Nodi: -4 -52 -1344

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
1R		45.00	45.00	4.90	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
1R		45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	9	SLV	1	1	70.00	-7348.00	17061.90	17061.90	-4925.85	-4925.85	-7348.00	18479.50	-5377.45	347.34	6.41	1.084
0.70	9	SLV	1	1	70.00	-7348.00	17061.90	17061.90	-4925.85	-4925.85	-7348.00	18479.50	-5377.45	347.34	6.41	1.084
4.38	5	SLV	1	1	438.00	1169.22	4540.81	4540.81	-12293.50	-12293.50	1169.22	6981.77	-18250.40	292.50	7.04	1.491
4.68	9	SLV	2	1	0.00	-2518.35	-6053.26	-6053.26	-735.33	-735.33	-2518.35	-18684.10	-2476.99	185.62	7.89	3.091
4.68	9	SLV	2	1	0.00	-2518.35	-6053.26	-6053.26	-735.33	-735.33	-2518.35	-15084.20	-1878.46	184.22	12.73	2.493
9.30	17	SLU	2	1	462.00	-2165.15	801.62	801.62	2191.09	2191.09	-2165.15	5287.13	14620.90	74.53	8.46	6.664

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
0.70	37	SLE R	1	1	70.00	-9177.98	2659.49	7901.36	20.11	8.04	101.71	2217.05
0.70	29	SLE Q	1	1	70.00	-9002.74	1252.15	4420.76	16.09	12.06	54.13	1051.02
0.70	37	SLE R	1	1	70.00	-9177.98	2659.49	7901.36	20.11	8.04	101.71	2217.05
0.70	29	SLE Q	1	1	70.00	-9002.74	1252.15	4420.76	16.09	12.06	54.13	1051.02
4.38	37	SLE R	1	1	438.00	-7314.98	-2294.08	-2071.02	18.10	10.05	39.92	630.77
4.38	29	SLE Q	1	1	438.00	-7139.74	-694.49	-51.23	2.01	26.14	6.74	87.70
4.68	35	SLE R	2	1	0.00	-3817.36	-2431.73	-2936.87	20.11	8.04	51.37	1021.38
4.68	29	SLE Q	2	1	0.00	-2694.19	-279.15	-1573.70	18.10	10.05	17.75	373.84
4.68	35	SLE R	2	1	0.00	-3817.36	-2431.73	-2936.87	13.45	7.16	55.77	1179.58
4.68	29	SLE Q	2	1	0.00	-2694.19	-279.15	-1573.70	12.31	8.29	17.89	398.26
9.30	21	SLE R	2	1	462.00	-1454.32	1440.91	552.51	12.31	8.29	20.02	465.41
9.30	29	SLE Q	2	1	462.00	-355.32	89.75	149.15	10.30	10.30	2.39	43.85

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
0.70	29	SLE Q	1	1	70.00	-9002.74	4420.76	1252.15	44.00	186.33	0.50	16.00	203.27	4.02	289.71	1051.02	0.31	0.11
0.70	42	SLE F	1	1	70.00	-8789.70	5034.85	1453.58	44.00	186.33	0.50	16.00	206.10	4.02	296.82	1259.72	0.37	0.13
0.70	29	SLE Q	1	1	70.00	-9002.74	4420.76	1252.15	44.00	186.33	0.50	16.00	203.27	4.02	289.71	1051.02	0.31	0.11
0.70	42	SLE F	1	1	70.00	-8789.70	5034.85	1453.58	44.00	186.33	0.50	16.00	206.10	4.02	296.82	1259.72	0.37	0.13
4.38	25	SLE F	1	1	438.00	-7859.34	-475.27	-1246.69	44.00	69.20	0.50	16.00	157.86	2.01	87.79	105.93	0.03	0.01
4.68	29	SLE Q	2	1	0.00	-2694.19	-1573.70	-279.15	44.00	186.32	0.50	16.00	181.17	6.03	351.25	373.84	0.11	0.03
4.68	25	SLE F	2	1	0.00	-3132.09	-2098.45	-1300.78	44.00	186.32	0.50	16.00	247.58	2.01	200.54	643.93	0.19	0.08
4.68	29	SLE Q	2	1	0.00	-2694.19	-1573.70	-279.15	44.00	171.01	0.50	18.86	215.05	5.15	347.15	398.26	0.12	0.04
4.68	25	SLE F	2	1	0.00	-3132.09	-2098.45	-1300.78	44.00	171.01	0.50	18.86	204.10	3.14	193.43	721.28	0.21	0.07
9.30	29	SLE Q	2	1	462.00	-355.32	149.15	89.75	44.00	171.02	0.50	18.86	195.46	3.14	179.02	43.85	0.01	0.00
9.30	25	SLE F	2	1	462.00	-793.22	250.70	723.32	44.00	171.02	0.50	18.86	188.10	5.15	273.51	225.57	0.07	0.02

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/10	2	232	SLU	0.45	1902.44	2.50	19715.80	40713.00	0.45	4248.44	2.50	19715.80	40713.00	4.641	
0.70	1.31	ø6/10	2	211 (TG)	SLV	0.45	1339.65	2.50	19715.80	40357.30	0.45	11788.20	2.50	19715.80	40357.30	1.673	
0.70	1.31	ø6/10	2	27 (TG)	SLV	0.45	13059.80	2.50	19715.80	40829.20	0.45	1714.72	2.50	19715.80	40829.20	1.510	
1.31	3.77	ø6/15	2	232	SLU	0.45	1902.44	2.50	13143.90	40657.90	0.45	4146.78	2.50	13143.90	40657.90	3.170	
1.31	3.77	ø6/15	2	211 (TG)	SLV	0.45	1339.65	2.50	13143.90	40357.30	0.45	11788.20	2.50	13143.90	40357.30	1.115	
1.31	3.77	ø6/15	2	27 (TG)	SLV	0.45	13059.80	2.50	13143.90	40829.20	0.45	1714.72	2.50	13143.90	40829.20	1.006	
3.77	4.38	ø6/10	2	232	SLU	0.45	1902.44	2.50	19715.80	40437.40	0.45	3740.10	2.50	19715.80	40437.40	5.271	
3.77	4.38	ø6/10	2	211 (TG)	SLV	0.45	1339.65	2.50	19715.80	40357.30	0.45	11788.20	2.50	19715.80	40357.30	1.673	
3.77	4.38	ø6/10	2	27 (TG)	SLV	0.45	13059.80	2.50	19715.80	40829.20	0.45	1714.72	2.50	19715.80	40829.20	1.510	
4.68	5.45	ø6/10	2	217	SLU	0.45	1263.71	2.50	19715.80	39727.40	0.45	984.37	2.50	19715.80	39727.40	15.602	
4.68	5.45	ø6/10	2	21 (TG)	SLV	0.45	1322.36	2.50	19715.80	39026.90	0.45	7110.69	2.50	19715.80	39026.90	2.773	
4.68	5.45	ø6/10	2	29 (TG)	SLV	0.45	1020.00	2.50	19715.80	39108.50	0.45	7119.80	2.50	19715.80	39108.50	2.769	
4.68	5.45	ø6/10	2	213 (TG)	SLV	0.45	6755.71	2.50	19715.80	39122.70	0.45	2743.00	2.50	19715.80	39122.70	2.918	
5.45	8.53	ø6/15	2	232	SLU	0.45	787.29	2.50	13143.90	39594.70	0.45	1229.70	2.50	13143.90	39594.70	10.689	
5.45	8.53	ø6/15	2	217	SLU	0.45	1263.71	2.50	13143.90	39658.20	0.45	984.37	2.50	13143.90	39658.20	10.401	
5.45	8.53	ø6/15	2	21 (TG)	SLV	0.45	1322.36	2.50	13143.90	39026.90	0.45	7110.69	2.50	13143.90	39026.90	1.848	
5.45	8.53	ø6/15	2	29 (TG)	SLV	0.45	1020.00	2.50	13143.90	39108.50	0.45	7119.80	2.50	13143.90	39108.50	1.846	
5.45	8.53	ø6/15	2	213 (TG)	SLV	0.45	6755.71	2.50	13143.90	39122.70	0.45	2743.00	2.50	13143.90	39122.70	1.946	
8.53	9.30	ø6/10	2	232	SLU	0.45	787.29	2.50	19715.80	39317.90	0.45	1357.33	2.50	19715.80	39317.90	14.525	
8.53	9.30	ø6/10	2	217	SLU	0.45	1263.71	2.50	19715.80	39381.40	0.45	984.37	2.50	19715.80	39381.40	15.602	
8.53	9.30	ø6/10	2	21 (TG)	SLV	0.45	1322.36	2.50	19715.80	39026.90	0.45	7110.69	2.50	19715.80	39026.90	2.773	
8.53	9.30	ø6/10	2	29 (TG)	SLV	0.45	1020.00	2.50	19715.80	39108.50	0.45	7119.80	2.50	19715.80	39108.50	2.769	
8.53	9.30	ø6/10	2	213 (TG)	SLV	0.45	6755.71	2.50	19715.80	39122.70	0.45	2743.00	2.50	19715.80	39122.70	2.918	

Dettagli costruttivi per la duttilità

Relazione di calcolo

- CC=13 $\alpha_e=0.41809$ $\omega_{nd}=0.0891$ $\mu\Phi_d=7.08596$ $v_d=0.0515$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=20.4619$
0.03725 >= -0.00998 [7.4.29]
- CC=13 $\alpha_e=0.41809$ $\omega_{nd}=0.0891$ $\mu\Phi_d=7.58384$ $v_d=0.0515$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=20.4619$
0.03725 >= -0.00822 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε_y	Sic.
0.70	46	SLU I	1	1	70.00	-9002.74	4420.76	1252.15	-9002.74	14031.70	3895.45	11.25	36.82	3.169
0.70	46	SLU I	1	1	70.00	-9002.74	4420.76	1252.15	-9002.74	14031.70	3895.45	11.25	36.82	3.169
4.38	46(e)	SLU I	1	1	438.00	-7139.74	-51.23	-694.49	-143489.00	-4119.52	-16018.00	247.50	37.48	20.097
4.68	46	SLU I	2	1	0.00	-2694.19	-1573.70	-279.15	-2694.19	-14217.10	-2608.34	183.52	45.01	9.045
4.68	46	SLU I	2	1	0.00	-2694.19	-1573.70	-279.15	-2694.19	-10117.30	-1860.29	188.44	54.73	6.437
9.30	46	SLU I	2	1	462.00	-355.32	149.15	89.75	-355.32	8704.03	5108.74	30.23	39.20	57.951

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø6/10	2	246	SLU I	0.35	528.98	2.50	10500.60	49426.40	0.35	1215.21	2.50	10500.60	49426.40	8.641	
1.31	3.77	ø6/15	2	246	SLU I	0.35	528.98	2.50	7000.38	49378.20	0.35	1215.21	2.50	7000.38	49378.20	5.761	
3.77	4.38	ø6/10	2	246	SLU I	0.35	528.98	2.50	10500.60	49185.50	0.35	1215.21	2.50	10500.60	49185.50	8.641	
4.68	5.45	ø6/10	2	246	SLU I	0.35	79.85	2.50	10500.60	48447.50	0.35	372.91	2.50	10500.60	48447.50	28.158	
5.45	8.53	ø6/15	2	246	SLU I	0.35	79.85	2.50	7000.38	48387.00	0.35	372.91	2.50	7000.38	48387.00	18.772	
8.53	9.30	ø6/10	2	246	SLU I	0.35	79.85	2.50	10500.60	48145.00	0.35	372.91	2.50	10500.60	48145.00	28.158	

Pilastrata n. 23

Nodi: 1 -58 -1336

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	R <cm>	Cf <cm>	Cls	Fck <daN/cm ² >	Fctk <daN/cm ² >	Fcd <daN/cm ² >	Fcd (Inc) <daN/cm ² >	Fctd <daN/cm ² >	TP	Fyk <daN/cm ² >	Fyd <daN/cm ² >
8	Cir.			25.00	4.90	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
1	R	45.00	45.00		5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Verifiche zone a sezione circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε_y	Sic.
0.70	1	SLV	1	8	70.00	-5394.07	-14978.80	-14978.80	3487.63	3487.63	-5394.07	-15433.70	3804.21	165.94	8.31	1.034
0.70	1	SLV	1	8	70.00	-5394.07	-14978.80	-14978.80	3487.63	3487.63	-5394.07	-15433.70	3804.21	165.94	8.31	1.034
4.38	13	SLV	1	8	438.00	948.58	-3882.70	-3882.70	-8173.81	-8173.81	948.58	-6458.78	-13734.90	244.69	9.37	1.677

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cm ² >	σ_f <daN/cm ² >
0.70	21	SLE R	1	8	70.00	-8338.19	2333.45	-4007.65	14.07	8.04	56.97	1233.58
0.70	29	SLE Q	1	8	70.00	-6335.80	1553.01	-3647.88	14.07	8.04	48.90	1082.47
0.70	21	SLE R	1	8	70.00	-8338.19	2333.45	-4007.65	14.07	8.04	56.97	1233.58
0.70	29	SLE Q	1	8	70.00	-6335.80	1553.01	-3647.88	14.07	8.04	48.90	1082.47
4.38	37	SLE R	1	8	438.00	-4418.92	-4289.70	-539.53	14.07	8.04	53.29	1283.03
4.38	29	SLE Q	1	8	438.00	-4529.38	-1494.10	271.43	14.07	8.04	18.24	320.26

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cm ² >	ε_{sm}	Wk <mm>
0.70	29	SLE Q	1	8	70.00	-6335.80	-3647.88	1553.01	44.00	391.97	0.50	16.00	238.97	6.03	298.82	1082.47	0.32	0.13
0.70	25	SLE F	1	8	70.00	-7185.46	-3743.34	1924.09	44.00	391.97	0.50	16.00	236.03	6.03	301.44	1134.99	0.33	0.13
0.70	29	SLE Q	1	8	70.00	-6335.80	-3647.88	1553.01	44.00	391.97	0.50	16.00	238.97	6.03	298.82	1082.47	0.32	0.13
0.70	25	SLE F	1	8	70.00	-7185.46	-3743.34	1924.09	44.00	391.97	0.50	16.00	236.03	6.03	301.44	1134.99	0.33	0.13
4.38	29	SLE Q	1	8	438.00	-4529.38	271.43	-1494.10	44.00	111.57	0.50	16.00	158.63	6.03	266.26	320.26	0.09	0.03
4.38	25	SLE F	1	8	438.00	-5379.04	607.84	-2057.11	44.00	111.57	0.50	16.00	160.51	6.03	273.34	494.80	0.14	0.04

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	b _w <cm>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/ 8	32	SLU	0.35	3270.23	2.50	18642.50	23885.60	5.701
0.70	1.31	ø6/ 8	15(TG)	SLV	0.35	9829.91	2.50	18642.50	23825.10	1.897
1.31	3.77	ø6/14	32	SLU	0.35	3270.23	2.50	10652.80	23852.90	3.258
1.31	3.77	ø6/14	15(TG)	SLV	0.35	9829.91	2.50	10652.80	23825.10	1.084
3.77	4.38	ø6/12	32	SLU	0.35	3270.23	2.50	12428.30	23721.80	3.800
3.77	4.38	ø6/12	15(TG)	SLV	0.35	9829.91	2.50	12428.30	23825.10	1.264

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Relazione di calcolo

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε_y	Sic.
0.70	46	SLU I	1	8	70.00	-6335.80	-3647.88	1553.01	-6335.80	-10634.70	4507.47	156.09	48.12	2.915
0.70	46	SLU I	1	8	70.00	-6335.80	-3647.88	1553.01	-6335.80	-10634.70	4507.47	156.09	48.12	2.915
4.38	46	SLU I	1	8	438.00	-4529.38	271.43	-1494.10	-4529.38	2041.56	-11214.50	279.84	52.20	7.505

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
4.68	5.45	ø6/10	2	246	SLU I	0.35	27.65	2.50	10500.60	48438.40	0.35	292.92	2.50	10500.60	48438.40	35.849	
5.45	8.53	ø6/15	2	246	SLU I	0.35	27.65	2.50	7000.38	48377.90	0.35	292.92	2.50	7000.38	48377.90	23.899	
8.53	9.30	ø6/10	2	246	SLU I	0.35	27.65	2.50	10500.60	48135.90	0.35	292.92	2.50	10500.60	48135.90	35.849	

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	b _w <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/ 8	46	SLU I	0.26	1349.04	2.50	5280.09	21298.30	3.914
1.31	3.77	ø6/14	46	SLU I	0.26	1349.04	2.50	3142.98	21274.40	2.330
3.77	4.38	ø6/12	46	SLU I	0.26	1349.04	2.50	3646.95	21178.50	2.703

Verifiche zone a sezione non circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε_y	Sic.
4.68	1	SLV	2	1	0.00	-2813.57	5408.05	5408.05	565.36	565.36	-2813.57	15160.50	1332.32	2.81	13.60	2.799
4.68	1	SLV	2	1	0.00	-2813.57	5408.05	5408.05	565.36	565.36	-2813.57	15160.50	1332.32	2.81	13.60	2.799
9.30	17	SLU	2	1	462.00	-2337.01	-475.04	-475.04	2221.80	2221.80	-2337.01	-3321.74	14947.40	98.44	10.64	6.739

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cmq>	σ_s <daN/cmq>
4.68	21	SLE R	2	1	0.00	-3896.67	-1979.77	2291.36	13.45	7.16	44.06	890.07
4.68	29	SLE Q	2	1	0.00	-2635.41	160.05	1349.93	12.31	8.29	14.41	314.19
4.68	21	SLE R	2	1	0.00	-3896.67	-1979.77	2291.36	13.45	7.16	44.06	890.07
4.68	29	SLE Q	2	1	0.00	-2635.41	160.05	1349.93	12.31	8.29	14.41	314.19
9.30	35	SLE R	2	1	462.00	-1618.39	1333.82	-659.61	12.31	8.29	20.23	444.37
9.30	29	SLE Q	2	1	462.00	-296.54	32.30	-3.34	8.29	12.31	0.33	4.21

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
4.68	29	SLE Q	2	1	0.00	-2635.41	1349.93	160.05	44.00	171.02	0.50	18.86	172.76	8.29	372.81	314.19	0.09	0.03
4.68	25	SLE F	2	1	0.00	-3175.04	1814.43	-840.80	44.00	171.02	0.50	18.86	217.07	3.14	215.02	543.31	0.16	0.06
4.68	29	SLE Q	2	1	0.00	-2635.41	1349.93	160.05	44.00	171.02	0.50	18.86	172.76	8.29	372.81	314.19	0.09	0.03
4.68	25	SLE F	2	1	0.00	-3175.04	1814.43	-840.80	44.00	171.02	0.50	18.86	217.07	3.14	215.02	543.31	0.16	0.06
9.30	25	SLE F	2	1	462.00	-836.16	-113.63	691.17	44.00	171.01	0.50	18.86	172.35	8.29	370.99	190.62	0.06	0.02

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
4.68	5.45	ø6/10	2	230	SLU	0.45	1111.77	2.50	19715.80	39763.30	0.45	1015.77	2.50	19715.80	39763.30	17.734	
4.68	5.45	ø6/10	2	217	SLU	0.45	1134.62	2.50	19715.80	39750.90	0.45	797.50	2.50	19715.80	39750.90	17.377	
4.68	5.45	ø6/10	2	211 (TG)	SLV	0.45	186.97	2.50	19715.80	39032.70	0.45	7150.15	2.50	19715.80	39032.70	2.757	
4.68	5.45	ø6/10	2	25 (TG)	SLV	0.45	6478.09	2.50	19715.80	39081.40	0.45	3151.09	2.50	19715.80	39081.40	3.043	
5.45	8.53	ø6/15	2	230	SLU	0.45	1111.77	2.50	13143.90	39694.10	0.45	951.11	2.50	13143.90	39694.10	11.822	
5.45	8.53	ø6/15	2	217	SLU	0.45	1134.62	2.50	13143.90	39681.70	0.45	797.50	2.50	13143.90	39681.70	11.584	
5.45	8.53	ø6/15	2	211 (TG)	SLV	0.45	186.97	2.50	13143.90	39032.70	0.45	7150.15	2.50	13143.90	39032.70	1.838	
5.45	8.53	ø6/15	2	25 (TG)	SLV	0.45	6478.09	2.50	13143.90	39081.40	0.45	3151.09	2.50	13143.90	39081.40	2.029	
8.53	9.30	ø6/10	2	217	SLU	0.45	1134.62	2.50	19715.80	39404.90	0.45	797.50	2.50	19715.80	39404.90	17.377	
8.53	9.30	ø6/10	2	211 (TG)	SLV	0.45	186.97	2.50	19715.80	39032.70	0.45	7150.15	2.50	19715.80	39032.70	2.757	
8.53	9.30	ø6/10	2	25 (TG)	SLV	0.45	6478.09	2.50	19715.80	39081.40	0.45	3151.09	2.50	19715.80	39081.40	3.043	

Altre verifiche

Dettagli costruttivi per la duttilità

- CC=5 α_e=0.82261 ω_{wd}=0.07973 μΦ_d=7.08596 v_d=0.036848 E_{sy,d}=0.0018995 b_c/b₀=1.17925 μΦ_c=40.619
0.06558 >= -0.01745 [7.4.29]

- CC=5 α_e=0.82261 ω_{wd}=0.07973 μΦ_d=7.58384 v_d=0.036848 E_{sy,d}=0.0018995 b_c/b₀=1.17925 μΦ_c=40.619
0.06558 >= -0.01622 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	Nu	MRdy	MRdz	α	ε _y	Sic.
----	----	-----	----	------	---	---	----	----	----	------	------	---	----------------	------

Relazione di calcolo

<m>					<cm>	<daN>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
4.68	46	SLU I	2	1	0.00	-2635.41	1349.93	160.05	-2635.41	10369.90	1017.89	6.26	57.25	7.664
4.68	46	SLU I	2	1	0.00	-2635.41	1349.93	160.05	-2635.41	10369.90	1017.89	6.26	57.25	7.664
9.30	46 (e)	SLU I	2	1	462.00	-296.54	-3.34	32.30	-296.54	-2012.76	9707.51	99.84	54.17	>100

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
4.68	5.45	ø6/10	2	2	46	SLU I	0.35	27.65	2.50	10500.60	48438.40	0.35	292.92	2.50	10500.60	48438.40	35.849
5.45	8.53	ø6/15	2	2	46	SLU I	0.35	27.65	2.50	7000.38	48377.90	0.35	292.92	2.50	7000.38	48377.90	23.899
8.53	9.30	ø6/10	2	2	46	SLU I	0.35	27.65	2.50	10500.60	48135.90	0.35	292.92	2.50	10500.60	48135.90	35.849

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/ 8	46	SLU I	0.26	1349.04	2.50	5280.09	21298.30	3.914
1.31	3.77	ø6/14	46	SLU I	0.26	1349.04	2.50	3142.98	21274.40	2.330
3.77	4.38	ø6/12	46	SLU I	0.26	1349.04	2.50	3646.95	21178.50	2.703

Pilastrata n. 24

Nodi: -11 -59 -1340

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	R <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
	8Cir.			25.00	4.90	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
	1R	45.00	45.00		5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Verifiche zone a sezione circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	1	SLV	1	8	70.00	-24495.80	-14247.10	-14247.10	-4954.02	-4954.02	-24495.80	-25197.20	-8997.86	199.69	5.48	1.774
0.70	1	SLV	1	8	70.00	-24495.80	-14247.10	-14247.10	-4954.02	-4954.02	-24495.80	-25197.20	-8997.86	199.69	5.48	1.774
4.38	5	SLV	1	8	438.00	-21503.10	3172.07	3172.07	10438.40	10438.40	-21503.10	7715.69	25391.30	73.12	5.55	2.432

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
0.70	24	SLE R	1	8	70.00	-30351.90	316.56	-4866.11	16.09	22.12	47.12	585.84
0.70	21	SLE R	1	8	70.00	-28142.40	690.32	-4753.10	16.09	22.12	45.97	574.01
0.70	29	SLE Q	1	8	70.00	-28197.10	49.63	-4308.29	14.07	24.13	41.82	519.20
0.70	24	SLE R	1	8	70.00	-30351.90	316.56	-4866.11	16.09	22.12	47.12	585.84
0.70	21	SLE R	1	8	70.00	-28142.40	690.32	-4753.10	16.09	22.12	45.97	574.01
0.70	29	SLE Q	1	8	70.00	-28197.10	49.63	-4308.29	14.07	24.13	41.82	519.20
4.38	24	SLE R	1	8	438.00	-28545.50	2531.84	1712.26	10.05	28.15	31.08	403.33
4.38	29	SLE Q	1	8	438.00	-26390.70	2728.52	961.92	10.05	28.15	29.27	378.13

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
0.70	29	SLE Q	1	8	70.00	-28197.10	-4308.29	49.63	44.00	65.18	0.50	16.00	192.76	2.01	131.65	264.04	0.08	0.03
0.70	28	SLE F	1	8	70.00	-28730.00	-4371.81	7.48	44.00	65.18	0.50	16.00	192.14	2.01	130.86	266.00	0.08	0.03
0.70	29	SLE Q	1	8	70.00	-28197.10	-4308.29	49.63	44.00	65.18	0.50	16.00	192.76	2.01	131.65	264.04	0.08	0.03
0.70	28	SLE F	1	8	70.00	-28730.00	-4371.81	7.48	44.00	65.18	0.50	16.00	192.14	2.01	130.86	266.00	0.08	0.03

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/ 6	19	SLU	0.35	2654.25	2.50	24856.60	26638.20	9.365
0.70	1.31	ø6/ 6	7 (TG)	SLV	0.35	15963.80	2.50	24856.60	25075.00	1.557
0.70	1.31	ø6/ 6	9 (TG)	SLV	0.35	16316.60	2.50	24856.60	25707.00	1.523
1.31	3.77	ø6/14	19	SLU	0.35	2654.25	2.50	10652.80	26605.40	4.014
1.31	3.77	ø6/14	1 (TG)	SND	0.35	9433.08	2.50	10652.80	25801.20	1.129
3.77	4.38	ø6/12	19	SLU	0.35	2654.25	2.50	12428.30	26474.40	4.682
3.77	4.38	ø6/12	1 (TG)	SND	0.35	9433.08	2.50	12428.30	25801.20	1.318

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	46 (e)	SLU I	1	8	70.00	-28197.10	-4308.29	49.63	-28197.10	-19515.90	2954.26	171.56	32.34	4.498
0.70	46 (e)	SLU I	1	8	70.00	-28197.10	-4308.29	49.63	-28197.10	-19515.90	2954.26	171.56	32.34	4.498
4.38	46	SLU I	1	8	438.00	-26390.70	961.92	2728.52	-137649.00	6011.96	18599.80	70.31	33.84	5.216

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
4.68	5.45	ø6/10	2	2	46	SLU I	0.35	887.46	2.50	10500.60	48537.50	0.35	527.54	2.50	10500.60	48537.50	11.832
5.45	8.53	ø6/15	2	2	46	SLU I	0.35	887.46	2.50	7000.38	48477.00	0.35	527.54	2.50	7000.38	48477.00	7.888
8.53	9.30	ø6/10	2	2	46	SLU I	0.35	887.46	2.50	10500.60	48235.10	0.35	527.54	2.50	10500.60	48235.10	11.832

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/ 6	46	SLU I	0.26	1606.52	2.50	3381.08	23038.80	2.105
1.31	3.77	ø6/14	46	SLU I	0.26	1606.52	2.50	1683.75	23014.80	1.048
3.77	4.38	ø6/12	46	SLU I	0.26	1606.52	2.50	2010.45	22919.00	1.251

Verifiche zone a sezione non circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
4.68	30	SLU	2	1	0.00	-5912.75	4510.02	4510.02	-7700.63	-7700.63	-5912.75	8150.68	-13867.40	296.72	6.66	1.802
4.68	30	SLU	2	1	0.00	-5912.75	4510.02	4510.02	-7700.63	-7700.63	-5912.75	8150.68	-13867.40	296.72	6.66	1.802
9.30	33	SLU	2	1	462.00	-4957.71	-7144.89	-7144.89	2940.95	2940.95	-4957.71	-14753.30	6035.18	161.72	7.68	2.063

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
4.68	35	SLE R	2	1	0.00	-4346.23	-5324.63	3135.39	15.46	5.15	87.24	1988.95
4.68	29	SLE Q	2	1	0.00	-3274.44	-3311.62	1491.21	12.31	8.29	48.67	1114.36
4.68	35	SLE R	2	1	0.00	-4346.23	-5324.63	3135.39	15.46	5.15	87.24	1988.95
4.68	29	SLE Q	2	1	0.00	-3274.44	-3311.62	1491.21	12.31	8.29	48.67	1114.36
9.30	38	SLE R	2	1	462.00	-3397.69	1990.69	-4817.73	12.31	8.29	68.91	1659.69
9.30	29	SLE Q	2	1	462.00	-935.56	788.46	-946.04	13.45	7.16	18.13	397.58

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
4.68	29	SLE Q	2	1	0.00	-3274.44	1491.21	-3311.62	44.00	171.02	0.50	18.86	230.47	3.14	237.35	1114.36	0.32	0.13
4.68	25	SLE F	2	1	0.00	-2787.16	1906.30	-4168.34	44.00	171.02	0.50	18.86	233.82	3.14	242.93	1479.22	0.43	0.17
4.68	29	SLE Q	2	1	0.00	-3274.44	1491.21	-3311.62	44.00	171.02	0.50	18.86	230.47	3.14	237.35	1114.36	0.32	0.13
4.68	25	SLE F	2	1	0.00	-2787.16	1906.30	-4168.34	44.00	171.02	0.50	18.86	233.82	3.14	242.93	1479.22	0.43	0.17
9.30	29	SLE Q	2	1	462.00	-935.56	-946.04	788.46	44.00	171.01	0.50	18.86	195.15	3.14	178.51	397.58	0.12	0.04
9.30	25	SLE F	2	1	462.00	-448.29	-1063.18	1396.58	44.00	171.02	0.50	18.86	203.65	3.14	192.67	615.15	0.18	0.06

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
4.68	5.45	ø6/10	2	2	32	SLU	0.45	1973.54	2.50	19715.80	40048.40	0.45	3683.14	2.50	19715.80	40048.40	5.353
4.68	5.45	ø6/10	2	2	17	SLU	0.45	2401.68	2.50	19715.80	39607.20	0.45	1564.75	2.50	19715.80	39607.20	8.209
4.68	5.45	ø6/10	2	2	9(TG)	SLV	0.45	3306.87	2.50	19715.80	39208.30	0.45	6167.65	2.50	19715.80	39208.30	3.197
4.68	5.45	ø6/10	2	2	5(TG)	SLV	0.45	6491.89	2.50	19715.80	39177.70	0.45	2800.25	2.50	19715.80	39177.70	3.037
5.45	8.53	ø6/15	2	2	32	SLU	0.45	1973.54	2.50	13143.90	39979.20	0.45	3269.93	2.50	13143.90	39979.20	4.020
5.45	8.53	ø6/15	2	2	17	SLU	0.45	2401.68	2.50	13143.90	39538.00	0.45	1564.75	2.50	13143.90	39538.00	5.473
5.45	8.53	ø6/15	2	2	9(TG)	SLV	0.45	3306.87	2.50	13143.90	39208.30	0.45	6167.65	2.50	13143.90	39208.30	2.131
5.45	8.53	ø6/15	2	2	5(TG)	SLV	0.45	6491.89	2.50	13143.90	39177.70	0.45	2800.25	2.50	13143.90	39177.70	2.025
8.53	9.30	ø6/10	2	2	33	SLU	0.45	2146.81	2.50	19715.80	39762.80	0.45	2023.01	2.50	19715.80	39762.80	9.184
8.53	9.30	ø6/10	2	2	17	SLU	0.45	2401.68	2.50	19715.80	39261.20	0.45	1564.75	2.50	19715.80	39261.20	8.209
8.53	9.30	ø6/10	2	2	9(TG)	SLV	0.45	3306.87	2.50	19715.80	39208.30	0.45	6167.65	2.50	19715.80	39208.30	3.197
8.53	9.30	ø6/10	2	2	5(TG)	SLV	0.45	6491.89	2.50	19715.80	39177.70	0.45	2800.25	2.50	19715.80	39177.70	3.037

Altre verifiche

Dettagli costruttivi per la duttilità

- CC=13 α_e=0.86533 ω_{nd}=0.1063 μΦ_d=7.08596 v_d=0.10319 E_{sy,d}=0.0018995 b_c/b₀=1.17925 μΦ_c=18.3114 0.09198 >= 0.01414 [7.4.29]
- CC=13 α_e=0.86533 ω_{nd}=0.1063 μΦ_d=7.58384 v_d=0.10319 E_{sy,d}=0.0018995 b_c/b₀=1.17925 μΦ_c=18.3114 0.09198 >= 0.01759 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
4.68	46	SLU I	2	1	0.00	-3274.44	1491.21	-3311.62	-3274.44	4238.07	-9591.50	289.69	41.41	2.888
4.68	46	SLU I	2	1	0.00	-3274.44	1491.21	-3311.62	-3274.44	4238.07	-9591.50	289.69	41.41	2.888
9.30	46	SLU I	2	1	462.00	-935.56	-946.04	788.46	-935.56	-7514.95	6226.55	139.22	38.92	7.923

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
4.68	5.45	ø6/10	2	246	SLU I	0.35	887.46	2.50	10500.60	48537.50	0.35	527.54	2.50	10500.60	48537.50	11.832	
5.45	8.53	ø6/15	2	246	SLU I	0.35	887.46	2.50	7000.38	48477.00	0.35	527.54	2.50	7000.38	48477.00	7.888	
8.53	9.30	ø6/10	2	246	SLU I	0.35	887.46	2.50	10500.60	48235.10	0.35	527.54	2.50	10500.60	48235.10	11.832	

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	b _w <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/ 6	46	SLU I	0.26	1606.52	2.50	3381.08	23038.80	2.105
1.31	3.77	ø6/14	46	SLU I	0.26	1606.52	2.50	1683.75	23014.80	1.048
3.77	4.38	ø6/12	46	SLU I	0.26	1606.52	2.50	2010.45	22919.00	1.251

Pilastrata n. 25

Nodi: -16 -60 -1501

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	R <cm>	Cf <cm>	Cl _s	Fck <daN/cm ² >	Fctk <daN/cm ² >	Fcd <daN/cm ² >	Fcd (Inc) <daN/cm ² >	Fctd <daN/cm ² >	TP	Fyk <daN/cm ² >	Fyd <daN/cm ² >
8	Cir.			25.00	4.90	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
1	R	45.00	45.00		5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Verifiche zone a sezione circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	1	SLV	1	8	70.00	-34162.10	-13721.80	-13721.80	-5369.79	-5369.79	-34162.10	-16992.80	-6619.33	201.09	5.84	1.238
0.70	1	SLV	1	8	70.00	-34162.10	-13721.80	-13721.80	-5369.79	-5369.79	-34162.10	-16992.80	-6619.33	201.09	5.84	1.238
4.38	5	SLV	1	8	438.00	-32579.30	2518.79	2518.79	7033.72	7033.72	-32579.30	6037.00	16845.60	70.31	6.25	2.395

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm ² >	σ _f <daN/cm ² >
0.70	23	SLE R	1	8	70.00	-38185.70	-10.01	-5353.60	6.03	14.07	62.16	778.01
0.70	21	SLE R	1	8	70.00	-36648.10	80.51	-5203.72	8.04	12.06	60.45	755.41
0.70	29	SLE Q	1	8	70.00	-34542.60	-251.69	-4617.15	6.03	14.07	53.55	674.36
0.70	23	SLE R	1	8	70.00	-38185.70	-10.01	-5353.60	6.03	14.07	62.16	778.01
0.70	21	SLE R	1	8	70.00	-36648.10	80.51	-5203.72	8.04	12.06	60.45	755.41
0.70	29	SLE Q	1	8	70.00	-34542.60	-251.69	-4617.15	6.03	14.07	53.55	674.36
4.38	37	SLE R	1	8	438.00	-37259.50	-2090.49	3931.07	6.03	14.07	51.38	656.30
4.38	29	SLE Q	1	8	438.00	-32736.20	207.44	1249.86	0.00	20.11	23.46	324.19

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm ² >	ε _{sm}	Wk <mm>
0.70	29	SLE Q	1	8	70.00	-34542.60	-4617.15	-251.69	44.00	122.37	0.50	16.00	185.97	2.01	123.12	307.49	0.09	0.03
0.70	25	SLE F	1	8	70.00	-34481.10	-4746.49	-96.21	44.00	122.37	0.50	16.00	190.60	2.01	128.94	338.14	0.10	0.03
0.70	29	SLE Q	1	8	70.00	-34542.60	-4617.15	-251.69	44.00	122.37	0.50	16.00	185.97	2.01	123.12	307.49	0.09	0.03
0.70	25	SLE F	1	8	70.00	-34481.10	-4746.49	-96.21	44.00	122.37	0.50	16.00	190.60	2.01	128.94	338.14	0.10	0.03

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	b _w <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/ 8	32	SLU	0.35	3456.78	2.50	18642.50	27781.50	5.393
0.70	1.31	ø6/ 8	3 (TG)	SLV	0.35	11032.80	2.50	18642.50	25896.50	1.690
1.31	3.77	ø6/16	32	SLU	0.35	3456.78	2.50	9321.24	27748.70	2.697
1.31	3.77	ø6/16	1 (TG)	SLV	0.35	9292.04	2.50	9321.24	25896.50	1.003
3.77	4.38	ø6/12	32	SLU	0.35	3456.78	2.50	12428.30	27617.70	3.595
3.77	4.38	ø6/12	3 (TG)	SLV	0.35	11032.80	2.50	12428.30	25896.50	1.126

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	46(e)	SLU I	1	8	70.00	-34542.60	-4617.15	-251.69	-34542.60	-13553.60	2408.17	171.56	36.62	2.937
0.70	46(e)	SLU I	1	8	70.00	-34542.60	-4617.15	-251.69	-34542.60	-13553.60	2408.17	171.56	36.62	2.937
4.38	46(e)	SLU I	1	8	438.00	-32736.20	1249.86	207.44	-137649.00	11613.40	7152.40	32.34	35.95	4.205

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
4.68	5.45	ø6/10	2	246	SLU	I	0.35	169.59	2.50	10500.60	48600.50	0.35	682.45	2.50	10500.60	48600.50	15.387
5.45	8.53	ø6/15	2	246	SLU	I	0.35	169.59	2.50	7000.38	48540.10	0.35	682.45	2.50	7000.38	48540.10	10.258

Relazione di calcolo

8.53	9.30	ø6/10	2	246	SLU I	0.35	169.59	2.50	10500.60	48298.10	0.35	682.45	2.50	10500.60	48298.10	15.387
------	------	-------	---	-----	-------	------	--------	------	----------	----------	------	--------	------	----------	----------	--------

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/ 8	46	SLU I	0.26	1599.17	2.50	4425.58	23544.00	2.767
1.31	3.77	ø6/16	46	SLU I	0.26	1599.17	2.50	2212.79	23520.10	1.384
3.77	4.38	ø6/12	46	SLU I	0.26	1599.17	2.50	3908.80	23424.20	2.444

Verifiche zone a sezione non circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
4.68	32	SLU	2	1	0.00	-10678.40	6832.26	6832.26	-1772.17	-1772.17	-10678.40	16209.40	-4048.47	348.75	8.63	2.367
4.68	32	SLU	2	1	0.00	-10678.40	6832.26	6832.26	-1772.17	-1772.17	-10678.40	16209.40	-4048.47	348.75	8.63	2.367
9.30	33	SLU	2	1	462.00	-8451.38	-10222.90	-10222.90	251.89	251.89	-8451.38	-16064.70	316.12	179.30	13.85	1.571

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _t <daN/cmq>
4.68	37	SLE R	2	1	0.00	-7524.13	-1231.84	4690.64	12.31	8.29	58.05	1275.20
4.68	29	SLE Q	2	1	0.00	-3680.57	-559.60	1733.61	12.31	8.29	22.48	444.10
4.68	37	SLE R	2	1	0.00	-7524.13	-1231.84	4690.64	12.31	8.29	58.05	1275.20
4.68	29	SLE Q	2	1	0.00	-3680.57	-559.60	1733.61	12.31	8.29	22.48	444.10
9.30	38	SLE R	2	1	462.00	-5727.58	193.71	-6895.71	12.31	8.29	65.75	1887.72
9.30	29	SLE Q	2	1	462.00	-1341.69	223.93	-1419.30	12.31	8.29	15.85	408.72

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
4.68	29	SLE Q	2	1	0.00	-3680.57	1733.61	-559.60	44.00	171.02	0.50	18.86	179.55	5.15	250.13	444.10	0.13	0.04
4.68	25	SLE F	2	1	0.00	-3658.35	2248.70	-723.26	44.00	171.02	0.50	18.86	186.24	5.15	268.41	630.83	0.18	0.06
4.68	29	SLE Q	2	1	0.00	-3680.57	1733.61	-559.60	44.00	171.02	0.50	18.86	179.55	5.15	250.13	444.10	0.13	0.04
4.68	25	SLE F	2	1	0.00	-3658.35	2248.70	-723.26	44.00	171.02	0.50	18.86	186.24	5.15	268.41	630.83	0.18	0.06
9.30	29	SLE Q	2	1	462.00	-1341.69	-1419.30	223.93	44.00	171.02	0.50	18.86	175.04	8.29	382.83	408.72	0.12	0.04
9.30	42	SLE F	2	1	462.00	-1817.67	-2089.33	152.26	44.00	171.02	0.50	18.86	186.29	8.29	432.32	581.98	0.17	0.05

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
4.68	5.45	ø6/10	2	232	SLU	0.45	373.15	2.50	19715.80	40474.70	0.45	5439.95	2.50	19715.80	40474.70	3.62	
4.68	5.45	ø6/10	2	217	SLU	0.45	430.90	2.50	19715.80	39983.60	0.45	2067.47	2.50	19715.80	39983.60	9.536	
4.68	5.45	ø6/10	2	29 (TG)	SLV	0.45	753.40	2.50	19715.80	39243.30	0.45	7213.45	2.50	19715.80	39243.30	2.733	
4.68	5.45	ø6/10	2	25 (TG)	SLV	0.45	5467.23	2.50	19715.80	39214.90	0.45	4564.21	2.50	19715.80	39214.90	3.606	
5.45	8.53	ø6/15	2	232	SLU	0.45	373.15	2.50	13143.90	40405.50	0.45	4825.10	2.50	13143.90	40405.50	2.724	
5.45	8.53	ø6/15	2	217	SLU	0.45	430.90	2.50	13143.90	39914.40	0.45	2067.47	2.50	13143.90	39914.40	6.357	
5.45	8.53	ø6/15	2	29 (TG)	SLV	0.45	753.40	2.50	13143.90	39243.30	0.45	7213.45	2.50	13143.90	39243.30	1.822	
5.45	8.53	ø6/15	2	25 (TG)	SLV	0.45	5467.23	2.50	13143.90	39214.90	0.45	4564.21	2.50	13143.90	39214.90	2.404	
8.53	9.30	ø6/10	2	233	SLU	0.45	428.18	2.50	19715.80	40239.80	0.45	2842.48	2.50	19715.80	40239.80	6.936	
8.53	9.30	ø6/10	2	217	SLU	0.45	430.90	2.50	19715.80	39637.60	0.45	2067.47	2.50	19715.80	39637.60	9.536	
8.53	9.30	ø6/10	2	29 (TG)	SLV	0.45	753.40	2.50	19715.80	39243.30	0.45	7213.45	2.50	19715.80	39243.30	2.733	
8.53	9.30	ø6/10	2	25 (TG)	SLV	0.45	5467.23	2.50	19715.80	39214.90	0.45	4564.21	2.50	19715.80	39214.90	3.606	

Altre verifiche

Dettagli costruttivi per la duttilità

- CC=9 α_e=0.82261 ω_{wd}=0.07973 μΦ_d=7.08596 ν_d=0.10893 E_{sy,d}=0.0018995 b_c/b₀=1.17925 μΦ_e=13.7405 0.06558 >= 0.01687 [7.4.29]
- CC=9 α_e=0.82261 ω_{wd}=0.07973 μΦ_d=7.58384 ν_d=0.10893 E_{sy,d}=0.0018995 b_c/b₀=1.17925 μΦ_e=13.7405 0.06558 >= 0.02051 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
4.68	46	SLU I	2	1	0.00	-3680.57	1733.61	-559.60	-3680.57	9905.34	-3316.69	344.53	44.76	5.736
4.68	46	SLU I	2	1	0.00	-3680.57	1733.61	-559.60	-3680.57	9905.34	-3316.69	344.53	44.76	5.736
9.30	46	SLU I	2	1	462.00	-1341.69	-1419.30	223.93	-1341.69	-9968.64	1546.26	172.97	57.89	7.020

Stato limite ultimo - Verifiche a taglio

X0 [m]	X1 [m]	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} [m]	V _{sdu,y} [daN]	ctgθ _{,y}	V _{Rsd,y} [daN]	V _{Rcd,y} [daN]	b _{w,z} [m]	V _{sdu,z} [daN]	ctgθ _{,z}	V _{Rsd,z} [daN]	V _{Rcd,z} [daN]	Sic.
4.68	5.45	ø6/10	2	246	SLU I	0.35	169.59	2.50	10500.60	48600.50	0.35	682.45	2.50	10500.60	48600.50	15.387	
5.45	8.53	ø6/15	2	246	SLU I	0.35	169.59	2.50	7000.38	48540.10	0.35	682.45	2.50	7000.38	48540.10	10.258	

Relazione di calcolo

8.53	9.30	ø6/10	2	246	SLU I	0.35	169.59	2.50	10500.60	48298.10	0.35	682.45	2.50	10500.60	48298.10	15.387
------	------	-------	---	-----	-------	------	--------	------	----------	----------	------	--------	------	----------	----------	--------

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/ 8	46	SLU I	0.26	1599.17	2.50	4425.58	23544.00	2.767
1.31	3.77	ø6/16	46	SLU I	0.26	1599.17	2.50	2212.79	23520.10	1.384
3.77	4.38	ø6/12	46	SLU I	0.26	1599.17	2.50	3908.80	23424.20	2.444

Pilastrata n. 26

Nodi: -25 -61 -1342

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	R <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	TP	Fyk <daN/cm²>	Fyd <daN/cm²>
8	Cir.			25.00	4.90	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
1	R	45.00	45.00		5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Verifiche zone a sezione circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _r	Sic.
0.70	9	SLV	1	8	70.00	-22937.90	-13076.30	-13076.30	6250.02	6250.02	-22937.90	-15231.90	7383.03	153.28	7.02	1.168
0.70	9	SLV	1	8	70.00	-22937.90	-13076.30	-13076.30	6250.02	6250.02	-22937.90	-15231.90	7383.03	153.28	7.02	1.168
4.38	13	SLV	1	8	438.00	-19545.90	2388.19	2388.19	-13173.70	-13173.70	-19545.90	3008.39	-16269.70	281.25	7.33	1.236

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _e <daN/cm²>	σ _f <daN/cm²>
0.70	21	SLE R	1	8	70.00	-25803.70	1286.54	-5582.11	10.05	10.05	69.40	886.76
0.70	29	SLE Q	1	8	70.00	-24822.40	1115.40	-4617.39	10.05	10.05	56.62	662.48
0.70	21	SLE R	1	8	70.00	-25803.70	1286.54	-5582.11	10.05	10.05	69.40	886.76
0.70	29	SLE Q	1	8	70.00	-24822.40	1115.40	-4617.39	10.05	10.05	56.62	662.48
4.38	37	SLE R	1	8	438.00	-24835.50	-7506.23	3712.47	12.06	8.04	104.44	1896.43
4.38	29	SLE Q	1	8	438.00	-23016.00	-5047.53	1300.22	10.05	10.05	63.41	844.45

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
0.70	29	SLE Q	1	8	70.00	-24822.40	-4617.39	1115.40	44.00	122.37	0.50	16.00	166.53	4.02	197.36	603.28	0.18	0.05
0.70	25	SLE F	1	8	70.00	-24481.10	-4939.61	1180.03	44.00	122.37	0.50	16.00	171.94	4.02	210.97	721.58	0.21	0.06
0.70	29	SLE Q	1	8	70.00	-24822.40	-4617.39	1115.40	44.00	122.37	0.50	16.00	166.53	4.02	197.36	603.28	0.18	0.05
0.70	25	SLE F	1	8	70.00	-24481.10	-4939.61	1180.03	44.00	122.37	0.50	16.00	171.94	4.02	210.97	721.58	0.21	0.06
4.38	29	SLE Q	1	8	438.00	-23016.00	1300.22	-5047.53	44.00	122.37	0.50	16.00	176.85	4.02	223.29	844.45	0.25	0.07
4.38	42	SLE F	1	8	438.00	-23129.00	1458.63	-5522.26	44.00	122.37	0.50	16.00	181.37	4.02	234.66	1014.74	0.30	0.09

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/ 6	32	SLU	0.35	5271.45	2.50	24856.60	26297.80	4.715
0.70	1.31	ø6/ 6	1 (TG)	SLV	0.35	10303.20	2.50	24856.60	25063.00	2.413
0.70	1.31	ø6/ 6	1 (TG)	SLV	0.35	10389.00	2.50	24856.60	25272.50	2.393
1.31	3.77	ø6/14	32	SLU	0.35	5271.45	2.50	10652.80	26265.00	2.021
1.31	3.77	ø6/14	1 (TG)	SLV	0.35	10303.20	2.50	10652.80	25063.00	1.034
1.31	3.77	ø6/14	1 (TG)	SLV	0.35	10389.00	2.50	10652.80	25272.50	1.025
3.77	4.38	ø6/12	32	SLU	0.35	5271.45	2.50	12428.30	26134.00	2.358
3.77	4.38	ø6/12	1 (TG)	SLV	0.35	10303.20	2.50	12428.30	25063.00	1.206
3.77	4.38	ø6/12	1 (TG)	SLV	0.35	10389.00	2.50	12428.30	25272.50	1.196

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	46	SLU I	1	8	70.00	-24822.40	-4617.39	1115.40	-24822.40	-12350.90	3170.24	165.94	40.94	2.684
0.70	46	SLU I	1	8	70.00	-24822.40	-4617.39	1115.40	-24822.40	-12350.90	3170.24	165.94	40.94	2.684
4.38	46	SLU I	1	8	438.00	-23016.00	1300.22	-5047.53	-23016.00	2942.89	-12302.60	284.06	40.13	2.427

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
4.68	5.45	ø6/10	2	246	SLU I	0.35	868.79	868.79	2.50	10500.60	48612.00	0.35	649.76	2.50	10500.60	48612.00	12.086
5.45	8.53	ø6/15	2	246	SLU I	0.35	868.79	868.79	2.50	7000.38	48551.50	0.35	649.76	2.50	7000.38	48551.50	8.058
8.53	9.30	ø6/10	2	246	SLU I	0.35	868.79	868.79	2.50	10500.60	48309.50	0.35	649.76	2.50	10500.60	48309.50	12.086

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
-----------	-----------	--------	----	-----	-----------	---------------	------	---------------	---------------	------

Relazione di calcolo

0.70	1.31	ø6/ 6	46	SLU I	0.26	2321.74	2.50	7293.92	22770.10	3.142
1.31	3.77	ø6/14	46	SLU I	0.26	2321.74	2.50	3473.66	22746.20	1.496
3.77	4.38	ø6/12	46	SLU I	0.26	2321.74	2.50	3646.95	22650.30	1.571

Verifiche zone a sezione non circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
4.68	30	SLU	2	1	0.00	-7746.53	7393.68	7393.68	6944.80	6944.80	-7746.53	12146.70	11463.10	43.59	5.68	1.646
4.68	30	SLU	2	1	0.00	-7746.53	7393.68	7393.68	6944.80	6944.80	-7746.53	12146.70	11463.10	43.59	5.68	1.646
9.30	33	SLU	2	1	462.00	-6560.77	-8745.64	-8745.64	-2049.33	-2049.33	-6560.77	-15596.20	-3699.20	189.84	9.55	1.784

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _t <daN/cmq>
4.68	35	SLE R	2	1	0.00	-5576.04	4845.46	5070.24	13.45	7.16	103.79	2254.55
4.68	29	SLE Q	2	1	0.00	-3754.14	3753.67	1808.92	12.31	8.29	56.56	1283.66
4.68	35	SLE R	2	1	0.00	-5576.04	4845.46	5070.24	13.45	7.16	103.79	2254.55
4.68	29	SLE Q	2	1	0.00	-3754.14	3753.67	1808.92	12.31	8.29	56.56	1283.66
9.30	38	SLE R	2	1	462.00	-4473.68	-1366.06	-5900.74	12.31	8.29	71.29	1826.31
9.30	29	SLE Q	2	1	462.00	-1415.27	-260.15	-1192.97	12.31	8.29	14.19	340.62

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	W _k <mm>
4.68	29	SLE Q	2	1	0.00	-3754.14	1808.92	3753.67	44.00	171.01	0.50	18.86	225.17	3.14	228.53	1283.66	0.37	0.14
4.68	25	SLE F	2	1	0.00	-3623.88	3004.79	4232.12	44.00	171.01	0.50	18.86	203.24	3.14	191.99	1685.36	0.49	0.17
4.68	29	SLE Q	2	1	0.00	-3754.14	1808.92	3753.67	44.00	171.01	0.50	18.86	225.17	3.14	228.53	1283.66	0.37	0.14
4.68	25	SLE F	2	1	0.00	-3623.88	3004.79	4232.12	44.00	171.01	0.50	18.86	203.24	3.14	191.99	1685.36	0.49	0.17
9.30	29	SLE Q	2	1	462.00	-1415.27	-1192.97	-260.15	44.00	171.02	0.50	18.86	213.06	5.15	341.69	340.62	0.10	0.04
9.30	42	SLE F	2	1	462.00	-1729.62	-1701.50	-409.69	44.00	171.02	0.50	18.86	210.43	5.15	334.51	506.78	0.15	0.05

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	b _{w,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
4.68	5.45	ø6/10	2	232	SLU	0.45	1900.01	2.50	19715.80	40224.50	0.45	4530.03	2.50	19715.80	40224.50	4.352	
4.68	5.45	ø6/10	2	230	SLU	0.45	1993.28	2.50	19715.80	40074.40	0.45	3979.05	2.50	19715.80	40074.40	4.955	
4.68	5.45	ø6/10	2	23(TG)	SLV	0.45	3094.37	2.50	19715.80	39242.80	0.45	6699.47	2.50	19715.80	39242.80	2.943	
4.68	5.45	ø6/10	2	215(TG)	SLV	0.45	6401.74	2.50	19715.80	39174.00	0.45	3464.38	2.50	19715.80	39174.00	3.080	
5.45	8.53	ø6/15	2	232	SLU	0.45	1900.01	2.50	13143.90	40155.30	0.45	4075.09	2.50	13143.90	40155.30	3.225	
5.45	8.53	ø6/15	2	230	SLU	0.45	1993.28	2.50	13143.90	40005.20	0.45	3706.09	2.50	13143.90	40005.20	3.547	
5.45	8.53	ø6/15	2	23(TG)	SLV	0.45	3094.37	2.50	13143.90	39242.80	0.45	6699.47	2.50	13143.90	39242.80	1.962	
5.45	8.53	ø6/15	2	215(TG)	SLV	0.45	6401.74	2.50	13143.90	39174.00	0.45	3464.38	2.50	13143.90	39174.00	2.053	
8.53	9.30	ø6/10	2	233	SLU	0.45	1801.76	2.50	19715.80	39981.70	0.45	2776.42	2.50	19715.80	39981.70	7.101	
8.53	9.30	ø6/10	2	230	SLU	0.45	1993.28	2.50	19715.80	39728.40	0.45	2614.25	2.50	19715.80	39728.40	7.542	
8.53	9.30	ø6/10	2	23(TG)	SLV	0.45	3094.37	2.50	19715.80	39242.80	0.45	6699.47	2.50	19715.80	39242.80	2.943	
8.53	9.30	ø6/10	2	215(TG)	SLV	0.45	6401.74	2.50	19715.80	39174.00	0.45	3464.38	2.50	19715.80	39174.00	3.080	

Altre verifiche

Dettagli costruttivi per la duttilità

- CC=5 α_e=0.86533 ω_{rd}=0.1063 μΦ_d=7.08596 v_d=0.088247 E_{sy,d}=0.0018995 b_c/b₀=1.17925 μΦ_c=21.413
0.09198 >= 0.00702 [7.4.29]
- CC=5 α_e=0.86533 ω_{rd}=0.1063 μΦ_d=7.58384 v_d=0.088247 E_{sy,d}=0.0018995 b_c/b₀=1.17925 μΦ_c=21.413
0.09198 >= 0.00997 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
4.68	46	SLU I	2	1	0.00	-3754.14	1808.92	3753.67	-3754.14	4612.71	9502.09	67.50	39.88	2.534
4.68	46	SLU I	2	1	0.00	-3754.14	1808.92	3753.67	-3754.14	4612.71	9502.09	67.50	39.88	2.534
9.30	46	SLU I	2	1	462.00	-1415.27	-1192.97	-260.15	-1415.27	-9880.88	-2009.59	189.84	53.41	8.259

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	b _{w,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
4.68	5.45	ø6/10	2	246	SLU I	0.35	868.79	2.50	10500.60	48612.00	0.35	649.76	2.50	10500.60	48612.00	12.086	
5.45	8.53	ø6/15	2	246	SLU I	0.35	868.79	2.50	7000.38	48551.50	0.35	649.76	2.50	7000.38	48551.50	8.058	
8.53	9.30	ø6/10	2	246	SLU I	0.35	868.79	2.50	10500.60	48309.50	0.35	649.76	2.50	10500.60	48309.50	12.086	

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	CC	TCC	b _w	V _{sdu}	ctgθ	VR _{sd}	VR _{cd}	Sic.
----	----	--------	----	-----	----------------	------------------	------	------------------	------------------	------

Relazione di calcolo

<m>	<m>				<m>	<daN>		<daN>	<daN>	
0.70	1.31	ø6/ 6	46	SLU I	0.26	2321.74	2.50	7293.92	22770.10	3.142
1.31	3.77	ø6/14	46	SLU I	0.26	2321.74	2.50	3473.66	22746.20	1.496
3.77	4.38	ø6/12	46	SLU I	0.26	2321.74	2.50	3646.95	22650.30	1.571

Pilastrata n. 27

Nodi: -30 -62 -1339

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	R	Cf	Cls	Fck	Fctk	Fcd	Fcd (Inc)	Fctd	TP	Fyk	Fyd
		<cm>	<cm>	<cm>	<cm>		<daN/cm²>	<daN/cm²>	<daN/cm²>	<daN/cm²>	<daN/cm²>		<daN/cm²>	<daN/cm²>
	8Cir.			25.00	4.90	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
	1R	45.00	45.00		5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Verifiche zone a sezione circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	My ver.	Mz	Mz ver.	Nu	MRdy	MRdz	α	ε _y	Sic.
<m>					<cm>	<daN>	<daNm>	<daNm>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
0.70	1	SLV	1	8	70.00	-28320.20	-12846.70	-12846.70	-7159.34	-7159.34	-28320.20	-15275.80	-8536.96	209.53	6.61	1.190
0.70	1	SLV	1	8	70.00	-28320.20	-12846.70	-12846.70	-7159.34	-7159.34	-28320.20	-15275.80	-8536.96	209.53	6.61	1.190
4.38	5	SLV	1	8	438.00	-24988.40	2449.15	2449.15	15741.50	15741.50	-24988.40	2742.75	16886.30	80.16	6.84	1.074

Stato limite d'esercizio - Verifiche tensionali

Xg	CC	TCC	El	Sez.	X	N	Mz	My	AfT	AfC	σ _c	σ _f
<m>					<cm>	<daN>	<daNm>	<daNm>	<cmq>	<cmq>	<daN/cm²>	<daN/cm²>
0.70	21	SLE R	1	8	70.00	-32880.80	-1905.68	-5479.49	8.04	12.06	68.68	800.81
0.70	29	SLE Q	1	8	70.00	-30704.90	-1969.17	-4509.03	8.04	12.06	57.43	694.98
0.70	21	SLE R	1	8	70.00	-32880.80	-1905.68	-5479.49	8.04	12.06	68.68	800.81
0.70	29	SLE Q	1	8	70.00	-30704.90	-1969.17	-4509.03	8.04	12.06	57.43	694.98
4.38	24	SLE R	1	8	438.00	-32771.20	8699.36	2724.53	10.05	10.05	113.45	1808.19
4.38	21	SLE R	1	8	438.00	-31074.40	8198.44	3552.25	10.05	10.05	110.95	1814.02
4.38	29	SLE Q	1	8	438.00	-28898.50	7809.47	1149.08	12.06	8.04	96.89	1522.92

Stato limite d'esercizio - Verifiche a fessurazione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	c	s	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	W _k
<m>					<cm>	<daN>	<daNm>	<daNm>	<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cm²>		<mm>
0.70	29	SLE Q	1	8	70.00	-30704.90	-4509.03	-1969.17	44.00	122.37	0.50	16.00	153.37	4.02	164.29	466.79	0.14	0.04
0.70	25	SLE F	1	8	70.00	-31008.40	-4872.12	-1960.06	44.00	122.37	0.50	16.00	157.31	4.02	174.18	546.67	0.16	0.04
0.70	29	SLE Q	1	8	70.00	-30704.90	-4509.03	-1969.17	44.00	122.37	0.50	16.00	153.37	4.02	164.29	466.79	0.14	0.04
0.70	25	SLE F	1	8	70.00	-31008.40	-4872.12	-1960.06	44.00	122.37	0.50	16.00	157.31	4.02	174.18	546.67	0.16	0.04
4.38	29	SLE Q	1	8	438.00	-28898.50	1149.08	7809.47	44.00	376.62	0.50	16.00	208.93	4.02	252.78	1522.92	0.44	0.16
4.38	25	SLE F	1	8	438.00	-29202.00	2260.48	7985.03	44.00	376.62	0.50	16.00	213.27	6.03	250.28	1674.43	0.49	0.18

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	CC	TCC	b _w	V _{sdu}	ctgθ	VRsd	VRcd	Sic.
<m>	<m>				<cm>	<daN>		<daN>	<daN>	
0.70	1.31	ø6/ 6	17	SLU	0.35	5209.62	2.50	24856.60	27037.50	4.771
0.70	1.31	ø6/ 6	1 (TG)	SLV	0.35	10705.60	2.50	24856.60	25691.00	2.322
0.70	1.31	ø6/ 6	13 (TG)	SLV	0.35	10804.90	2.50	24856.60	25934.40	2.301
1.31	3.77	ø6/12	17	SLU	0.35	5209.62	2.50	12428.30	27004.80	2.386
1.31	3.77	ø6/12	1 (TG)	SLV	0.35	10705.60	2.50	12428.30	25691.00	1.161
1.31	3.77	ø6/12	13 (TG)	SLV	0.35	10804.90	2.50	12428.30	25934.40	1.150
3.77	4.38	ø6/12	17	SLU	0.35	5209.62	2.50	12428.30	26873.70	2.386
3.77	4.38	ø6/12	1 (TG)	SLV	0.35	10705.60	2.50	12428.30	25691.00	1.161
3.77	4.38	ø6/12	13 (TG)	SLV	0.35	10804.90	2.50	12428.30	25934.40	1.150

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	Nu	MRdy	MRdz	α	ε _y	Sic.
<m>					<cm>	<daN>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
0.70	46	SLU I	1	8	70.00	-30704.90	-4509.03	-1969.17	-30704.90	-12234.20	-5474.93	205.31	38.56	2.724
0.70	46	SLU I	1	8	70.00	-30704.90	-4509.03	-1969.17	-30704.90	-12234.20	-5474.93	205.31	38.56	2.724
4.38	46	SLU I	1	8	438.00	-28898.50	1149.08	7809.47	-28898.50	1738.64	13107.30	81.56	38.99	1.675

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	b _{w,y}	V _{sdu,y}	ctgθ _y	VRsd _y	VRcd _y	b _{w,z}	V _{sdu,z}	ctgθ _z	VRsd _z	VRcd _z	Sic.
<m>	<m>						<cm>	<daN>		<daN>	<daN>	<cm>	<daN>		<daN>	<daN>	
4.68	5.45	ø6/10	2	2	46	SLU I	0.35	2012.67	2.50	10500.60	48499.10	0.35	557.93	2.50	10500.60	48499.10	5.217
5.45	8.53	ø6/15	2	2	46	SLU I	0.35	2012.67	2.50	7000.38	48438.60	0.35	557.93	2.50	7000.38	48438.60	3.478
8.53	9.30	ø6/10	2	2	46	SLU I	0.35	2012.67	2.50	10500.60	48196.60	0.35	557.93	2.50	10500.60	48196.60	5.217

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	CC	TCC	b _w	V _{sdu}	ctgθ	VRsd	VRcd	Sic.
<m>	<m>				<cm>	<daN>		<daN>	<daN>	
0.70	1.31	ø6/ 6	46	SLU I	0.26	3070.00	2.50	7065.03	23238.50	2.301
1.31	3.77	ø6/12	46	SLU I	0.26	3070.01	2.50	3928.95	23214.50	1.280

Relazione di calcolo

3.77	4.38	ø6/12	46	SLU I	0.26	3070.01	2.50	3068.06	23118.60	0.999
------	------	-------	----	-------	------	---------	------	---------	----------	-------

Verifiche zone a sezione non circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
4.68	34	SLU	2	1	0.00	-7084.26	5467.36	5467.36	-10784.50	-10784.50	-7084.26	7198.87	-14501.70	292.50	6.96	1.339
4.68	34	SLU	2	1	0.00	-7084.26	5467.36	5467.36	-10784.50	-10784.50	-7084.26	7198.87	-14501.70	292.50	6.96	1.339
9.30	33	SLU	2	1	462.00	-5506.96	-5063.96	-5063.96	2929.93	2929.93	-5506.96	-13969.60	7842.32	154.69	6.82	2.738

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _t <daN/cm²>
4.68	39	SLE R	2	1	0.00	-5080.80	-7692.49	3785.36	15.46	5.15	117.42	2785.68
4.68	29	SLE Q	2	1	0.00	-3026.58	-7536.13	1779.86	12.31	8.29	91.56	2477.37
4.68	39	SLE R	2	1	0.00	-5080.80	-7692.49	3785.36	15.46	5.15	117.42	2785.68
4.68	29	SLE Q	2	1	0.00	-3026.58	-7536.13	1779.86	12.31	8.29	91.56	2477.37
9.30	38	SLE R	2	1	462.00	-3717.42	2088.48	-3427.45	15.46	5.15	56.72	1245.32
9.30	29	SLE Q	2	1	462.00	-687.70	1762.43	-797.79	12.31	8.29	26.15	650.23

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cm²>	A _{c eff} <cm²>	σ _s <daN/cm²>	ε _{sm}	W _k <mm>
4.68	29	SLE Q	2	1	0.00	-3026.58	1779.86	-7536.13	44.00	171.01	0.50	18.86	218.23	5.15	355.83	2477.37	0.83	0.31
4.68	28	SLE F	2	1	0.00	-3018.47	1808.81	-7710.16	44.00	171.01	0.50	18.86	218.66	5.15	356.98	2536.56	0.74	0.27
4.68	29	SLE Q	2	1	0.00	-3026.58	1779.86	-7536.13	44.00	171.01	0.50	18.86	218.23	5.15	355.83	2477.37	0.83	0.31
4.68	28	SLE F	2	1	0.00	-3018.47	1808.81	-7710.16	44.00	171.01	0.50	18.86	218.66	5.15	356.98	2536.56	0.74	0.27
9.30	29	SLE Q	2	1	462.00	-687.70	-797.79	1762.43	44.00	171.01	0.50	18.86	179.81	5.15	250.84	650.23	0.19	0.06
9.30	27	SLE F	2	1	462.00	-1068.17	-1137.44	1948.03	44.00	171.01	0.50	18.86	217.29	3.14	215.40	754.17	0.22	0.08

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
4.68	5.45	ø6/10	2	232	SLU	0.45	2682.21	2.50	19715.80	40121.60	0.45	3804.61	2.50	19715.80	40121.60	5.182	
4.68	5.45	ø6/10	2	233	SLU	0.45	2889.54	2.50	19715.80	40183.80	0.45	3254.63	2.50	19715.80	40183.80	6.058	
4.68	5.45	ø6/10	2	213 (TG)	SLV	0.45	6207.68	2.50	19715.80	39084.50	0.45	4030.86	2.50	19715.80	39084.50	3.176	
4.68	5.45	ø6/10	2	213 (TG)	SLV	0.45	6248.12	2.50	19715.80	39169.90	0.45	4036.58	2.50	19715.80	39169.90	3.155	
4.68	5.45	ø6/10	2	27 (TG)	SLV	0.45	7088.31	2.50	19715.80	39136.50	0.45	1567.95	2.50	19715.80	39136.50	2.781	
5.45	8.53	ø6/15	2	232	SLU	0.45	2682.21	2.50	13143.90	40052.40	0.45	3272.20	2.50	13143.90	40052.40	4.017	
5.45	8.53	ø6/15	2	233	SLU	0.45	2889.54	2.50	13143.90	40114.60	0.45	2935.19	2.50	13143.90	40114.60	4.478	
5.45	8.53	ø6/15	2	213 (TG)	SLV	0.45	6207.68	2.50	13143.90	39084.50	0.45	4030.86	2.50	13143.90	39084.50	2.117	
5.45	8.53	ø6/15	2	213 (TG)	SLV	0.45	6248.12	2.50	13143.90	39169.90	0.45	4036.58	2.50	13143.90	39169.90	2.104	
5.45	8.53	ø6/15	2	27 (TG)	SLV	0.45	7088.31	2.50	13143.90	39136.50	0.45	1567.95	2.50	13143.90	39136.50	1.854	
8.53	9.30	ø6/10	2	217	SLU	0.45	2250.49	2.50	19715.80	39466.20	0.45	1976.92	2.50	19715.80	39466.20	8.761	
8.53	9.30	ø6/10	2	233	SLU	0.45	2889.54	2.50	19715.80	39837.80	0.45	1657.40	2.50	19715.80	39837.80	6.823	
8.53	9.30	ø6/10	2	213 (TG)	SLV	0.45	6207.68	2.50	19715.80	39084.50	0.45	4030.86	2.50	19715.80	39084.50	3.176	
8.53	9.30	ø6/10	2	213 (TG)	SLV	0.45	6248.12	2.50	19715.80	39169.90	0.45	4036.58	2.50	19715.80	39169.90	3.155	
8.53	9.30	ø6/10	2	27 (TG)	SLV	0.45	7088.31	2.50	19715.80	39136.50	0.45	1567.95	2.50	19715.80	39136.50	2.781	

Altre verifiche

Dettagli costruttivi per la duttilità

- CC=13 α_e=0.86533 ω_{nd}=0.1063 μΦ_d=7.08596 v_d=0.10797 E_{sy,d}=0.0018995 b_c/b₀=1.17925 μΦ_c=17.5018 0.09198 >= 0.01641 [7.4.29]
- CC=13 α_e=0.86533 ω_{nd}=0.1063 μΦ_d=7.58384 v_d=0.10797 E_{sy,d}=0.0018995 b_c/b₀=1.17925 μΦ_c=17.5018 0.09198 >= 0.02002 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
4.68	46	SLU I	2	1	0.00	-3026.58	1779.86	-7536.13	-3026.58	2300.42	-10049.40	281.25	50.30	1.331
4.68	46	SLU I	2	1	0.00	-3026.58	1779.86	-7536.13	-3026.58	2300.42	-10049.40	281.25	50.30	1.331
9.30	46	SLU I	2	1	462.00	-687.70	-797.79	1762.43	-687.70	-4145.36	9246.88	109.69	42.74	5.237

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
4.68	5.45	ø6/10	2	246	SLU I	0.35	2012.67	2.50	10500.60	48499.10	0.35	557.93	2.50	10500.60	48499.10	5.217	
5.45	8.53	ø6/15	2	246	SLU I	0.35	2012.67	2.50	7000.38	48438.60	0.35	557.93	2.50	7000.38	48438.60	3.478	
8.53	9.30	ø6/10	2	246	SLU I	0.35	2012.67	2.50	10500.60	48196.60	0.35	557.93	2.50	10500.60	48196.60	5.217	

Stato limite ultimo - Verifiche a taglio

Relazione di calcolo

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/ 6	46	SLU I	0.26	3070.00	2.50	7065.03	23238.50	2.301
1.31	3.77	ø6/12	46	SLU I	0.26	3070.01	2.50	3928.95	23214.50	1.280
3.77	4.38	ø6/12	46	SLU I	0.26	3070.01	2.50	3068.06	23118.60	0.999

Pilastrata n. 30

Nodi: -1627 -66 -1872

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
1R		45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	1	SLV	1	1	70.00	-28551.00	13396.70	13396.70	-6878.39	-6878.39	-28551.00	27909.50	-14305.40	334.69	3.99	2.083
0.70	1	SLV	1	1	70.00	-28551.00	13396.70	13396.70	-6878.39	-6878.39	-28551.00	27909.50	-14305.40	334.69	3.99	2.083
4.38	5	SLV	1	1	438.00	-28577.20	-5483.03	-5483.03	18250.80	18250.80	-28577.20	-10183.10	32979.90	112.50	4.34	1.811
4.68	34	SLU	2	1	0.00	-12837.80	3167.76	3167.76	-8360.63	-8360.63	-12837.80	11454.50	-30784.90	295.31	4.64	3.674
4.68	20	SLU	2	1	0.00	-9717.07	2850.53	2850.53	-8445.10	-8445.10	-9717.07	5166.76	-15778.40	285.47	7.72	1.863
8.76	32	SLU	2	1	407.60	-12214.00	-1391.94	-1391.94	1385.58	1385.58	-12214.00	-12068.60	12068.60	135.00	5.46	8.690

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
0.70	37	SLE R	1	1	70.00	-43489.80	1217.78	4272.76	6.28	43.98	42.48	539.13
0.70	29	SLE Q	1	1	70.00	-34604.10	-1943.53	1127.95	0.00	50.27	26.34	345.05
0.70	37	SLE R	1	1	70.00	-43489.80	1217.78	4272.76	6.28	43.98	42.48	539.13
0.70	29	SLE Q	1	1	70.00	-34604.10	-1943.53	1127.95	0.00	50.27	26.34	345.05
4.38	24	SLE R	1	1	438.00	-38263.10	8775.78	-1622.25	21.99	28.27	70.59	826.19
4.38	29	SLE Q	1	1	438.00	-32741.10	7826.70	-2007.24	21.99	28.27	66.79	776.40
4.68	39	SLE R	2	1	0.00	-9052.93	-6092.28	2189.43	28.27	21.99	55.54	883.96
4.68	24	SLE R	2	1	0.00	-6972.45	-6148.59	1977.95	28.27	21.99	53.99	911.35
4.68	29	SLE Q	2	1	0.00	-5066.08	-6212.76	736.12	28.27	21.99	43.83	826.52
4.68	39	SLE R	2	1	0.00	-9052.93	-6092.28	2189.43	12.31	8.29	82.38	1792.03
4.68	24	SLE R	2	1	0.00	-6972.45	-6148.59	1977.95	12.31	8.29	80.78	1878.85
4.68	29	SLE Q	2	1	0.00	-5066.08	-6212.76	736.12	12.31	8.29	66.33	1791.14
8.76	37	SLE R	2	1	407.60	-8361.96	955.12	-959.41	7.16	13.45	16.79	199.89
8.76	29	SLE Q	2	1	407.60	-3002.62	387.68	-388.03	7.16	13.45	6.91	81.03

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
4.38	29	SLE Q	1	1	438.00	-32741.10	-2007.24	7826.70	44.00	68.40	0.50	20.00	132.49	6.28	139.78	651.73	0.19	0.04
4.38	27	SLE F	1	1	438.00	-33497.20	-2031.87	7793.36	44.00	68.40	0.50	20.00	174.29	3.14	135.54	637.00	0.19	0.05
4.68	29	SLE Q	2	1	0.00	-5066.08	736.12	-6212.76	44.00	132.94	0.50	20.00	128.64	6.28	127.68	826.52	0.27	0.06
4.68	28	SLE F	2	1	0.00	-5070.92	763.52	-6385.02	44.00	68.40	0.50	20.00	130.68	15.71	335.17	852.90	0.25	0.06
4.68	29	SLE Q	2	1	0.00	-5066.08	736.12	-6212.76	44.00	171.02	0.50	18.86	180.87	8.29	408.48	1791.14	0.59	0.18
4.68	25	SLE F	2	1	0.00	-5001.98	1728.12	-5449.00	44.00	171.02	0.50	18.86	196.09	5.15	295.32	1721.47	0.50	0.17
8.76	29	SLE Q	2	1	407.60	-3002.62	-388.03	387.68	44.00	171.01	0.50	18.22	141.00	3.14	91.37	62.43	0.02	0.00
8.76	25	SLE F	2	1	407.60	-2938.51	-452.67	449.88	44.00	171.01	0.50	18.22	150.20	3.14	107.24	90.23	0.03	0.01

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø6/10	2	232	SLU	0.45	1196.86	2.50	19715.80	46819.90	0.45	3032.44	2.50	19715.80	46819.90	6.502	
0.70	1.31	ø6/10	2	220	SLU	0.45	4089.42	2.50	19715.80	46609.10	0.45	956.34	2.50	19715.80	46609.10	4.821	
0.70	1.31	ø6/10	2	29(TG)	SLV	0.45	6219.81	2.50	19715.80	42705.00	0.45	17918.10	2.50	19715.80	42705.00	1.100	
0.70	1.31	ø6/10	2	29(TG)	SLV	0.45	6292.41	2.50	19715.80	44314.00	0.45	18363.10	2.50	19715.80	44314.00	1.074	
0.70	1.31	ø6/10	2	213(TG)	SLV	0.45	19014.60	2.50	19715.80	42962.90	0.45	7202.63	2.50	19715.80	42962.90	1.037	
0.70	1.31	ø6/10	2	213(TG)	SLV	0.45	19286.00	2.50	19715.80	44068.70	0.45	7391.78	2.50	19715.80	44068.70	1.022	
1.31	3.77	ø6/15	2	232	SLU	0.45	1196.86	2.50	13143.90	46819.90	0.45	3032.44	2.50	13143.90	46819.90	4.334	
1.31	3.77	ø6/15	2	220	SLU	0.45	4089.42	2.50	13143.90	46553.90	0.45	956.34	2.50	13143.90	46553.90	3.214	
1.31	3.77	ø6/15	2	25(TG)	SLV	0.45	11274.40	2.50	13143.90	42918.80	0.45	12446.10	2.50	13143.90	42918.80	1.056	
1.31	3.77	ø6/15	2	25(TG)	SLV	0.45	11758.30	2.50	13143.90	44011.90	0.45	12523.30	2.50	13143.90	44011.90	1.050	
1.31	3.77	ø6/15	2	27(TG)	SLV	0.45	12901.90	2.50	13143.90	43341.20	0.45	10664.30	2.50	13143.90	43341.20	1.019	
1.31	3.77	ø6/15	2	27(TG)	SLV	0.45	12958.60	2.50	13143.90	43589.60	0.45	10691.20	2.50	13143.90	43589.60	1.014	
3.77	4.38	ø6/15	2	232	SLU	0.45	1196.86	2.50	13143.90	46819.90	0.45	3032.44	2.50	13143.90	46819.90	4.334	
3.77	4.38	ø6/15	2	220	SLU	0.45	4089.42	2.50	13143.90	46333.50	0.45	956.34	2.50	13143.90	46333.50	3.214	
3.77	4.38	ø6/15	2	25(TG)	SLV	0.45	11274.40	2.50	13143.90	42918.80	0.45	12446.10	2.50	13143.90	42918.80	1.056	
3.77	4.38	ø6/15	2	25(TG)	SLV	0.45	11758.30	2.50	13143.90	44011.90	0.45	12523.30	2.50	13143.90	44011.90	1.050	
3.77	4.38	ø6/15	2	27(TG)	SLV	0.45	12901.90	2.50	13143.90	43341.20	0.45	10664.30	2.50	13143.90	43341.20	1.019	
3.77	4.38	ø6/15	2	27(TG)	SLV	0.45	12958.60	2.50	13143.90	43589.60	0.45	10691.20	2.50	13143.90	43589.60	1.014	
4.68	5.36	ø6/10	2	230	SLU	0.45	1937.48	2.50	19715.80	40756.10	0.45	1342.24	2.50	19715.80	40756.10	10.176	
4.68	5.36	ø6/10	2	234	SLU	0.45	2340.43	2.50	19715.80	40769.60	0.45	1067.68	2.50	19715.80	40769.60	8.424	
4.68	5.36	ø6/10	2	23(TG)	SLV	0.45	4717.62	2.50	19715.80	39473.20	0.45	4313.67	2.50	19715.80	39473.20	4.179	
4.68	5.36	ø6/10	2	23(TG)	SLV	0.45	8281.25	2.50	19715.80	39473.20	0.45	1386.86	2.50	19715.80	39473.20	2.381	
5.36	8.08	ø6/15	2	230	SLU	0.45	1937.48	2.50	13143.90	40695.10	0.45	1342.24	2.50	13143.90	40695.10	6.784	
5.36	8.08	ø6/15	2	234	SLU	0.45	2340.43	2.50	13143.90	40708.60	0.45	1067.68	2.50	13143.90	40708.60	5.616	
5.36	8.08	ø6/15	2	23(TG)	SLV	0.45	4717.62	2.50	13143.90	39473.20	0.45	4313.67	2.50	13143.90	39473.20	2.786	
5.36	8.08	ø6/15	2	23(TG)	SLV	0.45	8281.25	2.50	13143.90	39473.20	0.45	1386.86	2.50	13143.90	39473.20	1.587	

Relazione di calcolo

8.08	8.76	ø6/10	2	2	30	SLU	0.45	1937.48	2.50	19715.80	40450.90	0.45	1342.24	2.50	19715.80	40450.90	10.176
8.08	8.76	ø6/10	2	2	34	SLU	0.45	2340.43	2.50	19715.80	40464.40	0.45	1067.68	2.50	19715.80	40464.40	8.424
8.08	8.76	ø6/10	2	2	3 (TG)	SLV	0.45	4717.62	2.50	19715.80	39473.20	0.45	4313.67	2.50	19715.80	39473.20	4.179
8.08	8.76	ø6/10	2	2	3 (TG)	SLV	0.45	8281.25	2.50	19715.80	39473.20	0.45	1386.86	2.50	19715.80	39473.20	2.381

Dettagli costruttivi per la duttilità

- CC=9 $\alpha_e=0.42561$ $\omega_{nd}=0.0891$ $\mu\Phi_d=7.08596$ $v_d=0.12095$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=8.7933$
0.03792 >= 0.02376 [7.4.29]
- CC=9 $\alpha_e=0.42561$ $\omega_{nd}=0.0891$ $\mu\Phi_d=7.58384$ $v_d=0.12095$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=8.7933$
0.03792 >= 0.02789 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	Nu	MRdy	MRdz	α	ϵ_y	Sic.	
<m>					<cm>	<daN>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>			
0.70	46	SLU	I	1	1	70.00	-34604.10	1127.95	-1943.53	-143489.00	12389.50	-21954.70	306.56	25.40	4.147
0.70	46	SLU	I	1	1	70.00	-34604.10	1127.95	-1943.53	-143489.00	12389.50	-21954.70	306.56	25.40	4.147
4.38	46	SLU	I	1	1	438.00	-32741.10	-2007.24	7826.70	-32741.10	-7168.09	27290.90	108.28	28.00	3.488
4.68	46	SLU	I	2	1	0.00	-5066.08	736.12	-6212.76	-5066.08	3321.60	-27892.90	278.44	35.18	4.491
4.68	46	SLU	I	2	1	0.00	-5066.08	736.12	-6212.76	-5066.08	1380.35	-10670.50	275.62	56.65	1.720
8.76	46	SLU	I	2	1	407.60	-3002.62	-388.03	387.68	-3002.62	-7070.33	7070.58	135.00	38.32	18.198

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø6/10	2	2	46	SLU I	0.35	2654.96	2.50	10500.60	53399.00	0.35	851.95	2.50	10500.60	53399.00	3.955
1.31	3.77	ø6/15	2	2	46	SLU I	0.35	2654.96	2.50	7000.38	53350.80	0.35	851.95	2.50	7000.38	53350.80	2.637
3.77	4.38	ø6/15	2	2	46	SLU I	0.35	2654.96	2.50	7000.38	53158.10	0.35	851.95	2.50	7000.38	53158.10	2.637
4.68	5.36	ø6/10	2	2	46	SLU I	0.35	1619.35	2.50	10500.60	48815.50	0.35	275.80	2.50	10500.60	48815.50	6.484
5.36	8.08	ø6/15	2	2	46	SLU I	0.35	1619.35	2.50	7000.38	48762.20	0.35	275.80	2.50	7000.38	48762.20	4.323
8.08	8.76	ø6/10	2	2	46	SLU I	0.35	1619.35	2.50	10500.60	48548.70	0.35	275.80	2.50	10500.60	48548.70	6.484

Pilastrata n. 31

Nodi: -43 -68 -1360

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fcd (Inc) <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
1R		45.00	45.00	5.20	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	1	SLV		1	1	70.00	-32611.10	14653.50	-4063.08	-4063.08	-32611.10	35469.10	-10144.10	344.53	4.00	2.426
0.70	1	SLV		1	1	70.00	-32611.10	14653.50	-4063.08	-4063.08	-32611.10	35469.10	-10144.10	344.53	4.00	2.426
4.38	1	SLV		1	1	438.00	-30748.10	-16496.70	6404.54	6404.54	-30748.10	-33983.20	12878.90	160.31	3.90	2.054
4.68	32	SLU		2	1	0.00	-13739.60	10293.40	-8023.82	-8023.82	-13739.60	27280.00	-21422.70	326.25	3.93	2.658
4.68	32	SLU		2	1	0.00	-13739.60	10293.40	-8023.82	-8023.82	-13739.60	13467.20	-10803.60	320.62	5.42	1.323
8.69	33	SLU		2	1	400.96	-11545.60	-2866.63	5285.61	5285.61	-11545.60	-7929.45	14754.70	115.31	6.37	2.786

Stato limite d'esercizio - Verifiche tensionali

Xg	CC	TCC	El	Sez.	X	N	Mz	My	AfT	AfC	σ_c	σ_f
<m>					<cm>	<daN>	<daNm>	<daNm>	<cmq>	<cmq>	<daN/cmq>	<daN/cmq>
0.70	37	SLE R	1	1	70.00	-41275.80	2606.57	4950.69	19.01	41.81	50.97	623.59
0.70	29	SLE Q	1	1	70.00	-37593.70	-270.62	1379.16	0.00	60.82	20.12	274.95
0.70	37	SLE R	1	1	70.00	-41275.80	2606.57	4950.69	19.01	41.81	50.97	623.59
0.70	29	SLE Q	1	1	70.00	-37593.70	-270.62	1379.16	0.00	60.82	20.12	274.95
4.38	39	SLE R	1	1	438.00	-41701.10	2116.59	-7364.47	26.61	34.21	64.26	763.05
4.38	37	SLE R	1	1	438.00	-39412.80	901.94	-8032.01	26.61	34.21	61.63	724.72
4.38	29	SLE Q	1	1	438.00	-35730.70	3366.68	-5224.65	19.01	41.81	56.48	673.49
4.68	37	SLE R	2	1	0.00	-9577.08	-5786.14	7180.29	34.21	26.61	83.10	1291.51
4.68	39	SLE R	2	1	0.00	-8176.79	-5822.62	6968.82	38.01	22.81	81.85	1293.86
4.68	29	SLE Q	2	1	0.00	-4376.34	-4946.31	4423.33	38.01	22.81	59.35	959.41
4.68	37	SLE R	2	1	0.00	-9577.08	-5786.14	7180.29	13.45	7.16	134.46	2832.02
4.68	39	SLE R	2	1	0.00	-8176.79	-5822.62	6968.82	13.45	7.16	133.25	2860.60
4.68	29	SLE Q	2	1	0.00	-4376.34	-4946.31	4423.33	13.45	7.16	98.32	2182.37
8.69	38	SLE R	2	1	400.96	-7843.77	3606.94	-1943.12	10.30	10.30	55.47	1053.67
8.69	29	SLE Q	2	1	400.96	-2346.49	1372.72	-543.59	12.31	8.29	19.08	397.08

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm ² >	ε _{sm}	W _k <mm>
4.38	29	SLE Q	1	1	438.00	-35730.70	-5224.65	3366.68	44.00	113.34	0.50	22.00	133.43	3.80	78.50	400.62	0.12	0.03
4.38	42	SLE F	1	1	438.00	-36008.50	-5822.18	2922.33	44.00	132.17	0.50	22.00	139.21	3.80	88.49	430.54	0.13	0.03
4.68	29	SLE Q	2	1	0.00	-4376.34	4423.33	-4946.31	44.00	132.17	0.50	22.00	171.89	3.80	144.95	959.41	0.28	0.08
4.68	25	SLE F	2	1	0.00	-4383.24	5245.86	-4485.45	44.00	132.17	0.50	22.00	177.84	3.80	155.23	1017.08	0.30	0.09
4.68	29	SLE Q	2	1	0.00	-4376.34	4423.33	-4946.31	44.00	171.02	0.50	18.86	193.20	3.14	175.26	2182.37	0.75	0.25
4.68	25	SLE F	2	1	0.00	-4383.24	5245.86	-4485.45	44.00	171.01	0.50	18.86	195.17	3.14	178.54	2277.78	0.66	0.22
8.69	29	SLE Q	2	1	400.96	-2346.49	-543.59	1372.72	44.00	171.02	0.50	18.86	228.82	3.14	234.61	397.08	0.12	0.04

Relazione di calcolo

8.69	42	SLE F	2	1	400.96	-3045.95	-754.17	1588.46	44.00	171.02	0.50	18.86	213.06	3.14	208.35	465.46	0.14	0.05
------	----	-------	---	---	--------	----------	---------	---------	-------	--------	------	-------	--------	------	--------	--------	------	------

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	32	SLU	0.45	860.82	2.50	39431.60	46790.40	0.45	5098.78	2.50	39431.60	46790.40	7.734
0.70	1.31	ø6/ 5	2	2	20	SLU	0.45	1286.65	2.50	39431.60	46819.90	0.45	2661.53	2.50	39431.60	46819.90	14.815
0.70	1.31	ø6/ 5	2	2	11 (TG)	SLV	0.45	2704.79	2.50	39431.60	43422.70	0.45	22605.70	2.50	39431.60	43422.70	1.744
0.70	1.31	ø6/ 5	2	2	11 (TG)	SLV	0.45	2696.84	2.50	39431.60	44348.20	0.45	22848.00	2.50	39431.60	44348.20	1.726
0.70	1.31	ø6/ 5	2	2	13 (TG)	SLV	0.45	21546.60	2.50	39431.60	43332.70	0.45	7594.47	2.50	39431.60	43332.70	1.830
0.70	1.31	ø6/ 5	2	2	13 (TG)	SLV	0.45	21796.80	2.50	39431.60	44438.20	0.45	7637.96	2.50	39431.60	44438.20	1.809
1.31	3.77	ø6/15	2	2	32	SLU	0.45	860.82	2.50	13143.90	46735.30	0.45	5098.78	2.50	13143.90	46735.30	2.578
1.31	3.77	ø6/15	2	2	20	SLU	0.45	1286.65	2.50	13143.90	46819.90	0.45	2661.53	2.50	13143.90	46819.90	4.938
1.31	3.77	ø6/15	2	2	5 (TG)	SND	0.45	8036.61	2.50	13143.90	45088.30						1.635
1.31	3.77	ø6/15	2	2	5 (TG)	SLV						0.45	12780.20	2.50	13143.90	43353.20	1.028
1.31	3.77	ø6/15	2	2	1 (TG)	SLV	0.45	9968.12	2.50	13143.90	43215.30						1.319
1.31	3.77	ø6/15	2	2	1 (TG)	SND						0.45	12908.70	2.50	13143.90	45318.10	1.018
3.77	4.38	ø6/15	2	2	32	SLU	0.45	860.82	2.50	13143.90	46514.80	0.45	5098.78	2.50	13143.90	46514.80	2.578
3.77	4.38	ø6/15	2	2	20	SLU	0.45	1286.65	2.50	13143.90	46812.80	0.45	2661.53	2.50	13143.90	46812.80	4.938
3.77	4.38	ø6/15	2	2	5 (TG)	SND	0.45	8036.61	2.50	13143.90	45088.30						1.635
3.77	4.38	ø6/15	2	2	5 (TG)	SLV						0.45	12780.20	2.50	13143.90	43353.20	1.028
3.77	4.38	ø6/15	2	2	1 (TG)	SLV	0.45	9968.12	2.50	13143.90	43215.30						1.319
3.77	4.38	ø6/15	2	2	1 (TG)	SND						0.45	12908.70	2.50	13143.90	45318.10	1.018
4.68	5.35	ø6/10	2	2	32	SLU	0.45	3106.54	2.50	19715.80	40892.70	0.45	3323.65	2.50	19715.80	40892.70	5.932
4.68	5.35	ø6/10	2	2	33	SLU	0.45	3441.01	2.50	19715.80	40953.50	0.45	3051.84	2.50	19715.80	40953.50	5.730
4.68	5.35	ø6/10	2	2	15 (TG)	SLV	0.45	6712.39	2.50	19715.80	39328.50	0.45	5992.02	2.50	19715.80	39328.50	2.937
4.68	5.35	ø6/10	2	2	15 (TG)	SLV	0.45	7408.10	2.50	19715.80	39328.50	0.45	4085.20	2.50	19715.80	39328.50	2.661
5.35	8.02	ø6/15	2	2	32	SLU	0.45	3106.54	2.50	13143.90	40832.70	0.45	3323.65	2.50	13143.90	40832.70	3.955
5.35	8.02	ø6/15	2	2	33	SLU	0.45	3441.01	2.50	13143.90	40893.40	0.45	3051.84	2.50	13143.90	40893.40	3.820
5.35	8.02	ø6/15	2	2	15 (TG)	SLV	0.45	6712.39	2.50	13143.90	39328.50	0.45	5992.02	2.50	13143.90	39328.50	1.958
5.35	8.02	ø6/15	2	2	15 (TG)	SLV	0.45	7408.10	2.50	13143.90	39328.50	0.45	4085.20	2.50	13143.90	39328.50	1.774
8.02	8.69	ø6/10	2	2	32	SLU	0.45	3106.54	2.50	19715.80	40592.50	0.45	3323.65	2.50	19715.80	40592.50	5.932
8.02	8.69	ø6/10	2	2	33	SLU	0.45	3441.01	2.50	19715.80	40653.20	0.45	3051.84	2.50	19715.80	40653.20	5.730
8.02	8.69	ø6/10	2	2	15 (TG)	SLV	0.45	6712.39	2.50	19715.80	39328.50	0.45	5992.02	2.50	19715.80	39328.50	2.937
8.02	8.69	ø6/10	2	2	15 (TG)	SLV	0.45	7408.10	2.50	19715.80	39328.50	0.45	4085.20	2.50	19715.80	39328.50	2.661

Dettagli costruttivi per la duttilità

- CC=1 α_e=0.49814 ω_{nd}=0.17821 μΦ_d=7.08596 v_d=0.1271 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_c=14.2022
0.08877 >= 0.02675 [7.4.29]
- CC=1 α_e=0.49814 ω_{nd}=0.17821 μΦ_d=7.58384 v_d=0.1271 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_c=14.2022
0.08877 >= 0.03109 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	46 (e)	SLU I	1	1	70.00	-37593.70	1379.16	-270.62	-143489.00	22569.20	-14528.40	331.88	23.90	3.817
0.70	46 (e)	SLU I	1	1	70.00	-37593.70	1379.16	-270.62	-143489.00	22569.20	-14528.40	331.88	23.90	3.817
4.38	46	SLU I	1	1	438.00	-35730.70	-5224.65	3366.68	-143489.00	-22492.20	14442.30	151.88	24.11	4.016
4.68	46	SLU I	2	1	0.00	-4376.34	4423.33	-4946.31	-4376.34	18168.60	-20429.80	316.41	27.24	4.121
4.68	46	SLU I	2	1	0.00	-4376.34	4423.33	-4946.31	-4376.34	6765.87	-7619.91	312.19	37.94	1.536
8.69	46	SLU I	2	1	400.96	-2346.49	-543.59	1372.72	-2346.49	-3659.82	9624.96	106.88	43.99	6.970

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	46	SLU	0.35	988.40	2.50	21001.10	53862.90	0.35	1794.51	2.50	21001.10	53862.90	11.703
1.31	3.77	ø6/15	2	2	46	SLU	0.35	988.40	2.50	7000.38	53814.70	0.35	1794.51	2.50	7000.38	53814.70	3.901
3.77	4.38	ø6/15	2	2	46	SLU	0.35	988.40	2.50	7000.38	53622.00	0.35	1794.51	2.50	7000.38	53622.00	3.901
4.68	5.35	ø6/10	2	2	46	SLU	0.35	1575.98	2.50	10500.60	48708.50	0.35	1238.76	2.50	10500.60	48708.50	6.663
5.35	8.02	ø6/15	2	2	46	SLU	0.35	1575.98	2.50	7000.38	48656.00	0.35	1238.76	2.50	7000.38	48656.00	4.442
8.02	8.69	ø6/10	2	2	46	SLU	0.35	1575.98	2.50	10500.60	48446.00	0.35	1238.76	2.50	10500.60	48446.00	6.663

Pilastrata n. 32

Nodi: -48 -69 -1846

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
1	R	45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	1	SLV	1	1	70.00	-47606.30	13054.40	13054.40	3754.06	3754.06	-47606.30	20268.10	5665.04	16.88	4.93	1.549
0.70	1	SLV	1	1	70.00	-47606.30	13054.40	13054.40	3754.06	3754.06	-47606.30	20268.10	5665.04	16.88	4.93	1.549
4.38	1	SLV	1	1	438.00	-44847.00	-11567.80	-11567.80	-1415.25	-1415.25	-44847.00	-21083.80	-2793.79	188.44	6.07	1.825
4.68	19	SLU	2	1	0.00	-12153.90	2811.65	2811.65	-4089.22	-4089.22	-12153.90	9700.59	-13899.70	303.75	5.76	3.416
4.68	19	SLU	2	1	0.00	-12153.90	2811.65	2811.65	-4089.22	-4089.22	-12153.90	9700.59	-13899.70	303.75	5.76	3.416
8.69	19	SLU	2	1	400.96	-9515.08	-545.85	-545.85	7134.33	7134.33	-9515.08	-1278.03	16275.80	92.81	12.39	2.282

Stato limite d'esercizio - Verifiche tensionali

Xg	CC	TCC	El	Sez.	X	N	Mz	My	AfT	AfC	σ _c	σ _t
----	----	-----	----	------	---	---	----	----	-----	-----	----------------	----------------

Relazione di calcolo

<m>					<cm>	<daN>	<daNm>	<daNm>	<cmq>	<cmq>	<daN/cmq>	<daN/cmq>
0.70	37	SLE R	1	1	70.00	-54977.30	2949.45	4018.21	3.14	17.47	62.83	799.48
0.70	29	SLE Q	1	1	70.00	-47163.00	1256.96	613.98	0.00	20.61	30.35	418.75
0.70	37	SLE R	1	1	70.00	-54977.30	2949.45	4018.21	3.14	17.47	62.83	799.48
0.70	29	SLE Q	1	1	70.00	-47163.00	1256.96	613.98	0.00	20.61	30.35	418.75
4.38	38	SLE R	1	1	438.00	-53340.20	-1294.09	-3717.30	0.00	20.61	50.12	653.57
4.38	29	SLE Q	1	1	438.00	-45300.00	-785.83	-2330.86	0.00	20.61	36.31	483.80
4.68	23	SLE R	2	1	0.00	-8505.54	-2820.90	2025.97	13.45	7.16	48.00	808.57
4.68	29	SLE Q	2	1	0.00	-4487.32	-1420.91	1942.60	13.45	7.16	33.97	631.35
4.68	23	SLE R	2	1	0.00	-8505.54	-2820.90	2025.97	13.45	7.16	48.00	808.57
4.68	29	SLE Q	2	1	0.00	-4487.32	-1420.91	1942.60	13.45	7.16	33.97	631.35
8.69	38	SLE R	2	1	400.96	-9288.26	4905.63	-677.89	12.31	8.29	53.48	1169.62
8.69	23	SLE R	2	1	400.96	-6475.68	4890.66	-371.88	12.31	8.29	49.75	1255.51
8.69	29	SLE Q	2	1	400.96	-2457.47	2030.67	-159.09	12.31	8.29	20.71	533.28

Stato limite d'esercizio - Verifiche a fessurazione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	c	s	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	Wk
<m>					<cm>	<daN>	<daNm>	<daNm>	<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cmq>		<mm>
4.68	29	SLE Q	2	1	0.00	-4487.32	1942.60	-1420.91	44.00	171.01	0.50	18.86	189.45	3.14	169.02	631.35	0.18	0.06
4.68	25	SLE F	2	1	0.00	-4385.53	1965.98	-1573.70	44.00	171.01	0.50	18.86	187.41	3.14	165.62	677.99	0.20	0.06
4.68	29	SLE Q	2	1	0.00	-4487.32	1942.60	-1420.91	44.00	171.01	0.50	18.86	189.45	3.14	169.02	631.35	0.18	0.06
4.68	25	SLE F	2	1	0.00	-4385.53	1965.98	-1573.70	44.00	171.01	0.50	18.86	187.41	3.14	165.62	677.99	0.20	0.06
8.69	29	SLE Q	2	1	400.96	-2457.47	-159.09	2030.67	44.00	171.01	0.50	18.86	183.37	8.29	419.45	533.28	0.16	0.05
8.69	27	SLE F	2	1	400.96	-3286.79	-200.50	2592.28	44.00	171.01	0.50	18.86	183.11	8.29	418.31	673.07	0.20	0.06

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø6/ 5	2	232	SLU	0.45	1291.45	2.50	39431.60	46819.90	0.45	3416.32	2.50	39431.60	46819.90	11.542	
0.70	1.31	ø6/ 5	2	233	SLU	0.45	1561.85	2.50	39431.60	46819.90	0.45	2498.26	2.50	39431.60	46819.90	15.784	
0.70	1.31	ø6/ 5	2	29(TG)	SLV	0.45	1770.81	2.50	39431.60	45140.50	0.45	12836.60	2.50	39431.60	45140.50	3.072	
0.70	1.31	ø6/ 5	2	215(TG)	SLV	0.45	11290.40	2.50	39431.60	45113.00	0.45	4855.50	2.50	39431.60	45113.00	3.492	
1.31	3.77	ø6/15	2	232	SLU	0.45	1291.45	2.50	13143.90	46819.90	0.45	3416.32	2.50	13143.90	46819.90	3.847	
1.31	3.77	ø6/15	2	233	SLU	0.45	1561.85	2.50	13143.90	46819.90	0.45	2498.26	2.50	13143.90	46819.90	5.261	
1.31	3.77	ø6/15	2	29(TG)	SLV	0.45	1770.81	2.50	13143.90	45140.50	0.45	12836.60	2.50	13143.90	45140.50	1.024	
1.31	3.77	ø6/15	2	215(TG)	SLV	0.45	11290.40	2.50	13143.90	45113.00	0.45	4855.50	2.50	13143.90	45113.00	1.164	
3.77	4.38	ø6/10	2	232	SLU	0.45	1291.45	2.50	19715.80	46819.90	0.45	3416.32	2.50	19715.80	46819.90	5.771	
3.77	4.38	ø6/10	2	233	SLU	0.45	1561.85	2.50	19715.80	46819.90	0.45	2498.26	2.50	19715.80	46819.90	7.892	
3.77	4.38	ø6/10	2	29(TG)	SLV	0.45	1770.81	2.50	19715.80	45140.50	0.45	12836.60	2.50	19715.80	45140.50	1.536	
3.77	4.38	ø6/10	2	215(TG)	SLV	0.45	11290.40	2.50	19715.80	45113.00	0.45	4855.50	2.50	19715.80	45113.00	1.746	
4.68	5.35	ø6/10	2	232	SLU	0.45	1494.01	2.50	19715.80	41211.70	0.45	1214.76	2.50	19715.80	41211.70	13.197	
4.68	5.35	ø6/10	2	219	SLU	0.45	2799.18	2.50	19715.80	40676.20	0.45	837.37	2.50	19715.80	40676.20	7.043	
4.68	5.35	ø6/10	2	213(TG)	SLV	0.45	6154.54	2.50	19715.80	39255.20	0.45	5580.12	2.50	19715.80	39255.20	3.203	
4.68	5.35	ø6/10	2	213(TG)	SLV	0.45	6289.83	2.50	19715.80	39450.00	0.45	5595.27	2.50	19715.80	39450.00	3.135	
4.68	5.35	ø6/10	2	25(TG)	SLV	0.45	7863.37	2.50	19715.80	39450.00	0.45	3345.36	2.50	19715.80	39450.00	2.507	
5.35	8.02	ø6/15	2	232	SLU	0.45	1494.01	2.50	13143.90	41151.60	0.45	1214.76	2.50	13143.90	41151.60	8.798	
5.35	8.02	ø6/15	2	219	SLU	0.45	2799.18	2.50	13143.90	40616.20	0.45	837.37	2.50	13143.90	40616.20	4.696	
5.35	8.02	ø6/15	2	213(TG)	SLV	0.45	6154.54	2.50	13143.90	39255.20	0.45	5580.12	2.50	13143.90	39255.20	2.136	
5.35	8.02	ø6/15	2	213(TG)	SLV	0.45	6289.83	2.50	13143.90	39450.00	0.45	5595.27	2.50	13143.90	39450.00	2.090	
5.35	8.02	ø6/15	2	25(TG)	SLV	0.45	7863.37	2.50	13143.90	39450.00	0.45	3345.36	2.50	13143.90	39450.00	1.672	
8.02	8.69	ø6/10	2	232	SLU	0.45	1494.01	2.50	19715.80	40911.40	0.45	1214.76	2.50	19715.80	40911.40	13.197	
8.02	8.69	ø6/10	2	219	SLU	0.45	2799.18	2.50	19715.80	40375.90	0.45	837.37	2.50	19715.80	40375.90	7.043	
8.02	8.69	ø6/10	2	213(TG)	SLV	0.45	6154.54	2.50	19715.80	39255.20	0.45	5580.12	2.50	19715.80	39255.20	3.203	
8.02	8.69	ø6/10	2	213(TG)	SLV	0.45	6289.83	2.50	19715.80	39450.00	0.45	5595.27	2.50	19715.80	39450.00	3.135	
8.02	8.69	ø6/10	2	25(TG)	SLV	0.45	7863.37	2.50	19715.80	39450.00	0.45	3345.36	2.50	19715.80	39450.00	2.507	

Dettagli costruttivi per la duttilità

- CC=13 α_e=0.36817 ω_{wd}=0.14257 μΦ_d=7.08596 ν_d=0.14266 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_c=8.94385
0.05249 >= 0.03431 [7.4.29]

- CC=13 α_e=0.36817 ω_{wd}=0.14257 μΦ_d=7.58384 ν_d=0.14266 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_c=8.94385
0.05249 >= 0.03918 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	Nu	MR _{dy}	MR _{dz}	α	ε _y	Sic.
<m>					<cm>	<daN>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
0.70	46(e)	SLU I	1	1	70.00	-47163.00	613.98	1256.96	-143489.00	9227.49	10410.20	50.62	27.19	3.042
0.70	46(e)	SLU I	1	1	70.00	-47163.00	613.98	1256.96	-143489.00	9227.49	10410.20	50.62	27.19	3.042
4.38	46(e)	SLU I	1	1	438.00	-45300.00	-2330.86	-785.83	-143489.00	-12998.60	-5795.85	204.61	28.78	3.168
4.68	46	SLU I	2	1	0.00	-4487.32	1942.60	-1420.91	-4487.32	8268.41	-6118.65	323.44	37.49	4.276
4.68	46	SLU I	2	1	0.00	-4487.32	1942.60	-1420.91	-4487.32	8268.41	-6118.65	323.44	37.49	4.276
8.69	46	SLU I	2	1	400.96	-2457.47	-159.09	2030.67	-2457.47	-1003.90	10552.30	95.62	57.58	5.202

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	b _{w,y}	V _{sdu,y}	ctgθ _y	V _{Rsd,y}	V _{Rcd,y}	b _{w,z}	V _{sdu,z}	ctgθ _z	V _{Rsd,z}	V _{Rcd,z}	Sic.
<m>	<m>						<cm>	<daN>		<daN>	<daN>	<cm>	<daN>		<daN>	<daN>	
0.70	1.31	ø6/ 5	2	246	SLU I	0.35	555.11	2.50	21001.10	55347.80	0.35	800.23	2.50	21001.10	55347.80	26.244	
1.31	3.77	ø6/15	2	246	SLU I	0.35	555.11	2.50	7000.38	55299.60	0.35	800.23	2.50	7000.38	55299.60	8.748	
3.77	4.38	ø6/10	2	246	SLU I	0.35	555.11	2.50	10500.60	55106.90	0.35	800.23	2.50	10500.60	55106.90	13.122	
4.68	5.35	ø6/10	2	246	SLU I	0.35	860.83	2.50	10500.60	48725.70	0.35	524.17	2.50	10500.60	48725.70	12.198	

Relazione di calcolo

5.35	8.02	ø6/15	2	246	SLU I	0.35	860.83	2.50	7000.38	48673.20	0.35	524.17	2.50	7000.38	48673.20	8.132
8.02	8.69	ø6/10	2	246	SLU I	0.35	860.83	2.50	10500.60	48463.20	0.35	524.17	2.50	10500.60	48463.20	12.198

Pilastrata n. 33

Nodi: -34 -93 -1358

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
1	R	45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/prestresso

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	1	SLV	1	1	70.00	-37977.90	-15170.90	-15170.90	4925.14	4925.14	-37977.90	-18968.80	6102.72	161.72	5.36	1.249
0.70	1	SLV	1	1	70.00	-37977.90	-15170.90	-15170.90	4925.14	4925.14	-37977.90	-18968.80	6102.72	161.72	5.36	1.249
4.38	9	SLV	1	1	438.00	-35914.50	18607.70	18607.70	-1442.83	-1442.83	-35914.50	20298.60	-1881.22	354.38	7.43	1.092
4.68	17	SLU	2	1	0.00	-8440.58	-10820.40	-10820.40	-2874.65	-2874.65	-8440.58	-15843.20	-4086.06	191.25	8.89	1.461
4.68	17	SLU	2	1	0.00	-8440.58	-10820.40	-10820.40	-2874.65	-2874.65	-8440.58	-15843.20	-4086.06	191.25	8.89	1.461
8.69	33	SLU	2	1	400.96	-12214.30	2041.21	2041.21	7065.73	7065.73	-12214.30	4700.01	16308.80	75.94	7.74	2.308

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
0.70	37	SLE R	1	1	70.00	-48346.00	3047.32	1305.95	0.00	20.61	44.35	580.18
0.70	22	SLE R	1	1	70.00	-43449.80	1500.21	-2377.93	0.00	20.61	39.67	519.22
0.70	29	SLE Q	1	1	70.00	-40720.40	1279.82	-2497.53	0.00	20.61	37.98	495.73
0.70	37	SLE R	1	1	70.00	-48346.00	3047.32	1305.95	0.00	20.61	44.35	580.18
0.70	22	SLE R	1	1	70.00	-43449.80	1500.21	-2377.93	0.00	20.61	39.67	519.22
0.70	29	SLE Q	1	1	70.00	-40720.40	1279.82	-2497.53	0.00	20.61	37.98	495.73
4.38	24	SLE R	1	1	438.00	-44915.90	-759.82	8162.06	8.29	12.31	81.40	956.25
4.38	29	SLE Q	1	1	438.00	-38857.40	-553.55	7652.45	10.30	10.30	75.29	871.81
4.68	23	SLE R	2	1	0.00	-7872.40	-2758.03	-7091.07	12.31	8.29	98.87	2260.23
4.68	24	SLE R	2	1	0.00	-6028.25	-2293.93	-7537.03	12.31	8.29	97.76	2410.46
4.68	29	SLE Q	2	1	0.00	-4256.02	-1890.34	-5710.56	12.31	8.29	75.96	1869.40
4.68	23	SLE R	2	1	0.00	-7872.40	-2758.03	-7091.07	12.31	8.29	98.87	2260.23
4.68	24	SLE R	2	1	0.00	-6028.25	-2293.93	-7537.03	12.31	8.29	97.76	2410.46
4.68	29	SLE Q	2	1	0.00	-4256.02	-1890.34	-5710.56	12.31	8.29	75.96	1869.40
8.69	38	SLE R	2	1	400.96	-8265.53	4848.14	1392.11	12.31	8.29	61.30	1313.23
8.69	29	SLE Q	2	1	400.96	-2226.16	2022.41	533.42	12.31	8.29	25.18	601.44

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
4.38	29	SLE Q	1	1	438.00	-38857.40	7652.45	-553.55	44.00	171.01	0.50	18.86	186.36	5.15	268.75	759.24	0.22	0.07
4.38	28	SLE F	1	1	438.00	-39967.00	7900.50	-544.95	44.00	171.01	0.50	18.86	187.54	5.15	271.97	785.81	0.23	0.07
4.68	29	SLE Q	2	1	0.00	-4256.02	-5710.56	-1890.34	44.00	171.01	0.50	18.86	195.32	5.15	293.23	1869.40	0.59	0.20
4.68	25	SLE F	2	1	0.00	-4226.55	-6546.37	-1685.29	44.00	171.01	0.50	18.86	211.31	5.15	336.91	2092.88	0.61	0.22
4.68	29	SLE Q	2	1	0.00	-4256.02	-5710.56	-1890.34	44.00	171.01	0.50	18.86	195.32	5.15	293.23	1869.40	0.59	0.20
4.68	25	SLE F	2	1	0.00	-4226.55	-6546.37	-1685.29	44.00	171.01	0.50	18.86	211.31	5.15	336.91	2092.88	0.61	0.22
8.69	29	SLE Q	2	1	400.96	-2226.16	533.42	2022.41	44.00	171.01	0.50	18.86	204.75	5.15	319.00	601.44	0.18	0.06
8.69	27	SLE F	2	1	400.96	-2957.54	643.68	2538.48	44.00	171.01	0.50	18.86	206.06	5.15	322.56	742.30	0.22	0.08

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <cm>	V _{sdu,y} <daN>	ctgθ _y	VR _{sd,y} <daN>	VR _{cd,y} <daN>	b _{w,z} <cm>	V _{sdu,z} <daN>	ctgθ _z	VR _{sd,z} <daN>	VR _{cd,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	20	SLU	0.45	892.18	2.50	39431.60	46819.90	0.45	4079.79	2.50	39431.60	46819.90	9.665
0.70	1.31	ø6/ 5	2	2	33	SLU	0.45	1495.52	2.50	39431.60	46819.90	0.45	2028.55	2.50	39431.60	46819.90	19.438
0.70	1.31	ø6/ 5	2	2	3(TG)	SLV	0.45	1196.25	2.50	39431.60	44640.90	0.45	12584.80	2.50	39431.60	44640.90	3.133
0.70	1.31	ø6/ 5	2	2	5(TG)	SLV	0.45	8643.03	2.50	39431.60	44579.60	0.45	7764.25	2.50	39431.60	44579.60	4.562
1.31	3.77	ø6/15	2	2	20	SLU	0.45	892.18	2.50	13143.90	46819.90	0.45	4079.79	2.50	13143.90	46819.90	3.222
1.31	3.77	ø6/15	2	2	33	SLU	0.45	1495.52	2.50	13143.90	46819.90	0.45	2028.55	2.50	13143.90	46819.90	6.479
1.31	3.77	ø6/15	2	2	3(TG)	SLV	0.45	1196.25	2.50	13143.90	44640.90	0.45	12584.80	2.50	13143.90	44640.90	1.044
1.31	3.77	ø6/15	2	2	5(TG)	SLV	0.45	8643.03	2.50	13143.90	44579.60	0.45	7764.25	2.50	13143.90	44579.60	1.521
3.77	4.38	ø6/10	2	2	20	SLU	0.45	892.18	2.50	19715.80	46819.90	0.45	4079.79	2.50	19715.80	46819.90	4.833
3.77	4.38	ø6/10	2	2	33	SLU	0.45	1495.52	2.50	19715.80	46819.90	0.45	2028.55	2.50	19715.80	46819.90	9.719
3.77	4.38	ø6/10	2	2	3(TG)	SLV	0.45	1196.25	2.50	19715.80	44640.90	0.45	12584.80	2.50	19715.80	44640.90	1.567
3.77	4.38	ø6/10	2	2	5(TG)	SLV	0.45	8643.03	2.50	19715.80	44579.60	0.45	7764.25	2.50	19715.80	44579.60	2.281
4.68	5.35	ø6/10	2	2	17	SLU	0.45	1769.89	2.50	19715.80	40169.20	0.45	3074.07	2.50	19715.80	40169.20	6.414
4.68	5.35	ø6/10	2	2	33	SLU	0.45	2693.61	2.50	19715.80	41044.80	0.45	2816.09	2.50	19715.80	41044.80	7.001
4.68	5.35	ø6/10	2	2	13(TG)	SLV	0.45	3664.01	2.50	19715.80	39418.10	0.45	7621.69	2.50	19715.80	39418.10	2.587
4.68	5.35	ø6/10	2	2	1(TG)	SLV	0.45	6236.79	2.50	19715.80	39292.30	0.45	4456.34	2.50	19715.80	39292.30	3.161
5.35	8.02	ø6/15	2	2	17	SLU	0.45	1769.89	2.50	13143.90	40109.10	0.45	3074.07	2.50	13143.90	40109.10	4.276
5.35	8.02	ø6/15	2	2	33	SLU	0.45	2693.61	2.50	13143.90	40984.70	0.45	2816.09	2.50	13143.90	40984.70	4.667
5.35	8.02	ø6/15	2	2	13(TG)	SLV	0.45	3664.01	2.50	13143.90	39418.10	0.45	7621.69	2.50	13143.90	39418.10	1.725
5.35	8.02	ø6/15	2	2	1(TG)	SLV	0.45	6236.79	2.50	13143.90	39292.30	0.45	4456.34	2.50	13143.90	39292.30	2.107
8.02	8.69	ø6/10	2	2	17	SLU	0.45	1769.89	2.50	19715.80	39868.90	0.45	3074.07	2.50	19715.80	39868.90	6.414
8.02	8.69	ø6/10	2	2	33	SLU	0.45	2693.61	2.50	19715.80	40744.50	0.45	2816.09	2.50	19715.80	40744.50	7.001
8.02	8.69	ø6/10	2	2	13(TG)	SLV	0.45	3664.01	2.50	19715.80	39418.10	0.45	7621.69	2.50	19715.80	39418.10	2.587
8.02	8.69	ø6/10	2	2	1(TG)	SLV	0.45	6236.79	2.50	19715.80	39292.30	0.45	4456.34	2.50	19715.80	39292.30	3.161

Dettagli costruttivi per la duttilità

- CC=1 α_e=0.36817 ω_{wd}=0.14257 μΦ_d=7.08596 v_d=0.12989 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_e=9.8233

Relazione di calcolo

0.05249 >= 0.02811 [7.4.29]
- CC=1 $\alpha_e=0.36817$ $\omega_{wd}=0.14257$ $\mu\Phi_d=7.58384$ $v_d=0.12989$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=9.8233$
0.05249 >= 0.03254 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	46	SLU I	1	1	70.00	-40720.40	-2497.53	1279.82	-143489.00	-12177.20	6436.97	153.28	29.25	3.524
0.70	46	SLU I	1	1	70.00	-40720.40	-2497.53	1279.82	-143489.00	-12177.20	6436.97	153.28	29.25	3.524
4.38	46(e)	SLU I	1	1	438.00	-38857.40	7652.45	-553.55	-38857.40	14451.20	1690.54	8.44	36.44	1.888
4.68	46	SLU I	2	1	0.00	-4256.02	-5710.56	-1890.34	-4256.02	-9989.27	-3307.95	195.47	44.49	1.749
4.68	46	SLU I	2	1	0.00	-4256.02	-5710.56	-1890.34	-4256.02	-9989.27	-3307.95	195.47	44.49	1.749
8.69	46	SLU I	2	1	400.96	-2226.16	533.42	2022.41	-2226.16	2655.14	9863.44	77.34	48.63	4.882

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _{,y}	Vsdu _{,y}	ctgθ _{,y}	VRsd _{,y}	VRcd _{,y}	bw _{,z}	Vsdu _{,z}	ctgθ _{,z}	VRsd _{,z}	VRcd _{,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
0.70	1.31	ø6/ 5	2	246	SLU I	0.35	498.20	2.50	21001.10	54348.10	0.35	2758.15	2.50	21001.10	54348.10	7.614	
1.31	3.77	ø6/15	2	246	SLU I	0.35	498.20	2.50	7000.38	54299.90	0.35	2758.15	2.50	7000.38	54299.90	2.538	
3.77	4.38	ø6/10	2	246	SLU I	0.35	498.20	2.50	10500.60	54107.20	0.35	2758.15	2.50	10500.60	54107.20	3.807	
4.68	5.35	ø6/10	2	246	SLU I	0.35	975.85	2.50	10500.60	48689.80	0.35	1557.26	2.50	10500.60	48689.80	6.743	
5.35	8.02	ø6/15	2	246	SLU I	0.35	975.85	2.50	7000.38	48637.30	0.35	1557.26	2.50	7000.38	48637.30	4.495	
8.02	8.69	ø6/10	2	246	SLU I	0.35	975.85	2.50	10500.60	48427.40	0.35	1557.26	2.50	10500.60	48427.40	6.743	

Pilastrata n. 34

Nodi: -1742 -71 -1852

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm ² >	Fctk <daN/cm ² >	Fcd <daN/cm ² >	Fcd (Inc) <daN/cm ² >	Fctd <daN/cm ² >	Tp	Fyk <daN/cm ² >	Fyd <daN/cm ² >
1R		45.00	45.00	5.40	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
1R		45.00	45.00	5.20	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_r	Sic.	
0.70	9	SLV	1	1	70.00	-33135.70	-14546.20	-14546.20	-7484.07	-7484.07	-33135.70	-31973.90	-16499.10	205.31	3.71	2.199
0.70	9	SLV	1	1	70.00	-33135.70	-14546.20	-14546.20	-7484.07	-7484.07	-33135.70	-31973.90	-16499.10	205.31	3.71	2.199
4.38	13	SLV	1	1	438.00	-30223.90	7104.42	7104.42	20022.20	20022.20	-30223.90	13379.00	37021.90	63.28	3.85	1.853
4.68	20	SLU	2	1	0.00	-9194.98	-4354.37	-4354.37	-8505.73	-8505.73	-9194.98	-16782.30	-32750.10	236.25	4.10	3.851
4.68	20	SLU	2	1	0.00	-9194.98	-4354.37	-4354.37	-8505.73	-8505.73	-9194.98	-7561.77	-14602.50	246.09	6.67	1.721
8.70	32	SLU	2	1	402.34	-11879.90	-911.85	-911.85	-1350.82	-1350.82	-11879.90	-9694.09	-13866.20	236.25	5.78	10.381

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cm ² >	σ_f <daN/cm ² >
0.70	24	SLE R	1	1	70.00	-45431.00	-1536.91	-2226.48	0.00	60.82	31.81	417.26
0.70	29	SLE Q	1	1	70.00	-39192.80	-1389.87	-2230.97	0.00	60.82	29.13	379.09
0.70	24	SLE R	1	1	70.00	-45431.00	-1536.91	-2226.48	0.00	60.82	31.81	417.26
0.70	29	SLE Q	1	1	70.00	-39192.80	-1389.87	-2230.97	0.00	60.82	29.13	379.09
4.38	24	SLE R	1	1	438.00	-43568.00	7846.72	3387.05	26.61	34.21	71.46	847.83
4.38	29	SLE Q	1	1	438.00	-37329.80	6863.85	3640.61	26.61	34.21	66.76	786.58
4.68	24	SLE R	2	1	0.00	-6601.81	-6169.93	-3019.98	34.21	26.61	56.51	889.32
4.68	29	SLE Q	2	1	0.00	-4757.91	-6203.81	-1451.69	34.21	26.61	44.99	768.51
4.68	24	SLE R	2	1	0.00	-6601.81	-6169.93	-3019.98	12.31	8.29	93.42	2096.19
4.68	29	SLE Q	2	1	0.00	-4757.91	-6203.81	-1451.69	12.31	8.29	75.14	1919.91
8.70	37	SLE R	2	1	402.34	-8120.18	-899.75	-607.77	7.16	13.45	13.06	159.51
8.70	29	SLE Q	2	1	402.34	-2721.06	-29.37	-24.74	0.00	20.61	1.46	20.83

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cm ² >	ϵ_{sm}	Wk <mm>
4.38	29	SLE Q	1	1	438.00	-37329.80	3640.61	6863.85	44.00	68.00	0.50	22.00	139.16	3.80	88.40	541.73	0.16	0.04
4.38	28	SLE F	1	1	438.00	-38341.40	3752.52	7086.89	44.00	68.00	0.50	22.00	139.40	3.80	88.82	561.45	0.16	0.04
4.68	29	SLE Q	2	1	0.00	-4757.91	-1451.69	-6203.81	44.00	132.16	0.50	22.00	125.21	7.60	128.60	768.51	0.26	0.05
4.68	25	SLE F	2	1	0.00	-4702.21	-2611.23	-5505.43	44.00	68.00	0.50	22.00	136.09	7.60	166.21	805.94	0.23	0.05
4.68	29	SLE Q	2	1	0.00	-4757.91	-1451.69	-6203.81	44.00	171.01	0.50	18.86	214.67	5.15	346.09	1919.91	0.57	0.21
4.68	25	SLE F	2	1	0.00	-4702.21	-2611.23	-5505.43	44.00	171.01	0.50	18.86	228.35	3.14	233.82	1917.32	0.56	0.22

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø8/10	2	220	SLU	0.45	3540.54	2.50	35050.30	46819.90	0.45	2101.15	2.50	35050.30	46819.90	9.900	
0.70	1.31	ø8/10	2	21 (TG)	SLV	0.45	6306.10	2.50	35050.30	43415.50	0.45	21094.60	2.50	35050.30	43415.50	1.662	
0.70	1.31	ø8/10	2	21 (TG)	SLV	0.45	6305.65	2.50	35050.30	44941.10	0.45	21419.10	2.50	35050.30	44941.10	1.636	
0.70	1.31	ø8/10	2	27 (TG)	SLV	0.45	24506.30	2.50	35050.30	43596.10	0.45	4113.99	2.50	35050.30	43596.10	1.430	
0.70	1.31	ø8/10	2	215 (TG)	SLV	0.45	24745.60	2.50	35050.30	44632.00	0.45	4495.50	2.50	35050.30	44632.00	1.416	
1.31	3.77	ø8/20	2	220	SLU	0.45	3540.54	2.50	17525.20	46819.90	0.45	2101.15	2.50	17525.20	46819.90	4.950	
1.31	3.77	ø8/20	2	211 (TG)	SLV	0.45	12286.30	2.50	17525.20	43733.40	0.45	17104.00	2.50	17525.20	43733.40	1.025	

Relazione di calcolo

1.31	3.77	ø8/20	2	211(TG)	SLV	0.45	12308.40	2.50	17525.20	44366.00	0.45	17211.00	2.50	17525.20	44366.00	1.018
1.31	3.77	ø8/20	2	213(TG)	SND	0.45	14572.10	2.50	17525.20	45771.30						1.203
1.31	3.77	ø8/20	2	213(TG)	SLV						0.45	6561.33	2.50	17525.20	43143.70	2.671
3.77	4.38	ø8/15	2	220	SLU	0.45	3540.54	2.50	23366.90	46819.90	0.45	2101.15	2.50	23366.90	46819.90	6.600
3.77	4.38	ø8/15	2	21(TG)	SLV	0.45	6306.10	2.50	23366.90	43415.50	0.45	21094.60	2.50	23366.90	43415.50	1.108
3.77	4.38	ø8/15	2	21(TG)	SLV	0.45	6305.65	2.50	23366.90	44941.10	0.45	21419.10	2.50	23366.90	44941.10	1.091
3.77	4.38	ø8/15	2	213(TG)	SLV	0.45	23048.30	2.50	23366.90	43143.70	0.45	6561.33	2.50	23366.90	43143.70	1.014
3.77	4.38	ø8/15	2	215(TG)	SLV	0.45	23163.90	2.50	23366.90	44632.00	0.45	6358.95	2.50	23366.90	44632.00	1.009
4.68	5.35	ø6/10	2	217	SLU	0.45	1640.05	2.50	19715.80	40264.10	0.45	1315.40	2.50	19715.80	40264.10	12.021
4.68	5.35	ø6/10	2	220	SLU	0.45	2040.59	2.50	19715.80	40272.20	0.45	1031.30	2.50	19715.80	40272.20	9.662
4.68	5.35	ø6/10	2	23(TG)	SLV	0.45	6110.87	2.50	19715.80	39403.30	0.45	5480.63	2.50	19715.80	39403.30	3.226
4.68	5.35	ø6/10	2	23(TG)	SLV	0.45	8338.58	2.50	19715.80	39403.30	0.45	1236.86	2.50	19715.80	39403.30	2.364
5.35	8.03	ø6/15	2	217	SLU	0.45	1640.05	2.50	13143.90	40203.80	0.45	1315.40	2.50	13143.90	40203.80	8.014
5.35	8.03	ø6/15	2	220	SLU	0.45	2040.60	2.50	13143.90	40211.90	0.45	1031.30	2.50	13143.90	40211.90	6.441
5.35	8.03	ø6/15	2	23(TG)	SLV	0.45	6110.87	2.50	13143.90	39403.30	0.45	5480.63	2.50	13143.90	39403.30	2.151
5.35	8.03	ø6/15	2	23(TG)	SLV	0.45	8338.58	2.50	13143.90	39403.30	0.45	1236.86	2.50	13143.90	39403.30	1.576
8.03	8.70	ø6/10	2	217	SLU	0.45	1640.05	2.50	19715.80	39962.80	0.45	1315.40	2.50	19715.80	39962.80	12.021
8.03	8.70	ø6/10	2	220	SLU	0.45	2040.60	2.50	19715.80	39970.90	0.45	1031.30	2.50	19715.80	39970.90	9.662
8.03	8.70	ø6/10	2	23(TG)	SLV	0.45	6110.87	2.50	19715.80	39403.30	0.45	5480.63	2.50	19715.80	39403.30	3.226
8.03	8.70	ø6/10	2	23(TG)	SLV	0.45	8338.58	2.50	19715.80	39403.30	0.45	1236.86	2.50	19715.80	39403.30	2.364

Dettagli costruttivi per la duttilità

- CC=5 $\alpha_e=0.43261$ $\omega_{wd}=0.15926$ $\mu\Phi_d=7.08596$ $v_d=0.13773$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20968$ $\mu\Phi_e=10.9428$
0.0689 >= 0.03228 [7.4.29]
- CC=5 $\alpha_e=0.43261$ $\omega_{wd}=0.15926$ $\mu\Phi_d=7.58384$ $v_d=0.13773$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20968$ $\mu\Phi_e=10.9428$
0.0689 >= 0.03701 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.	
0.70	46	SLU	I	1	1	70.00	-39192.80	-2230.97	-1389.87	-143489.00	-22978.60	-13986.60	206.72	23.65	3.661
0.70	46	SLU	I	1	1	70.00	-39192.80	-2230.97	-1389.87	-143489.00	-22978.60	-13986.60	206.72	23.65	3.661
4.38	46	SLU	I	1	1	438.00	-37329.80	3640.61	6863.85	-37329.80	13688.30	26054.30	54.84	24.15	3.784
4.68	46	SLU	I	2	1	0.00	-4757.91	-1451.69	-6203.81	-4757.91	-6989.90	-31066.40	251.72	31.19	4.999
4.68	46	SLU	I	2	1	0.00	-4757.91	-1451.69	-6203.81	-4757.91	-2287.20	-10307.60	258.75	49.33	1.657
8.70	46 (e)	SLU	I	2	1	402.34	-2721.06	-24.74	-29.37	-143489.00	-7044.17	-7044.09	225.00	38.40	52.733

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø8/10	2	246	SLU	I	0.35	2242.86	2.50	18908.30	54111.10	0.35	1595.54	2.50	18908.30	54111.10	8.430
1.31	3.77	ø8/20	2	246	SLU	I	0.35	2242.86	2.50	9454.14	54062.90	0.35	1595.54	2.50	9454.14	54062.90	4.215
3.77	4.38	ø8/15	2	246	SLU	I	0.35	2242.86	2.50	12605.50	53870.20	0.35	1595.54	2.50	12605.50	53870.20	5.620
4.68	5.35	ø6/10	2	246	SLU	I	0.35	1534.64	2.50	10500.60	48767.70	0.35	354.66	2.50	10500.60	48767.70	6.842
5.35	8.03	ø6/15	2	246	SLU	I	0.35	1534.64	2.50	7000.38	48715.00	0.35	354.66	2.50	7000.38	48715.00	4.562
8.03	8.70	ø6/10	2	246	SLU	I	0.35	1534.64	2.50	10500.60	48504.30	0.35	354.66	2.50	10500.60	48504.30	6.842

Pilastrata n. 35

Nodi: -224 -72 -1357

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
1R		45.00	45.00	5.40	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
1R		45.00	45.00	5.20	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	1	SLV	1	1	70.00	-20793.50	-13665.50	-13665.50	6928.42	6928.42	-20793.50	-28796.60	14648.00	154.69	4.10	2.109
0.70	1	SLV	1	1	70.00	-20793.50	-13665.50	-13665.50	6928.42	6928.42	-20793.50	-28796.60	14648.00	154.69	4.10	2.109
4.38	5	SLV	1	1	438.00	-19755.80	4616.81	4616.81	-19212.40	-19212.40	-19755.80	8043.61	-35046.00	286.88	4.92	1.820
4.68	17	SLU	2	1	0.00	-8349.74	-2405.65	-2405.65	5890.46	5890.46	-8349.74	-12986.60	31228.40	118.12	4.52	5.315
4.68	17	SLU	2	1	0.00	-8349.74	-2405.65	-2405.65	5890.46	5890.46	-8349.74	-6052.63	15206.90	108.28	7.40	2.572
8.66	32(e)	SLU	2	1	397.68	-8806.67	-8547.73	-8547.73	25.92	176.13	-8806.67	-16124.40	315.33	179.30	13.78	1.886

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
0.70	37	SLE R	1	1	70.00	-30982.80	3121.35	1415.91	10.08	42.82	32.11	402.87
0.70	29	SLE Q	1	1	70.00	-29548.70	970.42	-1810.48	0.00	52.90	23.10	300.18
0.70	37	SLE R	1	1	70.00	-30982.80	3121.35	1415.91	10.08	42.82	32.11	402.87
0.70	29	SLE Q	1	1	70.00	-29548.70	970.42	-1810.48	0.00	52.90	23.10	300.18
4.38	39	SLE R	1	1	438.00	-31737.90	-7062.20	743.89	26.45	26.45	51.62	606.42
4.38	37	SLE R	1	1	438.00	-29119.80	-7397.27	110.89	26.45	26.45	48.89	567.10
4.38	29	SLE Q	1	1	438.00	-27685.70	-5234.72	1923.86	23.31	29.59	47.79	564.70
4.68	21	SLE R	2	1	0.00	-5972.50	4193.41	-1587.27	29.59	23.31	37.51	588.39
4.68	29	SLE Q	2	1	0.00	-4104.48	3466.62	395.77	29.59	23.31	23.76	409.65
4.68	21	SLE R	2	1	0.00	-5972.50	4193.41	-1587.27	12.31	8.29	57.69	1260.83
4.68	29	SLE Q	2	1	0.00	-4104.48	3466.62	395.77	12.31	8.29	36.87	933.55
8.66	37	SLE R	2	1	397.68	-6008.70	19.29	-5797.51	12.31	8.29	53.61	1516.61

8.66	29	SLE Q	2	1	397.68	-2091.23	24.22	-1637.20	12.31	8.29	15.42	409.44
------	----	-------	---	---	--------	----------	-------	----------	-------	------	-------	--------

Stato limite d'esercizio - Verifiche a fessurazione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	C	S	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	W _k
<mm>					<cm>	<daN>	<daNm>	<daNm>	<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cmq>		<mm>
4.38	29	SLE Q	1	1	438.00	-27685.70	1923.86	-5234.72	44.00	68.61	0.50	20.71	140.75	3.80	96.83	376.00	0.11	0.03
4.38	42	SLE F	1	1	438.00	-27484.70	1658.16	-5635.04	44.00	68.61	0.50	20.71	149.19	3.80	112.33	401.97	0.12	0.03
4.68	29	SLE Q	2	1	0.00	-4104.48	395.77	3466.62	44.00	68.61	0.50	20.71	128.94	16.37	323.54	409.65	0.12	0.03
4.68	25	SLE F	2	1	0.00	-4313.39	-853.05	3860.83	44.00	68.61	0.50	20.71	139.13	10.08	249.00	501.67	0.15	0.03
4.68	29	SLE Q	2	1	0.00	-4104.48	395.77	3466.62	44.00	171.01	0.50	18.86	178.95	8.29	400.02	933.55	0.27	0.08
4.68	25	SLE F	2	1	0.00	-4313.39	-853.05	3860.83	44.00	171.01	0.50	18.86	213.29	5.15	342.31	1117.61	0.33	0.12
8.66	29	SLE Q	2	1	397.68	-2091.23	-1637.20	24.22	44.00	171.02	0.50	18.86	191.14	8.29	453.65	409.44	0.12	0.04
8.66	42	SLE F	2	1	397.68	-2534.54	-2400.74	23.55	44.00	171.02	0.50	18.86	193.19	8.29	462.67	625.78	0.18	0.06

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	b _{w,y}	V _{sdu,y}	ctgθ _y	VR _{sd,y}	VR _{cd,y}	b _{w,z}	V _{sdu,z}	ctgθ _z	VR _{sd,z}	VR _{cd,z}	Sic.
<mm>	<mm>						<mm>	<daN>		<daN>	<daN>	<mm>	<daN>		<daN>	<daN>	
0.70	1.31	ø8/15	2	2	19	SLU	0.45	2469.97	2.50	23366.90	45325.70	0.45	1278.46	2.50	23366.90	45325.70	9.460
0.70	1.31	ø8/15	2	2	32	SLU	0.45	4119.13	2.50	23366.90	44840.70	0.45	647.77	2.50	23366.90	44840.70	5.673
0.70	1.31	ø8/15	2	2	9(TG)	SLV	0.45	3858.85	2.50	23366.90	41730.50	0.45	19556.30	2.50	23366.90	41730.50	1.195
0.70	1.31	ø8/15	2	2	11(TG)	SLV	0.45	3927.88	2.50	23366.90	43544.90	0.45	20203.80	2.50	23366.90	43544.90	1.157
0.70	1.31	ø8/15	2	2	7(TG)	SLV	0.45	21672.70	2.50	23366.90	42258.60	0.45	3931.66	2.50	23366.90	42258.60	1.078
0.70	1.31	ø8/15	2	2	15(TG)	SLV	0.45	22081.20	2.50	23366.90	43335.60	0.45	3882.92	2.50	23366.90	43335.60	1.058
1.31	3.77	ø8/20	2	2	19	SLU	0.45	2469.97	2.50	17525.20	45270.60	0.45	1278.46	2.50	17525.20	45270.60	7.095
1.31	3.77	ø8/20	2	2	32	SLU	0.45	4119.13	2.50	17525.20	44785.60	0.45	647.77	2.50	17525.20	44785.60	4.255
1.31	3.77	ø8/20	2	2	3(TG)	SLV	0.45	8320.20	2.50	17525.20	42049.30	0.45	17496.00	2.50	17525.20	42049.30	1.002
1.31	3.77	ø8/20	2	2	5(TG)	SND	0.45	14476.60	2.50	17525.20	44641.40						1.211
1.31	3.77	ø8/20	2	2	5(TG)	SLV						0.45	7390.98	2.50	17525.20	41714.30	2.371
3.77	4.38	ø8/15	2	2	19	SLU	0.45	2469.97	2.50	23366.90	45050.10	0.45	1278.46	2.50	23366.90	45050.10	9.460
3.77	4.38	ø8/15	2	2	32	SLU	0.45	4119.13	2.50	23366.90	44565.10	0.45	647.77	2.50	23366.90	44565.10	5.673
3.77	4.38	ø8/15	2	2	9(TG)	SLV	0.45	3858.85	2.50	23366.90	41730.50	0.45	19556.30	2.50	23366.90	41730.50	1.195
3.77	4.38	ø8/15	2	2	11(TG)	SLV	0.45	3927.88	2.50	23366.90	43544.90	0.45	20203.80	2.50	23366.90	43544.90	1.157
3.77	4.38	ø8/15	2	2	7(TG)	SLV	0.45	21672.70	2.50	23366.90	42258.60	0.45	3931.66	2.50	23366.90	42258.60	1.078
3.77	4.38	ø8/15	2	2	15(TG)	SLV	0.45	22081.20	2.50	23366.90	43335.60	0.45	3882.92	2.50	23366.90	43335.60	1.058
4.68	5.34	ø6/10	2	2	32	SLU	0.45	1438.36	2.50	19715.80	40576.50	0.45	2623.17	2.50	19715.80	40576.50	7.516
4.68	5.34	ø6/10	2	2	34	SLU	0.45	1546.54	2.50	19715.80	40395.30	0.45	1761.62	2.50	19715.80	40395.30	11.192
4.68	5.34	ø6/10	2	2	9(TG)	SLV	0.45	4409.67	2.50	19715.80	39470.00	0.45	5995.80	2.50	19715.80	39470.00	3.288
4.68	5.34	ø6/10	2	2	11(TG)	SLV	0.45	4514.38	2.50	19715.80	39446.00	0.45	5761.46	2.50	19715.80	39446.00	3.422
4.68	5.34	ø6/10	2	2	9(TG)	SLV	0.45	4515.54	2.50	19715.80	39470.00	0.45	5769.78	2.50	19715.80	39470.00	3.417
5.34	7.99	ø6/15	2	2	32	SLU	0.45	1438.36	2.50	13143.90	40517.00	0.45	2623.17	2.50	13143.90	40517.00	5.011
5.34	7.99	ø6/15	2	2	34	SLU	0.45	1546.54	2.50	13143.90	40335.70	0.45	1761.62	2.50	13143.90	40335.70	7.461
5.34	7.99	ø6/15	2	2	9(TG)	SLV	0.45	4409.67	2.50	13143.90	39470.00	0.45	5995.80	2.50	13143.90	39470.00	2.192
5.34	7.99	ø6/15	2	2	11(TG)	SLV	0.45	4514.38	2.50	13143.90	39446.00	0.45	5761.46	2.50	13143.90	39446.00	2.281
5.34	7.99	ø6/15	2	2	9(TG)	SLV	0.45	4515.54	2.50	13143.90	39470.00	0.45	5769.78	2.50	13143.90	39470.00	2.278
7.99	8.66	ø6/10	2	2	32	SLU	0.45	1438.36	2.50	19715.80	40278.70	0.45	2623.16	2.50	19715.80	40278.70	7.516
7.99	8.66	ø6/10	2	2	34	SLU	0.45	1546.54	2.50	19715.80	40097.50	0.45	1761.62	2.50	19715.80	40097.50	11.192
7.99	8.66	ø6/10	2	2	9(TG)	SLV	0.45	4409.67	2.50	19715.80	39470.00	0.45	5995.80	2.50	19715.80	39470.00	3.288
7.99	8.66	ø6/10	2	2	11(TG)	SLV	0.45	4514.38	2.50	19715.80	39446.00	0.45	5761.46	2.50	19715.80	39446.00	3.422
7.99	8.66	ø6/10	2	2	9(TG)	SLV	0.45	4515.54	2.50	19715.80	39470.00	0.45	5769.78	2.50	19715.80	39470.00	3.417

Dettagli costruttivi per la duttilità

- CC=9 α_e=0.36804 ω_{wd}=0.10617 μΦ_d=7.08596 v_d=0.11395 E_{sy,d}=0.0018995 b_c/b₀=1.20968 μΦ_c=9.43039
0.03908 >= 0.02066 [7.4.29]
- CC=9 α_e=0.36804 ω_{wd}=0.10617 μΦ_d=7.58384 v_d=0.11395 E_{sy,d}=0.0018995 b_c/b₀=1.20968 μΦ_c=9.43039
0.03908 >= 0.02457 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	Nu	MR _{dy}	MR _{dz}	α	ε _y	Sic.
<mm>					<cm>	<daN>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
0.70	46	SLU I	1	1	70.00	-29548.70	-1810.48	970.42	-143489.00	-21668.00	11671.40	154.69	25.39	4.856
0.70	46	SLU I	1	1	70.00	-29548.70	-1810.48	970.42	-143489.00	-21668.00	11671.40	154.69	25.39	4.856
4.38	46	SLU I	1	1	438.00	-27685.70	1923.86	-5234.72	-27685.70	9078.33	-25690.40	295.31	27.67	4.892
4.68	46	SLU I	2	1	0.00	-4104.48	395.77	3466.62	-4104.48	3260.82	28755.80	81.56	34.99	8.291
4.68	46	SLU I	2	1	0.00	-4104.48	395.77	3466.62	-4104.48	1390.16	10582.90	84.20	56.82	3.058
8.66	46(e)	SLU I	2	1	397.68	-2091.23	-1637.20	24.22	-2091.23	-10566.30	446.37	177.19	64.43	6.457

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	b _{w,y}	V _{sdu,y}	ctgθ _y	VR _{sd,y}	VR _{cd,y}	b _{w,z}	V _{sdu,z}	ctgθ _z	VR _{sd,z}	VR _{cd,z}	Sic.
<mm>	<mm>						<mm>	<daN>		<daN>	<daN>	<mm>	<daN>		<daN>	<daN>	
0.70	1.31	ø8/15	2	2	46	SLU I	0.35	1686.18	2.50	12605.50	52614.60	0.35	1014.77	2.50	12605.50	52614.60	7.476
1.31	3.77	ø8/20	2	2	46	SLU I	0.35	1686.18	2.50	9454.14	52566.40	0.35	1014.77	2.50	9454.14	52566.40	5.607
3.77	4.38	ø8/15	2	2	46	SLU I	0.35	1686.18	2.50	12605.50	52373.70	0.35	1014.77	2.50	12605.50	52373.70	7.476
4.68	5.34	ø6/10	2	2	46	SLU I	0.35	865.62	2.50	10500.60	48666.30	0.35	511.21	2.50	10500.60	48666.30	12.131
5.34	7.99	ø6/15	2	2	46	SLU I	0.35	865.62	2.50	7000.38	48614.30	0.35	511.21	2.50	7000.38	48614.30	8.087
7.99	8.66	ø6/10	2	2	46	SLU I	0.35	865.62	2.50	10500.60	48406.00	0.35	511.21	2.50	10500.60	48406.00	12.131

Pilastrata n. 36

Nodi: -18 -73 -1824

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	Cf	Cls	Fck	Fctk	Fcd	Fcd (Inc)	Fctd	Tp	Fyk	Fyd
------	------	---	---	----	-----	-----	------	-----	-----------	------	----	-----	-----

Relazione di calcolo

		<cm>	<cm>	<cm>		<daN/cm>	<daN/cm>	<daN/cm>	<daN/cm>	<daN/cm>		<daN/cm>	<daN/cm>
1R		45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _r	Sic.
0.7013	SLV	1	1	1	70.00	-38302.80	-5691.95	-5691.95	-14000.00	-14000.00	-38302.80	-7340.56	-18447.70	247.50	4.97	1.314
0.7013	SLV	1	1	1	70.00	-38302.80	-5691.95	-5691.95	-14000.00	-14000.00	-38302.80	-7340.56	-18447.70	247.50	4.97	1.314
4.3813	SLV	1	1	1	438.00	-36439.80	2276.54	2276.54	11599.20	11599.20	-36439.80	3792.68	19731.80	78.75	6.28	1.700
4.6832	SLU	2	1	1	0.00	-12520.20	6453.57	6453.57	-1824.91	-1824.91	-12520.20	16351.10	-4697.91	345.94	7.71	2.537
4.6832	SLU	2	1	1	0.00	-12520.20	6453.57	6453.57	-1824.91	-1824.91	-12520.20	16351.10	-4697.91	345.94	7.71	2.537
8.6632(e)	SLU	2	1	1	397.68	-9902.94	-11235.40	-11235.40	11.74	198.06	-9902.94	-16302.90	312.97	179.30	13.58	1.451

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cm>	AfC <cm>	σ _c <daN/cm>	σ _f <daN/cm>
0.7024	SLE	R	1	1	70.00	-44654.40	-149.80	-2545.69	0.00	20.61	33.75	453.61
0.7022	SLE	R	1	1	70.00	-41506.90	-106.30	-2462.54	0.00	20.61	31.71	425.55
0.7029	SLE	Q	1	1	70.00	-38919.00	-281.68	-2268.66	0.00	20.61	30.50	407.78
0.7024	SLE	R	1	1	70.00	-44654.40	-149.80	-2545.69	0.00	20.61	33.75	453.61
0.7022	SLE	R	1	1	70.00	-41506.90	-106.30	-2462.54	0.00	20.61	31.71	425.55
0.7029	SLE	Q	1	1	70.00	-38919.00	-281.68	-2268.66	0.00	20.61	30.50	407.78
4.3837	SLE	R	1	1	438.00	-42355.10	-1657.51	3547.86	3.14	17.47	47.41	604.73
4.3829	SLE	Q	1	1	438.00	-37056.00	276.78	1366.04	0.00	20.61	24.79	339.70
4.6837	SLE	R	2	1	0.00	-8767.81	-1275.86	4417.87	12.31	8.29	55.73	1136.96
4.6829	SLE	Q	2	1	0.00	-4477.41	-742.66	1553.33	10.30	10.30	22.45	382.53
4.6837	SLE	R	2	1	0.00	-8767.81	-1275.86	4417.87	12.31	8.29	55.73	1136.96
4.6829	SLE	Q	2	1	0.00	-4477.41	-742.66	1553.33	10.30	10.30	22.45	382.53
8.6637	SLE	R	2	1	397.68	-6754.56	8.80	-7576.15	12.31	8.29	69.69	2035.49
8.6629	SLE	Q	2	1	397.68	-2464.16	11.58	-1483.12	12.31	8.29	13.89	343.51

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	C <mm>	S <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cm>	A _{c eff} <cm>	σ _s <daN/cm>	ε _{sm}	Wk <mm>
4.6829	SLE	Q	2	1	0.00	-4477.41	1553.33	-742.66	44.00	171.02	0.50	18.86	198.03	3.14	183.31	382.53	0.11	0.04
4.6842	SLE	F	2	1	0.00	-5019.64	1991.10	-755.84	44.00	171.02	0.50	18.86	217.16	3.14	215.18	490.62	0.14	0.05
4.6829	SLE	Q	2	1	0.00	-4477.41	1553.33	-742.66	44.00	171.02	0.50	18.86	198.03	3.14	183.31	382.53	0.11	0.04
4.6842	SLE	F	2	1	0.00	-5019.64	1991.10	-755.84	44.00	171.02	0.50	18.86	217.16	3.14	215.18	490.62	0.14	0.05
8.6629	SLE	Q	2	1	397.68	-2464.16	-1483.12	11.58	44.00	171.02	0.50	18.86	189.51	8.29	446.49	343.51	0.10	0.03
8.6642	SLE	F	2	1	397.68	-3006.39	-2424.72	11.40	44.00	171.02	0.50	18.86	192.70	8.29	460.48	610.39	0.18	0.06

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	V _{sd_y} <daN>	ctgθ _y	VR _{sd,y} <daN>	VR _{cd,y} <daN>	b _{w,z} <m>	V _{sd_z} <daN>	ctgθ _z	VR _{sd,z} <daN>	VR _{cd,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	219	SLU	0.45	39.05	2.50	39431.60	46819.90	0.45	1901.17	2.50	39431.60	46819.90	20.741	
0.70	1.31	ø6/ 5	2	232	SLU	0.45	1508.52	2.50	39431.60	46819.90	0.45	1508.88	2.50	39431.60	46819.90	26.133	
0.70	1.31	ø6/ 5	2	211 (TG)	SLV	0.45	4415.71	2.50	39431.60	43905.00	0.45	10849.10	2.50	39431.60	43905.00	3.635	
0.70	1.31	ø6/ 5	2	211 (TG)	SLV	0.45	4579.89	2.50	39431.60	44233.70	0.45	10926.60	2.50	39431.60	44233.70	3.609	
0.70	1.31	ø6/ 5	2	215 (TG)	SLV	0.45	12181.80	2.50	39431.60	44096.00	0.45	1518.19	2.50	39431.60	44096.00	3.237	
1.31	3.77	ø6/15	2	219	SLU	0.45	39.05	2.50	13143.90	46819.90	0.45	1901.17	2.50	13143.90	46819.90	6.914	
1.31	3.77	ø6/15	2	232	SLU	0.45	1508.52	2.50	13143.90	46819.90	0.45	1508.88	2.50	13143.90	46819.90	8.711	
1.31	3.77	ø6/15	2	211 (TG)	SLV	0.45	4415.71	2.50	13143.90	43905.00	0.45	10849.10	2.50	13143.90	43905.00	1.212	
1.31	3.77	ø6/15	2	211 (TG)	SLV	0.45	4579.89	2.50	13143.90	44233.70	0.45	10926.60	2.50	13143.90	44233.70	1.203	
1.31	3.77	ø6/15	2	215 (TG)	SLV	0.45	12181.80	2.50	13143.90	44096.00	0.45	1518.19	2.50	13143.90	44096.00	1.079	
3.77	4.38	ø6/10	2	219	SLU	0.45	39.05	2.50	19715.80	46819.90	0.45	1901.17	2.50	19715.80	46819.90	10.370	
3.77	4.38	ø6/10	2	232	SLU	0.45	1508.52	2.50	19715.80	46819.90	0.45	1508.88	2.50	19715.80	46819.90	13.066	
3.77	4.38	ø6/10	2	211 (TG)	SLV	0.45	4415.71	2.50	19715.80	43905.00	0.45	10849.10	2.50	19715.80	43905.00	1.817	
3.77	4.38	ø6/10	2	211 (TG)	SLV	0.45	4579.89	2.50	19715.80	44233.70	0.45	10926.60	2.50	19715.80	44233.70	1.804	
3.77	4.38	ø6/10	2	215 (TG)	SLV	0.45	12181.80	2.50	19715.80	44096.00	0.45	1518.19	2.50	19715.80	44096.00	1.618	
4.68	5.34	ø6/10	2	232	SLU	0.45	461.84	2.50	19715.80	40726.20	0.45	4448.05	2.50	19715.80	40726.20	4.432	
4.68	5.34	ø6/10	2	230	SLU	0.45	527.87	2.50	19715.80	40486.60	0.45	3457.29	2.50	19715.80	40486.60	5.703	
4.68	5.34	ø6/10	2	21 (TG)	SLV	0.45	574.01	2.50	19715.80	39533.90	0.45	8575.56	2.50	19715.80	39533.90	2.299	
4.68	5.34	ø6/10	2	213 (TG)	SLV	0.45	4367.17	2.50	19715.80	39414.10	0.45	4837.31	2.50	19715.80	39414.10	4.076	
5.34	7.99	ø6/15	2	232	SLU	0.45	461.84	2.50	13143.90	40666.70	0.45	4448.05	2.50	13143.90	40666.70	2.955	
5.34	7.99	ø6/15	2	230	SLU	0.45	527.87	2.50	13143.90	40427.10	0.45	3457.29	2.50	13143.90	40427.10	3.802	
5.34	7.99	ø6/15	2	21 (TG)	SLV	0.45	574.01	2.50	13143.90	39533.90	0.45	8575.56	2.50	13143.90	39533.90	1.533	
5.34	7.99	ø6/15	2	213 (TG)	SLV	0.45	4367.17	2.50	13143.90	39414.10	0.45	4837.31	2.50	13143.90	39414.10	2.717	
7.99	8.66	ø6/10	2	232	SLU	0.45	461.84	2.50	19715.80	40428.40	0.45	4448.05	2.50	19715.80	40428.40	4.432	
7.99	8.66	ø6/10	2	230	SLU	0.45	527.87	2.50	19715.80	40188.80	0.45	3457.29	2.50	19715.80	40188.80	5.703	
7.99	8.66	ø6/10	2	21 (TG)	SLV	0.45	574.01	2.50	19715.80	39533.90	0.45	8575.56	2.50	19715.80	39533.90	2.299	
7.99	8.66	ø6/10	2	213 (TG)	SLV	0.45	4367.17	2.50	19715.80	39414.10	0.45	4837.31	2.50	19715.80	39414.10	4.076	

Dettagli costruttivi per la duttilità

- CC=1 α_e=0.36817 ω_{nd}=0.14257 μΦ_d=7.08596 v_d=0.11987 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_c=10.6446
0.05249 >= 0.02324 [7.4.29]

- CC=1 α_e=0.36817 ω_{nd}=0.14257 μΦ_d=7.58384 v_d=0.11987 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_c=10.6446
0.05249 >= 0.02733 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _r	Sic.
-----------	----	-----	----	------	-----------	------------	--------------	--------------	-------------	----------------	----------------	-------------	----------------	------

Relazione di calcolo

0.70	46(e)	SLU	I	1	1	70.00	-38919.00	-2268.66	-281.68	-143489.00	-12745.30	-5036.27	203.20	30.25	3.687
0.70	46(e)	SLU	I	1	1	70.00	-38919.00	-2268.66	-281.68	-143489.00	-12745.30	-5036.27	203.20	30.25	3.687
4.38	46(e)	SLU	I	1	1	438.00	-37056.00	1366.04	276.78	-143489.00	11372.80	7245.82	29.53	29.62	3.872
4.68	46	SLU	I	2	1	0.00	-4477.41	1553.33	-742.66	-4477.41	9593.92	-4646.66	337.50	39.53	6.194
4.68	46	SLU	I	2	1	0.00	-4477.41	1553.33	-742.66	-4477.41	9593.92	-4646.66	337.50	39.53	6.194
8.66	46(e)	SLU	I	2	1	397.68	-2464.16	-1483.12	11.58	-2464.16	-10623.20	447.45	177.19	64.02	7.165

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _{,y}	Vsdu _{,y}	ctgθ _{,y}	VRsd _{,y}	VRcd _{,y}	bw _{,z}	Vsdu _{,z}	ctgθ _{,z}	VRsd _{,z}	VRcd _{,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
0.70	1.31	ø6/ 5	2	2	46	SLU I	0.35	151.76	2.50	21001.10	54068.60	0.35	987.69	2.50	21001.10	54068.60	21.263
1.31	3.77	ø6/15	2	2	46	SLU I	0.35	151.76	2.50	7000.38	54020.40	0.35	987.69	2.50	7000.38	54020.40	7.088
3.77	4.38	ø6/10	2	2	46	SLU I	0.35	151.76	2.50	10500.60	53827.70	0.35	987.69	2.50	10500.60	53827.70	10.631
4.68	5.34	ø6/10	2	2	46	SLU I	0.35	189.66	2.50	10500.60	48724.20	0.35	763.54	2.50	10500.60	48724.20	13.752
5.34	7.99	ø6/15	2	2	46	SLU I	0.35	189.66	2.50	7000.38	48672.10	0.35	763.54	2.50	7000.38	48672.10	9.168
7.99	8.66	ø6/10	2	2	46	SLU I	0.35	189.66	2.50	10500.60	48463.90	0.35	763.54	2.50	10500.60	48463.90	13.752

Pilastrata n. 37

Nodi: -225 -74 -1810

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
1	R	45.00	45.00	5.30	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
1	R	45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _r	Sic.
0.70	5	SLV	1	1	70.00	-25929.60	-8136.55	-8136.55	12736.50	12736.50	-25929.60	-17658.60	26826.70	129.38	3.89	2.125
0.70	5	SLV	1	1	70.00	-25929.60	-8136.55	-8136.55	12736.50	12736.50	-25929.60	-17658.60	26826.70	129.38	3.89	2.125
4.38	13	SLV	1	1	438.00	-22819.00	2892.39	2892.39	16018.80	16018.80	-22819.00	6361.41	34481.20	75.94	5.14	2.154
4.68	30	SLU	2	1	0.00	-8865.74	4418.39	4418.39	-7485.27	-7485.27	-8865.74	16024.80	-27095.70	306.56	4.31	3.622
4.68	30	SLU	2	1	0.00	-8865.74	4418.39	4418.39	-7485.27	-7485.27	-8865.74	8508.41	-14096.30	298.12	6.34	1.894
8.66	32(e)	SLU	2	1	397.68	-7606.49	-8376.32	-8376.32	11.60	-152.13	-7606.49	-15924.40	-318.23	180.70	14.03	1.901

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
0.70	24	SLE R	1	1	70.00	-35443.80	-224.95	-2745.55	0.00	50.27	26.79	351.33
0.70	21	SLE R	1	1	70.00	-32691.40	118.56	-2674.21	0.00	50.27	25.02	327.52
0.70	29	SLE Q	1	1	70.00	-31690.20	-305.47	-2462.87	0.00	50.27	24.47	319.95
0.70	24	SLE R	1	1	70.00	-35443.80	-224.95	-2745.55	0.00	50.27	26.79	351.33
0.70	21	SLE R	1	1	70.00	-32691.40	118.56	-2674.21	0.00	50.27	25.02	327.52
0.70	29	SLE Q	1	1	70.00	-31690.20	-305.47	-2462.87	0.00	50.27	24.47	319.95
4.38	24	SLE R	1	1	438.00	-33580.80	3166.35	1842.06	9.42	40.84	36.12	453.63
4.38	29	SLE Q	1	1	438.00	-29827.20	3063.19	1341.95	9.42	40.84	31.77	399.34
4.68	35	SLE R	2	1	0.00	-6315.91	-5222.97	3084.76	28.27	21.99	57.16	932.37
4.68	29	SLE Q	2	1	0.00	-4060.85	-3171.08	1662.16	28.27	21.99	33.04	534.95
4.68	35	SLE R	2	1	0.00	-6315.91	-5222.97	3084.76	15.46	5.15	85.09	1842.09
4.68	29	SLE Q	2	1	0.00	-4060.85	-3171.08	1662.16	12.31	8.29	49.13	1063.64
8.66	37	SLE R	2	1	397.68	-5207.98	8.25	-5655.09	12.31	8.29	52.07	1511.22
8.66	29	SLE Q	2	1	397.68	-2047.60	6.33	-1148.90	12.31	8.29	10.74	259.57

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez .	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>	
4.68	29	SLE	Q	2	1	0.00	-4060.85	1662.16	-3171.08	44.00	68.40	0.50	20.00	139.34	6.28	161.28	534.95	0.16	0.04
4.68	25	SLE	F	2	1	0.00	-3940.79	1809.62	-4116.27	44.00	68.40	0.50	20.00	144.48	6.28	177.43	681.26	0.20	0.05
4.68	29	SLE	Q	2	1	0.00	-4060.85	1662.16	-3171.08	44.00	171.01	0.50	18.86	215.79	3.14	212.91	1063.64	0.31	0.11
4.68	25	SLE	F	2	1	0.00	-3940.79	1809.62	-4116.27	44.00	171.01	0.50	18.86	232.85	3.14	241.32	1383.63	0.40	0.16
8.66	29	SLE	Q	2	1	397.68	-2047.60	-1148.90	6.33	44.00	171.01	0.50	18.86	188.99	8.29	444.19	259.57	0.08	0.02
8.66	42	SLE	F	2	1	397.68	-2452.24	-1832.12	6.81	44.00	171.01	0.50	18.86	192.19	8.29	458.27	452.52	0.13	0.04

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø8/15	2	2	19	SLU	0.45	1033.09	2.50	23366.90	45475.10	0.45	1871.03	2.50	23366.90	45475.10	12.489
0.70	1.31	ø8/15	2	2	20	SLU	0.45	1307.51	2.50	23366.90	45711.80	0.45	1738.23	2.50	23366.90	45711.80	13.443
0.70	1.31	ø8/15	2	2	3(TG)	SLV	0.45	4318.12	2.50	23366.90	43121.30	0.45	18874.10	2.50	23366.90	43121.30	1.238
0.70	1.31	ø8/15	2	2	3(TG)	SLV	0.45	4321.16	2.50	23366.90	43228.20	0.45	18906.00	2.50	23366.90	43228.20	1.236
0.70	1.31	ø8/15	2	2	15(TG)	SLV	0.45	21594.10	2.50	23366.90	42247.10	0.45	1616.25	2.50	23366.90	42247.10	1.082
0.70	1.31	ø8/15	2	2	15(TG)	SLV	0.45	22102.50	2.50	23366.90	43761.60	0.45	2139.50	2.50	23366.90	43761.60	1.057
1.31	3.77	ø8/20	2	2	19	SLU	0.45	1033.09	2.50	17525.20	45420.00	0.45	1871.03	2.50	17525.20	45420.00	9.367
1.31	3.77	ø8/20	2	2	20	SLU	0.45	1307.51	2.50	17525.20	45656.70	0.45	1738.23	2.50	17525.20	45656.70	10.082
1.31	3.77	ø8/20	2	2	11(TG)	SLV	0.45	7414.24	2.50	17525.20	42950.90	0.45	17306.80	2.50	17525.20	42950.90	1.013
1.31	3.77	ø8/20	2	2	1(TG)	SLV	0.45	7686.95	2.50	17525.20	43610.00	0.45	17427.90	2.50	17525.20	43610.00	1.006
1.31	3.77	ø8/20	2	2	1(TG)	SLV	0.45	12994.00	2.50	17525.20	42739.50	0.45	12243.30	2.50	17525.20	42739.50	1.349
1.31	3.77	ø8/20	2	2	1(TG)	SLV	0.45	13194.00	2.50	17525.20	43610.00	0.45	12354.70	2.50	17525.20	43610.00	1.328
3.77	4.38	ø8/15	2	2	19	SLU	0.45	1033.09	2.50	23366.90	45199.50	0.45	1871.03	2.50	23366.90	45199.50	12.489
3.77	4.38	ø8/15	2	2	20	SLU	0.45	1307.51	2.50	23366.90	45436.20	0.45	1738.23	2.50	23366.90	45436.20	13.443

Relazione di calcolo

3.77	4.38	ø8/15	2	2	3(TG)	SLV	0.45	4318.12	2.50	23366.90	43121.30	0.45	18874.10	2.50	23366.90	43121.30	1.238
3.77	4.38	ø8/15	2	2	3(TG)	SLV	0.45	4321.16	2.50	23366.90	43228.20	0.45	18906.00	2.50	23366.90	43228.20	1.236
3.77	4.38	ø8/15	2	2	15(TG)	SLV	0.45	21594.10	2.50	23366.90	42247.10	0.45	1616.25	2.50	23366.90	42247.10	1.082
3.77	4.38	ø8/15	2	2	15(TG)	SLV	0.45	22102.50	2.50	23366.90	43761.60	0.45	2139.50	2.50	23366.90	43761.60	1.057
4.68	5.34	ø6/10	2	2	32	SLU	0.45	1572.13	2.50	19715.80	40412.60	0.45	3349.39	2.50	19715.80	40412.60	5.886
4.68	5.34	ø6/10	2	2	17	SLU	0.45	1925.32	2.50	19715.80	39978.60	0.45	1693.16	2.50	19715.80	39978.60	10.240
4.68	5.34	ø6/10	2	2	1(TG)	SLV	0.45	2321.38	2.50	19715.80	39159.20	0.45	8006.56	2.50	19715.80	39159.20	2.462
4.68	5.34	ø6/10	2	2	13(TG)	SLV	0.45	6682.36	2.50	19715.80	39346.90	0.45	5952.82	2.50	19715.80	39346.90	2.950
5.34	7.99	ø6/15	2	2	32	SLU	0.45	1572.13	2.50	13143.90	40353.10	0.45	3349.39	2.50	13143.90	40353.10	3.924
5.34	7.99	ø6/15	2	2	17	SLU	0.45	1925.32	2.50	13143.90	39919.00	0.45	1693.16	2.50	13143.90	39919.00	6.827
5.34	7.99	ø6/15	2	2	1(TG)	SLV	0.45	2321.38	2.50	13143.90	39159.20	0.45	8006.56	2.50	13143.90	39159.20	1.642
5.34	7.99	ø6/15	2	2	13(TG)	SLV	0.45	6682.36	2.50	13143.90	39346.90	0.45	5952.82	2.50	13143.90	39346.90	1.967
7.99	8.66	ø6/10	2	2	32	SLU	0.45	1572.13	2.50	19715.80	40114.80	0.45	3349.39	2.50	19715.80	40114.80	5.886
7.99	8.66	ø6/10	2	2	17	SLU	0.45	1925.32	2.50	19715.80	39680.80	0.45	1693.16	2.50	19715.80	39680.80	10.240
7.99	8.66	ø6/10	2	2	1(TG)	SLV	0.45	2321.38	2.50	19715.80	39159.20	0.45	8006.56	2.50	19715.80	39159.20	2.462
7.99	8.66	ø6/10	2	2	13(TG)	SLV	0.45	6682.36	2.50	19715.80	39346.90	0.45	5952.82	2.50	19715.80	39346.90	2.950

Dettagli costruttivi per la duttilità

- CC=5 $\alpha_e=0.36488$ $\omega_{wd}=0.10617$ $\mu\Phi_d=7.08596$ $v_d=0.11512$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20968$ $\mu\Phi_c=9.29198$
0.03874 >= 0.02123 [7.4.29]
- CC=5 $\alpha_e=0.36488$ $\omega_{wd}=0.10617$ $\mu\Phi_d=7.58384$ $v_d=0.11512$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20968$ $\mu\Phi_c=9.29198$
0.03874 >= 0.02518 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	46(e)	SLU	I	1	1	70.00	-31690.20	-2462.87	-305.47	-143489.00	-24511.40	-7075.72	192.66	4.528
0.70	46(e)	SLU	I	1	1	70.00	-31690.20	-2462.87	-305.47	-143489.00	-24511.40	-7075.72	192.66	4.528
4.38	46	SLU	I	1	1	438.00	-29827.20	1341.95	3063.19	-143489.00	10508.40	24081.80	59.06	4.811
4.68	46	SLU	I	2	1	0.00	-4060.85	1662.16	-3171.08	-4060.85	11778.80	-21728.40	303.75	6.905
4.68	46	SLU	I	2	1	0.00	-4060.85	1662.16	-3171.08	-4060.85	4934.81	-9403.98	295.31	2.967
8.66	46(e)	SLU	I	2	1	397.68	-2047.60	-1148.90	6.33	-2047.60	-10559.60	446.31	177.19	9.193

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _{,y}	Vsdu _{,y}	ctgθ _{,y}	VRsd _{,y}	VRcd _{,y}	bw _{,z}	Vsdu _{,z}	ctgθ _{,z}	VRsd _{,z}	VRcd _{,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
0.70	1.31	ø8/15	2	2	46	SLU I	0.35	915.40	2.50	12605.50	52946.90	0.35	1033.92	2.50	12605.50	52946.90	12.192
1.31	3.77	ø8/20	2	2	46	SLU I	0.35	915.40	2.50	9454.14	52898.70	0.35	1033.92	2.50	9454.14	52898.70	9.144
3.77	4.38	ø8/15	2	2	46	SLU I	0.35	915.40	2.50	12605.50	52706.00	0.35	1033.92	2.50	12605.50	52706.00	12.192
4.68	5.34	ø6/10	2	2	46	SLU I	0.35	798.99	2.50	10500.60	48659.60	0.35	706.87	2.50	10500.60	48659.60	13.142
5.34	7.99	ø6/15	2	2	46	SLU I	0.35	798.99	2.50	7000.38	48607.50	0.35	706.87	2.50	7000.38	48607.50	8.762
7.99	8.66	ø6/10	2	2	46	SLU I	0.35	798.99	2.50	10500.60	48399.20	0.35	706.87	2.50	10500.60	48399.20	13.142

Pilastrata n. 38

Nodi: -5 -75 -1799

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cl _s	F _{ck} <daN/cm ² >	F _{ctk} <daN/cm ² >	F _{cd} <daN/cm ² >	F _{cd} (Inc) <daN/cm ² >	F _{ctd} <daN/cm ² >	Tp	F _{yk} <daN/cm ² >	F _{yd} <daN/cm ² >
1	R	45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	1	SLV	1	1	70.00	-3891.91	-15892.80	-15892.80	5756.23	5756.23	-3891.91	-28213.40	10290.10	161.72	4.90	1.777
0.70	1	SLV	1	1	70.00	-3891.91	-15892.80	-15892.80	5756.23	5756.23	-3891.91	-28213.40	10290.10	161.72	4.90	1.777
4.38	5	SLV	1	1	438.00	-929.29	7232.82	7232.82	-11880.90	-11880.90	-929.29	15858.50	-26521.80	306.56	4.50	2.222
4.68	30	SLU	2	1	0.00	-3262.96	3238.74	3238.74	-4212.20	-4212.20	-3262.96	18587.70	-23973.70	313.59	4.35	5.709
4.68	30	SLU	2	1	0.00	-3262.96	3238.74	3238.74	-4212.20	-4212.20	-3262.96	9740.11	-12655.50	305.16	6.30	3.005
8.66	32(e)	SLU	2	1	397.68	-706.26	-2892.23	-2892.23	10.35	14.13	-706.26	-14831.30	-0.02	180.00	16.71	5.128

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cm ² >	σ_f <daN/cm ² >
0.70	21	SLE	R	1	1	70.00	-12075.40	2028.46	-2395.64	25.13	31.05	357.53
0.70	37	SLE	R	1	1	70.00	-8745.34	3418.35	1015.90	28.27	29.79	399.51
0.70	29	SLE	Q	1	1	70.00	-11351.70	1404.86	-2254.21	21.99	25.91	300.56
0.70	21	SLE	R	1	1	70.00	-12075.40	2028.46	-2395.64	25.13	31.05	357.53
0.70	37	SLE	R	1	1	70.00	-8745.34	3418.35	1015.90	28.27	29.79	399.51
0.70	29	SLE	Q	1	1	70.00	-11351.70	1404.86	-2254.21	21.99	25.91	300.56
4.38	37	SLE	R	1	1	438.00	-6882.34	-3333.34	-951.52	28.27	21.99	417.76
4.38	29	SLE	Q	1	1	438.00	-9488.66	-1096.30	1142.05	18.85	31.42	187.30
4.68	35	SLE	R	2	1	0.00	-2501.83	-2815.92	2315.31	31.42	18.85	610.89
4.68	29	SLE	Q	2	1	0.00	-2653.47	-330.16	1494.77	28.27	21.99	212.85
4.68	35	SLE	R	2	1	0.00	-2501.83	-2815.92	2315.31	13.45	7.16	1191.57
4.68	29	SLE	Q	2	1	0.00	-2653.47	-330.16	1494.77	12.31	8.29	383.77
8.66	37	SLE	R	2	1	397.68	-528.93	7.71	-1966.73	12.31	8.29	589.09
8.66	29	SLE	Q	2	1	397.68	-640.23	9.83	-401.17	12.31	8.29	94.77

Stato limite d'esercizio - Verifiche a fessurazione

Relazione di calcolo

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
0.70	29	SLE Q	1	1	70.00	-11351.70	-2254.21	1404.86	44.00	114.00	0.50	20.00	156.87	3.14	108.18	257.79	0.08	0.02
0.70	25	SLE F	1	1	70.00	-11539.10	-2279.72	1711.02	44.00	114.00	0.50	20.00	155.90	3.14	106.66	288.56	0.08	0.02
0.70	29	SLE Q	1	1	70.00	-11351.70	-2254.21	1404.86	44.00	114.00	0.50	20.00	156.87	3.14	108.18	257.79	0.08	0.02
0.70	25	SLE F	1	1	70.00	-11539.10	-2279.72	1711.02	44.00	114.00	0.50	20.00	155.90	3.14	106.66	288.56	0.08	0.02
4.38	29	SLE Q	1	1	438.00	-9488.66	1142.05	-1096.30	44.00	132.95	0.50	20.00	134.02	3.14	72.29	109.22	0.03	0.01
4.68	25	SLE F	1	1	438.00	-9676.06	1222.19	-1630.53	44.00	68.40	0.50	20.00	145.18	3.14	89.81	173.34	0.05	0.01
4.68	29	SLE Q	2	1	0.00	-2653.47	1494.77	-330.16	44.00	132.95	0.50	20.00	176.07	6.28	276.67	212.85	0.06	0.02
4.68	25	SLE F	2	1	0.00	-2546.14	1661.00	-1514.35	44.00	132.95	0.50	20.00	183.28	3.14	149.66	361.38	0.11	0.03
4.68	29	SLE Q	2	1	0.00	-2653.47	1494.77	-330.16	44.00	171.02	0.50	18.86	205.16	5.15	320.11	383.77	0.11	0.04
4.68	25	SLE F	2	1	0.00	-2546.14	1661.00	-1514.35	44.00	171.02	0.50	18.86	188.56	3.14	167.54	680.09	0.20	0.06
8.66	29	SLE Q	2	1	397.68	-640.23	-401.17	9.83	44.00	171.01	0.50	18.86	187.76	8.29	438.76	94.77	0.03	0.01
8.66	42	SLE F	2	1	397.68	-617.47	-663.37	9.71	44.00	171.01	0.50	18.86	193.34	8.29	463.33	177.02	0.05	0.02

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	V _{sdu,y} <daN>	ctgθ _y	VR _{sd,y} <daN>	VR _{cd,y} <daN>	b _{w,z} <m>	V _{sdu,z} <daN>	ctgθ _z	VR _{sd,z} <daN>	VR _{cd,z} <daN>	Sic.
0.70	1.31	ø6/10		2	219	SLU	0.45	1336.37	2.50	19715.80	41254.40	0.45	1474.90	2.50	19715.80	41254.40	13.368
0.70	1.31	ø6/10		2	232	SLU	0.45	2617.79	2.50	19715.80	40562.50	0.45	910.32	2.50	19715.80	40562.50	7.531
0.70	1.31	ø6/10		2	23(TG)	SLV	0.45	3336.96	2.50	19715.80	39848.80	0.45	18043.00	2.50	19715.80	39848.80	1.093
0.70	1.31	ø6/10		2	23(TG)	SLV	0.45	3296.17	2.50	19715.80	40715.30	0.45	18380.40	2.50	19715.80	40715.30	1.073
0.70	1.31	ø6/10		2	27(TG)	SLV	0.45	18913.40	2.50	19715.80	39570.00	0.45	5069.59	2.50	19715.80	39570.00	1.042
0.70	1.31	ø6/10		2	27(TG)	SLV	0.45	19356.00	2.50	19715.80	40994.10	0.45	5398.58	2.50	19715.80	40994.10	1.019
1.31	3.77	ø6/15		2	219	SLU	0.45	1336.37	2.50	13143.90	41199.30	0.45	1474.90	2.50	13143.90	41199.30	8.912
1.31	3.77	ø6/15		2	232	SLU	0.45	2617.79	2.50	13143.90	40507.40	0.45	910.32	2.50	13143.90	40507.40	5.021
1.31	3.77	ø6/15		2	21(TG)	SLV	0.45	5993.90	2.50	13143.90	39293.60						2.193
1.31	3.77	ø6/15		2	21(TG)	SND						0.45	12053.00	2.50	13143.90	42163.70	1.091
1.31	3.77	ø6/15		2	25(TG)	SND	0.45	10410.80	2.50	13143.90	42413.90						1.263
1.31	3.77	ø6/15		2	25(TG)	SLV						0.45	8315.79	2.50	13143.90	39143.50	1.581
3.77	4.38	ø6/15		2	219	SLU	0.45	1336.37	2.50	13143.90	40978.90	0.45	1474.90	2.50	13143.90	40978.90	8.912
3.77	4.38	ø6/15		2	232	SLU	0.45	2617.79	2.50	13143.90	40286.90	0.45	910.32	2.50	13143.90	40286.90	5.021
3.77	4.38	ø6/15		2	21(TG)	SLV	0.45	5993.90	2.50	13143.90	39293.60						2.193
3.77	4.38	ø6/15		2	21(TG)	SND						0.45	12053.00	2.50	13143.90	42163.70	1.091
3.77	4.38	ø6/15		2	25(TG)	SND	0.45	10410.80	2.50	13143.90	42413.90						1.263
3.77	4.38	ø6/15		2	25(TG)	SLV						0.45	8315.79	2.50	13143.90	39143.50	1.581
4.68	5.34	ø6/10		2	232	SLU	0.45	690.74	2.50	19715.80	39470.40	0.45	1587.11	2.50	19715.80	39470.40	12.422
4.68	5.34	ø6/10		2	217	SLU	0.45	1082.01	2.50	19715.80	39476.10	0.45	927.58	2.50	19715.80	39476.10	18.221
4.68	5.34	ø6/10		2	21(TG)	SLV	0.45	366.42	2.50	19715.80	39235.30	0.45	8374.10	2.50	19715.80	39235.30	2.354
4.68	5.34	ø6/10		2	25(TG)	SLV	0.45	2416.00	2.50	19715.80	39179.00	0.45	7803.31	2.50	19715.80	39179.00	2.527
5.34	7.99	ø6/15		2	232	SLU	0.45	690.74	2.50	13143.90	39410.80	0.45	1587.11	2.50	13143.90	39410.80	8.282
5.34	7.99	ø6/15		2	217	SLU	0.45	1082.01	2.50	13143.90	39416.60	0.45	927.58	2.50	13143.90	39416.60	12.148
5.34	7.99	ø6/15		2	21(TG)	SLV	0.45	366.42	2.50	13143.90	39235.30	0.45	8374.10	2.50	13143.90	39235.30	1.570
5.34	7.99	ø6/15		2	25(TG)	SLV	0.45	2416.00	2.50	13143.90	39179.00	0.45	7803.31	2.50	13143.90	39179.00	1.684
7.99	8.66	ø6/10		2	232	SLU	0.45	690.74	2.50	19715.80	39172.60	0.45	1587.11	2.50	19715.80	39172.60	12.422
7.99	8.66	ø6/10		2	217	SLU	0.45	1082.01	2.50	19715.80	39178.30	0.45	927.58	2.50	19715.80	39178.30	18.221
7.99	8.66	ø6/10		2	21(TG)	SLV	0.45	366.42	2.50	19715.80	39235.30	0.45	8374.10	2.50	19715.80	39235.30	2.354
7.99	8.66	ø6/10		2	25(TG)	SLV	0.45	2416.00	2.50	19715.80	39179.00	0.45	7803.31	2.50	19715.80	39179.00	2.527

Dettagli costruttivi per la duttilità

- CC=13 α_e=0.42561 ω_{wd}=0.0891 μΦ_d=7.08596 ν_d=0.059233 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_c=17.9554 0.03792 >= -0.00622 [7.4.29]
- CC=13 α_e=0.42561 ω_{wd}=0.0891 μΦ_d=7.58384 ν_d=0.059233 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_c=17.9554 0.03792 >= -0.0042 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MR _{dy} <daNm>	MR _{dz} <daNm>	α <grad>	ε _y	Sic.
0.70	46	SLU I	1	1	70.00	-11351.70	-2254.21	1404.86	-11351.70	-19828.20	12412.40	153.28	27.91	8.800
0.70	46	SLU I	1	1	70.00	-11351.70	-2254.21	1404.86	-11351.70	-19828.20	12412.40	153.28	27.91	8.800
4.38	46	SLU I	1	1	438.00	-9488.66	1142.05	-1096.30	-9488.66	16930.70	-16261.20	320.62	28.05	14.851
4.68	46	SLU I	2	1	0.00	-2653.47	1494.77	-330.16	-2653.47	23260.00	-4880.31	350.16	32.09	15.528
4.68	46	SLU I	2	1	0.00	-2653.47	1494.77	-330.16	-2653.47	9993.60	-2307.97	348.75	50.49	6.701
8.66	46(e)	SLU I	2	1	397.68	-640.23	-401.17	9.83	-640.23	-10344.60	442.01	177.19	66.01	25.796

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	V _{sdu,y} <daN>	ctgθ _y	VR _{sd,y} <daN>	VR _{cd,y} <daN>	b _{w,z} <m>	V _{sdu,z} <daN>	ctgθ _z	VR _{sd,z} <daN>	VR _{cd,z} <daN>	Sic.
0.70	1.31	ø6/10		2	246	SLU I	0.35	679.66	2.50	10500.60	49790.90	0.35	922.90	2.50	10500.60	49790.90	11.378
1.31	3.77	ø6/15		2	246	SLU I	0.35	679.66	2.50	7000.38	49742.70	0.35	922.90	2.50	7000.38	49742.70	7.585
3.77	4.38	ø6/15		2	246	SLU I	0.35	679.66	2.50	7000.38	49550.00	0.35	922.90	2.50	7000.38	49550.00	7.585
4.68	5.34	ø6/10		2	246	SLU I	0.35	85.49	2.50	10500.60	48441.20	0.35	476.75	2.50	10500.60	48441.20	22.025
5.34	7.99	ø6/15		2	246	SLU I	0.35	85.49	2.50	7000.38	48389.10	0.35	476.75	2.50	7000.38	48389.10	14.684
7.99	8.66	ø6/10		2	246	SLU I	0.35	85.49	2.50	10500.60	48180.80	0.35	476.75	2.50	10500.60	48180.80	22.025

Pilastrata n. 49

Nodi: -2 -81 -1840

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	R <cm>	Cf <cm>	Cl _s	F _{ck} <daN/cmq>	F _{ctk} <daN/cmq>	F _{cd} <daN/cmq>	F _{cd (Inc)} <daN/cmq>	F _{ctd} <daN/cmq>	Tp	F _{yk} <daN/cmq>	F _{yd} <daN/cmq>
8	Cir.			25.00	4.90	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Relazione di calcolo

1	R	45.00	45.00		5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
---	---	-------	-------	--	------	--------	--------	-------	--------	--------	-------	-------	---------	---------

Verifiche zone a sezione circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε_y	Sic.
0.70	9	SLV	1	8	70.00	-2933.39	13993.60	13993.60	4428.96	4428.96	-2933.39	15078.20	4552.53	16.88	8.72	1.073
0.70	9	SLV	1	8	70.00	-2933.39	13993.60	13993.60	4428.96	4428.96	-2933.39	15078.20	4552.53	16.88	8.72	1.073
4.38	9	SLV	1	8	438.00	-1126.97	-10614.60	-10614.60	-4823.76	-4823.76	-1126.97	-14018.60	-6520.50	203.91	8.87	1.326

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cmq>	σ_f <daN/cmq>
0.70	37	SLE R	1	8	70.00	-9091.84	3791.30	4603.69	14.07	8.04	73.83	1649.83
0.70	29	SLE Q	1	8	70.00	-8323.07	1694.68	1266.99	12.06	10.05	25.21	360.24
0.70	37	SLE R	1	8	70.00	-9091.84	3791.30	4603.69	14.07	8.04	73.83	1649.83
0.70	29	SLE Q	1	8	70.00	-8323.07	1694.68	1266.99	12.06	10.05	25.21	360.24
4.38	37	SLE R	1	8	438.00	-7285.43	-4212.80	-3024.30	14.07	8.04	64.44	1459.84
4.38	29	SLE Q	1	8	438.00	-6516.65	-1737.25	-545.98	12.06	10.05	21.85	335.09

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cmq>	ε_{sm}	W _k <mm>
0.70	29	SLE Q	1	8	70.00	-8323.07	1266.99	1694.68	44.00	360.21	0.50	16.00	203.11	4.02	232.23	360.24	0.10	0.04
0.70	42	SLE F	1	8	70.00	-8293.50	1898.45	2023.13	44.00	360.21	0.50	16.00	217.77	6.03	265.30	584.25	0.17	0.06
0.70	29	SLE Q	1	8	70.00	-8323.07	1266.99	1694.68	44.00	360.21	0.50	16.00	203.11	4.02	232.23	360.24	0.10	0.04
0.70	42	SLE F	1	8	70.00	-8293.50	1898.45	2023.13	44.00	360.21	0.50	16.00	217.77	6.03	265.30	584.25	0.17	0.06
4.38	29	SLE Q	1	8	438.00	-6516.65	-545.98	-1737.25	44.00	111.57	0.50	16.00	184.63	4.02	242.85	335.09	0.10	0.03
4.38	25	SLE F	1	8	438.00	-6981.48	-674.35	-2276.61	44.00	111.57	0.50	16.00	192.04	4.02	261.48	501.47	0.15	0.05

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <m>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/ 6	32	SLU	0.35	4335.22	2.46	24482.60	24482.60	5.647
0.70	1.31	ø6/ 6	5 (TG)	SLV	0.35	10252.50	2.47	24549.40	24549.40	2.394
1.31	3.77	ø6/14	32	SLU	0.35	4335.22	2.50	10652.80	24183.80	2.457
1.31	3.77	ø6/14	5 (TG)	SLV	0.35	10252.50	2.50	10652.80	24330.10	1.039
3.77	4.38	ø6/12	32	SLU	0.35	4335.22	2.50	12428.30	24052.80	2.867
3.77	4.38	ø6/12	5 (TG)	SLV	0.35	10252.50	2.50	12428.30	24330.10	1.212

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε_y	Sic.
0.70	46	SLU I	1	8	70.00	-8323.07	1266.99	1694.68	-8323.07	7083.74	9646.85	54.84	47.34	5.650
0.70	46	SLU I	1	8	70.00	-8323.07	1266.99	1694.68	-8323.07	7083.74	9646.85	54.84	47.34	5.650
4.38	46	SLU I	1	8	438.00	-6516.65	-545.98	-1737.25	-6516.65	-3475.41	-11047.80	251.72	48.21	6.363

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
4.68	5.35	ø6/10	2	246	SLU I	0.35	17.72	2.50	10500.60	48457.60	0.35	384.46	2.50	10500.60	48457.60	27.313	
5.35	8.03	ø6/15	2	246	SLU I	0.35	17.72	2.50	7000.38	48405.00	0.35	384.46	2.50	7000.38	48405.00	18.208	
8.03	8.70	ø6/10	2	246	SLU I	0.35	17.72	2.50	10500.60	48194.60	0.35	384.46	2.50	10500.60	48194.60	27.313	

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <m>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/ 6	46	SLU I	0.26	1054.72	2.50	8216.08	21456.50	7.790
1.31	3.77	ø6/14	46	SLU I	0.26	1054.72	2.50	3294.44	21432.60	3.124
3.77	4.38	ø6/12	46	SLU I	0.26	1054.72	2.50	3925.98	21336.70	3.722

Verifiche zone a sezione non circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε_y	Sic.
4.68	17	SLU	2	1	0.00	-4455.09	-2093.80	-2093.80	-3099.23	-3099.23	-4455.09	-8981.09	-13239.20	239.06	6.45	4.277
4.68	17	SLU	2	1	0.00	-4455.09	-2093.80	-2093.80	-3099.23	-3099.23	-4455.09	-8981.09	-13239.20	239.06	6.45	4.277
8.70	1	SLV	2	1	401.76	70.99	2693.61	2693.61	45.14	45.14	70.99	14843.40	0.04	0.00	18.34	5.510

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cmq>	σ_f <daN/cmq>
4.68	21	SLE R	2	1	0.00	-3296.06	-2021.01	-1527.63	13.45	7.16	36.47	740.56

Relazione di calcolo

4.68	29	SLE Q	2	1	0.00	-2759.36	188.56	-1200.23	12.31	8.29	13.30	266.47
4.68	21	SLE R	2	1	0.00	-3296.06	-2021.01	-1527.63	13.45	7.16	36.47	740.56
4.68	29	SLE Q	2	1	0.00	-2759.36	188.56	-1200.23	12.31	8.29	13.30	266.47
8.70	21	SLE R	2	1	401.76	-1262.16	835.62	516.20	13.45	7.16	13.79	286.05
8.70	29	SLE Q	2	1	401.76	-725.46	117.38	344.36	12.31	8.29	4.54	89.52

Stato limite d'esercizio - Verifiche a fessurazione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	c	s	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	Wk
<m>					<cm>	<daN>	<daNm>	<daNm>	<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cmq>		<mm>
4.68	29	SLE Q	2	1	0.00	-2759.36	-1200.23	188.56	44.00	171.01	0.50	18.86	211.70	5.15	337.98	266.47	0.08	0.03
4.68	25	SLE F	2	1	0.00	-2941.84	-1325.79	-833.02	44.00	171.01	0.50	18.86	195.69	3.14	179.41	407.90	0.12	0.04
4.68	29	SLE Q	2	1	0.00	-2759.36	-1200.23	188.56	44.00	171.01	0.50	18.86	211.70	5.15	337.98	266.47	0.08	0.03
4.68	25	SLE F	2	1	0.00	-2941.84	-1325.79	-833.02	44.00	171.01	0.50	18.86	195.69	3.14	179.41	407.90	0.12	0.04
8.70	29	SLE Q	2	1	401.76	-725.46	344.36	117.38	44.00	171.02	0.50	18.86	176.80	5.15	242.61	89.52	0.03	0.01
8.70	25	SLE F	2	1	401.76	-907.95	379.33	436.38	44.00	171.02	0.50	18.86	186.25	3.14	163.69	161.12	0.05	0.01

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _{,y}	Vsdu _{,y}	ctgθ _{,y}	VRsd _{,y}	VRcd _{,y}	bw _{,z}	Vsdu _{,z}	ctgθ _{,z}	VRsd _{,z}	VRcd _{,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
4.68	5.35	ø6/10	2	2	19	SLU	0.45	774.13	2.50	19715.80	39627.90	0.45	715.80	2.50	19715.80	39627.90	25.468
4.68	5.35	ø6/10	2	2	17	SLU	0.45	1085.60	2.50	19715.80	39624.90	0.45	701.09	2.50	19715.80	39624.90	18.161
4.68	5.35	ø6/10	2	2	29(TG)	SLV	0.45	90.11	2.50	19715.80	39224.40	0.45	8270.30	2.50	19715.80	39224.40	2.384
4.68	5.35	ø6/10	2	2	15(TG)	SLV	0.45	5088.40	2.50	19715.80	39130.90	0.45	4472.37	2.50	19715.80	39130.90	3.875
5.35	8.03	ø6/15	2	2	19	SLU	0.45	774.13	2.50	13143.90	39567.80	0.45	715.81	2.50	13143.90	39567.80	16.979
5.35	8.03	ø6/15	2	2	17	SLU	0.45	1085.60	2.50	13143.90	39564.80	0.45	701.09	2.50	13143.90	39564.80	12.107
5.35	8.03	ø6/15	2	2	29(TG)	SLV	0.45	90.11	2.50	13143.90	39224.40	0.45	8270.30	2.50	13143.90	39224.40	1.589
5.35	8.03	ø6/15	2	2	15(TG)	SLV	0.45	5088.40	2.50	13143.90	39130.90	0.45	4472.37	2.50	13143.90	39130.90	2.583
8.03	8.70	ø6/10	2	2	19	SLU	0.45	774.13	2.50	19715.80	39327.10	0.45	715.81	2.50	19715.80	39327.10	25.468
8.03	8.70	ø6/10	2	2	17	SLU	0.45	1085.60	2.50	19715.80	39324.10	0.45	701.09	2.50	19715.80	39324.10	18.161
8.03	8.70	ø6/10	2	2	29(TG)	SLV	0.45	90.11	2.50	19715.80	39224.40	0.45	8270.30	2.50	19715.80	39224.40	2.384
8.03	8.70	ø6/10	2	2	15(TG)	SLV	0.45	5088.40	2.50	19715.80	39130.90	0.45	4472.37	2.50	19715.80	39130.90	3.875

Altre verifiche

Dettagli costruttivi per la duttilità

- CC=5 α_e=0.86533 ω_{md}=0.1063 μΦ_d=7.08596 v_d=0.048182 E_{sy,d}=0.0018995 b_c/b₀=1.17925 μΦ_c=39.2187 0.09198 >= -0.01206 [7.4.29]
- CC=5 α_e=0.86533 ω_{md}=0.1063 μΦ_d=7.58384 v_d=0.048182 E_{sy,d}=0.0018995 b_c/b₀=1.17925 μΦ_c=39.2187 0.09198 >= -0.01044 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	Nu	MRdy	MRdz	α	ε _y	Sic.
<m>					<cm>	<daN>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
4.68	46	SLU I	2	1	0.00	-2759.36	-1200.23	188.56	-2759.36	-10168.70	1560.98	172.97	56.85	8.466
4.68	46	SLU I	2	1	0.00	-2759.36	-1200.23	188.56	-2759.36	-10168.70	1560.98	172.97	56.85	8.466
8.70	46	SLU I	2	1	401.76	-725.46	344.36	117.38	-725.46	9473.92	3358.40	15.47	46.11	27.620

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _{,y}	Vsdu _{,y}	ctgθ _{,y}	VRsd _{,y}	VRcd _{,y}	bw _{,z}	Vsdu _{,z}	ctgθ _{,z}	VRsd _{,z}	VRcd _{,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
4.68	5.35	ø6/10	2	2	46	SLU I	0.35	17.72	2.50	10500.60	48457.60	0.35	384.46	2.50	10500.60	48457.60	27.313
5.35	8.03	ø6/15	2	2	46	SLU I	0.35	17.72	2.50	7000.38	48405.00	0.35	384.46	2.50	7000.38	48405.00	18.208
8.03	8.70	ø6/10	2	2	46	SLU I	0.35	17.72	2.50	10500.60	48194.60	0.35	384.46	2.50	10500.60	48194.60	27.313

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	CC	TCC	bw	Vsdu	ctgθ	VRsd	VRcd	Sic.
<m>	<m>				<m>	<daN>		<daN>	<daN>	
0.70	1.31	ø6/ 6	46	SLU I	0.26	1054.72	2.50	8216.08	21456.50	7.790
1.31	3.77	ø6/14	46	SLU I	0.26	1054.72	2.50	3294.44	21432.60	3.124
3.77	4.38	ø6/12	46	SLU I	0.26	1054.72	2.50	3925.98	21336.70	3.722

Pilastrata n. 50

Nodi: -12 -67 -1395

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	R	Cf	Cls	Fck	Fctk	Fcd	Fcd (Inc)	Fctd	TP	Fyk	Fyd
		<cm>	<cm>	<cm>	<cm>		<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>		<daN/cmq>	<daN/cmq>
8	Cir.			25.00	4.90	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
1	R	45.00	45.00		5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Verifiche zone a sezione circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Relazione di calcolo

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε_y	Sic.
0.70	9	SLV	1	8	70.00	-29707.10	12331.10	12331.10	3808.27	3808.27	-29707.10	26055.30	7814.77	16.88	5.17	2.108
0.70	9	SLV	1	8	70.00	-29707.10	12331.10	12331.10	3808.27	3808.27	-29707.10	26055.30	7814.77	16.88	5.17	2.108
4.38	5	SLV	1	8	438.00	-24605.30	-2752.32	-2752.32	10394.60	10394.60	-24605.30	-6508.08	25957.80	104.06	5.49	2.489

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cmq>	σ_f <daN/cmq>
0.70	37	SLE R	1	8	70.00	-36606.70	2774.56	4319.21	14.07	24.13	50.08	631.97
0.70	29	SLE Q	1	8	70.00	-31518.50	238.17	1490.50	0.00	38.20	21.70	296.97
0.70	37	SLE R	1	8	70.00	-36606.70	2774.56	4319.21	14.07	24.13	50.08	631.97
0.70	29	SLE Q	1	8	70.00	-31518.50	238.17	1490.50	0.00	38.20	21.70	296.97
4.38	24	SLE R	1	8	438.00	-32966.70	2427.73	-1341.27	4.02	34.18	30.18	400.02
4.38	29	SLE Q	1	8	438.00	-29712.10	2452.82	-938.91	6.03	32.17	28.18	371.39

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <m>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/ 6	32	SLU	0.35	2747.67	2.50	24856.60	27432.50	9.046
0.70	1.31	ø6/ 6	7 (TG)	SLV	0.35	16117.10	2.50	24856.60	25304.60	1.542
0.70	1.31	ø6/ 6	13 (TG)	SLV	0.35	16523.80	2.50	24856.60	26102.70	1.504
1.31	3.77	ø6/14	32	SLU	0.35	2747.67	2.50	10652.80	27399.70	3.877
1.31	3.77	ø6/14	5 (TG)	SND	0.35	8338.68	2.50	10652.80	26377.90	1.278
3.77	4.38	ø6/12	32	SLU	0.35	2747.67	2.50	12428.30	27268.70	4.523
3.77	4.38	ø6/12	5 (TG)	SND	0.35	8338.68	2.50	12428.30	26377.90	1.490

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε_y	Sic.
0.70	46 (e)	SLU I	1	8	70.00	-31518.50	1490.50	238.17	-137649.00	17425.90	8871.85	26.72	33.63	4.367
0.70	46 (e)	SLU I	1	8	70.00	-31518.50	1490.50	238.17	-137649.00	17425.90	8871.85	26.72	33.63	4.367
4.38	46	SLU I	1	8	438.00	-29712.10	-938.91	2452.82	-137649.00	-7216.05	18069.80	111.09	32.98	4.633

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _y	Vsdu _y	ctgθ _y	VRsd _y	VRcd _y	bw _z	Vsdu _z	ctgθ _z	VRsd _z	VRcd _z	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
4.68	5.35	ø6/10	2	246	SLU I	0.35	1047.67	2.50	10500.60	48616.90	0.35	562.30	2.50	10500.60	48616.90	10.023	
5.35	8.03	ø6/15	2	246	SLU I	0.35	1047.67	2.50	7000.38	48564.30	0.35	562.30	2.50	7000.38	48564.30	6.682	
8.03	8.70	ø6/10	2	246	SLU I	0.35	1047.67	2.50	10500.60	48353.90	0.35	562.30	2.50	10500.60	48353.90	10.023	

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <m>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/ 6	46	SLU I	0.26	893.30	2.50	3374.60	23303.30	3.778
1.31	3.77	ø6/14	46	SLU I	0.26	893.30	2.50	1484.25	23279.30	1.662
3.77	4.38	ø6/12	46	SLU I	0.26	893.30	2.50	1716.54	23183.40	1.922

Verifiche zone a sezione non circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε_y	Sic.
4.68	17	SLU	2	1	0.00	-5745.33	-2711.55	-2711.55	-8159.55	-8159.55	-5745.33	-4876.01	-15276.50	255.94	8.41	1.865
4.68	17	SLU	2	1	0.00	-5745.33	-2711.55	-2711.55	-8159.55	-8159.55	-5745.33	-4876.01	-15276.50	255.94	8.41	1.865
8.70	19	SLU	2	1	401.76	-5232.39	3850.88	3850.88	2350.26	2350.26	-5232.39	13632.10	8439.41	28.12	6.60	3.554

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cmq>	σ_f <daN/cmq>
4.68	35	SLE R	2	1	0.00	-5889.00	-5721.95	-1971.52	12.31	8.29	76.83	1802.35
4.68	21	SLE R	2	1	0.00	-4232.33	-5695.68	-1922.33	12.31	8.29	76.21	1871.78
4.68	29	SLE Q	2	1	0.00	-3786.28	-3598.42	-1269.34	12.31	8.29	48.66	1134.41
4.68	35	SLE R	2	1	0.00	-5889.00	-5721.95	-1971.52	12.31	8.29	76.83	1802.35
4.68	21	SLE R	2	1	0.00	-4232.33	-5695.68	-1922.33	12.31	8.29	76.21	1871.78
4.68	29	SLE Q	2	1	0.00	-3786.28	-3598.42	-1269.34	12.31	8.29	48.66	1134.41
8.70	38	SLE R	2	1	401.76	-5275.85	1825.71	2491.51	13.45	7.16	43.81	835.41
8.70	23	SLE R	2	1	401.76	-3619.18	1595.68	2632.02	13.45	7.16	43.22	913.60
8.70	29	SLE Q	2	1	401.76	-1752.38	610.69	989.74	13.45	7.16	16.24	325.12

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cmq>	ε_{sm}	Wk <mm>
4.68	29	SLE Q	2	1	0.00	-3786.28	-1269.34	-3598.42	44.00	171.02	0.50	18.86	187.52	5.15	271.92	1134.41	0.33	0.11

Relazione di calcolo

4.68	25	SLE F	2	1	0.00	-3441.02	-1428.20	-4460.91	44.00	171.02	0.50	18.86	197.22	5.15	298.40	1445.66	0.42	0.14
4.68	29	SLE Q	2	1	0.00	-3786.28	-1269.34	-3598.42	44.00	171.02	0.50	18.86	187.52	5.15	271.92	1134.41	0.33	0.11
4.68	25	SLE F	2	1	0.00	-3441.02	-1428.20	-4460.91	44.00	171.02	0.50	18.86	197.22	5.15	298.40	1445.66	0.42	0.14
8.70	29	SLE Q	2	1	401.76	-1752.38	989.74	610.69	44.00	171.01	0.50	18.86	201.36	3.14	188.85	325.12	0.09	0.03
8.70	27	SLE F	2	1	401.76	-2210.20	1300.02	733.59	44.00	171.01	0.50	18.86	206.51	3.14	197.44	417.86	0.12	0.04

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	b _{w,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
4.68	5.35	ø6/10	2	219		SLU	0.45	2454.36	2.50	19715.80	40092.10	0.45	1708.15	2.50	19715.80	40092.10	8.033
4.68	5.35	ø6/10	2	230		SLU	0.45	2685.90	2.50	19715.80	40140.40	0.45	1331.24	2.50	19715.80	40140.40	7.340
4.68	5.35	ø6/10	2	29(TG)		SLV	0.45	3635.77	2.50	19715.80	39368.90	0.45	7641.05	2.50	19715.80	39368.90	2.580
4.68	5.35	ø6/10	2	25(TG)		SLV	0.45	7712.70	2.50	19715.80	39295.40	0.45	3111.76	2.50	19715.80	39295.40	2.556
5.35	8.03	ø6/15	2	219		SLU	0.45	2454.36	2.50	13143.90	40031.90	0.45	1708.15	2.50	13143.90	40031.90	5.355
5.35	8.03	ø6/15	2	230		SLU	0.45	2685.90	2.50	13143.90	40080.30	0.45	1331.24	2.50	13143.90	40080.30	4.894
5.35	8.03	ø6/15	2	29(TG)		SLV	0.45	3635.77	2.50	13143.90	39368.90	0.45	7641.05	2.50	13143.90	39368.90	1.720
5.35	8.03	ø6/15	2	25(TG)		SLV	0.45	7712.70	2.50	13143.90	39295.40	0.45	3111.76	2.50	13143.90	39295.40	1.704
8.03	8.70	ø6/10	2	219		SLU	0.45	2454.36	2.50	19715.80	39791.20	0.45	1708.15	2.50	19715.80	39791.20	8.033
8.03	8.70	ø6/10	2	230		SLU	0.45	2685.90	2.50	19715.80	39839.60	0.45	1331.23	2.50	19715.80	39839.60	7.340
8.03	8.70	ø6/10	2	29(TG)		SLV	0.45	3635.77	2.50	19715.80	39368.90	0.45	7641.05	2.50	19715.80	39368.90	2.580
8.03	8.70	ø6/10	2	25(TG)		SLV	0.45	7712.70	2.50	19715.80	39295.40	0.45	3111.76	2.50	19715.80	39295.40	2.556

Altre verifiche

Dettagli costruttivi per la duttilità

- CC=13 α_e=0.86533 ω_{nd}=0.1063 μΦ_d=7.08596 v_d=0.11424 E_{sy,d}=0.0018995 b_c/b₀=1.17925 μΦ_c=16.5412
0.09198 >= 0.0194 [7.4.29]
- CC=13 α_e=0.86533 ω_{nd}=0.1063 μΦ_d=7.58384 v_d=0.11424 E_{sy,d}=0.0018995 b_c/b₀=1.17925 μΦ_c=16.5412
0.09198 >= 0.02322 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
4.68	46	SLU I	2	1	0.00	-3786.28	-1269.34	-3598.42	-3786.28	-3645.35	-9830.48	253.12	43.39	2.749
4.68	46	SLU I	2	1	0.00	-3786.28	-1269.34	-3598.42	-3786.28	-3645.35	-9830.48	253.12	43.39	2.749
8.70	46	SLU I	2	1	401.76	-1752.38	989.74	610.69	-15236.60					8.695

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	b _{w,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
4.68	5.35	ø6/10	2	246	SLU I	0.35	1047.67	2.50	10500.60	48616.90	0.35	562.30	2.50	10500.60	48616.90	10.023	
5.35	8.03	ø6/15	2	246	SLU I	0.35	1047.67	2.50	7000.38	48564.30	0.35	562.30	2.50	7000.38	48564.30	6.682	
8.03	8.70	ø6/10	2	246	SLU I	0.35	1047.67	2.50	10500.60	48353.90	0.35	562.30	2.50	10500.60	48353.90	10.023	

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	b _w <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/ 6	46	SLU I	0.26	893.30	2.50	3374.60	23303.30	3.778
1.31	3.77	ø6/14	46	SLU I	0.26	893.30	2.50	1484.25	23279.30	1.662
3.77	4.38	ø6/12	46	SLU I	0.26	893.30	2.50	1716.54	23183.40	1.922

Pilastrata n. 51

Nodi: -226 -64 -1401

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	R <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fcd (Inc) <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
8	Cir.			25.00	4.90	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
1	R	45.00	45.00		5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Verifiche zone a sezione circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	9	SLV	1	8	70.00	-37458.90	11066.00	11066.00	3718.04	3718.04	-37458.90	17575.00	5818.39	18.28	5.55	1.586
0.70	9	SLV	1	8	70.00	-37458.90	11066.00	11066.00	3718.04	3718.04	-37458.90	17575.00	5818.39	18.28	5.55	1.586
4.38	5	SLV	1	8	438.00	-36188.90	-1942.25	-1942.25	7420.17	7420.17	-36188.90	-4440.45	17742.20	104.06	5.99	2.384

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
0.70	37	SLE R	1	8	70.00	-44789.70	2307.09	3857.59	6.03	14.07	53.29	693.11

Relazione di calcolo

0.70	29	SLE Q	1	8	70.00	-38399.10	-231.73	1337.19	0.00	20.11	26.63	369.52
0.70	37	SLE R	1	8	70.00	-44789.70	2307.09	3857.59	6.03	14.07	53.29	693.11
0.70	29	SLE Q	1	8	70.00	-38399.10	-231.73	1337.19	0.00	20.11	26.63	369.52
4.38	37	SLE R	1	8	438.00	-42983.30	-2122.70	-1073.96	0.00	20.11	35.76	484.87
4.38	29	SLE Q	1	8	438.00	-36592.70	180.88	-1018.80	0.00	20.11	23.59	330.82

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	b _w <m>	V _{sdu} <daN>	ctgθ	VR _{sd} <daN>	VR _{cd} <daN>	Sic.
0.70	1.31	ø6/ 6	32	SLU	0.35	2659.73	2.50	24856.60	27826.10	9.346
0.70	1.31	ø6/ 6	11 (TG)	SLV	0.35	11130.80	2.50	24856.60	26329.80	2.233
1.31	3.77	ø6/18	32	SLU	0.35	2659.73	2.50	8285.55	27826.10	3.115
1.31	3.77	ø6/18	5 (TG)	SND	0.35	7492.06	2.50	8285.55	26446.80	1.106
3.77	4.38	ø6/12	32	SLU	0.35	2659.73	2.50	12428.30	27826.10	4.673
3.77	4.38	ø6/12	11 (TG)	SLV	0.35	11130.80	2.50	12428.30	26329.80	1.117

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MR _{dy} <daNm>	MR _{dz} <daNm>	α <grad>	ε _y	Sic.
0.70	46 (e)	SLU I	1	8	70.00	-38399.10	1337.19	-231.73	-137649.00	11525.80	-7748.25	326.25	34.28	3.585
0.70	46 (e)	SLU I	1	8	70.00	-38399.10	1337.19	-231.73	-137649.00	11525.80	-7748.25	326.25	34.28	3.585
4.38	46 (e)	SLU I	1	8	438.00	-36592.70	-1018.80	180.88	-137649.00	-10548.20	8749.37	139.92	35.36	3.762

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	V _{sdu,y} <daN>	ctgθ _y	VR _{sd,y} <daN>	VR _{cd,y} <daN>	b _{w,z} <m>	V _{sdu,z} <daN>	ctgθ _z	VR _{sd,z} <daN>	VR _{cd,z} <daN>	Sic.
4.68	5.35	ø6/10	2	246	SLU I	0.35	184.98	2.50	10500.60	48692.00	0.35	609.34	2.50	10500.60	48692.00	17.233	
5.35	8.03	ø6/15	2	246	SLU I	0.35	184.98	2.50	7000.38	48639.40	0.35	609.34	2.50	7000.38	48639.40	11.489	
8.03	8.70	ø6/10	2	246	SLU I	0.35	184.98	2.50	10500.60	48429.00	0.35	609.34	2.50	10500.60	48429.00	17.233	

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	b _w <m>	V _{sdu} <daN>	ctgθ	VR _{sd} <daN>	VR _{cd} <daN>	Sic.
0.70	1.31	ø6/ 6	46	SLU I	0.26	649.96	2.50	3127.05	23851.10	4.811
1.31	3.77	ø6/18	46	SLU I	0.26	649.96	2.50	1042.35	23827.10	1.604
3.77	4.38	ø6/12	46	SLU I	0.26	649.96	2.50	1563.51	23731.20	2.406

Verifiche zone a sezione non circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MR _{dy} <daNm>	MR _{dz} <daNm>	α <grad>	ε _y	Sic.
4.68	9	SLV	2	1	0.00	-3335.23	-4291.87	-4291.87	-1188.72	-1188.72	-3335.23	-15005.30	-4167.83	191.25	9.47	3.497
4.68	9	SLV	2	1	0.00	-3335.23	-4291.87	-4291.87	-1188.72	-1188.72	-3335.23	-15005.30	-4167.83	191.25	9.47	3.497
8.70	19 (e)	SLU	2	1	401.76	-7994.51	5240.96	5240.96	93.87	-160.59	-7994.51	16044.60	-748.49	358.59	13.66	3.063

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _t <daN/cmq>
4.68	23	SLE R	2	1	0.00	-7502.77	-1119.70	-2011.38	10.30	10.30	30.08	445.44
4.68	29	SLE Q	2	1	0.00	-4269.85	-702.05	-1094.01	10.30	10.30	17.26	251.31
4.68	23	SLE R	2	1	0.00	-7502.77	-1119.70	-2011.38	10.30	10.30	30.08	445.44
4.68	29	SLE Q	2	1	0.00	-4269.85	-702.05	-1094.01	10.30	10.30	17.26	251.31
8.70	23	SLE R	2	1	401.76	-5468.87	69.26	3575.80	12.31	8.29	33.95	853.46
8.70	29	SLE Q	2	1	401.76	-2235.95	41.13	1354.07	12.31	8.29	13.05	317.45

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	W _k <mm>
4.68	29	SLE Q	2	1	0.00	-4269.85	-1094.01	-702.05	44.00	171.02	0.50	18.86	175.69	3.14	146.10	251.31	0.07	0.02
4.68	27	SLE F	2	1	0.00	-4932.32	-1276.89	-752.46	44.00	171.02	0.50	18.86	177.61	3.14	149.29	282.94	0.08	0.02
4.68	29	SLE Q	2	1	0.00	-4269.85	-1094.01	-702.05	44.00	171.02	0.50	18.86	175.69	3.14	146.10	251.31	0.07	0.02
4.68	27	SLE F	2	1	0.00	-4932.32	-1276.89	-752.46	44.00	171.02	0.50	18.86	177.61	3.14	149.29	282.94	0.08	0.02
8.70	29	SLE Q	2	1	401.76	-2235.95	1354.07	41.13	44.00	171.02	0.50	18.86	186.60	8.29	433.69	317.45	0.09	0.03
8.70	27	SLE F	2	1	401.76	-2898.42	1809.58	36.21	44.00	171.02	0.50	18.86	188.31	8.29	441.19	425.86	0.12	0.04

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
4.68	5.35	ø6/10	2	219	SLU	0.45	417.46	2.50	19715.80	40469.30	0.45	2022.88	2.50	19715.80	40469.30	9.746	
4.68	5.35	ø6/10	2	217	SLU	0.45	427.96	2.50	19715.80	40119.70	0.45	1410.78	2.50	19715.80	40119.70	13.975	
4.68	5.35	ø6/10	2	29 (TG)	SLV	0.45	722.70	2.50	19715.80	39460.80	0.45	8432.32	2.50	19715.80	39460.80	2.338	
4.68	5.35	ø6/10	2	213 (TG)	SLV	0.45	6502.53	2.50	19715.80	39376.60	0.45	4980.90	2.50	19715.80	39376.60	3.032	
5.35	8.03	ø6/15	2	219	SLU	0.45	417.46	2.50	13143.90	40409.10	0.45	2022.88	2.50	13143.90	40409.10	6.498	
5.35	8.03	ø6/15	2	217	SLU	0.45	427.96	2.50	13143.90	40059.50	0.45	1410.78	2.50	13143.90	40059.50	9.317	

Relazione di calcolo

5.35	8.03	ø6/15	2	2	9 (TG)	SLV	0.45	722.70	2.50	13143.90	39460.80	0.45	8432.32	2.50	13143.90	39460.80	1.559
5.35	8.03	ø6/15	2	2	13 (TG)	SLV	0.45	6502.53	2.50	13143.90	39376.60	0.45	4980.90	2.50	13143.90	39376.60	2.021
8.03	8.70	ø6/10	2	2	19	SLU	0.45	417.46	2.50	19715.80	40168.40	0.45	2022.88	2.50	19715.80	40168.40	9.746
8.03	8.70	ø6/10	2	2	17	SLU	0.45	427.96	2.50	19715.80	39818.80	0.45	1410.78	2.50	19715.80	39818.80	13.975
8.03	8.70	ø6/10	2	2	9 (TG)	SLV	0.45	722.70	2.50	19715.80	39460.80	0.45	8432.32	2.50	19715.80	39460.80	2.338
8.03	8.70	ø6/10	2	2	13 (TG)	SLV	0.45	6502.53	2.50	19715.80	39376.60	0.45	4980.90	2.50	19715.80	39376.60	3.032

Altre verifiche

Dettagli costruttivi per la duttilità

- CC=9 $\alpha_e=0.86533$ $\omega_{wd}=0.1063$ $\mu\Phi_d=7.08596$ $v_d=0.12297$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.17925$ $\mu\Phi_c=15.3669$
0.09198 >= 0.02355 [7.4.29]
- CC=9 $\alpha_e=0.86533$ $\omega_{wd}=0.1063$ $\mu\Phi_d=7.58384$ $v_d=0.12297$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.17925$ $\mu\Phi_c=15.3669$
0.09198 >= 0.02767 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
4.68	46	SLU I	2	1	0.00	-4269.85	-1094.01	-702.05	-4269.85	-8591.04	-5645.00	210.94	38.02	7.914
4.68	46	SLU I	2	1	0.00	-4269.85	-1094.01	-702.05	-4269.85	-8591.04	-5645.00	210.94	38.02	7.914
8.70	46 (e)	SLU I	2	1	401.76	-2235.95	1354.07	41.13	-2235.95	10586.60	481.01	2.81	64.16	7.822

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	V _{sdu,y} <daN>	ctg θ _y	V _{Rsd,y} <daN>	V _{Rcd,y} <daN>	b _{w,z} <m>	V _{sdu,z} <daN>	ctg θ _z	V _{Rsd,z} <daN>	V _{Rcd,z} <daN>	Sic.
4.68	5.35	ø6/10	2	2	46	SLU I	0.35	184.98	2.50	10500.60	48692.00	0.35	609.34	2.50	10500.60	48692.00	17.233
5.35	8.03	ø6/15	2	2	46	SLU I	0.35	184.98	2.50	7000.38	48639.40	0.35	609.34	2.50	7000.38	48639.40	11.489
8.03	8.70	ø6/10	2	2	46	SLU I	0.35	184.98	2.50	10500.60	48429.00	0.35	609.34	2.50	10500.60	48429.00	17.233

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	b _w <m>	V _{sdu} <daN>	ctgθ	V _{Rsd} <daN>	V _{Rcd} <daN>	Sic.
0.70	1.31	ø6/ 6	46	SLU I	0.26	649.96	2.50	3127.05	23851.10	4.811
1.31	3.77	ø6/18	46	SLU I	0.26	649.96	2.50	1042.35	23827.10	1.604
3.77	4.38	ø6/12	46	SLU I	0.26	649.96	2.50	1563.51	23731.20	2.406

Pilastrata n. 52

Nodi: -26 -65 -1407

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	F _{ck} <daN/cm ² >	F _{ctk} <daN/cm ² >	F _{cd} <daN/cm ² >	F _{cd} (Inc) <daN/cm ² >	F _{ctd} <daN/cm ² >	Tp	F _{yk} <daN/cm ² >	F _{yd} <daN/cm ² >
1	R	45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	9	SLV	1	1	70.00	-24646.00	12448.20	12448.20	5437.66	5437.66	-24646.00	23523.00	10380.00	22.50	4.62	1.893
0.70	9	SLV	1	1	70.00	-24646.00	12448.20	12448.20	5437.66	5437.66	-24646.00	23523.00	10380.00	22.50	4.62	1.893
4.38	13	SLV	1	1	438.00	-22786.40	-4321.78	-4321.78	-14430.00	-14430.00	-22786.40	-7831.59	-26253.40	250.31	5.22	1.819
4.68	30	SLU	2	1	0.00	-7836.03	2760.18	2760.18	7699.54	7699.54	-7836.03	8955.38	24064.60	67.50	5.61	3.139
4.68	30	SLU	2	1	0.00	-7836.03	2760.18	2760.18	7699.54	7699.54	-7836.03	5624.11	15331.00	73.12	7.64	1.996
8.70	33	SLU	2	1	401.76	-6573.39	5170.32	5170.32	-2920.31	-2920.31	-6573.39	14109.00	-7859.00	334.69	6.73	2.720

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	A _{fT} <cm ² >	A _{fC} <cm ² >	σ_c <daN/cm ² >	σ_f <daN/cm ² >
0.70	37	SLE R	1	1	70.00	-32160.60	3591.04	4232.29	13.19	23.50	59.94	714.05
0.70	29	SLE Q	1	1	70.00	-28546.40	930.13	1121.39	0.00	36.69	21.16	281.11
0.70	37	SLE R	1	1	70.00	-32160.60	3591.04	4232.29	13.19	23.50	59.94	714.05
0.70	29	SLE Q	1	1	70.00	-28546.40	930.13	1121.39	0.00	36.69	21.16	281.11
4.38	37	SLE R	1	1	438.00	-30297.60	-7623.38	-3079.61	18.35	18.35	81.93	941.60
4.38	29	SLE Q	1	1	438.00	-26683.40	-5086.68	-1846.72	16.34	20.36	52.71	619.91
4.68	35	SLE R	2	1	0.00	-5583.73	5418.38	1857.91	20.36	16.34	55.62	1050.05
4.68	29	SLE Q	2	1	0.00	-3392.33	3818.68	10.35	22.37	14.33	26.61	599.47
4.68	35	SLE R	2	1	0.00	-5583.73	5418.38	1857.91	12.31	8.29	72.64	1704.76
4.68	29	SLE Q	2	1	0.00	-3392.33	3818.68	10.35	12.31	8.29	35.20	1026.55
8.70	38	SLE R	2	1	401.76	-4470.78	-1968.10	3546.16	15.46	5.15	56.24	1215.03
8.70	29	SLE Q	2	1	401.76	-1358.43	-468.36	1492.30	12.31	8.29	19.51	471.19

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cm ² >	A _{c eff} <cm ² >	σ_s <daN/cm ² >	ϵ_{sm}	W _k <mm>
4.38	29	SLE Q	1	1	438.00	-26683.40	-1846.72	-5086.68	44.00	69.63	0.50	17.54	148.27	3.14	107.95	461.33	0.13	0.03
4.38	42	SLE F	1	1	438.00	-27090.20	-2198.58	-5585.00	44.00	69.63	0.50	17.54	151.95	3.14	114.56	572.01	0.17	0.04

Relazione di calcolo

4.68	29	SLE Q	2	1	0.00	-3392.33	10.35	3818.68	44.00	69.63	0.50	17.54	141.24	14.33	434.91	599.47	0.17	0.04
4.68	25	SLE F	2	1	0.00	-3405.95	1128.74	4443.65	44.00	69.63	0.50	17.54	153.87	7.16	269.01	842.68	0.25	0.06
4.68	29	SLE Q	2	1	0.00	-3392.33	10.35	3818.68	44.00	171.02	0.50	18.86	195.13	8.29	471.20	1026.55	0.30	0.10
4.68	25	SLE F	2	1	0.00	-3405.95	1128.74	4443.65	44.00	171.02	0.50	18.86	210.64	5.15	335.07	1390.30	0.40	0.14
8.70	29	SLE Q	2	1	401.76	-1358.43	1492.30	-468.36	44.00	171.02	0.50	18.86	196.85	5.15	297.39	471.19	0.14	0.05
8.70	27	SLE F	2	1	401.76	-1731.17	1938.10	-590.04	44.00	171.02	0.50	18.86	198.96	5.15	303.17	610.48	0.18	0.06

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/10	2	232		SLU	0.45	4405.96	2.50	19715.80	45090.30	0.45	2863.21	2.50	19715.80	45090.30	4.475
0.70	1.31	ø6/10	2	21(TG)		SLV	0.45	3070.52	2.50	19715.80	42229.10	0.45	15971.20	2.50	19715.80	42229.10	1.234
0.70	1.31	ø6/10	2	27(TG)		SLV	0.45	16306.90	2.50	19715.80	42970.80	0.45	4321.80	2.50	19715.80	42970.80	1.209
1.31	3.77	ø6/15	2	232		SLU	0.45	4405.96	2.50	13143.90	45035.20	0.45	2863.21	2.50	13143.90	45035.20	2.983
1.31	3.77	ø6/15	2	21(TG)		SLV	0.45	7581.73	2.50	13143.90	42229.10	0.45	13008.80	2.50	13143.90	42229.10	1.010
1.31	3.77	ø6/15	2	211(TG)		SLV	0.45	7555.58	2.50	13143.90	42869.30	0.45	13033.40	2.50	13143.90	42869.30	1.008
1.31	3.77	ø6/15	2	25(TG)		SLV	0.45	13143.80	2.50	13143.90	42229.10	0.45	8021.19	2.50	13143.90	42229.10	1.000
3.77	4.38	ø6/10	2	232		SLU	0.45	4405.96	2.50	19715.80	44814.70	0.45	2863.21	2.50	19715.80	44814.70	4.475
3.77	4.38	ø6/10	2	21(TG)		SLV	0.45	3070.52	2.50	19715.80	42229.10	0.45	15971.20	2.50	19715.80	42229.10	1.234
3.77	4.38	ø6/10	2	27(TG)		SLV	0.45	16306.90	2.50	19715.80	42970.80	0.45	4321.80	2.50	19715.80	42970.80	1.209
4.68	5.35	ø6/10	2	233		SLU	0.45	2431.71	2.50	19715.80	40275.20	0.45	1082.12	2.50	19715.80	40275.20	8.108
4.68	5.35	ø6/10	2	230		SLU	0.45	2596.18	2.50	19715.80	40086.60	0.45	4.37	2.50	19715.80	40086.60	7.594
4.68	5.35	ø6/10	2	21(TG)		SLV	0.45	4814.85	2.50	19715.80	39280.00	0.45	5937.77	2.50	19715.80	39280.00	3.320
4.68	5.35	ø6/10	2	23(TG)		SLV	0.45	8098.68	2.50	19715.80	39268.40	0.45	2167.12	2.50	19715.80	39268.40	2.434
5.35	8.03	ø6/15	2	233		SLU	0.45	2431.71	2.50	13143.90	40215.10	0.45	1082.12	2.50	13143.90	40215.10	5.405
5.35	8.03	ø6/15	2	230		SLU	0.45	2596.18	2.50	13143.90	40026.40	0.45	4.37	2.50	13143.90	40026.40	5.063
5.35	8.03	ø6/15	2	21(TG)		SLV	0.45	4814.85	2.50	13143.90	39280.00	0.45	5937.77	2.50	13143.90	39280.00	2.214
5.35	8.03	ø6/15	2	23(TG)		SLV	0.45	8098.68	2.50	13143.90	39268.40	0.45	2167.12	2.50	13143.90	39268.40	1.623
8.03	8.70	ø6/10	2	233		SLU	0.45	2431.71	2.50	19715.80	39974.40	0.45	1082.12	2.50	19715.80	39974.40	8.108
8.03	8.70	ø6/10	2	230		SLU	0.45	2596.18	2.50	19715.80	39785.70	0.45	4.37	2.50	19715.80	39785.70	7.594
8.03	8.70	ø6/10	2	21(TG)		SLV	0.45	4814.85	2.50	19715.80	39280.00	0.45	5937.77	2.50	19715.80	39280.00	3.320
8.03	8.70	ø6/10	2	23(TG)		SLV	0.45	8098.68	2.50	19715.80	39268.40	0.45	2167.12	2.50	19715.80	39268.40	2.434

Dettagli costruttivi per la duttilità

- CC=1 α_e=0.42561 ω_{nd}=0.0891 μΦ_d=7.08596 v_d=0.096525 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_c=11.0183
0.03792 >= 0.0119 [7.4.29]
- CC=1 α_e=0.42561 ω_{nd}=0.0891 μΦ_d=7.58384 v_d=0.096525 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_c=11.0183
0.03792 >= 0.01519 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	46	SLU I	1	1	70.00	-28546.40	1121.39	930.13	-143489.00	15040.80	12225.80	33.75	26.92	5.027
0.70	46	SLU I	1	1	70.00	-28546.40	1121.39	930.13	-143489.00	15040.80	12225.80	33.75	26.92	5.027
4.38	46	SLU I	1	1	438.00	-26683.40	-1846.72	-5086.68	-26683.40	-7529.34	-19761.60	246.09	30.23	3.914
4.68	46(e)	SLU I	2	1	0.00	-3392.33	10.35	3818.68	-3392.33	530.50	20822.40	87.19	48.03	5.452
4.68	46(e)	SLU I	2	1	0.00	-3392.33	10.35	3818.68	-3392.33	217.00	10796.30	88.59	66.87	2.827
8.70	46	SLU I	2	1	401.76	-1358.43	1492.30	-468.36	-1358.43	9653.84	-3006.09	345.94	47.34	6.465

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/10	2	246	SLU I	0.35	1635.00	2.50	10500.60	52459.00	0.35	806.55	2.50	10500.60	52459.00	6.422	
1.31	3.77	ø6/15	2	246	SLU I	0.35	1635.00	2.50	7000.38	52410.90	0.35	806.55	2.50	7000.38	52410.90	4.282	
3.77	4.38	ø6/10	2	246	SLU I	0.35	1635.00	2.50	10500.60	52218.10	0.35	806.55	2.50	10500.60	52218.10	6.422	
4.68	5.35	ø6/10	2	246	SLU I	0.35	1067.07	2.50	10500.60	48555.80	0.35	368.87	2.50	10500.60	48555.80	9.841	
5.35	8.03	ø6/15	2	246	SLU I	0.35	1067.07	2.50	7000.38	48503.20	0.35	368.87	2.50	7000.38	48503.20	6.560	
8.03	8.70	ø6/10	2	246	SLU I	0.35	1067.07	2.50	10500.60	48292.80	0.35	368.87	2.50	10500.60	48292.80	9.841	

Pilastrata n. 60

Nodi: -223 -94 -119

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fcd (Inc) <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
7R		30.00	30.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
4.68	32	SLU	2	7	0.00	-3411.65	1812.89	1812.89	2441.77	2441.77	-3411.65	3579.29	4879.08	52.03	4.51	1.990
4.68	32	SLU	2	7	0.00	-3411.65	1812.89	1812.89	2441.77	2441.77	-3411.65	3579.29	4879.08	52.03	4.51	1.990
8.46	13	SLV	2	7	378.00	-23.17	480.70	480.70	1415.55	1415.55	-23.17	1791.73	5193.40	75.94	6.93	3.675

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*
---	1	4.68	54.04	52.35
---	1	4.68	54.04	52.35

Relazione di calcolo

---	1	4.68	54.04	52.35
-----	---	------	-------	-------

Stato limite ultimo - Verifiche a flessione/pressoflessione - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy,s <daNm>	MRdz,s <daNm>	α <grad>	ϵ_y	Sic.
0.70	9	SLV	1	7	70.00	-18712.70	3019.95	3019.95	-709.44	-709.44	-18712.70	6081.77	-1166.35	345.94	4.63	1.996
0.70	9	SLV	1	7	70.00	-18712.70	3019.95	3019.95	-709.44	-709.44	-18712.70	6081.77	-1166.35	345.94	4.63	1.996
4.38	9(e)	SLV	1	7	438.00	-17884.70	-3262.28	-3262.28	52.08	-418.50	-17884.70	-6147.89	-556.77	187.03	5.67	1.877

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cmq>	σ_f <daN/cmq>
0.70	37	SLE R	1	7	70.00	-20063.50	449.66	977.68	0.00	12.57	44.02	521.65
0.70	29	SLE Q	1	7	70.00	-19101.90	-199.76	181.98	0.00	12.57	24.30	328.00
0.70	37	SLE R	1	7	70.00	-20063.50	449.66	977.68	0.00	12.57	44.02	521.65
0.70	29	SLE Q	1	7	70.00	-19101.90	-199.76	181.98	0.00	12.57	24.30	328.00
4.38	37	SLE R	1	7	438.00	-19235.50	1102.22	-1272.18	3.14	9.42	66.34	719.05
4.38	29	SLE Q	1	7	438.00	-18273.90	-73.16	-596.36	0.00	12.57	28.62	365.42
4.68	37	SLE R	2	7	0.00	-2479.11	1626.63	1244.66	9.42	3.14	91.21	1600.28
4.68	29	SLE Q	2	7	0.00	-1866.31	-34.25	525.24	6.28	6.28	16.47	264.99
4.68	37	SLE R	2	7	0.00	-2479.11	1626.63	1244.66	9.42	3.14	91.21	1600.28
4.68	29	SLE Q	2	7	0.00	-1866.31	-34.25	525.24	6.28	6.28	16.47	264.99
8.46	37	SLE R	2	7	378.00	-1628.60	-300.54	-522.93	6.28	6.28	25.48	391.83
8.46	29	SLE Q	2	7	378.00	-1015.80	253.29	37.34	6.28	6.28	8.64	126.70

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cmq>	ϵ_{sm}	Wk <mm>
4.68	29	SLE Q	2	7	0.00	-1866.31	525.24	-34.25	44.00	192.00	0.50	20.00	193.17	3.14	165.20	264.99	0.08	0.03
4.68	42	SLE F	2	7	0.00	-1889.04	646.75	340.13	44.00	192.00	0.50	20.00	140.12	3.14	81.87	479.39	0.14	0.03
4.68	29	SLE Q	2	7	0.00	-1866.31	525.24	-34.25	44.00	192.00	0.50	20.00	193.17	3.14	165.20	264.99	0.08	0.03
4.68	42	SLE F	2	7	0.00	-1889.04	646.75	340.13	44.00	192.00	0.50	20.00	140.12	3.14	81.87	479.39	0.14	0.03
8.46	29	SLE Q	2	7	378.00	-1015.80	37.34	253.29	44.00	192.00	0.50	20.00	175.84	3.14	137.97	126.70	0.04	0.01
8.46	25	SLE F	2	7	378.00	-1081.10	-19.78	362.44	44.00	192.00	0.50	20.00	198.50	3.14	173.58	196.72	0.06	0.02

Stato limite ultimo - Verifiche a taglio

X0 [m]	X1 [m]	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} [m]	Vsdu _y [daN]	ctgθ _y	VRsd _y [daN]	VRcd _y [daN]	b _{w,z} [m]	Vsdu _z [daN]	ctgθ _z	VRsd _z [daN]	VRcd _z [daN]	Sic.
0.70	1.31	ø6/ 5	2	232	SLU	0.30	1644.06	2.18	21329.80	21329.80	0.30	892.92	2.18	21329.80	21329.80	12.974	
0.70	1.31	ø6/ 5	2	21 (TG)	SLV	0.30	783.92	2.11	20683.40	20683.40	0.30	4231.85	2.11	20683.40	20683.40	4.888	
0.70	1.31	ø6/ 5	2	27 (TG)	SLV	0.30	3215.07	2.12	20804.20	20804.20	0.30	2370.15	2.12	20804.20	20804.20	6.471	
1.31	3.77	ø6/20	2	232	SLU	0.30	1524.69	2.50	6123.85	19390.10	0.30	892.92	2.50	6123.85	19390.10	4.016	
1.31	3.77	ø6/20	2	21 (TG)	SLV	0.30	783.92	2.50	6123.85	18434.40	0.30	4231.85	2.50	6123.85	18434.40	1.447	
1.31	3.77	ø6/20	2	27 (TG)	SLV	0.30	3184.68	2.50	6123.85	18350.50	0.30	2346.75	2.50	6123.85	18350.50	1.923	
1.31	3.77	ø6/20	2	27 (TG)	SLV	0.30	3215.07	2.50	6123.85	18610.80	0.30	2370.15	2.50	6123.85	18610.80	1.905	
3.77	4.38	ø6/15	2	232	SLU	0.30	2158.45	2.50	8165.14	19390.10	0.30	892.92	2.50	8165.14	19390.10	3.783	
3.77	4.38	ø6/15	2	21 (TG)	SLV	0.30	783.92	2.50	8165.14	18434.40	0.30	4231.85	2.50	8165.14	18434.40	1.929	
3.77	4.38	ø6/15	2	27 (TG)	SLV	0.30	3184.68	2.50	8165.14	18350.50	0.30	2346.75	2.50	8165.14	18350.50	2.564	
3.77	4.38	ø6/15	2	27 (TG)	SLV	0.30	3215.07	2.50	8165.14	18610.80	0.30	2370.15	2.50	8165.14	18610.80	2.540	
4.68	5.31	ø6/15	2	232	SLU	0.30	2728.31	2.50	8165.14	16592.50	0.30	689.85	2.50	8165.14	16592.50	2.993	
4.68	5.31	ø6/15	2	21 (TG)	SLV	0.30	279.53	2.50	8165.14	16333.90	0.30	3187.20	2.50	8165.14	16333.90	2.562	
4.68	5.31	ø6/15	2	25 (TG)	SLV	0.30	2537.90	2.50	8165.14	16413.90	0.30	2113.72	2.50	8165.14	16413.90	3.217	
5.31	7.83	ø6/20	2	232	SLU	0.30	2077.34	2.50	6123.85	16569.00	0.30	689.85	2.50	6123.85	16569.00	2.948	
5.31	7.83	ø6/20	2	21 (TG)	SLV	0.30	279.53	2.50	6123.85	16333.90	0.30	3187.20	2.50	6123.85	16333.90	1.921	
5.31	7.83	ø6/20	2	25 (TG)	SLV	0.30	2537.90	2.50	6123.85	16413.90	0.30	2113.72	2.50	6123.85	16413.90	2.413	
7.83	8.46	ø6/15	2	232	SLU	0.30	1177.52	2.50	8165.14	16475.30	0.30	689.85	2.50	8165.14	16475.30	6.934	
7.83	8.46	ø6/15	2	21 (TG)	SLV	0.30	279.53	2.50	8165.14	16333.90	0.30	3187.20	2.50	8165.14	16333.90	2.562	
7.83	8.46	ø6/15	2	25 (TG)	SLV	0.30	2537.90	2.50	8165.14	16413.90	0.30	2113.72	2.50	8165.14	16413.90	3.217	

Dettagli costruttivi per la duttilità

- CC=5 $\alpha_e=0.37814$ $\omega_{wd}=0.23804$ $\mu\Phi_d=7.08596$ $v_d=0.13487$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.33929$ $\mu\Phi_e=12.1444$
0.09001 >= 0.03794 [7.4.29]

- CC=5 $\alpha_e=0.37814$ $\omega_{wd}=0.23804$ $\mu\Phi_d=7.58384$ $v_d=0.13487$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.33929$ $\mu\Phi_e=12.1444$
0.09001 >= 0.04306 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
4.68	46(e)	SLU I	2	7	0.00	-1866.31	525.24	-34.25	-1866.31	2608.67	-221.02	354.38	53.08	4.972
4.68	46(e)	SLU I	2	7	0.00	-1866.31	525.24	-34.25	-1866.31	2608.67	-221.02	354.38	53.08	4.972
8.46	46	SLU I	2	7	378.00	-1015.80	37.34	253.29	-1015.80	400.27	2514.02	81.56	48.68	9.952

Stato limite ultimo - Verifiche a flessione/pressoflessione - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy,s <daNm>	M'ydy,s <daNm>	MRdz,s <daNm>	M'ydz,s <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
-----------	----	-----	----	------	-----------	------------	--------------	-------------------	--------------	-------------------	-------------	------------------	-------------------	------------------	-------------------	----------------	--------------------	--------------	------

Relazione di calcolo

0.70	46(e)	SLU I	1	7	70.00	-19101.90	181.98	-446.98	-199.76	-446.98	-19101.90	-544.18	-544.18	-2252.74	-544.18	-544.18	-2252.75	225.00	20.00	1.217
0.70	46(e)	SLU I	1	7	70.00	-19101.90	181.98	-446.98	-199.76	-446.98	-19101.90	-544.18	-544.18	-2252.74	-544.18	-544.18	-2252.75	225.00	20.00	1.217
4.38	46(e)	SLU I	1	7	438.00	-18273.90	-596.36	-596.36	-73.16	-427.61	-18273.90	-657.98	-657.98	-2798.56	-461.30	-461.30	-2017.62	217.27	20.44	1.096

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	b _{w,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	46	SLU I	0.18	34.40	2.50	12140.20	14672.10	0.18	211.51	2.50	12140.20	14672.10	57.399
1.31	3.77	ø6/20	2	2	46	SLU I	0.18	34.40	2.50	3035.04	14672.10	0.18	211.51	2.50	3035.04	14672.10	14.350
3.77	4.38	ø6/15	2	2	46	SLU I	0.18	34.40	2.50	4046.73	14672.10	0.18	211.51	2.50	4046.73	14672.10	19.133
4.68	5.31	ø6/15	2	2	46	SLU I	0.20	76.07	2.50	4547.93	15732.60	0.20	129.07	2.50	4547.93	15732.60	35.235
5.31	7.83	ø6/20	2	2	46	SLU I	0.20	76.07	2.50	3410.95	15710.60	0.20	129.07	2.50	3410.95	15710.60	26.427
7.83	8.46	ø6/15	2	2	46	SLU I	0.20	76.07	2.50	4547.93	15622.60	0.20	129.07	2.50	4547.93	15622.60	35.235

Pilastrata n. 61

Nodi: -21 -87 -125

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
7R		30.00	30.00	5.30	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	1	SLV	1	7	70.00	-12947.50	-3639.15	-3639.15	816.83	816.83	-12947.50	-8332.69	1885.99	165.94	4.58	2.291
0.70	1	SLV	1	7	70.00	-12947.50	-3639.15	-3639.15	816.83	816.83	-12947.50	-8332.69	1885.99	165.94	4.58	2.291
4.38	1	SLV	1	7	438.00	-12119.50	5001.17	5001.17	-846.75	-846.75	-12119.50	8334.21	-1408.78	350.16	5.17	1.666
4.68	1	SLV	2	7	0.00	-103.82	-3349.71	-3349.71	70.64	70.64	-103.82	-7264.65	98.86	179.30	8.58	2.168
4.68	1	SLV	2	7	0.00	-103.82	-3349.71	-3349.71	70.64	70.64	-103.82	-5283.85	82.09	179.30	10.46	1.577
8.46	9	SLV	2	7	378.00	639.91	2478.03	2478.03	657.07	657.07	639.91	5182.05	1359.18	9.84	7.89	2.090

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _t <daN/cm²>
0.70	37	SLE R	1	7	70.00	-18029.10	587.93	383.13	0.00	18.10	31.31	380.53
0.70	29	SLE Q	1	7	70.00	-16396.50	-0.30	-532.93	0.00	18.10	22.74	292.14
0.70	37	SLE R	1	7	70.00	-18029.10	587.93	383.13	0.00	18.10	31.31	380.53
0.70	29	SLE Q	1	7	70.00	-16396.50	-0.30	-532.93	0.00	18.10	22.74	292.14
4.38	24	SLE R	1	7	438.00	-16808.10	-450.32	1790.76	9.05	9.05	58.33	606.06
4.38	29	SLE Q	1	7	438.00	-15568.50	-383.94	1685.60	9.05	9.05	53.95	559.77
4.68	37	SLE R	2	7	0.00	-2078.00	1343.56	-1049.75	13.57	4.52	64.00	983.60
4.68	21	SLE R	2	7	0.00	-1430.22	73.61	-2125.95	9.05	9.05	53.92	1091.20
4.68	29	SLE Q	2	7	0.00	-1375.03	158.19	-1630.64	9.05	9.05	44.66	852.99
4.68	37	SLE R	2	7	0.00	-2078.00	1343.56	-1049.75	9.42	3.14	76.06	1331.70
4.68	21	SLE R	2	7	0.00	-1430.22	73.61	-2125.95	6.28	6.28	63.13	1516.10
4.68	29	SLE Q	2	7	0.00	-1375.03	158.19	-1630.64	6.28	6.28	52.41	1180.17
8.46	21	SLE R	2	7	378.00	-579.72	203.84	1089.51	6.28	6.28	38.68	855.52
8.46	29	SLE Q	2	7	378.00	-524.53	155.92	641.93	6.28	6.28	24.15	504.15

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
4.68	29	SLE Q	2	7	0.00	-1375.03	-1630.64	158.19	44.00	188.00	0.50	24.00	178.28	4.52	170.17	852.99	0.25	0.08
4.68	25	SLE F	2	7	0.00	-1248.66	-1846.33	137.58	44.00	188.00	0.50	24.00	182.18	4.52	177.53	969.90	0.28	0.09
4.68	29	SLE Q	2	7	0.00	-1375.03	-1630.64	158.19	44.00	192.00	0.50	20.00	203.18	3.14	180.92	1180.17	0.34	0.12
4.68	28	SLE F	2	7	0.00	-1374.76	-1667.00	162.97	44.00	192.00	0.50	20.00	203.15	3.14	180.87	1209.44	0.35	0.12
8.46	29	SLE Q	2	7	378.00	-524.53	641.93	155.92	44.00	192.00	0.50	20.00	179.73	3.14	144.09	504.15	0.15	0.04
8.46	25	SLE F	2	7	378.00	-398.16	825.59	155.21	44.00	192.00	0.50	20.00	190.35	3.14	160.78	651.95	0.19	0.06

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	b _{w,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	20	SLU	0.30	181.65	2.17	21255.40	21255.40	0.30	900.44	2.17	21255.40	21255.40	23.606
0.70	1.31	ø6/ 5	2	2	32	SLU	0.30	1418.23	2.17	21305.50	21305.50	0.30	91.51	2.17	21305.50	21305.50	15.023
0.70	1.31	ø6/ 5	2	2	11(TG)	SLV	0.30	700.97	2.12	20749.00	20749.00	0.30	5344.68	2.12	20749.00	20749.00	3.882
0.70	1.31	ø6/ 5	2	2	13(TG)	SLV	0.30	4394.06	2.10	20624.50	20624.50	0.30	2376.99	2.10	20624.50	20624.50	4.694
1.31	3.77	ø6/25	2	2	20	SLU	0.30	181.65	2.50	4899.08	19255.90	0.30	900.44	2.50	4899.08	19255.90	5.441
1.31	3.77	ø6/25	2	2	32	SLU	0.30	996.52	2.50	4899.08	19330.90	0.30	91.51	2.50	4899.08	19330.90	4.916
1.31	3.77	ø6/25	2	2	29(TG)	SLV	0.30	1518.85	2.50	4899.08	17714.20	0.30	4839.94	2.50	4899.08	17714.20	1.012
1.31	3.77	ø6/25	2	2	13(TG)	SLV	0.30	4394.06	2.50	4899.08	18348.80	0.30	2376.99	2.50	4899.08	18348.80	1.115
3.77	4.38	ø6/15	2	2	20	SLU	0.30	181.65	2.50	8165.14	19164.60	0.30	900.44	2.50	8165.14	19164.60	9.068
3.77	4.38	ø6/15	2	2	32	SLU	0.30	1112.02	2.50	8165.14	19239.60	0.30	91.51	2.50	8165.14	19239.60	7.343
3.77	4.38	ø6/15	2	2	11(TG)	SLV	0.30	700.97	2.50	8165.14	18530.10	0.30	5344.68	2.50	8165.14	18530.10	1.528
3.77	4.38	ø6/15	2	2	29(TG)	SLV	0.30	792.11	2.50	8165.14	18578.20	0.30	5345.46	2.50	8165.14	18578.20	1.527
3.77	4.38	ø6/15	2	2	13(TG)	SLV	0.30	4394.06	2.50	8165.14	18348.80	0.30	2376.99	2.50	8165.14	18348.80	1.858
4.68	5.31	ø6/15	2	2	17	SLU	0.30	48.66	2.50	8165.14	16399.00	0.30	1215.07	2.50	8165.14	16399.00	6.720
4.68	5.31	ø6/15	2	2	32	SLU	0.30	1953.78	2.50	8165.14	16522.60	0.30	417.47	2.50	8165.14	16522.60	4.179

Relazione di calcolo

4.68	5.31	ø6/15	2	29(TG)	SLV	0.30	246.63	2.50	8165.14	16386.90	0.30	3211.49	2.50	8165.14	16386.90	2.542
4.68	5.31	ø6/15	2	29(TG)	SLV	0.30	2004.23	2.50	8165.14	16386.90	0.30	2161.03	2.50	8165.14	16386.90	3.778
5.31	7.83	ø6/20	2	217	SLU	0.30	48.66	2.50	6123.85	16375.50	0.30	1215.07	2.50	6123.85	16375.50	5.040
5.31	7.83	ø6/20	2	232	SLU	0.30	1520.61	2.50	6123.85	16499.20	0.30	417.47	2.50	6123.85	16499.20	4.027
5.31	7.83	ø6/20	2	29(TG)	SLV	0.30	246.63	2.50	6123.85	16386.90	0.30	3211.49	2.50	6123.85	16386.90	1.907
5.31	7.83	ø6/20	2	29(TG)	SLV	0.30	2004.23	2.50	6123.85	16386.90	0.30	2161.03	2.50	6123.85	16386.90	2.834
7.83	8.46	ø6/15	2	217	SLU	0.30	48.66	2.50	8165.14	16281.70	0.30	1215.07	2.50	8165.14	16281.70	6.720
7.83	8.46	ø6/15	2	232	SLU	0.30	645.24	2.50	8165.14	16405.40	0.30	417.47	2.50	8165.14	16405.40	12.654
7.83	8.46	ø6/15	2	29(TG)	SLV	0.30	246.63	2.50	8165.14	16386.90	0.30	3211.49	2.50	8165.14	16386.90	2.542
7.83	8.46	ø6/15	2	29(TG)	SLV	0.30	2004.23	2.50	8165.14	16386.90	0.30	2161.03	2.50	8165.14	16386.90	3.778

Dettagli costruttivi per la duttilità

- CC=9 $\alpha_e=0.39458$ $\omega_{wd}=0.23804$ $\mu\Phi_d=7.08596$ $v_d=0.13283$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.33929$ $\mu\Phi_c=12.7169$
0.09392 >= 0.03684 [7.4.29]
- CC=9 $\alpha_e=0.39458$ $\omega_{wd}=0.23804$ $\mu\Phi_d=7.58384$ $v_d=0.13283$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.33929$ $\mu\Phi_c=12.7169$
0.09392 >= 0.04188 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.	
0.70	46 (e)	SLU	I	1	7	70.00	-16396.50	-532.93	-0.30	-46967.20	-3228.78	-2321.91	217.97	19.97	2.864
0.70	46 (e)	SLU	I	1	7	70.00	-16396.50	-532.93	-0.30	-46967.20	-3228.78	-2321.91	217.97	19.97	2.864
4.38	46	SLU	I	1	7	438.00	-15568.50	1685.60	-383.94	-15568.50	4489.00	-991.26	343.12	25.85	2.658
4.68	46	SLU	I	2	7	0.00	-1375.03	-1630.64	158.19	-1375.03	-3986.34	374.66	171.56	42.87	2.444
4.68	46	SLU	I	2	7	0.00	-1375.03	-1630.64	158.19	-1375.03	-2563.34	227.01	174.38	54.06	1.571
8.46	46	SLU	I	2	7	378.00	-524.53	641.93	155.92	-524.53	2445.35	579.30	11.25	44.42	3.804

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <cm>	Vsdu _y <daN>	ctg θ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <cm>	Vsdu _z <daN>	ctg θ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø6/ 5	2	246	SLU	I	0.20	104.25	2.50	13643.80	17987.30	0.20	602.86	2.50	13643.80	17987.30	22.632
1.31	3.77	ø6/25	2	246	SLU	I	0.20	104.25	2.50	2728.76	17965.90	0.20	602.86	2.50	2728.76	17965.90	4.526
3.77	4.38	ø6/15	2	246	SLU	I	0.20	104.25	2.50	4547.93	17880.20	0.20	602.86	2.50	4547.93	17880.20	7.544
4.68	5.31	ø6/15	2	246	SLU	I	0.20	0.60	2.50	4547.93	15656.40	0.20	601.21	2.50	4547.93	15656.40	7.565
5.31	7.83	ø6/20	2	246	SLU	I	0.20	0.60	2.50	3410.95	15634.40	0.20	601.21	2.50	3410.95	15634.40	5.673
7.83	8.46	ø6/15	2	246	SLU	I	0.20	0.60	2.50	4547.93	15546.40	0.20	601.21	2.50	4547.93	15546.40	7.565

Pilastrata n. 62

Nodi: -22 -88 -1525

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fcd (Inc) <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
7R		30.00	30.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
7R		30.00	30.00	5.20	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	1	SLV	1	7	70.00	-10452.20	3344.55	3344.55	1425.05	1425.05	-10452.20	10339.50	4256.55	28.12	3.15	3.076
0.70	1	SLV	1	7	70.00	-10452.20	3344.55	3344.55	1425.05	1425.05	-10452.20	10339.50	4256.55	28.12	3.15	3.076
4.13	1	SLV	1	7	413.00	-2206.99	-3739.42	-3739.42	-1949.64	-1949.64	-2206.99	-9388.07	-5085.44	213.75	3.32	2.532
4.68	32	SLU	2	7	0.00	-294.87	2405.03	2405.03	2201.46	2201.46	-294.87	7300.69	6919.84	47.81	3.32	3.085
4.68	32	SLU	2	7	0.00	-294.87	2405.03	2405.03	2201.46	2201.46	-294.87	4825.68	4533.96	43.59	4.39	2.031
8.46	1	SLV	2	7	378.00	-44.15	-2437.90	-2437.90	-646.46	-646.46	-44.15	-6196.82	-1609.78	191.25	6.79	2.539

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cm ² >	σ_f <daN/cm ² >
0.70	37	SLE R	1	7	70.00	-7767.19	792.99	1252.44	15.71	15.71	46.69	452.33
0.70	29	SLE Q	1	7	70.00	-6629.61	276.22	66.55	0.00	31.42	10.15	123.58
0.70	37	SLE R	1	7	70.00	-7767.19	792.99	1252.44	15.71	15.71	46.69	452.33
0.70	29	SLE Q	1	7	70.00	-6629.61	276.22	66.55	0.00	31.42	10.15	123.58
4.13	37	SLE R	1	7	413.00	-6995.44	-1236.64	-1134.82	15.71	15.71	54.97	570.65
4.13	29	SLE Q	1	7	413.00	-5857.86	-933.75	-267.46	15.71	15.71	28.60	279.21
4.68	37	SLE R	2	7	0.00	-332.00	1518.92	1636.37	18.85	12.57	72.94	1074.30
4.68	29	SLE Q	2	7	0.00	-1035.55	757.81	389.48	18.85	12.57	26.79	377.02
4.68	37	SLE R	2	7	0.00	-332.00	1518.92	1636.37	11.40	3.80	92.55	1666.80
4.68	29	SLE Q	2	7	0.00	-1035.55	757.81	389.48	11.40	3.80	32.85	557.26
8.46	37	SLE R	2	7	378.00	518.50	-942.47	-587.97	11.40	3.80	44.42	867.95
8.46	29	SLE Q	2	7	378.00	-185.05	-247.64	-97.88	7.60	7.60	9.79	180.49

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>	
4.68	29	SLE	Q	2	7	0.00	-1035.55	389.48	757.81	44.00	115.38	0.50	20.00	138.24	3.14	78.91	377.02	0.11	0.03

Relazione di calcolo

4.68	42	SLE F	2	7	0.00	-975.67	730.12	862.24	44.00	115.38	0.50	20.00	131.33	3.14	68.06	518.67	0.15	0.03
4.68	29	SLE Q	2	7	0.00	-1035.55	389.48	757.81	44.00	190.00	0.50	22.00	138.69	3.80	87.58	557.26	0.16	0.04
4.68	42	SLE F	2	7	0.00	-975.67	730.12	862.24	44.00	190.00	0.50	22.00	132.31	3.80	76.56	783.32	0.23	0.05
8.46	29	SLE Q	2	7	378.00	-185.05	-97.88	-247.64	44.00	190.00	0.50	22.00	148.26	3.80	104.12	180.49	0.05	0.01
8.46	25	SLE F	2	7	378.00	-117.13	287.95	-357.19	44.00	190.00	0.50	22.00	134.42	3.80	80.21	337.98	0.10	0.02

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _{,y}	Vsdu _{,y}	ctgθ _{,y}	VRsd _{,y}	VRcd _{,y}	bw _{,z}	Vsdu _{,z}	ctgθ _{,z}	VRsd _{,z}	VRcd _{,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
0.70	1.31	ø6/10	2	232		SLV	0.30	1097.85	2.50	12247.70	17524.60	0.30	1717.89	2.50	12247.70	17524.60	7.130
0.70	1.31	ø6/10	2	211(TG)		SLV	0.30	859.29	2.50	12247.70	16518.90	0.30	7028.81	2.50	12247.70	16518.90	1.742
0.70	1.31	ø6/10	2	211(TG)		SLV	0.30	937.47	2.50	12247.70	17266.80	0.30	7150.82	2.50	12247.70	17266.80	1.713
0.70	1.31	ø6/10	2	215(TG)		SLV	0.30	6124.70	2.50	12247.70	16851.00	0.30	1736.35	2.50	12247.70	16851.00	2.000
0.70	1.31	ø6/10	2	215(TG)		SLV	0.30	6141.41	2.50	12247.70	16934.60	0.30	1737.25	2.50	12247.70	16934.60	1.994
1.31	3.77	ø6/20	2	232		SLV	0.30	1010.82	2.50	6123.85	17501.80	0.30	1471.43	2.50	6123.85	17501.80	4.162
1.31	3.77	ø6/20	2	25(TG)		SLV	0.30	5001.46	2.50	6123.85	16618.10	0.30	3263.23	2.50	6123.85	16618.10	1.224
1.31	3.77	ø6/20	2	29(TG)		SLV	0.30	1112.21	2.50	6123.85	16417.40						5.506
1.31	3.77	ø6/20	2	29(TG)		SND						0.30	3394.29	2.50	6123.85	17776.20	1.804
1.31	3.77	ø6/20	2	27(TG)		SLV	0.30	6025.37	2.50	6123.85	16872.90	0.30	1891.34	2.50	6123.85	16872.90	1.016
1.31	3.77	ø6/20	2	27(TG)		SLV	0.30	6037.56	2.50	6123.85	16956.50	0.30	1895.36	2.50	6123.85	16956.50	1.014
3.77	4.38	ø6/15	2	232		SLV	0.30	662.69	2.50	8165.14	17410.50	0.30	485.59	2.50	8165.14	17410.50	12.321
3.77	4.38	ø6/15	2	211(TG)		SLV	0.30	859.29	2.50	8165.14	16518.90	0.30	7028.81	2.50	8165.14	16518.90	1.162
3.77	4.38	ø6/15	2	211(TG)		SLV	0.30	937.47	2.50	8165.14	17266.80	0.30	7150.82	2.50	8165.14	17266.80	1.142
3.77	4.38	ø6/15	2	215(TG)		SLV	0.30	6124.70	2.50	8165.14	16851.00	0.30	1736.35	2.50	8165.14	16851.00	1.333
3.77	4.38	ø6/15	2	215(TG)		SLV	0.30	6141.41	2.50	8165.14	16934.60	0.30	1737.25	2.50	8165.14	16934.60	1.330
4.68	5.31	ø6/15	2	232		SLV	0.30	1218.49	2.50	8165.14	16195.90	0.30	1624.34	2.50	8165.14	16195.90	5.027
4.68	5.31	ø6/15	2	21(TG)		SLV	0.30	740.70	2.50	8165.14	16164.00	0.30	3673.44	2.50	8165.14	16164.00	2.223
4.68	5.31	ø6/15	2	215(TG)		SLV	0.30	3030.51	2.50	8165.14	16172.60	0.30	1903.02	2.50	8165.14	16172.60	2.694
5.31	7.83	ø6/25	2	232		SLV	0.30	1129.10	2.50	4899.08	16158.40	0.30	1371.19	2.50	4899.08	16158.40	3.573
5.31	7.83	ø6/25	2	21(TG)		SLV	0.30	740.70	2.50	4899.08	16164.00	0.30	3673.44	2.50	4899.08	16164.00	1.334
5.31	7.83	ø6/25	2	215(TG)		SLV	0.30	3030.51	2.50	4899.08	16172.60	0.30	1903.02	2.50	4899.08	16172.60	1.617
7.83	8.46	ø6/15	2	217		SLV	0.30	646.72	2.50	8165.14	16158.40	0.30	444.65	2.50	8165.14	16158.40	12.625
7.83	8.46	ø6/15	2	230		SLV	0.30	777.99	2.50	8165.14	16158.40	0.30	265.22	2.50	8165.14	16158.40	10.495
7.83	8.46	ø6/15	2	21(TG)		SLV	0.30	740.70	2.50	8165.14	16164.00	0.30	3673.44	2.50	8165.14	16164.00	2.223
7.83	8.46	ø6/15	2	215(TG)		SLV	0.30	3030.51	2.50	8165.14	16172.60	0.30	1903.02	2.50	8165.14	16172.60	2.694

Dettagli costruttivi per la duttilità

- CC=1 α_e=0.2891 ω_{nd}=0.11902 μΦ_d=7.08596 v_d=0.069961 E_{sy,d}=0.0018995 b_c/b₀=1.33929 μΦ_c=12.9989
0.03441 >= 0.00284 [7.4.29]
- CC=1 α_e=0.2891 ω_{nd}=0.11902 μΦ_d=7.58384 v_d=0.069961 E_{sy,d}=0.0018995 b_c/b₀=1.33929 μΦ_c=12.9989
0.03441 >= 0.00549 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	Nu	MRdy	MRdz	α	ε _y	Sic.
<m>					<m>	<daN>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
0.70	46(e)	SLU I	1	7	70.00	-6629.61	66.55	276.22	-46967.20	3093.81	5431.09	61.88	21.48	7.084
0.70	46(e)	SLU I	1	7	70.00	-6629.61	66.55	276.22	-46967.20	3093.81	5431.09	61.88	21.48	7.084
4.13	46	SLU I	1	7	413.00	-5857.86	-267.46	-933.75	-5857.86	-1813.82	-6543.86	261.56	23.30	6.985
4.68	46	SLU I	2	7	0.00	-1035.55	389.48	757.81	-1035.55	2808.90	5349.44	64.69	23.80	7.092
4.68	46	SLU I	2	7	0.00	-1035.55	389.48	757.81	-3681.06					3.555
8.46	46	SLU I	2	7	378.00	-185.05	-97.88	-247.64	-185.05	-1101.67	-2911.88	250.31	33.52	11.690

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/10	2	246	SLU I	0.20	352.76	2.50	6821.90	16471.80	0.20	97.38	2.50	6821.90	16471.80	19.339	
1.31	3.77	ø6/20	2	246	SLU I	0.20	352.76	2.50	3410.95	16450.30	0.20	97.38	2.50	3410.95	16450.30	9.669	
3.77	4.38	ø6/15	2	246	SLU I	0.20	352.76	2.50	4547.93	16364.70	0.20	97.38	2.50	4547.93	16364.70	12.892	
4.68	5.31	ø6/15	2	246	SLU I	0.20	265.99	2.50	4547.93	15603.70	0.20	128.93	2.50	4547.93	15603.70	17.098	
5.31	7.83	ø6/25	2	246	SLU I	0.20	265.99	2.50	2728.76	15581.70	0.20	128.93	2.50	2728.76	15581.70	10.259	
7.83	8.46	ø6/15	2	246	SLU I	0.20	265.99	2.50	4547.93	15493.70	0.20	128.93	2.50	4547.93	15493.70	17.098	

Pilastrata n. 63

Nodi: -19 -89 -123

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	Cf	Cls	Fck	Fctk	Fcd	Fcd (Inc)	Fctd	Tp	Fyk	Fyd
		<cm>	<cm>	<cm>		<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>		<daN/cmq>	<daN/cmq>
7	R	30.00	30.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	My ver.	Mz	Mz ver.	Nu	MRdy	MRdz	α	ε _y	Sic.
<m>					<cm>	<daN>	<daNm>	<daNm>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
0.70	13	SLV	1	7	70.00	-12810.60	-1114.37	-1114.37	-3267.96	-3267.96	-12810.60	-2155.30	-6286.38	250.31	4.71	1.925
0.70	13	SLV	1	7	70.00	-12810.60	-1114.37	-1114.37	-3267.96	-3267.96	-12810.60	-2155.30	-6286.38	250.31	4.71	1.925
4.13	13(e)	SLV	1	7	413.00	-12038.90	279.54	281.71	3378.49	3378.49	-12038.90	605.78	6451.36	85.78	7.10	1.911
4.68	32	SLU	2	7	0.00	-3980.29	2982.76	2982.76	-281.11	-281.11	-3980.29	5688.16	-560.53	356.48	8.74	1.908

Relazione di calcolo

4.68	32	SLU	2	7	0.00	-3980.29	2982.76	2982.76	-281.11	-281.11	-3980.29	5688.16	-560.53	356.48	8.74	1.908
8.46	1	SLV	2	7	378.00	1413.47	1894.94	1894.94	779.94	779.94	1413.47	5096.67	2135.74	15.47	7.36	2.697

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cmq>	σ_s <daN/cmq>
0.70	37	SLE R	1	7	70.00	-16035.70	554.35	328.11	0.00	12.57	30.33	370.72
0.70	29	SLE Q	1	7	70.00	-14380.40	-42.41	-435.51	0.00	12.57	21.66	279.26
0.70	37	SLE R	1	7	70.00	-16035.70	554.35	328.11	0.00	12.57	30.33	370.72
0.70	29	SLE Q	1	7	70.00	-14380.40	-42.41	-435.51	0.00	12.57	21.66	279.26
4.13	37	SLE R	1	7	413.00	-15264.00	-465.47	828.73	3.14	9.42	37.88	437.85
4.13	29	SLE Q	1	7	413.00	-13608.70	144.56	117.17	0.00	12.57	17.13	231.94
4.68	37	SLE R	2	7	0.00	-2789.41	-232.42	2004.40	6.28	6.28	66.06	1378.19
4.68	29	SLE Q	2	7	0.00	-1063.73	-507.97	200.68	6.28	6.28	21.81	379.71
4.68	37	SLE R	2	7	0.00	-2789.41	-232.42	2004.40	6.28	6.28	66.06	1378.19
4.68	29	SLE Q	2	7	0.00	-1063.73	-507.97	200.68	6.28	6.28	21.81	379.71
8.46	37	SLE R	2	7	378.00	-1938.91	98.14	-1011.00	6.28	6.28	32.69	646.18
8.46	29	SLE Q	2	7	378.00	-213.22	292.05	148.64	9.42	3.14	13.83	267.14

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cmq>	ϵ_{sm}	Wk <mm>
4.68	29	SLE Q	2	7	0.00	-1063.73	200.68	-507.97	44.00	192.00	0.50	20.00	151.51	3.14	99.76	379.71	0.11	0.03
4.68	42	SLE F	2	7	0.00	-1352.56	528.63	-428.11	44.00	192.00	0.50	20.00	135.40	3.14	74.46	486.86	0.14	0.03
4.68	29	SLE Q	2	7	0.00	-1063.73	200.68	-507.97	44.00	192.00	0.50	20.00	151.51	3.14	99.76	379.71	0.11	0.03
4.68	42	SLE F	2	7	0.00	-1352.56	528.63	-428.11	44.00	192.00	0.50	20.00	135.40	3.14	74.46	486.86	0.14	0.03
8.46	29	SLE Q	2	7	378.00	-213.22	148.64	292.05	44.00	192.00	0.50	20.00	149.24	3.14	96.20	267.14	0.08	0.02
8.46	25	SLE F	2	7	378.00	-264.51	33.12	309.81	44.00	192.00	0.50	20.00	201.51	3.14	178.31	225.16	0.07	0.02

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø6/10	2	2	32	SLU	0.30	457.27	2.50	12247.70	19001.30	0.30	1170.25	2.50	12247.70	19001.30	10.466
0.70	1.31	ø6/10	2	2	11 (TG)	SLV	0.30	1956.82	2.50	12247.70	17754.20	0.30	3422.72	2.50	12247.70	17754.20	3.578
0.70	1.31	ø6/10	2	2	11 (TG)	SLV	0.30	1990.31	2.50	12247.70	18063.70	0.30	3469.85	2.50	12247.70	18063.70	3.530
0.70	1.31	ø6/10	2	2	13 (TG)	SLV	0.30	4049.75	2.50	12247.70	18120.60	0.30	488.08	2.50	12247.70	18120.60	3.024
1.31	3.77	ø6/20	2	2	32	SLU	0.30	457.27	2.50	6123.85	18978.50	0.30	1278.51	2.50	6123.85	18978.50	4.790
1.31	3.77	ø6/20	2	2	11 (TG)	SLV	0.30	1956.82	2.50	6123.85	17754.20	0.30	3422.72	2.50	6123.85	17754.20	1.789
1.31	3.77	ø6/20	2	2	11 (TG)	SLV	0.30	1990.31	2.50	6123.85	18063.70	0.30	3469.85	2.50	6123.85	18063.70	1.765
1.31	3.77	ø6/20	2	2	13 (TG)	SLV	0.30	4049.75	2.50	6123.85	18120.60	0.30	488.08	2.50	6123.85	18120.60	1.512
3.77	4.38	ø6/15	2	2	32	SLU	0.30	457.27	2.50	8165.14	18887.20	0.30	1768.26	2.50	8165.14	18887.20	4.618
3.77	4.38	ø6/15	2	2	11 (TG)	SLV	0.30	1956.82	2.50	8165.14	17754.20	0.30	3422.72	2.50	8165.14	17754.20	2.386
3.77	4.38	ø6/15	2	2	11 (TG)	SLV	0.30	1990.31	2.50	8165.14	18063.70	0.30	3469.85	2.50	8165.14	18063.70	2.353
3.77	4.38	ø6/15	2	2	13 (TG)	SLV	0.30	4049.75	2.50	8165.14	18120.60	0.30	488.08	2.50	8165.14	18120.60	2.016
4.68	5.31	ø6/15	2	2	32	SLU	0.30	102.61	2.50	8165.14	16664.80	0.30	2704.33	2.50	8165.14	16664.80	3.019
4.68	5.31	ø6/15	2	2	19	SLU	0.30	437.70	2.50	8165.14	16431.30	0.30	182.86	2.50	8165.14	16431.30	18.654
4.68	5.31	ø6/15	2	2	9 (TG)	SLV	0.30	1084.96	2.50	8165.14	16392.50	0.30	3104.09	2.50	8165.14	16392.50	2.630
4.68	5.31	ø6/15	2	2	7 (TG)	SLV	0.30	3133.13	2.50	8165.14	16218.70	0.30	416.93	2.50	8165.14	16218.70	2.606
5.31	7.83	ø6/20	2	2	32	SLU	0.30	102.61	2.50	6123.85	16641.40	0.30	2201.27	2.50	6123.85	16641.40	2.782
5.31	7.83	ø6/20	2	2	19	SLU	0.30	437.70	2.50	6123.85	16407.90	0.30	182.86	2.50	6123.85	16407.90	13.991
5.31	7.83	ø6/20	2	2	9 (TG)	SLV	0.30	1084.96	2.50	6123.85	16392.50	0.30	3104.09	2.50	6123.85	16392.50	1.973
5.31	7.83	ø6/20	2	2	7 (TG)	SLV	0.30	3133.13	2.50	6123.85	16218.70	0.30	416.93	2.50	6123.85	16218.70	1.955
7.83	8.46	ø6/15	2	2	32	SLU	0.30	102.61	2.50	8165.14	16547.60	0.30	314.04	2.50	8165.14	16547.60	26.000
7.83	8.46	ø6/15	2	2	19	SLU	0.30	437.70	2.50	8165.14	16314.10	0.30	182.86	2.50	8165.14	16314.10	18.654
7.83	8.46	ø6/15	2	2	9 (TG)	SLV	0.30	1084.96	2.50	8165.14	16392.50	0.30	3104.09	2.50	8165.14	16392.50	2.630
7.83	8.46	ø6/15	2	2	7 (TG)	SLV	0.30	3133.13	2.50	8165.14	16218.70	0.30	416.93	2.50	8165.14	16218.70	2.606

Dettagli costruttivi per la duttilità

- CC=9 $\alpha_e=0.2891$ $\omega_{wd}=0.11902$ $\mu\Phi_d=7.08596$ $v_d=0.11038$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.33929$ $\mu\Phi_c=8.23866$
0.03441 ≥ 0.0247 [7.4.29]
- CC=9 $\alpha_e=0.2891$ $\omega_{wd}=0.11902$ $\mu\Phi_d=7.58384$ $v_d=0.11038$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.33929$ $\mu\Phi_c=8.23866$
0.03441 ≥ 0.02889 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	46 (e)	SLU I	1	7	70.00	-14380.40	-435.51	-42.41	-46967.20	-2603.17	-2017.63	216.56	21.99	3.266
0.70	46 (e)	SLU I	1	7	70.00	-14380.40	-435.51	-42.41	-46967.20	-2603.17	-2017.63	216.56	21.99	3.266
4.13	46 (e)	SLU I	1	7	413.00	-13608.70	117.17	144.56	-46967.20	2308.39	2308.40	45.00	21.87	3.451
4.68	46	SLU I	2	7	0.00	-1063.73	200.68	-507.97	-1063.73	930.04	-2429.83	288.28	35.96	4.762
4.68	46	SLU I	2	7	0.00	-1063.73	200.68	-507.97	-1063.73	930.04	-2429.83	288.28	35.96	4.762
8.46	46	SLU I	2	7	378.00	-213.22	148.64	292.05	-213.22	1157.73	2304.83	67.50	33.84	7.872

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _y	Vsdu _y	ctgθ _y	VRsd _y	VRcd _y	bw _z	Vsdu _z	ctgθ _z	VRsd _z	VRcd _z	Sic.
----	----	--------	-----------------	-----------------	----	-----	-----------------	-------------------	-------------------	-------------------	-------------------	-----------------	-------------------	-------------------	-------------------	-------------------	------

<m>	<m>					<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>		
0.70	1.31	ø6/10	2	2	46	SLU I	0.20	54.51	2.50	6821.90	17674.50	0.20	161.13	2.50	6821.90	17674.50	42.338
1.31	3.77	ø6/20	2	2	46	SLU I	0.20	54.51	2.50	3410.95	17653.10	0.20	161.13	2.50	3410.95	17653.10	21.169
3.77	4.38	ø6/15	2	2	46	SLU I	0.20	54.51	2.50	4547.93	17567.40	0.20	161.13	2.50	4547.93	17567.40	28.225
4.68	5.31	ø6/15	2	2	46	SLU I	0.20	211.65	2.50	4547.93	15608.10	0.20	13.77	2.50	4547.93	15608.10	21.488
5.31	7.83	ø6/20	2	2	46	SLU I	0.20	211.65	2.50	3410.95	15586.10	0.20	13.77	2.50	3410.95	15586.10	16.116
7.83	8.46	ø6/15	2	2	46	SLU I	0.20	211.65	2.50	4547.93	15498.10	0.20	13.77	2.50	4547.93	15498.10	21.488

Pilastrata n. 64

Nodi: -8 -90 -122

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
7R		30.00	30.00	5.30	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	5	SLV	1	7	70.00	-8681.69	-1741.27	-1741.27	2561.18	2561.18	-8681.69	-4480.71	6476.65	126.56	3.74	2.543
0.70	5	SLV	1	7	70.00	-8681.69	-1741.27	-1741.27	2561.18	2561.18	-8681.69	-4480.71	6476.65	126.56	3.74	2.543
4.38	13	SLV	1	7	438.00	-7896.46	858.94	858.94	3343.75	3343.75	-7896.46	1948.24	7882.71	75.94	5.05	2.352
4.68	30	SLU	2	7	0.00	-2060.24	1577.18	1577.18	-2166.35	-2166.35	-2060.24	4476.76	-6131.03	307.97	4.06	2.833
4.68	17	SLU	2	7	0.00	-1007.02	521.08	521.08	-2478.57	-2478.57	-1007.02	1189.12	-5366.54	278.44	7.91	2.170
8.46	1	SLV	2	7	378.00	1518.60	1829.87	1829.87	777.45	777.45	1518.60	5086.34	2136.82	15.47	7.37	2.775

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
0.70	37	SLE R	1	7	70.00	-12616.20	551.40	139.91	0.00	18.10	22.11	268.11
0.70	21	SLE R	1	7	70.00	-10685.70	77.19	-654.37	0.00	18.10	21.32	251.11
0.70	29	SLE Q	1	7	70.00	-10895.10	-34.45	-585.03	0.00	18.10	19.47	235.10
0.70	37	SLE R	1	7	70.00	-12616.20	551.40	139.91	0.00	18.10	22.11	268.11
0.70	21	SLE R	1	7	70.00	-10685.70	77.19	-654.37	0.00	18.10	21.32	251.11
0.70	29	SLE Q	1	7	70.00	-10895.10	-34.45	-585.03	0.00	18.10	19.47	235.10
4.38	37	SLE R	1	7	438.00	-11788.20	-199.57	847.22	4.52	13.57	28.32	320.22
4.38	29	SLE Q	1	7	438.00	-10067.10	467.93	369.72	4.52	13.57	22.78	261.55
4.68	35	SLE R	2	7	0.00	-1499.62	-1503.97	1056.98	13.57	4.52	68.38	1100.32
4.68	29	SLE Q	2	7	0.00	-863.91	-938.57	72.23	9.05	9.05	25.15	481.18
4.68	35	SLE R	2	7	0.00	-1499.62	-1503.97	1056.98	9.42	3.14	81.45	1495.15
4.68	29	SLE Q	2	7	0.00	-863.91	-938.57	72.23	6.28	6.28	29.47	666.18
8.46	35	SLE R	2	7	378.00	-649.12	1051.54	-529.94	9.42	3.14	49.64	969.38
8.46	21	SLE R	2	7	378.00	53.03	1241.07	-90.06	6.28	6.28	38.38	974.56
8.46	29	SLE Q	2	7	378.00	-13.41	528.46	211.54	9.42	3.14	22.99	487.30

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
4.68	29	SLE Q	2	7	0.00	-863.91	72.23	-938.57	44.00	188.00	0.50	24.00	180.80	4.52	174.92	481.18	0.14	0.04
4.68	25	SLE F	2	7	0.00	-773.34	195.58	-1277.29	44.00	188.00	0.50	24.00	171.38	4.52	157.17	707.61	0.21	0.06
4.68	29	SLE Q	2	7	0.00	-863.91	72.23	-938.57	44.00	192.00	0.50	20.00	147.02	6.28	185.43	666.18	0.19	0.05
4.68	25	SLE F	2	7	0.00	-773.34	195.58	-1277.29	44.00	192.00	0.50	20.00	195.32	3.14	168.58	977.49	0.28	0.09
8.46	29	SLE Q	2	7	378.00	-13.41	211.54	528.46	44.00	192.00	0.50	20.00	160.76	3.14	114.29	487.30	0.14	0.04
8.46	25	SLE F	2	7	378.00	77.16	72.86	836.92	44.00	192.00	0.84	20.00	190.08	6.28	190.57	665.44	0.19	0.06

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <cm>	V _{sdu,y} <daN>	ctgθ _y	VR _{sd,y} <daN>	VR _{cd,y} <daN>	b _{w,z} <cm>	V _{sdu,z} <daN>	ctgθ _z	VR _{sd,z} <daN>	VR _{cd,z} <daN>	Sic.
0.70	1.31	ø6/10	2	2	32	SLU	0.30	310.55	2.50	12247.70	18393.20	0.30	780.97	2.50	12247.70	18393.20	15.683
0.70	1.31	ø6/10	2	2	3(TG)	SLV	0.30	1295.89	2.50	12247.70	17590.50	0.30	4872.96	2.50	12247.70	17590.50	2.513
0.70	1.31	ø6/10	2	2	15(TG)	SLV	0.30	4977.17	2.50	12247.70	17590.50	0.30	640.83	2.50	12247.70	17590.50	2.461
1.31	3.77	ø6/25	2	2	32	SLU	0.30	310.55	2.50	4899.08	18370.40	0.30	943.85	2.50	4899.08	18370.40	5.191
1.31	3.77	ø6/25	2	2	3(TG)	SLV	0.30	1295.89	2.50	4899.08	17590.50	0.30	4872.96	2.50	4899.08	17590.50	1.005
1.31	3.77	ø6/25	2	2	15(TG)	SLV	0.30	4859.58	2.50	4899.08	17293.90	0.30	543.43	2.50	4899.08	17293.90	1.008
1.31	3.77	ø6/25	2	2	7(TG)	SLV	0.30	4862.06	2.50	4899.08	17590.50	0.30	1218.12	2.50	4899.08	17590.50	1.008
3.77	4.38	ø6/15	2	2	32	SLU	0.30	310.55	2.50	8165.14	18279.10	0.30	1288.81	2.50	8165.14	18279.10	6.335
3.77	4.38	ø6/15	2	2	3(TG)	SLV	0.30	1295.89	2.50	8165.14	17590.50	0.30	4872.96	2.50	8165.14	17590.50	1.676
3.77	4.38	ø6/15	2	2	15(TG)	SLV	0.30	4977.17	2.50	8165.14	17590.50	0.30	640.83	2.50	8165.14	17590.50	1.641
4.68	5.31	ø6/15	2	2	32	SLU	0.30	666.97	2.50	8165.14	16523.70	0.30	1917.52	2.50	8165.14	16523.70	4.258
4.68	5.31	ø6/15	2	2	17	SLU	0.30	1135.44	2.50	8165.14	16286.50	0.30	181.11	2.50	8165.14	16286.50	7.191
4.68	5.31	ø6/15	2	2	5(TG)	SLV	0.30	2385.95	2.50	8165.14	16226.10	0.30	2440.97	2.50	8165.14	16226.10	3.345
4.68	5.31	ø6/15	2	2	15(TG)	SLV	0.30	3117.43	2.50	8165.14	16197.80	0.30	433.59	2.50	8165.14	16197.80	2.619
5.31	7.83	ø6/20	2	2	32	SLU	0.30	666.97	2.50	6123.85	16500.30	0.30	1563.18	2.50	6123.85	16500.30	3.918
5.31	7.83	ø6/20	2	2	17	SLU	0.30	1135.44	2.50	6123.85	16263.10	0.30	181.11	2.50	6123.85	16263.10	5.393
5.31	7.83	ø6/20	2	2	5(TG)	SLV	0.30	2385.95	2.50	6123.85	16226.10	0.30	2440.97	2.50	6123.85	16226.10	2.509
5.31	7.83	ø6/20	2	2	15(TG)	SLV	0.30	3117.43	2.50	6123.85	16197.80	0.30	433.59	2.50	6123.85	16197.80	1.964
7.83	8.46	ø6/15	2	2	30	SLU	0.30	977.63	2.50	8165.14	16303.30	0.30	209.85	2.50	8165.14	16303.30	8.352
7.83	8.46	ø6/15	2	2	17	SLU	0.30	1135.44	2.50	8165.14	16158.40	0.30	181.11	2.50	8165.14	16158.40	7.191

Relazione di calcolo

7.83	8.46	ø6/15	2	2	5 (TG)	SLV	0.30	2385.95	2.50	8165.14	16226.10	0.30	2440.97	2.50	8165.14	16226.10	3.345
7.83	8.46	ø6/15	2	2	15 (TG)	SLV	0.30	3117.43	2.50	8165.14	16197.80	0.30	433.59	2.50	8165.14	16197.80	2.619

Dettagli costruttivi per la duttilità

- CC=9 $\alpha_e=0.30167$ $\omega_{wd}=0.11902$ $\mu\Phi_d=7.08596$ $v_d=0.087902$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.33929$ $\mu\Phi_c=10.5688$
0.0359 >= 0.01254 [7.4.29]
- CC=9 $\alpha_e=0.30167$ $\omega_{wd}=0.11902$ $\mu\Phi_d=7.58384$ $v_d=0.087902$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.33929$ $\mu\Phi_c=10.5688$
0.0359 >= 0.01588 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	46 (e)	SLU I	1	7	70.00	-10895.10	-585.03	-34.45	-46967.20	-3891.25	-1667.95	206.72	24.45	4.311
0.70	46 (e)	SLU I	1	7	70.00	-10895.10	-585.03	-34.45	-46967.20	-3891.25	-1667.95	206.72	24.45	4.311
4.38	46	SLU I	1	7	438.00	-10067.10	369.72	467.93	-46967.20	2659.78	3289.83	52.03	20.97	4.665
4.68	46	SLU I	2	7	0.00	-863.91	72.23	-938.57	-863.91	263.77	-3965.12	275.62	47.42	4.221
4.68	46	SLU I	2	7	0.00	-863.91	72.23	-938.57	-863.91	184.40	-2522.37	274.22	58.42	2.686
8.46	46	SLU I	2	7	378.00	-13.41	211.54	528.46	-13.41	969.51	2336.79	71.72	36.71	4.445

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctg θ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctg θ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/10	2	2	46	SLU I	0.20	136.52	2.50	6821.90	17133.70	0.20	259.44	2.50	6821.90	17133.70	26.294
1.31	3.77	ø6/25	2	2	46	SLU I	0.20	136.52	2.50	2728.76	17112.20	0.20	259.44	2.50	2728.76	17112.20	10.518
3.77	4.38	ø6/15	2	2	46	SLU I	0.20	136.52	2.50	4547.93	17026.60	0.20	259.44	2.50	4547.93	17026.60	17.530
4.68	5.31	ø6/15	2	2	46	SLU I	0.20	388.10	2.50	4547.93	15577.10	0.20	36.85	2.50	4547.93	15577.10	11.718
5.31	7.83	ø6/20	2	2	46	SLU I	0.20	388.10	2.50	3410.95	15555.10	0.20	36.85	2.50	3410.95	15555.10	8.789
7.83	8.46	ø6/15	2	2	46	SLU I	0.20	388.10	2.50	4547.93	15467.10	0.20	36.85	2.50	4547.93	15467.10	11.718

Pilastrata n. 65

Nodi: -6 -91 -121

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm ² >	Fctk <daN/cm ² >	Fcd <daN/cm ² >	Fcd (Inc) <daN/cm ² >	Fctd <daN/cm ² >	Tp	Fyk <daN/cm ² >	Fyd <daN/cm ² >
7	R	30.00	30.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	1	SLV	1	7	70.00	6889.33	-3829.53	-3829.53	1177.84	1177.84	6889.33	-10456.90	3153.92	160.31	4.13	2.726
0.70	1	SLV	1	7	70.00	6889.33	-3829.53	-3829.53	1177.84	1177.84	6889.33	-10456.90	3153.92	160.31	4.13	2.726
4.38	1	SLV	1	7	438.00	7717.33	4296.52	4296.52	-1285.27	-1285.27	7717.33	10393.20	-3144.56	340.31	4.18	2.421
4.68	30	SLU	2	7	0.00	-2566.84	885.70	885.70	-1333.27	-1333.27	-2566.84	5583.85	-8366.99	300.94	3.33	6.284
4.68	1	SLV	2	7	0.00	320.69	-1722.94	-1722.94	-341.58	-341.58	320.69	-5241.35	-1021.12	187.03	8.48	3.040
8.46	1	SLV	2	7	378.00	1171.19	1697.89	1697.89	399.35	399.35	1171.19	5238.17	1238.72	7.73	9.06	3.086

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cm ² >	σ_f <daN/cm ² >
0.70	21	SLE R	1	7	70.00	-2715.75	428.17	-750.68	15.71	15.71	26.81	306.53
0.70	29	SLE Q	1	7	70.00	-1406.32	273.77	-700.28	15.71	15.71	21.73	285.76
0.70	21	SLE R	1	7	70.00	-2715.75	428.17	-750.68	15.71	15.71	26.81	306.53
0.70	29	SLE Q	1	7	70.00	-1406.32	273.77	-700.28	15.71	15.71	21.73	285.76
4.38	21	SLE R	1	7	438.00	-1887.75	-533.45	872.26	15.71	15.71	32.00	411.80
4.38	29	SLE Q	1	7	438.00	-578.32	-281.48	777.83	15.71	15.71	23.38	344.69
4.68	35	SLE R	2	7	0.00	-1821.18	-894.78	567.63	18.85	12.57	34.15	453.25
4.68	29	SLE Q	2	7	0.00	-897.24	-201.53	-259.19	18.85	12.57	10.59	125.08
4.68	35	SLE R	2	7	0.00	-1821.18	-894.78	567.63	9.42	3.14	45.90	776.79
4.68	29	SLE Q	2	7	0.00	-897.24	-201.53	-259.19	9.42	3.14	14.35	214.46
8.46	35	SLE R	2	7	378.00	-970.68	753.22	-386.31	9.42	3.14	35.66	654.79
8.46	29	SLE Q	2	7	378.00	-46.74	202.03	241.75	9.42	3.14	14.28	276.31

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cm ² >	ϵ_{sm}	Wk <mm>
0.70	29	SLE Q	1	7	70.00	-1406.32	-700.28	273.77	44.00	64.00	0.50	20.00	136.38	3.14	75.99	285.76	0.08	0.02
0.70	28	SLE F	1	7	70.00	-1420.07	-707.18	272.06	44.00	64.00	0.50	20.00	136.72	3.14	76.53	287.25	0.08	0.02
0.70	29	SLE Q	1	7	70.00	-1406.32	-700.28	273.77	44.00	64.00	0.50	20.00	136.38	3.14	75.99	285.76	0.08	0.02
0.70	28	SLE F	1	7	70.00	-1420.07	-707.18	272.06	44.00	64.00	0.50	20.00	136.72	3.14	76.53	287.25	0.08	0.02
4.38	29	SLE Q	1	7	438.00	-578.32	777.83	-281.48	44.00	64.00	0.50	20.00	142.50	3.14	85.60	344.69	0.10	0.02
4.38	25	SLE F	1	7	438.00	-1168.26	817.06	-400.96	44.00	64.00	0.50	20.00	133.90	3.14	72.09	375.04	0.11	0.02
4.68	29	SLE Q	2	7	0.00	-897.24	-259.19	-201.53	44.00	64.00	0.50	20.00	125.50	3.14	58.90	125.08	0.04	0.01
4.68	25	SLE F	2	7	0.00	-1221.42	-109.72	-599.59	44.00	115.38	0.50	20.00	170.65	3.14	129.82	232.80	0.07	0.02
4.68	29	SLE Q	2	7	0.00	-897.24	-259.19	-201.53	44.00	192.00	0.50	20.00	133.20	3.14	71.00	214.46	0.06	0.01
4.68	25	SLE F	2	7	0.00	-1221.42	-109.72	-599.59	44.00	192.00	0.50	20.00	182.51	3.14	148.46	397.48	0.12	0.04

Relazione di calcolo

8.46	29	SLE Q	2	7	378.00	-46.74	241.75	202.03	44.00	192.00	0.50	20.00	141.13	3.14	83.46	276.31	0.08	0.02
8.46	25	SLE F	2	7	378.00	-370.92	109.02	536.07	44.00	192.00	0.50	20.00	186.78	3.14	155.16	417.57	0.12	0.04

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/10	2	2	20	SLU	0.30	295.54	2.50	12247.70	16563.00	0.30	607.41	2.50	12247.70	16563.00	20.164
0.70	1.31	ø6/10	2	2	17	SLU	0.30	362.69	2.50	12247.70	16645.20	0.30	608.09	2.50	12247.70	16645.20	20.141
0.70	1.31	ø6/10	2	2	32	SLU	0.30	672.90	2.50	12247.70	16898.90	0.30	358.77	2.50	12247.70	16898.90	18.201
0.70	1.31	ø6/10	2	2	3(TG)	SLV	0.30	714.71	2.50	12247.70	16158.40	0.30	6793.12	2.50	12247.70	16158.40	1.803
0.70	1.31	ø6/10	2	2	11(TG)	SLV	0.30	1013.05	2.50	12247.70	17012.30	0.30	7091.69	2.50	12247.70	17012.30	1.727
0.70	1.31	ø6/10	2	2	15(TG)	SLV	0.30	6142.87	2.50	12247.70	16158.40	0.30	1355.37	2.50	12247.70	16158.40	1.994
0.70	1.31	ø6/10	2	2	15(TG)	SLV	0.30	6230.38	2.50	12247.70	16536.10	0.30	1371.54	2.50	12247.70	16536.10	1.966
1.31	3.77	ø6/20	2	2	20	SLU	0.30	295.54	2.50	6123.85	16540.20	0.30	607.41	2.50	6123.85	16540.20	10.082
1.31	3.77	ø6/20	2	2	17	SLU	0.30	362.69	2.50	6123.85	16622.40	0.30	608.09	2.50	6123.85	16622.40	10.071
1.31	3.77	ø6/20	2	2	32	SLU	0.30	672.90	2.50	6123.85	16876.00	0.30	257.10	2.50	6123.85	16876.00	9.101
1.31	3.77	ø6/20	2	2	1(TG)	SLV	0.30	2031.01	2.50	6123.85	16158.40	0.30	6112.68	2.50	6123.85	16158.40	1.002
1.31	3.77	ø6/20	2	2	15(TG)	SLV	0.30	6108.76	2.50	6123.85	16158.40	0.30	1420.72	2.50	6123.85	16158.40	1.002
3.77	4.38	ø6/15	2	2	20	SLU	0.30	295.54	2.50	8165.14	16448.90	0.30	607.41	2.50	8165.14	16448.90	13.443
3.77	4.38	ø6/15	2	2	17	SLU	0.30	362.69	2.50	8165.14	16531.10	0.30	608.09	2.50	8165.14	16531.10	13.428
3.77	4.38	ø6/15	2	2	32	SLU	0.30	672.90	2.50	8165.14	16784.70	0.30	251.25	2.50	8165.14	16784.70	12.134
3.77	4.38	ø6/15	2	2	3(TG)	SLV	0.30	714.71	2.50	8165.14	16158.40	0.30	6793.12	2.50	8165.14	16158.40	1.202
3.77	4.38	ø6/15	2	2	11(TG)	SLV	0.30	1013.05	2.50	8165.14	17012.30	0.30	7091.69	2.50	8165.14	17012.30	1.151
3.77	4.38	ø6/15	2	2	15(TG)	SLV	0.30	6142.87	2.50	8165.14	16158.40	0.30	1355.37	2.50	8165.14	16158.40	1.329
3.77	4.38	ø6/15	2	2	15(TG)	SLV	0.30	6230.38	2.50	8165.14	16536.10	0.30	1371.54	2.50	8165.14	16536.10	1.311
4.68	5.31	ø6/15	2	2	32	SLU	0.30	326.35	2.50	8165.14	16462.30	0.30	847.87	2.50	8165.14	16462.30	9.630
4.68	5.31	ø6/15	2	2	17	SLU	0.30	785.62	2.50	8165.14	16444.80	0.30	52.91	2.50	8165.14	16444.80	10.393
4.68	5.31	ø6/15	2	2	9(TG)	SLV	0.30	431.16	2.50	8165.14	16319.30	0.30	3165.01	2.50	8165.14	16319.30	2.580
4.68	5.31	ø6/15	2	2	15(TG)	SLV	0.30	3065.43	2.50	8165.14	16200.00	0.30	912.60	2.50	8165.14	16200.00	2.664
5.31	7.83	ø6/20	2	2	32	SLU	0.30	326.35	2.50	6123.85	16438.80	0.30	743.43	2.50	6123.85	16438.80	8.237
5.31	7.83	ø6/20	2	2	17	SLU	0.30	785.62	2.50	6123.85	16421.40	0.30	52.91	2.50	6123.85	16421.40	7.795
5.31	7.83	ø6/20	2	2	9(TG)	SLV	0.30	431.16	2.50	6123.85	16319.30	0.30	3165.01	2.50	6123.85	16319.30	1.935
5.31	7.83	ø6/20	2	2	15(TG)	SLV	0.30	3065.43	2.50	6123.85	16200.00	0.30	912.60	2.50	6123.85	16200.00	1.998
7.83	8.46	ø6/15	2	2	32	SLU	0.30	326.35	2.50	8165.14	16345.00	0.30	325.70	2.50	8165.14	16345.00	25.019
7.83	8.46	ø6/15	2	2	17	SLU	0.30	785.62	2.50	8165.14	16327.60	0.30	52.91	2.50	8165.14	16327.60	10.393
7.83	8.46	ø6/15	2	2	9(TG)	SLV	0.30	431.16	2.50	8165.14	16319.30	0.30	3165.01	2.50	8165.14	16319.30	2.580
7.83	8.46	ø6/15	2	2	15(TG)	SLV	0.30	3065.43	2.50	8165.14	16200.00	0.30	912.60	2.50	8165.14	16200.00	2.664

Dettagli costruttivi per la duttilità

- CC=9 α_e=0.2891 ω_{wd}=0.11902 μΦ_d=7.08596 v_d=0.06494 E_{sy,d}=0.0018995 b_c/b₀=1.33929 μΦ_c=14.0041
0.03441 >= 0.00012 [7.4.29]
- CC=9 α_e=0.2891 ω_{wd}=0.11902 μΦ_d=7.58384 v_d=0.06494 E_{sy,d}=0.0018995 b_c/b₀=1.33929 μΦ_c=14.0041
0.03441 >= 0.00259 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	Nu	MRdy	MRdz	α	ε _y	Sic.	
<m>					<cm>	<daN>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>			
0.70	46	SLU	I	1	7	70.00	-1406.32	-700.28	273.77	-1406.32	-6374.53	2508.19	153.28	25.25	9.112
0.70	46	SLU	I	1	7	70.00	-1406.32	-700.28	273.77	-1406.32	-6374.53	2508.19	153.28	25.25	9.112
4.38	46	SLU	I	1	7	438.00	-578.32	777.83	-281.48	-578.32	6474.21	-2239.44	334.69	25.48	8.281
4.68	46	SLU	I	2	7	0.00	-897.24	-259.19	-201.53	-897.24	-4799.92	-3820.91	225.00	24.62	18.681
4.68	46	SLU	I	2	7	0.00	-897.24	-259.19	-201.53	-897.24	-1938.84	-1516.25	210.94	32.50	7.494
8.46	46	SLU	I	2	7	378.00	-46.74	241.75	202.03	-46.74	1849.10	1538.35	33.75	33.03	7.635

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _{,y}	Vsdu _{,y}	ctgθ _{,y}	VRsd _{,y}	VRcd _{,y}	bw _{,z}	Vsdu _{,z}	ctgθ _{,z}	VRsd _{,z}	VRcd _{,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
0.70	1.31	ø6/10	2	2	46	SLU I	0.20	150.88	2.50	6821.90	15661.20	0.20	401.66	2.50	6821.90	15661.20	16.984
1.31	3.77	ø6/20	2	2	46	SLU I	0.20	150.88	2.50	3410.95	15639.80	0.20	401.66	2.50	3410.95	15639.80	8.492
3.77	4.38	ø6/15	2	2	46	SLU I	0.20	150.88	2.50	4547.93	15554.20	0.20	401.66	2.50	4547.93	15554.20	11.323
4.68	5.31	ø6/15	2	2	46	SLU I	0.20	106.76	2.50	4547.93	15582.30	0.20	132.52	2.50	4547.93	15582.30	34.318
5.31	7.83	ø6/20	2	2	46	SLU I	0.20	106.76	2.50	3410.95	15560.30	0.20	132.52	2.50	3410.95	15560.30	25.739
7.83	8.46	ø6/15	2	2	46	SLU I	0.20	106.76	2.50	4547.93	15472.30	0.20	132.52	2.50	4547.93	15472.30	34.318

Pilastrata n. 68

Nodi: -1 -92 -120

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	R <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	TP	Fyk <daN/cm²>	Fyd <daN/cm²>
9	Cir.			15.00	4.90	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
7	R	30.00	30.00		5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Verifiche zone a sezione circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	9	SLV	1	9	70.00	4238.60	2364.83	2364.83	685.92	685.92	4238.60	4740.16	1437.84	16.88	5.27	2.012
0.70	9	SLV	1	9	70.00	4238.60	2364.83	2364.83	685.92	685.92	4238.60	4740.16	1437.84	16.88	5.27	2.012
4.38	9	SLV	1	9	438.00	4888.91	-2637.47	-2637.47	-832.15	-832.15	4888.91	-4704.26	-1422.44	196.88	5.34	1.777

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
0.70	37	SLE R	1	9	70.00	-251.38	536.07	947.60	10.05	6.03	53.09	990.40
0.70	29	SLE Q	1	9	70.00	-1265.88	230.93	358.59	10.05	6.03	20.95	311.00
0.70	37	SLE R	1	9	70.00	-251.38	536.07	947.60	10.05	6.03	53.09	990.40
0.70	29	SLE Q	1	9	70.00	-1265.88	230.93	358.59	10.05	6.03	20.95	311.00
4.38	37	SLE R	1	9	438.00	398.94	-677.40	-851.03	10.05	6.03	53.37	1057.53
4.38	29	SLE Q	1	9	438.00	-615.57	-298.67	-375.19	10.05	6.03	23.59	410.02

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
0.70	29	SLE Q	1	9	70.00	-1265.88	358.59	230.93	44.00	75.01	0.50	16.00	163.39	2.01	94.73	311.00	0.09	0.03
0.70	42	SLE F	1	9	70.00	-843.18	468.48	274.55	44.00	75.01	0.50	16.00	168.80	2.01	101.54	445.22	0.13	0.04
0.70	29	SLE Q	1	9	70.00	-1265.88	358.59	230.93	44.00	75.01	0.50	16.00	163.39	2.01	94.73	311.00	0.09	0.03
0.70	42	SLE F	1	9	70.00	-843.18	468.48	274.55	44.00	75.01	0.50	16.00	168.80	2.01	101.54	445.22	0.13	0.04
4.38	29	SLE Q	1	9	438.00	-615.57	-375.19	-298.67	44.00	75.01	0.50	16.00	168.93	2.01	101.70	410.02	0.12	0.03
4.38	42	SLE F	1	9	438.00	-192.87	-457.28	-347.06	44.00	75.01	0.50	16.00	171.80	2.01	105.30	528.21	0.15	0.04

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/12	32	SLU	0.21	1070.49	2.50	6560.82	7355.94	6.129
0.70	1.31	ø6/12	7 (TG)	SLV	0.21	3198.87	2.50	6560.82	7433.34	2.051
0.70	1.31	ø6/12	1 (TG)	SLV	0.21	3321.92	2.50	6560.82	7795.27	1.975
1.31	3.77	ø6/18	32	SLU	0.21	994.06	2.50	4373.88	7344.59	4.400
1.31	3.77	ø6/18	7 (TG)	SLV	0.21	3198.87	2.50	4373.88	7433.34	1.367
1.31	3.77	ø6/18	1 (TG)	SLV	0.21	3321.92	2.50	4373.88	7795.27	1.317
3.77	4.38	ø6/12	32	SLU	0.21	710.14	2.50	6560.82	7344.59	9.239
3.77	4.38	ø6/12	7 (TG)	SLV	0.21	3198.87	2.50	6560.82	7433.34	2.051
3.77	4.38	ø6/12	1 (TG)	SLV	0.21	3321.92	2.50	6560.82	7795.27	1.975

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	46	SLU I	1	9	70.00	-1265.88	358.59	230.93	-1265.88	2494.99	1588.72	26.72	31.89	6.935
0.70	46	SLU I	1	9	70.00	-1265.88	358.59	230.93	-1265.88	2494.99	1588.72	26.72	31.89	6.935
4.38	46	SLU I	1	9	438.00	-615.57	-375.19	-298.67	-615.57	-2377.50	-1943.88	213.75	32.04	6.404

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
4.68	5.31	ø6/15	2	246	SLU I	0.20	73.06	2.50	4547.93	15605.30	0.20	107.81	2.50	4547.93	15605.30	42.183	
5.31	7.83	ø6/20	2	246	SLU I	0.20	73.06	2.50	3410.95	15583.30	0.20	107.81	2.50	3410.95	15583.30	31.637	
7.83	8.46	ø6/15	2	246	SLU I	0.20	73.06	2.50	4547.93	15495.30	0.20	107.81	2.50	4547.93	15495.30	42.183	

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/12	46	SLU I	0.13	245.91	2.50	695.32	3426.00	2.828
1.31	3.77	ø6/18	46	SLU I	0.13	245.91	2.50	475.51	3419.65	1.934
3.77	4.38	ø6/12	46	SLU I	0.13	245.91	2.50	713.26	3394.22	2.901

Verifiche zone a sezione non circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
4.68	9	SLV	2	7	0.00	-89.19	1844.13	1844.13	64.92	64.92	-89.19	5281.77	170.59	1.05	10.31	2.864
4.68	9	SLV	2	7	0.00	-89.19	1844.13	1844.13	64.92	64.92	-89.19	5281.77	170.59	1.05	10.31	2.864
8.46	9	SLV	2	7	378.00	761.31	-1745.22	-1745.22	402.75	402.75	761.31	-5184.16	1209.94	171.56	8.25	2.972

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
4.68	37	SLE R	2	7	0.00	-1205.52	-767.35	870.83	9.42	3.14	52.31	927.15
4.68	35	SLE R	2	7	0.00	-1728.86	-1202.21	435.62	6.28	6.28	50.40	945.41

Relazione di calcolo

4.68	29	SLE Q	2	7	0.00	-1045.82	-68.90	209.15	6.28	6.28	8.32	104.07
4.68	37	SLE R	2	7	0.00	-1205.52	-767.35	870.83	9.42	3.14	52.31	927.15
4.68	35	SLE R	2	7	0.00	-1728.86	-1202.21	435.62	6.28	6.28	50.40	945.41
4.68	29	SLE Q	2	7	0.00	-1045.82	-68.90	209.15	6.28	6.28	8.32	104.07
8.46	37	SLE R	2	7	378.00	-355.02	784.09	-649.02	9.42	3.14	46.03	874.22
8.46	35	SLE R	2	7	378.00	-878.36	1171.09	-320.24	6.28	6.28	45.38	941.50
8.46	29	SLE Q	2	7	378.00	-195.32	207.29	-198.39	9.42	3.14	13.02	238.47

Stato limite d'esercizio - Verifiche a fessurazione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	c	s	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	Wk
<m>					<cm>	<daN>	<daNm>	<daNm>	<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cmq>		<mm>
4.68	29	SLE Q	2	7	0.00	-1045.82	209.15	-68.90	44.00	192.00	0.50	20.00	141.46	3.14	83.98	104.07	0.03	0.01
4.68	25	SLE F	2	7	0.00	-1478.57	80.58	-598.99	44.00	192.00	0.50	20.00	188.01	3.14	157.10	365.81	0.11	0.03
4.68	29	SLE Q	2	7	0.00	-1045.82	209.15	-68.90	44.00	192.00	0.50	20.00	141.46	3.14	83.98	104.07	0.03	0.01
4.68	25	SLE F	2	7	0.00	-1478.57	80.58	-598.99	44.00	192.00	0.50	20.00	188.01	3.14	157.10	365.81	0.11	0.03
8.46	29	SLE Q	2	7	378.00	-195.32	-198.39	207.29	44.00	192.00	0.50	20.00	138.71	3.14	79.66	238.47	0.07	0.02
8.46	25	SLE F	2	7	378.00	-628.07	-86.64	665.50	44.00	192.00	0.50	20.00	197.27	3.14	171.64	485.02	0.14	0.05

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _{,y}	Vsdu _{,y}	ctgθ _{,y}	VRsd _{,y}	VRcd _{,y}	bw _{,z}	Vsdu _{,z}	ctgθ _{,z}	VRsd _{,z}	VRcd _{,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
4.68	5.31	ø6/15	2	2	32	SLU	0.30	618.28	2.50	8165.14	16366.50	0.30	853.03	2.50	8165.14	16366.50	9.572
4.68	5.31	ø6/15	2	2	17	SLU	0.30	963.01	2.50	8165.14	16517.10	0.30	55.00	2.50	8165.14	16517.10	8.479
4.68	5.31	ø6/15	2	2	1(TG)	SLV	0.30	193.81	2.50	8165.14	16305.00	0.30	3178.28	2.50	8165.14	16305.00	2.569
4.68	5.31	ø6/15	2	2	7(TG)	SLV	0.30	3104.91	2.50	8165.14	16198.20	0.30	565.86	2.50	8165.14	16198.20	2.630
5.31	7.83	ø6/20	2	2	32	SLU	0.30	618.28	2.50	6123.85	16343.00	0.30	764.85	2.50	6123.85	16343.00	8.007
5.31	7.83	ø6/20	2	2	17	SLU	0.30	963.01	2.50	6123.85	16493.60	0.30	55.00	2.50	6123.85	16493.60	6.359
5.31	7.83	ø6/20	2	2	1(TG)	SLV	0.30	193.81	2.50	6123.85	16305.00	0.30	3178.28	2.50	6123.85	16305.00	1.927
5.31	7.83	ø6/20	2	2	7(TG)	SLV	0.30	3104.91	2.50	6123.85	16198.20	0.30	565.86	2.50	6123.85	16198.20	1.972
7.83	8.46	ø6/15	2	2	32	SLU	0.30	618.28	2.50	8165.14	16249.20	0.30	412.14	2.50	8165.14	16249.20	13.206
7.83	8.46	ø6/15	2	2	17	SLU	0.30	963.01	2.50	8165.14	16399.80	0.30	55.00	2.50	8165.14	16399.80	8.479
7.83	8.46	ø6/15	2	2	1(TG)	SLV	0.30	193.81	2.50	8165.14	16305.00	0.30	3178.28	2.50	8165.14	16305.00	2.569
7.83	8.46	ø6/15	2	2	7(TG)	SLV	0.30	3104.91	2.50	8165.14	16198.20	0.30	565.86	2.50	8165.14	16198.20	2.630

Altre verifiche

Dettagli costruttivi per la duttilità

- CC=1 α_e=0.54631 ω_{nd}=0.10191 μΦ_d=7.08596 v_d=0.05866 E_{sy,d}=0.0018995 b_c/b₀=1.33929 μΦ_c=20.2539 0.05568 >= -0.00328 [7.4.29]
- CC=1 α_e=0.54631 ω_{nd}=0.10191 μΦ_d=7.58384 v_d=0.05866 E_{sy,d}=0.0018995 b_c/b₀=1.33929 μΦ_c=20.2539 0.05568 >= -0.00105 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	Nu	MRdy	MRdz	α	ε _y	Sic.
<m>					<cm>	<daN>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
4.68	46	SLU I	2	7	0.00	-1045.82	209.15	-68.90	-1045.82	2457.91	-781.14	344.53	38.69	11.708
4.68	46	SLU I	2	7	0.00	-1045.82	209.15	-68.90	-1045.82	2457.91	-781.14	344.53	38.69	11.708
8.46	46	SLU I	2	7	378.00	-195.32	-198.39	207.29	-195.32	-1679.21	1756.13	132.19	31.95	8.469

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _{,y}	Vsdu _{,y}	ctgθ _{,y}	VRsd _{,y}	VRcd _{,y}	bw _{,z}	Vsdu _{,z}	ctgθ _{,z}	VRsd _{,z}	VRcd _{,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
4.68	5.31	ø6/15	2	2	46	SLU I	0.20	73.06	2.50	4547.93	15605.30	0.20	107.81	2.50	4547.93	15605.30	42.183
5.31	7.83	ø6/20	2	2	46	SLU I	0.20	73.06	2.50	3410.95	15583.30	0.20	107.81	2.50	3410.95	15583.30	31.637
7.83	8.46	ø6/15	2	2	46	SLU I	0.20	73.06	2.50	4547.93	15495.30	0.20	107.81	2.50	4547.93	15495.30	42.183

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	CC	TCC	bw	Vsdu	ctgθ	VRsd	VRcd	Sic.
<m>	<m>				<m>	<daN>		<daN>	<daN>	
0.70	1.31	ø6/12	46	SLU I	0.13	245.91	2.50	695.32	3426.00	2.828
1.31	3.77	ø6/18	46	SLU I	0.13	245.91	2.50	475.51	3419.65	1.934
3.77	4.38	ø6/12	46	SLU I	0.13	245.91	2.50	713.26	3394.22	2.901

Pilastrata n. 69

Nodi: -13 -83 -128

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	R	Cf	Cls	Fck	Fctk	Fcd	Fcd (Inc)	Fctd	Tp	Fyk	Fyd
		<cm>	<cm>	<cm>	<cm>		<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>		<daN/cmq>	<daN/cmq>
	9Cir.			15.00	4.90	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
	7R	30.00	30.00		5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Verifiche zone a sezione circolare

Dati per verifiche di stabilità

Xg <m>	El <m>	l ₀ <m>	λ	λ*
---	1	4.68	62.40	60.00
---	1	4.68	62.40	60.00
---	1	4.68	62.40	60.00

Stato limite ultimo - Verifiche a flessione/pressoflessione - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy,s <daNm>	MRdz,s <daNm>	α <grad>	ε _y	Sic.
0.70	9	SLV	1	9	70.00	-14209.90	1893.08	1893.08	474.47	474.47	-14209.90	4815.05	1322.96	14.06	3.62	2.559
0.70	9	SLV	1	9	70.00	-14209.90	1893.08	1893.08	474.47	474.47	-14209.90	4815.05	1322.96	14.06	3.62	2.559
4.38	5	SLV	1	9	438.00	-13582.70	-682.21	-682.21	1775.42	1775.42	-13582.70	-1859.86	4747.73	111.09	3.48	2.681

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm q>	σ _f <daN/cm q>
0.70	37	SLE R	1	9	70.00	-12165.10	312.69	948.72	6.03	10.05	48.31	507.45
0.70	29	SLE Q	1	9	70.00	-12385.80	-36.59	325.23	0.00	16.09	22.97	293.88
0.70	37	SLE R	1	9	70.00	-12165.10	312.69	948.72	6.03	10.05	48.31	507.45
0.70	29	SLE Q	1	9	70.00	-12385.80	-36.59	325.23	0.00	16.09	22.97	293.88
4.38	24	SLE R	1	9	438.00	-12164.60	360.48	-331.28	0.00	16.09	27.59	338.72
4.38	21	SLE R	1	9	438.00	-11064.90	252.27	-375.87	0.00	16.09	25.41	307.96
4.38	29	SLE Q	1	9	438.00	-11735.50	410.44	-237.62	0.00	16.09	26.70	322.78

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/12	32	SLU	0.21	1366.58	2.50	6560.82	8576.41	4.801
0.70	1.31	ø6/12	5 (TG)	SLV	0.21	3460.43	2.50	6560.82	8084.71	1.896
0.70	1.31	ø6/12	5 (TG)	SLV	0.21	3560.03	2.50	6560.82	8344.81	1.843
1.31	3.77	ø6/18	32	SLU	0.21	1039.60	2.50	4373.88	8566.04	4.207
1.31	3.77	ø6/18	5 (TG)	SLV	0.21	3460.43	2.50	4373.88	8084.71	1.264
1.31	3.77	ø6/18	5 (TG)	SLV	0.21	3560.03	2.50	4373.88	8344.81	1.229
3.77	4.38	ø6/12	32	SLU	0.21	629.92	2.50	6560.82	8524.53	10.415
3.77	4.38	ø6/12	5 (TG)	SLV	0.21	3460.43	2.50	6560.82	8084.71	1.896
3.77	4.38	ø6/12	5 (TG)	SLV	0.21	3560.03	2.50	6560.82	8344.81	1.843

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy,s <daNm>	M'ydy,s <daNm>	MRdy <daNm>	MRdz,s <daNm>	M'ydz,s <daNm>	MRdz <daNm>	α <grad>	ε _r	Sic.
0.70	46(e)	SLU I	1	9	70.00	-12385.80	325.23	325.23	-36.59	289.83	-12385.80	685.48	685.48	2451.21	557.48	557.48	2143.15	39.38	23.37	2.028
0.70	46(e)	SLU I	1	9	70.00	-12385.80	325.23	325.23	-36.59	289.83	-12385.80	685.48	685.48	2451.21	557.48	557.48	2143.15	39.38	23.37	2.028
4.38	46(e)	SLU I	1	9	438.00	-11735.50	-237.62	-274.61	410.44	410.44	-11735.50	-503.26	-503.26	-1841.19	762.55	762.55	2801.90	123.75	23.97	1.854

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
4.68	5.31	ø6/15	2	246	SLU	I	0.20	498.09	2.50	4547.93	15584.10	0.20	30.49	2.50	4547.93	15584.10	9.131
5.31	7.83	ø6/20	2	246	SLU	I	0.20	498.09	2.50	3410.95	15562.10	0.20	30.49	2.50	3410.95	15562.10	6.848
7.83	8.46	ø6/15	2	246	SLU	I	0.20	498.09	2.50	4547.93	15474.20	0.20	30.49	2.50	4547.93	15474.20	9.131

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/12	46	SLU I	0.11	195.32	2.44	2696.19	2696.19	13.804
1.31	3.77	ø6/18	46	SLU I	0.11	195.32	2.50	340.44	2649.54	1.743
3.77	4.38	ø6/12	46	SLU I	0.11	195.32	2.50	515.17	2649.54	2.638

Verifiche zone a sezione non circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
4.68	17	SLU	2	7	0.00	-670.84	-459.02	-459.02	-3419.74	-3419.74	-670.84	-675.01	-5364.49	265.78	9.17	1.567
4.68	17	SLU	2	7	0.00	-670.84	-459.02	-459.02	-3419.74	-3419.74	-670.84	-675.01	-5364.49	265.78	9.17	1.567
8.46	17	SLU	2	7	378.00	434.81	268.78	268.78	2471.99	2471.99	434.81	585.59	5254.77	86.48	9.63	2.126

Stato limite d'esercizio - Verifiche tensionali

Data Pointe e esercizio					verifiche dimensionali								
Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>	
4.68	37	SLE	R	2	7	0.00	-725.42	-1862.48	879.21	9.42	3.14	85.85	1723.93
4.68	21	SLE	R	2	7	0.00	-580.40	-2357.33	-307.89	6.28	6.28	78.47	1851.15
4.68	29	SLE	Q	2	7	0.00	-909.38	-1235.00	-26.94	6.28	6.28	36.08	868.49
4.68	37	SLE	R	2	7	0.00	-725.42	-1862.48	879.21	9.42	3.14	85.85	1723.93

Relazione di calcolo

4.68	21	SLE R	2	7	0.00	-580.40	-2357.33	-307.89	6.28	6.28	78.47	1851.15
4.68	29	SLE Q	2	7	0.00	-909.38	-1235.00	-26.94	6.28	6.28	36.08	868.49
8.46	37	SLE R	2	7	378.00	125.08	1267.66	-535.59	9.42	3.14	56.20	1195.82
8.46	21	SLE R	2	7	378.00	270.10	1685.33	164.20	6.28	6.28	53.72	1356.42
8.46	29	SLE Q	2	7	378.00	-58.88	647.77	-142.21	6.28	6.28	23.76	541.01

Stato limite d'esercizio - Verifiche a fessurazione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	c	s	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	Wk
<m>					<cm>	<daN>	<daNm>	<daNm>	<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cmq>		<mm>
4.68	29	SLE Q	2	7	0.00	-909.38	-26.94	-1235.00	44.00	192.00	0.50	20.00	151.97	6.28	200.98	868.49	0.25	0.07
4.68	25	SLE F	2	7	0.00	-660.97	-150.73	-1727.34	44.00	192.00	0.50	20.00	147.52	6.28	186.98	1307.25	0.38	0.10
4.68	29	SLE Q	2	7	0.00	-909.38	-26.94	-1235.00	44.00	192.00	0.50	20.00	151.97	6.28	200.98	868.49	0.25	0.07
4.68	25	SLE F	2	7	0.00	-660.97	-150.73	-1727.34	44.00	192.00	0.50	20.00	147.52	6.28	186.98	1307.25	0.38	0.10
8.46	29	SLE Q	2	7	378.00	-58.88	-142.21	647.77	44.00	192.00	0.50	20.00	187.34	3.14	156.04	541.01	0.16	0.05
8.46	25	SLE F	2	7	378.00	189.53	-11.39	1097.96	44.00	192.00	0.98	20.00	219.21	6.28	210.42	846.63	0.25	0.09

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	b _{w,y}	Vsdu _y	ctgθ _y	VRsd _y	VRcd _y	b _{w,z}	Vsdu _z	ctgθ _z	VRsd _z	VRcd _z	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
4.68	5.31	ø6/15	2	2	32	SLU	0.30	1196.55	2.50	8165.14	16271.40	0.30	1570.47	2.50	8165.14	16271.40	5.199
4.68	5.31	ø6/15	2	2	17	SLU	0.30	1558.66	2.50	8165.14	16243.70	0.30	192.54	2.50	8165.14	16243.70	5.239
4.68	5.31	ø6/15	2	2	1 (TG)	SLV	0.30	2339.61	2.50	8165.14	16333.00	0.30	2316.53	2.50	8165.14	16333.00	3.490
4.68	5.31	ø6/15	2	2	7 (TG)	SLV	0.30	3119.86	2.50	8165.14	16184.50	0.30	393.02	2.50	8165.14	16184.50	2.617
5.31	7.83	ø6/20	2	2	32	SLU	0.30	1196.55	2.50	6123.85	16248.00	0.30	1232.39	2.50	6123.85	16248.00	4.969
5.31	7.83	ø6/20	2	2	17	SLU	0.30	1558.66	2.50	6123.85	16220.30	0.30	192.54	2.50	6123.85	16220.30	3.929
5.31	7.83	ø6/20	2	2	1 (TG)	SLV	0.30	2339.61	2.50	6123.85	16333.00	0.30	2316.53	2.50	6123.85	16333.00	2.617
5.31	7.83	ø6/20	2	2	7 (TG)	SLV	0.30	3119.86	2.50	6123.85	16184.50	0.30	393.02	2.50	6123.85	16184.50	1.963
7.83	8.46	ø6/15	2	2	32	SLU	0.30	1196.55	2.50	8165.14	16158.40	0.30	458.03	2.50	8165.14	16158.40	6.824
7.83	8.46	ø6/15	2	2	17	SLU	0.30	1558.66	2.50	8165.14	16158.40	0.30	192.54	2.50	8165.14	16158.40	5.239
7.83	8.46	ø6/15	2	2	1 (TG)	SLV	0.30	2339.61	2.50	8165.14	16333.00	0.30	2316.53	2.50	8165.14	16333.00	3.490
7.83	8.46	ø6/15	2	2	7 (TG)	SLV	0.30	3119.86	2.50	8165.14	16184.50	0.30	393.02	2.50	8165.14	16184.50	2.617

Altre verifiche

Dettagli costruttivi per la duttilità

- CC=1 α_e=0.54631 ω_{md}=0.10191 μΦ_d=7.08596 ν_d=0.12452 E_{sy,d}=0.0018995 b_c/b₀=1.33929 μΦ_c=9.54107 0.05568 >= 0.03234 [7.4.29]
- CC=1 α_e=0.54631 ω_{md}=0.10191 μΦ_d=7.58384 ν_d=0.12452 E_{sy,d}=0.0018995 b_c/b₀=1.33929 μΦ_c=9.54107 0.05568 >= 0.03707 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	Nu	MRdy	MRdz	α	ε _y	Sic.
<m>					<cm>	<daN>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
4.68	46	SLU I	2	7	0.00	-909.38	-26.94	-1235.00	-909.38	-69.47	-2532.79	268.59	66.27	2.051
4.68	46	SLU I	2	7	0.00	-909.38	-26.94	-1235.00	-909.38	-69.47	-2532.79	268.59	66.27	2.051
8.46	46	SLU I	2	7	378.00	-58.88	-142.21	647.77	-58.88	-527.63	2412.04	99.84	47.14	3.723

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	b _{w,y}	Vsdu _y	ctgθ _y	VRsd _y	VRcd _y	b _{w,z}	Vsdu _z	ctgθ _z	VRsd _z	VRcd _z	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
4.68	5.31	ø6/15	2	2	46	SLU I	0.20	498.09	2.50	4547.93	15584.10	0.20	30.49	2.50	4547.93	15584.10	9.131
5.31	7.83	ø6/20	2	2	46	SLU I	0.20	498.09	2.50	3410.95	15562.10	0.20	30.49	2.50	3410.95	15562.10	6.848
7.83	8.46	ø6/15	2	2	46	SLU I	0.20	498.09	2.50	4547.93	15474.20	0.20	30.49	2.50	4547.93	15474.20	9.131

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	CC	TCC	b _w	Vsdu	ctgθ	VRsd	VRcd	Sic.
<m>	<m>				<m>	<daN>		<daN>	<daN>	
0.70	1.31	ø6/12	46	SLU I	0.11	195.32	2.44	2696.19	2696.19	13.804
1.31	3.77	ø6/18	46	SLU I	0.11	195.32	2.50	340.44	2649.54	1.743
3.77	4.38	ø6/12	46	SLU I	0.11	195.32	2.50	515.17	2649.54	2.638

Pilastrata n. 70

Nodi: -14 -82 -129

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	R	Cf	Cls	Fck	Fctk	Fcd	Fcd (Inc)	Fctd	TP	Fyk	Fyd
		<cm>	<cm>	<cm>	<cm>		<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>		<daN/cmq>	<daN/cmq>
	9Cir.			15.00	4.90	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
	7R	30.00	30.00		5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Verifiche zone a sezione circolare

Dati per verifiche di stabilità

Relazione di calcolo

Xg <m>	El <m>	l ₀ <m>	λ	λ*
---	1	4.68	62.40	58.29
---	1	4.68	62.40	58.29
---	1	4.68	62.40	58.29

Stato limite ultimo - Verifiche a flessione/pressoflessione - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy,s <daNm>	MRdz,s <daNm>	α <grad>	ε _y	Sic.
0.70	9	SLV	1	9	70.00	-13329.60	1564.06	1564.06	845.47	845.47	-13329.60	4506.53	2309.18	28.12	3.67	2.848
0.70	9	SLV	1	9	70.00	-13329.60	1564.06	1564.06	845.47	845.47	-13329.60	4506.53	2309.18	28.12	3.67	2.848
4.38	13	SLV	1	9	438.00	-12370.20	-340.44	-340.44	-2195.59	-2195.59	-12370.20	-832.22	-4911.37	261.56	3.90	2.242

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _g <daN/cmq>
0.70	37	SLE R	1	9	70.00	-12307.60	670.17	786.95	6.03	10.05	49.84	540.49
0.70	29	SLE Q	1	9	70.00	-12198.10	257.58	222.34	0.00	16.09	23.18	295.02
0.70	37	SLE R	1	9	70.00	-12307.60	670.17	786.95	6.03	10.05	49.84	540.49
0.70	29	SLE Q	1	9	70.00	-12198.10	257.58	222.34	0.00	16.09	23.18	295.02
4.38	37	SLE R	1	9	438.00	-11657.30	-1156.05	450.99	8.04	8.04	59.93	583.99
4.38	29	SLE Q	1	9	438.00	-11547.80	-683.94	-107.78	4.02	12.06	34.23	396.37

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/12	32	SLU	0.21	1451.66	2.50	6560.82	8598.72	4.520
0.70	1.31	ø6/12	1 (TG)	SLV	0.21	3586.01	2.50	6560.82	8111.64	1.830
1.31	3.77	ø6/18	32	SLU	0.21	1138.06	2.50	4373.88	8588.35	3.843
1.31	3.77	ø6/18	1 (TG)	SLV	0.21	3586.01	2.50	4373.88	8111.64	1.220
3.77	4.38	ø6/12	32	SLU	0.21	1242.33	2.50	6560.82	8546.85	5.281
3.77	4.38	ø6/12	1 (TG)	SLV	0.21	3586.01	2.50	6560.82	8111.64	1.830

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy,s <daNm>	M'ydy,s <daNm>	MRdy <daNm>	MRdz,s <daNm>	M'ydz,s <daNm>	MRdz <daNm>	α <grad>	ε _r	Sic.
0.70	46(e)	SLU I	1	9	70.00	-12198.10	222.34	285.44	257.58	285.44	-12198.10	638.50	638.50	2309.72	638.50	638.50	2309.72	45.00	23.81	2.239
0.70	46(e)	SLU I	1	9	70.00	-12198.10	222.34	285.44	257.58	285.44	-12198.10	638.50	638.50	2309.72	638.50	638.50	2309.72	45.00	23.81	2.239
4.38	46(e)	SLU I	1	9	438.00	-11547.80	-107.78	-270.22	-683.94	-683.94	-11547.80	-354.31	-354.31	-1273.82	-852.88	-852.88	-3070.27	247.50	25.29	1.257

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
4.68	5.31	ø6/15	2	246	SLU	I	0.20	262.83	2.50	4547.93	15609.70	0.20	36.41	2.50	4547.93	15609.70	17.304
5.31	7.83	ø6/20	2	246	SLU	I	0.20	262.83	2.50	3410.95	15587.70	0.20	36.41	2.50	3410.95	15587.70	12.978
7.83	8.46	ø6/15	2	246	SLU	I	0.20	262.83	2.50	4547.93	15499.80	0.20	36.41	2.50	4547.93	15499.80	17.304

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/12	46	SLU I	0.11	271.12	2.44	2696.19	2696.19	9.945
1.31	3.77	ø6/18	46	SLU I	0.11	271.12	2.50	291.56	2649.54	1.075
3.77	4.38	ø6/12	46	SLU I	0.11	271.12	2.44	2696.19	2696.19	9.945

Verifiche zone a sezione non circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
4.68	13	SLV	2	7	0.00	-503.36	-238.28	-238.28	1649.91	1649.91	-503.36	-857.70	5337.68	95.62	8.77	3.243
4.68	13	SLV	2	7	0.00	-503.36	-238.28	-238.28	1649.91	1649.91	-503.36	-857.70	5337.68	95.62	8.77	3.243
8.46	9	SLV	2	7	378.00	1052.44	-1706.19	-1706.19	-721.20	-721.20	1052.44	-5042.16	-2062.32	196.88	6.65	2.941

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>	
4.68	37	SLE	R	2	7	0.00	-1009.72	754.81	959.02	9.42	3.14	54.71	995.13
4.68	29	SLE	Q	2	7	0.00	-1074.32	771.90	-167.78	6.28	6.28	28.32	561.98
4.68	37	SLE	R	2	7	0.00	-1009.72	754.81	959.02	9.42	3.14	54.71	995.13
4.68	29	SLE	Q	2	7	0.00	-1074.32	771.90	-167.78	6.28	6.28	28.32	561.98
8.46	37	SLE	R	2	7	378.00	-159.22	-343.00	-750.26	9.42	3.14	34.20	700.37
8.46	29	SLE	Q	2	7	378.00	-223.82	-221.60	-30.15	6.28	6.28	7.46	160.85

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X	N	My	Mz	c	s	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	Wk
-----------	----	-----	----	------	---	---	----	----	---	---	----------------	-----------------	-----------------	----------------	--------------------	----------------	-----------------	----

Relazione di calcolo

<m>					<cm>	<daN>	<daNm>	<daNm>	<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cmq>		<mm>
4.68	29	SLE Q	2	7	0.00	-1074.32	-167.78	771.90	44.00	192.00	0.50	20.00	180.63	3.14	145.51	561.98	0.16	0.05
4.68	42	SLE F	2	7	0.00	-1000.76	91.30	831.90	44.00	192.00	0.50	20.00	199.24	3.14	174.73	582.41	0.17	0.06
4.68	29	SLE Q	2	7	0.00	-1074.32	-167.78	771.90	44.00	192.00	0.50	20.00	180.63	3.14	145.51	561.98	0.16	0.05
4.68	42	SLE F	2	7	0.00	-1000.76	91.30	831.90	44.00	192.00	0.50	20.00	199.24	3.14	174.73	582.41	0.17	0.06
8.46	29	SLE Q	2	7	378.00	-223.82	-30.15	-221.60	44.00	192.00	0.50	20.00	195.97	3.14	169.59	160.85	0.05	0.02
8.46	42	SLE F	2	7	378.00	-150.26	-206.31	-297.66	44.00	192.00	0.50	20.00	142.78	3.14	86.05	307.14	0.09	0.02

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _{,y}	Vsdu _{,y}	ctgθ _{,y}	VRsd _{,y}	VRcd _{,y}	bw _{,z}	Vsdu _{,z}	ctgθ _{,z}	VRsd _{,z}	VRcd _{,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
4.68	5.31	ø6/15	2	2	32	SLU	0.30	410.69	2.50	8165.14	16325.40	0.30	1849.88	2.50	8165.14	16325.40	4.414
4.68	5.31	ø6/15	2	2	1 (TG)	SLV	0.30	1623.22	2.50	8165.14	16349.30	0.30	2950.43	2.50	8165.14	16349.30	2.767
4.68	5.31	ø6/15	2	2	7 (TG)	SLV	0.30	3060.02	2.50	8165.14	16219.40	0.30	977.26	2.50	8165.14	16219.40	2.668
5.31	7.83	ø6/20	2	2	32	SLU	0.30	410.69	2.50	6123.85	16301.90	0.30	1460.60	2.50	6123.85	16301.90	4.193
5.31	7.83	ø6/20	2	2	1 (TG)	SLV	0.30	1623.22	2.50	6123.85	16349.30	0.30	2950.43	2.50	6123.85	16349.30	2.076
5.31	7.83	ø6/20	2	2	7 (TG)	SLV	0.30	3060.02	2.50	6123.85	16219.40	0.30	977.26	2.50	6123.85	16219.40	2.001
7.83	8.46	ø6/15	2	2	32	SLU	0.30	410.69	2.50	8165.14	16208.20	0.30	485.82	2.50	8165.14	16208.20	16.807
7.83	8.46	ø6/15	2	2	1 (TG)	SLV	0.30	1623.22	2.50	8165.14	16349.30	0.30	2950.43	2.50	8165.14	16349.30	2.767
7.83	8.46	ø6/15	2	2	7 (TG)	SLV	0.30	3060.02	2.50	8165.14	16219.40	0.30	977.26	2.50	8165.14	16219.40	2.668

Altre verifiche

Dettagli costruttivi per la duttilità

- CC=1 α_e=0.54631 ω_{nd}=0.10191 μΦ_d=7.08596 v_d=0.11728 E_{sy,d}=0.0018995 b_c/b₀=1.33929 μΦ_c=10.1302
0.05568 >= 0.02843 [7.4.29]
- CC=1 α_e=0.54631 ω_{nd}=0.10191 μΦ_d=7.58384 v_d=0.11728 E_{sy,d}=0.0018995 b_c/b₀=1.33929 μΦ_c=10.1302
0.05568 >= 0.03288 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	Nu	MRdy	MRdz	α	ε _y	Sic.
<m>					<cm>	<daN>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
4.68	46	SLU I	2	7	0.00	-1074.32	-167.78	771.90	-1074.32	-553.61	2496.62	101.25	43.92	3.238
4.68	46	SLU I	2	7	0.00	-1074.32	-167.78	771.90	-1074.32	-553.61	2496.62	101.25	43.92	3.238
8.46	46	SLU I	2	7	378.00	-223.82	-30.15	-221.60	-223.82	-369.65	-2444.14	262.97	52.44	11.050

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _{,y}	Vsdu _{,y}	ctgθ _{,y}	VRsd _{,y}	VRcd _{,y}	bw _{,z}	Vsdu _{,z}	ctgθ _{,z}	VRsd _{,z}	VRcd _{,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
4.68	5.31	ø6/15	2	2	46	SLU I	0.20	262.83	2.50	4547.93	15609.70	0.20	36.41	2.50	4547.93	15609.70	17.304
5.31	7.83	ø6/20	2	2	46	SLU I	0.20	262.83	2.50	3410.95	15587.70	0.20	36.41	2.50	3410.95	15587.70	12.978
7.83	8.46	ø6/15	2	2	46	SLU I	0.20	262.83	2.50	4547.93	15499.80	0.20	36.41	2.50	4547.93	15499.80	17.304

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	CC	TCC	bw	Vsdu	ctgθ	VRsd	VRcd	Sic.
<m>	<m>				<m>	<daN>		<daN>	<daN>	
0.70	1.31	ø6/12	46	SLU I	0.11	271.12	2.44	2696.19	2696.19	9.945
1.31	3.77	ø6/18	46	SLU I	0.11	271.12	2.50	291.56	2649.54	1.075
3.77	4.38	ø6/12	46	SLU I	0.11	271.12	2.44	2696.19	2696.19	9.945

Pilastrata n. 71

Nodi: -1542 -1441 -1440

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	R	Cf	Cls	Fck	Fctk	Fcd	Fcd (Inc)	Fctd	TP	Fyk	Fyd
		<cm>	<cm>	<cm>	<cm>		<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>		<daN/cmq>	<daN/cmq>
9	Cir.			15.00	4.90	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
7	R	30.00	30.00		5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Verifiche zone a sezione circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	My ver.	Mz	Mz ver.	Nu	MRdy	MRdz	α	ε _y	Sic.
<m>					<cm>	<daN>	<daNm>	<daNm>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
0.70	9	SLV	1	9	70.00	-7406.78	1609.73	1609.73	721.77	721.77	-7406.78	5123.43	2382.44	25.31	4.10	3.202
0.70	9	SLV	1	9	70.00	-7406.78	1609.73	1609.73	721.77	721.77	-7406.78	5123.43	2382.44	25.31	4.10	3.202
4.13	13	SLV	1	9	413.00	-7185.84	290.25	290.25	-1457.73	-1457.73	-7185.84	1055.75	-5513.61	279.84	4.28	3.771

Stato limite d'esercizio - Verifiche tensionali

Xg	CC	TCC	El	Sez.	X	N	Mz	My	AfT	AfC	σ _c	σ _f
<m>					<cm>	<daN>	<daNm>	<daNm>	<cmq>	<cmq>	<daN/cmq>	<daN/cmq>
0.70	37	SLE R	1	9	70.00	-8805.35	526.60	576.26	6.03	10.05	37.51	404.02
0.70	29	SLE Q	1	9	70.00	-8539.59	82.80	126.07	0.00	16.09	13.63	180.14

Relazione di calcolo

0.70	37	SLE R	1	9	70.00	-8805.35	526.60	576.26	6.03	10.05	37.51	404.02
0.70	29	SLE Q	1	9	70.00	-8539.59	82.80	126.07	0.00	16.09	13.63	180.14
4.13	37	SLE R	1	9	413.00	-8199.22	-484.62	45.77	2.01	14.07	24.23	280.88
4.13	29	SLE Q	1	9	413.00	-7933.46	-4.72	17.32	0.00	16.09	9.01	132.15

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/12	32	SLU	0.21	751.74	2.50	6560.82	8231.29	8.728
0.70	1.31	ø6/12	1 (TG)	SLV	0.21	3423.73	2.50	6560.82	7848.79	1.916
0.70	1.31	ø6/12	9 (TG)	SLV	0.21	3442.48	2.50	6560.82	8012.22	1.906
1.31	3.77	ø6/18	32	SLU	0.21	647.39	2.50	4373.88	8220.91	6.756
1.31	3.77	ø6/18	1 (TG)	SLV	0.21	3423.73	2.50	4373.88	7848.79	1.278
1.31	3.77	ø6/18	9 (TG)	SLV	0.21	3442.48	2.50	4373.88	8012.22	1.271
3.77	4.38	ø6/12	32	SLU	0.21	491.44	2.50	6560.82	8179.41	13.350
3.77	4.38	ø6/12	1 (TG)	SLV	0.21	3423.73	2.50	6560.82	7848.79	1.916
3.77	4.38	ø6/12	9 (TG)	SLV	0.21	3442.48	2.50	6560.82	8012.22	1.906

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	46(e)	SLU I	1	9	70.00	-8539.59	126.07	82.80	-33593.20	2245.08	2245.08	45.00	26.16	3.934
0.70	46(e)	SLU I	1	9	70.00	-8539.59	126.07	82.80	-33593.20	2245.08	2245.08	45.00	26.16	3.934
4.13	46(e)	SLU I	1	9	413.00	-7933.46	17.32	-4.72	-33593.20	2387.74	-2387.74	315.00	26.16	4.234

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
4.68	5.31	ø6/15	2	246	SLU I	0.20	278.78	2.50	4547.93	15717.20	0.20	109.08	2.50	4547.93	15717.20	16.314	
5.31	7.83	ø6/20	2	246	SLU I	0.20	278.78	2.50	3410.95	15695.20	0.20	109.08	2.50	3410.95	15695.20	12.235	
7.83	8.46	ø6/15	2	246	SLU I	0.20	278.78	2.50	4547.93	15607.20	0.20	109.08	2.50	4547.93	15607.20	16.314	

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	CC	TCC	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Sic.
0.70	1.31	ø6/12	46	SLU I	0.13	40.70	2.50	674.29	3852.55	16.567
1.31	3.77	ø6/18	46	SLU I	0.13	40.70	2.50	449.52	3846.19	11.045
3.77	4.38	ø6/12	46	SLU I	0.13	40.70	2.50	593.83	3820.77	14.591

Verifiche zone a sezione non circolare

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
4.68	5	SLV	2	7	0.00	-1578.74	-319.17	-319.17	-1769.01	-1769.01	-1578.74	-1004.69	-5427.10	262.97	8.17	3.070
4.68	5	SLV	2	7	0.00	-1578.74	-319.17	-319.17	-1769.01	-1769.01	-1578.74	-1004.69	-5427.10	262.97	8.17	3.070
8.46	5	SLV	2	7	378.00	-728.24	29.37	29.37	1622.36	1622.36	-728.24	81.27	5344.43	89.30	10.33	3.294

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
4.68	35	SLE R	2	7	0.00	-2191.66	-630.83	533.56	9.42	3.14	36.36	545.95
4.68	21	SLE R	2	7	0.00	-1858.26	-841.28	319.58	6.28	6.28	35.65	615.37
4.68	29	SLE Q	2	7	0.00	-1767.03	-566.53	-252.18	6.28	6.28	25.11	389.76
4.68	35	SLE R	2	7	0.00	-2191.66	-630.83	533.56	9.42	3.14	36.36	545.95
4.68	21	SLE R	2	7	0.00	-1858.26	-841.28	319.58	6.28	6.28	35.65	615.37
4.68	29	SLE Q	2	7	0.00	-1767.03	-566.53	-252.18	6.28	6.28	25.11	389.76
8.46	23	SLE R	2	7	378.00	-1462.24	910.58	235.49	6.28	6.28	34.76	662.83
8.46	29	SLE Q	2	7	378.00	-916.52	487.26	160.13	6.28	6.28	19.81	358.38

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	C <mm>	S <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
4.68	29	SLE Q	2	7	0.00	-1767.03	-252.18	-566.53	44.00	192.00	0.50	20.00	143.13	3.14	86.60	389.76	0.11	0.03
4.68	25	SLE F	2	7	0.00	-1634.88	53.94	-624.95	44.00	192.00	0.50	20.00	195.26	3.14	168.49	363.48	0.11	0.04
4.68	29	SLE Q	2	7	0.00	-1767.03	-252.18	-566.53	44.00	192.00	0.50	20.00	143.13	3.14	86.60	389.76	0.11	0.03
4.68	25	SLE F	2	7	0.00	-1634.88	53.94	-624.95	44.00	192.00	0.50	20.00	195.26	3.14	168.49	363.48	0.11	0.04
8.46	29	SLE Q	2	7	378.00	-916.52	160.13	487.26	44.00	192.00	0.50	20.00	159.90	3.14	112.94	358.38	0.10	0.03
8.46	27	SLE F	2	7	378.00	-1056.03	208.60	558.60	44.00	192.00	0.50	20.00	154.58	3.14	104.58	421.39	0.12	0.03

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
4.68	5.31	ø6/15	2	232		SLU	0.30	339.37	2.50	8165.14	16603.90	0.30	530.21	2.50	8165.14	16603.90	15.400
4.68	5.31	ø6/15	2	219		SLU	0.30	691.23	2.50	8165.14	16564.40	0.30	65.83	2.50	8165.14	16564.40	11.813

Relazione di calcolo

4.68	5.31	ø6/15	2	211 (TG)	SLV	0.30	2551.44	2.50	8165.14	16215.60	0.30	2402.08	2.50	8165.14	16215.60	3.200
4.68	5.31	ø6/15	2	215 (TG)	SLV	0.30	3164.37	2.50	8165.14	16296.70	0.30	442.13	2.50	8165.14	16296.70	2.580
5.31	7.83	ø6/20	2	232	SLU	0.30	339.37	2.50	6123.85	16580.40	0.30	390.83	2.50	6123.85	16580.40	15.669
5.31	7.83	ø6/20	2	219	SLU	0.30	691.23	2.50	6123.85	16540.90	0.30	65.83	2.50	6123.85	16540.90	8.859
5.31	7.83	ø6/20	2	211 (TG)	SLV	0.30	2551.44	2.50	6123.85	16215.60	0.30	2402.08	2.50	6123.85	16215.60	2.400
5.31	7.83	ø6/20	2	215 (TG)	SLV	0.30	3164.37	2.50	6123.85	16296.70	0.30	442.13	2.50	6123.85	16296.70	1.935
7.83	8.46	ø6/15	2	232	SLU	0.30	339.37	2.50	8165.14	16486.60	0.30	306.06	2.50	8165.14	16486.60	24.060
7.83	8.46	ø6/15	2	219	SLU	0.30	691.23	2.50	8165.14	16447.20	0.30	65.83	2.50	8165.14	16447.20	11.813
7.83	8.46	ø6/15	2	211 (TG)	SLV	0.30	2551.44	2.50	8165.14	16215.60	0.30	2402.08	2.50	8165.14	16215.60	3.200
7.83	8.46	ø6/15	2	215 (TG)	SLV	0.30	3164.37	2.50	8165.14	16296.70	0.30	442.13	2.50	8165.14	16296.70	2.580

Altre verifiche

Dettagli costruttivi per la duttilità

- CC=1 $\alpha_e=0.54631$ $\omega_{Nd}=0.10191$ $\mu\Phi_d=7.08596$ $v_d=0.083803$ $E_{sy/d}=0.0018995$ $b_c/b_0=1.33929$ $\mu\Phi_c=14.1771$
0.05568 >= 0.01032 [7.4.29]
- CC=1 $\alpha_e=0.54631$ $\omega_{Nd}=0.10191$ $\mu\Phi_d=7.58384$ $v_d=0.083803$ $E_{sy/d}=0.0018995$ $b_c/b_0=1.33929$ $\mu\Phi_c=14.1771$
0.05568 >= 0.01351 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	Nu	MRdy	MRdz	α	ϵ_y	Sic.
<m>					<cm>	<daN>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
4.68	46	SLU	I	2	7	0.00	-1767.03	-252.18	-566.53	-1767.03	-1062.72	-2454.43	248.91	4.311
4.68	46	SLU	I	2	7	0.00	-1767.03	-252.18	-566.53	-1767.03	-1062.72	-2454.43	248.91	4.311
8.46	46	SLU	I	2	7	378.00	-916.52	160.13	487.26	-916.52	786.07	2446.36	74.53	5.012

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _{,y}	Vsdu _{,y}	ctgθ _{,y}	VRsd _{,y}	VRcd _{,y}	bw _{,z}	Vsdu _{,z}	ctgθ _{,z}	VRsd _{,z}	VRcd _{,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
4.68	5.31	ø6/15	2	246	SLU	I	0.20	278.78	2.50	4547.93	15717.20	0.20	109.08	2.50	4547.93	15717.20	16.314
5.31	7.83	ø6/20	2	246	SLU	I	0.20	278.78	2.50	3410.95	15695.20	0.20	109.08	2.50	3410.95	15695.20	12.235
7.83	8.46	ø6/15	2	246	SLU	I	0.20	278.78	2.50	4547.93	15607.20	0.20	109.08	2.50	4547.93	15607.20	16.314

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	CC	TCC	bw	Vsdu	ctgθ	VRsd	VRcd	Sic.
<m>	<m>				<m>	<daN>		<daN>	<daN>	
0.70	1.31	ø6/12	46	SLU I	0.13	40.70	2.50	674.29	3852.55	16.567
1.31	3.77	ø6/18	46	SLU I	0.13	40.70	2.50	449.52	3846.19	11.045
3.77	4.38	ø6/12	46	SLU I	0.13	40.70	2.50	593.83	3820.77	14.591

Pilastrata n. 72

Nodi: -1613 -85 -126

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	Cf	Cls	Fck	Fctk	Fcd	Fcd (Inc)	Fctd	Tp	Fyk	Fyd
		<cm>	<cm>	<cm>		<daN/cm²>	<daN/cm²>	<daN/cm²>	<daN/cm²>	<daN/cm²>		<daN/cm²>	<daN/cm²>
7R		30.00	30.00	5.30	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	My ver.	Mz	Mz ver.	Nu	MRdy	MRdz	α	ϵ_y	Sic.
<m>					<cm>	<daN>	<daNm>	<daNm>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
0.70	1		SLV	1	7	70.00	-12711.30	3551.96	3551.96	-872.31	-12711.30	8311.90	-1888.96	345.94	4.60	2.331
0.70	1		SLV	1	7	70.00	-12711.30	3551.96	3551.96	-872.31	-12711.30	8311.90	-1888.96	345.94	4.60	2.331
4.38	1		SLV	1	7	438.00	-11883.30	-4898.85	-4898.85	588.51	-11883.30	-8358.36	890.56	174.38	5.86	1.704
4.68	32(e)		SLU	2	7	0.00	-1105.65	0.00	22.11	3483.66	-1105.65	0.00	7402.07	90.00	8.80	2.125
4.68	32(e)		SLU	2	7	0.00	-1105.65	0.00	22.11	3483.66	-1105.65	0.00	5422.16	90.00	10.73	1.556

Stato limite d'esercizio - Verifiche tensionali

Xg	CC	TCC	El	Sez.	X	N	Mz	My	AfT	AfC	σ_c	σ_s
<m>					<cm>	<daN>	<daNm>	<daNm>	<cmq>	<cmq>	<daN/cm²>	<daN/cm²>
0.70	37	SLE	R	1	7	70.00	-14680.20	363.27	1219.26	4.52	13.57	453.21
0.70	29	SLE	Q	1	7	70.00	-14529.90	-80.21	275.51	0.00	18.10	240.88
0.70	37	SLE	R	1	7	70.00	-14680.20	363.27	1219.26	4.52	13.57	453.21
0.70	29	SLE	Q	1	7	70.00	-14529.90	-80.21	275.51	0.00	18.10	240.88
4.38	37	SLE	R	1	7	438.00	-13852.20	701.79	-2138.13	9.05	9.05	702.43
4.38	29	SLE	Q	1	7	438.00	-13701.90	-52.79	-1057.05	9.05	9.05	353.15
4.68	37	SLE	R	2	7	0.00	-850.50	2322.44	0.00	9.05	9.05	1206.48
4.68	29	SLE	Q	2	7	0.00	-850.50	0.00	0.00	0.00	18.10	10.89
4.68	37	SLE	R	2	7	0.00	-850.50	2322.44	0.00	6.28	6.28	1681.86
4.68	29	SLE	Q	2	7	0.00	-850.50	0.00	0.00	0.00	12.57	11.72
8.46	21	SLE	R	2	7	378.00	0.00	-0.00	0.00	0.00	0.00	0.00
8.46	29	SLE	Q	2	7	378.00	0.00	-0.00	0.00	0.00	0.00	0.00

Stato limite d'esercizio - Verifiche a fessurazione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	c	s	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	Wk
<m>					<cm>	<daN>	<daNm>	<daNm>	<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cmq>		<mm>
4.68	42	SLE F	2	7	0.00	-850.50	0.00	464.49	44.00	188.00	0.50	24.00	137.98	9.05	188.42	204.78	0.06	0.01
4.68	42	SLE F	2	7	0.00	-850.50	0.00	464.49	44.00	192.00	0.50	20.00	151.07	6.28	198.14	283.44	0.08	0.02

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _{,y}	Vsdu _{,y}	ctgθ _{,y}	VRsd _{,y}	VRcd _{,y}	bw _{,z}	Vsdu _{,z}	ctgθ _{,z}	VRsd _{,z}	VRcd _{,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
0.70	1.31	ø6/10	2	2	32	SLU	0.30	766.30	2.50	12247.70	18731.40	0.30	1343.48	2.50	12247.70	18731.40	9.116
0.70	1.31	ø6/10	2	2	1 (TG)	SLV	0.30	812.44	2.50	12247.70	17670.40	0.30	5073.12	2.50	12247.70	17670.40	2.414
0.70	1.31	ø6/10	2	2	1 (TG)	SLV	0.30	669.22	2.50	12247.70	18121.50	0.30	5190.89	2.50	12247.70	18121.50	2.359
0.70	1.31	ø6/10	2	2	7 (TG)	SLV	0.30	4496.51	2.50	12247.70	17858.60	0.30	2062.26	2.50	12247.70	17858.60	2.724
1.31	3.77	ø6/25	2	2	32	SLU	0.30	729.07	2.50	4899.08	18708.50	0.30	1343.48	2.50	4899.08	18708.50	3.647
1.31	3.77	ø6/25	2	2	1 (TG)	SLV	0.30	812.44	2.50	4899.08	17670.40						6.030
1.31	3.77	ø6/25	2	2	1 (TG)	SND						0.30	3583.49	2.50	4899.08	18373.30	1.367
1.31	3.77	ø6/25	2	2	7 (TG)	SLV	0.30	4496.51	2.50	4899.08	17858.60	0.30	2062.26	2.50	4899.08	17858.60	1.090
3.77	4.38	ø6/15	2	2	32	SLU	0.30	1028.14	2.50	8165.14	18617.20	0.30	1343.48	2.50	8165.14	18617.20	6.078
3.77	4.38	ø6/15	2	2	1 (TG)	SLV	0.30	812.44	2.50	8165.14	17670.40	0.30	5073.12	2.50	8165.14	17670.40	1.609
3.77	4.38	ø6/15	2	2	1 (TG)	SLV	0.30	669.22	2.50	8165.14	18121.50	0.30	5190.89	2.50	8165.14	18121.50	1.573
3.77	4.38	ø6/15	2	2	7 (TG)	SLV	0.30	4496.51	2.50	8165.14	17858.60	0.30	2062.26	2.50	8165.14	17858.60	1.816
4.68	5.31	ø6/15	2	2	32	SLU	0.30	1843.20	2.50	8165.14	16299.10	0.30	0.00	2.50	8165.14	16299.10	4.430
4.68	5.31	ø6/15	2	2	1 (TG)	SLV	0.30	1269.52	2.50	8165.14	16158.40	0.30	1269.52	2.50	8165.14	16158.40	6.432
5.31	7.83	ø6/20	2	2	32	SLU	0.30	1536.00	2.50	6123.85	16275.60	0.30	0.00	2.50	6123.85	16275.60	3.987
5.31	7.83	ø6/20	2	2	1 (TG)	SLV	0.30	1269.52	2.50	6123.85	16158.40	0.30	1269.52	2.50	6123.85	16158.40	4.824
7.83	8.46	ø6/15	2	2	32	SLU	0.30	307.20	2.50	8165.14	16181.80	0.30	0.00	2.50	8165.14	16181.80	26.579
7.83	8.46	ø6/15	2	2	1 (TG)	SLV	0.30	1269.52	2.50	8165.14	16158.40	0.30	1269.52	2.50	8165.14	16158.40	6.432

Dettagli costruttivi per la duttilità

- CC=9 α_e=0.30167 ω_{wd}=0.11902 μΦ_d=7.08596 v_d=0.10943 E_{sy, d}=0.0018995 b_c/b₀=1.33929 μΦ_e=8.48975
0.0359 >= 0.02418 [7.4.29]
- CC=9 α_e=0.30167 ω_{wd}=0.11902 μΦ_d=7.58384 v_d=0.10943 E_{sy, d}=0.0018995 b_c/b₀=1.33929 μΦ_e=8.48975
0.0359 >= 0.02834 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	Nu	MRdy	MRdz	α	ε _y	Sic.
<m>					<cm>	<daN>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
0.70	46 (e)	SLU I	1	7	70.00	-14529.90	275.51	-80.21	-46967.20	2779.85	-2779.85	315.00	19.82	3.232
0.70	46 (e)	SLU I	1	7	70.00	-14529.90	275.51	-80.21	-46967.20	2779.85	-2779.85	315.00	19.82	3.232
4.38	46 (e)	SLU I	1	7	438.00	-13701.90	-1057.05	-52.79	-46967.20	-4253.19	-1248.20	202.50	25.17	3.428
4.68	46 (e)	SLU I	2	7	0.00	-850.50	0.00	0.00	-46967.20	2672.53	2672.53	45.00	25.35	55.223
4.68	46 (e)	SLU I	2	7	0.00	-850.50	0.00	0.00	-46967.20	1753.83	1753.83	45.00	31.23	55.223

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _{,y}	Vsdu _{,y}	ctgθ _{,y}	VRsd _{,y}	VRcd _{,y}	bw _{,z}	Vsdu _{,z}	ctgθ _{,z}	VRsd _{,z}	VRcd _{,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
0.70	1.31	ø6/10	2	2	46	SLU I	0.20	7.45	2.50	6821.90	17697.70	0.20	362.11	2.50	6821.90	17697.70	18.839
1.31	3.77	ø6/25	2	2	46	SLU I	0.20	7.45	2.50	2728.76	17676.30	0.20	362.11	2.50	2728.76	17676.30	7.536
3.77	4.38	ø6/15	2	2	46	SLU I	0.20	7.45	2.50	4547.93	17590.60	0.20	362.11	2.50	4547.93	17590.60	12.560

Verifiche e armature solette/platee

Simbologia

Δ_{sm} =Distanza media tra le fessure
Φ_{eq} =Diametro equivalente delle barre
ε_{sm} =Deformazione unitaria media dell'armatura (*1000)
σ_c =Tensione nel calcestruzzo
σ_f =Tensione nel ferro
σ_s =Tensione nell'acciaio nella sezione fessurata
A_{c eff} =Area di calcestruzzo efficace
A_s =Area complessiva dei ferri nell'area di calcestruzzo efficace
A_{fE I} =Area di ferro effettiva totale presente nel punto di verifica, inferiore
A_{fE S} =Area di ferro effettiva totale presente nel punto di verifica, superiore
A_{fE St.} =Area di ferro effettiva della staffatura
CC =Numero della combinazione delle condizioni di carico elementari
Cf inf =Copriferro inferiore
Cf sup =Copriferro superiore
Cls =Tipo di calcestruzzo
DV =Direzione di verifica
XX = Verifica per momento Mxx
YY = Verifica per momento Myy
Fcd =Resistenza di calcolo a compressione del calcestruzzo
Fck =Resistenza caratteristica cilindrica a compressione del calcestruzzo
Fctd =Resistenza di calcolo a trazione del calcestruzzo
Fctk =Resistenza caratteristica a trazione del calcestruzzo
Fyd =Resistenza di calcolo dell'acciaio

Fyk =Tensione caratteristica di snervamento dell'acciaio
K₂ =Coefficiente per distribuzione deformazioni
MRdy =Momento resistente allo stato limite ultimo intorno all'asse Y
Mom =Momento flettente
My =Momento flettente intorno all'asse Y
Nodo =Numero del nodo
Sic. =Sicurezza
Spess. =Spessore
TCC =Tipo di combinazione di carico
SLU = Stato limite ultimo
SLE R = Stato limite d'esercizio, combinazione rara
SLE F = Stato limite d'esercizio, combinazione frequente
SLE Q = Stato limite d'esercizio, combinazione quasi permanente
SLD = Stato limite di danno
SLV = Stato limite di salvaguardia della vita
SLU I = Stato limite di resistenza al fuoco
SND = Stato limite di salvaguardia della vita (non dissipativo)
Tp =Tipo di acciaio
VRcd =Taglio ultimo lato calcestruzzo
VRsd =Taglio ultimo lato armatura
Vrdu =Taglio ultimo resistente
Vsdu =Taglio agente nella direzione del momento ultimo
Wk =Ampiezza caratteristica delle fessure
X =Coordinata X del nodo
Y =Coordinata Y del nodo
c =Ricoprimento dell'armatura
ctgθ =Cotangente dell'angolo di inclinazione dei puntoni di calcestruzzo
s =Distanza massima tra le barre

Armatura soletta a quota 2.34

Caratteristiche delle sezioni e dei materiali utilizzati

Spess.	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fctd	Tp	Fyk	Fyd
<cm>	<cm>	<cm>		<daN/cm²>	<daN/cm²>	<daN/cm²>	<daN/cm²>		<daN/cm²>	<daN/cm²>
20.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	My	MRdy	Sic.
	<m>	<m>				<cmq>	<cmq>	<daNm>	<daNm>	
20	10.06	24.07	XX	9	SLV	10.05	10.05	3110.16	5927.93	1.906
-1906	11.48	24.76	XX	9	SLV	10.05	10.05	-1871.30	-5927.93	3.168
-1906	11.48	24.76	YY	9	SLV	16.96	16.96	-6047.13	-9469.34	1.566

Stato limite ultimo - Verifiche a taglio

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	AfE St.	Vsdu	ctgθ	VRcd	VRsd	Vrdu	Sic.
	<m>	<m>				<cmq>	<cmq>	<cmq/m>	<daN>		<daN>	<daN>	<daN>	
-1903	8.43	25.27	XX	9	SLV	10.05	10.05	28.27	10118.40	2.32	38096.70	38096.70	38096.70	3.765
20	10.06	24.07	XX	1	SLV	10.05	10.05	28.27	21306.80	2.32	38096.70	38096.70	38096.70	1.788
-1903	8.43	25.27	YY	13	SLV	16.96	16.96	28.27	11775.50	2.32	38096.70	38096.70	38096.70	3.235
-1902	11.48	25.27	YY	9	SLV	16.96	16.96	28.27	17977.50	2.32	38096.70	38096.70	38096.70	2.119

Stato limite d'esercizio - Verifiche tensionali

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	Mom	σ _c	σ _f
	<m>	<m>				<cmq>	<cmq>	<daNm>	<daN/cm²>	<daN/cm²>
-1903	8.43	25.27	XX	37	SLE R	10.05	10.05	-291.92	6.37	200.99
-1236	9.41	24.07	XX	29	SLE Q	10.05	10.05	-143.53	3.13	98.82
20	10.06	24.07	XX	37	SLE R	10.05	10.05	1623.87	35.42	1118.04
20	10.06	24.07	XX	29	SLE Q	10.05	10.05	643.21	14.03	442.85
-1903	8.43	25.27	YY	37	SLE R	16.96	16.96	-2099.95	35.44	880.83
-1905	8.43	24.07	YY	29	SLE Q	16.96	16.96	734.04	12.39	307.90
-1902	11.48	25.27	YY	29	SLE Q	16.96	16.96	-1676.43	28.30	703.18
-1905	8.43	24.07	YY	37	SLE R	16.96	16.96	1020.30	17.22	427.97

Stato limite d'esercizio - Verifiche a fessurazione

Nodo	X	Y	DV	CC	TCC	c	s	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	W _k
	<m>	<m>				<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cm²>		<mm>
-1236	9.41	24.07	XX	29	SLE Q	27.00	200.00	0.50	16.00	118.92	12.06	489.48	98.82	0.03	0.01
-1236	9.41	24.07	XX	25	SLE F	27.00	200.00	0.50	16.00	118.92	12.06	489.48	135.56	0.04	0.01
20	10.06	24.07	XX	42	SLE F	27.00	200.00	0.50	16.00	118.92	12.06	489.48	573.80	0.17	0.03
20	10.06	24.07	XX	29	SLE Q	27.00	200.00	0.50	16.00	118.92	12.06	489.48	442.85	0.13	0.03
-1905	8.43	24.07	YY	29	SLE Q	26.00	150.00	0.50	18.00	103.42	19.51	459.65	307.90	0.09	0.02
-1902	11.48	25.27	YY	28	SLE F	26.00	150.00	0.50	18.00	103.42	19.51	459.65	733.43	0.21	0.04
-1905	8.43	24.07	YY	42	SLE F	26.00	150.00	0.50	18.00	103.42	19.51	459.65	346.91	0.10	0.02
-1902	11.48	25.27	YY	29	SLE Q	26.00	150.00	0.50	18.00	103.42	19.51	459.65	703.18	0.20	0.04

Armatura soletta a quota 4.68

Caratteristiche delle sezioni e dei materiali utilizzati

Spess.	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fctd	Tp	Fyk	Fyd
<cm>	<cm>	<cm>		<daN/cm²>	<daN/cm²>	<daN/cm²>	<daN/cm²>		<daN/cm²>	<daN/cm²>
20.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	My	MRdy	Sic.
	<m>	<m>				<cmq>	<cmq>	<daNm>	<daNm>	
17	8.43	17.48	XX	9	SLV	10.05	10.05	1140.83	5927.93	5.196
-1913	10.06	21.07	XX	9	SLV	10.05	10.05	-1631.50	-5927.93	3.633
-1943	11.89	21.38	XX	1	SLV	10.05	10.05	-314.23	-5927.93	18.865
21	11.89	17.48	XX	9	SLV	10.05	10.05	-3501.16	-5927.93	1.693
-1898	11.48	21.07	YY	5	SLV	10.05	10.05	3999.45	5927.93	1.482
18	11.48	17.48	YY	5	SLV	10.05	10.05	-4093.59	-5927.93	1.448
-1943	11.89	21.38	YY	20	SLU	10.05	10.05	1549.87	5927.93	3.825
-68	12.70	17.48	YY	5	SLV	10.05	10.05	-1719.98	-5927.93	3.446

Stato limite ultimo - Verifiche a taglio

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	AfE St.	Vsdu	ctgθ	VRcd	VRsd	Vrdu	Sic.
	<m>	<m>				<cmq>	<cmq>	<cmq/m>	<daN>		<daN>	<daN>	<daN>	
18	11.48	17.48	XX	1	SLV	10.05	10.05	28.27	6005.51	2.32	38096.70	38096.70	38096.70	6.344
17	8.43	17.48	XX	1	SLV	10.05	10.05		6094.85				9803.09	1.608
-1951	12.30	18.76	XX	5	SLV	10.05	10.05		1120.20				9803.09	8.751
21	11.89	17.48	XX	5	SLV	10.05	10.05	28.27	8219.99	2.32	38096.70	38096.70	38096.70	4.635
-1901	11.48	20.25	YY	9	SLV	10.05	10.05	28.27	10460.90	2.32	38096.70	38096.70	38096.70	3.642
17	8.43	17.48	YY	1	SLV	10.05	10.05		3716.30				9803.09	2.638
-1247	12.70	19.27	YY	20	SLU	10.05	10.05		4336.18				9803.09	2.261
-1246	12.70	18.38	YY	9	SLV	10.05	10.05	28.27	4306.43	2.32	38096.70	38096.70	38096.70	8.846

Stato limite d'esercizio - Verifiche tensionali

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	Mom	σ _c	σ _f
	<m>	<m>				<cmq>	<cmq>	<daNm>	<daN/cm²>	<daN/cm²>
-1255	9.77	17.48	XX	24	SLE R	10.05	10.05	426.05	9.29	293.33
-1255	9.77	17.48	XX	29	SLE Q	10.05	10.05	404.34	8.82	278.39
21	11.89	17.48	XX	24	SLE R	10.05	10.05	-1881.91	41.05	1295.70
-1943	11.89	21.38	XX	24	SLE R	10.05	10.05	-1.49	0.03	1.02
21	11.89	17.48	XX	29	SLE Q	10.05	10.05	-1749.37	38.16	1204.44
-1942	11.89	22.35	XX	29	SLE Q	10.05	10.05	2.76	0.06	1.90
-1913	10.06	21.07	XX	29	SLE Q	10.05	10.05	-285.91	6.24	196.85
-1913	10.06	21.07	XX	24	SLE R	10.05	10.05	-319.39	6.97	219.90
-1249	11.25	21.07	YY	24	SLE R	10.05	10.05	1367.38	29.83	941.44
-1898	11.48	21.07	YY	29	SLE Q	10.05	10.05	1430.48	31.21	984.88
18	11.48	17.48	YY	24	SLE R	10.05	10.05	-1620.74	35.36	1115.88
18	11.48	17.48	YY	29	SLE Q	10.05	10.05	-1630.40	35.57	1122.53
-1943	11.89	21.38	YY	24	SLE R	10.05	10.05	1141.53	24.90	785.94
-1948	12.30	21.80	YY	29	SLE Q	10.05	10.05	1062.93	23.19	731.83
-68	12.70	17.48	YY	24	SLE R	10.05	10.05	-1036.07	22.60	713.33
-68	12.70	17.48	YY	29	SLE Q	10.05	10.05	-955.63	20.85	657.95

Stato limite d'esercizio - Verifiche a fessurazione

Nodo	X	Y	DV	CC	TCC	c	s	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	W _k
	<m>	<m>				<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cm²>		<mm>
-1255	9.77	17.48	XX	29	SLE Q	27.00	200.00	0.50	16.00	118.92	12.06	489.48	278.39	0.08	0.02
-1255	9.77	17.48	XX	28	SLE F	27.00	200.00	0.50	16.00	118.92	12.06	489.48	286.71	0.08	0.02
21	11.89	17.48	XX	29	SLE Q	27.00	200.00	0.50	16.00	118.92	12.06	489.48	1204.44	0.35	0.07
21	11.89	17.48	XX	28	SLE F	27.00	200.00	0.50	16.00	118.92	12.06	489.48	1241.98	0.36	0.07
-1942	11.89	22.35	XX	29	SLE Q	27.00	200.00	0.50	16.00	118.92	12.06	489.48	1.90	0.00	0.00
-1942	11.89	22.35	XX	26	SLE F	27.00	200.00	0.50	16.00	118.92	12.06	489.48	1.91	0.00	0.00
-1913	10.06	21.07	XX	29	SLE Q	27.00	200.00	0.50	16.00	118.92	12.06	489.48	196.85	0.06	0.01
-1913	10.06	21.07	XX	28	SLE F	27.00	200.00	0.50	16.00	118.92	12.06	489.48	206.37	0.06	0.01
-1898	11.48	21.07	YY	29	SLE Q	27.00	200.00	0.50	16.00	118.92	12.06	489.48	984.88	0.29	0.06
-1898	11.48	21.07	YY	28	SLE F	27.00	200.00	0.50	16.00	118.92	12.06	489.48	1007.19	0.29	0.06
18	11.48	17.48	YY	29	SLE Q	27.00	200.00	0.50	16.00	118.92	12.06	489.48	1122.53	0.33	0.07
18	11.48	17.48	YY	28	SLE F	27.00	200.00	0.50	16.00	118.92	12.06	489.48	1155.45	0.34	0.07
-1948	12.30	21.80	YY	29	SLE Q	27.00	200.00	0.50	16.00	118.92	12.06	489.48	731.83	0.21	0.04
-1948	12.30	21.80	YY	28	SLE F	27.00	200.00	0.50	16.00	118.92	12.06	489.48	750.07	0.22	0.04
-68	12.70	17.48	YY	29	SLE Q	27.00	200.00	0.50	16.00	118.92	12.06	489.48	657.95	0.19	0.04
-68	12.70	17.48	YY	28	SLE F	27.00	200.00	0.50	16.00	118.92	12.06	489.48	672.46	0.20	0.04

Armatura soletta rampa 2

Caratteristiche delle sezioni e dei materiali utilizzati

Spess.	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fctd	Tp	Fyk	Fyd
<cm>	<cm>	<cm>		<daN/cm²>	<daN/cm²>	<daN/cm²>	<daN/cm²>		<daN/cm²>	<daN/cm²>
20.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	My	MRdy	Sic.
	<m>	<m>				<cmq>	<cmq>	<daNm>	<daNm>	

Relazione di calcolo

20	10.06	24.07	XX	1	SLV	7.70	7.70	824.08	4702.85	5.707
-1913	10.06	21.07	XX	9	SLV	7.70	7.70	-632.60	-4702.85	7.434
-1913	10.06	21.07	YY	5	SLV	16.96	16.96	5208.97	9469.34	1.818
20	10.06	24.07	YY	5	SLV	16.96	16.96	-3893.87	-9469.34	2.432

Stato limite ultimo - Verifiche a taglio

Nodo	X <m>	Y <m>	DV	CC	TCC	AfE S <cmq>	AfE I <cmq>	AfE St. <cmq/m>	Vsdu <daN>	ctgθ	VRcd <daN>	VRsd <daN>	Vrdu <daN>	Sic.
-1898	11.48	21.07	XX	30	SLU	7.70	7.70		3101.26				8968.13	2.892
20	10.06	24.07	YY	5	SLV	16.96	16.96		7273.64				11671.10	1.605

Stato limite d'esercizio - Verifiche tensionali

Nodo	X <m>	Y <m>	DV	CC	TCC	AfE S <cmq>	AfE I <cmq>	Mom <daNm>	σ _c <daN/cm²>	σ _f <daN/cm²>
20	10.06	24.07	XX	37	SLE R	7.70	7.70	489.63	12.11	434.03
20	10.06	24.07	XX	29	SLE Q	7.70	7.70	274.83	6.80	243.63
-1913	10.06	21.07	XX	24	SLE R	7.70	7.70	-67.12	1.66	59.50
-1913	10.06	21.07	XX	29	SLE Q	7.70	7.70	-130.21	3.22	115.42
-1913	10.06	21.07	YY	24	SLE R	16.96	16.96	1780.28	30.05	746.74
-1913	10.06	21.07	YY	29	SLE Q	16.96	16.96	1849.49	31.22	775.77
20	10.06	24.07	YY	23	SLE R	16.96	16.96	-816.26	13.78	342.38
20	10.06	24.07	YY	29	SLE Q	16.96	16.96	-789.25	13.32	331.05

Stato limite d'esercizio - Verifiche a fessurazione

Nodo	X <m>	Y <m>	DV	CC	TCC	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	W _k <mm>
20	10.06	24.07	XX	29	SLE Q	28.00	200.00	0.50	14.00	132.45	9.24	504.39	243.63	0.07	0.02
20	10.06	24.07	XX	42	SLE F	28.00	200.00	0.50	14.00	132.45	9.24	504.39	277.08	0.08	0.02
-1913	10.06	21.07	XX	29	SLE Q	28.00	200.00	0.50	14.00	132.45	9.24	504.39	115.42	0.03	0.01
-1913	10.06	21.07	XX	28	SLE F	28.00	200.00	0.50	14.00	132.45	9.24	504.39	121.53	0.04	0.01
-1913	10.06	21.07	YY	29	SLE Q	26.00	150.00	0.50	18.00	103.42	19.51	459.65	775.77	0.23	0.04
-1913	10.06	21.07	YY	28	SLE F	26.00	150.00	0.50	18.00	103.42	19.51	459.65	792.88	0.23	0.04
20	10.06	24.07	YY	29	SLE Q	26.00	150.00	0.50	18.00	103.42	19.51	459.65	331.05	0.10	0.02
20	10.06	24.07	YY	27	SLE F	26.00	150.00	0.50	18.00	103.42	19.51	459.65	334.34	0.10	0.02

Armatura soletta rampa

Caratteristiche delle sezioni e dei materiali utilizzati

Spess. <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
20.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Nodo	X <m>	Y <m>	DV	CC	TCC	AfE S <cmq>	AfE I <cmq>	My <daNm>	MRdy <daNm>	Sic.
19	9.85	24.07	XX	5	SLV	7.70	7.70	-990.59	-4702.85	4.748
-1905	8.43	24.07	YY	13	SLV	13.40	13.40	3663.86	7651.65	2.088
-1914	9.85	20.17	YY	34	SLU	13.40	13.40	-4080.96	-7651.65	1.875

Stato limite ultimo - Verifiche a taglio

Nodo	X <m>	Y <m>	DV	CC	TCC	AfE S <cmq>	AfE I <cmq>	AfE St. <cmq/m>	Vsdu <daN>	ctgθ	VRcd <daN>	VRsd <daN>	Vrdu <daN>	Sic.
-1908	8.43	20.17	XX	1	SLV	7.70	7.70		1406.16				8968.13	6.378
-1914	9.85	20.17	YY	34	SLU	13.40	13.40		4532.18				10789.70	2.381

Stato limite d'esercizio - Verifiche tensionali

Nodo	X <m>	Y <m>	DV	CC	TCC	AfE S <cmq>	AfE I <cmq>	Mom <daNm>	σ _c <daN/cm²>	σ _f <daN/cm²>
19	9.85	24.07	XX	21	SLE R	7.70	7.70	-443.21	10.96	392.88
19	9.85	24.07	XX	29	SLE Q	7.70	7.70	-319.18	7.89	282.94
-1920	9.85	22.51	XX	24	SLE R	7.70	7.70	24.71	0.61	21.91
-1920	9.85	22.51	XX	29	SLE Q	7.70	7.70	18.99	0.47	16.83
-1905	8.43	24.07	YY	37	SLE R	13.40	13.40	2155.68	40.93	1130.42
19	9.85	24.07	YY	29	SLE Q	13.40	13.40	1805.70	34.28	946.89
-1914	9.85	20.17	YY	39	SLE R	13.40	13.40	-2939.31	55.80	1541.35
-1914	9.85	20.17	YY	29	SLE Q	13.40	13.40	-2512.56	47.70	1317.56

Stato limite d'esercizio - Verifiche a fessurazione

Nodo	X <m>	Y <m>	DV	CC	TCC	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	W _k <mm>
19	9.85	24.07	XX	29	SLE Q	28.00	200.00	0.50	14.00	132.45	9.24	504.39	282.94	0.08	0.02
19	9.85	24.07	XX	25	SLE F	28.00	200.00	0.50	14.00	132.45	9.24	504.39	331.49	0.10	0.02
-1920	9.85	22.51	XX	29	SLE Q	28.00	200.00	0.50	14.00	132.45	9.24	504.39	16.83	0.00	0.00
-1920	9.85	22.51	XX	25	SLE F	28.00	200.00	0.50	14.00	132.45	9.24	504.39	18.96	0.01	0.00
19	9.85	24.07	YY	29	SLE Q	27.00	150.00	0.50	16.00	106.45	15.41	473.10	946.89	0.28	0.05
19	9.85	24.07	YY	42	SLE F	27.00	150.00	0.50	16.00	106.45	15.41	473.10	996.76	0.29	0.05

-1914	9.85	20.17	YY	29	SLE Q	27.00	150.00	0.50	16.00	106.45	15.41	473.10	1317.56	0.45	0.08
-1914	9.85	20.17	YY	42	SLE F	27.00	150.00	0.50	16.00	106.45	15.41	473.10	1366.96	0.40	0.07

Verifiche aste in acciaio

Simbologia

Φ_{LT}		=	Coefficiente Φ per stabilità laterale membrature inflesse
Φ_y		=	Coefficiente Φ per inflessione intorno all'asse y(c)
Φ_z		=	Coefficiente Φ per inflessione intorno all'asse z(e)
α		=	Esponente sfruttamento per flessione retta intorno all'asse y
α_{imp}		=	Coefficiente di imperfezione
$\alpha_{my}, \alpha_{mz}, \alpha_{LT}$		=	Coefficienti correttivi per il momento flettente
β		=	Esponente sfruttamento per flessione retta intorno all'asse z
β_{LT}		=	Coefficiente per calcolo Φ_{LT}
χ_{LT}		=	Coefficiente di riduzione per stabilità laterale membrature inflesse
χ_y		=	Coefficiente χ di riduzione per instabilità intorno all'asse y(c)
χ_z		=	Coefficiente χ di riduzione per instabilità intorno all'asse z(e)
λ^*_y		=	Snellezza adimensionale per inflessione intorno all'asse y(c)
λ^*_z		=	Snellezza adimensionale per inflessione intorno all'asse z(e)
λ_{LT}		=	Coefficiente di imperfezione per stabilità laterale membrature inflesse
$\lambda_{LT,0}$		=	Coefficiente di imperfezione di confronto per stabilità laterale membrature inflesse
λ_y		=	Snellezza per inflessione intorno all'asse y(c)
λ_z		=	Snellezza per inflessione intorno all'asse z(e)
$\sigma_{TD,max}$	<daN/cm²>	=	Tensione ideale massima
σ_M	<daN/cm²>	=	Tensione normale per momento flettente
σ_N	<daN/cm²>	=	Tensione normale per sforzo normale
τ	<daN/cm²>	=	Tensione tangenziale per taglio e/o torsione
ψ		=	Coeff. di correzione momento critico per stabilità laterale membrature inflesse
A_{eff}	<cm²>	=	Area effettiva per trazione
A_{net}	<cm²>	=	Area netta per compressione
A_{area}	<cm²>	=	Area
$A_{tag,y}$	<cm²>	=	Area resistente a taglio in dir. Y
$A_{tag,z}$	<cm²>	=	Area resistente a taglio in dir. Z
CC		=	Numero della combinazione delle condizioni di carico elementari
Cod.		=	Codice
Curva		=	Curva di instabilità adottata
D	<cm>	=	Distanza
F _{yk}	<daN/cm²>	=	Tensione caratteristica di snervamento dell'acciaio
F _{yt}	<daN/cm²>	=	Tensione caratteristica di rottura
I _y	<cm>	=	Raggio giratorio d'inerzia rispetto all'asse Y
I _z	<cm>	=	Raggio giratorio d'inerzia rispetto all'asse Z
J ₀	<cm⁶>	=	Costante di ingobbamento
J _y	<cm⁴>	=	Momento d'inerzia rispetto all'asse Y
J _z	<cm⁴>	=	Momento d'inerzia rispetto all'asse Z
K _E φ		=	Fattore di riduzione del modulo di elasticità dell'acciaio in funzione della temperatura
K _y φ		=	Fattore di riduzione della resistenza a snervamento dell'acciaio in funzione della temperatura
K _{yy} , K _{yz} , K _{zy} , K _{zz}		=	Coefficienti di interazione
L	<m>	=	Lunghezza dell'asta
L _{cr}	<m>	=	Lunghezza di libera inflessione laterale fra ritegni torsionali
M _{y,cr}	<daNm>	=	Momento critico per instabilità flessione torsionale
M _{Ny,c,Rd}	<daNm>	=	Resistenza di calcolo a pressoflessione intorno all'asse Y
M _{Nz,c,Rd}	<daNm>	=	Resistenza di calcolo a pressoflessione intorno all'asse Z
M _x	<daNm>	=	Momento torcente intorno all'asse X
M _y	<daNm>	=	Momento flettente intorno all'asse Y
M _{y,Ed}	<daNm>	=	Momento flettente di calcolo intorno all'asse Y
M _{y,V,c,Rd}	<daNm>	=	Resistenza di calcolo a flessione ridotta per taglio intorno all'asse Y
M _{y,c,Rd}	<daNm>	=	Resistenza di calcolo a flessione intorno all'asse Y
M _z	<daNm>	=	Momento flettente intorno all'asse Z
M _{z,Ed}	<daNm>	=	Momento flettente di calcolo intorno all'asse Z
N	<daN>	=	Sforzo normale
N _{Ed}	<daN>	=	Forza assiale di calcolo
N _{c,Rd}	<daN>	=	Resistenza a compressione
N _{cr,y}	<daN>	=	Sforzo normale critico euleriano per inflessione intorno all'asse y(c)
N _{cr,z}	<daN>	=	Sforzo normale critico euleriano per inflessione intorno all'asse z(e)
Sez.		=	Numero della sezione
Temp.	<°C>	=	Temperatura
Tipo		=	Tipologia
			Cir. = Circolare
			L = Sezione a L
			Ldx = L destra
			R = Rettangolare
			Is = I stondata
Tp		=	Tipo di acciaio
T _y	<daN>	=	Taglio in dir. Y
T _z	<daN>	=	Taglio in dir. Z
V _{Ed}	<daN>	=	Forza di taglio di calcolo
V _{c,Rd}	<daN>	=	Resistenza a taglio
V _{c,Rd,Red}	<daN>	=	Resistenza a taglio ridotta
W _{y,plas}	<cm³>	=	Modulo di resistenza plastico intorno all'asse Y
W _{ymin}	<cm³>	=	Modulo di resistenza minimo rispetto all'asse Y
W _{z,plas}	<cm³>	=	Modulo di resistenza plastico intorno all'asse Z
W _{zmin}	<cm³>	=	Modulo di resistenza minimo rispetto all'asse Z
X _l	<m>	=	Coordinata progressiva (dal nodo iniziale dell'asta) in cui viene effettuato il progetto/verifica
f		=	Fattore di modifica per il coefficiente di riduzione
f _{z,G}	<cm>	=	Freccia in direzione Z globale
f _{z,L}	<cm>	=	Freccia in direzione Z locale
K _c		=	Coeff. di correzione momento flettente per stabilità laterale membrature inflesse

Caratteristiche profilati utilizzati

Sez.	Cod.	Tipo	D <cm>	Area <cm²>	A _{net} <cm²>	A _{eff} <cm²>	J _y <cm⁴>	J _z <cm⁴>	I _y <cm>	I _z <cm>	Wymin <cm³>	Wzmin <cm³>	Tp		F _{yk} <daN/cm²>	F _{yt} <daN/cm²>
5	IPE300	Is	--	53.81	53.81	53.81	8356.33	603.78	12.46	3.35	557.09	80.50	S275	UNI EN 10025-2	2750.00	4300.00
6	IPE200	Is	--	28.48	28.48	28.48	1943.23	142.37	8.26	2.24	194.32	28.47	S275	UNI EN 10025-2	2750.00	4300.00

Caratteristiche profilati utilizzati

Sez.	Cod.	W _{y,plas} <cm³>	W _{z,plas} <cm³>	A _{tag,y} <cm²>	A _{tag,z} <cm²>	J ₀ <cm⁶>	Temp. <°C>	K _y φ	K _E φ
5	IPE300	630.77	125.38	36.16	25.68	125934.00			

Relazione di calcolo

6	IPE200	221.64	44.70	19.58	14.00	12988.10			
---	--------	--------	-------	-------	-------	----------	--	--	--

Asta n. 2001 (-121 -1798) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 34 SLU $X_l=0.76$ - Classe 1
Sollecitazioni: $T_y=172.54$
 $V, Ed=172.54$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 34 SLU $X_l=0.76$ - Classe 1
Sollecitazioni: $T_z=355.67$
 $V, Ed=355.67$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$
- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.30$ - Classe 3
Sollecitazioni: $N=920.25$ $T_z=-1322.39$ $M_y=-1304.07$ $T_y=66.71$ $M_z=46.18$
Tensioni: $\sigma_N=17.10$ $\sigma_{m,d}=291.45$ $\tau=0.00$ $\sigma_{max}=308.55$ (sfrut=0.12)
Tensioni: $\sigma_N=17.10$ $\sigma_{m,d}=2.72$ $\tau=73.84$ $\tau_{max}=73.84$ (sfrut=0.05)
Tensioni: $\sigma_N=17.10$ $\sigma_{m,d}=291.45$ $\tau=0.00$ $\sigma_{ID,max}=308.55$ (sfrut=0.12)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed=-502.96$ $M_y, Ed=-1304.07$ $M_z, Ed=56.32$ $L=1.56$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.56$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.09$ $M_{cr}=166391.00$ $\lambda_{LT}=0.30$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.52$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.49$ $N_{cr,y}=7154730.00$ $\lambda'_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=46.45$ $N_{cr,z}=516959.00$ $\lambda'_z=0.54$ Curva b: $\Phi_z=0.70$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.08+0.03=0.11$
Verifica ZZ: $0.00+0.07+0.03=0.10$
- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,g}=0.01$ (L/20273)
- Verifica freccia massima carichi totali - CC 37
 $f_{z,g}=0.00$ (L/29284)

Asta n. 2001 (-1798 -1799) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 3 SLV $X_l=0.34$ - Classe 1
Sollecitazioni: $T_y=-137.98$
 $V, Ed=-137.98$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 3 SLV $X_l=0.34$ - Classe 1
Sollecitazioni: $T_z=-1261.51$
 $V, Ed=-1261.51$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.03$
- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.80$ - Classe 3
Sollecitazioni: $N=896.97$ $T_z=-1427.22$ $M_y=1515.63$ $T_y=-216.83$ $M_z=-115.83$
Tensioni: $\sigma_N=16.67$ $\sigma_{m,d}=415.94$ $\tau=0.00$ $\sigma_{max}=432.61$ (sfrut=0.17)
Tensioni: $\sigma_N=16.67$ $\sigma_{m,d}=-6.81$ $\tau=79.69$ $\tau_{max}=79.69$ (sfrut=0.05)
Tensioni: $\sigma_N=16.67$ $\sigma_{m,d}=415.94$ $\tau=0.00$ $\sigma_{ID,max}=432.61$ (sfrut=0.17)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed=-497.37$ $M_y, Ed=1515.63$ $M_z, Ed=-115.83$ $L=1.02$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.02$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.50$ $M_{cr}=267003.00$ $\lambda_{LT}=0.24$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.49$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=8.20$ $N_{cr,y}=16592800.00$ $\lambda'_y=0.09$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=30.50$ $N_{cr,z}=1198900.00$ $\lambda'_z=0.35$ Curva b: $\Phi_z=0.59$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.10+0.05=0.15$
Verifica ZZ: $0.00+0.08+0.05=0.13$
- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.00$ (L/22596)
- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.00$ (L/32155)

Asta n. 2001 (-1799 -1800) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 7 SLV $X_l=0.22$ - Classe 1
Sollecitazioni: $T_y=-26.71$ $M_x=1.26$
 $V, Ed=-26.71$ $V_c, Rd, Red=54574.60$ $V, Ed/V_c, Rd, Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 7 SLV $X_l=0.22$ - Classe 1
Sollecitazioni: $T_z=313.11$ $M_x=1.26$
 $V, Ed=313.11$ $V_c, Rd, Red=38759.20$ $V, Ed/V_c, Rd, Red=0.01$
- Verifica in termini tensionali [4.2.4] - CC 30 SLU $X_l=0.22$ - Classe 3

Sollecitazioni: $N=-1530.23$ $T_z=759.98$ $M_y=1626.02$ $T_y=561.51$ $M_z=-142.53$ $M_x=-1.90$
 Tensioni: $\sigma_N=-28.44$ $\sigma_{m,d}=-468.92$ $\tau=11.26$ $\sigma_{max}=-497.36$ (sfrut=0.19)
 Tensioni: $\sigma_N=-28.44$ $\sigma_{m,d}=-8.38$ $\tau=44.43$ $\tau_{max}=44.43$ (sfrut=0.03)
 Tensioni: $\sigma_N=-28.44$ $\sigma_{m,d}=-468.92$ $\tau=11.26$ $\sigma_{ID,max}=497.74$ (sfrut=0.19)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 3
 Sollecitazioni: $N,Ed=-1530.23$ $M_y,Ed=1626.02$ $M_z,Ed=-142.53$ $L=0.60$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.60$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.09$ $M_{cr}=548164.00$ $\lambda_{LT}=0.17$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.47$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=4.83$ $N_{cr,y}=47828800.00$ $\lambda^*_y=0.06$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=17.96$ $N_{cr,z}=3455830.00$ $\lambda^*_z=0.21$ Curva b: $\Phi_z=0.52$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.11+0.06=0.18$
 Verifica ZZ: $0.01+0.08+0.06=0.16$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,g}=0.00$ (L/17988)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,g}=0.00$ (L/9893)

Asta n. 2001 (-1800 -1801) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 3 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-2.51$
 $V,Ed=-2.51$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 3 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=423.74$
 $V,Ed=423.74$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 32 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-1693.01$ $T_z=871.33$ $M_y=1684.93$ $T_y=-21.50$ $M_z=42.17$ $M_x=-1.75$
 Tensioni: $\sigma_N=-31.46$ $\sigma_{m,d}=-354.84$ $\tau=10.36$ $\sigma_{max}=-386.30$ (sfrut=0.15)
 Tensioni: $\sigma_N=-31.46$ $\sigma_{m,d}=-2.48$ $\tau=49.76$ $\tau_{max}=49.76$ (sfrut=0.03)
 Tensioni: $\sigma_N=-31.46$ $\sigma_{m,d}=-354.84$ $\tau=10.36$ $\sigma_{ID,max}=386.72$ (sfrut=0.15)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 3
 Sollecitazioni: $N,Ed=-1693.01$ $M_y,Ed=1684.93$ $M_z,Ed=42.17$ $L=1.54$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.54$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.51$ $M_{cr}=122393.00$ $\lambda_{LT}=0.35$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.54$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.38$ $N_{cr,y}=7276390.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=46.06$ $N_{cr,z}=525750.00$ $\lambda^*_z=0.53$ Curva b: $\Phi_z=0.70$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.11+0.02=0.14$
 Verifica ZZ: $0.01+0.09+0.02=0.12$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,g}=0.01$ (L/19972)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,g}=0.01$ (L/11005)

Asta n. 2001 (-1801 -1802) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 30 SLU $X_l=0.54$ - Classe 2
 Sollecitazioni: $T_y=-33.74$ $M_x=-1.15$
 $V,Ed=-33.74$ $V_c,Rd,Red=54584.40$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 30 SLU $X_l=0.54$ - Classe 2
 Sollecitazioni: $T_z=443.94$ $M_x=-1.15$
 $V,Ed=443.94$ $V_c,Rd,Red=38766.20$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=1.50$ - Classe 3
 Sollecitazioni: $N=-1435.06$ $T_z=496.83$ $M_y=-496.32$ $T_y=-40.52$ $M_z=-48.57$ $M_x=-1.53$
 Tensioni: $\sigma_N=-26.67$ $\sigma_{m,d}=-149.43$ $\tau=9.06$ $\sigma_{max}=-176.09$ (sfrut=0.07)
 Tensioni: $\sigma_N=-26.67$ $\sigma_{m,d}=2.86$ $\tau=29.23$ $\tau_{max}=29.23$ (sfrut=0.02)
 Tensioni: $\sigma_N=-26.67$ $\sigma_{m,d}=-149.43$ $\tau=9.06$ $\sigma_{ID,max}=176.79$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N,Ed=-1441.33$ $M_y,Ed=-496.32$ $M_z,Ed=-48.57$ $L=1.50$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.50$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.52$ $M_{cr}=215629.00$ $\lambda_{LT}=0.27$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.50$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=12.01$ $N_{cr,y}=7738040.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=44.66$ $N_{cr,z}=559106.00$ $\lambda^*_z=0.51$ Curva b: $\Phi_z=0.69$ $\chi_z=0.88$

Relazione di calcolo

Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.01+0.03+0.02=0.06
Verifica ZZ: 0.01+0.03+0.02=0.06

- Verifica freccia massima per soli carichi accidentali - CC 21
 $f_{z,G}=0.00$ (L/92278) $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 21
 $f_{z,G}=0.00$ (L/98046)

Asta n. 2001 (-1802 -1803) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_l=0.96$ - Classe 1
Sollecitazioni: $T_y=-16.91$
 $V,Ed=-16.91$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=0.96$ - Classe 1
Sollecitazioni: $T_z=246.22$
 $V,Ed=246.22$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 32 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-1616.36$ $T_z=216.33$ $M_y=-436.01$ $T_y=61.09$ $M_z=-73.05$
Tensioni: $\sigma_N=-30.04$ $\sigma_{m,d}=-169.01$ $\tau=0.00$ $\sigma_{max}=-199.04$ (sfrut=0.08)
Tensioni: $\sigma_N=-30.04$ $\sigma_{m,d}=-4.30$ $\tau=12.08$ $\tau_{max}=12.08$ (sfrut=0.01)
Tensioni: $\sigma_N=-30.04$ $\sigma_{m,d}=-169.01$ $\tau=0.00$ $\sigma_{ID,max}=199.04$ (sfrut=0.08)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 3
Sollecitazioni: $N,Ed=-1616.36$ $M_y,Ed=-700.84$ $M_z,Ed=-73.05$ $L=1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.21$ $M_{cr}=101507.00$ $\lambda_{LT}=0.39$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.55$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.15$ $N_{cr,y}=7551620.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.21$ $N_{cr,z}=545637.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.01+0.05+0.03=0.09
Verifica ZZ: 0.01+0.04+0.03=0.08

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.00$ (L/36929)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.01$ (L/23014)

Asta n. 2001 (-1803 -1804) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_l=1.25$ - Classe 1
Sollecitazioni: $T_y=-13.72$
 $V,Ed=-13.72$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=1.25$ - Classe 1
Sollecitazioni: $T_z=-230.94$
 $V,Ed=-230.94$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 32 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-1547.57$ $T_z=-187.25$ $M_y=-700.57$ $T_y=58.88$ $M_z=-29.44$ $M_x=1.47$
Tensioni: $\sigma_N=-28.76$ $\sigma_{m,d}=-162.33$ $\tau=8.75$ $\sigma_{max}=-191.09$ (sfrut=0.07)
Tensioni: $\sigma_N=-28.76$ $\sigma_{m,d}=1.73$ $\tau=13.76$ $\tau_{max}=13.76$ (sfrut=0.01)
Tensioni: $\sigma_N=-28.76$ $\sigma_{m,d}=-162.33$ $\tau=8.75$ $\sigma_{ID,max}=191.69$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 3
Sollecitazioni: $N,Ed=-1547.57$ $M_y,Ed=-700.57$ $M_z,Ed=60.32$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.30$ $M_{cr}=107346.00$ $\lambda_{LT}=0.38$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.55$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.23$ $N_{cr,y}=7452600.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.51$ $N_{cr,z}=538482.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.01+0.05+0.03=0.08
Verifica ZZ: 0.01+0.04+0.03=0.07

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.00$ (L/42065)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.01$ (L/24592)

Asta n. 2001 (-1804 -1344) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU $X_l=0.94$ - Classe 2

Sollecitazioni: $T_y = -32.33$ $M_x = 1.73$
 $V, Ed = -32.33$ $Vc, Rd, Red = 54534.90$ $V, Ed/Vc, Rd, Red = 0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU $X_l = 0.94$ - Classe 2
 Sollecitazioni: $T_z = -728.88$ $M_x = 1.73$
 $V, Ed = -728.88$ $Vc, Rd, Red = 38731.00$ $V, Ed/Vc, Rd, Red = 0.02$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l = 1.30$ - Classe 3
 Sollecitazioni: $N = -924.62$ $T_z = -462.31$ $M_y = 588.36$ $T_y = -144.94$ $M_z = -119.22$
 Tensioni: $\sigma_N = -17.18$ $\sigma_{m,d} = -253.71$ $\tau = 0.00$ $\sigma_{max} = -270.89$ (sfrut=0.10)
 Tensioni: $\sigma_N = -17.18$ $\sigma_{m,d} = -7.01$ $\tau = 25.82$ $\tau_{max} = 25.82$ (sfrut=0.02)
 Tensioni: $\sigma_N = -17.18$ $\sigma_{m,d} = -253.71$ $\tau = 0.00$ $\sigma_{ID,max} = 270.89$ (sfrut=0.10)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed = -930.05$ $M_y, Ed = 588.36$ $M_z, Ed = -119.22$ $L = 1.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.75$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.69$ $M_{cr} = 108387.00$ $\lambda_{LT} = 0.38$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.55$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 14.00$ $N_{cr,y} = 5687190.00$ $\lambda_y^* = 0.16$ Curva a: $\Phi_y = 0.51$ $\chi_y = 1.00$
 $\lambda_z = 52.10$ $N_{cr,z} = 410924.00$ $\lambda_z^* = 0.60$ Curva b: $\Phi_z = 0.75$ $\chi_z = 0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01 + 0.04 + 0.05 = 0.10$
 Verifica ZZ: $0.01 + 0.03 + 0.05 = 0.09$

- Verifica freccia massima per soli carichi accidentali - CC 23
 $f_{z,g} = 0.01$ (L/20913)

- Verifica freccia massima carichi totali - CC 21
 $f_{z,g} = 0.01$ (L/19419) $f_{z,L} = 0.01$ (L/23641)

Asta n. 2002 (-1336 -1836) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_l = 1.04$ - Classe 1
 Sollecitazioni: $T_y = -9.05$
 $V, Ed = -9.05$ $Vc, Rd = 54683.30$ $V, Ed/Vc, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l = 1.04$ - Classe 1
 Sollecitazioni: $T_z = 278.52$
 $V, Ed = 278.52$ $Vc, Rd = 38836.40$ $V, Ed/Vc, Rd = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 30 SLU $X_l = 0.45$ - Classe 3
 Sollecitazioni: $N = -449.61$ $T_z = 478.50$ $M_y = 760.51$ $T_y = 182.96$ $M_z = -160.52$ $M_x = -1.17$
 Tensioni: $\sigma_N = -8.36$ $\sigma_{m,d} = -335.90$ $\tau = 6.97$ $\sigma_{max} = -344.26$ (sfrut=0.13)
 Tensioni: $\sigma_N = -8.36$ $\sigma_{m,d} = -9.44$ $\tau = 27.77$ $\tau_{max} = 27.77$ (sfrut=0.02)
 Tensioni: $\sigma_N = -8.36$ $\sigma_{m,d} = -335.90$ $\tau = 6.97$ $\sigma_{ID,max} = 344.47$ (sfrut=0.13)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 3
 Sollecitazioni: $N, Ed = -455.13$ $M_y, Ed = 760.51$ $M_z, Ed = -160.52$ $L = 1.76$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.76$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.52$ $M_{cr} = 96263.10$ $\lambda_{LT} = 0.40$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.56$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 14.09$ $N_{cr,y} = 5621880.00$ $\lambda_y^* = 0.16$ Curva a: $\Phi_y = 0.51$ $\chi_y = 1.00$
 $\lambda_z = 52.40$ $N_{cr,z} = 406205.00$ $\lambda_z^* = 0.60$ Curva b: $\Phi_z = 0.75$ $\chi_z = 0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00 + 0.05 + 0.07 = 0.13$
 Verifica ZZ: $0.00 + 0.04 + 0.07 = 0.12$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L} = 0.01$ (L/12017)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L} = 0.01$ (L/13564)

Asta n. 2002 (-1836 -1837) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_l = 0.61$ - Classe 1
 Sollecitazioni: $T_y = -12.11$
 $V, Ed = -12.11$ $Vc, Rd = 54683.30$ $V, Ed/Vc, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l = 0.61$ - Classe 1
 Sollecitazioni: $T_z = 216.88$
 $V, Ed = 216.88$ $Vc, Rd = 38836.40$ $V, Ed/Vc, Rd = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l = 0.00$ - Classe 3
 Sollecitazioni: $N = -1215.22$ $T_z = 204.05$ $M_y = -581.54$ $T_y = 23.35$ $M_z = -13.86$
 Tensioni: $\sigma_N = -22.58$ $\sigma_{m,d} = -121.60$ $\tau = 0.00$ $\sigma_{max} = -144.18$ (sfrut=0.06)
 Tensioni: $\sigma_N = -22.58$ $\sigma_{m,d} = -0.81$ $\tau = 11.39$ $\tau_{max} = 11.39$ (sfrut=0.01)
 Tensioni: $\sigma_N = -22.58$ $\sigma_{m,d} = -121.60$ $\tau = 0.00$ $\sigma_{ID,max} = 144.18$ (sfrut=0.06)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed = -1220.17 \text{ My}, Ed = -581.54 \text{ Mz}, Ed = 21.81 \text{ L} = 1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.52$ Curva b: $\alpha_{imp} = 0.34 \quad k_e = 0.94 \quad \psi = 1.33 \quad M, cr = 110210.00 \quad \lambda_{LT} = 0.37$
 $\lambda_{LT,0} = 0.40 \quad \Phi_{LT} = 0.55 \quad \beta_{LT} = 0.75 \quad f = 0.98 \quad \chi_{LT} = 1.00$
 $\lambda_y = 12.23 \quad N_{cr,y} = 7451970.00 \quad \lambda^*_y = 0.14$ Curva a: $\Phi_y = 0.50 \quad \chi_y = 1.00$
 $\lambda_z = 45.51 \quad N_{cr,z} = 538436.00 \quad \lambda^*_z = 0.52$ Curva b: $\Phi_z = 0.69 \quad \chi_z = 0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01 + 0.04 + 0.01 = 0.06$
 Verifica ZZ: $0.01 + 0.03 + 0.01 = 0.05$

- Verifica freccia massima per soli carichi accidentali - CC 35
 $f_{z,L} = 0.00 \quad (L/59206)$

- Verifica freccia massima carichi totali - CC 23
 $f_{z,G} = 0.00 \quad (L/51566)$

Asta n. 2002 (-1837 -1838) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 1 SLV $X_L = 1.02$ - Classe 1
 Sollecitazioni: $T_y = -13.27$
 $V, Ed = -13.27 \quad V_c, Rd = 54683.30 \quad V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_L = 1.02$ - Classe 1
 Sollecitazioni: $T_z = -317.46$
 $V, Ed = -317.46 \quad V_c, Rd = 38836.40 \quad V, Ed/V_c, Rd = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 32 SLU $X_L = 1.40$ - Classe 3
 Sollecitazioni: $N = -76.10 \quad M_y = -337.67 \quad T_y = 42.64 \quad M_z = 37.20$
 Tensioni: $\sigma_N = -1.41 \quad \sigma_{m,d} = -106.82 \quad \tau = 0.00 \quad \sigma_{max} = -108.23 \quad (sfrut = 0.04)$
 Tensioni: $\sigma_N = -1.41 \quad \sigma_{m,d} = 49.18 \quad \tau = 1.86 \quad \tau_{max} = 1.86 \quad (sfrut = 0.00)$
 Tensioni: $\sigma_N = -1.41 \quad \sigma_{m,d} = -106.82 \quad \tau = 0.00 \quad \sigma_{ID,max} = 108.23 \quad (sfrut = 0.04)$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed = -1249.08 \text{ My}, Ed = -265.31 \text{ Mz}, Ed = 37.31 \text{ L} = 1.40$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.40$ Curva b: $\alpha_{imp} = 0.34 \quad k_e = 0.94 \quad \psi = 1.21 \quad M, cr = 117964.00 \quad \lambda_{LT} = 0.36$
 $\lambda_{LT,0} = 0.40 \quad \Phi_{LT} = 0.54 \quad \beta_{LT} = 0.75 \quad f = 0.98 \quad \chi_{LT} = 1.00$
 $\lambda_y = 11.20 \quad N_{cr,y} = 8885080.00 \quad \lambda^*_y = 0.13$ Curva a: $\Phi_y = 0.50 \quad \chi_y = 1.00$
 $\lambda_z = 41.68 \quad N_{cr,z} = 641985.00 \quad \lambda^*_z = 0.48$ Curva b: $\Phi_z = 0.66 \quad \chi_z = 0.89$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01 + 0.02 + 0.02 = 0.04$
 Verifica ZZ: $0.01 + 0.01 + 0.02 = 0.04$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,G} = 0.00 \quad (L/54221)$

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G} = 0.00 \quad (L/34046)$

Asta n. 2002 (-1838 -1839) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 32 SLU $X_L = 1.42$ - Classe 1
 Sollecitazioni: $T_y = 58.13 \quad M_x = 1.42$
 $V, Ed = 58.13 \quad V_c, Rd, Red = 54561.60 \quad V, Ed/V_c, Rd, Red = 0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 32 SLU $X_L = 1.42$ - Classe 1
 Sollecitazioni: $T_z = -277.23 \quad M_x = 1.42$
 $V, Ed = -277.23 \quad V_c, Rd, Red = 38749.90 \quad V, Ed/V_c, Rd, Red = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_L = 1.56$ - Classe 3
 Sollecitazioni: $N = -1281.61 \quad T_z = -419.18 \quad M_y = 763.54 \quad T_y = 21.71 \quad M_z = 45.78$
 Tensioni: $\sigma_N = -23.82 \quad \sigma_{m,d} = -193.93 \quad \tau = 0.00 \quad \sigma_{max} = -217.75 \quad (sfrut = 0.08)$
 Tensioni: $\sigma_N = -23.82 \quad \sigma_{m,d} = 2.69 \quad \tau = 23.40 \quad \tau_{max} = 23.40 \quad (sfrut = 0.02)$
 Tensioni: $\sigma_N = -23.82 \quad \sigma_{m,d} = -193.93 \quad \tau = 0.00 \quad \sigma_{ID,max} = 217.75 \quad (sfrut = 0.08)$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed = -1281.61 \text{ My}, Ed = 763.54 \text{ Mz}, Ed = 45.78 \text{ L} = 1.56$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.56$ Curva b: $\alpha_{imp} = 0.34 \quad k_e = 0.94 \quad \psi = 1.99 \quad M, cr = 158055.00 \quad \lambda_{LT} = 0.31$
 $\lambda_{LT,0} = 0.40 \quad \Phi_{LT} = 0.52 \quad \beta_{LT} = 0.75 \quad f = 0.98 \quad \chi_{LT} = 1.00$
 $\lambda_y = 12.51 \quad N_{cr,y} = 7129370.00 \quad \lambda^*_y = 0.14$ Curva a: $\Phi_y = 0.50 \quad \chi_y = 1.00$
 $\lambda_z = 46.53 \quad N_{cr,z} = 515127.00 \quad \lambda^*_z = 0.54$ Curva b: $\Phi_z = 0.70 \quad \chi_z = 0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01 + 0.05 + 0.02 = 0.08$
 Verifica ZZ: $0.01 + 0.04 + 0.02 = 0.07$

- Verifica freccia massima per soli carichi accidentali - CC 37

Relazione di calcolo

$f_{z,g}=0.00$ (L/40858)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,g}=0.00$ (L/68097)

Asta n. 2002 (-1839 -1840) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 32 SLU $X_l=0.50$ - Classe 1
Sollecitazioni: $T_y=-214.25$ $M_y=1.28$
 $V, Ed=-214.25$ $V_c, Rd, Red=54573.50$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 32 SLU $X_l=0.50$ - Classe 1
Sollecitazioni: $T_z=-386.70$ $M_z=1.28$
 $V, Ed=-386.70$ $V_c, Rd, Red=38758.40$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=1.37$ - Classe 3
Sollecitazioni: $N=-821.79$ $T_z=-377.86$ $M_y=822.11$ $T_y=-327.78$ $M_z=-290.08$ $M_x=1.01$
Tensioni: $\sigma_N=-15.27$ $\sigma_{m,d}=-507.90$ $\tau=5.97$ $\sigma_{max}=-523.17$ (sfrut=0.20)
Tensioni: $\sigma_N=-15.27$ $\sigma_{m,d}=-17.06$ $\tau=22.26$ $\tau_{max}=22.26$ (sfrut=0.01)
Tensioni: $\sigma_N=-15.27$ $\sigma_{m,d}=-507.90$ $\tau=5.97$ $\sigma_{ID,max}=523.28$ (sfrut=0.20)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-821.79$ $M_y, Ed=822.11$ $M_z, Ed=-290.08$ $L=1.60$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.60$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.35$ $M_{cr}=102268.00$ $\lambda_{LT}=0.39$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.55$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.83$ $N_{cr,y}=6776460.00$ $\lambda^*_y=0.15$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=47.73$ $N_{cr,z}=489628.00$ $\lambda^*_z=0.55$ Curva b: $\Phi_z=0.71$ $\chi_z=0.86$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.05+0.13=0.19$
Verifica ZZ: $0.01+0.04+0.13=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,g}=0.00$ (L/41174)

- Verifica freccia massima carichi totali - CC 23
 $f_{z,L}=0.01$ (L/14856)

Asta n. 2002 (-1840 -1841) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_l=1.30$ - Classe 1
Sollecitazioni: $T_y=51.26$
 $V, Ed=51.26$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=1.30$ - Classe 1
Sollecitazioni: $T_z=1180.43$
 $V, Ed=1180.43$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.03$

- Verifica in termini tensionali [4.2.4] - CC 30 SLU $X_l=0.22$ - Classe 3
Sollecitazioni: $N=26.17$ $T_z=540.98$ $M_y=736.94$ $T_y=394.32$ $M_z=-325.14$
Tensioni: $\sigma_N=0.49$ $\sigma_{m,d}=536.17$ $\tau=0.00$ $\sigma_{max}=536.66$ (sfrut=0.20)
Tensioni: $\sigma_N=0.49$ $\sigma_{m,d}=-19.12$ $\tau=30.24$ $\tau_{max}=30.24$ (sfrut=0.02)
Tensioni: $\sigma_N=0.49$ $\sigma_{m,d}=536.17$ $\tau=0.00$ $\sigma_{ID,max}=536.66$ (sfrut=0.20)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 3
Sollecitazioni: $M_y, Ed=736.94$ $M_z, Ed=-325.14$ $L=1.54$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.54$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.65$ $M_{cr}=133246.00$ $\lambda_{LT}=0.34$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.39$ $N_{cr,y}=7259660.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=46.11$ $N_{cr,z}=524541.00$ $\lambda^*_z=0.53$ Curva b: $\Phi_z=0.70$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.05+0.15=0.19$
Verifica ZZ: $0.00+0.04+0.15=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.01$ (L/18707)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.01$ (L/13706)

Asta n. 2002 (-1841 -120) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 1 SLV $X_l=0.68$ - Classe 1
Sollecitazioni: $T_y=10.93$
 $V, Ed=10.93$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.68$ - Classe 1
Sollecitazioni: $T_z=972.86$

- V,Ed=972.86 Vc,Rd=38836.40 V,Ed/Vc,Rd=0.03
- Verifica in termini tensionali [4.2.4] - CC 9 SLV Xl=1.25 - Classe 3
Sollecitazioni: N=937.81 Tz=1103.31 My=-1416.96 Ty=29.16 Mz=41.06
Tensioni: $\sigma_N=17.43$ $\sigma_{m,d}=305.36$ $\tau=0.00$ $\sigma_{max}=322.79$ (sfrut=0.12)
Tensioni: $\sigma_N=17.43$ $\sigma_{m,d}=2.41$ $\tau=61.60$ $\tau_{max}=61.60$ (sfrut=0.04)
Tensioni: $\sigma_N=17.43$ $\sigma_{m,d}=305.36$ $\tau=0.00$ $\sigma_{ID,max}=322.79$ (sfrut=0.12)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: N,Ed=-583.90 My,Ed=-1416.96 Mz,Ed=41.06 L=1.54
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
L_{cr}=1.54 Curva b: $\alpha_{imp}=0.34$ k_c=0.94 $\psi=1.74$ M_{cr}=140427.00 $\lambda_{LT}=0.33$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ f=0.98 $\chi_{LT}=1.00$
 $\lambda_y=12.39$ N_{cr,y}=7259670.00 $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=46.11$ N_{cr,z}=524542.00 $\lambda^*_z=0.53$ Curva b: $\Phi_z=0.70$ $\chi_z=0.87$
K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.00+0.09+0.02=0.11
Verifica ZZ: 0.00+0.07+0.02=0.10
 - Verifica freccia massima per soli carichi accidentali - CC 37
f_{z,g}=0.00 (L/31852)
 - Verifica freccia massima carichi totali - CC 37
f_{z,g}=0.01 (L/22134)
- Asta n. 2003 (-1568 -1340) - Sez. 5 (IPE300) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU Xl=0.48 - Classe 1
Sollecitazioni: Ty=110.29 Mx=-2.92
V,Ed=110.29 Vc,Rd,Red=54432.00 V,Ed/Vc,Rd,Red=0.00
 - Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU Xl=0.48 - Classe 1
Sollecitazioni: Tz=-4325.94 Mx=-2.92
V,Ed=-4325.94 Vc,Rd,Red=38657.90 V,Ed/Vc,Rd,Red=0.11
 - Verifica in termini tensionali [4.2.4] - CC 33 SLU Xl=1.31 - Classe 3
Sollecitazioni: N=-1534.38 Tz=-4371.46 My=5175.97 Ty=110.29 Mz=92.37 Mx=-2.92
Tensioni: $\sigma_N=-28.51$ $\sigma_{m,d}=-1043.85$ $\tau=17.34$ $\sigma_{max}=-1072.36$ (sfrut=0.41)
Tensioni: $\sigma_N=-28.51$ $\sigma_{m,d}=5.43$ $\tau=244.72$ $\tau_{max}=244.72$ (sfrut=0.16)
Tensioni: $\sigma_N=-28.51$ $\sigma_{m,d}=-1043.85$ $\tau=17.34$ $\sigma_{ID,max}=1072.79$ (sfrut=0.41)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: N,Ed=-1539.90 My,Ed=5175.97 Mz,Ed=92.37 L=1.76
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
L_{cr}=1.76 Curva b: $\alpha_{imp}=0.34$ k_c=0.94 $\psi=1.85$ M_{cr}=117602.00 $\lambda_{LT}=0.36$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.54$ $\beta_{LT}=0.75$ f=0.98 $\chi_{LT}=1.00$
 $\lambda_y=14.09$ N_{cr,y}=5621880.00 $\lambda^*_y=0.16$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=52.40$ N_{cr,z}=406205.00 $\lambda^*_z=0.60$ Curva b: $\Phi_z=0.75$ $\chi_z=0.84$
K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.01+0.34+0.04=0.39
Verifica ZZ: 0.01+0.27+0.04=0.32
 - Verifica freccia massima per soli carichi accidentali - CC 38
f_{z,g}=0.04 (L/3450)
 - Verifica freccia massima carichi totali - CC 38
f_{z,g}=0.05 (L/2878)
- Asta n. 2003 (-1580 -1568) - Sez. 5 (IPE300) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU Xl=1.11 - Classe 1
Sollecitazioni: Ty=25.28
V,Ed=25.28 Vc,Rd=54683.30 V,Ed/Vc,Rd=0.00
 - Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU Xl=1.11 - Classe 1
Sollecitazioni: Tz=-1747.77
V,Ed=-1747.77 Vc,Rd=38836.40 V,Ed/Vc,Rd=0.05
 - Verifica in termini tensionali [4.2.4] - CC 33 SLU Xl=0.00 - Classe 3
Sollecitazioni: N=-1756.31 Tz=-1716.78 My=-3169.36 Ty=8.86 Mz=-15.12
Tensioni: $\sigma_N=-32.64$ $\sigma_{m,d}=-587.70$ $\tau=0.00$ $\sigma_{max}=-620.34$ (sfrut=0.24)
Tensioni: $\sigma_N=-32.64$ $\sigma_{m,d}=-0.89$ $\tau=95.86$ $\tau_{max}=95.86$ (sfrut=0.06)
Tensioni: $\sigma_N=-32.64$ $\sigma_{m,d}=-587.70$ $\tau=0.00$ $\sigma_{ID,max}=620.34$ (sfrut=0.24)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: N,Ed=-1756.31 My,Ed=-3169.36 Mz,Ed=-15.12 L=1.52
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
L_{cr}=1.52 Curva b: $\alpha_{imp}=0.34$ k_c=0.94 $\psi=1.60$ M_{cr}=131849.00 $\lambda_{LT}=0.34$

$\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.23$ Ncr,y=7451930.00 $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.51$ Ncr,z=538433.00 $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.01+0.21+0.01=0.23
 Verifica ZZ: 0.01+0.17+0.01=0.18

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/9403)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.02$ (L/6471)

Asta n. 2003 (-1394 -1580) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 1 SLV Xl=0.38 - Classe 1
 Sollecitazioni: $T_y=-13.19$
 $V,Ed=-13.19$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV Xl=0.38 - Classe 1
 Sollecitazioni: $T_z=308.70$
 $V,Ed=308.70$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU Xl=1.40 - Classe 3
 Sollecitazioni: $N=-1913.11$ $T_z=162.78$ $M_y=-3169.12$ $T_y=41.56$ $M_z=22.19$
 Tensioni: $\sigma_N=-35.55$ $\sigma_{m,d}=-596.43$ $\tau=0.00$ $\sigma_{max}=-631.98$ (sfrut=0.24)
 Tensioni: $\sigma_N=-35.55$ $\sigma_{m,d}=1.30$ $\tau=9.09$ $\tau_{max}=9.09$ (sfrut=0.01)
 Tensioni: $\sigma_N=-35.55$ $\sigma_{m,d}=-596.43$ $\tau=0.00$ $\sigma_{TD,max}=631.98$ (sfrut=0.24)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N,Ed=-1919.00$ $M_y,Ed=-3169.12$ $M_z,Ed=-35.84$ $L=1.40$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.40$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.04$ $M_{cr}=101748.00$ $\lambda_{LT}=0.39$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.55$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=11.20$ Ncr,y=8885140.00 $\lambda^*_y=0.13$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=41.68$ Ncr,z=641989.00 $\lambda^*_z=0.48$ Curva b: $\Phi_z=0.66$ $\chi_z=0.89$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.01+0.21+0.02=0.24
 Verifica ZZ: 0.01+0.17+0.02=0.20

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/6624)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/4863)

Asta n. 2003 (-1393 -1394) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 1 SLV Xl=0.00 - Classe 1
 Sollecitazioni: $T_y=-17.25$
 $V,Ed=-17.25$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV Xl=0.00 - Classe 1
 Sollecitazioni: $T_z=704.81$
 $V,Ed=704.81$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.02$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU Xl=1.56 - Classe 3
 Sollecitazioni: $N=-2055.66$ $T_z=1859.93$ $M_y=-2888.69$ $T_y=43.74$ $M_z=-8.63$
 Tensioni: $\sigma_N=-38.20$ $\sigma_{m,d}=-529.25$ $\tau=0.00$ $\sigma_{max}=-567.45$ (sfrut=0.22)
 Tensioni: $\sigma_N=-38.20$ $\sigma_{m,d}=-0.51$ $\tau=103.85$ $\tau_{max}=103.85$ (sfrut=0.07)
 Tensioni: $\sigma_N=-38.20$ $\sigma_{m,d}=-529.25$ $\tau=0.00$ $\sigma_{TD,max}=567.45$ (sfrut=0.22)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N,Ed=-2062.24$ $M_y,Ed=-2888.69$ $M_z,Ed=-76.80$ $L=1.56$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.56$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.78$ $M_{cr}=140962.00$ $\lambda_{LT}=0.33$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.51$ Ncr,y=7129370.00 $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=46.53$ Ncr,z=515127.00 $\lambda^*_z=0.54$ Curva b: $\Phi_z=0.70$ $\chi_z=0.87$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.96, 0.76, 0.96
 Verifica YY: 0.01+0.19+0.03=0.24
 Verifica ZZ: 0.01+0.15+0.03=0.20

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.01$ (L/11271)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.02$ (L/9613)

Relazione di calcolo

Asta n. 2003 (-1395 -1393) - Sez. 5 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 3 SLV $X_l=1.10$ - Classe 1
Sollecitazioni: $T_y=-99.56$
 $V, Ed=-99.56$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 3 SLV $X_l=1.10$ - Classe 1
Sollecitazioni: $T_z=1118.87$
 $V, Ed=1118.87$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.03$
 - Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.22$ - Classe 3
Sollecitazioni: $N=-2204.27$ $T_z=4024.25$ $M_y=5555.35$ $T_y=-223.47$ $M_z=186.66$ $M_x=2.81$
Tensioni: $\sigma_N=-40.96$ $\sigma_{m,d}=-1229.08$ $\tau=16.68$ $\sigma_{max}=-1270.04$ (sfrut=0.48)
Tensioni: $\sigma_N=-40.96$ $\sigma_{m,d}=10.97$ $\tau=225.37$ $\tau_{max}=225.37$ (sfrut=0.15)
Tensioni: $\sigma_N=-40.96$ $\sigma_{m,d}=-1229.08$ $\tau=16.68$ $\sigma_{ID,max}=1270.37$ (sfrut=0.49)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-2204.27$ $M_y, Ed=5555.35$ $M_z, Ed=186.66$ $L=1.60$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.60$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.74$ $M_{cr}=131190.00$ $\lambda_{LT}=0.34$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.83$ $N_{cr,y}=6776460.00$ $\lambda^*_y=0.15$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=47.73$ $N_{cr,z}=489628.00$ $\lambda^*_z=0.55$ Curva b: $\Phi_z=0.71$ $\chi_z=0.86$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.36+0.08=0.46$
Verifica ZZ: $0.02+0.29+0.08=0.39$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.03$ (L/4852)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.05$ (L/2983)

Asta n. 2003 (-1392 -1395) - Sez. 5 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 11 SLV $X_l=0.36$ - Classe 1
Sollecitazioni: $T_y=75.89$
 $V, Ed=75.89$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 11 SLV $X_l=0.36$ - Classe 1
Sollecitazioni: $T_z=-1361.53$
 $V, Ed=-1361.53$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.04$
 - Verifica in termini tensionali [4.2.4] - CC 32 SLU $X_l=1.32$ - Classe 3
Sollecitazioni: $N=-107.08$ $T_z=-2233.44$ $M_y=2832.29$ $T_y=291.07$ $M_z=237.18$ $M_x=-1.07$
Tensioni: $\sigma_N=-1.99$ $\sigma_{m,d}=-803.03$ $\tau=6.36$ $\sigma_{max}=-805.02$ (sfrut=0.31)
Tensioni: $\sigma_N=-1.99$ $\sigma_{m,d}=13.95$ $\tau=124.92$ $\tau_{max}=124.92$ (sfrut=0.08)
Tensioni: $\sigma_N=-1.99$ $\sigma_{m,d}=-803.03$ $\tau=6.36$ $\sigma_{ID,max}=805.10$ (sfrut=0.31)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 3
Sollecitazioni: $N, Ed=-112.65$ $M_y, Ed=2832.29$ $M_z, Ed=237.18$ $L=1.54$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.54$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.78$ $M_{cr}=143185.00$ $\lambda_{LT}=0.33$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.39$ $N_{cr,y}=7259670.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=46.11$ $N_{cr,z}=524542.00$ $\lambda^*_z=0.53$ Curva b: $\Phi_z=0.70$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.18+0.11=0.29$
Verifica ZZ: $0.00+0.15+0.11=0.26$
 - Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,g}=0.01$ (L/9417)
 - Verifica freccia massima carichi totali - CC 37
 $f_{z,g}=0.02$ (L/6887)

Asta n. 2003 (-128 -1392) - Sez. 5 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_l=0.30$ - Classe 1
Sollecitazioni: $T_y=-18.53$
 $V, Ed=-18.53$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=0.30$ - Classe 1
Sollecitazioni: $T_z=-1113.12$
 $V, Ed=-1113.12$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.03$
 - Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.30$ - Classe 3
Sollecitazioni: $N=791.46$ $T_z=-1113.12$ $M_y=-1383.18$ $T_y=23.86$ $M_z=-34.70$
Tensioni: $\sigma_N=14.71$ $\sigma_{m,d}=291.39$ $\tau=0.00$ $\sigma_{max}=306.10$ (sfrut=0.12)

Tensioni: $\sigma_N=14.71$ $\sigma_{m,d}=-2.04$ $\tau=62.15$ $\tau_{max}=62.15$ (sfrut=0.04)
Tensioni: $\sigma_N=14.71$ $\sigma_{m,d}=291.39$ $\tau=0.00$ $\sigma_{ID,max}=306.10$ (sfrut=0.12)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-607.35$ $M_y, Ed=-1383.18$ $M_z, Ed=-34.70$ $L=1.54$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.54$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.68$ $M_{cr}=135277.00$ $\lambda_{LT}=0.34$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.39$ $N_{cr,y}=7259660.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=46.11$ $N_{cr,z}=524541.00$ $\lambda^*_z=0.53$ Curva b: $\Phi_z=0.70$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.09+0.02=0.11$
Verifica ZZ: $0.00+0.07+0.02=0.09$

- Verifica freccia massima per soli carichi accidentali - CC 21
 $f_{z,g}=0.00$ (L/35296)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.01$ (L/24184)

Asta n. 2004 (-1569 -1493) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1=1.76$ - Classe 1
Sollecitazioni: $T_y=19.85$
 $V, Ed=19.85$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1=1.76$ - Classe 1
Sollecitazioni: $T_z=-510.45$
 $V, Ed=-510.45$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.02$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $N=26.93$ $T_z=-459.58$ $M_y=-845.92$ $T_y=19.85$ $M_z=-14.19$
 $N, Ed=26.93$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-845.92$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.15$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-14.19$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^1 = 0.15$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y, Ed=-845.92$ $M_z, Ed=20.64$ $L=1.76$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.76$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.76$ $M_{cr}=20126.20$ $\lambda_{LT}=0.55$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.64$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=21.25$ $N_{cr,y}=1307340.00$ $\lambda^*_y=0.24$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=78.51$ $N_{cr,z}=95781.40$ $\lambda^*_z=0.90$ Curva b: $\Phi_z=1.03$ $\chi_z=0.66$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.14+0.01=0.15$
Verifica ZZ: $0.00+0.09+0.02=0.10$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/7865)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/5917)

Asta n. 2004 (-1581 -1569) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU $X_1=1.52$ - Classe 1
Sollecitazioni: $T_y=24.06$
 $V, Ed=24.06$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU $X_1=1.52$ - Classe 1
Sollecitazioni: $T_z=-123.50$
 $V, Ed=-123.50$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.01$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $N=-12.62$ $T_z=-42.10$ $M_y=-943.45$ $T_y=18.33$ $M_z=-13.64$
 $N, Ed=-12.62$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-943.45$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.16$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-13.64$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^1 = 0.16$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-12.62$ $M_y, Ed=-943.45$ $M_z, Ed=14.30$ $L=1.52$

$\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.05$ $M_{cr}=15218.30$ $\lambda_{LT}=0.63$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.69$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.93$
 $\lambda_y=18.46$ $N_{cr,y}=1732910.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.19$ $N_{cr,z}=126960.00$ $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.17+0.01=0.17$
Verifica ZZ: $0.00+0.10+0.01=0.11$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.03$ (L/4633)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.04$ (L/3475)

Asta n. 2004 (-1489 -1581) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=22.99$
 $V, Ed=22.99$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=228.41$
 $V, Ed=228.41$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.01$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=1.40$ - Classe 1
Sollecitazioni: $N=-34.15$ $T_z=187.94$ $M_y=-943.58$ $T_y=22.99$ $M_z=13.90$
 $N, Ed=-34.15$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-943.58$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.16$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=13.90$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.16$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-37.27$ $M_y, Ed=-943.58$ $M_z, Ed=-18.21$ $L=1.40$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.40$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.17$ $M_{cr}=19675.90$ $\lambda_{LT}=0.56$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.64$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=16.90$ $N_{cr,y}=2066200.00$ $\lambda^*_y=0.19$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=62.45$ $N_{cr,z}=151378.00$ $\lambda^*_z=0.72$ Curva b: $\Phi_z=0.85$ $\chi_z=0.77$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.16+0.01=0.17$
Verifica ZZ: $0.00+0.10+0.01=0.11$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/5809)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/4318)

Asta n. 2004 (-1490 -1489) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=4.14$
 $V, Ed=4.14$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=426.99$
 $V, Ed=426.99$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.02$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=1.56$ - Classe 1
Sollecitazioni: $N=-51.49$ $T_z=381.82$ $M_y=-653.00$ $T_y=4.14$ $M_z=-1.27$
 $N, Ed=-51.49$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-653.00$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.11$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-1.27$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.11$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 1
Sollecitazioni: $N, Ed=-49.15$ $M_y, Ed=-648.37$ $M_z, Ed=-9.00$ $L=1.56$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.56$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.63$ $M_{cr}=22718.60$ $\lambda_{LT}=0.52$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.62$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.98$
 $\lambda_y=18.87$ $N_{cr,y}=1657900.00$ $\lambda^*_y=0.22$ Curva a: $\Phi_y=0.53$ $\chi_y=1.00$
 $\lambda_z=69.72$ $N_{cr,z}=121465.00$ $\lambda^*_z=0.80$ Curva b: $\Phi_z=0.92$ $\chi_z=0.72$

Relazione di calcolo

- Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
Verifica YY: 0.00+0.11+0.00=0.11
Verifica ZZ: 0.00+0.07+0.01=0.07
- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.02$ (L/10343)
- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.02$ (L/8338)
- Asta n. 2004 (-1488 -1490) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_y=-34.38$
 $V, Ed=-34.38$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=435.68$
 $V, Ed=435.68$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.02$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $N=-56.79$ $T_z=426.43$ $M_y=622.04$ $T_y=-40.25$ $M_z=36.43$
 $N, Ed=-56.79$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=622.04$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.11$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=36.43$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.03$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.11$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-56.79$ $M_y, Ed=622.04$ $M_z, Ed=36.43$ $L=1.60$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.60$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.79$ $M, cr=23926.20$ $\lambda_{LT}=0.50$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.61$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.98$
 $\lambda_y=19.36$ $N_{cr,y}=1575840.00$ $\lambda^*_y=0.22$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=71.51$ $N_{cr,z}=115452.00$ $\lambda^*_z=0.82$ Curva b: $\Phi_z=0.95$ $\chi_z=0.71$
Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
Verifica YY: 0.00+0.10+0.02=0.12
Verifica ZZ: 0.00+0.06+0.03=0.09
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G}=0.01$ (L/14327)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.02$ (L/9160)
- Asta n. 2004 (-1491 -1488) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1=1.54$ - Classe 1
Sollecitazioni: $T_y=60.49$
 $V, Ed=60.49$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1=1.54$ - Classe 1
Sollecitazioni: $T_z=-481.39$
 $V, Ed=-481.39$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.02$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1=1.54$ - Classe 1
Sollecitazioni: $N=7.98$ $T_z=-481.39$ $M_y=621.53$ $T_y=60.49$ $M_z=51.28$
 $N, Ed=7.98$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=621.53$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.11$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=51.28$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.04$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.11$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y, Ed=621.53$ $M_z, Ed=51.28$ $L=1.54$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.54$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.90$ $M, cr=26987.80$ $\lambda_{LT}=0.48$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.60$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.99$
 $\lambda_y=18.70$ $N_{cr,y}=1688200.00$ $\lambda^*_y=0.22$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=69.09$ $N_{cr,z}=123685.00$ $\lambda^*_z=0.80$ Curva b: $\Phi_z=0.92$ $\chi_z=0.73$
Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
Verifica YY: 0.00+0.10+0.02=0.13
Verifica ZZ: 0.00+0.06+0.04=0.10
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G}=0.01$ (L/17229)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.01$ (L/11651)

Asta n. 2004 (-1492 -1491) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=21.86$
 $V, Ed=21.86$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=80.31$
 $V, Ed=80.31$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.00$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 30 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-32.28$ $T_z=62.71$ $M_y=1.18$ $T_y=29.32$ $M_z=-30.18$
 $N, Ed=-32.28$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1.18$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.00$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-30.18$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.03$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^3 = 0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 1
 Sollecitazioni: $N, Ed=-34.88$ $M_y, Ed=-79.77$ $M_z, Ed=-29.08$ $L=1.54$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.54$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.77$ $M, cr=25075.60$ $\lambda_{LT}=0.49$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.61$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.99$
 $\lambda_y=18.70$ $N_{cr,y}=1688200.00$ $\lambda^*_y=0.22$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=69.09$ $N_{cr,z}=123685.00$ $\lambda^*_z=0.80$ Curva b: $\Phi_z=0.92$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.57, 0.95$
 Verifica YY: $0.00+0.01+0.01=0.03$
 Verifica ZZ: $0.00+0.01+0.02=0.03$

- Verifica freccia massima per soli carichi accidentali - CC 21
 $f_{z,g}=0.00$ (L/73618) $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 21
 $f_{z,g}=0.00$ (L/67483) $f_{z,L}=0.00$

Asta n. 2005 (-1570 -1501) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_l=0.48$ - Classe 1
 Sollecitazioni: $T_y=11.57$
 $V, Ed=11.57$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=0.48$ - Classe 1
 Sollecitazioni: $T_z=-1218.81$
 $V, Ed=-1218.81$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.03$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=1.31$ - Classe 3
 Sollecitazioni: $N=-1933.84$ $T_z=-6126.32$ $M_y=7464.01$ $T_y=75.52$ $M_z=66.12$
 Tensioni: $\sigma_N=-35.94$ $\sigma_{m,d}=-1421.96$ $\tau=0.00$ $\sigma_{max}=-1457.90$ (sfrut=0.56)
 Tensioni: $\sigma_N=-35.94$ $\sigma_{m,d}=3.89$ $\tau=342.06$ $\tau_{max}=342.06$ (sfrut=0.23)
 Tensioni: $\sigma_N=-35.94$ $\sigma_{m,d}=-1421.96$ $\tau=0.00$ $\sigma_{TD,max}=1457.90$ (sfrut=0.56)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed=-1939.35$ $M_y, Ed=7464.01$ $M_z, Ed=66.12$ $L=1.76$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.76$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.82$ $M, cr=115627.00$ $\lambda_{LT}=0.36$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.54$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=14.09$ $N_{cr,y}=5621880.00$ $\lambda^*_y=0.16$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=52.40$ $N_{cr,z}=406205.00$ $\lambda^*_z=0.60$ Curva b: $\Phi_z=0.75$ $\chi_z=0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.01+0.49+0.03=0.53$
 Verifica ZZ: $0.01+0.39+0.03=0.43$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.05$ (L/2420)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.07$ (L/1965)

Asta n. 2005 (-1582 -1570) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.83$ - Classe 1
 Sollecitazioni: $T_y=27.42$
 $V, Ed=27.42$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.83$ - Classe 1
Sollecitazioni: $T_z=-2655.73$
 $V, Ed=-2655.73$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.07$
- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-2186.60$ $T_z=-2610.20$ $M_y=-4536.49$ $T_y=27.42$ $M_z=-22.67$
Tensioni: $\sigma_N=-40.63$ $\sigma_{m,d}=-842.48$ $\tau=0.00$ $\sigma_{max}=-883.11$ (sfrut=0.34)
Tensioni: $\sigma_N=-40.63$ $\sigma_{m,d}=-1.33$ $\tau=145.74$ $\tau_{max}=145.74$ (sfrut=0.10)
Tensioni: $\sigma_N=-40.63$ $\sigma_{m,d}=-842.48$ $\tau=0.00$ $\sigma_{ID,max}=883.11$ (sfrut=0.34)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-2186.60$ $M_y, Ed=-4536.49$ $M_z, Ed=-22.67$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.64$ $M_{cr}=135487.00$ $\lambda_{LT}=0.34$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.23$ $N_{cr,y}=7451930.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.51$ $N_{cr,z}=538433.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.30+0.01=0.32$
Verifica ZZ: $0.02+0.24+0.01=0.26$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/6551)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/4687)

Asta n. 2005 (-1400 -1582) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 3 SLV $X_l=0.89$ - Classe 1
Sollecitazioni: $T_y=15.66$
 $V, Ed=15.66$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 3 SLV $X_l=0.89$ - Classe 1
Sollecitazioni: $T_z=273.68$
 $V, Ed=273.68$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$
- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=1.40$ - Classe 3
Sollecitazioni: $N=-2383.18$ $T_z=159.34$ $M_y=-4536.25$ $T_y=50.82$ $M_z=28.98$
Tensioni: $\sigma_N=-44.29$ $\sigma_{m,d}=-850.27$ $\tau=0.00$ $\sigma_{max}=-894.56$ (sfrut=0.34)
Tensioni: $\sigma_N=-44.29$ $\sigma_{m,d}=1.70$ $\tau=8.90$ $\tau_{max}=8.90$ (sfrut=0.01)
Tensioni: $\sigma_N=-44.29$ $\sigma_{m,d}=-850.27$ $\tau=0.00$ $\sigma_{ID,max}=894.56$ (sfrut=0.34)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-2389.07$ $M_y, Ed=-4536.25$ $M_z, Ed=-41.98$ $L=1.40$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.40$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.03$ $M_{cr}=100408.00$ $\lambda_{LT}=0.39$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.56$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=11.20$ $N_{cr,y}=8885140.00$ $\lambda^*_y=0.13$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=41.68$ $N_{cr,z}=641989.00$ $\lambda^*_z=0.48$ Curva b: $\Phi_z=0.66$ $\chi_z=0.89$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.30+0.02=0.33$
Verifica ZZ: $0.02+0.24+0.02=0.27$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.03$ (L/4518)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.04$ (L/3373)

Asta n. 2005 (-1399 -1400) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_l=1.56$ - Classe 1
Sollecitazioni: $T_y=-1.66$
 $V, Ed=-1.66$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=1.56$ - Classe 1
Sollecitazioni: $T_z=756.63$
 $V, Ed=756.63$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.02$
- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=1.56$ - Classe 3
Sollecitazioni: $N=-2559.08$ $T_z=2657.02$ $M_y=-4260.49$ $T_y=48.75$ $M_z=1.34$
Tensioni: $\sigma_N=-47.55$ $\sigma_{m,d}=-766.44$ $\tau=0.00$ $\sigma_{max}=-813.99$ (sfrut=0.31)
Tensioni: $\sigma_N=-47.55$ $\sigma_{m,d}=0.08$ $\tau=148.35$ $\tau_{max}=148.35$ (sfrut=0.10)
Tensioni: $\sigma_N=-47.55$ $\sigma_{m,d}=-766.44$ $\tau=0.00$ $\sigma_{ID,max}=813.99$ (sfrut=0.31)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-2565.66$ $M_y, Ed=-4260.49$ $M_z, Ed=-74.64$ $L=1.56$

$\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.56$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.74$ $M_{cr}=137708.00$ $\lambda_{LT}=0.33$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.51$ $N_{cr,y}=7129370.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=46.53$ $N_{cr,z}=515127.00$ $\lambda^*_z=0.54$ Curva b: $\Phi_z=0.70$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.28+0.03=0.33$
Verifica ZZ: $0.02+0.22+0.03=0.27$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.02$ (L/7819)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.02$ (L/6359)

Asta n. 2005 (-1401 -1399) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 1 SLV $X_1=1.22$ - Classe 1
Sollecitazioni: $T_y=-35.79$
 $V, Ed=-35.79$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_1=1.22$ - Classe 1
Sollecitazioni: $T_z=1412.17$
 $V, Ed=1412.17$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.04$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=0.22$ - Classe 3
Sollecitazioni: $N=-2760.75$ $T_z=5538.95$ $M_y=7507.88$ $T_y=-147.87$ $M_z=130.83$
Tensioni: $\sigma_N=-51.30$ $\sigma_{m,d}=-1510.21$ $\tau=0.00$ $\sigma_{max}=-1561.52$ (sfrut=0.60)
Tensioni: $\sigma_N=-51.30$ $\sigma_{m,d}=7.69$ $\tau=309.27$ $\tau_{max}=309.27$ (sfrut=0.20)
Tensioni: $\sigma_N=-51.30$ $\sigma_{m,d}=-1510.21$ $\tau=0.00$ $\sigma_{ID,max}=1561.52$ (sfrut=0.60)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-2760.75$ $M_y, Ed=7507.88$ $M_z, Ed=130.83$ $L=1.60$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.60$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.76$ $M_{cr}=132836.00$ $\lambda_{LT}=0.34$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.83$ $N_{cr,y}=6776460.00$ $\lambda^*_y=0.15$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=47.73$ $N_{cr,z}=489628.00$ $\lambda^*_z=0.55$ Curva b: $\Phi_z=0.71$ $\chi_z=0.86$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.49+0.06=0.57$
Verifica ZZ: $0.02+0.39+0.06=0.47$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G}=0.04$ (L/3398)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.06$ (L/2230)

Asta n. 2005 (-1398 -1401) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_1=0.60$ - Classe 1
Sollecitazioni: $T_y=42.15$
 $V, Ed=42.15$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_1=0.60$ - Classe 1
Sollecitazioni: $T_z=-1665.49$
 $V, Ed=-1665.49$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.04$

- Verifica in termini tensionali [4.2.4] - CC 32 SLU $X_1=1.32$ - Classe 3
Sollecitazioni: $N=-275.84$ $T_z=-2947.73$ $M_y=3883.00$ $T_y=192.45$ $M_z=168.19$
Tensioni: $\sigma_N=-5.13$ $\sigma_{m,d}=-905.94$ $\tau=0.00$ $\sigma_{max}=-911.07$ (sfrut=0.35)
Tensioni: $\sigma_N=-5.13$ $\sigma_{m,d}=9.89$ $\tau=164.59$ $\tau_{max}=164.59$ (sfrut=0.11)
Tensioni: $\sigma_N=-5.13$ $\sigma_{m,d}=-905.94$ $\tau=0.00$ $\sigma_{ID,max}=911.07$ (sfrut=0.35)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 3
Sollecitazioni: $N, Ed=-281.42$ $M_y, Ed=3883.00$ $M_z, Ed=168.19$ $L=1.54$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.54$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.74$ $M_{cr}=140270.00$ $\lambda_{LT}=0.33$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.39$ $N_{cr,y}=7259670.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=46.11$ $N_{cr,z}=524542.00$ $\lambda^*_z=0.53$ Curva b: $\Phi_z=0.70$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.25+0.08=0.33$
Verifica ZZ: $0.00+0.20+0.08=0.28$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,G}=0.02$ (L/6264)

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 37
 $f_{z,g}=0.03$ (L/5070)

Asta n. 2005 (-129 -1398) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_l=0.87$ - Classe 1
Sollecitazioni: $T_y=-66.36$
 $V,Ed=-66.36$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=0.87$ - Classe 1
Sollecitazioni: $T_z=-1168.52$
 $V,Ed=-1168.52$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.03$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.30$ - Classe 3
Sollecitazioni: $N=-633.04$ $T_z=-1144.68$ $M_y=-1365.91$ $T_y=99.35$ $M_z=-83.57$
Tensioni: $\sigma_N=-11.76$ $\sigma_{m,d}=-349.00$ $\tau=0.00$ $\sigma_{max}=-360.76$ (sfrut=0.14)
Tensioni: $\sigma_N=-11.76$ $\sigma_{m,d}=-4.91$ $\tau=63.91$ $\tau_{max}=63.91$ (sfrut=0.04)
Tensioni: $\sigma_N=-11.76$ $\sigma_{m,d}=-349.00$ $\tau=0.00$ $\sigma_{ID,max}=360.76$ (sfrut=0.14)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N,Ed=-633.04$ $M_y,Ed=-1365.91$ $M_z,Ed=-83.57$ $L=1.54$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $L_{cr}=1.54$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.65$ $M_{cr}=133345.00$ $\lambda_{LT}=0.34$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.39$ $N_{cr,y}=7259660.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=46.11$ $N_{cr,z}=524541.00$ $\lambda^*_z=0.53$ Curva b: $\Phi_z=0.70$ $\chi_z=0.87$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.95$, 0.95 , 0.76 , 0.95
Verifica YY: $0.00+0.09+0.04=0.13$
Verifica ZZ: $0.00+0.07+0.04=0.11$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.01$ (L/19787)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.01$ (L/18138)

Asta n. 2006 (-1510 -1832) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-43.97$
 $V,Ed=-43.97$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=90.09$
 $V,Ed=90.09$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.00$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 30 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-124.01$ $T_z=66.23$ $M_y=2.82$ $T_y=-48.13$ $M_z=52.37$
 $N,Ed=-124.01$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=2.82$ $M_y,V,c,Rd=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_y,Ed/M_{Ny,c,Rd}=0.00$
Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=52.37$ $M_z,V,c,Rd=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_z,Ed/M_{Nz,c,Rd}=0.04$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/M_{Ny,c,Rd})^2 + (M_z,Ed/M_{Nz,c,Rd})^1 = 0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 1
Sollecitazioni: $N,Ed=-124.01$ $M_y,Ed=-65.13$ $M_z,Ed=52.37$ $L=1.56$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $L_{cr}=1.56$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.80$ $M_{cr}=25150.70$ $\lambda_{LT}=0.49$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.61$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.99$
 $\lambda_y=18.84$ $N_{cr,y}=1663800.00$ $\lambda^*_y=0.22$ Curva a: $\Phi_y=0.53$ $\chi_y=1.00$
 $\lambda_z=69.59$ $N_{cr,z}=121897.00$ $\lambda^*_z=0.80$ Curva b: $\Phi_z=0.92$ $\chi_z=0.72$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.95$, 0.57 , 0.57 , 0.95
Verifica YY: $0.00+0.01+0.03=0.04$
Verifica ZZ: $0.00+0.01+0.04=0.05$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.00$ (L/66589)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.00$ (L/62747)

Asta n. 2006 (-1832 -1831) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU $X_l=1.62$ - Classe 1
Sollecitazioni: $T_y=-35.44$
 $V,Ed=-35.44$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

Relazione di calcolo

- Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU $X_l=1.62$ - Classe 1
Sollecitazioni: $T_z=-259.57$
 $V, Ed=-259.57$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.01$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=1.62$ - Classe 1
Sollecitazioni: $N=-67.77$ $T_z=-258.35$ $M_y=302.35$ $T_y=-32.41$ $M_z=-24.81$
 $N, Ed=-67.77$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=302.35$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.05$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-24.81$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.05$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-71.38$ $M_y, Ed=302.35$ $M_z, Ed=27.81$ $L=1.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.62$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=2.04$ $M_{cr}=26651.40$ $\lambda_{LT}=0.48$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.60$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.99$
 $\lambda_y=19.66$ $N_{cr,y}=1528200.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=72.62$ $N_{cr,z}=111962.00$ $\lambda^*_z=0.84$ Curva b: $\Phi_z=0.96$ $\chi_z=0.70$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.05+0.01=0.06$
Verifica ZZ: $0.00+0.03+0.02=0.05$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.00$ (L/44796)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.01$ (L/24670)
- Asta n. 2006 (-1831 -1829) - Sez. 6 (IPE200) - Crit. 1
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-51.57$
 $V, Ed=-51.57$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=315.21$
 $V, Ed=315.21$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.01$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-110.76$ $T_z=315.21$ $M_y=302.35$ $T_y=-51.57$ $M_z=41.80$
 $N, Ed=-110.76$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=302.35$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.05$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=41.80$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.04$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.05$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-110.76$ $M_y, Ed=302.35$ $M_z, Ed=41.80$ $L=1.54$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.54$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=2.34$ $M_{cr}=33272.10$ $\lambda_{LT}=0.43$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.57$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=18.68$ $N_{cr,y}=1692090.00$ $\lambda^*_y=0.22$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=69.01$ $N_{cr,z}=123970.00$ $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.92$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.05+0.02=0.07$
Verifica ZZ: $0.00+0.03+0.03=0.07$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.00$ (L/53924)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.01$ (L/27892)
- Asta n. 2006 (-1829 -1828) - Sez. 6 (IPE200) - Crit. 1
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-51.99$
 $V, Ed=-51.99$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=332.47$
 $V, Ed=332.47$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.02$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=1.50$ - Classe 1
Sollecitazioni: $N=-98.08$ $T_z=289.11$ $M_y=-615.08$ $T_y=-51.99$ $M_z=-42.79$

N,Ed=-98.08 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.00
 Pressoflessione retta YY [4.2.33]:
 My,Ed=-615.08 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.11
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=-42.79 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.04
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.11$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: N,Ed=-101.40 My,Ed=-615.08 Mz,Ed=-42.79 L=1.50
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.50$ Curva b: $\alpha_{imp}=0.34 k_e=0.94 \psi=1.51 M_{cr}=22625.30 \lambda_{LT}=0.52$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.62 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.98$
 $\lambda_y=18.11 N_{cr,y}=1799450.00 \lambda^*_y=0.21$ Curva a: $\Phi_y=0.52 \chi_y=1.00$
 $\lambda_z=66.92 N_{cr,z}=131835.00 \lambda^*_z=0.77$ Curva b: $\Phi_z=0.89 \chi_z=0.74$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.10+0.02=0.13$
 Verifica ZZ: $0.00+0.06+0.03=0.10$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.01 (L/11409)$

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.02 (L/8388)$

Asta n. 2006 (-1828 -1827) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: $T_y=-11.33$
 $V,Ed=-11.33 V_c,Rd=29609.30 V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: $T_z=111.76$
 $V,Ed=111.76 V_c,Rd=21171.50 V,Ed/V_c,Rd=0.01$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=1.51 - Classe 1
 Sollecitazioni: N=-71.49 $T_z=67.87 M_y=-751.38 T_y=-11.33 M_z=-12.53$
 N,Ed=-71.49 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.00
 Pressoflessione retta YY [4.2.33]:
 My,Ed=-751.38 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.13
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=-12.53 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.01
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.13$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: N,Ed=-74.85 My,Ed=-751.38 Mz,Ed=-12.53 L=1.51
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34 k_e=0.94 \psi=1.09 M_{cr}=15998.00 \lambda_{LT}=0.62$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.68 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.94$
 $\lambda_y=18.34 N_{cr,y}=1756100.00 \lambda^*_y=0.21$ Curva a: $\Phi_y=0.52 \chi_y=1.00$
 $\lambda_z=67.74 N_{cr,z}=128659.00 \lambda^*_z=0.78$ Curva b: $\Phi_z=0.90 \chi_z=0.74$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.13+0.01=0.14$
 Verifica ZZ: $0.00+0.08+0.01=0.09$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02 (L/6403)$

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03 (L/4643)$

Asta n. 2006 (-1827 -1826) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU Xl=1.52 - Classe 1
 Sollecitazioni: $T_y=-11.04$
 $V,Ed=-11.04 V_c,Rd=29609.30 V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU Xl=1.52 - Classe 1
 Sollecitazioni: $T_z=-136.21$
 $V,Ed=-136.21 V_c,Rd=21171.50 V,Ed/V_c,Rd=0.01$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: N=-47.65 $T_z=-79.49 M_y=-751.12 T_y=-8.18 M_z=8.31$
 N,Ed=-47.65 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.00
 Pressoflessione retta YY [4.2.33]:
 My,Ed=-751.12 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.13
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=8.31 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.01
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.13$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed = -47.65 \text{ My}, Ed = -751.12 \text{ Mz}, Ed = 8.31 \text{ L} = 1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.52$ Curva b: $\alpha_{imp} = 0.34 \quad k_c = 0.94 \quad \psi = 1.11 \quad M_{cr} = 16025.70 \quad \lambda_{LT} = 0.62$
 $\lambda_{LT,0} = 0.40 \quad \Phi_{LT} = 0.68 \quad \beta_{LT} = 0.75 \quad f = 0.97 \quad \chi_{LT} = 0.94$
 $\lambda_y = 18.46 \quad N_{cr,y} = 1733070.00 \quad \lambda^*_y = 0.21$ Curva a: $\Phi_y = 0.52 \quad \chi_y = 1.00$
 $\lambda_z = 68.19 \quad N_{cr,z} = 126972.00 \quad \lambda^*_z = 0.79$ Curva b: $\Phi_z = 0.91 \quad \chi_z = 0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00 + 0.13 + 0.00 = 0.14$
 Verifica ZZ: $0.00 + 0.08 + 0.01 = 0.09$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.02 \quad (L/6231)$

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.03 \quad (L/4667)$

Asta n. 2006 (-1826 -1511) - Sez. 6 (IPE200) - Crit. 1

 - Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1 = 1.75$ - Classe 1
 Sollecitazioni: $T_y = -35.39$
 $V, Ed = -35.39 \quad V_c, Rd = 29609.30 \quad V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1 = 1.75$ - Classe 1
 Sollecitazioni: $T_z = -369.09$
 $V, Ed = -369.09 \quad V_c, Rd = 21171.50 \quad V, Ed/V_c, Rd = 0.02$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1 = 0.00$ - Classe 1
 Sollecitazioni: $N = -9.61 \quad T_z = -318.51 \quad M_y = -596.09 \quad T_y = -35.39 \quad M_z = 23.40$
 $N, Ed = -9.61 \quad N_c, Rd = 74603.30 \quad n = N, Ed/N_c, Rd = 0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed = -596.09 \quad M_y, V, c, Rd = 5804.95 \quad M_{Ny}, c, Rd = 5804.95 \quad M_y, Ed/M_{Ny}, c, Rd = 0.10$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed = 23.40 \quad M_z, V, c, Rd = 1170.59 \quad M_{Nz}, c, Rd = 1170.59 \quad M_z, Ed/M_{Nz}, c, Rd = 0.02$
 $\alpha = 2.00 \quad \beta = 1.00 \quad (M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^1 = 0.10$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed = -9.61 \text{ My}, Ed = -596.09 \text{ Mz}, Ed = -38.37 \text{ L} = 1.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.75$ Curva b: $\alpha_{imp} = 0.34 \quad k_c = 0.94 \quad \psi = 1.76 \quad M_{cr} = 20319.20 \quad \lambda_{LT} = 0.55$
 $\lambda_{LT,0} = 0.40 \quad \Phi_{LT} = 0.64 \quad \beta_{LT} = 0.75 \quad f = 0.97 \quad \chi_{LT} = 0.97$
 $\lambda_y = 21.13 \quad N_{cr,y} = 1322530.00 \quad \lambda^*_y = 0.24$ Curva a: $\Phi_y = 0.53 \quad \chi_y = 0.99$
 $\lambda_z = 78.06 \quad N_{cr,z} = 96894.10 \quad \lambda^*_z = 0.90$ Curva b: $\Phi_z = 1.02 \quad \chi_z = 0.66$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00 + 0.10 + 0.02 = 0.12$
 Verifica ZZ: $0.00 + 0.06 + 0.03 = 0.09$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.02 \quad (L/11123)$

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.02 \quad (L/8432)$

Asta n. 2007 (-1571 -1500) - Sez. 6 (IPE200) - Crit. 1

 - Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1 = 1.76$ - Classe 1
 Sollecitazioni: $T_y = 7.38$
 $V, Ed = 7.38 \quad V_c, Rd = 29609.30 \quad V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1 = 1.76$ - Classe 1
 Sollecitazioni: $T_z = -492.17$
 $V, Ed = -492.17 \quad V_c, Rd = 21171.50 \quad V, Ed/V_c, Rd = 0.02$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1 = 0.00$ - Classe 1
 Sollecitazioni: $N = -134.78 \quad T_z = -441.30 \quad M_y = -814.29 \quad T_y = 7.38 \quad M_z = -4.39$
 $N, Ed = -134.78 \quad N_c, Rd = 74603.30 \quad n = N, Ed/N_c, Rd = 0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed = -814.29 \quad M_y, V, c, Rd = 5804.95 \quad M_{Ny}, c, Rd = 5804.95 \quad M_y, Ed/M_{Ny}, c, Rd = 0.14$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed = -4.39 \quad M_z, V, c, Rd = 1170.59 \quad M_{Nz}, c, Rd = 1170.59 \quad M_z, Ed/M_{Nz}, c, Rd = 0.00$
 $\alpha = 2.00 \quad \beta = 1.00 \quad (M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^1 = 0.14$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed = -134.78 \text{ My}, Ed = -814.29 \text{ Mz}, Ed = 8.58 \text{ L} = 1.76$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$

$L_{cr}=1.76$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.76$ $M_{cr}=20122.50$ $\lambda_{LT}=0.55$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.64$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=21.25$ $N_{cr,y}=1307340.00$ $\lambda^*_y=0.24$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=78.51$ $N_{cr,z}=95781.40$ $\lambda^*_z=0.90$ Curva b: $\Phi_z=1.03$ $\chi_z=0.66$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.14+0.00=0.14$
 Verifica ZZ: $0.00+0.08+0.01=0.09$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/8327)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/6176)

Asta n. 2007 (-1583 -1571) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 19 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=24.82$
 $V_{Ed}=24.82$ $V_{c,Rd}=29609.30$ $V_{Ed/Vc,Rd}=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 19 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=74.15$
 $V_{Ed}=74.15$ $V_{c,Rd}=21171.50$ $V_{Ed/Vc,Rd}=0.00$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=1.52$ - Classe 1
 Sollecitazioni: $N=-209.10$ $T_z=5.73$ $M_y=-814.19$ $T_y=15.87$ $M_z=13.08$
 $N_{Ed}=-209.10$ $N_{c,Rd}=74603.30$ $n=N_{Ed}/N_{c,Rd}=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_{y,Ed}=-814.19$ $M_{y,V,c,Rd}=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_{y,Ed/MNy,c,Rd}=0.14$
 Pressoflessione retta ZZ [4.2.34]:
 $M_{z,Ed}=13.08$ $M_{z,V,c,Rd}=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_{z,Ed/MNz,c,Rd}=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_{y,Ed/MNy,c,Rd})^2 + (M_{z,Ed/MNz,c,Rd})^1 = 0.14$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N_{Ed}=-212.51$ $M_{y,Ed}=-814.19$ $M_{z,Ed}=13.08$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.02$ $M_{cr}=14846.40$ $\lambda_{LT}=0.64$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.69$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.92$
 $\lambda_y=18.46$ $N_{cr,y}=1732910.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.19$ $N_{cr,z}=126960.00$ $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.14+0.01=0.15$
 Verifica ZZ: $0.00+0.09+0.01=0.10$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.03$ (L/5328)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.04$ (L/3937)

Asta n. 2007 (-1498 -1583) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=20.48$
 $V_{Ed}=20.48$ $V_{c,Rd}=29609.30$ $V_{Ed/Vc,Rd}=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=193.20$
 $V_{Ed}=193.20$ $V_{c,Rd}=21171.50$ $V_{Ed/Vc,Rd}=0.01$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=1.40$ - Classe 1
 Sollecitazioni: $N=-255.64$ $T_z=152.73$ $M_y=-772.04$ $T_y=20.48$ $M_z=12.67$
 $N_{Ed}=-255.64$ $N_{c,Rd}=74603.30$ $n=N_{Ed}/N_{c,Rd}=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_{y,Ed}=-772.04$ $M_{y,V,c,Rd}=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_{y,Ed/MNy,c,Rd}=0.13$
 Pressoflessione retta ZZ [4.2.34]:
 $M_{z,Ed}=12.67$ $M_{z,V,c,Rd}=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_{z,Ed/MNz,c,Rd}=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_{y,Ed/MNy,c,Rd})^2 + (M_{z,Ed/MNz,c,Rd})^1 = 0.13$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N_{Ed}=-258.76$ $M_{y,Ed}=-772.04$ $M_{z,Ed}=-15.92$ $L=1.40$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.40$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.17$ $M_{cr}=19727.00$ $\lambda_{LT}=0.56$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.64$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=16.90$ $N_{cr,y}=2066200.00$ $\lambda^*_y=0.19$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=62.45$ $N_{cr,z}=151378.00$ $\lambda^*_z=0.72$ Curva b: $\Phi_z=0.85$ $\chi_z=0.77$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$

Relazione di calcolo

- Verifica YY: $0.00+0.13+0.01=0.14$
Verifica ZZ: $0.00+0.08+0.01=0.10$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/7319)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/5285)
- Asta n. 2007 (-1496 -1498) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=3.37$
 $V, Ed=3.37$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=276.45$
 $V, Ed=276.45$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.01$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 32 SLU $X_l=1.56$ - Classe 1
Sollecitazioni: $N=-231.71$ $T_z=211.80$ $M_y=-538.78$ $T_y=-2.98$ $M_z=-5.84$
 $N, Ed=-231.71$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-538.78$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.09$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-5.84$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.09$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 1
Sollecitazioni: $N, Ed=-235.19$ $M_y, Ed=-538.78$ $M_z, Ed=-5.84$ $L=1.56$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.56$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.44$ $M_{cr}=20146.70$ $\lambda_{LT}=0.55$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.64$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=18.87$ $N_{cr,y}=1657900.00$ $\lambda^*_y=0.22$ Curva a: $\Phi_y=0.53$ $\chi_y=1.00$
 $\lambda_z=69.72$ $N_{cr,z}=121465.00$ $\lambda^*_z=0.80$ Curva b: $\Phi_z=0.92$ $\chi_z=0.72$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.09+0.00=0.10$
Verifica ZZ: $0.00+0.05+0.00=0.06$
- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.01$ (L/11194)
- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.02$ (L/8786)
- Asta n. 2007 (-1497 -1496) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-32.41$
 $V, Ed=-32.41$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=400.33$
 $V, Ed=400.33$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.02$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-345.32$ $T_z=386.14$ $M_y=445.70$ $T_y=-29.08$ $M_z=26.14$
 $N, Ed=-345.32$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=445.70$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.08$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=26.14$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.08$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-345.32$ $M_y, Ed=445.70$ $M_z, Ed=26.14$ $L=1.60$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.60$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.09$ $M_{cr}=28016.40$ $\lambda_{LT}=0.47$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.59$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=19.36$ $N_{cr,y}=1575840.00$ $\lambda^*_y=0.22$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=71.51$ $N_{cr,z}=115452.00$ $\lambda^*_z=0.82$ Curva b: $\Phi_z=0.95$ $\chi_z=0.71$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.96$
Verifica YY: $0.00+0.07+0.01=0.09$
Verifica ZZ: $0.00+0.04+0.02=0.07$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G}=0.01$ (L/26193)

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.01$ (L/16434)

Asta n. 2007 (-1495 -1497) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU $X_l=1.54$ - Classe 1
Sollecitazioni: $T_y=32.73$
 $V, Ed=32.73$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU $X_l=1.54$ - Classe 1
Sollecitazioni: $T_z=-319.51$
 $V, Ed=-319.51$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.02$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=1.54$ - Classe 1
Sollecitazioni: $N=-335.49$ $T_z=-313.74$ $M_y=445.28$ $T_y=39.62$ $M_z=35.78$
 $N, Ed=-335.49$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=445.28$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.08$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=35.78$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.03$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^2 = 0.08$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-338.94$ $M_y, Ed=445.28$ $M_z, Ed=35.78$ $L=1.54$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.54$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.76$ $M_{cr}=24968.80$ $\lambda_{LT}=0.49$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.61$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.99$
 $\lambda_y=18.70$ $N_{cr,y}=1688200.00$ $\lambda^*_y=0.22$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=69.09$ $N_{cr,z}=123685.00$ $\lambda^*_z=0.80$ Curva b: $\Phi_z=0.92$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.96$
Verifica YY: $0.00+0.07+0.02=0.10$
Verifica ZZ: $0.00+0.04+0.03=0.08$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.01$ (L/20501)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.01$ (L/13842)

Asta n. 2007 (-1440 -1495) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 1 SLV $X_l=0.30$ - Classe 1
Sollecitazioni: $T_y=-28.59$
 $V, Ed=-28.59$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.30$ - Classe 1
Sollecitazioni: $T_z=319.40$
 $V, Ed=319.40$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.02$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 1 SLV $X_l=0.30$ - Classe 1
Sollecitazioni: $N=108.37$ $T_z=319.40$ $M_y=468.12$ $T_y=-28.59$ $M_z=18.33$
 $N, Ed=108.37$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=468.12$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.08$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=18.33$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^2 = 0.08$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 1
Sollecitazioni: $N, Ed=-268.04$ $M_y, Ed=468.12$ $M_z, Ed=-30.54$ $L=1.54$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.54$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.56$ $M_{cr}=22170.10$ $\lambda_{LT}=0.52$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.62$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.97$
 $\lambda_y=18.70$ $N_{cr,y}=1688200.00$ $\lambda^*_y=0.22$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=69.09$ $N_{cr,z}=123685.00$ $\lambda^*_z=0.80$ Curva b: $\Phi_z=0.92$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.08+0.01=0.10$
Verifica ZZ: $0.00+0.05+0.02=0.08$

- Verifica freccia massima per soli carichi accidentali - CC 21
 $f_{z,l}=0.01$ (L/18926)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.01$ (L/11162)

Asta n. 2008 (-1572 -1342) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 30 SLU $X_l=1.07$ - Classe 1

Sollecitazioni: $T_y = -39.62$ $M_x = 1.56$
 $V, Ed = -39.62$ $V_c, Rd, Red = 54549.10$ $V, Ed/V_c, Rd, Red = 0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 30 SLU $X_l = 1.07$ - Classe 1
 Sollecitazioni: $T_z = -3824.31$ $M_x = 1.56$
 $V, Ed = -3824.31$ $V_c, Rd, Red = 38741.10$ $V, Ed/V_c, Rd, Red = 0.10$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l = 1.31$ - Classe 3
 Sollecitazioni: $N = -2042.44$ $T_z = -4966.17$ $M_y = 6509.36$ $T_y = -51.87$ $M_z = -29.67$ $M_x = 1.71$
 Tensioni: $\sigma_N = -37.95$ $\sigma_{m,d} = -1205.32$ $\tau = 10.16$ $\sigma_{max} = -1243.27$ (sfrut=0.47)
 Tensioni: $\sigma_N = -37.95$ $\sigma_{m,d} = -1.74$ $\tau = 277.48$ $\tau_{max} = 277.48$ (sfrut=0.18)
 Tensioni: $\sigma_N = -37.95$ $\sigma_{m,d} = -1205.32$ $\tau = 10.16$ $\sigma_{ID,max} = 1243.40$ (sfrut=0.47)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed = -2047.96$ $M_y, Ed = 6509.36$ $M_z, Ed = 38.09$ $L = 1.76$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.76$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.74$ $M_{cr} = 110445.00$ $\lambda_{LT} = 0.37$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.55$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 14.09$ $N_{cr,y} = 5621880.00$ $\lambda_y^* = 0.16$ Curva a: $\Phi_y = 0.51$ $\chi_y = 1.00$
 $\lambda_z = 52.40$ $N_{cr,z} = 406205.00$ $\lambda_z^* = 0.60$ Curva b: $\Phi_z = 0.75$ $\chi_z = 0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.01 + 0.42 + 0.02 = 0.46$
 Verifica ZZ: $0.01 + 0.34 + 0.02 = 0.37$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g} = 0.05$ (L/2681)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,g} = 0.06$ (L/2191)

Asta n. 2008 (-1584 -1572) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l = 0.14$ - Classe 1
 Sollecitazioni: $T_y = 16.95$
 $V, Ed = 16.95$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l = 0.14$ - Classe 1
 Sollecitazioni: $T_z = -2451.18$
 $V, Ed = -2451.18$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.06$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l = 0.00$ - Classe 3
 Sollecitazioni: $N = -2218.92$ $T_z = -2443.59$ $M_y = -3721.89$ $T_y = 16.95$ $M_z = -1.63$
 Tensioni: $\sigma_N = -41.23$ $\sigma_{m,d} = -670.13$ $\tau = 0.00$ $\sigma_{max} = -711.36$ (sfrut=0.27)
 Tensioni: $\sigma_N = -41.23$ $\sigma_{m,d} = -0.10$ $\tau = 136.44$ $\tau_{max} = 136.44$ (sfrut=0.09)
 Tensioni: $\sigma_N = -41.23$ $\sigma_{m,d} = -670.13$ $\tau = 0.00$ $\sigma_{ID,max} = 711.36$ (sfrut=0.27)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed = -2218.92$ $M_y, Ed = -3721.89$ $M_z, Ed = 24.20$ $L = 1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.52$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.77$ $M_{cr} = 146206.00$ $\lambda_{LT} = 0.32$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.53$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 12.23$ $N_{cr,y} = 7451930.00$ $\lambda_y^* = 0.14$ Curva a: $\Phi_y = 0.50$ $\chi_y = 1.00$
 $\lambda_z = 45.51$ $N_{cr,z} = 538433.00$ $\lambda_z^* = 0.52$ Curva b: $\Phi_z = 0.69$ $\chi_z = 0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.02 + 0.24 + 0.01 = 0.27$
 Verifica ZZ: $0.02 + 0.19 + 0.01 = 0.22$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.02$ (L/8831)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.03$ (L/6032)

Asta n. 2008 (-1406 -1584) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l = 1.02$ - Classe 1
 Sollecitazioni: $T_z = 254.38$
 $V, Ed = 254.38$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l = 0.00$ - Classe 3
 Sollecitazioni: $N = -2388.04$ $T_z = 8.37$ $M_y = -3763.55$ $T_y = 9.88$ $M_z = -14.67$
 Tensioni: $\sigma_N = -44.38$ $\sigma_{m,d} = -693.80$ $\tau = 0.00$ $\sigma_{max} = -738.18$ (sfrut=0.28)
 Tensioni: $\sigma_N = -44.38$ $\sigma_{m,d} = -0.86$ $\tau = 0.47$ $\tau_{max} = 0.47$ (sfrut=0.00)
 Tensioni: $\sigma_N = -44.38$ $\sigma_{m,d} = -693.80$ $\tau = 0.00$ $\sigma_{ID,max} = 738.18$ (sfrut=0.28)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed = -2388.04$ $M_y, Ed = -3763.55$ $M_z, Ed = -14.67$ $L = 1.40$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$

$L_{cr}=1.40$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.01$ $M_{cr}=98118.20$ $\lambda_{LT}=0.40$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.56$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=11.20$ $N_{cr,y}=8885140.00$ $\lambda^*_y=0.13$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=41.68$ $N_{cr,z}=641989.00$ $\lambda^*_z=0.48$ Curva b: $\Phi_z=0.66$ $\chi_z=0.89$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.02+0.25+0.01=0.27$
 Verifica ZZ: $0.02+0.20+0.01=0.22$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.03$ (L/5342)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.04$ (L/3903)

Asta n. 2008 (-1405 -1406) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 3 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-11.10$
 $V, Ed=-11.10$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 3 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=774.79$
 $V, Ed=774.79$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.02$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=1.56$ - Classe 3
 Sollecitazioni: $N=-2532.93$ $T_z=2168.80$ $M_y=-3763.31$ $T_y=3.94$ $M_z=-21.81$
 Tensioni: $\sigma_N=-47.07$ $\sigma_{m,d}=-702.62$ $\tau=0.00$ $\sigma_{max}=-749.69$ (sfrut=0.29)
 Tensioni: $\sigma_N=-47.07$ $\sigma_{m,d}=-1.28$ $\tau=121.09$ $\tau_{max}=121.09$ (sfrut=0.08)
 Tensioni: $\sigma_N=-47.07$ $\sigma_{m,d}=-702.62$ $\tau=0.00$ $\sigma_{ID,max}=749.69$ (sfrut=0.29)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed=-2539.52$ $M_y, Ed=-3763.31$ $M_z, Ed=-27.95$ $L=1.56$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.56$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.66$ $M_{cr}=131902.00$ $\lambda_{LT}=0.34$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.51$ $N_{cr,y}=7129370.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=46.53$ $N_{cr,z}=515127.00$ $\lambda^*_z=0.54$ Curva b: $\Phi_z=0.70$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.02+0.25+0.01=0.28$
 Verifica ZZ: $0.02+0.20+0.01=0.23$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.02$ (L/8424)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.02$ (L/6809)

Asta n. 2008 (-1407 -1405) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 1 SLV $X_l=0.97$ - Classe 1
 Sollecitazioni: $T_y=-44.54$
 $V, Ed=-44.54$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.97$ - Classe 1
 Sollecitazioni: $T_z=1162.97$
 $V, Ed=1162.97$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.03$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.22$ - Classe 3
 Sollecitazioni: $N=-2690.84$ $T_z=4186.31$ $M_y=5385.60$ $T_y=-153.27$ $M_z=120.95$ $M_x=-1.41$
 Tensioni: $\sigma_N=-50.00$ $\sigma_{m,d}=-1116.98$ $\tau=8.34$ $\sigma_{max}=-1166.99$ (sfrut=0.45)
 Tensioni: $\sigma_N=-50.00$ $\sigma_{m,d}=-7.11$ $\tau=233.91$ $\tau_{max}=233.91$ (sfrut=0.15)
 Tensioni: $\sigma_N=-50.00$ $\sigma_{m,d}=-1116.98$ $\tau=8.34$ $\sigma_{ID,max}=1167.08$ (sfrut=0.45)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed=-2690.84$ $M_y, Ed=5385.60$ $M_z, Ed=120.95$ $L=1.60$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.60$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.81$ $M_{cr}=137013.00$ $\lambda_{LT}=0.33$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.83$ $N_{cr,y}=6776460.00$ $\lambda^*_y=0.15$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=47.73$ $N_{cr,z}=489628.00$ $\lambda^*_z=0.55$ Curva b: $\Phi_z=0.71$ $\chi_z=0.86$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.02+0.35+0.05=0.43$
 Verifica ZZ: $0.02+0.28+0.05=0.35$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G}=0.03$ (L/5183)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.04$ (L/3181)

Asta n. 2008 (-1867 -1407) - Sez. 5 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-15.30$
 $V, Ed=-15.30$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

 - Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=696.78$
 $V, Ed=696.78$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.02$

 - Verifica in termini tensionali [4.2.4] - CC 32 SLU $X_l=0.75$ - Classe 3
 Sollecitazioni: $N=-853.19$ $T_z=-1511.16$ $M_y=1146.79$ $T_y=194.57$ $M_z=133.00$ $M_x=2.43$
 Tensioni: $\sigma_N=-15.85$ $\sigma_{m,d}=-371.07$ $\tau=14.41$ $\sigma_{max}=-386.92$ (sfrut=0.15)
 Tensioni: $\sigma_N=-15.85$ $\sigma_{m,d}=-7.82$ $\tau=85.71$ $\tau_{max}=85.71$ (sfrut=0.06)
 Tensioni: $\sigma_N=-15.85$ $\sigma_{m,d}=-371.07$ $\tau=14.41$ $\sigma_{ID,max}=387.73$ (sfrut=0.15)

 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 3
 Sollecitazioni: $N, Ed=-856.38$ $M_y, Ed=1146.79$ $M_z, Ed=133.00$ $L=0.98$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.98$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.73$ $M_{cr}=334776.00$ $\lambda_{LT}=0.21$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.49$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=7.86$ $N_{cr,y}=18065700.00$ $\lambda^*_y=0.09$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=29.23$ $N_{cr,z}=1305320.00$ $\lambda^*_z=0.34$ Curva b: $\Phi_z=0.58$ $\chi_z=0.95$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.07+0.06=0.14$
 Verifica ZZ: $0.01+0.06+0.06=0.13$

 - Verifica freccia massima per soli carichi accidentali - CC 35
 $f_{z,g}=0.00$ (L/18844)

 - Verifica freccia massima carichi totali - CC 35
 $f_{z,g}=0.00$ (L/16839)

Asta n. 2009 (-1433 -1553) - Sez. 6 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-63.72$
 $V, Ed=-63.72$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=989.20$
 $V, Ed=989.20$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.05$

 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-1995.91$ $T_z=989.20$ $M_y=1033.03$ $T_y=-63.72$ $M_z=30.97$
 $N, Ed=-1995.91$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.03$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1033.03$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=0.18$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=30.97$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.03$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.18$

 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-1995.91$ $M_y, Ed=1033.03$ $M_z, Ed=-52.06$ $L=1.30$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.30$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.76$ $M_{cr}=33553.90$ $\lambda_{LT}=0.43$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.57$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=15.77$ $N_{cr,y}=2372530.00$ $\lambda^*_y=0.18$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=58.28$ $N_{cr,z}=173821.00$ $\lambda^*_z=0.67$ Curva b: $\Phi_z=0.81$ $\chi_z=0.80$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.97$
 Verifica YY: $0.03+0.17+0.03=0.22$
 Verifica ZZ: $0.03+0.10+0.04=0.17$

 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.01$ (L/9621)

 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.02$ (L/6970)

Asta n. 2009 (-1459 -1433) - Sez. 6 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=3.78$ - Classe 1
 Sollecitazioni: $T_y=-14.49$
 $V, Ed=-14.49$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=3.78$ - Classe 1
 Sollecitazioni: $T_z=-1147.16$

- V,Ed=-1147.16 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.05
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=3.78 - Classe 1
Sollecitazioni: N=-2340.20 T_z=-1147.16 M_y=1032.66 T_y=-14.49 M_z=-27.98
N,Ed=-2340.20 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.03
Pressoflessione retta YY [4.2.33]:
M_y,Ed=1032.66 M_y,V,c,Rd=5804.95 M_{Ny},c,Rd=5804.95 M_y,Ed/M_{Ny},c,Rd=0.18
Pressoflessione retta ZZ [4.2.34]:
M_z,Ed=-27.98 M_z,V,c,Rd=1170.59 M_{Nz},c,Rd=1170.59 M_z,Ed/M_{Nz},c,Rd=0.02
 $\alpha=2.00$ $\beta=1.00$ (M_y,Ed/M_{Ny},c,Rd)² + (M_z,Ed/M_{Nz},c,Rd)¹=0.18
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 1
Sollecitazioni: N,Ed=-2910.08 M_y,Ed=838.27 M_z,Ed=-32.93 L=3.78
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95, 0.95
L_{cr}=3.78 Curva b: $\alpha_{imp}=0.34$ k_c=0.94 $\psi=2.47$ M_{cr}=9285.88 $\lambda_{LT}=0.81$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.82$ $\beta_{LT}=0.75$ f=0.97 $\chi_{LT}=0.84$
 $\lambda_y=45.77$ Ncr,y=281876.00 $\lambda^*_y=0.53$ Curva a: $\Phi_y=0.67$ $\chi_y=0.92$
 $\lambda_z=169.08$ Ncr,z=20651.40 $\lambda^*_z=1.95$ Curva b: $\Phi_z=2.69$ $\chi_z=0.22$
K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.71, 0.58, 1.19
Verifica YY: 0.04+0.17+0.02=0.23
Verifica ZZ: 0.18+0.10+0.03=0.31
 - Verifica freccia massima per soli carichi accidentali - CC 38
f_{z,L}=0.09 (L/4331)
 - Verifica freccia massima carichi totali - CC 38
f_{z,L}=0.12 (L/3143)
- Asta n. 2009 (-1847 -1459) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU Xl=0.00 - Classe 1
Sollecitazioni: T_y=-14.58
V,Ed=-14.58 Vc,Rd=29609.30 V,Ed/Vc,Rd=0.00
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU Xl=0.00 - Classe 1
Sollecitazioni: T_z=1355.10
V,Ed=1355.10 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.06
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=0.00 - Classe 1
Sollecitazioni: N=-2350.51 T_z=1355.10 M_y=1756.16 T_y=-14.58 M_z=28.15
N,Ed=-2350.51 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.03
Pressoflessione retta YY [4.2.33]:
M_y,Ed=1756.16 M_y,V,c,Rd=5804.95 M_{Ny},c,Rd=5804.95 M_y,Ed/M_{Ny},c,Rd=0.30
Pressoflessione retta ZZ [4.2.34]:
M_z,Ed=28.15 M_z,V,c,Rd=1170.59 M_{Nz},c,Rd=1170.59 M_z,Ed/M_{Nz},c,Rd=0.02
 $\alpha=2.00$ $\beta=1.00$ (M_y,Ed/M_{Ny},c,Rd)² + (M_z,Ed/M_{Nz},c,Rd)¹=0.30
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: N,Ed=-2350.51 M_y,Ed=1756.16 M_z,Ed=28.15 L=3.78
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95, 0.95
L_{cr}=3.78 Curva b: $\alpha_{imp}=0.34$ k_c=0.94 $\psi=2.16$ M_{cr}=8116.95 $\lambda_{LT}=0.87$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.86$ $\beta_{LT}=0.75$ f=0.97 $\chi_{LT}=0.80$
 $\lambda_y=45.77$ Ncr,y=281877.00 $\lambda^*_y=0.53$ Curva a: $\Phi_y=0.67$ $\chi_y=0.92$
 $\lambda_z=169.08$ Ncr,z=20651.40 $\lambda^*_z=1.95$ Curva b: $\Phi_z=2.69$ $\chi_z=0.22$
K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.68, 0.58, 1.14
Verifica YY: 0.03+0.36+0.02=0.41
Verifica ZZ: 0.14+0.22+0.03=0.39
 - Verifica freccia massima per soli carichi accidentali - CC 38
f_{z,L}=0.04 (L/9550)
 - Verifica freccia massima carichi totali - CC 38
f_{z,L}=0.05 (L/6893)
- Asta n. 2009 (-1451 -1847) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU Xl=4.23 - Classe 1
Sollecitazioni: T_y=-4.68
V,Ed=-4.68 Vc,Rd=29609.30 V,Ed/Vc,Rd=0.00
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU Xl=4.23 - Classe 1
Sollecitazioni: T_z=-1354.82
V,Ed=-1354.82 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.06
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=4.23 - Classe 1
Sollecitazioni: N=-2471.35 T_z=-1354.82 M_y=1754.73 T_y=-4.68 M_z=-11.65
N,Ed=-2471.35 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.03
Pressoflessione retta YY [4.2.33]:

- My,Ed=1754.73 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.30
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=-11.65 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.01
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.30$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: N,Ed=-2471.35 My,Ed=1754.73 Mz,Ed=-11.65 L=4.23
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.23$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=2.10 M_{cr}=6858.69 \lambda_{LT}=0.94$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.93 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.76$
 $\lambda_y=51.21 N_{cr,y}=225093.00 \lambda_y^*=0.59$ Curva a: $\Phi_y=0.71 \chi_y=0.89$
 $\lambda_z=189.21 N_{cr,z}=16491.20 \lambda_z^*=2.18$ Curva b: $\Phi_z=3.21 \chi_z=0.18$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.72, 0.58, 1.20$
 Verifica YY: $0.04+0.39+0.01=0.43$
 Verifica ZZ: $0.18+0.23+0.01=0.43$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.06 (L/7142)$
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.08 (L/5489)$
- Asta n. 2009 (-1437 -1451) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_y=-2.94$
 $V,Ed=-2.94 V_c,Rd=29609.30 V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_z=1179.66$
 $V,Ed=1179.66 V_c,Rd=21171.50 V,Ed/V_c,Rd=0.06$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU X1=0.00 - Classe 1
 Sollecitazioni: N=-2475.62 $T_z=1179.66 M_y=1013.12 T_y=-2.94 M_z=7.78$
 $N,Ed=-2475.62 N_c,Rd=74603.30 n=N,Ed/N_c,Rd=0.03$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=1013.12 M_y,V,c,Rd=5804.95 MN_y,c,Rd=5804.95 M_y,Ed/MN_y,c,Rd=0.17$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=7.78 M_z,V,c,Rd=1170.59 MN_z,c,Rd=1170.59 M_z,Ed/MN_z,c,Rd=0.01$
 $\alpha=2.00 \beta=1.00 (M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.17$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 1
 Sollecitazioni: N,Ed=-3053.02 My,Ed=794.40 Mz,Ed=12.69 L=4.23
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.23$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=2.37 M_{cr}=7740.42 \lambda_{LT}=0.89$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.88 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.79$
 $\lambda_y=51.21 N_{cr,y}=225093.00 \lambda_y^*=0.59$ Curva a: $\Phi_y=0.71 \chi_y=0.89$
 $\lambda_z=189.21 N_{cr,z}=16491.20 \lambda_z^*=2.18$ Curva b: $\Phi_z=3.21 \chi_z=0.18$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.75, 0.58, 1.25$
 Verifica YY: $0.05+0.17+0.01=0.22$
 Verifica ZZ: $0.23+0.10+0.01=0.34$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.13 (L/3152)$
- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.19 (L/2282)$
- Asta n. 2009 (-1711 -1437) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU X1=2.87 - Classe 1
 Sollecitazioni: $T_y=-13.58$
 $V,Ed=-13.58 V_c,Rd=29609.30 V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU X1=2.87 - Classe 1
 Sollecitazioni: $T_z=-759.13$
 $V,Ed=-759.13 V_c,Rd=21171.50 V,Ed/V_c,Rd=0.04$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU X1=2.87 - Classe 1
 Sollecitazioni: N=-2428.98 $T_z=-759.13 M_y=1005.03 T_y=-13.58 M_z=-15.80$
 $N,Ed=-2428.98 N_c,Rd=74603.30 n=N,Ed/N_c,Rd=0.03$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=1005.03 M_y,V,c,Rd=5804.95 MN_y,c,Rd=5804.95 M_y,Ed/MN_y,c,Rd=0.17$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-15.80 M_z,V,c,Rd=1170.59 MN_z,c,Rd=1170.59 M_z,Ed/MN_z,c,Rd=0.01$
 $\alpha=2.00 \beta=1.00 (M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.17$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N_{Ed}=-2428.98$ My, $E_{dEd}=1005.03$ Mz, $E_{dEd}=23.20$ L=2.87
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.87$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.44$ M, $cr=7840.51$ $\lambda_{LT}=0.88$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.87$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.79$
 $\lambda_y=34.77$ Ncr, $y=488475.00$ $\lambda_y^*=0.40$ Curva a: $\Phi_y=0.60$ $\chi_y=0.95$
 $\lambda_z=128.44$ Ncr, $z=35787.70$ $\lambda_z^*=1.48$ Curva b: $\Phi_z=1.81$ $\chi_z=0.35$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.64, 0.57, 1.07$
 Verifica YY: $0.03+0.21+0.01=0.26$
 Verifica ZZ: $0.09+0.13+0.02=0.24$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.05$ (L/5974)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.07$ (L/4408)
- Asta n. 2010 (-1339 -1573) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU $X_1=0.45$ - Classe 1
 Sollecitazioni: $T_y=-7.31$ $M_x=-1.09$
 $V_{Ed}=-7.31$ $V_c, R_d, Red=29490.80$ $V_{Ed}/V_c, R_d, Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU $X_1=0.45$ - Classe 1
 Sollecitazioni: $T_z=3101.38$ $M_x=-1.09$
 $V_{Ed}=3101.38$ $V_c, R_d, Red=21086.70$ $V_{Ed}/V_c, R_d, Red=0.15$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1=0.45$ - Classe 1
 Sollecitazioni: $N=-1096.36$ $T_z=3101.38$ $M_y=3666.76$ $T_y=-7.31$ $M_z=2.75$ $M_x=-1.09$
 $N_{Ed}=-1096.36$ $N_c, R_d=74603.30$ $n=N_{Ed}/N_c, R_d=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y, E_{dEd}=3666.76$ My, $V_c, R_d=5804.95$ MNy, $c, R_d=5804.95$ My, $E_{dEd}/M_{Ny}, c, R_d=0.63$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, E_{dEd}=2.75$ Mz, $V_c, R_d=1170.59$ MNz, $c, R_d=1170.59$ Mz, $E_{dEd}/M_{Nz}, c, R_d=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, E_{dEd}/M_{Ny}, c, R_d)^2 + (M_z, E_{dEd}/M_{Nz}, c, R_d)^1 = 0.63$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N_{Ed}=-1099.28$ My, $E_{dEd}=3666.76$ Mz, $E_{dEd}=-6.79$ L=1.76
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.76$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.86$ M, $cr=21265.70$ $\lambda_{LT}=0.54$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.63$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.97$
 $\lambda_y=21.25$ Ncr, $y=1307340.00$ $\lambda_y^*=0.24$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=78.51$ Ncr, $z=95781.40$ $\lambda_z^*=0.90$ Curva b: $\Phi_z=1.03$ $\chi_z=0.66$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.59, 0.57, 0.98$
 Verifica YY: $0.01+0.62+0.00=0.64$
 Verifica ZZ: $0.01+0.37+0.01=0.39$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.11$ (L/1211)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.14$ (L/933)
- Asta n. 2010 (-1573 -1585) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_y=10.54$
 $V_{Ed}=10.54$ $V_c, R_d=29609.30$ $V_{Ed}/V_c, R_d=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=893.60$
 $V_{Ed}=893.60$ $V_c, R_d=21171.50$ $V_{Ed}/V_c, R_d=0.04$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1=1.52$ - Classe 1
 Sollecitazioni: $N=-1269.13$ $T_z=849.42$ $M_y=-1688.45$ $T_y=10.54$ $M_z=6.43$
 $N_{Ed}=-1269.13$ $N_c, R_d=74603.30$ $n=N_{Ed}/N_c, R_d=0.02$
 Pressoflessione retta YY [4.2.33]:
 $M_y, E_{dEd}=-1688.45$ My, $V_c, R_d=5804.95$ MNy, $c, R_d=5804.95$ My, $E_{dEd}/M_{Ny}, c, R_d=0.29$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, E_{dEd}=6.43$ Mz, $V_c, R_d=1170.59$ MNz, $c, R_d=1170.59$ Mz, $E_{dEd}/M_{Nz}, c, R_d=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, E_{dEd}/M_{Ny}, c, R_d)^2 + (M_z, E_{dEd}/M_{Nz}, c, R_d)^1 = 0.29$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N_{Ed}=-1269.13$ My, $E_{dEd}=-1688.45$ Mz, $E_{dEd}=-9.65$ L=1.52
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.54$ M, $cr=22320.10$ $\lambda_{LT}=0.52$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.62$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.98$

- $\lambda_y=18.46$ Ncr,y=1732910.00 $\lambda'_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.19$ Ncr,z=126960.00 $\lambda'_z=0.79$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.58, 0.57, 0.97
 Verifica YY: 0.02+0.28+0.00=0.31
 Verifica ZZ: 0.02+0.17+0.01=0.20
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.04$ (L/4229)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.05$ (L/3116)
- Asta n. 2010 (-1585 -1416) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=1.40$ - Classe 1
 Sollecitazioni: $T_y=8.52$
 $V,Ed=8.52$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=1.40$ - Classe 1
 Sollecitazioni: $T_z=-323.83$
 $V,Ed=-323.83$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.02$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-1362.54$ $T_z=-283.37$ $M_y=-1688.70$ $T_y=8.52$ $M_z=-6.23$
 $N,Ed=-1362.54$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.02$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-1688.70$ $M_y,V,c,Rd=5804.95$ $M_{Ny},c,Rd=5804.95$ $M_y,Ed/M_{Ny},c,Rd=0.29$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-6.23$ $M_z,V,c,Rd=1170.59$ $M_{Nz},c,Rd=1170.59$ $M_z,Ed/M_{Nz},c,Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/M_{Ny},c,Rd)^2 + (M_z,Ed/M_{Nz},c,Rd)^1 = 0.29$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N,Ed=-1365.66$ $M_y,Ed=-1688.70$ $M_z,Ed=-6.23$ $L=1.40$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.40$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.13$ $M_{cr}=19082.10$ $\lambda_{LT}=0.57$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.65$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=16.90$ Ncr,y=2066200.00 $\lambda'_y=0.19$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=62.45$ Ncr,z=151378.00 $\lambda'_z=0.72$ Curva b: $\Phi_z=0.85$ $\chi_z=0.77$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.58, 0.57, 0.97
 Verifica YY: 0.02+0.29+0.00=0.31
 Verifica ZZ: 0.02+0.17+0.01=0.20
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.04$ (L/3175)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.06$ (L/2305)
- Asta n. 2010 (-1416 -1419) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=1.56$ - Classe 1
 Sollecitazioni: $T_y=72.33$
 $V,Ed=72.33$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=1.56$ - Classe 1
 Sollecitazioni: $T_z=-836.53$
 $V,Ed=-836.53$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.04$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-1377.94$ $T_z=-791.35$ $M_y=-1265.11$ $T_y=72.33$ $M_z=-32.16$
 $N,Ed=-1377.94$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.02$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-1265.11$ $M_y,V,c,Rd=5804.95$ $M_{Ny},c,Rd=5804.95$ $M_y,Ed/M_{Ny},c,Rd=0.22$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-32.16$ $M_z,V,c,Rd=1170.59$ $M_{Nz},c,Rd=1170.59$ $M_z,Ed/M_{Nz},c,Rd=0.03$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/M_{Ny},c,Rd)^2 + (M_z,Ed/M_{Nz},c,Rd)^1 = 0.22$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N,Ed=-1381.43$ $M_y,Ed=-1265.11$ $M_z,Ed=80.57$ $L=1.56$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.56$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=24473.00$ $\lambda_{LT}=0.50$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.61$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.98$
 $\lambda_y=18.87$ Ncr,y=1657900.00 $\lambda'_y=0.22$ Curva a: $\Phi_y=0.53$ $\chi_y=1.00$
 $\lambda_z=69.72$ Ncr,z=121465.00 $\lambda'_z=0.80$ Curva b: $\Phi_z=0.92$ $\chi_z=0.72$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.58, 0.57, 0.97
 Verifica YY: 0.02+0.21+0.04=0.27
 Verifica ZZ: 0.02+0.13+0.07=0.21

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.03$ (L/6098)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.04$ (L/4346)

Asta n. 2011 (-1430 -1610) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=15.17$
 $V, Ed=15.17$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=1345.11$
 $V, Ed=1345.11$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.06$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-248.80$ $T_z=1345.11$ $M_y=1702.11$ $T_y=15.17$ $M_z=-33.83$
 $N, Ed=-248.80$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1702.11$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.29$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-33.83$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.03$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.29$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-248.80$ $M_y, Ed=1702.11$ $M_z, Ed=40.37$ $L=4.89$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.89$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.74$ $M_{cr}=4778.25$ $\lambda_{LT}=1.13$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=1.10$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.64$
 $\lambda_y=59.20$ $N_{cr,y}=168432.00$ $\lambda^*_y=0.68$ Curva a: $\Phi_y=0.78$ $\chi_y=0.86$
 $\lambda_z=218.73$ $N_{cr,z}=12340.00$ $\lambda^*_z=2.52$ Curva b: $\Phi_z=4.07$ $\chi_z=0.14$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.59, 0.57, 0.98$
 Verifica YY: $0.00+0.44+0.02=0.46$
 Verifica ZZ: $0.00+0.26+0.03=0.30$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,l}=0.08$ (L/6465)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,l}=0.09$ (L/5483)

Asta n. 2011 (-1457 -1430) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=3.78$ - Classe 1
 Sollecitazioni: $T_y=3.40$
 $V, Ed=3.40$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=3.78$ - Classe 1
 Sollecitazioni: $T_z=-1531.61$
 $V, Ed=-1531.61$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.07$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=3.78$ - Classe 1
 Sollecitazioni: $N=-549.59$ $T_z=-1531.61$ $M_y=1708.22$ $T_y=3.40$ $M_z=9.48$
 $N, Ed=-549.59$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1708.22$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.29$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=9.48$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.29$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-549.59$ $M_y, Ed=1708.22$ $M_z, Ed=9.48$ $L=3.78$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.78$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.55$ $M_{cr}=9594.89$ $\lambda_{LT}=0.80$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.81$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.84$
 $\lambda_y=45.77$ $N_{cr,y}=281877.00$ $\lambda^*_y=0.53$ Curva a: $\Phi_y=0.67$ $\chi_y=0.92$
 $\lambda_z=169.08$ $N_{cr,z}=20651.40$ $\lambda^*_z=1.95$ Curva b: $\Phi_z=2.69$ $\chi_z=0.22$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.60, 0.57, 0.99$
 Verifica YY: $0.01+0.33+0.00=0.34$
 Verifica ZZ: $0.01+0.20+0.01=0.21$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,l}=0.09$ (L/4128)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,l}=0.13$ (L/3005)

Asta n. 2011 (-1845 -1457) - Sez. 6 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=4.15$
 $V, Ed=4.15$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=1737.16$
 $V, Ed=1737.16$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.08$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-592.92$ $T_z=1737.16$ $M_y=2485.71$ $T_y=4.15$ $M_z=-9.03$
 $N, Ed=-592.92$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=2485.71$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.43$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-9.03$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.43$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-592.92$ $M_y, Ed=2485.71$ $M_z, Ed=-9.03$ $L=3.78$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.78$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.27$ $M_{cr}=8550.84$ $\lambda_{LT}=0.84$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.84$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.82$
 $\lambda_y=45.77$ $N_{cr,y}=281877.00$ $\lambda_y^*=0.53$ Curva a: $\Phi_y=0.67$ $\chi_y=0.92$
 $\lambda_z=169.08$ $N_{cr,z}=20651.40$ $\lambda_z^*=1.95$ Curva b: $\Phi_z=2.69$ $\chi_z=0.22$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.60, 0.57, 1.00$
Verifica YY: $0.01+0.50+0.00=0.51$
Verifica ZZ: $0.01+0.30+0.01=0.32$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.07$ (L/5349)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.10$ (L/3963)

Asta n. 2011 (-1449 -1845) - Sez. 6 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=4.23$ - Classe 1
Sollecitazioni: $T_y=2.20$
 $V, Ed=2.20$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=4.23$ - Classe 1
Sollecitazioni: $T_z=-1831.69$
 $V, Ed=-1831.69$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.09$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=4.23$ - Classe 1
Sollecitazioni: $N=-763.48$ $T_z=-1831.69$ $M_y=2488.62$ $T_y=2.20$ $M_z=7.25$
 $N, Ed=-763.48$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=2488.62$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.43$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=7.25$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.43$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-763.48$ $M_y, Ed=2488.62$ $M_z, Ed=7.25$ $L=4.23$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.23$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.51$ $M_{cr}=8189.79$ $\lambda_{LT}=0.86$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.86$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.81$
 $\lambda_y=51.21$ $N_{cr,y}=225093.00$ $\lambda_y^*=0.59$ Curva a: $\Phi_y=0.71$ $\chi_y=0.89$
 $\lambda_z=189.21$ $N_{cr,z}=16491.20$ $\lambda_z^*=2.18$ Curva b: $\Phi_z=3.21$ $\chi_z=0.18$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.62, 0.57, 1.03$
Verifica YY: $0.01+0.51+0.00=0.52$
Verifica ZZ: $0.06+0.30+0.01=0.37$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.13$ (L/3307)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.17$ (L/2438)

Asta n. 2011 (-1432 -1449) - Sez. 6 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=4.49$
 $V, Ed=4.49$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=1789.85$
 $V, Ed=1789.85$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.08$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-781.08$ $T_z=1789.85$ $M_y=2312.74$ $T_y=4.49$ $M_z=-7.66$
 $N, Ed=-781.08$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=2312.74$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.40$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-7.66$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.40$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-781.08$ $M_y, Ed=2312.74$ $M_z, Ed=11.34$ $L=4.23$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.23$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.57$ $M_{cr}=8405.81$ $\lambda_{LT}=0.85$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.85$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.81$
 $\lambda_y=51.21$ $N_{cr,y}=225093.00$ $\lambda_y^*=0.59$ Curva a: $\Phi_y=0.71$ $\chi_y=0.89$
 $\lambda_z=189.21$ $N_{cr,z}=16491.20$ $\lambda_z^*=2.18$ Curva b: $\Phi_z=3.21$ $\chi_z=0.18$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.62, 0.57, 1.03$
Verifica YY: $0.01+0.47+0.01=0.49$
Verifica ZZ: $0.06+0.28+0.01=0.35$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.14$ (L/2986)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.19$ (L/2233)
- Asta n. 2011 (-1480 -1432) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=3.75$ - Classe 1
Sollecitazioni: $T_z=-1552.44$
 $V, Ed=-1552.44$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.07$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=3.75$ - Classe 1
Sollecitazioni: $N=-796.90$ $T_z=-1552.44$ $M_y=2311.06$ $M_z=-1.30$
 $N, Ed=-796.90$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=2311.06$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.40$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-1.30$ $M_z, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.40$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-796.90$ $M_y, Ed=2311.06$ $M_z, Ed=-1.30$ $L=3.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.75$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.03$ $M_{cr}=7713.05$ $\lambda_{LT}=0.89$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.88$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.79$
 $\lambda_y=45.42$ $N_{cr,y}=286203.00$ $\lambda_y^*=0.52$ Curva a: $\Phi_y=0.67$ $\chi_y=0.92$
 $\lambda_z=167.80$ $N_{cr,z}=20968.40$ $\lambda_z^*=1.93$ Curva b: $\Phi_z=2.66$ $\chi_z=0.22$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.61, 0.57, 1.01$
Verifica YY: $0.01+0.48+0.00=0.49$
Verifica ZZ: $0.01+0.29+0.00=0.30$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.08$ (L/4526)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.12$ (L/3256)
- Asta n. 2011 (-1710 -1480) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-18.83$
 $V, Ed=-18.83$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=1389.79$
 $V, Ed=1389.79$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.07$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-653.46$ $T_z=1389.79$ $M_y=1986.06$ $T_y=-18.83$ $M_z=24.82$
 $N, Ed=-653.46$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1986.06$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.34$

- Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=24.82$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.34$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-653.46$ $M_y, Ed=1986.06$ $M_z, Ed=24.82$ $L=2.57$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.57$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.08$ $M, cr=13209.70$ $\lambda_{LT}=0.68$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.72$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.91$
 $\lambda_y=31.14$ $N_{cr,y}=608824.00$ $\lambda^*_y=0.36$ Curva a: $\Phi_y=0.58$ $\chi_y=0.96$
 $\lambda_z=115.05$ $N_{cr,z}=44605.00$ $\lambda^*_z=1.33$ Curva b: $\Phi_z=1.57$ $\chi_z=0.41$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.59, 0.57, 0.98$
 Verifica YY: $0.01+0.36+0.01=0.38$
 Verifica ZZ: $0.01+0.22+0.02=0.24$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.05$ (L/4894)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.08$ (L/3210)
- Asta n. 2012 (-1609 -1556) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-28.00$
 $V, Ed=-28.00$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=134.61$
 $V, Ed=134.61$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.01$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 32 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=212.49$ $T_z=134.61$ $M_y=223.55$ $T_y=-28.00$ $M_z=29.08$
 $N, Ed=212.49$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=223.55$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.04$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=29.08$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.04$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 1
 Sollecitazioni: $M_y, Ed=223.55$ $M_z, Ed=-30.48$ $L=2.13$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.13$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.74$ $M, cr=14646.20$ $\lambda_{LT}=0.65$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.70$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.92$
 $\lambda_y=25.76$ $N_{cr,y}=890020.00$ $\lambda^*_y=0.30$ Curva a: $\Phi_y=0.55$ $\chi_y=0.98$
 $\lambda_z=95.15$ $N_{cr,z}=65206.60$ $\lambda^*_z=1.10$ Curva b: $\Phi_z=1.25$ $\chi_z=0.54$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.04+0.01=0.05$
 Verifica ZZ: $0.00+0.02+0.02=0.05$
- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.01$ (L/30980)
- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.01$ (L/21448)
- Asta n. 2012 (-1427 -1609) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=1.14$
 $V, Ed=1.14$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=1269.76$
 $V, Ed=1269.76$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.06$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=352.65$ $T_z=1269.76$ $M_y=1632.43$ $T_y=1.14$ $M_z=-3.37$
 $N, Ed=352.65$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1632.43$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.28$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-3.37$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.28$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1

- Sollecitazioni: $M_y, Ed=1632.43$ $M_z, Ed=-3.37$ $L=4.89$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.89$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.62$ $M_{cr}=4446.65$ $\lambda_{LT}=1.17$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=1.15$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.61$
 $\lambda_y=59.20$ $N_{cr,y}=168432.00$ $\lambda^*_y=0.68$ Curva a: $\Phi_y=0.78$ $\chi_y=0.86$
 $\lambda_z=218.73$ $N_{cr,z}=12340.00$ $\lambda^*_z=2.52$ Curva b: $\Phi_z=4.07$ $\chi_z=0.14$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.44+0.00=0.44$
Verifica ZZ: $0.00+0.26+0.00=0.27$
- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.06$ (L/8750)
- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.06$ (L/8690)
- Asta n. 2012 (-1458 -1427) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=3.78$ - Classe 1
Sollecitazioni: $T_y=-7.15$
 $V, Ed=-7.15$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=3.78$ - Classe 1
Sollecitazioni: $T_z=-1419.33$
 $V, Ed=-1419.33$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.07$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=3.78$ - Classe 1
Sollecitazioni: $N=387.68$ $T_z=-1419.33$ $M_y=1631.20$ $T_y=-7.15$ $M_z=-14.05$
 $N, Ed=387.68$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1631.20$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.28$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-14.05$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^2 = 0.28$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y, Ed=1631.20$ $M_z, Ed=-14.05$ $L=3.78$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.78$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.40$ $M_{cr}=9026.96$ $\lambda_{LT}=0.82$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.82$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.83$
 $\lambda_y=45.77$ $N_{cr,y}=281877.00$ $\lambda^*_y=0.53$ Curva a: $\Phi_y=0.67$ $\chi_y=0.92$
 $\lambda_z=169.08$ $N_{cr,z}=20651.40$ $\lambda^*_z=1.95$ Curva b: $\Phi_z=2.69$ $\chi_z=0.22$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.32+0.01=0.33$
Verifica ZZ: $0.00+0.19+0.01=0.20$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.07$ (L/5356)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.09$ (L/3983)
- Asta n. 2012 (-1844 -1458) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-3.85$
 $V, Ed=-3.85$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=1575.40$
 $V, Ed=1575.40$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.07$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=379.70$ $T_z=1575.40$ $M_y=2219.61$ $T_y=-3.85$ $M_z=7.13$
 $N, Ed=379.70$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=2219.61$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.38$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=7.13$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^2 = 0.38$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y, Ed=2219.61$ $M_z, Ed=-7.42$ $L=3.78$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.78$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.21$ $M_{cr}=8318.81$ $\lambda_{LT}=0.86$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.85$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.81$
 $\lambda_y=45.77$ $N_{cr,y}=281877.00$ $\lambda^*_y=0.53$ Curva a: $\Phi_y=0.67$ $\chi_y=0.92$

- $\lambda_z=169.08$ Ncr,z=20651.40 $\lambda^*_z=1.95$ Curva b: $\Phi_z=2.69$ $\chi_z=0.22$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.45+0.00=0.45$
Verifica ZZ: $0.00+0.27+0.01=0.28$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.07$ (L/5761)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.09$ (L/4413)
- Asta n. 2012 (-1450 -1844) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1=4.23$ - Classe 1
Sollecitazioni: $T_y=-2.17$
 $V, Ed=-2.17$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1=4.23$ - Classe 1
Sollecitazioni: $T_z=-1697.96$
 $V, Ed=-1697.96$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.08$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1=4.23$ - Classe 1
Sollecitazioni: $N=401.82$ $T_z=-1697.96$ $M_y=2219.14$ $T_y=-2.17$ $M_z=-3.63$
 $N, Ed=401.82$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=2219.14$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.38$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-3.63$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.38$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y, Ed=2219.14$ $M_z, Ed=5.57$ $L=4.23$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.23$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.52$ $M_{cr}=8236.64$ $\lambda_{LT}=0.86$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.86$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.81$
 $\lambda_y=51.21$ Ncr,y=225093.00 $\lambda^*_y=0.59$ Curva a: $\Phi_y=0.71$ $\chi_y=0.89$
 $\lambda_z=189.21$ Ncr,z=16491.20 $\lambda^*_z=2.18$ Curva b: $\Phi_z=3.21$ $\chi_z=0.18$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.45+0.00=0.45$
Verifica ZZ: $0.00+0.27+0.00=0.27$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.13$ (L/3249)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.18$ (L/2415)
- Asta n. 2012 (-1429 -1450) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_y=2.74$
 $V, Ed=2.74$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=1673.06$
 $V, Ed=1673.06$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.08$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $N=399.15$ $T_z=1673.06$ $M_y=2113.86$ $T_y=2.74$ $M_z=-4.38$
 $N, Ed=399.15$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=2113.86$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.36$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-4.38$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.36$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y, Ed=2113.86$ $M_z, Ed=7.22$ $L=4.23$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.23$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.57$ $M_{cr}=8381.90$ $\lambda_{LT}=0.85$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.85$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.81$
 $\lambda_y=51.21$ Ncr,y=225093.00 $\lambda^*_y=0.59$ Curva a: $\Phi_y=0.71$ $\chi_y=0.89$
 $\lambda_z=189.21$ Ncr,z=16491.20 $\lambda^*_z=2.18$ Curva b: $\Phi_z=3.21$ $\chi_z=0.18$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.43+0.00=0.43$
Verifica ZZ: $0.00+0.26+0.01=0.26$
- Verifica freccia massima per soli carichi accidentali - CC 38

Relazione di calcolo

$f_{z,L}=0.14$ (L/3065)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.18$ (L/2322)

Asta n. 2012 (-1479 -1429) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=3.75$ - Classe 1
Sollecitazioni: $T_y=2.39$
 $V,Ed=2.39$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=3.75$ - Classe 1
Sollecitazioni: $T_z=-1292.29$
 $V,Ed=-1292.29$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.06$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 33 SLU $X_l=3.75$ - Classe 1
Sollecitazioni: $N=402.89$ $T_z=-1292.29$ $M_y=2114.05$ $T_y=2.39$
 $M_y,Ed=2114.05$ $M_y,V,c,Rd=5804.95$
 $N,Ed=402.89$ $N_c,Rd=74603.30$ YY $n=N,Ed/N_c,Rd=0.01$ $MNy,c,Rd=5804.95$ $M_y,Ed/MNy,c,Rd=0.36$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y,Ed=2114.05$ $M_z,Ed=-8.28$ $L=3.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.75$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.71$ $M_{cr}=6494.55$ $\lambda_{LT}=0.97$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.95$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.74$
 $\lambda_y=45.42$ $N_{cr,y}=286203.00$ $\lambda_y^*=0.52$ Curva a: $\Phi_y=0.67$ $\chi_y=0.92$
 $\lambda_z=167.80$ $N_{cr,z}=20968.40$ $\lambda_z^*=1.93$ Curva b: $\Phi_z=2.66$ $\chi_z=0.22$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.47+0.00=0.47$
Verifica ZZ: $0.00+0.28+0.01=0.29$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.12$ (L/3169)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.16$ (L/2281)

Asta n. 2012 (-1705 -1479) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=846.64$
 $V,Ed=846.64$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.04$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=408.22$ $T_z=846.64$ $M_y=628.94$ $M_z=4.08$
 $N,Ed=408.22$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=628.94$ $M_y,V,c,Rd=5804.95$ $MNy,c,Rd=5804.95$ $M_y,Ed/MNy,c,Rd=0.11$
Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=4.08$ $M_z,c,Rd=1170.59$ $MNz,c,Rd=1170.59$ $M_z,Ed/MNz,c,Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MNy,c,Rd)^2 + (M_z,Ed/MNz,c,Rd)^1 = 0.11$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y,Ed=628.94$ $M_z,Ed=4.08$ $L=4.28$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.28$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.62$ $M_{cr}=5197.23$ $\lambda_{LT}=1.08$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=1.06$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.67$
 $\lambda_y=51.86$ $N_{cr,y}=219486.00$ $\lambda_y^*=0.60$ Curva a: $\Phi_y=0.72$ $\chi_y=0.89$
 $\lambda_z=191.61$ $N_{cr,z}=16080.40$ $\lambda_z^*=2.21$ Curva b: $\Phi_z=3.28$ $\chi_z=0.18$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.15+0.00=0.16$
Verifica ZZ: $0.00+0.09+0.00=0.10$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.10$ (L/4261)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.14$ (L/3119)

Asta n. 2013 (-1579 -1593) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-13.94$
 $V,Ed=-13.94$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=605.76$
 $V,Ed=605.76$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.03$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=1.76$ - Classe 1
 Sollecitazioni: $N=35.93$ $T_z=554.89$ $M_y=-1013.65$ $T_y=-13.94$ $M_z=-14.27$
 $N, Ed=35.93$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-1013.65$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.17$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-14.27$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^2 = 0.17$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $M_y, Ed=-1013.65$ $M_z, Ed=-14.27$ $L=1.76$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.76$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.76$ $M, cr=20108.10$ $\lambda_{LT}=0.55$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.64$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=21.25$ $N_{cr,y}=1307340.00$ $\lambda^*_y=0.24$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=78.51$ $N_{cr,z}=95781.40$ $\lambda^*_z=0.90$ Curva b: $\Phi_z=1.03$ $\chi_z=0.66$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.17+0.01=0.18$
 Verifica ZZ: $0.00+0.10+0.01=0.11$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.02$ (L/7189)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.03$ (L/5258)

Asta n. 2013 (-1593 -1596) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=1.53$ - Classe 1
 Sollecitazioni: $T_y=7.54$
 $V, Ed=7.54$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=1.53$ - Classe 1
 Sollecitazioni: $T_z=-475.95$
 $V, Ed=-475.95$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.02$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-60.46$ $T_z=-431.52$ $M_y=-1013.61$ $T_y=7.54$ $M_z=-6.90$
 $N, Ed=-60.46$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-1013.61$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.17$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-6.90$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^2 = 0.17$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-63.87$ $M_y, Ed=-1013.61$ $M_z, Ed=-6.90$ $L=1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.45$ $M, cr=20822.70$ $\lambda_{LT}=0.54$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.63$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.97$
 $\lambda_y=18.56$ $N_{cr,y}=1713930.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.57$ $N_{cr,z}=125570.00$ $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.17+0.00=0.18$
 Verifica ZZ: $0.00+0.10+0.01=0.11$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.02$ (L/6507)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.03$ (L/4391)

Asta n. 2014 (-1607 -1608) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-4.67$
 $V, Ed=-4.67$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=103.00$
 $V, Ed=103.00$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.00$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=11.99$ $T_z=103.00$ $M_y=175.88$ $T_y=-4.67$ $M_z=8.34$
 $N, Ed=11.99$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=175.88$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.03$
 Pressoflessione retta ZZ [4.2.34]:

Mz,Ed=8.34 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.01
 $\alpha=2.00 \quad \beta=1.00 \quad (M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: My,Ed=175.88 Mz,Ed=-9.40 L=3.80
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.80$ Curva b: $\alpha_{imp}=0.34 \quad k_c=0.94 \quad \psi=1.78 \quad M_{cr}=6664.48 \quad \lambda_{LT}=0.96$
 $\lambda_{LT,0}=0.40 \quad \Phi_{LT}=0.94 \quad \beta_{LT}=0.75 \quad f=0.97 \quad \chi_{LT}=0.75$
 $\lambda_y=46.01 \quad N_{cr,y}=278917.00 \quad \lambda_y^*=0.53$ Curva a: $\Phi_y=0.68 \quad \chi_y=0.91$
 $\lambda_z=169.97 \quad N_{cr,z}=20434.60 \quad \lambda_z^*=1.96$ Curva b: $\Phi_z=2.72 \quad \chi_z=0.22$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.04+0.00=0.04$
 Verifica ZZ: $0.00+0.02+0.01=0.03$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.01$ (L/27479)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.01$ (L/28060)

Asta n. 2014 (-1424 -1607) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: Tz=1483.09
 V,Ed=1483.09 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.07
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: N=28.08 Tz=1483.09 My=1821.51 Mz=-2.71
 N,Ed=28.08 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.00
 Pressoflessione retta YY [4.2.33]:
 My,Ed=1821.51 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.31
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=-2.71 Mz,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.00
 $\alpha=2.00 \quad \beta=1.00 \quad (M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.31$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: My,Ed=1821.51 Mz,Ed=-2.71 L=4.89
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.89$ Curva b: $\alpha_{imp}=0.34 \quad k_c=0.94 \quad \psi=1.65 \quad M_{cr}=4528.03 \quad \lambda_{LT}=1.16$
 $\lambda_{LT,0}=0.40 \quad \Phi_{LT}=1.13 \quad \beta_{LT}=0.75 \quad f=0.98 \quad \chi_{LT}=0.62$
 $\lambda_y=59.20 \quad N_{cr,y}=168432.00 \quad \lambda_y^*=0.68$ Curva a: $\Phi_y=0.78 \quad \chi_y=0.86$
 $\lambda_z=218.73 \quad N_{cr,z}=12340.00 \quad \lambda_z^*=2.52$ Curva b: $\Phi_z=4.07 \quad \chi_z=0.14$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.48+0.00=0.49$
 Verifica ZZ: $0.00+0.29+0.00=0.29$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.10$ (L/5117)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.10$ (L/4888)

Asta n. 2014 (-1456 -1424) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU Xl=3.78 - Classe 1
 Sollecitazioni: Ty=-8.66
 V,Ed=-8.66 Vc,Rd=29609.30 V,Ed/Vc,Rd=0.00
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU Xl=3.78 - Classe 1
 Sollecitazioni: Tz=-1592.36
 V,Ed=-1592.36 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.08
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=3.78 - Classe 1
 Sollecitazioni: N=83.33 Tz=-1592.36 My=1819.61 Ty=-8.66 Mz=-16.54
 N,Ed=83.33 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.00
 Pressoflessione retta YY [4.2.33]:
 My,Ed=1819.61 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.31
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=-16.54 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.01
 $\alpha=2.00 \quad \beta=1.00 \quad (M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.31$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: My,Ed=1819.61 Mz,Ed=-16.54 L=3.78
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.78$ Curva b: $\alpha_{imp}=0.34 \quad k_c=0.94 \quad \psi=2.31 \quad M_{cr}=8671.42 \quad \lambda_{LT}=0.84$
 $\lambda_{LT,0}=0.40 \quad \Phi_{LT}=0.84 \quad \beta_{LT}=0.75 \quad f=0.97 \quad \chi_{LT}=0.82$

- $\lambda_y=45.77$ Ncr,y=281877.00 $\lambda^*_y=0.53$ Curva a: $\Phi_y=0.67$ $\chi_y=0.92$
 $\lambda_z=169.08$ Ncr,z=20651.40 $\lambda^*_z=1.95$ Curva b: $\Phi_z=2.69$ $\chi_z=0.22$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
 Verifica YY: 0.00+0.36+0.01=0.37
 Verifica ZZ: 0.00+0.22+0.01=0.23
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.07$ (L/5120)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.10$ (L/3932)
- Asta n. 2014 (-1843 -1456) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-4.44$
 $V,Ed=-4.44$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=1726.61$
 $V,Ed=1726.61$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.08$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=89.75$ $T_z=1726.61$ $M_y=2325.22$ $T_y=-4.44$ $M_z=7.87$
 $N,Ed=89.75$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=2325.22$ $M_y,V,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.40$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=7.87$ $M_z,V,c,Rd=1170.59$ $MN_z,c,Rd=1170.59$ $M_z,Ed/MN_z,c,Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.40$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $M_y,Ed=2325.22$ $M_z,Ed=-8.92$ $L=3.78$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.78$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.17$ $M_{cr}=8179.11$ $\lambda_{LT}=0.86$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.86$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.81$
 $\lambda_y=45.77$ Ncr,y=281877.00 $\lambda^*_y=0.53$ Curva a: $\Phi_y=0.67$ $\chi_y=0.92$
 $\lambda_z=169.08$ Ncr,z=20651.40 $\lambda^*_z=1.95$ Curva b: $\Phi_z=2.69$ $\chi_z=0.22$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
 Verifica YY: 0.00+0.47+0.00=0.48
 Verifica ZZ: 0.00+0.28+0.01=0.29
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.06$ (L/5933)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.08$ (L/4646)
- Asta n. 2014 (-1448 -1843) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=4.23$ - Classe 1
 Sollecitazioni: $T_y=-2.76$
 $V,Ed=-2.76$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=4.23$ - Classe 1
 Sollecitazioni: $T_z=-1836.46$
 $V,Ed=-1836.46$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.09$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=4.23$ - Classe 1
 Sollecitazioni: $N=113.75$ $T_z=-1836.46$ $M_y=2324.61$ $T_y=-2.76$ $M_z=-4.83$
 $N,Ed=113.75$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=2324.61$ $M_y,V,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.40$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-4.83$ $M_z,V,c,Rd=1170.59$ $MN_z,c,Rd=1170.59$ $M_z,Ed/MN_z,c,Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.40$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $M_y,Ed=2324.61$ $M_z,Ed=6.87$ $L=4.23$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.23$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.40$ $M_{cr}=7841.22$ $\lambda_{LT}=0.88$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.87$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.79$
 $\lambda_y=51.21$ Ncr,y=225093.00 $\lambda^*_y=0.59$ Curva a: $\Phi_y=0.71$ $\chi_y=0.89$
 $\lambda_z=189.21$ Ncr,z=16491.20 $\lambda^*_z=2.18$ Curva b: $\Phi_z=3.21$ $\chi_z=0.18$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
 Verifica YY: 0.00+0.48+0.00=0.48
 Verifica ZZ: 0.00+0.29+0.01=0.29

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.13$ (L/3150)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.18$ (L/2411)

Asta n. 2014 (-1426 -1448) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=2.48$
 $V, Ed=2.48$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=1805.35$
 $V, Ed=1805.35$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.09$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=113.83$ $T_z=1805.35$ $M_y=2192.94$ $T_y=2.48$ $M_z=-4.03$
 $N, Ed=113.83$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=2192.94$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.38$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-4.03$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.38$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $M_y, Ed=2192.94$ $M_z, Ed=6.45$ $L=4.23$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.23$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.44$ $M_{cr}=7986.95$ $\lambda_{LT}=0.87$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.87$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.80$
 $\lambda_y=51.21$ $N_{cr,y}=225093.00$ $\lambda^*_y=0.59$ Curva a: $\Phi_y=0.71$ $\chi_y=0.89$
 $\lambda_z=189.21$ $N_{cr,z}=16491.20$ $\lambda^*_z=2.18$ Curva b: $\Phi_z=3.21$ $\chi_z=0.18$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.45+0.00=0.45$
 Verifica ZZ: $0.00+0.27+0.01=0.27$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.15$ (L/2891)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.19$ (L/2269)

Asta n. 2014 (-1481 -1426) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=3.75$ - Classe 1
 Sollecitazioni: $T_y=1.22$
 $V, Ed=1.22$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=3.75$ - Classe 1
 Sollecitazioni: $T_z=-1388.37$
 $V, Ed=-1388.37$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.07$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=3.75$ - Classe 1
 Sollecitazioni: $N=99.18$ $T_z=-1388.37$ $M_y=2192.98$ $T_y=1.22$ $M_z=-1.20$
 $N, Ed=99.18$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=2192.98$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.38$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-1.20$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.38$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $M_y, Ed=2192.98$ $M_z, Ed=-5.78$ $L=3.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.75$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.62$ $M_{cr}=6148.69$ $\lambda_{LT}=1.00$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.97$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.72$
 $\lambda_y=45.42$ $N_{cr,y}=286203.00$ $\lambda^*_y=0.52$ Curva a: $\Phi_y=0.67$ $\chi_y=0.92$
 $\lambda_z=167.80$ $N_{cr,z}=20968.40$ $\lambda^*_z=1.93$ Curva b: $\Phi_z=2.66$ $\chi_z=0.22$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.50+0.00=0.50$
 Verifica ZZ: $0.00+0.30+0.00=0.30$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.13$ (L/2888)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.17$ (L/2158)

Asta n. 2014 (-1484 -1481) - Sez. 6 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=1133.91$
 $V, Ed=1133.91$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.05$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=2.44$ - Classe 1
Sollecitazioni: $N=3.67$ $M_y=-935.66$ $M_z=2.00$
 $N, Ed=3.67$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-935.66$ $M_y, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.16$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=2.00$ $M_z, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^2 = 0.16$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y, Ed=-935.66$ $M_z, Ed=3.31$ $L=4.72$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.72$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.21$ $M_{cr}=3467.33$ $\lambda_{LT}=1.33$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=1.32$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=0.52$
 $\lambda_y=57.18$ $N_{cr,y}=180599.00$ $\lambda_y^*=0.66$ Curva a: $\Phi_y=0.77$ $\chi_y=0.87$
 $\lambda_z=211.23$ $N_{cr,z}=13231.40$ $\lambda_z^*=2.43$ Curva b: $\Phi_z=3.84$ $\chi_z=0.15$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.30+0.00=0.30$
Verifica ZZ: $0.00+0.18+0.00=0.18$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.26$ (L/1834)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.33$ (L/1432)

Asta n. 2014 (-1704 -1484) - Sez. 6 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=1.27$ - Classe 1
Sollecitazioni: $T_y=-2.09$
 $V, Ed=-2.09$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=1.27$ - Classe 1
Sollecitazioni: $T_z=-719.01$
 $V, Ed=-719.01$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.03$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=1.27$ - Classe 1
Sollecitazioni: $N=-35.12$ $T_z=-719.01$ $M_y=455.03$ $T_y=-2.09$ $M_z=1.01$
 $N, Ed=-35.12$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=455.03$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.08$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=1.01$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^2 = 0.08$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-35.12$ $M_y, Ed=455.03$ $M_z, Ed=3.67$ $L=1.27$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.27$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.15$ $M_{cr}=42530.50$ $\lambda_{LT}=0.38$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.55$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=15.41$ $N_{cr,y}=2485550.00$ $\lambda_y^*=0.18$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=56.94$ $N_{cr,z}=182102.00$ $\lambda_z^*=0.66$ Curva b: $\Phi_z=0.79$ $\chi_z=0.81$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.07+0.00=0.08$
Verifica ZZ: $0.00+0.04+0.00=0.05$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.00$ (L/30335)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.00$ (L/38136)

Asta n. 2015 (-1606 -1557) - Sez. 6 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=2.12$ - Classe 1
Sollecitazioni: $T_y=-17.21$
 $V, Ed=-17.21$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=2.12$ - Classe 1
Sollecitazioni: $T_z=-524.49$
 $V, Ed=-524.49$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.02$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-216.67$ $T_z=-462.99$ $M_y=-1045.01$ $T_y=-17.21$ $M_z=17.46$
 $N, Ed=-216.67$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-1045.01$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.18$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=17.46$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.18$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-216.67$ $M_y, Ed=-1045.01$ $M_z, Ed=-18.96$ $L=2.12$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.12$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=14884.70$ $\lambda_{LT}=0.64$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.69$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.93$
 $\lambda_y=25.62$ $N_{cr,y}=899730.00$ $\lambda_y^*=0.30$ Curva a: $\Phi_y=0.55$ $\chi_y=0.98$
 $\lambda_z=94.64$ $N_{cr,z}=65917.90$ $\lambda_z^*=1.09$ Curva b: $\Phi_z=1.25$ $\chi_z=0.54$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.96$
 Verifica YY: $0.00+0.18+0.01=0.20$
 Verifica ZZ: $0.00+0.11+0.02=0.13$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.04$ (L/5384)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.05$ (L/3997)

Asta n. 2015 (-1605 -1606) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-5.84$
 $V, Ed=-5.84$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=562.89$
 $V, Ed=562.89$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.03$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=3.80$ - Classe 1
 Sollecitazioni: $N=-241.84$ $T_z=452.43$ $M_y=-1046.53$ $T_y=-5.84$ $M_z=-9.07$
 $N, Ed=-241.84$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-1046.53$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.18$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-9.07$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.18$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-241.84$ $M_y, Ed=-1046.53$ $M_z, Ed=13.12$ $L=3.80$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.80$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.85$ $M_{cr}=10643.40$ $\lambda_{LT}=0.76$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.78$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.87$
 $\lambda_y=46.01$ $N_{cr,y}=278917.00$ $\lambda_y^*=0.53$ Curva a: $\Phi_y=0.68$ $\chi_y=0.91$
 $\lambda_z=169.97$ $N_{cr,z}=20434.60$ $\lambda_z^*=1.96$ Curva b: $\Phi_z=2.72$ $\chi_z=0.22$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.97$
 Verifica YY: $0.00+0.20+0.01=0.21$
 Verifica ZZ: $0.00+0.12+0.01=0.13$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G}=0.05$ (L/8424)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.06$ (L/5876)

Asta n. 2015 (-1445 -1605) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-4.49$
 $V, Ed=-4.49$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=1464.73$
 $V, Ed=1464.73$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.07$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-326.56$ $T_z=1464.73$ $M_y=1613.22$ $T_y=-4.49$ $M_z=9.85$
 $N, Ed=-326.56$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1613.22$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.28$

- Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed = 9.85$ $M_z, V, c, Rd = 1170.59$ $MN_z, c, Rd = 1170.59$ $M_z, Ed/MN_z, c, Rd = 0.01$
 $\alpha = 2.00$ $\beta = 1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.28$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed = -326.56$ $M_y, Ed = 1613.22$ $M_z, Ed = -12.12$ $L = 4.89$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 4.89$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.27$ $M, cr = 3472.18$ $\lambda_{LT} = 1.32$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 1.32$ $\beta_{LT} = 0.75$ $f = 0.99$ $\chi_{LT} = 0.52$
 $\lambda_y = 59.20$ $N_{cr,y} = 168432.00$ $\lambda^*_y = 0.68$ Curva a: $\Phi_y = 0.78$ $\chi_y = 0.86$
 $\lambda_z = 218.73$ $N_{cr,z} = 12340.00$ $\lambda^*_z = 2.52$ Curva b: $\Phi_z = 4.07$ $\chi_z = 0.14$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.60, 0.57, 0.99$
 Verifica YY: $0.00 + 0.51 + 0.01 = 0.52$
 Verifica ZZ: $0.00 + 0.31 + 0.01 = 0.32$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.06$ (L/8074)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.05$ (L/10421)
- Asta n. 2015 (-1461 -1445) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l = 3.78$ - Classe 1
 Sollecitazioni: $T_y = -12.87$
 $V, Ed = -12.87$ $V_c, Rd = 29609.30$ $V, Ed/V_c, Rd = 0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l = 3.78$ - Classe 1
 Sollecitazioni: $T_z = -1624.23$
 $V, Ed = -1624.23$ $V_c, Rd = 21171.50$ $V, Ed/V_c, Rd = 0.08$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l = 3.78$ - Classe 1
 Sollecitazioni: $N = -552.52$ $T_z = -1624.23$ $M_y = 1613.31$ $T_y = -12.87$ $M_z = -25.34$
 $N, Ed = -552.52$ $N_c, Rd = 74603.30$ $n = N, Ed/N_c, Rd = 0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed = 1613.31$ $M_y, V, c, Rd = 5804.95$ $MN_y, c, Rd = 5804.95$ $M_y, Ed/MN_y, c, Rd = 0.28$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed = -25.34$ $M_z, V, c, Rd = 1170.59$ $MN_z, c, Rd = 1170.59$ $M_z, Ed/MN_z, c, Rd = 0.02$
 $\alpha = 2.00$ $\beta = 1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.28$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed = -552.52$ $M_y, Ed = 1613.31$ $M_z, Ed = -25.34$ $L = 3.78$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 3.78$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 2.25$ $M, cr = 8460.39$ $\lambda_{LT} = 0.85$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.85$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.81$
 $\lambda_y = 45.77$ $N_{cr,y} = 281877.00$ $\lambda^*_y = 0.53$ Curva a: $\Phi_y = 0.67$ $\chi_y = 0.92$
 $\lambda_z = 169.08$ $N_{cr,z} = 20651.40$ $\lambda^*_z = 1.95$ Curva b: $\Phi_z = 2.69$ $\chi_z = 0.22$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.60, 0.57, 0.99$
 Verifica YY: $0.01 + 0.33 + 0.01 = 0.35$
 Verifica ZZ: $0.01 + 0.20 + 0.02 = 0.22$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.09$ (L/4019)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.12$ (L/3120)
- Asta n. 2015 (-1842 -1461) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_y = -6.97$
 $V, Ed = -6.97$ $V_c, Rd = 29609.30$ $V, Ed/V_c, Rd = 0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_z = 1799.66$
 $V, Ed = 1799.66$ $V_c, Rd = 21171.50$ $V, Ed/V_c, Rd = 0.09$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l = 0.00$ - Classe 1
 Sollecitazioni: $N = -585.54$ $T_z = 1799.66$ $M_y = 2273.25$ $T_y = -6.97$ $M_z = 12.94$
 $N, Ed = -585.54$ $N_c, Rd = 74603.30$ $n = N, Ed/N_c, Rd = 0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed = 2273.25$ $M_y, V, c, Rd = 5804.95$ $MN_y, c, Rd = 5804.95$ $M_y, Ed/MN_y, c, Rd = 0.39$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed = 12.94$ $M_z, V, c, Rd = 1170.59$ $MN_z, c, Rd = 1170.59$ $M_z, Ed/MN_z, c, Rd = 0.01$
 $\alpha = 2.00$ $\beta = 1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.39$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1

- Sollecitazioni: $N, Ed = -585.54$ $My, Ed = 2273.25$ $Mz, Ed = -13.39$ $L = 3.78$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 3.78$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 2.10$ $M, cr = 7879.80$ $\lambda_{LT} = 0.88$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.87$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.80$
 $\lambda_y = 45.77$ $N_{cr,y} = 281877.00$ $\lambda^*_y = 0.53$ Curva a: $\Phi_y = 0.67$ $\chi_y = 0.92$
 $\lambda_z = 169.08$ $N_{cr,z} = 20651.40$ $\lambda^*_z = 1.95$ Curva b: $\Phi_z = 2.69$ $\chi_z = 0.22$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.60, 0.57, 1.00$
Verifica YY: $0.01 + 0.47 + 0.01 = 0.48$
Verifica ZZ: $0.01 + 0.28 + 0.01 = 0.30$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.05$ (L/6941)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.07$ (L/5497)
- Asta n. 2015 (-1453 -1842) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1 = 4.23$ - Classe 1
Sollecitazioni: $T_y = -3.04$
 $V, Ed = -3.04$ $V_c, Rd = 29609.30$ $V, Ed/V_c, Rd = 0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1 = 4.23$ - Classe 1
Sollecitazioni: $T_z = -1876.16$
 $V, Ed = -1876.16$ $V_c, Rd = 21171.50$ $V, Ed/V_c, Rd = 0.09$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1 = 4.23$ - Classe 1
Sollecitazioni: $N = -683.02$ $T_z = -1876.16$ $M_y = 2272.89$ $T_y = -3.04$ $M_z = -6.82$
 $N, Ed = -683.02$ $N_c, Rd = 74603.30$ $n = N, Ed/N_c, Rd = 0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed = 2272.89$ $M_y, V, c, Rd = 5804.95$ $MN_y, c, Rd = 5804.95$ $M_y, Ed/MN_y, c, Rd = 0.39$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed = -6.82$ $M_z, V, c, Rd = 1170.59$ $MN_z, c, Rd = 1170.59$ $M_z, Ed/MN_z, c, Rd = 0.01$
 $\alpha = 2.00$ $\beta = 1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.39$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed = -683.02$ $M_y, Ed = 2272.89$ $M_z, Ed = -6.82$ $L = 4.23$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 4.23$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 2.19$ $M, cr = 7140.35$ $\lambda_{LT} = 0.92$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.91$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.77$
 $\lambda_y = 51.21$ $N_{cr,y} = 225093.00$ $\lambda^*_y = 0.59$ Curva a: $\Phi_y = 0.71$ $\chi_y = 0.89$
 $\lambda_z = 189.21$ $N_{cr,z} = 16491.20$ $\lambda^*_z = 2.18$ Curva b: $\Phi_z = 3.21$ $\chi_z = 0.18$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.61, 0.57, 1.02$
Verifica YY: $0.01 + 0.49 + 0.00 = 0.50$
Verifica ZZ: $0.05 + 0.29 + 0.01 = 0.35$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G} = 0.12$ (L/3568)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.15$ (L/2805)
- Asta n. 2015 (-1446 -1453) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1 = 0.00$ - Classe 1
Sollecitazioni: $T_y = 3.28$
 $V, Ed = 3.28$ $V_c, Rd = 29609.30$ $V, Ed/V_c, Rd = 0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1 = 0.00$ - Classe 1
Sollecitazioni: $T_z = 1817.24$
 $V, Ed = 1817.24$ $V_c, Rd = 21171.50$ $V, Ed/V_c, Rd = 0.09$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1 = 0.00$ - Classe 1
Sollecitazioni: $N = -676.56$ $T_z = 1817.24$ $M_y = 2023.88$ $T_y = 3.28$ $M_z = -6.28$
 $N, Ed = -676.56$ $N_c, Rd = 74603.30$ $n = N, Ed/N_c, Rd = 0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed = 2023.88$ $M_y, V, c, Rd = 5804.95$ $MN_y, c, Rd = 5804.95$ $M_y, Ed/MN_y, c, Rd = 0.35$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed = -6.28$ $M_z, V, c, Rd = 1170.59$ $MN_z, c, Rd = 1170.59$ $M_z, Ed/MN_z, c, Rd = 0.01$
 $\alpha = 2.00$ $\beta = 1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.35$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed = -676.56$ $M_y, Ed = 2023.88$ $M_z, Ed = 7.61$ $L = 4.23$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 4.23$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 2.25$ $M, cr = 7334.09$ $\lambda_{LT} = 0.91$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.90$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.78$
 $\lambda_y = 51.21$ $N_{cr,y} = 225093.00$ $\lambda^*_y = 0.59$ Curva a: $\Phi_y = 0.71$ $\chi_y = 0.89$

- $\lambda_z=189.21$ Ncr,z=16491.20 $\lambda^*_z=2.18$ Curva b: $\Phi_z=3.21$ $\chi_z=0.18$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.61, 0.57, 1.02
 Verifica YY: 0.01+0.43+0.00=0.44
 Verifica ZZ: 0.05+0.26+0.01=0.31
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.14$ (L/2927)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.18$ (L/2358)
- Asta n. 2015 (-1478 -1446) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=3.75$ - Classe 1
 Sollecitazioni: $T_y=9.18$
 $V,Ed=9.18$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=3.75$ - Classe 1
 Sollecitazioni: $T_z=-1405.91$
 $V,Ed=-1405.91$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.07$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=3.75$ - Classe 1
 Sollecitazioni: $N=-605.06$ $T_z=-1405.91$ $M_y=2022.77$ $T_y=9.18$ $M_z=11.00$
 $N,Ed=-605.06$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=2022.77$ $M_y,V,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.35$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=11.00$ $M_z,V,c,Rd=1170.59$ $MN_z,c,Rd=1170.59$ $M_z,Ed/MN_z,c,Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.35$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N,Ed=-605.06$ $M_y,Ed=2022.77$ $M_z,Ed=-23.45$ $L=3.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.75$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.49$ $M_{cr}=5675.39$ $\lambda_{LT}=1.04$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=1.01$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.70$
 $\lambda_y=45.42$ Ncr,y=286203.00 $\lambda^*_y=0.52$ Curva a: $\Phi_y=0.67$ $\chi_y=0.92$
 $\lambda_z=167.80$ Ncr,z=20968.40 $\lambda^*_z=1.93$ Curva b: $\Phi_z=2.66$ $\chi_z=0.22$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.60, 0.57, 1.00
 Verifica YY: 0.01+0.48+0.01=0.50
 Verifica ZZ: 0.01+0.29+0.02=0.31
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.12$ (L/3240)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.15$ (L/2458)
- Asta n. 2015 (-1474 -1478) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=4.72$ - Classe 1
 Sollecitazioni: $T_y=3.36$
 $V,Ed=3.36$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=4.72$ - Classe 1
 Sollecitazioni: $T_z=-1295.00$
 $V,Ed=-1295.00$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.06$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=2.31$ - Classe 1
 Sollecitazioni: $N=-194.63$ $M_y=-1019.74$ $T_y=3.36$ $M_z=4.66$
 $N,Ed=-194.63$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-1019.74$ $M_y,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.18$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=4.66$ $M_z,V,c,Rd=1170.59$ $MN_z,c,Rd=1170.59$ $M_z,Ed/MN_z,c,Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.18$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N,Ed=-194.63$ $M_y,Ed=-1019.74$ $M_z,Ed=12.75$ $L=4.72$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.72$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.11$ $M_{cr}=3183.70$ $\lambda_{LT}=1.38$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=1.39$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=0.49$
 $\lambda_y=57.18$ Ncr,y=180599.00 $\lambda^*_y=0.66$ Curva a: $\Phi_y=0.77$ $\chi_y=0.87$
 $\lambda_z=211.23$ Ncr,z=13231.40 $\lambda^*_z=2.43$ Curva b: $\Phi_z=3.84$ $\chi_z=0.15$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.58, 0.57, 0.97
 Verifica YY: 0.00+0.34+0.01=0.35
 Verifica ZZ: 0.00+0.21+0.01=0.22
- Verifica freccia massima per soli carichi accidentali - CC 38

Relazione di calcolo

$f_{z,L}=0.28$ (L/1673)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.35$ (L/1332)

Asta n. 2015 (-1848 -1474) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1=2.98$ - Classe 1
 Sollecitazioni: $T_y=7.85$
 $V,Ed=7.85$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1=2.98$ - Classe 1
 Sollecitazioni: $T_z=-901.05$
 $V,Ed=-901.05$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.04$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1=2.98$ - Classe 1
 Sollecitazioni: $N=-173.77$ $T_z=-901.05$ $M_y=417.98$ $T_y=7.85$ $M_z=10.60$
 $N,Ed=-173.77$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=417.98$ $M_y,V,c,Rd=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_y,Ed/M_{Ny,c,Rd}=0.07$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=10.60$ $M_z,V,c,Rd=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_z,Ed/M_{Nz,c,Rd}=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/M_{Ny,c,Rd})^2 + (M_z,Ed/M_{Nz,c,Rd})^1 = 0.07$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N,Ed=-173.77$ $M_y,Ed=417.98$ $M_z,Ed=-12.82$ $L=2.98$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.98$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=9006.02$ $\lambda_{LT}=0.82$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.83$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.83$
 $\lambda_y=36.14$ $N_{cr,y}=452137.00$ $\lambda^*_y=0.42$ Curva a: $\Phi_y=0.61$ $\chi_y=0.95$
 $\lambda_z=133.50$ $N_{cr,z}=33125.40$ $\lambda^*_z=1.54$ Curva b: $\Phi_z=1.91$ $\chi_z=0.33$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.96$
 Verifica YY: $0.00+0.08+0.01=0.09$
 Verifica ZZ: $0.00+0.05+0.01=0.06$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G}=0.03$ (L/9177)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.04$ (L/6788)

Asta n. 2016 (-1601 -1338) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 32 SLU $X_1=1.29$ - Classe 2
 Sollecitazioni: $T_y=11.80$ $M_x=2.26$
 $V,Ed=11.80$ $V_c,Rd,Red=54488.90$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 32 SLU $X_1=1.29$ - Classe 2
 Sollecitazioni: $T_z=-636.16$ $M_x=2.26$
 $V,Ed=-636.16$ $V_c,Rd,Red=38698.40$ $V,Ed/V_c,Rd,Red=0.02$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-2075.05$ $T_z=-597.01$ $M_y=-1567.15$ $T_y=10.26$ $M_z=-11.14$ $M_x=2.51$
 Tensioni: $\sigma_N=-38.56$ $\sigma_{m,d}=-295.14$ $\tau=14.90$ $\sigma_{max}=-333.70$ (sfrut=0.13)
 Tensioni: $\sigma_N=-38.56$ $\sigma_{m,d}=0.65$ $\tau=36.53$ $\tau_{max}=36.53$ (sfrut=0.02)
 Tensioni: $\sigma_N=-38.56$ $\sigma_{m,d}=-295.14$ $\tau=14.90$ $\sigma_{ID,max}=334.70$ (sfrut=0.13)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N,Ed=-2075.05$ $M_y,Ed=-1567.15$ $M_z,Ed=25.38$ $L=4.01$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.01$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.46$ $M_{cr}=38042.30$ $\lambda_{LT}=0.63$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.69$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.93$
 $\lambda_y=32.18$ $N_{cr,y}=1077070.00$ $\lambda^*_y=0.37$ Curva a: $\Phi_y=0.59$ $\chi_y=0.96$
 $\lambda_z=119.72$ $N_{cr,z}=77823.10$ $\lambda^*_z=1.38$ Curva b: $\Phi_z=1.65$ $\chi_z=0.39$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.97, 0.76, 0.97$
 Verifica YY: $0.01+0.11+0.01=0.14$
 Verifica ZZ: $0.01+0.09+0.01=0.11$

- Verifica freccia massima per soli carichi accidentali - CC 35
 $f_{z,L}=0.04$ (L/9038)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.03$ (L/11176)

Asta n. 2016 (-1471 -1601) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_1=1.52$ - Classe 1
 Sollecitazioni: $T_y=1.48$

- V,Ed=1.48 Vc,Rd=54683.30 V,Ed/Vc,Rd=0.00
- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV Xl=1.52 - Classe 1
Sollecitazioni: T_z=519.30
V,Ed=519.30 Vc,Rd=38836.40 V,Ed/Vc,Rd=0.01
 - Verifica in termini tensionali [4.2.4] - CC 33 SLU Xl=3.80 - Classe 3
Sollecitazioni: N=-2044.73 T_z=804.04 M_y=-1569.17 T_y=-13.62 M_z=-33.36 M_x=-2.59
Tensioni: $\sigma_N=-38.00$ $\sigma_{m,d}=-323.12$ $\tau=15.35$ $\sigma_{max}=-361.11$ (sfrut=0.14)
Tensioni: $\sigma_N=-38.00$ $\sigma_{m,d}=1.96$ $\tau=47.46$ $\tau_{max}=47.46$ (sfrut=0.03)
Tensioni: $\sigma_N=-38.00$ $\sigma_{m,d}=-323.12$ $\tau=15.35$ $\sigma_{ID,max}=362.09$ (sfrut=0.14)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: N,Ed=-2044.73 My,Ed=1656.22 Mz,Ed=-33.36 L=3.80
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
L_{cr}=3.80 Curva b: $\alpha_{imp}=0.34$ k_c=0.94 $\psi=3.01$ M_{cr}=50690.00 $\lambda_{LT}=0.55$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.64$ $\beta_{LT}=0.75$ f=0.97 $\chi_{LT}=0.96$
 $\lambda_y=30.49$ Ncr,y=119410.00 $\lambda^*_y=0.35$ Curva a: $\Phi_y=0.58$ $\chi_y=0.97$
 $\lambda_z=113.45$ Ncr,z=86662.40 $\lambda^*_z=1.31$ Curva b: $\Phi_z=1.54$ $\chi_z=0.42$
Kyy, Kyz, Kzy, Kzz=0.95, 0.97, 0.76, 0.97
Verifica YY: 0.01+0.11+0.02=0.14
Verifica ZZ: 0.01+0.09+0.02=0.12
 - Verifica freccia massima per soli carichi accidentali - CC 35
f_{z,L}=0.04 (L/10050)
 - Verifica freccia massima carichi totali - CC 23
f_{z,L}=0.02 (L/14643)
- Asta n. 2016 (-1352 -1471) - Sez. 5 (IPE300) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 30 SLU Xl=3.05 - Classe 2
Sollecitazioni: T_y=-3.27
V,Ed=-3.27 Vc,Rd=54683.30 V,Ed/Vc,Rd=0.00
 - Verifica a taglio Dir. Z [4.2.16] - CC 30 SLU Xl=3.05 - Classe 2
Sollecitazioni: T_z=-861.42
V,Ed=-861.42 Vc,Rd=38836.40 V,Ed/Vc,Rd=0.02
 - Verifica in termini tensionali [4.2.4] - CC 30 SLU Xl=4.67 - Classe 3
Sollecitazioni: N=-2170.82 T_z=-1231.08 M_y=1986.25 T_y=-3.27 M_z=-5.18
Tensioni: $\sigma_N=-40.34$ $\sigma_{m,d}=-362.98$ $\tau=0.00$ $\sigma_{max}=-403.32$ (sfrut=0.15)
Tensioni: $\sigma_N=-40.34$ $\sigma_{m,d}=-0.30$ $\tau=68.74$ $\tau_{max}=68.74$ (sfrut=0.05)
Tensioni: $\sigma_N=-40.34$ $\sigma_{m,d}=-362.98$ $\tau=0.00$ $\sigma_{ID,max}=403.32$ (sfrut=0.15)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 3
Sollecitazioni: N,Ed=-2170.82 My,Ed=1986.25 Mz,Ed=9.32 L=4.89
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
L_{cr}=4.89 Curva b: $\alpha_{imp}=0.34$ k_c=0.94 $\psi=2.51$ M_{cr}=28984.70 $\lambda_{LT}=0.73$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.75$ $\beta_{LT}=0.75$ f=0.97 $\chi_{LT}=0.88$
 $\lambda_y=39.24$ Ncr,y=724297.00 $\lambda^*_y=0.45$ Curva a: $\Phi_y=0.63$ $\chi_y=0.94$
 $\lambda_z=145.99$ Ncr,z=52333.50 $\lambda^*_z=1.68$ Curva b: $\Phi_z=2.17$ $\chi_z=0.28$
Kyy, Kyz, Kzy, Kzz=0.95, 0.98, 0.76, 0.98
Verifica YY: 0.02+0.15+0.00=0.17
Verifica ZZ: 0.05+0.12+0.00=0.18
 - Verifica freccia massima per soli carichi accidentali - CC 35
f_{z,L}=0.03 (L/14023)
 - Verifica freccia massima carichi totali - CC 37
f_{z,L}=0.03 (L/13151)
- Asta n. 2016 (-1462 -1352) - Sez. 5 (IPE300) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU Xl=0.97 - Classe 2
Sollecitazioni: T_y=-16.86 M_x=2.59
V,Ed=-16.86 Vc,Rd,Red=54460.20 V,Ed/Vc,Rd,Red=0.00
 - Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU Xl=0.97 - Classe 2
Sollecitazioni: T_z=-857.59 M_x=2.59
V,Ed=-857.59 Vc,Rd,Red=38677.90 V,Ed/Vc,Rd,Red=0.02
 - Verifica in termini tensionali [4.2.4] - CC 32 SLU Xl=3.56 - Classe 3
Sollecitazioni: N=-3980.66 T_z=-1517.34 M_y=2651.48 T_y=-21.60 M_z=-57.63 M_x=2.34
Tensioni: $\sigma_N=-73.97$ $\sigma_{m,d}=-547.54$ $\tau=13.91$ $\sigma_{max}=-621.51$ (sfrut=0.24)
Tensioni: $\sigma_N=-73.97$ $\sigma_{m,d}=-3.39$ $\tau=85.87$ $\tau_{max}=85.87$ (sfrut=0.06)
Tensioni: $\sigma_N=-73.97$ $\sigma_{m,d}=-547.54$ $\tau=13.91$ $\sigma_{ID,max}=621.98$ (sfrut=0.24)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3

- Sollecitazioni: N,Ed=-4417.73 My,Ed=2696.18 Mz,Ed=-43.05 L=3.78
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.78$ Curva b: $\alpha_{imp}=0.34 k_e=0.94 \psi=2.30 M, cr=38944.80 \lambda_{LT}=0.63$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.69 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.93$
 $\lambda_y=30.33 N_{cr,y}=1212140.00 \lambda'_y=0.35$ Curva a: $\Phi_y=0.58 \chi_y=0.97$
 $\lambda_z=112.85 N_{cr,z}=87581.90 \lambda'_z=1.30$ Curva b: $\Phi_z=1.53 \chi_z=0.43$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.99, 0.77, 0.99$
 Verifica YY: $0.03+0.19+0.02=0.24$
 Verifica ZZ: $0.07+0.15+0.02=0.25$
- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.03$ (L/12063)
- Verifica freccia massima carichi totali - CC 37
 $f_{z,G}=0.05$ (L/7238)
- Asta n. 2016 (-1351 -1462) - Sez. 5 (IPE300) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 19 SLU X1=2.16 - Classe 2
 Sollecitazioni: $T_y=-3.61 M_x=-1.86$
 $V, Ed=-3.61 V_c, Rd, Red=54523.70 V, Ed/V_c, Rd, Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 19 SLU X1=2.16 - Classe 2
 Sollecitazioni: $T_z=561.92 M_x=-1.86$
 $V, Ed=561.92 V_c, Rd, Red=38723.10 V, Ed/V_c, Rd, Red=0.01$
- Verifica in termini tensionali [4.2.4] - CC 33 SLU X1=0.23 - Classe 3
 Sollecitazioni: N=-4371.73 $T_z=1243.83 M_y=1223.63 T_y=-20.19 M_z=46.81 M_x=-2.57$
 Tensioni: $\sigma_N=-81.24 \sigma_{m,d}=-277.80 \tau=15.27 \sigma_{max}=-359.04$ (sfrut=0.14)
 Tensioni: $\sigma_N=-81.24 \sigma_{m,d}=-2.75 \tau=71.12 \tau_{max}=71.12$ (sfrut=0.05)
 Tensioni: $\sigma_N=-81.24 \sigma_{m,d}=-277.80 \tau=15.27 \sigma_{ID,max}=360.01$ (sfrut=0.14)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: N,Ed=-4371.73 My,Ed=-1243.92 Mz,Ed=46.81 L=3.78
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.78$ Curva b: $\alpha_{imp}=0.34 k_e=0.94 \psi=3.07 M, cr=52109.40 \lambda_{LT}=0.54$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.63 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.97$
 $\lambda_y=30.33 N_{cr,y}=1212140.00 \lambda'_y=0.35$ Curva a: $\Phi_y=0.58 \chi_y=0.97$
 $\lambda_z=112.85 N_{cr,z}=87581.90 \lambda'_z=1.30$ Curva b: $\Phi_z=1.53 \chi_z=0.43$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.99, 0.77, 0.99$
 Verifica YY: $0.03+0.08+0.02=0.14$
 Verifica ZZ: $0.07+0.07+0.02=0.16$
- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.02$ (L/15340)
- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.03$ (L/10412)
- Asta n. 2016 (-1454 -1351) - Sez. 5 (IPE300) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU X1=1.82 - Classe 2
 Sollecitazioni: $T_y=2.99 M_x=3.61$
 $V, Ed=2.99 V_c, Rd, Red=54372.50 V, Ed/V_c, Rd, Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU X1=1.82 - Classe 2
 Sollecitazioni: $T_z=-1063.84 M_x=3.61$
 $V, Ed=-1063.84 V_c, Rd, Red=38615.60 V, Ed/V_c, Rd, Red=0.03$
- Verifica in termini tensionali [4.2.4] - CC 33 SLU X1=4.00 - Classe 3
 Sollecitazioni: N=-5367.31 $T_z=1739.45 M_y=2769.07 T_y=2.99 M_z=7.43 M_x=3.61$
 Tensioni: $\sigma_N=-99.74 \sigma_{m,d}=-506.29 \tau=21.43 \sigma_{max}=-606.03$ (sfrut=0.23)
 Tensioni: $\sigma_N=-99.74 \sigma_{m,d}=-0.44 \tau=99.46 \tau_{max}=99.46$ (sfrut=0.07)
 Tensioni: $\sigma_N=-99.74 \sigma_{m,d}=-506.29 \tau=21.43 \sigma_{ID,max}=607.16$ (sfrut=0.23)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: N,Ed=-5367.31 My,Ed=2769.07 Mz,Ed=7.43 L=4.23
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.23$ Curva b: $\alpha_{imp}=0.34 k_e=0.94 \psi=2.52 M, cr=35929.60 \lambda_{LT}=0.65$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.70 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.92$
 $\lambda_y=33.95 N_{cr,y}=967952.00 \lambda'_y=0.39$ Curva a: $\Phi_y=0.60 \chi_y=0.96$
 $\lambda_z=126.28 N_{cr,z}=69938.60 \lambda'_z=1.45$ Curva b: $\Phi_z=1.77 \chi_z=0.36$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 1.01, 0.77, 1.01$
 Verifica YY: $0.04+0.20+0.00=0.24$
 Verifica ZZ: $0.11+0.16+0.00=0.27$
- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,G}=0.03$ (L/11537)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.04$ (L/9676)

Asta n. 2016 (-1350 -1454) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 19 SLU $X_1=0.59$ - Classe 2
 Sollecitazioni: $T_y=-1.74$ $M_x=-2.72$
 $V,Ed=-1.74$ $Vc,Rd,Red=54449.70$ $V,Ed/Vc,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 19 SLU $X_1=0.59$ - Classe 2
 Sollecitazioni: $T_z=1359.64$ $M_x=-2.72$
 $V,Ed=1359.64$ $Vc,Rd,Red=38670.50$ $V,Ed/Vc,Rd,Red=0.04$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=0.23$ - Classe 3
 Sollecitazioni: $N=-5372.67$ $T_z=1697.08$ $M_y=2599.73$ $T_y=2.35$ $M_z=-8.89$ $M_x=-3.64$
 Tensioni: $\sigma_N=-99.84$ $\sigma_{m,d}=-477.70$ $\tau=21.61$ $\sigma_{max}=-577.54$ (sfrut=0.22)
 Tensioni: $\sigma_N=-99.84$ $\sigma_{m,d}=-0.52$ $\tau=97.19$ $\tau_{max}=97.19$ (sfrut=0.06)
 Tensioni: $\sigma_N=-99.84$ $\sigma_{m,d}=-477.70$ $\tau=21.61$ $\sigma_{ID,max}=578.76$ (sfrut=0.22)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N,Ed=-5372.67$ $My,Ed=2599.73$ $Mz,Ed=-8.89$ $L=4.23$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.23$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=2.57$ $M_{cr}=36753.90$ $\lambda_{LT}=0.65$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.70$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.92$
 $\lambda_y=33.95$ $N_{cr,y}=967952.00$ $\lambda^*_y=0.39$ Curva a: $\Phi_y=0.60$ $\chi_y=0.96$
 $\lambda_z=126.28$ $N_{cr,z}=69938.60$ $\lambda^*_z=1.45$ Curva b: $\Phi_z=1.77$ $\chi_z=0.36$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 1.01, 0.77, 1.01$
 Verifica YY: $0.04+0.19+0.00=0.23$
 Verifica ZZ: $0.11+0.15+0.00=0.26$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.02$ (L/16933)

- Verifica freccia massima carichi totali - CC 23
 $f_{z,G}=0.04$ (L/9501)

Asta n. 2016 (-1350 -1477) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 34 SLU $X_1=0.87$ - Classe 2
 Sollecitazioni: $T_y=-45.67$ $M_x=2.24$
 $V,Ed=-45.67$ $Vc,Rd,Red=54491.00$ $V,Ed/Vc,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 34 SLU $X_1=0.87$ - Classe 2
 Sollecitazioni: $T_z=301.78$ $M_x=2.24$
 $V,Ed=301.78$ $Vc,Rd,Red=38699.90$ $V,Ed/Vc,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_1=3.75$ - Classe 3
 Sollecitazioni: $N=-2450.45$ $T_z=-719.16$ $M_y=538.81$ $T_y=-103.54$ $M_z=-255.35$ $M_x=1.56$
 Tensioni: $\sigma_N=-45.54$ $\sigma_{m,d}=-413.91$ $\tau=9.28$ $\sigma_{max}=-459.45$ (sfrut=0.18)
 Tensioni: $\sigma_N=-45.54$ $\sigma_{m,d}=-15.01$ $\tau=41.29$ $\tau_{max}=41.29$ (sfrut=0.03)
 Tensioni: $\sigma_N=-45.54$ $\sigma_{m,d}=-413.91$ $\tau=9.28$ $\sigma_{ID,max}=459.73$ (sfrut=0.18)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-2450.45$ $My,Ed=-941.76$ $Mz,Ed=-255.35$ $L=3.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.75$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=2.45$ $M_{cr}=42020.40$ $\lambda_{LT}=0.60$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.67$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.94$
 $\lambda_y=30.10$ $N_{cr,y}=1230740.00$ $\lambda^*_y=0.35$ Curva a: $\Phi_y=0.58$ $\chi_y=0.97$
 $\lambda_z=111.99$ $N_{cr,z}=88926.10$ $\lambda^*_z=1.29$ Curva b: $\Phi_z=1.52$ $\chi_z=0.43$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.97, 0.76, 0.97$
 Verifica YY: $0.02+0.07+0.12=0.20$
 Verifica ZZ: $0.02+0.05+0.12=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 21
 $f_{z,L}=0.02$ (L/20890)

- Verifica freccia massima carichi totali - CC 21
 $f_{z,G}=0.04$ (L/10047)

Asta n. 2016 (-1477 -1349) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 32 SLU $X_1=0.34$ - Classe 2
 Sollecitazioni: $T_y=976.80$ $M_x=-13.83$
 $V,Ed=976.80$ $Vc,Rd,Red=53482.60$ $V,Ed/Vc,Rd,Red=0.02$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 32 SLU $X_1=0.34$ - Classe 2
 Sollecitazioni: $T_z=-2760.42$ $M_x=-13.83$
 $V,Ed=-2760.42$ $Vc,Rd,Red=37983.70$ $V,Ed/Vc,Rd,Red=0.07$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.79$ - Classe 3
 Sollecitazioni: $N=-2942.98$ $T_z=-2132.42$ $M_y=2220.68$ $T_y=2360.66$ $M_z=1042.96$ $M_x=-7.78$
 Tensioni: $\sigma_N=-54.69$ $\sigma_{m,d}=-1694.16$ $\tau=46.17$ $\sigma_{max}=-1748.85$ (sfrut=0.67)
 Tensioni: $\sigma_N=-54.69$ $\sigma_{m,d}=-269.00$ $\tau=136.30$ $\tau_{max}=136.30$ (sfrut=0.09)
 Tensioni: $\sigma_N=-54.69$ $\sigma_{m,d}=-1694.16$ $\tau=46.17$ $\sigma_{ID,max}=1750.68$ (sfrut=0.67)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N_{Ed}=-2942.98$ $M_{y,Ed}=2220.68$ $M_{z,Ed}=1042.96$ $L=1.02$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $L_{cr}=1.02$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.50$ $M_{cr}=267901.00$ $\lambda_{LT}=0.24$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.49$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=8.17$ $N_{cr,y}=16690100.00$ $\lambda^*_y=0.09$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=30.41$ $N_{cr,z}=1205930.00$ $\lambda^*_z=0.35$ Curva b: $\Phi_z=0.59$ $\chi_z=0.95$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.95$, 0.95 , 0.76 , 0.95
 Verifica YY: $0.02+0.14+0.47=0.64$
 Verifica ZZ: $0.02+0.12+0.47=0.61$
- Verifica freccia massima per soli carichi accidentali - CC 23
 $f_{z,L}=0.01$ (L/13210)
- Verifica freccia massima carichi totali - CC 23
 $f_{z,G}=0.01$ (L/9565)
- Asta n. 2016 (-1349 -1475) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 30 SLU $X_l=2.44$ - Classe 2
 Sollecitazioni: $T_y=-79.81$ $M_x=2.23$
 $V_{Ed}=-79.81$ $V_{c,Rd,Red}=54491.80$ $V_{Ed/Vc,Rd,Red}=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 30 SLU $X_l=2.44$ - Classe 2
 Sollecitazioni: $T_z=1287.89$ $M_x=2.23$
 $V_{Ed}=1287.89$ $V_{c,Rd,Red}=38700.40$ $V_{Ed/Vc,Rd,Red}=0.03$
- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.23$ - Classe 3
 Sollecitazioni: $N=-3696.42$ $T_z=2599.38$ $M_y=4354.04$ $T_y=-70.10$ $M_z=156.66$ $M_x=2.85$
 Tensioni: $\sigma_N=-68.69$ $\sigma_{m,d}=-976.17$ $\tau=16.93$ $\sigma_{max}=-1044.86$ (sfrut=0.40)
 Tensioni: $\sigma_N=-68.69$ $\sigma_{m,d}=9.21$ $\tau=146.15$ $\tau_{max}=146.15$ (sfrut=0.10)
 Tensioni: $\sigma_N=-68.69$ $\sigma_{m,d}=-976.17$ $\tau=16.93$ $\sigma_{ID,max}=1045.27$ (sfrut=0.40)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N_{Ed}=-3696.42$ $M_{y,Ed}=4354.04$ $M_{z,Ed}=156.66$ $L=3.70$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $L_{cr}=3.70$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.55$ $M_{cr}=44723.90$ $\lambda_{LT}=0.59$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.66$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.95$
 $\lambda_y=29.72$ $N_{cr,y}=1262570.00$ $\lambda^*_y=0.34$ Curva a: $\Phi_y=0.57$ $\chi_y=0.97$
 $\lambda_z=110.57$ $N_{cr,z}=91226.00$ $\lambda^*_z=1.27$ Curva b: $\Phi_z=1.49$ $\chi_z=0.44$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.96$, 0.98 , 0.76 , 0.98
 Verifica YY: $0.03+0.30+0.07=0.40$
 Verifica ZZ: $0.06+0.24+0.07=0.37$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.04$ (L/8664)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.07$ (L/4976)
- Asta n. 2016 (-1475 -1524) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 32 SLU $X_l=2.70$ - Classe 2
 Sollecitazioni: $T_y=21.39$ $M_x=-1.93$
 $V_{Ed}=21.39$ $V_{c,Rd,Red}=54517.00$ $V_{Ed/Vc,Rd,Red}=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 32 SLU $X_l=2.70$ - Classe 2
 Sollecitazioni: $T_z=-1079.45$ $M_x=-1.93$
 $V_{Ed}=-1079.45$ $V_{c,Rd,Red}=38718.30$ $V_{Ed/Vc,Rd,Red}=0.03$
- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-3700.37$ $T_z=-454.48$ $M_y=-2815.95$ $T_y=21.84$ $M_z=-61.81$ $M_x=-2.06$
 Tensioni: $\sigma_N=-68.76$ $\sigma_{m,d}=-582.25$ $\tau=12.25$ $\sigma_{max}=-651.01$ (sfrut=0.25)
 Tensioni: $\sigma_N=-68.76$ $\sigma_{m,d}=-3.63$ $\tau=28.21$ $\tau_{max}=28.21$ (sfrut=0.02)
 Tensioni: $\sigma_N=-68.76$ $\sigma_{m,d}=-582.25$ $\tau=12.25$ $\sigma_{ID,max}=651.36$ (sfrut=0.25)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N_{Ed}=-3700.37$ $M_{y,Ed}=-2815.95$ $M_{z,Ed}=-61.81$ $L=4.70$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $L_{cr}=4.70$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.57$ $M_{cr}=31457.50$ $\lambda_{LT}=0.70$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.73$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.90$

- $\lambda_y=37.69$ Ncr,y=785287.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=140.20$ Ncr,z=56740.30 $\lambda^*_z=1.61$ Curva b: $\Phi_z=2.04$ $\chi_z=0.30$
 Kyy, Kyz, Kzy, Kzz=0.96, 1.00, 0.77, 1.00
 Verifica YY: 0.03+0.21+0.03=0.26
 Verifica ZZ: 0.09+0.16+0.03=0.28
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.07$ (L/5874)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.11$ (L/4004)
- Asta n. 2017 (-1336 -1340) - Sez. 5 (IPE300) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=1.27$ - Classe 2
 Sollecitazioni: $T_y=-22.57$
 $V, Ed=-22.57$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=1.27$ - Classe 2
 Sollecitazioni: $T_z=1842.84$
 $V, Ed=1842.84$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.05$
- Verifica in termini tensionali [4.2.4] - CC 30 SLU $X_l=1.95$ - Classe 3
 Sollecitazioni: $N=-928.81$ $T_z=1466.72$ $M_y=-1311.64$ $T_y=-142.71$ $M_z=-108.13$
 Tensioni: $\sigma_N=-17.26$ $\sigma_{m,d}=-369.76$ $\tau=0.00$ $\sigma_{max}=-387.02$ (sfrut=0.15)
 Tensioni: $\sigma_N=-17.26$ $\sigma_{m,d}=-6.36$ $\tau=81.90$ $\tau_{max}=81.90$ (sfrut=0.05)
 Tensioni: $\sigma_N=-17.26$ $\sigma_{m,d}=-369.76$ $\tau=0.00$ $\sigma_{ID,max}=387.02$ (sfrut=0.15)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 3
 Sollecitazioni: $N, Ed=-928.81$ $M_y, Ed=-1311.64$ $M_z, Ed=-108.13$ $L=2.17$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.17$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.92$ $M_{cr}=125900.00$ $\lambda_{LT}=0.35$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.54$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=17.41$ Ncr,y=3678030.00 $\lambda^*_y=0.20$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=64.78$ Ncr,z=265753.00 $\lambda^*_z=0.75$ Curva b: $\Phi_z=0.87$ $\chi_z=0.76$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.01+0.09+0.05=0.14
 Verifica ZZ: 0.01+0.07+0.05=0.12
- Verifica freccia massima per soli carichi accidentali - CC 21
 $f_{z,L}=0.01$ (L/15219)
- Verifica freccia massima carichi totali - CC 21
 $f_{z,L}=0.01$ (L/21474)
- Asta n. 2017 (-1340 -1493) - Sez. 5 (IPE300) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU $X_l=2.04$ - Classe 2
 Sollecitazioni: $T_y=-14.03$ $M_x=2.75$
 $V, Ed=-14.03$ $V_c, Rd, Red=54447.10$ $V, Ed/V_c, Rd, Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU $X_l=2.04$ - Classe 2
 Sollecitazioni: $T_z=713.84$ $M_x=2.75$
 $V, Ed=713.84$ $V_c, Rd, Red=38668.70$ $V, Ed/V_c, Rd, Red=0.02$
- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.23$ - Classe 3
 Sollecitazioni: $N=-2672.01$ $T_z=1341.15$ $M_y=1602.51$ $T_y=-14.03$ $M_z=24.49$ $M_x=2.75$
 Tensioni: $\sigma_N=-49.65$ $\sigma_{m,d}=-318.07$ $\tau=16.29$ $\sigma_{max}=-367.73$ (sfrut=0.14)
 Tensioni: $\sigma_N=-49.65$ $\sigma_{m,d}=1.44$ $\tau=76.64$ $\tau_{max}=76.64$ (sfrut=0.05)
 Tensioni: $\sigma_N=-49.65$ $\sigma_{m,d}=-318.07$ $\tau=16.29$ $\sigma_{ID,max}=368.81$ (sfrut=0.14)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed=-2672.01$ $M_y, Ed=1602.51$ $M_z, Ed=24.49$ $L=3.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.36$ $M_{cr}=55788.00$ $\lambda_{LT}=0.52$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.62$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.97$
 $\lambda_y=24.68$ Ncr,y=1831660.00 $\lambda^*_y=0.28$ Curva a: $\Phi_y=0.55$ $\chi_y=0.98$
 $\lambda_z=91.80$ Ncr,z=132345.00 $\lambda^*_z=1.06$ Curva b: $\Phi_z=1.20$ $\chi_z=0.56$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.97, 0.76, 0.97
 Verifica YY: 0.02+0.11+0.01=0.14
 Verifica ZZ: 0.02+0.09+0.01=0.12
- Verifica freccia massima per soli carichi accidentali - CC 21
 $f_{z,G}=0.01$ (L/23347)
- Verifica freccia massima carichi totali - CC 21
 $f_{z,L}=0.02$ (L/12936)
- Asta n. 2017 (-1493 -1501) - Sez. 5 (IPE300) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU $X_l=1.04$ - Classe 2
Sollecitazioni: $T_y=-5.54$ $M_x=-2.63$
 $V, Ed=-5.54$ $V_c, Rd, Red=54457.10$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU $X_l=1.04$ - Classe 2
Sollecitazioni: $T_z=-514.39$ $M_y=-2.63$
 $V, Ed=-514.39$ $V_c, Rd, Red=38675.70$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=2.85$ - Classe 3
Sollecitazioni: $N=-2652.16$ $T_z=-1141.70$ $M_y=1032.57$ $T_y=-5.54$ $M_z=-10.70$ $M_x=-2.63$
Tensioni: $\sigma_N=-49.28$ $\sigma_{m,d}=-198.64$ $\tau=15.61$ $\sigma_{max}=-247.93$ (sfrut=0.09)
Tensioni: $\sigma_N=-49.28$ $\sigma_{m,d}=0.63$ $\tau=65.63$ $\tau_{max}=65.63$ (sfrut=0.04)
Tensioni: $\sigma_N=-49.28$ $\sigma_{m,d}=-198.64$ $\tau=15.61$ $\sigma_{ID,max}=249.40$ (sfrut=0.10)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-2652.16$ $M_y, Ed=1032.57$ $M_z, Ed=-10.70$ $L=3.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.77$ $M_{cr}=65385.50$ $\lambda_{LT}=0.48$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.60$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.99$
 $\lambda_y=24.68$ $N_{cr,y}=1831660.00$ $\lambda^*_y=0.28$ Curva a: $\Phi_y=0.55$ $\chi_y=0.98$
 $\lambda_z=91.80$ $N_{cr,z}=132345.00$ $\lambda^*_z=1.06$ Curva b: $\Phi_z=1.20$ $\chi_z=0.56$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.97, 0.76, 0.97$
Verifica YY: $0.02+0.07+0.00=0.09$
Verifica ZZ: $0.02+0.05+0.00=0.08$
 - Verifica freccia massima per soli carichi accidentali - CC 23
 $f_{z,L}=0.01$ (L/39321)
 - Verifica freccia massima carichi totali - CC 23
 $f_{z,L}=0.01$ (L/23717)

Asta n. 2017 (-1501 -1500) - Sez. 5 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 7 SLV $X_l=1.97$ - Classe 2
Sollecitazioni: $T_y=-19.35$
 $V, Ed=-19.35$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 7 SLV $X_l=1.97$ - Classe 2
Sollecitazioni: $T_z=253.43$
 $V, Ed=253.43$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.23$ - Classe 3
Sollecitazioni: $N=-3468.28$ $T_z=606.15$ $M_y=726.49$ $T_y=-140.94$ $M_z=230.13$ $M_x=1.04$
Tensioni: $\sigma_N=-64.45$ $\sigma_{m,d}=-416.27$ $\tau=6.15$ $\sigma_{max}=-480.72$ (sfrut=0.18)
Tensioni: $\sigma_N=-64.45$ $\sigma_{m,d}=13.53$ $\tau=34.49$ $\tau_{max}=34.49$ (sfrut=0.02)
Tensioni: $\sigma_N=-64.45$ $\sigma_{m,d}=-416.27$ $\tau=6.15$ $\sigma_{ID,max}=480.84$ (sfrut=0.18)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-3468.28$ $M_y, Ed=726.49$ $M_z, Ed=230.13$ $L=3.43$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.43$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.16$ $M_{cr}=42767.90$ $\lambda_{LT}=0.60$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.67$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.94$
 $\lambda_y=27.53$ $N_{cr,y}=1472130.00$ $\lambda^*_y=0.32$ Curva a: $\Phi_y=0.56$ $\chi_y=0.97$
 $\lambda_z=102.40$ $N_{cr,z}=106368.00$ $\lambda^*_z=1.18$ Curva b: $\Phi_z=1.36$ $\chi_z=0.49$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.98, 0.76, 0.98$
Verifica YY: $0.02+0.05+0.11=0.18$
Verifica ZZ: $0.02+0.04+0.11=0.17$
 - Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.01$ (L/38628)
 - Verifica freccia massima carichi totali - CC 23
 $f_{z,L}=0.01$ (L/25851)

Asta n. 2017 (-1500 -1342) - Sez. 5 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 15 SLV $X_l=1.17$ - Classe 2
Sollecitazioni: $T_y=19.46$
 $V, Ed=19.46$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 15 SLV $X_l=1.17$ - Classe 2
Sollecitazioni: $T_z=-305.86$
 $V, Ed=-305.86$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 30 SLU $X_l=2.58$ - Classe 3
Sollecitazioni: $N=-3394.22$ $T_z=-991.50$ $M_y=1304.36$ $T_y=121.53$ $M_z=145.31$ $M_x=-2.31$
Tensioni: $\sigma_N=-63.07$ $\sigma_{m,d}=-414.63$ $\tau=13.74$ $\sigma_{max}=-477.71$ (sfrut=0.18)
Tensioni: $\sigma_N=-63.07$ $\sigma_{m,d}=8.54$ $\tau=57.14$ $\tau_{max}=57.14$ (sfrut=0.04)

Tensioni: $\sigma_N = -63.07$ $\sigma_{m,d} = -414.63$ $\tau = 13.74$ $\sigma_{ID,max} = 478.30$ (sfrut=0.18)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 3
 Sollecitazioni: $N, Ed = -3394.22$ $M_y, Ed = 1304.36$ $M_z, Ed = -167.63$ $L = 2.80$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 2.80$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 2.11$ $M, cr = 58218.10$ $\lambda_{LT} = 0.51$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.62$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.98$
 $\lambda_y = 22.47$ $N_{cr,y} = 2209120.00$ $\lambda^*_y = 0.26$ Curva a: $\Phi_y = 0.54$ $\chi_y = 0.99$
 $\lambda_z = 83.59$ $N_{cr,z} = 159618.00$ $\lambda^*_z = 0.96$ Curva b: $\Phi_z = 1.09$ $\chi_z = 0.62$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.97, 0.76, 0.97$
 Verifica YY: $0.02 + 0.09 + 0.08 = 0.19$
 Verifica ZZ: $0.02 + 0.07 + 0.08 = 0.17$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L} = 0.01$ (L/23478)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L} = 0.02$ (L/15882)

Asta n. 2017 (-1339 -1342) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_L = 1.80$ - Classe 1
 Sollecitazioni: $T_y = 6.20$
 $V, Ed = 6.20$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 5 SLV $X_L = 1.80$ - Classe 1
 Sollecitazioni: $T_z = -838.24$
 $V, Ed = -838.24$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.02$

- Verifica in termini tensionali [4.2.4] - CC 5 SLV $X_L = 0.23$ - Classe 3
 Sollecitazioni: $N = -406.80$ $T_z = -730.02$ $M_y = -1326.95$ $T_y = -29.35$ $M_z = 36.02$
 Tensioni: $\sigma_N = -7.56$ $\sigma_{m,d} = -282.94$ $\tau = 0.00$ $\sigma_{max} = -290.50$ (sfrut=0.11)
 Tensioni: $\sigma_N = -7.56$ $\sigma_{m,d} = 2.12$ $\tau = 40.76$ $\tau_{max} = 40.76$ (sfrut=0.03)
 Tensioni: $\sigma_N = -7.56$ $\sigma_{m,d} = -282.94$ $\tau = 0.00$ $\sigma_{ID,max} = 290.50$ (sfrut=0.11)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
 Sollecitazioni: $N, Ed = -406.80$ $M_y, Ed = -1326.95$ $M_z, Ed = -36.76$ $L = 2.93$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 2.93$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 2.38$ $M, cr = 60972.80$ $\lambda_{LT} = 0.50$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.61$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 0.98$
 $\lambda_y = 23.51$ $N_{cr,y} = 2017430.00$ $\lambda^*_y = 0.27$ Curva a: $\Phi_y = 0.54$ $\chi_y = 0.98$
 $\lambda_z = 87.47$ $N_{cr,z} = 145768.00$ $\lambda^*_z = 1.01$ Curva b: $\Phi_z = 1.14$ $\chi_z = 0.59$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00 + 0.09 + 0.02 = 0.11$
 Verifica ZZ: $0.00 + 0.07 + 0.02 = 0.09$

- Verifica freccia massima per soli carichi accidentali - CC 35
 $f_{z,L} = 0.01$ (L/27088)

- Verifica freccia massima carichi totali - CC 24
 $f_{z,L} = 0.02$ (L/12266)

Asta n. 2017 (-1339 -1579) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 32 SLU $X_L = 2.17$ - Classe 2
 Sollecitazioni: $T_y = -1.32$ $M_x = 2.35$
 $V, Ed = -1.32$ $V_c, Rd, Red = 54480.90$ $V, Ed/V_c, Rd, Red = 0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 32 SLU $X_L = 2.17$ - Classe 2
 Sollecitazioni: $T_z = 906.33$ $M_x = 2.35$
 $V, Ed = 906.33$ $V_c, Rd, Red = 38692.70$ $V, Ed/V_c, Rd, Red = 0.02$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_L = 0.23$ - Classe 3
 Sollecitazioni: $N = -4144.40$ $T_z = 1748.79$ $M_y = 2757.57$ $T_y = -2.96$ $M_z = 8.24$ $M_x = 2.56$
 Tensioni: $\sigma_N = -77.01$ $\sigma_{m,d} = -505.23$ $\tau = 15.19$ $\sigma_{max} = -582.25$ (sfrut=0.22)
 Tensioni: $\sigma_N = -77.01$ $\sigma_{m,d} = 0.48$ $\tau = 98.82$ $\tau_{max} = 98.82$ (sfrut=0.07)
 Tensioni: $\sigma_N = -77.01$ $\sigma_{m,d} = -505.23$ $\tau = 15.19$ $\sigma_{ID,max} = 582.84$ (sfrut=0.22)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed = -4144.40$ $M_y, Ed = 2757.57$ $M_z, Ed = 8.24$ $L = 3.79$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 3.79$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 2.30$ $M, cr = 38864.50$ $\lambda_{LT} = 0.63$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.69$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.93$
 $\lambda_y = 30.41$ $N_{cr,y} = 1205750.00$ $\lambda^*_y = 0.35$ Curva a: $\Phi_y = 0.58$ $\chi_y = 0.97$
 $\lambda_z = 113.15$ $N_{cr,z} = 87120.20$ $\lambda^*_z = 1.30$ Curva b: $\Phi_z = 1.54$ $\chi_z = 0.43$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.96, 0.99, 0.76, 0.99$
 Verifica YY: $0.03 + 0.19 + 0.00 = 0.23$
 Verifica ZZ: $0.07 + 0.16 + 0.00 = 0.23$

- Verifica freccia massima per soli carichi accidentali - CC 35
 $f_{z,L}=0.02$ (L/23218)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.05$ (L/7491)

Asta n. 2017 (-1579 -1338) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU $X_1=3.23$ - Classe 2
 Sollecitazioni: $T_y=3.89$ $M_x=-2.37$
 $V,Ed=3.89$ $V_c,Rd,Red=54479.60$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU $X_1=3.23$ - Classe 2
 Sollecitazioni: $T_z=-1081.10$ $M_x=-2.37$
 $V,Ed=-1081.10$ $V_c,Rd,Red=38691.80$ $V,Ed/V_c,Rd,Red=0.03$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-4158.33$ $T_z=-91.32$ $M_y=-1277.59$ $T_y=3.89$ $M_z=-12.43$ $M_x=-2.37$
 Tensioni: $\sigma_N=-77.27$ $\sigma_{m,d}=-244.78$ $\tau=14.06$ $\sigma_{max}=-322.05$ (sfrut=0.12)
 Tensioni: $\sigma_N=-77.27$ $\sigma_{m,d}=-0.73$ $\tau=14.96$ $\tau_{max}=14.96$ (sfrut=0.01)
 Tensioni: $\sigma_N=-77.27$ $\sigma_{m,d}=-244.78$ $\tau=14.06$ $\sigma_{ID,max}=322.97$ (sfrut=0.12)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-3888.30$ $M_y,Ed=1138.00$ $M_z,Ed=-40.08$ $L=4.00$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.00$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.18$ $M_{cr}=33813.00$ $\lambda_{LT}=0.67$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.72$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.91$
 $\lambda_y=32.10$ $N_{cr,y}=1082470.00$ $\lambda^*_y=0.37$ Curva a: $\Phi_y=0.59$ $\chi_y=0.96$
 $\lambda_z=119.42$ $N_{cr,z}=78212.80$ $\lambda^*_z=1.38$ Curva b: $\Phi_z=1.65$ $\chi_z=0.39$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.99, 0.76, 0.99$
 Verifica YY: $0.03+0.08+0.02=0.13$
 Verifica ZZ: $0.07+0.07+0.02=0.15$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.03$ (L/13015)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/10198)

Asta n. 2018 (-1568 -1836) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_y=-30.18$
 $V,Ed=-30.18$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=1059.66$
 $V,Ed=1059.66$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.05$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $N=-127.29$ $T_z=1059.66$ $M_y=948.21$ $T_y=-30.18$ $M_z=30.53$
 $N,Ed=-127.29$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=948.21$ $M_y,V,c,Rd=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_y,Ed/M_{Ny,c,Rd}=0.16$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=30.53$ $M_z,V,c,Rd=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_z,Ed/M_{Nz,c,Rd}=0.03$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/M_{Ny,c,Rd})^2 + (M_z,Ed/M_{Nz,c,Rd})^2 = 0.16$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N,Ed=-127.29$ $M_y,Ed=948.21$ $M_z,Ed=-34.97$ $L=2.17$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.17$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=14342.80$ $\lambda_{LT}=0.65$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.70$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.92$
 $\lambda_y=26.27$ $N_{cr,y}=855308.00$ $\lambda^*_y=0.30$ Curva a: $\Phi_y=0.56$ $\chi_y=0.98$
 $\lambda_z=97.06$ $N_{cr,z}=62663.40$ $\lambda^*_z=1.12$ Curva b: $\Phi_z=1.28$ $\chi_z=0.52$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.17+0.02=0.19$
 Verifica ZZ: $0.00+0.10+0.03=0.13$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/12167)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.02$ (L/9287)

Asta n. 2018 (-1568 -1569) - Sez. 6 (IPE200) - Crit. 1

Relazione di calcolo

-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-13.02$
 $V, Ed=-13.02$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=1448.83$
 $V, Ed=1448.83$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.07$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-228.72$ $T_z=1448.83$ $M_y=946.48$ $T_y=-13.02$ $M_z=19.59$
 $N, Ed=-228.72$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=946.48$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.16$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=19.59$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^1 = 0.16$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-228.72$ $M_y, Ed=946.48$ $M_z, Ed=-20.45$ $L=3.08$
 $\alpha_m, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.85$ $M, cr=14088.00$ $\lambda_{LT}=0.66$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.71$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.92$
 $\lambda_y=37.23$ $N_{cr,y}=425944.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.95$
 $\lambda_z=137.54$ $N_{cr,z}=31206.40$ $\lambda_z^*=1.58$ Curva b: $\Phi_z=1.99$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.96$
Verifica YY: $0.00+0.17+0.01=0.18$
Verifica ZZ: $0.00+0.10+0.02=0.12$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.08$ (L/3815)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.10$ (L/3070)
- Asta n. 2018 (-1569 -1570) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=3.08$ - Classe 1
Sollecitazioni: $T_y=-5.70$
 $V, Ed=-5.70$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=3.08$ - Classe 1
Sollecitazioni: $T_z=-1698.68$
 $V, Ed=-1698.68$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.08$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=3.08$ - Classe 1
Sollecitazioni: $N=-230.24$ $T_z=-1698.68$ $M_y=1712.41$ $T_y=-5.70$ $M_z=-9.58$
 $N, Ed=-230.24$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1712.41$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.29$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-9.58$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^1 = 0.29$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-230.24$ $M_y, Ed=1712.41$ $M_z, Ed=-9.58$ $L=3.08$
 $\alpha_m, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.31$ $M, cr=11398.60$ $\lambda_{LT}=0.73$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.76$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.88$
 $\lambda_y=37.23$ $N_{cr,y}=425944.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.95$
 $\lambda_z=137.54$ $N_{cr,z}=31206.40$ $\lambda_z^*=1.58$ Curva b: $\Phi_z=1.99$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.96$
Verifica YY: $0.00+0.32+0.00=0.33$
Verifica ZZ: $0.00+0.19+0.01=0.20$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.04$ (L/8246)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.05$ (L/6566)
- Asta n. 2018 (-1570 -1571) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-24.00$
 $V, Ed=-24.00$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=1671.09$

Relazione di calcolo

- V,Ed=1671.09 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.08
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=0.00 - Classe 1
Sollecitazioni: N=-278.34 Tz=1671.09 My=1708.40 Ty=-24.00 Mz=41.94
N,Ed=-278.34 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.00
Pressoflessione retta YY [4.2.33]:
My,Ed=1708.40 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.29
Pressoflessione retta ZZ [4.2.34]:
Mz,Ed=41.94 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.04
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.29$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: N,Ed=-278.34 My,Ed=1708.40 Mz,Ed=41.94 L=3.43
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
L_{cr}=3.43 Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=2.20 M_{cr}=9367.35 \lambda_{LT}=0.81$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.81 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.84$
 $\lambda_y=41.53 N_{cr,y}=342337.00 \lambda_y^*=0.48$ Curva a: $\Phi_y=0.64 \chi_y=0.93$
 $\lambda_z=153.42 N_{cr,z}=25081.10 \lambda_z^*=1.77$ Curva b: $\Phi_z=2.33 \chi_z=0.26$
Kyy, Kyz, Kzy, Kzz=0.95, 0.58, 0.57, 0.97
Verifica YY: 0.00+0.33+0.02=0.36
Verifica ZZ: 0.00+0.20+0.03=0.24
 - Verifica freccia massima per soli carichi accidentali - CC 38
f_{z,L}=0.05 (L/6735)
 - Verifica freccia massima carichi totali - CC 38
f_{z,G}=0.06 (L/5550)
- Asta n. 2018 (-1571 -1572) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU Xl=2.80 - Classe 1
Sollecitazioni: Ty=15.72
V,Ed=15.72 Vc,Rd=29609.30 V,Ed/Vc,Rd=0.00
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU Xl=2.80 - Classe 1
Sollecitazioni: Tz=-1445.78
V,Ed=-1445.78 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.07
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=2.80 - Classe 1
Sollecitazioni: N=-269.85 Tz=-1445.78 My=1147.39 Ty=15.72 Mz=21.03
N,Ed=-269.85 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.00
Pressoflessione retta YY [4.2.33]:
My,Ed=1147.39 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.20
Pressoflessione retta ZZ [4.2.34]:
Mz,Ed=21.03 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.02
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.20$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: N,Ed=-269.85 My,Ed=1147.39 Mz,Ed=-22.98 L=2.80
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
L_{cr}=2.80 Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=2.45 M_{cr}=13763.60 \lambda_{LT}=0.67$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.71 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.91$
 $\lambda_y=33.90 N_{cr,y}=513720.00 \lambda_y^*=0.39$ Curva a: $\Phi_y=0.60 \chi_y=0.96$
 $\lambda_z=125.24 N_{cr,z}=37637.20 \lambda_z^*=1.44$ Curva b: $\Phi_z=1.75 \chi_z=0.36$
Kyy, Kyz, Kzy, Kzz=0.95, 0.58, 0.57, 0.96
Verifica YY: 0.00+0.21+0.01=0.22
Verifica ZZ: 0.00+0.12+0.02=0.15
 - Verifica freccia massima per soli carichi accidentali - CC 38
f_{z,L}=0.04 (L/7358)
 - Verifica freccia massima carichi totali - CC 38
f_{z,L}=0.05 (L/5860)
- Asta n. 2018 (-1573 -1572) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU Xl=2.93 - Classe 1
Sollecitazioni: Ty=-2.24
V,Ed=-2.24 Vc,Rd=29609.30 V,Ed/Vc,Rd=0.00
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU Xl=2.93 - Classe 1
Sollecitazioni: Tz=-927.52
V,Ed=-927.52 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.04
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=2.93 - Classe 1
Sollecitazioni: N=-201.03 Tz=-927.52 My=1145.80 Ty=-2.24 Mz=-6.97
N,Ed=-201.03 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.00
Pressoflessione retta YY [4.2.33]:

My,Ed=1145.80 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.20
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=-6.97 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.01
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.20$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: N,Ed=-201.03 My,Ed=1145.80 Mz,Ed=-6.97 L=2.93
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.93$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=1.12 M_{cr}=5894.99 \lambda_{LT}=1.02$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.99 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.71$
 $\lambda_y=35.47 N_{cr,y}=469145.00 \lambda_y^*=0.41$ Curva a: $\Phi_y=0.61 \chi_y=0.95$
 $\lambda_z=131.06 N_{cr,z}=34371.50 \lambda_z^*=1.51$ Curva b: $\Phi_z=1.86 \chi_z=0.34$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.96$
 Verifica YY: $0.00+0.26+0.00=0.27$
 Verifica ZZ: $0.00+0.16+0.01=0.17$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.07 (L/4290)$

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.09 (L/3268)$

Asta n. 2018 (-1573 -1593) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_y=-3.15$
 $V,Ed=-3.15 V_c,Rd=29609.30 V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_z=1425.68$
 $V,Ed=1425.68 V_c,Rd=21171.50 V,Ed/V_c,Rd=0.07$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU X1=0.00 - Classe 1
 Sollecitazioni: N=-183.19 $T_z=1425.68 M_y=887.63 T_y=-3.15 M_z=3.33$
 $N,Ed=-183.19 N_c,Rd=74603.30 n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=887.63 M_y,V,c,Rd=5804.95 MN_y,c,Rd=5804.95 M_y,Ed/MN_y,c,Rd=0.15$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=3.33 M_z,V,c,Rd=1170.59 MN_z,c,Rd=1170.59 M_z,Ed/MN_z,c,Rd=0.00$
 $\alpha=2.00 \beta=1.00 (M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.15$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: N,Ed=-183.19 My,Ed=887.63 Mz,Ed=-8.62 L=3.79
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.79$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=2.28 M_{cr}=8554.96 \lambda_{LT}=0.84$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.84 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.82$
 $\lambda_y=45.89 N_{cr,y}=280391.00 \lambda_y^*=0.53$ Curva a: $\Phi_y=0.67 \chi_y=0.92$
 $\lambda_z=169.53 N_{cr,z}=20542.60 \lambda_z^*=1.95$ Curva b: $\Phi_z=2.70 \chi_z=0.22$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.96$
 Verifica YY: $0.00+0.18+0.00=0.18$
 Verifica ZZ: $0.00+0.11+0.01=0.12$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.15 (L/2512)$

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.18 (L/2061)$

Asta n. 2018 (-1593 -1578) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU X1=1.86 - Classe 1
 Sollecitazioni: $T_y=17.26$
 $V,Ed=17.26 V_c,Rd=29609.30 V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU X1=1.86 - Classe 1
 Sollecitazioni: $T_z=-590.63$
 $V,Ed=-590.63 V_c,Rd=21171.50 V,Ed/V_c,Rd=0.03$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU X1=0.45 - Classe 1
 Sollecitazioni: N=-161.71 $M_y=-452.18 T_y=17.26 M_z=-8.29$
 $N,Ed=-161.71 N_c,Rd=74603.30 n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-452.18 M_y,c,Rd=5804.95 MN_y,c,Rd=5804.95 M_y,Ed/MN_y,c,Rd=0.08$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-8.29 M_z,V,c,Rd=1170.59 MN_z,c,Rd=1170.59 M_z,Ed/MN_z,c,Rd=0.01$
 $\alpha=2.00 \beta=1.00 (M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.08$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N_{Ed}=-161.71$ My, $E_{dEd}=-452.18$ Mz, $E_{dEd}=16.18$ L=1.86
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.86$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ M, $cr=18139.10$ $\lambda_{LT}=0.58$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.66$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.95$
 $\lambda_y=22.58$ Ncr, $y=1158140.00$ $\lambda^*_y=0.26$ Curva a: $\Phi_y=0.54$ $\chi_y=0.99$
 $\lambda_z=83.41$ Ncr, $z=84849.80$ $\lambda^*_z=0.96$ Curva b: $\Phi_z=1.09$ $\chi_z=0.62$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.08+0.01=0.09$
 Verifica ZZ: $0.00+0.05+0.01=0.06$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.02$ (L/8969)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/6861)

Asta n. 2019 (-1853 -1608) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=17.15$ $M_x=-4.59$
 $V_{Ed}=17.15$ $V_c, R_d, R_{ed}=29108.30$ $V_{Ed}/V_c, R_d, R_{ed}=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=879.16$ $M_x=-4.59$
 $V_{Ed}=879.16$ $V_c, R_d, R_{ed}=20813.30$ $V_{Ed}/V_c, R_d, R_{ed}=0.04$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.18$ - Classe 1
 Sollecitazioni: $N=-44.51$ $T_z=788.49$ $M_y=-446.12$ $T_y=17.15$ $M_z=4.25$ $M_x=-4.59$
 $N_{Ed}=-44.51$ $N_c, R_d=74603.30$ $n=N_{Ed}/N_c, R_d=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, E_{dEd}=-446.12$ My, $V, c, R_d=5804.95$ MNy, $c, R_d=5804.95$ My, $E_{dEd}/M_{Ny}, c, R_d=0.08$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, E_{dEd}=4.25$ Mz, $V, c, R_d=1170.59$ MNz, $c, R_d=1170.59$ Mz, $E_{dEd}/M_{Nz}, c, R_d=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, E_{dEd}/M_{Ny}, c, R_d)^2 + (M_z, E_{dEd}/M_{Nz}, c, R_d)^1 = 0.08$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N_{Ed}=-51.62$ My, $E_{dEd}=-446.12$ Mz, $E_{dEd}=4.25$ L=0.18
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.18$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.18$ M, $cr=1040230.00$ $\lambda_{LT}=0.08$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.45$ $\beta_{LT}=0.75$ $f=1.00$ $\chi_{LT}=1.00$
 $\lambda_y=2.17$ Ncr, $y=125095000.00$ $\lambda^*_y=0.03$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=8.03$ Ncr, $z=9165000.00$ $\lambda^*_z=0.09$ Curva b: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.07+0.00=0.08$
 Verifica ZZ: $0.00+0.04+0.00=0.05$

- Verifica freccia massima per soli carichi accidentali - CC 22
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.00$

Asta n. 2019 (-1608 -1606) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=5.16$
 $V_{Ed}=5.16$ $V_c, R_d=29609.30$ $V_{Ed}/V_c, R_d=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=780.67$
 $V_{Ed}=780.67$ $V_c, R_d=21171.50$ $V_{Ed}/V_c, R_d=0.04$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 33 SLU $X_l=0.98$ - Classe 1
 Sollecitazioni: $N=12.52$ $M_y=-845.94$ $T_y=5.16$
 $M_y, E_{dEd}=-845.94$ My, $c, R_d=5804.95$
 $N_{Ed}=12.52$ $N_c, R_d=74603.30$ YY $n=N_{Ed}/N_c, R_d=0.00$ MNy, $c, R_d=5804.95$ My, $E_{dEd}/M_{Ny}, c, R_d=0.15$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N_{Ed}=-48.63$ My, $E_{dEd}=-845.94$ Mz, $E_{dEd}=-5.56$ L=1.53
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.21$ M, $cr=17283.40$ $\lambda_{LT}=0.59$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.67$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.95$
 $\lambda_y=18.58$ Ncr, $y=1710580.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.64$ Ncr, $z=125324.00$ $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.15+0.00=0.15$
 Verifica ZZ: $0.00+0.09+0.00=0.09$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.03$ (L/5705)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.04$ (L/4047)

Asta n. 2019 (-1606 -1601) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=1.53$ - Classe 1
 Sollecitazioni: $T_y=30.32$
 $V,Ed=30.32$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=1.53$ - Classe 1
 Sollecitazioni: $T_z=-1394.86$
 $V,Ed=-1394.86$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.07$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.37$ - Classe 1
 Sollecitazioni: $N=23.94$ $M_y=-778.23$ $T_y=30.32$ $M_z=-12.90$
 $N,Ed=23.94$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-778.23$ $M_y,c,Rd=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_y,Ed/M_{Ny,c,Rd}=0.13$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-12.90$ $M_z,V,c,Rd=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_z,Ed/M_{Nz,c,Rd}=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/M_{Ny,c,Rd})^2 + (M_z,Ed/M_{Nz,c,Rd})^1 = 0.13$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N,Ed=-6.59$ $M_y,Ed=-778.23$ $M_z,Ed=-24.21$ $L=1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.76$ $M_{cr}=25195.90$ $\lambda_{LT}=0.49$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.61$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.99$
 $\lambda_y=18.58$ $N_{cr,y}=1710570.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.64$ $N_{cr,z}=125324.00$ $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.13+0.01=0.14$
 Verifica ZZ: $0.00+0.08+0.02=0.10$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.03$ (L/6106)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/4795)

Asta n. 2020 (-1838 -1394) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=2.17$ - Classe 1
 Sollecitazioni: $T_y=-18.09$
 $V,Ed=-18.09$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=2.17$ - Classe 1
 Sollecitazioni: $T_z=-640.66$
 $V,Ed=-640.66$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.03$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=2.17$ - Classe 1
 Sollecitazioni: $N=22.98$ $T_z=-640.66$ $M_y=480.58$ $T_y=-18.09$ $M_z=-18.83$
 $N,Ed=22.98$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=480.58$ $M_y,V,c,Rd=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_y,Ed/M_{Ny,c,Rd}=0.08$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-18.83$ $M_z,V,c,Rd=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_z,Ed/M_{Nz,c,Rd}=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/M_{Ny,c,Rd})^2 + (M_z,Ed/M_{Nz,c,Rd})^1 = 0.08$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 1
 Sollecitazioni: $M_y,Ed=451.04$ $M_z,Ed=33.61$ $L=2.17$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.17$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=14340.60$ $\lambda_{LT}=0.65$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.70$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.92$
 $\lambda_y=26.27$ $N_{cr,y}=855308.00$ $\lambda^*_y=0.30$ Curva a: $\Phi_y=0.56$ $\chi_y=0.98$
 $\lambda_z=97.06$ $N_{cr,z}=62663.40$ $\lambda^*_z=1.12$ Curva b: $\Phi_z=1.28$ $\chi_z=0.52$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.08+0.02=0.10$
 Verifica ZZ: $0.00+0.05+0.03=0.08$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.00$ (L/48412)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.01$ (L/29550)

Asta n. 2020 (-1394 -1489) - Sez. 6 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-6.48$
 $V, Ed=-6.48$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=985.83$
 $V, Ed=985.83$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.05$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=2.55$ - Classe 1
Sollecitazioni: $N=25.16$ $M_y=-778.77$ $T_y=-6.48$ $M_z=-8.18$
 $N, Ed=25.16$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-778.77$ $M_y, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.13$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-8.18$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.13$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y, Ed=-778.77$ $M_z, Ed=-11.57$ $L=3.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.57$ $M_{cr}=12708.00$ $\lambda_{LT}=0.69$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.73$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.90$
 $\lambda_y=37.23$ $N_{cr,y}=425944.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.95$
 $\lambda_z=137.54$ $N_{cr,z}=31206.40$ $\lambda^*_z=1.58$ Curva b: $\Phi_z=1.99$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.14+0.01=0.15$
Verifica ZZ: $0.00+0.08+0.01=0.09$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.08$ (L/4025)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.10$ (L/3064)

Asta n. 2020 (-1489 -1400) - Sez. 6 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=3.08$ - Classe 1
Sollecitazioni: $T_y=-4.11$
 $V, Ed=-4.11$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=3.08$ - Classe 1
Sollecitazioni: $T_z=-1236.02$
 $V, Ed=-1236.02$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.06$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=3.08$ - Classe 1
Sollecitazioni: $N=6.30$ $T_z=-1236.02$ $M_y=1247.16$ $T_y=-4.11$ $M_z=-7.32$
 $N, Ed=6.30$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1247.16$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.21$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-7.32$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.21$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y, Ed=1247.16$ $M_z, Ed=-7.32$ $L=3.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.46$ $M_{cr}=12167.50$ $\lambda_{LT}=0.71$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.74$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.89$
 $\lambda_y=37.23$ $N_{cr,y}=425944.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.95$
 $\lambda_z=137.54$ $N_{cr,z}=31206.40$ $\lambda^*_z=1.58$ Curva b: $\Phi_z=1.99$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.23+0.00=0.23$
Verifica ZZ: $0.00+0.14+0.01=0.14$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.03$ (L/9596)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.04$ (L/7229)

Asta n. 2020 (-1400 -1498) - Sez. 6 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-20.83$
 $V, Ed=-20.83$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=1191.21$
 $V, Ed=1191.21$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.06$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=4.23$ $T_z=1191.21$ $M_y=1243.76$ $T_y=-20.83$ $M_z=35.87$
 $N, Ed=4.23$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1243.76$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.21$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=35.87$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.03$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.21$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y, Ed=1243.76$ $M_z, Ed=35.87$ $L=3.43$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.43$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.29$ $M_{cr}=9784.02$ $\lambda_{LT}=0.79$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.80$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.85$
 $\lambda_y=41.53$ $N_{cr,y}=342337.00$ $\lambda_y^*=0.48$ Curva a: $\Phi_y=0.64$ $\chi_y=0.93$
 $\lambda_z=153.42$ $N_{cr,z}=25081.10$ $\lambda_z^*=1.77$ Curva b: $\Phi_z=2.33$ $\chi_z=0.26$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.24+0.02=0.26$
Verifica ZZ: $0.00+0.14+0.03=0.17$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.04$ (L/9489)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.05$ (L/7052)
- Asta n. 2020 (-1498 -1406) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=2.80$ - Classe 1
Sollecitazioni: $T_y=14.32$
 $V, Ed=14.32$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=2.80$ - Classe 1
Sollecitazioni: $T_z=-1174.68$
 $V, Ed=-1174.68$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.06$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=2.80$ - Classe 1
Sollecitazioni: $N=-12.89$ $T_z=-1174.68$ $M_y=1203.92$ $T_y=14.32$ $M_z=19.35$
 $N, Ed=-12.89$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1203.92$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.21$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=19.35$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.21$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-12.89$ $M_y, Ed=1203.92$ $M_z, Ed=-20.74$ $L=2.80$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.80$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.32$ $M_{cr}=13017.90$ $\lambda_{LT}=0.68$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.72$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.90$
 $\lambda_y=33.90$ $N_{cr,y}=513720.00$ $\lambda_y^*=0.39$ Curva a: $\Phi_y=0.60$ $\chi_y=0.96$
 $\lambda_z=125.24$ $N_{cr,z}=37637.20$ $\lambda_z^*=1.44$ Curva b: $\Phi_z=1.75$ $\chi_z=0.36$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.22+0.01=0.23$
Verifica ZZ: $0.00+0.13+0.02=0.15$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G}=0.01$ (L/19189)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.02$ (L/13048)
- Asta n. 2020 (-1406 -1416) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-7.36$
 $V, Ed=-7.36$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=990.60$
 $V, Ed=990.60$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.05$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1

- Sollecitazioni: $N=-18.82$ $T_z=990.60$ $M_y=1205.59$ $T_y=-7.36$ $M_z=12.32$
 $N, Ed=-18.82$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1205.59$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.21$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=12.32$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.21$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-18.82$ $M_y, Ed=1205.59$ $M_z, Ed=12.32$ $L=2.93$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.93$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.78$ $M_{cr}=9413.77$ $\lambda_{LT}=0.80$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.81$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.84$
 $\lambda_y=35.47$ $N_{cr,y}=469145.00$ $\lambda^*_y=0.41$ Curva a: $\Phi_y=0.61$ $\chi_y=0.95$
 $\lambda_z=131.06$ $N_{cr,z}=34371.50$ $\lambda^*_z=1.51$ Curva b: $\Phi_z=1.86$ $\chi_z=0.34$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.23+0.01=0.24$
 Verifica ZZ: $0.00+0.14+0.01=0.15$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.04$ (L/8192)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.05$ (L/5606)
- Asta n. 2020 (-1416 -1547) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-25.87$
 $V, Ed=-25.87$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=329.54$
 $V, Ed=329.54$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.02$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 17 SLU $X_l=2.10$ - Classe 1
 Sollecitazioni: $N=-57.10$ $T_z=-149.47$ $M_y=6.64$ $T_y=-42.69$ $M_z=-48.20$
 $N, Ed=-57.10$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=6.64$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.00$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-48.20$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.04$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.04$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $M_y, Ed=-184.21$ $M_z, Ed=-36.91$ $L=2.10$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.10$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.12$ $M_{cr}=18189.00$ $\lambda_{LT}=0.58$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.66$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.95$
 $\lambda_y=25.45$ $N_{cr,y}=911631.00$ $\lambda^*_y=0.29$ Curva a: $\Phi_y=0.55$ $\chi_y=0.98$
 $\lambda_z=94.02$ $N_{cr,z}=66789.90$ $\lambda^*_z=1.08$ Curva b: $\Phi_z=1.24$ $\chi_z=0.55$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.03+0.02=0.05$
 Verifica ZZ: $0.00+0.02+0.03=0.05$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.01$ (L/19504)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.01$ (L/14693)
- Asta n. 2021 (-1839 -1393) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=2.17$ - Classe 1
 Sollecitazioni: $T_y=25.62$
 $V, Ed=25.62$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=2.17$ - Classe 1
 Sollecitazioni: $T_z=-826.39$
 $V, Ed=-826.39$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.04$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=2.17$ - Classe 1
 Sollecitazioni: $N=-289.91$ $T_z=-826.39$ $M_y=827.95$ $T_y=25.62$ $M_z=28.20$
 $N, Ed=-289.91$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=827.95$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.14$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=28.20$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.02$

$$\alpha=2.00 \quad \beta=1.00 \quad (M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.14$$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed = -289.91$ $M_y, Ed = 827.95$ $M_z, Ed = 28.20$ $L = 2.17$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 2.17$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.75$ $M_{cr} = 14298.20$ $\lambda_{LT} = 0.65$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.70$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.92$
 $\lambda_y = 26.27$ $N_{cr,y} = 855308.00$ $\lambda^*_y = 0.30$ Curva a: $\Phi_y = 0.56$ $\chi_y = 0.98$
 $\lambda_z = 97.06$ $N_{cr,z} = 62663.40$ $\lambda^*_z = 1.12$ Curva b: $\Phi_z = 1.28$ $\chi_z = 0.52$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.58, 0.57, 0.96$
Verifica YY: $0.00 + 0.15 + 0.01 = 0.17$
Verifica ZZ: $0.00 + 0.09 + 0.02 = 0.12$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.01$ (L/14775)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,G} = 0.02$ (L/9600)

Asta n. 2021 (-1393 -1490) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l = 0.00$ - Classe 1
Sollecitazioni: $T_y = 7.32$
 $V, Ed = 7.32$ $V_c, Rd = 29609.30$ $V, Ed/V_c, Rd = 0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l = 0.00$ - Classe 1
Sollecitazioni: $T_z = 1181.89$
 $V, Ed = 1181.89$ $V_c, Rd = 21171.50$ $V, Ed/V_c, Rd = 0.06$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l = 2.88$ - Classe 1
Sollecitazioni: $N = -557.12$ $M_y = -866.78$ $T_y = 7.32$ $M_z = 5.88$
 $N, Ed = -557.12$ $N_c, Rd = 74603.30$ $n = N, Ed/N_c, Rd = 0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed = -866.78$ $M_y, c, Rd = 5804.95$ $MN_y, c, Rd = 5804.95$ $M_y, Ed/MN_y, c, Rd = 0.15$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed = 5.88$ $M_z, V, c, Rd = 1170.59$ $MN_z, c, Rd = 1170.59$ $M_z, Ed/MN_z, c, Rd = 0.01$
 $\alpha = 2.00$ $\beta = 1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.15$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed = -557.12$ $M_y, Ed = -866.78$ $M_z, Ed = -15.19$ $L = 3.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 3.08$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 3.05$ $M_{cr} = 15067.80$ $\lambda_{LT} = 0.64$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.69$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.93$
 $\lambda_y = 37.23$ $N_{cr,y} = 425944.00$ $\lambda^*_y = 0.43$ Curva a: $\Phi_y = 0.62$ $\chi_y = 0.95$
 $\lambda_z = 137.54$ $N_{cr,z} = 31206.40$ $\lambda^*_z = 1.58$ Curva b: $\Phi_z = 1.99$ $\chi_z = 0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.59, 0.57, 0.98$
Verifica YY: $0.01 + 0.15 + 0.01 = 0.17$
Verifica ZZ: $0.01 + 0.09 + 0.01 = 0.11$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.07$ (L/4727)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.09$ (L/3531)

Asta n. 2021 (-1490 -1399) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l = 3.08$ - Classe 1
Sollecitazioni: $T_y = 9.17$
 $V, Ed = 9.17$ $V_c, Rd = 29609.30$ $V, Ed/V_c, Rd = 0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l = 3.08$ - Classe 1
Sollecitazioni: $T_z = -1391.49$
 $V, Ed = -1391.49$ $V_c, Rd = 21171.50$ $V, Ed/V_c, Rd = 0.07$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l = 3.08$ - Classe 1
Sollecitazioni: $N = -601.51$ $T_z = -1391.49$ $M_y = 1479.29$ $T_y = 9.17$ $M_z = 15.39$
 $N, Ed = -601.51$ $N_c, Rd = 74603.30$ $n = N, Ed/N_c, Rd = 0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed = 1479.29$ $M_y, V, c, Rd = 5804.95$ $MN_y, c, Rd = 5804.95$ $M_y, Ed/MN_y, c, Rd = 0.25$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed = 15.39$ $M_z, V, c, Rd = 1170.59$ $MN_z, c, Rd = 1170.59$ $M_z, Ed/MN_z, c, Rd = 0.01$
 $\alpha = 2.00$ $\beta = 1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.25$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed = -601.51$ $M_y, Ed = 1479.29$ $M_z, Ed = 15.39$ $L = 3.08$

$\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.46$ $M_{cr}=12143.40$ $\lambda_{LT}=0.71$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.74$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.89$
 $\lambda_y=37.23$ $N_{cr,y}=425944.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.95$
 $\lambda_z=137.54$ $N_{cr,z}=31206.40$ $\lambda_z^*=1.58$ Curva b: $\Phi_z=1.99$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.59, 0.57, 0.98$
Verifica YY: $0.01+0.27+0.01=0.29$
Verifica ZZ: $0.01+0.16+0.01=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.03$ (L/9860)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.04$ (L/7117)

Asta n. 2021 (-1399 -1496) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_y=-11.41$
 $V, Ed=-11.41$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=1336.35$
 $V, Ed=1336.35$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.06$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $N=-798.13$ $T_z=1336.35$ $M_y=1479.18$ $T_y=-11.41$ $M_z=17.63$
 $N, Ed=-798.13$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1479.18$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.25$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=17.63$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.25$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-798.13$ $M_y, Ed=1479.18$ $M_z, Ed=-21.49$ $L=3.43$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.43$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.30$ $M_{cr}=9824.32$ $\lambda_{LT}=0.79$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.80$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.85$
 $\lambda_y=41.53$ $N_{cr,y}=342337.00$ $\lambda_y^*=0.48$ Curva a: $\Phi_y=0.64$ $\chi_y=0.93$
 $\lambda_z=153.42$ $N_{cr,z}=25081.10$ $\lambda_z^*=1.77$ Curva b: $\Phi_z=2.33$ $\chi_z=0.26$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.60, 0.57, 1.00$
Verifica YY: $0.01+0.29+0.01=0.31$
Verifica ZZ: $0.01+0.17+0.02=0.20$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.04$ (L/9800)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.05$ (L/7136)

Asta n. 2021 (-1496 -1405) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1=2.80$ - Classe 1
Sollecitazioni: $T_y=24.91$
 $V, Ed=24.91$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1=2.80$ - Classe 1
Sollecitazioni: $T_z=-1156.67$
 $V, Ed=-1156.67$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.05$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1=2.80$ - Classe 1
Sollecitazioni: $N=-830.58$ $T_z=-1156.67$ $M_y=941.68$ $T_y=24.91$ $M_z=34.26$
 $N, Ed=-830.58$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=941.68$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.16$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=34.26$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.03$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.16$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-830.58$ $M_y, Ed=941.68$ $M_z, Ed=-35.50$ $L=2.80$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.80$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.68$ $M_{cr}=15041.00$ $\lambda_{LT}=0.64$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.69$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.93$
 $\lambda_y=33.90$ $N_{cr,y}=513720.00$ $\lambda_y^*=0.39$ Curva a: $\Phi_y=0.60$ $\chi_y=0.96$
 $\lambda_z=125.24$ $N_{cr,z}=37637.20$ $\lambda_z^*=1.44$ Curva b: $\Phi_z=1.75$ $\chi_z=0.36$

Relazione di calcolo

- Kyy, Kyz, Kzy, Kzz=0.95, 0.59, 0.57, 0.99
 Verifica YY: 0.01+0.17+0.02=0.20
 Verifica ZZ: 0.01+0.10+0.03=0.14
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.03$ (L/8364)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.04$ (L/6300)
- Asta n. 2021 (-1405 -1419) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_y=27.18$
 $V,Ed=27.18$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=705.96$
 $V,Ed=705.96$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.03$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $N=-987.78$ $T_z=705.96$ $M_y=944.08$ $T_y=27.18$ $M_z=-27.49$
 $N,Ed=-987.78$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=944.08$ $M_y,V,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.16$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-27.49$ $M_z,V,c,Rd=1170.59$ $MN_z,c,Rd=1170.59$ $M_z,Ed/MN_z,c,Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.16$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N,Ed=-987.78$ $M_y,Ed=944.08$ $M_z,Ed=52.13$ $L=2.93$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.93$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.24$ $M_{cr}=6536.61$ $\lambda_{LT}=0.97$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.95$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.74$
 $\lambda_y=35.47$ $N_{cr,y}=469145.00$ $\lambda^*_y=0.41$ Curva a: $\Phi_y=0.61$ $\chi_y=0.95$
 $\lambda_z=131.06$ $N_{cr,z}=34371.50$ $\lambda^*_z=1.51$ Curva b: $\Phi_z=1.86$ $\chi_z=0.34$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.60, 0.57, 1.00
 Verifica YY: 0.01+0.21+0.03=0.25
 Verifica ZZ: 0.01+0.13+0.04=0.18
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.05$ (L/5596)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.08$ (L/3893)
- Asta n. 2021 (-1419 -1857) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_y=-1928.36$
 $V,Ed=-1928.36$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.07$
- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=-722.28$
 $V,Ed=-722.28$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.03$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 19 SLU $X_1=0.21$ - Classe 1
 Sollecitazioni: $N=-1073.53$ $T_z=-1042.06$ $M_y=601.75$ $T_y=-1883.28$ $M_z=-223.86$ $M_x=2.44$
 $N,Ed=-1073.53$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=601.75$ $M_y,V,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.10$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-223.86$ $M_z,V,c,Rd=1170.59$ $MN_z,c,Rd=1170.59$ $M_z,Ed/MN_z,c,Rd=0.19$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.20$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 19 SLU - Classe 1
 Sollecitazioni: $N,Ed=-1073.53$ $M_y,Ed=601.75$ $M_z,Ed=-223.86$ $L=0.21$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.21$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.19$ $M_{cr}=797641.00$ $\lambda_{LT}=0.09$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.45$ $\beta_{LT}=0.75$ $f=1.00$ $\chi_{LT}=1.00$
 $\lambda_y=2.49$ $N_{cr,y}=95032800.00$ $\lambda^*_y=0.03$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=9.21$ $N_{cr,z}=6962500.00$ $\lambda^*_z=0.11$ Curva b: $\Phi_z=0.00$ $\chi_z=1.00$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.94
 Verifica YY: 0.01+0.10+0.11=0.22
 Verifica ZZ: 0.01+0.06+0.18=0.25
- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.00$

Asta n. 2022 (-1840 -1395) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.45$ - Classe 1
Sollecitazioni: $T_y=6.04$
 $V, Ed=6.04$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.45$ - Classe 1
Sollecitazioni: $T_z=1136.62$
 $V, Ed=1136.62$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.05$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 17 SLU $X_l=1.95$ - Classe 1
Sollecitazioni: $N=-378.02$ $T_z=846.87$ $M_y=-755.45$ $T_y=6.04$ $M_z=4.72$
 $N, Ed=-378.02$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-755.45$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.13$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=4.72$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.13$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 1
Sollecitazioni: $N, Ed=-378.02$ $M_y, Ed=-755.45$ $M_z, Ed=4.72$ $L=2.17$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.17$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=3.04$ $M_{cr}=24862.50$ $\lambda_{LT}=0.50$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.61$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.99$
 $\lambda_y=26.27$ $N_{cr,y}=855308.00$ $\lambda^*_y=0.30$ Curva a: $\Phi_y=0.56$ $\chi_y=0.98$
 $\lambda_z=97.06$ $N_{cr,z}=62663.40$ $\lambda^*_z=1.12$ Curva b: $\Phi_z=1.28$ $\chi_z=0.52$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.96$
Verifica YY: $0.01+0.13+0.00=0.13$
Verifica ZZ: $0.01+0.08+0.00=0.08$

- Verifica freccia massima per soli carichi accidentali - CC 21
 $f_{z,L}=0.02$ (L/9275)

- Verifica freccia massima carichi totali - CC 21
 $f_{z,L}=0.01$ (L/10886)

Asta n. 2022 (-1395 -1488) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.23$ - Classe 1
Sollecitazioni: $T_y=-7.93$
 $V, Ed=-7.93$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.23$ - Classe 1
Sollecitazioni: $T_z=1661.58$
 $V, Ed=1661.58$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.08$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.23$ - Classe 1
Sollecitazioni: $N=-2228.81$ $T_z=1661.58$ $M_y=1855.13$ $T_y=-7.93$ $M_z=11.43$
 $N, Ed=-2228.81$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.03$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1855.13$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.32$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=11.43$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.32$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-2228.81$ $M_y, Ed=1855.13$ $M_z, Ed=11.43$ $L=3.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.57$ $M_{cr}=12687.10$ $\lambda_{LT}=0.69$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.73$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.90$
 $\lambda_y=37.23$ $N_{cr,y}=425944.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.95$
 $\lambda_z=137.54$ $N_{cr,z}=31206.40$ $\lambda^*_z=1.58$ Curva b: $\Phi_z=1.99$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.65, 0.57, 1.08$
Verifica YY: $0.03+0.34+0.01=0.38$
Verifica ZZ: $0.10+0.20+0.01=0.31$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.04$ (L/7306)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.06$ (L/4514)

Asta n. 2022 (-1488 -1401) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=2.85$ - Classe 1
Sollecitazioni: $T_y=-2.69$
 $V, Ed=-2.69$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=2.85$ - Classe 1
Sollecitazioni: $T_z=-1580.48$
 $V, Ed=-1580.48$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.07$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 32 SLU $X_l=2.85$ - Classe 1
Sollecitazioni: $N=-1962.17$ $T_z=-1549.90$ $M_y=1624.46$ $T_y=-3.90$ $M_z=-6.02$
 $N, Ed=-1962.17$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.03$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1624.46$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.28$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-6.02$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^1 = 0.28$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-2128.06$ $M_y, Ed=1623.06$ $M_z, Ed=-4.02$ $L=3.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.71$ $M, cr=13374.30$ $\lambda_{LT}=0.68$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.72$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.91$
 $\lambda_y=37.23$ $N_{cr,y}=425944.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.95$
 $\lambda_z=137.54$ $N_{cr,z}=31206.40$ $\lambda_z^*=1.58$ Curva b: $\Phi_z=1.99$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.64, 0.57, 1.07$
Verifica YY: $0.03+0.29+0.00=0.33$
Verifica ZZ: $0.09+0.18+0.00=0.27$
 - Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.04$ (L/8142)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.04$ (L/6385)
- Asta n. 2022 (-1401 -1497) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.23$ - Classe 1
Sollecitazioni: $T_y=-22.72$
 $V, Ed=-22.72$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.23$ - Classe 1
Sollecitazioni: $T_z=1475.55$
 $V, Ed=1475.55$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.07$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.23$ - Classe 1
Sollecitazioni: $N=-2179.78$ $T_z=1475.55$ $M_y=1582.00$ $T_y=-22.72$ $M_z=35.50$
 $N, Ed=-2179.78$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.03$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1582.00$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.27$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=35.50$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.03$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^1 = 0.27$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-2179.78$ $M_y, Ed=1582.00$ $M_z, Ed=-37.31$ $L=3.43$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.43$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.58$ $M, cr=10985.00$ $\lambda_{LT}=0.74$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.77$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.87$
 $\lambda_y=41.53$ $N_{cr,y}=342337.00$ $\lambda_y^*=0.48$ Curva a: $\Phi_y=0.64$ $\chi_y=0.93$
 $\lambda_z=153.42$ $N_{cr,z}=25081.10$ $\lambda_z^*=1.77$ Curva b: $\Phi_z=2.33$ $\chi_z=0.26$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.66, 0.57, 1.10$
Verifica YY: $0.03+0.30+0.02=0.35$
Verifica ZZ: $0.11+0.18+0.04=0.33$
 - Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.04$ (L/7211)
 - Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.05$ (L/5865)
- Asta n. 2022 (-1497 -1407) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=2.58$ - Classe 1
Sollecitazioni: $T_y=21.30$
 $V, Ed=21.30$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=2.58$ - Classe 1
Sollecitazioni: $T_z=-1577.05$

- V,Ed=-1577.05 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.07
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 32 SLU Xl=2.58 - Classe 1
Sollecitazioni: N=-1923.44 Tz=-1570.17 My=1719.11 Ty=19.92 Mz=25.77
N,Ed=-1923.44 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.03
Pressoflessione retta YY [4.2.33]:
My,Ed=1719.11 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.30
Pressoflessione retta ZZ [4.2.34]:
Mz,Ed=25.77 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.02
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.30$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 1
Sollecitazioni: N,Ed=-1923.44 My,Ed=1719.11 Mz,Ed=25.77 L=2.80
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
L_{cr}=2.80 Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=2.49 M_{cr}=14011.30 \lambda_{LT}=0.66$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.71 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.92$
 $\lambda_y=33.90 N_{cr,y}=513720.00 \lambda_y^*=0.39$ Curva a: $\Phi_y=0.60 \chi_y=0.96$
 $\lambda_z=125.24 N_{cr,z}=37637.20 \lambda_z^*=1.44$ Curva b: $\Phi_z=1.75 \chi_z=0.36$
Kyy, Kyz, Kzy, Kzz=0.95, 0.63, 0.57, 1.04
Verifica YY: 0.03+0.31+0.01=0.35
Verifica ZZ: 0.07+0.19+0.02=0.28
 - Verifica freccia massima per soli carichi accidentali - CC 37
f_{z,L}=0.04 (L/6053)
 - Verifica freccia massima carichi totali - CC 37
f_{z,L}=0.06 (L/4631)
- Asta n. 2022 (-1407 -1865) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU Xl=1.19 - Classe 1
Sollecitazioni: Ty=-19.93
V,Ed=-19.93 Vc,Rd=29609.30 V,Ed/Vc,Rd=0.00
 - Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU Xl=1.19 - Classe 1
Sollecitazioni: Tz=-1009.25
V,Ed=-1009.25 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.05
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 32 SLU Xl=0.23 - Classe 1
Sollecitazioni: N=985.44 Tz=-756.12 My=-837.32 Ty=-19.93 Mz=-14.02
N,Ed=985.44 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.01
Pressoflessione retta YY [4.2.33]:
My,Ed=-837.32 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.14
Pressoflessione retta ZZ [4.2.34]:
Mz,Ed=-14.02 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.01
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.14$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 1
Sollecitazioni: My,Ed=-837.32 Mz,Ed=-33.27 L=1.19
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
L_{cr}=1.19 Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=1.78 M_{cr}=39689.40 \lambda_{LT}=0.39$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.56 \beta_{LT}=0.75 f=0.98 \chi_{LT}=1.00$
 $\lambda_y=14.42 N_{cr,y}=2838930.00 \lambda_y^*=0.17$ Curva a: $\Phi_y=0.51 \chi_y=1.00$
 $\lambda_z=53.28 N_{cr,z}=207992.00 \lambda_z^*=0.61$ Curva b: $\Phi_z=0.76 \chi_z=0.83$
Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
Verifica YY: 0.00+0.14+0.02=0.15
Verifica ZZ: 0.00+0.08+0.03=0.11
 - Verifica freccia massima per soli carichi accidentali - CC 37
f_{z,L}=0.01 (L/6621)
 - Verifica freccia massima carichi totali - CC 37
f_{z,L}=0.02 (L/5821)
- Asta n. 2023 (-1392 -1841) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU Xl=0.00 - Classe 1
Sollecitazioni: Ty=-56.93
V,Ed=-56.93 Vc,Rd=29609.30 V,Ed/Vc,Rd=0.00
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU Xl=0.00 - Classe 1
Sollecitazioni: Tz=762.26
V,Ed=762.26 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.04
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=0.00 - Classe 1
Sollecitazioni: N=-351.21 Tz=762.26 My=701.34 Ty=-56.93 Mz=59.83
N,Ed=-351.21 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.00
Pressoflessione retta YY [4.2.33]:

- My,Ed=701.34 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.12
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=59.83 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.05
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.12$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 1
 Sollecitazioni: N,Ed=-291.64 My,Ed=678.68 Mz,Ed=-76.92 L=2.17
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.17$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=1.76 M_{cr}=14395.30 \lambda_{LT}=0.65$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.70 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.92$
 $\lambda_y=26.27 N_{cr,y}=855308.00 \lambda^*_y=0.30$ Curva a: $\Phi_y=0.56 \chi_y=0.98$
 $\lambda_z=97.06 N_{cr,z}=62663.40 \lambda^*_z=1.12$ Curva b: $\Phi_z=1.28 \chi_z=0.52$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.96$
 Verifica YY: $0.00+0.12+0.04=0.16$
 Verifica ZZ: $0.00+0.07+0.06=0.14$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.01 (L/17369)$
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.02 (L/11851)$
- Asta n. 2023 (-1392 -1491) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_y=-18.24$
 $V,Ed=-18.24 V_c,Rd=29609.30 V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_z=952.97$
 $V,Ed=952.97 V_c,Rd=21171.50 V,Ed/V_c,Rd=0.05$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU X1=0.00 - Classe 1
 Sollecitazioni: N=-665.98 $T_z=952.97 M_y=696.58 T_y=-18.24 M_z=30.52$
 $N,Ed=-665.98 N_c,Rd=74603.30 n=N,Ed/N_c,Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $My,Ed=696.58 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.12$
 Pressoflessione retta ZZ [4.2.34]:
 $Mz,Ed=30.52 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.03$
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.12$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: N,Ed=-665.98 My,Ed=696.58 Mz,Ed=30.52 L=3.08
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=2.32 M_{cr}=11434.70 \lambda_{LT}=0.73$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.76 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.88$
 $\lambda_y=37.23 N_{cr,y}=425944.00 \lambda^*_y=0.43$ Curva a: $\Phi_y=0.62 \chi_y=0.95$
 $\lambda_z=137.54 N_{cr,z}=31206.40 \lambda^*_z=1.58$ Curva b: $\Phi_z=1.99 \chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.59, 0.57, 0.99$
 Verifica YY: $0.01+0.13+0.02=0.15$
 Verifica ZZ: $0.01+0.08+0.03=0.11$
- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.04 (L/8761)$
- Verifica freccia massima carichi totali - CC 37
 $f_{z,g}=0.05 (L/6759)$
- Asta n. 2023 (-1491 -1398) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU X1=3.08 - Classe 1
 Sollecitazioni: $T_y=-19.48$
 $V,Ed=-19.48 V_c,Rd=29609.30 V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU X1=3.08 - Classe 1
 Sollecitazioni: $T_z=-1049.37$
 $V,Ed=-1049.37 V_c,Rd=21171.50 V,Ed/V_c,Rd=0.05$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 32 SLU X1=3.08 - Classe 1
 Sollecitazioni: N=-578.99 $T_z=-1032.50 M_y=991.01 T_y=-19.91 M_z=-33.28$
 $N,Ed=-578.99 N_c,Rd=74603.30 n=N,Ed/N_c,Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $My,Ed=991.01 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.17$
 Pressoflessione retta ZZ [4.2.34]:
 $Mz,Ed=-33.28 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.03$
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.17$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed = -704.61$ $M_y, Ed = 988.74$ $M_z, Ed = -32.69$ $L = 3.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 3.08$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 2.14$ $M, cr = 10566.60$ $\lambda_{LT} = 0.76$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.78$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.86$
 $\lambda_y = 37.23$ $N_{cr,y} = 425944.00$ $\lambda^*_y = 0.43$ Curva a: $\Phi_y = 0.62$ $\chi_y = 0.95$
 $\lambda_z = 137.54$ $N_{cr,z} = 31206.40$ $\lambda^*_z = 1.58$ Curva b: $\Phi_z = 1.99$ $\chi_z = 0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.59, 0.57, 0.99$
 Verifica YY: $0.01 + 0.19 + 0.02 = 0.21$
 Verifica ZZ: $0.01 + 0.11 + 0.03 = 0.15$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.02$ (L/17335)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.03$ (L/11810)

Asta n. 2023 (-1398 -1495) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_y = -29.28$
 $V, Ed = -29.28$ $V_c, Rd = 29609.30$ $V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_z = 1064.56$
 $V, Ed = 1064.56$ $V_c, Rd = 21171.50$ $V, Ed/V_c, Rd = 0.05$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 32 SLU $X_l = 0.00$ - Classe 1
 Sollecitazioni: $N = -709.26$ $T_z = 1056.32$ $M_y = 985.30$ $T_y = -23.03$ $M_z = 41.01$
 $N, Ed = -709.26$ $N_c, Rd = 74603.30$ $n = N, Ed/N_c, Rd = 0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed = 985.30$ $M_y, V, c, Rd = 5804.95$ $M_{Ny}, c, Rd = 5804.95$ $M_y, Ed/M_{Ny}, c, Rd = 0.17$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed = 41.01$ $M_z, V, c, Rd = 1170.59$ $M_{Nz}, c, Rd = 1170.59$ $M_z, Ed/M_{Nz}, c, Rd = 0.04$
 $\alpha = 2.00$ $\beta = 1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^2 = 0.17$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed = -843.48$ $M_y, Ed = 982.32$ $M_z, Ed = 52.09$ $L = 3.43$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 3.43$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 2.10$ $M, cr = 8957.25$ $\lambda_{LT} = 0.82$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.83$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.83$
 $\lambda_y = 41.53$ $N_{cr,y} = 342337.00$ $\lambda^*_y = 0.48$ Curva a: $\Phi_y = 0.64$ $\chi_y = 0.93$
 $\lambda_z = 153.42$ $N_{cr,z} = 25081.10$ $\lambda^*_z = 1.77$ Curva b: $\Phi_z = 2.33$ $\chi_z = 0.26$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.60, 0.57, 1.01$
 Verifica YY: $0.01 + 0.19 + 0.03 = 0.23$
 Verifica ZZ: $0.01 + 0.12 + 0.04 = 0.17$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,G} = 0.04$ (L/9014)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L} = 0.05$ (L/7325)

Asta n. 2023 (-1495 -1869) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU $X_l = 2.11$ - Classe 1
 Sollecitazioni: $T_y = -4.21$
 $V, Ed = -4.21$ $V_c, Rd = 29609.30$ $V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU $X_l = 2.11$ - Classe 1
 Sollecitazioni: $T_z = -472.24$
 $V, Ed = -472.24$ $V_c, Rd = 21171.50$ $V, Ed/V_c, Rd = 0.02$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 32 SLU $X_l = 0.47$ - Classe 1
 Sollecitazioni: $N = -700.40$ $M_y = -391.66$ $T_y = -4.21$
 $M_y, Ed = -391.66$ $M_y, c, Rd = 5804.95$
 $N, Ed = -700.40$ $N_c, Rd = 74603.30$ YY $n = N, Ed/N_c, Rd = 0.01$ $M_{Ny}, c, Rd = 5804.95$ $M_y, Ed/M_{Ny}, c, Rd = 0.07$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 1
 Sollecitazioni: $N, Ed = -939.91$ $M_y, Ed = -339.35$ $M_z, Ed = -26.77$ $L = 2.11$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 2.11$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.85$ $M, cr = 15776.40$ $\lambda_{LT} = 0.62$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.68$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.93$
 $\lambda_y = 25.57$ $N_{cr,y} = 902805.00$ $\lambda^*_y = 0.29$ Curva a: $\Phi_y = 0.55$ $\chi_y = 0.98$
 $\lambda_z = 94.48$ $N_{cr,z} = 66143.20$ $\lambda^*_z = 1.09$ Curva b: $\Phi_z = 1.24$ $\chi_z = 0.54$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.59, 0.57, 0.98$
 Verifica YY: $0.01 + 0.06 + 0.01 = 0.09$
 Verifica ZZ: $0.01 + 0.04 + 0.02 = 0.07$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.02$ (L/9039)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.03$ (L/7285)

Asta n. 2024 (-120 -128) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_1=1.55$ - Classe 1
 Sollecitazioni: $T_y=8.63$
 $V,Ed=8.63$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=1.55$ - Classe 1
 Sollecitazioni: $T_z=1421.77$
 $V,Ed=1421.77$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.04$

- Verifica in termini tensionali [4.2.4] - CC 30 SLU $X_1=0.30$ - Classe 3
 Sollecitazioni: $N=-896.10$ $T_z=1557.88$ $M_y=1274.19$ $T_y=-73.14$ $M_z=57.04$
 Tensioni: $\sigma_N=-16.65$ $\sigma_{m,d}=-299.57$ $\tau=0.00$ $\sigma_{max}=-316.23$ (sfrut=0.12)
 Tensioni: $\sigma_N=-16.65$ $\sigma_{m,d}=3.35$ $\tau=86.98$ $\tau_{max}=86.98$ (sfrut=0.06)
 Tensioni: $\sigma_N=-16.65$ $\sigma_{m,d}=-299.57$ $\tau=0.00$ $\sigma_{ID,max}=316.23$ (sfrut=0.12)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 3
 Sollecitazioni: $N,Ed=-896.10$ $M_y,Ed=1274.19$ $M_z,Ed=-68.77$ $L=2.17$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.17$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.90$ $M_{cr}=125073.00$ $\lambda_{LT}=0.35$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.54$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=17.41$ $N_{cr,y}=3678020.00$ $\lambda^*_y=0.20$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=64.78$ $N_{cr,z}=265753.00$ $\lambda^*_z=0.75$ Curva b: $\Phi_z=0.87$ $\chi_z=0.76$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.08+0.03=0.12$
 Verifica ZZ: $0.01+0.07+0.03=0.10$

- Verifica freccia massima per soli carichi accidentali - CC 21
 $f_{z,L}=0.01$ (L/20730)

- Verifica freccia massima carichi totali - CC 21
 $f_{z,L}=0.01$ (L/21729)

Asta n. 2024 (-128 -1492) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU $X_1=0.42$ - Classe 2
 Sollecitazioni: $T_y=2.14$
 $V,Ed=2.14$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU $X_1=0.42$ - Classe 2
 Sollecitazioni: $T_z=737.45$
 $V,Ed=737.45$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.02$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=0.15$ - Classe 3
 Sollecitazioni: $N=-1964.47$ $T_z=860.45$ $M_y=1041.89$ $T_y=5.09$ $M_z=-5.27$
 Tensioni: $\sigma_N=-36.51$ $\sigma_{m,d}=-193.57$ $\tau=0.00$ $\sigma_{max}=-230.07$ (sfrut=0.09)
 Tensioni: $\sigma_N=-36.51$ $\sigma_{m,d}=-0.31$ $\tau=48.04$ $\tau_{max}=48.04$ (sfrut=0.03)
 Tensioni: $\sigma_N=-36.51$ $\sigma_{m,d}=-193.57$ $\tau=0.00$ $\sigma_{ID,max}=230.07$ (sfrut=0.09)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N,Ed=-1964.47$ $M_y,Ed=1041.89$ $M_z,Ed=9.63$ $L=3.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.25$ $M_{cr}=53110.90$ $\lambda_{LT}=0.54$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.63$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.97$
 $\lambda_y=24.68$ $N_{cr,y}=1831660.00$ $\lambda^*_y=0.28$ Curva a: $\Phi_y=0.55$ $\chi_y=0.98$
 $\lambda_z=91.80$ $N_{cr,z}=132345.00$ $\lambda^*_z=1.06$ Curva b: $\Phi_z=1.20$ $\chi_z=0.56$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.01+0.07+0.00=0.09$
 Verifica ZZ: $0.01+0.06+0.00=0.07$

- Verifica freccia massima per soli carichi accidentali - CC 21
 $f_{z,G}=0.01$ (L/28138)

- Verifica freccia massima carichi totali - CC 21
 $f_{z,L}=0.02$ (L/18148)

Asta n. 2024 (-1492 -129) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 7 SLV $X_1=2.15$ - Classe 1
 Sollecitazioni: $T_z=-214.75$
 $V,Ed=-214.75$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 32 SLU $X_l=2.92$ - Classe 3
 Sollecitazioni: $N=-1887.23$ $T_z=-653.33$ $M_y=471.02$ $T_y=-26.87$ $M_z=-44.36$
 Tensioni: $\sigma_N=-35.07$ $\sigma_{m,d}=-139.66$ $\tau=0.00$ $\sigma_{max}=-174.73$ (sfrut=0.07)
 Tensioni: $\sigma_N=-35.07$ $\sigma_{m,d}=-2.61$ $\tau=36.48$ $\tau_{max}=36.48$ (sfrut=0.02)
 Tensioni: $\sigma_N=-35.07$ $\sigma_{m,d}=-139.66$ $\tau=0.00$ $\sigma_{ID,max}=174.73$ (sfrut=0.07)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 3
 Sollecitazioni: $N,Ed=-1887.23$ $M_y,Ed=471.02$ $M_z,Ed=-44.36$ $L=3.08$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.97$ $M_{cr}=70196.90$ $\lambda_{LT}=0.47$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.59$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=24.68$ $N_{cr,y}=1831660.00$ $\lambda^*_y=0.28$ Curva a: $\Phi_y=0.55$ $\chi_y=0.98$
 $\lambda_z=91.80$ $N_{cr,z}=132345.00$ $\lambda^*_z=1.06$ Curva b: $\Phi_z=1.20$ $\chi_z=0.56$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.95$, 0.96 , 0.76 , 0.96
 Verifica YY: $0.01+0.03+0.02=0.06$
 Verifica ZZ: $0.01+0.02+0.02=0.06$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.01$ (L/36512)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.01$ (L/24734)
- Asta n. 2024 (-129 -1440) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l=1.86$ - Classe 1
 Sollecitazioni: $T_y=16.04$
 $V,Ed=16.04$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 13 SLV $X_l=1.86$ - Classe 1
 Sollecitazioni: $T_z=-436.32$
 $V,Ed=-436.32$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$
- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.15$ - Classe 3
 Sollecitazioni: $N=-2526.69$ $T_z=237.51$ $M_y=252.50$ $T_y=-113.33$ $M_z=190.64$
 Tensioni: $\sigma_N=-46.95$ $\sigma_{m,d}=-282.14$ $\tau=0.00$ $\sigma_{max}=-329.09$ (sfrut=0.13)
 Tensioni: $\sigma_N=-46.95$ $\sigma_{m,d}=11.21$ $\tau=13.27$ $\tau_{max}=13.27$ (sfrut=0.01)
 Tensioni: $\sigma_N=-46.95$ $\sigma_{m,d}=-282.14$ $\tau=0.00$ $\sigma_{ID,max}=329.09$ (sfrut=0.13)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-2526.69$ $M_y,Ed=252.50$ $M_z,Ed=190.64$ $L=3.43$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $L_{cr}=3.43$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.17$ $M_{cr}=23077.70$ $\lambda_{LT}=0.81$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.82$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.83$
 $\lambda_y=27.53$ $N_{cr,y}=1472130.00$ $\lambda^*_y=0.32$ Curva a: $\Phi_y=0.56$ $\chi_y=0.97$
 $\lambda_z=102.40$ $N_{cr,z}=106368.00$ $\lambda^*_z=1.18$ Curva b: $\Phi_z=1.36$ $\chi_z=0.49$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.95$, 0.97 , 0.76 , 0.97
 Verifica YY: $0.02+0.02+0.09=0.13$
 Verifica ZZ: $0.02+0.02+0.09=0.12$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G}=0.01$ (L/39542)
- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.01$ (L/33151)
- Asta n. 2024 (-1440 -1621) - Sez. 5 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 30 SLU $X_l=0.23$ - Classe 3
 Sollecitazioni: $N=-2950.37$ $T_z=1283.85$ $M_y=1091.74$ $T_y=-564.84$ $M_z=-60.39$ $M_x=30.65$
 Tensioni: $\sigma_N=-54.83$ $\sigma_{m,d}=-270.98$ $\tau=181.91$ $\sigma_{max}=-325.81$ (sfrut=0.12)
 Tensioni: $\sigma_N=-54.83$ $\sigma_{m,d}=-165.95$ $\tau=202.23$ $\tau_{max}=202.23$ (sfrut=0.13)
 Tensioni: $\sigma_N=-54.83$ $\sigma_{m,d}=-270.98$ $\tau=181.91$ $\sigma_{ID,max}=453.23$ (sfrut=0.17)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 19 SLU - Classe 3
 Sollecitazioni: $N,Ed=-2706.28$ $M_y,Ed=1418.04$ $M_z,Ed=-50.12$ $L=0.23$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $L_{cr}=0.23$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.04$ $M_{cr}=3461890.00$ $\lambda_{LT}=0.07$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.44$ $\beta_{LT}=0.75$ $f=1.00$ $\chi_{LT}=1.00$
 $\lambda_y=1.87$ $N_{cr,y}=318458000.00$ $\lambda^*_y=0.02$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=6.96$ $N_{cr,z}=23009900.00$ $\lambda^*_z=0.08$ Curva b: $\Phi_z=0.00$ $\chi_z=1.00$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.95$, 0.95 , 0.76 , 0.95
 Verifica YY: $0.02+0.09+0.02=0.13$
 Verifica ZZ: $0.02+0.07+0.02=0.12$
- Verifica freccia massima per soli carichi accidentali - CC 23
 $f_{z,L}=0.00$

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 23
 $f_{z,L}=0.00$

Asta n. 2025 (-1871 -1433) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l=0.11$ - Classe 1
 Sollecitazioni: $T_y=-38.75$
 $V,Ed=-38.75$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 13 SLV $X_l=0.11$ - Classe 1
 Sollecitazioni: $T_z=-249.16$
 $V,Ed=-249.16$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 32 SLU $X_l=1.06$ - Classe 3
 Sollecitazioni: $N=385.87$ $T_z=-722.89$ $M_y=722.58$ $T_y=-108.49$ $M_z=-77.82$ $M_x=1.70$
 Tensioni: $\sigma_N=7.17$ $\sigma_{m,d}=226.37$ $\tau=10.07$ $\sigma_{max}=233.54$ (sfrut=0.09)
 Tensioni: $\sigma_N=7.17$ $\sigma_{m,d}=-4.58$ $\tau=41.69$ $\tau_{max}=41.69$ (sfrut=0.03)
 Tensioni: $\sigma_N=7.17$ $\sigma_{m,d}=226.37$ $\tau=10.07$ $\sigma_{ID,max}=234.19$ (sfrut=0.09)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-832.96$ $M_y,Ed=422.91$ $M_z,Ed=-119.23$ $L=1.06$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.06$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.77$ $M_{cr}=296457.00$ $\lambda_{LT}=0.23$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.49$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=8.47$ $N_{cr,y}=15548100.00$ $\lambda^*_y=0.10$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=31.51$ $N_{cr,z}=1123420.00$ $\lambda^*_z=0.36$ Curva b: $\Phi_z=0.59$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.03+0.05=0.09$
 Verifica ZZ: $0.01+0.02+0.05=0.08$

- Verifica freccia massima per soli carichi accidentali - CC 35
 $f_{z,G}=0.00$ (L/48117)

- Verifica freccia massima carichi totali - CC 35
 $f_{z,G}=0.00$ (L/39524)

Asta n. 2025 (-1433 -1360) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=0.65$ - Classe 1
 Sollecitazioni: $T_y=74.39$
 $V,Ed=74.39$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 5 SLV $X_l=0.65$ - Classe 1
 Sollecitazioni: $T_z=-721.05$
 $V,Ed=-721.05$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.02$

- Verifica in termini tensionali [4.2.4] - CC 32 SLU $X_l=1.19$ - Classe 3
 Sollecitazioni: $N=592.05$ $T_z=-2883.87$ $M_y=4126.83$ $T_y=313.12$ $M_z=234.75$ $M_x=-2.75$
 Tensioni: $\sigma_N=11.00$ $\sigma_{m,d}=1032.38$ $\tau=16.32$ $\sigma_{max}=1043.39$ (sfrut=0.40)
 Tensioni: $\sigma_N=11.00$ $\sigma_{m,d}=13.80$ $\tau=161.96$ $\tau_{max}=161.96$ (sfrut=0.11)
 Tensioni: $\sigma_N=11.00$ $\sigma_{m,d}=1032.38$ $\tau=16.32$ $\sigma_{ID,max}=1043.77$ (sfrut=0.40)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 3
 Sollecitazioni: $M_y,Ed=4126.83$ $M_z,Ed=234.75$ $L=1.42$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.42$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.58$ $M_{cr}=149258.00$ $\lambda_{LT}=0.32$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.52$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=11.38$ $N_{cr,y}=8609050.00$ $\lambda^*_y=0.13$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=42.34$ $N_{cr,z}=622040.00$ $\lambda^*_z=0.49$ Curva b: $\Phi_z=0.67$ $\chi_z=0.89$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.27+0.11=0.37$
 Verifica ZZ: $0.00+0.21+0.11=0.32$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,G}=0.02$ (L/6137)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,G}=0.03$ (L/4520)

Asta n. 2025 (-1360 -1430) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=1.15$ - Classe 1
 Sollecitazioni: $T_y=-74.05$
 $V,Ed=-74.05$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 5 SLV $X_l=1.15$ - Classe 1
 Sollecitazioni: $T_z=1259.70$
 $V,Ed=1259.70$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.03$

Relazione di calcolo

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=0.22$ - Classe 3
 Sollecitazioni: $N=-3842.38$ $T_z=5857.12$ $M_y=8627.23$ $T_y=-243.31$ $M_z=214.43$ $M_x=2.10$
 Tensioni: $\sigma_N=-71.40$ $\sigma_{m,d}=-1814.99$ $\tau=12.48$ $\sigma_{max}=-1886.39$ (sfrut=0.72)
 Tensioni: $\sigma_N=-71.40$ $\sigma_{m,d}=12.61$ $\tau=327.30$ $\tau_{max}=327.30$ (sfrut=0.22)
 Tensioni: $\sigma_N=-71.40$ $\sigma_{m,d}=-1814.99$ $\tau=12.48$ $\sigma_{ID,max}=1886.52$ (sfrut=0.72)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N,Ed=-3842.38$ $M_y,Ed=8627.23$ $M_z,Ed=214.43$ $L=1.68$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.68$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.73$ $M_{cr}=119560.00$ $\lambda_{LT}=0.36$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.54$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=13.45$ $N_{cr,y}=6164860.00$ $\lambda^*_y=0.15$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=50.04$ $N_{cr,z}=445437.00$ $\lambda^*_z=0.58$ Curva b: $\Phi_z=0.73$ $\chi_z=0.85$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.03+0.56+0.10=0.69$
 Verifica ZZ: $0.03+0.45+0.10=0.58$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G}=0.05$ (L/2819)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.08$ (L/1866)
- Asta n. 2025 (-1430 -1427) - Sez. 5 (IPE300) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_1=1.39$ - Classe 1
 Sollecitazioni: $T_y=21.25$
 $V,Ed=21.25$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 5 SLV $X_1=1.39$ - Classe 1
 Sollecitazioni: $T_z=651.50$
 $V,Ed=651.50$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.02$
 - Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=1.53$ - Classe 3
 Sollecitazioni: $N=-3616.58$ $T_z=2824.77$ $M_y=-4217.45$ $T_y=57.48$ $M_z=-6.94$
 Tensioni: $\sigma_N=-67.21$ $\sigma_{m,d}=-765.68$ $\tau=0.00$ $\sigma_{max}=-832.88$ (sfrut=0.32)
 Tensioni: $\sigma_N=-67.21$ $\sigma_{m,d}=-0.41$ $\tau=157.72$ $\tau_{max}=157.72$ (sfrut=0.10)
 Tensioni: $\sigma_N=-67.21$ $\sigma_{m,d}=-765.68$ $\tau=0.00$ $\sigma_{ID,max}=832.88$ (sfrut=0.32)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N,Ed=-3623.16$ $M_y,Ed=-4217.45$ $M_z,Ed=-95.15$ $L=1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.80$ $M_{cr}=146612.00$ $\lambda_{LT}=0.32$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.31$ $N_{cr,y}=7355880.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.81$ $N_{cr,z}=531493.00$ $\lambda^*_z=0.53$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.03+0.28+0.04=0.34$
 Verifica ZZ: $0.03+0.22+0.04=0.29$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/8558)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.02$ (L/7215)
- Asta n. 2025 (-1427 -1424) - Sez. 5 (IPE300) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 19 SLU $X_1=0.56$ - Classe 1
 Sollecitazioni: $T_y=15.87$
 $V,Ed=15.87$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 19 SLU $X_1=0.56$ - Classe 1
 Sollecitazioni: $T_z=172.89$
 $V,Ed=172.89$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.00$
 - Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=1.53$ - Classe 3
 Sollecitazioni: $N=-3408.20$ $T_z=59.28$ $M_y=-4372.90$ $T_y=22.46$ $M_z=16.77$
 Tensioni: $\sigma_N=-63.33$ $\sigma_{m,d}=-805.78$ $\tau=0.00$ $\sigma_{max}=-869.12$ (sfrut=0.33)
 Tensioni: $\sigma_N=-63.33$ $\sigma_{m,d}=0.99$ $\tau=3.31$ $\tau_{max}=3.31$ (sfrut=0.00)
 Tensioni: $\sigma_N=-63.33$ $\sigma_{m,d}=-805.78$ $\tau=0.00$ $\sigma_{ID,max}=869.12$ (sfrut=0.33)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N,Ed=-3414.78$ $M_y,Ed=-4372.90$ $M_z,Ed=-17.69$ $L=1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.02$ $M_{cr}=82981.40$ $\lambda_{LT}=0.43$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.57$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.31$ $N_{cr,y}=7355890.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$

$\lambda_z=45.81$ Ncr,z=531494.00 $\lambda^*_z=0.53$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.02+0.29+0.01=0.32$
 Verifica ZZ: $0.02+0.23+0.01=0.26$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.04$ (L/4168)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.05$ (L/3170)

Asta n. 2025 (-1424 -1445) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 34 SLU $X_1=0.14$ - Classe 1
 Sollecitazioni: $T_y=-32.60$
 $V, Ed=-32.60$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 34 SLU $X_1=0.14$ - Classe 1
 Sollecitazioni: $T_z=-2277.22$
 $V, Ed=-2277.22$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.06$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-3177.51$ $T_z=-3007.55$ $M_y=-4372.78$ $T_y=-32.79$ $M_z=2.84$
 Tensioni: $\sigma_N=-59.05$ $\sigma_{m,d}=-788.46$ $\tau=0.00$ $\sigma_{max}=-847.51$ (sfrut=0.32)
 Tensioni: $\sigma_N=-59.05$ $\sigma_{m,d}=0.17$ $\tau=167.93$ $\tau_{max}=167.93$ (sfrut=0.11)
 Tensioni: $\sigma_N=-59.05$ $\sigma_{m,d}=-788.46$ $\tau=0.00$ $\sigma_{TD,max}=847.51$ (sfrut=0.32)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3177.51$ $M_y, Ed=-4372.78$ $M_z, Ed=-47.47$ $L=1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.83$ $M_{cr}=149009.00$ $\lambda_{LT}=0.32$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.31$ Ncr,y=7355920.00 $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.81$ Ncr,z=531496.00 $\lambda^*_z=0.53$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.02+0.29+0.02=0.33$
 Verifica ZZ: $0.02+0.23+0.02=0.27$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/7466)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/5435)

Asta n. 2025 (-1445 -1352) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_1=0.54$ - Classe 1
 Sollecitazioni: $T_y=59.62$
 $V, Ed=59.62$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 5 SLV $X_1=0.54$ - Classe 1
 Sollecitazioni: $T_z=-1014.77$
 $V, Ed=-1014.77$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.03$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=1.09$ - Classe 3
 Sollecitazioni: $N=-2933.34$ $T_z=-6231.17$ $M_y=7040.66$ $T_y=193.17$ $M_z=127.20$ $M_x=-2.25$
 Tensioni: $\sigma_N=-54.51$ $\sigma_{m,d}=-1421.84$ $\tau=13.34$ $\sigma_{max}=-1476.35$ (sfrut=0.56)
 Tensioni: $\sigma_N=-54.51$ $\sigma_{m,d}=7.48$ $\tau=348.20$ $\tau_{max}=348.20$ (sfrut=0.23)
 Tensioni: $\sigma_N=-54.51$ $\sigma_{m,d}=-1421.84$ $\tau=13.34$ $\sigma_{TD,max}=1476.53$ (sfrut=0.56)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed=-2938.00$ $M_y, Ed=7040.66$ $M_z, Ed=127.20$ $L=1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.70$ $M_{cr}=139186.00$ $\lambda_{LT}=0.33$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.31$ Ncr,y=7355860.00 $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.81$ Ncr,z=531492.00 $\lambda^*_z=0.53$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.02+0.46+0.06=0.54$
 Verifica ZZ: $0.02+0.37+0.06=0.45$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G}=0.04$ (L/2617)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.05$ (L/2092)

Asta n. 2026 (-1460 -1459) - Sez. 6 (IPE200) - Crit. 1

Relazione di calcolo

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=44.49$
 $V, Ed=44.49$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=90.94$
 $V, Ed=90.94$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.00$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 32 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-9.49$ $T_z=80.48$ $M_y=1.53$ $T_y=63.58$ $M_z=-63.46$
 $N, Ed=-9.49$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1.53$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.00$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-63.46$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.05$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^1 = 0.05$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 1
Sollecitazioni: $N, Ed=-9.49$ $M_y, Ed=-87.34$ $M_z, Ed=-63.46$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.77$ $M, cr=25746.30$ $\lambda_{LT}=0.49$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.60$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.99$
 $\lambda_y=18.41$ $N_{cr,y}=1741830.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.02$ $N_{cr,z}=127614.00$ $\lambda^*_z=0.78$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.01+0.03=0.05$
Verifica ZZ: $0.00+0.01+0.05=0.06$
 - Verifica freccia massima per soli carichi accidentali - CC 35
 $f_{z,g}=0.00$ (L/72476) $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.00$ (L/63778)
- Asta n. 2026 (-1459 -1463) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=1.42$ - Classe 1
Sollecitazioni: $T_y=54.80$
 $V, Ed=54.80$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=1.42$ - Classe 1
Sollecitazioni: $T_z=-380.60$
 $V, Ed=-380.60$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.02$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=1.42$ - Classe 1
Sollecitazioni: $N=14.87$ $T_z=-380.60$ $M_y=408.24$ $T_y=54.80$ $M_z=46.68$
 $N, Ed=14.87$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=408.24$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.07$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=46.68$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.04$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^1 = 0.07$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y, Ed=408.24$ $M_z, Ed=46.68$ $L=1.42$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.42$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.03$ $M, cr=33340.10$ $\lambda_{LT}=0.43$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.57$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=17.17$ $N_{cr,y}=2002000.00$ $\lambda^*_y=0.20$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=63.44$ $N_{cr,z}=146675.00$ $\lambda^*_z=0.73$ Curva b: $\Phi_z=0.86$ $\chi_z=0.77$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.07+0.02=0.09$
Verifica ZZ: $0.00+0.04+0.04=0.08$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.00$ (L/30352)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.01$ (L/19315)
- Asta n. 2026 (-1463 -1457) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-27.59$
 $V, Ed=-27.59$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=317.60$

V,Ed=317.60 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.02

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: N=-34.89 Tz=306.38 My=408.69 Ty=-31.90 Mz=30.11
 N,Ed=-34.89 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.00
 Pressoflessione retta YY [4.2.33]:
 My,Ed=408.69 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.07
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=30.11 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.03
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.07$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: N,Ed=-34.89 My,Ed=408.69 Mz,Ed=30.11 L=1.68
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 L_{cr}=1.68 Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=1.92 M_{cr}=23760.20 \lambda_{LT}=0.51$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.61 \beta_{LT}=0.75 f=0.98 \chi_{LT}=0.98$
 $\lambda_y=20.29 N_{cr,y}=1433610.00 \lambda^*_y=0.23$ Curva a: $\Phi_y=0.53 \chi_y=0.99$
 $\lambda_z=74.97 N_{cr,z}=105032.00 \lambda^*_z=0.86$ Curva b: $\Phi_z=0.99 \chi_z=0.68$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
 Verifica YY: 0.00+0.07+0.01=0.08
 Verifica ZZ: 0.00+0.04+0.02=0.07

- Verifica freccia massima per soli carichi accidentali - CC 38
 f_{z,g}=0.01 (L/24075)

- Verifica freccia massima carichi totali - CC 38
 f_{z,g}=0.01 (L/14406)

Asta n. 2026 (-1457 -1458) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: Ty=11.44
 V,Ed=11.44 Vc,Rd=29609.30 V,Ed/Vc,Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: Tz=372.09
 V,Ed=372.09 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.02

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=1.53 - Classe 1
 Sollecitazioni: N=-35.81 Tz=327.62 My=-601.35 Ty=11.44 Mz=4.21
 N,Ed=-35.81 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.00
 Pressoflessione retta YY [4.2.33]:
 My,Ed=-601.35 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.10
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=4.21 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.00
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.10$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 1
 Sollecitazioni: N,Ed=-27.30 My,Ed=-598.90 Mz,Ed=-18.76 L=1.53
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 L_{cr}=1.53 Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=1.57 M_{cr}=22525.30 \lambda_{LT}=0.52$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.62 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.98$
 $\lambda_y=18.58 N_{cr,y}=1710580.00 \lambda^*_y=0.21$ Curva a: $\Phi_y=0.52 \chi_y=1.00$
 $\lambda_z=68.64 N_{cr,z}=125324.00 \lambda^*_z=0.79$ Curva b: $\Phi_z=0.91 \chi_z=0.73$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
 Verifica YY: 0.00+0.10+0.01=0.11
 Verifica ZZ: 0.00+0.06+0.02=0.08

- Verifica freccia massima per soli carichi accidentali - CC 37
 f_{z,L}=0.01 (L/11212)

- Verifica freccia massima carichi totali - CC 37
 f_{z,L}=0.02 (L/9039)

Asta n. 2026 (-1458 -1456) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: Ty=19.41
 V,Ed=19.41 Vc,Rd=29609.30 V,Ed/Vc,Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: Tz=298.02
 V,Ed=298.02 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.01

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=1.53 - Classe 1
 Sollecitazioni: N=-26.68 Tz=253.55 My=-1024.70 Ty=19.41 Mz=13.53
 N,Ed=-26.68 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.00
 Pressoflessione retta YY [4.2.33]:

My,Ed=-1024.70 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.18
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=13.53 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.01
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.18$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: N,Ed=-30.16 My,Ed=-1024.70 Mz,Ed=-16.26 L=1.53
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=1.24 M_{cr}=17733.70 \lambda_{LT}=0.59$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.66 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.95$
 $\lambda_y=18.58 N_{cr,y}=1710580.00 \lambda^*_y=0.21$ Curva a: $\Phi_y=0.52 \chi_y=1.00$
 $\lambda_z=68.64 N_{cr,z}=125324.00 \lambda^*_z=0.79$ Curva b: $\Phi_z=0.91 \chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.18+0.01=0.19$
 Verifica ZZ: $0.00+0.11+0.01=0.12$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.03 (L/5173)$

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.04 (L/3891)$

Asta n. 2026 (-1456 -1461) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 19 SLU Xl=0.00 - Classe 1
 Sollecitazioni: $T_z=56.92$
 $V,Ed=56.92 V_c,Rd=21171.50 V,Ed/V_c,Rd=0.00$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=0.98 - Classe 1
 Sollecitazioni: N=-2.58 My=-1038.48 Ty=12.98 Mz=1.05
 $N,Ed=-2.58 N_c,Rd=74603.30 n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $My,Ed=-1038.48 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.18$
 Pressoflessione retta ZZ [4.2.34]:
 $Mz,Ed=1.05 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.00$
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.18$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: N,Ed=-4.81 My,Ed=-1034.05 Mz,Ed=-11.68 L=1.53
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=1.00 M_{cr}=14395.90 \lambda_{LT}=0.65$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.70 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.92$
 $\lambda_y=18.58 N_{cr,y}=1710590.00 \lambda^*_y=0.21$ Curva a: $\Phi_y=0.52 \chi_y=1.00$
 $\lambda_z=68.64 N_{cr,z}=125325.00 \lambda^*_z=0.79$ Curva b: $\Phi_z=0.91 \chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.18+0.01=0.19$
 Verifica ZZ: $0.00+0.11+0.01=0.12$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.04 (L/3982)$

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.05 (L/3038)$

Asta n. 2026 (-1461 -1462) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU Xl=1.53 - Classe 1
 Sollecitazioni: $T_y=46.00$
 $V,Ed=46.00 V_c,Rd=29609.30 V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU Xl=1.53 - Classe 1
 Sollecitazioni: $T_z=-699.72$
 $V,Ed=-699.72 V_c,Rd=21171.50 V,Ed/V_c,Rd=0.03$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: N=54.68 $T_z=-655.25 M_y=-1034.42 T_y=46.00 M_z=-28.59$
 $N,Ed=54.68 N_c,Rd=74603.30 n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $My,Ed=-1034.42 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.18$
 Pressoflessione retta ZZ [4.2.34]:
 $Mz,Ed=-28.59 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.02$
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.18$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: My,Ed=-1034.42 Mz,Ed=41.99 L=1.53
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$

$L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.76$ $M_{cr}=25162.90$ $\lambda_{LT}=0.49$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.61$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.99$
 $\lambda_y=18.58$ $N_{cr,y}=1710570.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.64$ $N_{cr,z}=125324.00$ $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.17+0.02=0.19$
 Verifica ZZ: $0.00+0.10+0.03=0.14$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/7247)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/5577)

Asta n. 2027 (-119 -1847) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l=0.52$ - Classe 1
 Sollecitazioni: $T_y=-21.12$
 $V, Ed=-21.12$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 13 SLV $X_l=0.52$ - Classe 1
 Sollecitazioni: $T_z=1192.84$
 $V, Ed=1192.84$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.03$

- Verifica in termini tensionali [4.2.4] - CC 13 SLV $X_l=0.15$ - Classe 3
 Sollecitazioni: $N=-466.35$ $T_z=1208.59$ $M_y=1233.81$ $T_y=53.54$ $M_z=-41.90$
 Tensioni: $\sigma_N=-8.67$ $\sigma_{m,d}=-273.53$ $\tau=0.00$ $\sigma_{max}=-282.19$ (sfrut=0.11)
 Tensioni: $\sigma_N=-8.67$ $\sigma_{m,d}=-2.46$ $\tau=67.48$ $\tau_{max}=67.48$ (sfrut=0.04)
 Tensioni: $\sigma_N=-8.67$ $\sigma_{m,d}=-273.53$ $\tau=0.00$ $\sigma_{ID,max}=282.19$ (sfrut=0.11)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
 Sollecitazioni: $N, Ed=-466.35$ $M_y, Ed=1233.81$ $M_z, Ed=-41.90$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.11$ $M_{cr}=174906.00$ $\lambda_{LT}=0.30$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.52$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=12.20$ $N_{cr,y}=7490300.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.40$ $N_{cr,z}=541205.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.08+0.02=0.10$
 Verifica ZZ: $0.00+0.06+0.02=0.09$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.00$ (L/34230)

- Verifica freccia massima carichi totali - CC 21
 $f_{z,G}=0.00$ (L/29951)

Asta n. 2027 (-1847 -1846) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU $X_l=0.33$ - Classe 1
 Sollecitazioni: $T_y=161.36$
 $V, Ed=161.36$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU $X_l=0.33$ - Classe 1
 Sollecitazioni: $T_z=-3094.30$
 $V, Ed=-3094.30$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.08$

- Verifica in termini tensionali [4.2.4] - CC 32 SLU $X_l=1.19$ - Classe 3
 Sollecitazioni: $N=-875.77$ $T_z=-3141.85$ $M_y=3827.76$ $T_y=161.36$ $M_z=140.79$
 Tensioni: $\sigma_N=-16.27$ $\sigma_{m,d}=-861.98$ $\tau=0.00$ $\sigma_{max}=-878.26$ (sfrut=0.34)
 Tensioni: $\sigma_N=-16.27$ $\sigma_{m,d}=8.28$ $\tau=175.43$ $\tau_{max}=175.43$ (sfrut=0.12)
 Tensioni: $\sigma_N=-16.27$ $\sigma_{m,d}=-861.98$ $\tau=0.00$ $\sigma_{ID,max}=878.26$ (sfrut=0.34)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 3
 Sollecitazioni: $N, Ed=-880.89$ $M_y, Ed=3827.76$ $M_z, Ed=140.79$ $L=1.42$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.42$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.72$ $M_{cr}=162831.00$ $\lambda_{LT}=0.31$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.52$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=11.38$ $N_{cr,y}=8609050.00$ $\lambda^*_y=0.13$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=42.34$ $N_{cr,z}=622040.00$ $\lambda^*_z=0.49$ Curva b: $\Phi_z=0.67$ $\chi_z=0.89$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.25+0.06=0.32$
 Verifica ZZ: $0.01+0.20+0.06=0.27$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,G}=0.02$ (L/5769)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,G}=0.02$ (L/5396)

Asta n. 2027 (-1846 -1845) - Sez. 5 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV Xl=1.02 - Classe 1
Sollecitazioni: $T_y = -33.10$
 $V, Ed = -33.10$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 5 SLV Xl=1.02 - Classe 1
Sollecitazioni: $T_z = 1532.68$
 $V, Ed = 1532.68$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.04$
 - Verifica in termini tensionali [4.2.4] - CC 33 SLU Xl=0.22 - Classe 3
Sollecitazioni: $N = -3833.51$ $T_z = 6841.65$ $M_y = 9294.37$ $T_y = -133.34$ $M_z = 118.36$ $M_x = 1.86$
Tensioni: $\sigma_N = -71.24$ $\sigma_{m,d} = -1815.40$ $\tau = 11.04$ $\sigma_{max} = -1886.64$ (sfrut=0.72)
Tensioni: $\sigma_N = -71.24$ $\sigma_{m,d} = 6.96$ $\tau = 382.17$ $\tau_{max} = 382.17$ (sfrut=0.25)
Tensioni: $\sigma_N = -71.24$ $\sigma_{m,d} = -1815.40$ $\tau = 11.04$ $\sigma_{ID,max} = 1886.74$ (sfrut=0.72)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed = -3833.51$ $M_y, Ed = 9294.37$ $M_z, Ed = 118.36$ $L = 1.68$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.68$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.82$ $M_{cr} = 125699.00$ $\lambda_{LT} = 0.35$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.54$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 13.45$ $N_{cr,y} = 6164850.00$ $\lambda^*_y = 0.15$ Curva a: $\Phi_y = 0.51$ $\chi_y = 1.00$
 $\lambda_z = 50.04$ $N_{cr,z} = 445436.00$ $\lambda^*_z = 0.58$ Curva b: $\Phi_z = 0.73$ $\chi_z = 0.85$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.03 + 0.61 + 0.05 = 0.69$
Verifica ZZ: $0.03 + 0.49 + 0.05 = 0.57$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g} = 0.05$ (L/2675)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.08$ (L/1810)

Asta n. 2027 (-1845 -1844) - Sez. 5 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 19 SLU Xl=1.53 - Classe 1
Sollecitazioni: $T_y = 32.38$
 $V, Ed = 32.38$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 19 SLU Xl=1.53 - Classe 1
Sollecitazioni: $T_z = 2451.72$
 $V, Ed = 2451.72$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.06$
 - Verifica in termini tensionali [4.2.4] - CC 33 SLU Xl=1.53 - Classe 3
Sollecitazioni: $N = -3543.83$ $T_z = 3120.07$ $M_y = -5432.40$ $T_y = 37.20$ $M_z = -1.68$
Tensioni: $\sigma_N = -65.85$ $\sigma_{m,d} = -977.23$ $\tau = 0.00$ $\sigma_{max} = -1043.08$ (sfrut=0.40)
Tensioni: $\sigma_N = -65.85$ $\sigma_{m,d} = -0.10$ $\tau = 174.21$ $\tau_{max} = 174.21$ (sfrut=0.12)
Tensioni: $\sigma_N = -65.85$ $\sigma_{m,d} = -977.23$ $\tau = 0.00$ $\sigma_{ID,max} = 1043.08$ (sfrut=0.40)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed = -3550.41$ $M_y, Ed = -5432.40$ $M_z, Ed = -58.77$ $L = 1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.53$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.64$ $M_{cr} = 133999.00$ $\lambda_{LT} = 0.34$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.53$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 12.31$ $N_{cr,y} = 7355880.00$ $\lambda^*_y = 0.14$ Curva a: $\Phi_y = 0.50$ $\chi_y = 1.00$
 $\lambda_z = 45.81$ $N_{cr,z} = 531493.00$ $\lambda^*_z = 0.53$ Curva b: $\Phi_z = 0.69$ $\chi_z = 0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.03 + 0.35 + 0.03 = 0.41$
Verifica ZZ: $0.03 + 0.28 + 0.03 = 0.34$
 - Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L} = 0.03$ (L/5948)
 - Verifica freccia massima carichi totali - CC 37
 $f_{z,L} = 0.03$ (L/4670)

Asta n. 2027 (-1844 -1843) - Sez. 5 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 30 SLU Xl=0.84 - Classe 1
Sollecitazioni: $T_y = 18.93$
 $V, Ed = 18.93$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 30 SLU Xl=0.84 - Classe 1
Sollecitazioni: $T_z = -258.87$
 $V, Ed = -258.87$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.01$
 - Verifica in termini tensionali [4.2.4] - CC 33 SLU Xl=0.00 - Classe 3
Sollecitazioni: $N = -3286.45$ $T_z = -143.15$ $M_y = -5432.42$ $T_y = 15.09$ $M_z = -12.44$

Tensioni: $\sigma_N = -61.07$ $\sigma_{m,d} = -990.59$ $\tau = 0.00$ $\sigma_{max} = -1051.67$ (sfrut=0.40)
 Tensioni: $\sigma_N = -61.07$ $\sigma_{m,d} = -0.73$ $\tau = 7.99$ $\tau_{max} = 7.99$ (sfrut=0.01)
 Tensioni: $\sigma_N = -61.07$ $\sigma_{m,d} = -990.59$ $\tau = 0.00$ $\sigma_{ID,max} = 1051.67$ (sfrut=0.40)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: N,Ed=-3286.45 My,Ed=-5432.42 Mz,Ed=-12.44 L=1.53
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.53$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.02$ M,cr=83633.10 $\lambda_{LT} = 0.43$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.57$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 12.31$ Ncr,y=7355880.00 $\lambda^*_y = 0.14$ Curva a: $\Phi_y = 0.50$ $\chi_y = 1.00$
 $\lambda_z = 45.81$ Ncr,z=531493.00 $\lambda^*_z = 0.53$ Curva b: $\Phi_z = 0.69$ $\chi_z = 0.87$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.96, 0.76, 0.96
 Verifica YY: 0.02+0.35+0.01=0.38
 Verifica ZZ: 0.02+0.28+0.01=0.31

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.04$ (L/3416)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.06$ (L/2539)

Asta n. 2027 (-1843 -1842) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 30 SLU Xl=0.00 - Classe 1
 Sollecitazioni: $T_y = -12.07$
 $V, Ed = -12.07$ Vc,Rd=54683.30 V,Ed/Vc,Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 30 SLU Xl=0.00 - Classe 1
 Sollecitazioni: $T_z = -2916.44$
 $V, Ed = -2916.44$ Vc,Rd=38836.40 V,Ed/Vc,Rd=0.08

- Verifica in termini tensionali [4.2.4] - CC 33 SLU Xl=0.00 - Classe 3
 Sollecitazioni: N=-2999.84 $T_z = -3779.23$ $M_y = -5148.39$ $T_y = -8.91$ $M_z = -2.00$
 Tensioni: $\sigma_N = -55.75$ $\sigma_{m,d} = -926.64$ $\tau = 0.00$ $\sigma_{max} = -982.39$ (sfrut=0.38)
 Tensioni: $\sigma_N = -55.75$ $\sigma_{m,d} = -0.12$ $\tau = 211.01$ $\tau_{max} = 211.01$ (sfrut=0.14)
 Tensioni: $\sigma_N = -55.75$ $\sigma_{m,d} = -926.64$ $\tau = 0.00$ $\sigma_{ID,max} = 982.39$ (sfrut=0.38)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: N,Ed=-2999.84 My,Ed=-5148.39 Mz,Ed=-15.68 L=1.53
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.53$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.90$ M,cr=155258.00 $\lambda_{LT} = 0.31$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.52$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 12.31$ Ncr,y=7355920.00 $\lambda^*_y = 0.14$ Curva a: $\Phi_y = 0.50$ $\chi_y = 1.00$
 $\lambda_z = 45.81$ Ncr,z=531496.00 $\lambda^*_z = 0.53$ Curva b: $\Phi_z = 0.69$ $\chi_z = 0.87$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.96, 0.76, 0.96
 Verifica YY: 0.02+0.34+0.01=0.36
 Verifica ZZ: 0.02+0.27+0.01=0.30

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.02$ (L/6817)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.03$ (L/4868)

Asta n. 2027 (-1842 -1351) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 19 SLU Xl=0.43 - Classe 1
 Sollecitazioni: $T_y = 74.78$ $M_x = -1.11$
 $V, Ed = 74.78$ Vc,Rd,Red=54587.60 V,Ed/Vc,Rd,Red=0.00

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 19 SLU Xl=0.43 - Classe 1
 Sollecitazioni: $T_z = -5535.46$ $M_x = -1.11$
 $V, Ed = -5535.46$ Vc,Rd,Red=38768.40 V,Ed/Vc,Rd,Red=0.14

- Verifica in termini tensionali [4.2.4] - CC 33 SLU Xl=1.09 - Classe 3
 Sollecitazioni: N=-2697.56 $T_z = -7586.95$ $M_y = 8921.22$ $T_y = 88.57$ $M_z = 60.76$ $M_x = -1.70$
 Tensioni: $\sigma_N = -50.13$ $\sigma_{m,d} = -1676.88$ $\tau = 10.12$ $\sigma_{max} = -1727.01$ (sfrut=0.66)
 Tensioni: $\sigma_N = -50.13$ $\sigma_{m,d} = 3.57$ $\tau = 423.74$ $\tau_{max} = 423.74$ (sfrut=0.28)
 Tensioni: $\sigma_N = -50.13$ $\sigma_{m,d} = -1676.88$ $\tau = 10.12$ $\sigma_{ID,max} = 1727.10$ (sfrut=0.66)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: N,Ed=-2702.22 My,Ed=8921.22 Mz,Ed=60.76 L=1.53
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.53$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.67$ M,cr=136161.00 $\lambda_{LT} = 0.34$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.53$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 12.31$ Ncr,y=7355880.00 $\lambda^*_y = 0.14$ Curva a: $\Phi_y = 0.50$ $\chi_y = 1.00$
 $\lambda_z = 45.81$ Ncr,z=531493.00 $\lambda^*_z = 0.53$ Curva b: $\Phi_z = 0.69$ $\chi_z = 0.87$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.96, 0.76, 0.96

Relazione di calcolo

- Verifica YY: $0.02+0.58+0.03=0.63$
Verifica ZZ: $0.02+0.47+0.03=0.51$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.05$ (L/2047)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.07$ (L/1633)
- Asta n. 2028 (-1452 -1451) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=10.01$
 $V, Ed=10.01$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=320.76$
 $V, Ed=320.76$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.02$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=1.52$ - Classe 1
Sollecitazioni: $N=-48.80$ $T_z=276.70$ $M_y=-450.00$ $T_y=10.01$ $M_z=5.97$
 $N, Ed=-48.80$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-450.00$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.08$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=5.97$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.08$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-52.26$ $M_y, Ed=-450.00$ $M_z, Ed=-9.25$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.76$ $M_{cr}=25621.70$ $\lambda_{LT}=0.49$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.60$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.99$
 $\lambda_y=18.41$ $N_{cr,y}=1741830.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.02$ $N_{cr,z}=127614.00$ $\lambda^*_z=0.78$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.07+0.00=0.08$
Verifica ZZ: $0.00+0.04+0.01=0.05$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,l}=0.01$ (L/20842)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,l}=0.01$ (L/14429)
- Asta n. 2028 (-1451 -1455) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=1.42$ - Classe 1
Sollecitazioni: $T_y=14.29$
 $V, Ed=14.29$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=1.42$ - Classe 1
Sollecitazioni: $T_z=-479.51$
 $V, Ed=-479.51$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.02$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=8.97$ $T_z=-438.41$ $M_y=-448.80$ $T_y=14.29$ $M_z=-6.82$
 $N, Ed=8.97$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-448.80$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.08$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-6.82$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.08$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y, Ed=-448.80$ $M_z, Ed=13.44$ $L=1.42$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.42$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.28$ $M_{cr}=37465.80$ $\lambda_{LT}=0.40$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.56$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=17.17$ $N_{cr,y}=2002000.00$ $\lambda^*_y=0.20$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=63.44$ $N_{cr,z}=146675.00$ $\lambda^*_z=0.73$ Curva b: $\Phi_z=0.86$ $\chi_z=0.77$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.07+0.01=0.08$
Verifica ZZ: $0.00+0.04+0.01=0.05$
- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,l}=0.01$ (L/24787)

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.01$ (L/18707)

Asta n. 2028 (-1455 -1449) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-25.00$
 $V,Ed=-25.00$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=374.54$
 $V,Ed=374.54$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.02$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 32 SLU $X_l=1.68$ - Classe 1
 Sollecitazioni: $N=-46.18$ $T_x=325.97$ $M_y=-430.52$ $T_y=-25.00$ $M_z=-19.14$
 $N,Ed=-46.18$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-430.52$ $M_y,V,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.07$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-19.14$ $M_z,V,c,Rd=1170.59$ $MN_z,c,Rd=1170.59$ $M_z,Ed/MN_z,c,Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^2 = 0.07$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 1
 Sollecitazioni: $N,Ed=-49.98$ $M_y,Ed=-430.52$ $M_z,Ed=22.77$ $L=1.68$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.68$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.17$ $M_{cr}=26842.20$ $\lambda_{LT}=0.48$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.60$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.99$
 $\lambda_y=20.29$ $N_{cr,y}=1433610.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=74.97$ $N_{cr,z}=105032.00$ $\lambda^*_z=0.86$ Curva b: $\Phi_z=0.99$ $\chi_z=0.68$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.07+0.01=0.08$
 Verifica ZZ: $0.00+0.04+0.02=0.06$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.01$ (L/22107)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.01$ (L/19103)

Asta n. 2028 (-1449 -1450) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-1.49$
 $V,Ed=-1.49$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=411.81$
 $V,Ed=411.81$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.02$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=1.53$ - Classe 1
 Sollecitazioni: $N=-44.68$ $T_x=367.34$ $M_y=-971.95$ $T_y=-1.49$ $M_z=-3.18$
 $N,Ed=-44.68$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-971.95$ $M_y,V,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.17$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-3.18$ $M_z,V,c,Rd=1170.59$ $MN_z,c,Rd=1170.59$ $M_z,Ed/MN_z,c,Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^2 = 0.17$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 1
 Sollecitazioni: $N,Ed=-46.42$ $M_y,Ed=-959.71$ $M_z,Ed=-7.56$ $L=1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.34$ $M_{cr}=19199.80$ $\lambda_{LT}=0.56$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.65$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=18.58$ $N_{cr,y}=1710580.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.64$ $N_{cr,z}=125324.00$ $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.16+0.00=0.17$
 Verifica ZZ: $0.00+0.10+0.01=0.11$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.03$ (L/6117)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.03$ (L/4551)

Asta n. 2028 (-1450 -1448) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1

Sollecitazioni: $T_y=1.18$
 $V, Ed=1.18$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=354.02$
 $V, Ed=354.02$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.02$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 33 SLU $X_l=1.53$ - Classe 1
 Sollecitazioni: $N=-35.22$ $T_z=309.55$ $M_y=-1481.15$ $T_y=1.18$
 $M_y, Ed=-1481.15$ $M_y, V, c, Rd=5804.95$
 $N, Ed=-35.22$ $N_c, Rd=74603.30$ YY $n=N, Ed/N_c, Rd=0.00$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.26$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-38.70$ $M_y, Ed=-1481.15$ $M_z, Ed=-1.53$ $L=1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.19$ $M, cr=17061.60$ $\lambda_{LT}=0.60$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.67$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.94$
 $\lambda_y=18.58$ $N_{cr,y}=1710580.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.64$ $N_{cr,z}=125324.00$ $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.26+0.00=0.26$
 Verifica ZZ: $0.00+0.15+0.00=0.16$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,l}=0.04$ (L/3437)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,l}=0.06$ (L/2580)

Asta n. 2028 (-1448 -1453) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU $X_l=1.53$ - Classe 1
 Sollecitazioni: $T_y=1.46$
 $V, Ed=1.46$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU $X_l=1.53$ - Classe 1
 Sollecitazioni: $T_z=-106.89$
 $V, Ed=-106.89$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-4.58$ $T_z=-14.38$ $M_y=-1481.28$ $T_y=1.11$
 $M_y, Ed=-1481.28$ $M_y, V, c, Rd=5804.95$
 $N, Ed=-4.58$ $N_c, Rd=74603.30$ YY $n=N, Ed/N_c, Rd=0.00$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.26$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-4.58$ $M_y, Ed=-1481.28$ $M_z, Ed=1.56$ $L=1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.02$ $M, cr=14587.00$ $\lambda_{LT}=0.65$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.70$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.92$
 $\lambda_y=18.58$ $N_{cr,y}=1710590.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.64$ $N_{cr,z}=125325.00$ $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.26+0.00=0.26$
 Verifica ZZ: $0.00+0.16+0.00=0.16$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,l}=0.05$ (L/2805)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,l}=0.07$ (L/2165)

Asta n. 2028 (-1453 -1454) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=1.53$ - Classe 1
 Sollecitazioni: $T_y=-5.36$
 $V, Ed=-5.36$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=1.53$ - Classe 1
 Sollecitazioni: $T_z=-956.32$
 $V, Ed=-956.32$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.05$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=72.08$ $T_z=-911.85$ $M_y=-1426.09$ $T_y=-5.36$ $M_z=3.15$
 $N, Ed=72.08$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-1426.09$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.25$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=3.15$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.25$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $M_y, Ed = -1426.09$ $M_z, Ed = -5.08$ $L = 1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.53$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 1.76$ $M, cr = 25164.20$ $\lambda_{LT} = 0.49$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.61$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 0.99$
 $\lambda_y = 18.58$ $N_{cr,y} = 1710570.00$ $\lambda^*_y = 0.21$ Curva a: $\Phi_y = 0.52$ $\chi_y = 1.00$
 $\lambda_z = 68.64$ $N_{cr,z} = 125324.00$ $\lambda^*_z = 0.79$ Curva b: $\Phi_z = 0.91$ $\chi_z = 0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00 + 0.24 + 0.00 = 0.24$
 Verifica ZZ: $0.00 + 0.14 + 0.00 = 0.15$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.03$ (L/5181)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.04$ (L/4037)

Asta n. 2029 (-125 -1437) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_1 = 1.40$ - Classe 1
 Sollecitazioni: $T_y = -115.31$
 $V, Ed = -115.31$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 13 SLV $X_1 = 1.40$ - Classe 1
 Sollecitazioni: $T_z = 1067.85$
 $V, Ed = 1067.85$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.03$

- Verifica in termini tensionali [4.2.4] - CC 13 SLV $X_1 = 0.15$ - Classe 3
 Sollecitazioni: $N = 954.77$ $T_z = 1120.34$ $M_y = 1209.42$ $T_y = 183.14$ $M_z = -167.13$
 Tensioni: $\sigma_N = 17.74$ $\sigma_{m,d} = 424.70$ $\tau = 0.00$ $\sigma_{max} = 442.44$ (sfrut=0.17)
 Tensioni: $\sigma_N = 17.74$ $\sigma_{m,d} = -9.83$ $\tau = 62.56$ $\tau_{max} = 62.56$ (sfrut=0.04)
 Tensioni: $\sigma_N = 17.74$ $\sigma_{m,d} = 424.70$ $\tau = 0.00$ $\sigma_{ID,max} = 442.44$ (sfrut=0.17)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
 Sollecitazioni: $N, Ed = -942.90$ $M_y, Ed = 1209.42$ $M_z, Ed = -167.13$ $L = 1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.52$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 2.02$ $M, cr = 167450.00$ $\lambda_{LT} = 0.30$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.52$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 12.20$ $N_{cr,y} = 7490300.00$ $\lambda^*_y = 0.14$ Curva a: $\Phi_y = 0.50$ $\chi_y = 1.00$
 $\lambda_z = 45.40$ $N_{cr,z} = 541205.00$ $\lambda^*_z = 0.52$ Curva b: $\Phi_z = 0.69$ $\chi_z = 0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01 + 0.08 + 0.08 = 0.16$
 Verifica ZZ: $0.01 + 0.06 + 0.08 = 0.15$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L} = 0.00$ (L/47922)

- Verifica freccia massima carichi totali - CC 21
 $f_{z,G} = 0.00$ (L/57506)

Asta n. 2029 (-1437 -1358) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 34 SLU $X_1 = 0.98$ - Classe 1
 Sollecitazioni: $T_y = -24.01$ $M_x = 2.77$
 $V, Ed = -24.01$ $V_c, Rd, Red = 54445.10$ $V, Ed/V_c, Rd, Red = 0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 34 SLU $X_1 = 0.98$ - Classe 1
 Sollecitazioni: $T_z = -1712.24$ $M_x = 2.77$
 $V, Ed = -1712.24$ $V_c, Rd, Red = 38667.20$ $V, Ed/V_c, Rd, Red = 0.04$

- Verifica in termini tensionali [4.2.4] - CC 32 SLU $X_1 = 1.19$ - Classe 3
 Sollecitazioni: $N = -103.68$ $T_z = -2417.45$ $M_y = 2992.32$ $T_y = 8.88$ $M_z = 16.54$ $M_x = 3.02$
 Tensioni: $\sigma_N = -1.93$ $\sigma_{m,d} = -557.68$ $\tau = 17.90$ $\sigma_{max} = -559.60$ (sfrut=0.21)
 Tensioni: $\sigma_N = -1.93$ $\sigma_{m,d} = -0.97$ $\tau = 136.16$ $\tau_{max} = 136.16$ (sfrut=0.09)
 Tensioni: $\sigma_N = -1.93$ $\sigma_{m,d} = -557.68$ $\tau = 17.90$ $\sigma_{ID,max} = 560.46$ (sfrut=0.21)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 3
 Sollecitazioni: $N, Ed = -108.81$ $M_y, Ed = 2992.32$ $M_z, Ed = 16.54$ $L = 1.42$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.42$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 1.70$ $M, cr = 161054.00$ $\lambda_{LT} = 0.31$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.52$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 11.38$ $N_{cr,y} = 8609050.00$ $\lambda^*_y = 0.13$ Curva a: $\Phi_y = 0.50$ $\chi_y = 1.00$
 $\lambda_z = 42.34$ $N_{cr,z} = 622040.00$ $\lambda^*_z = 0.49$ Curva b: $\Phi_z = 0.67$ $\chi_z = 0.89$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00 + 0.19 + 0.01 = 0.20$
 Verifica ZZ: $0.00 + 0.16 + 0.01 = 0.16$

Relazione di calcolo

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,g}=0.02$ (L/7195)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,g}=0.02$ (L/6731)

Asta n. 2029 (-1358 -1432) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU $X_l=1.02$ - Classe 1
 Sollecitazioni: $T_y=-15.27$ $M_x=-2.35$
 $V_{Ed}=-15.27$ $V_{c,Rd,Red}=54480.80$ $V_{Ed}/V_{c,Rd,Red}=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU $X_l=1.02$ - Classe 1
 Sollecitazioni: $T_z=6286.16$ $M_x=-2.35$
 $V_{Ed}=6286.16$ $V_{c,Rd,Red}=38692.60$ $V_{Ed}/V_{c,Rd,Red}=0.16$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.22$ - Classe 3
 Sollecitazioni: $N=-3571.80$ $T_z=6329.52$ $M_y=8653.76$ $T_y=-15.27$ $M_z=12.03$ $M_x=-2.35$
 Tensioni: $\sigma_N=-66.37$ $\sigma_{m,d}=-1568.33$ $\tau=13.97$ $\sigma_{max}=-1634.70$ (sfrut=0.62)
 Tensioni: $\sigma_N=-66.37$ $\sigma_{m,d}=-0.71$ $\tau=353.69$ $\tau_{max}=353.69$ (sfrut=0.23)
 Tensioni: $\sigma_N=-66.37$ $\sigma_{m,d}=-1568.33$ $\tau=13.97$ $\sigma_{ID,max}=1634.88$ (sfrut=0.62)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N_{Ed}=-3571.80$ $M_{y,Ed}=8653.76$ $M_{z,Ed}=12.03$ $L=1.68$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $L_{cr}=1.68$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.81$ $M_{cr}=125154.00$ $\lambda_{LT}=0.35$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.54$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=13.45$ $N_{cr,y}=6164830.00$ $\lambda^*_y=0.15$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=50.04$ $N_{cr,z}=445435.00$ $\lambda^*_z=0.58$ Curva b: $\Phi_z=0.73$ $\chi_z=0.85$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.95$, 0.96 , 0.76 , 0.96
 Verifica YY: $0.03+0.56+0.01=0.60$
 Verifica ZZ: $0.03+0.45+0.01=0.48$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.05$ (L/2899)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.08$ (L/1931)

Asta n. 2029 (-1432 -1429) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 19 SLU $X_l=0.84$ - Classe 1
 Sollecitazioni: $T_y=13.78$
 $V_{Ed}=13.78$ $V_{c,Rd}=54683.30$ $V_{Ed}/V_{c,Rd}=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 19 SLU $X_l=0.84$ - Classe 1
 Sollecitazioni: $T_z=2220.23$
 $V_{Ed}=2220.23$ $V_{c,Rd}=38836.40$ $V_{Ed}/V_{c,Rd}=0.06$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=1.53$ - Classe 3
 Sollecitazioni: $N=-3302.64$ $T_z=2833.59$ $M_y=-4890.39$ $M_z=-3.11$
 Tensioni: $\sigma_N=-61.37$ $\sigma_{m,d}=-881.71$ $\tau=0.00$ $\sigma_{max}=-943.08$ (sfrut=0.36)
 Tensioni: $\sigma_N=-61.37$ $\sigma_{m,d}=-0.18$ $\tau=158.21$ $\tau_{max}=158.21$ (sfrut=0.10)
 Tensioni: $\sigma_N=-61.37$ $\sigma_{m,d}=-881.71$ $\tau=0.00$ $\sigma_{ID,max}=943.08$ (sfrut=0.36)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N_{Ed}=-3309.22$ $M_{y,Ed}=-4890.39$ $M_{z,Ed}=-3.94$ $L=1.53$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.65$ $M_{cr}=134734.00$ $\lambda_{LT}=0.34$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.31$ $N_{cr,y}=7355880.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.81$ $N_{cr,z}=531493.00$ $\lambda^*_z=0.53$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.95$, 0.96 , 0.76 , 0.96
 Verifica YY: $0.02+0.32+0.00=0.34$
 Verifica ZZ: $0.02+0.26+0.00=0.28$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,l}=0.02$ (L/6732)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,l}=0.03$ (L/5372)

Asta n. 2029 (-1429 -1426) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 30 SLU $X_l=1.53$ - Classe 1
 Sollecitazioni: $T_y=2.33$
 $V_{Ed}=2.33$ $V_{c,Rd}=54683.30$ $V_{Ed}/V_{c,Rd}=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 30 SLU $X_l=1.53$ - Classe 1

Relazione di calcolo

Sollecitazioni: $T_z=-285.84$
 $V, Ed=-285.84$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-3071.35$ $T_z=-122.70$ $M_y=-4890.59$ $T_y=-3.19$ $M_z=1.94$
Tensioni: $\sigma_N=-57.07$ $\sigma_{m,d}=-880.29$ $\tau=0.00$ $\sigma_{max}=-937.37$ (sfrut=0.36)
Tensioni: $\sigma_N=-57.07$ $\sigma_{m,d}=0.11$ $\tau=6.85$ $\tau_{max}=6.85$ (sfrut=0.00)
Tensioni: $\sigma_N=-57.07$ $\sigma_{m,d}=-880.29$ $\tau=0.00$ $\sigma_{ID,max}=937.37$ (sfrut=0.36)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-3071.35$ $M_y, Ed=-4890.59$ $M_z, Ed=-2.96$ $L=1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.02$ $M_{cr}=83608.80$ $\lambda_{LT}=0.43$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.57$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.31$ $N_{cr,y}=7355890.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.81$ $N_{cr,z}=531494.00$ $\lambda^*_z=0.53$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.32+0.00=0.34$
Verifica ZZ: $0.02+0.26+0.00=0.28$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.04$ (L/3808)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.05$ (L/2820)

Asta n. 2029 (-1426 -1446) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=11.46$
 $V, Ed=11.46$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=-3390.78$
 $V, Ed=-3390.78$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.09$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.14$ - Classe 3
Sollecitazioni: $N=-2815.92$ $T_z=-3398.42$ $M_y=-4164.29$ $T_y=11.46$ $M_z=1.46$
Tensioni: $\sigma_N=-52.33$ $\sigma_{m,d}=-749.33$ $\tau=0.00$ $\sigma_{max}=-801.65$ (sfrut=0.31)
Tensioni: $\sigma_N=-52.33$ $\sigma_{m,d}=0.09$ $\tau=189.75$ $\tau_{max}=189.75$ (sfrut=0.13)
Tensioni: $\sigma_N=-52.33$ $\sigma_{m,d}=-749.33$ $\tau=0.00$ $\sigma_{ID,max}=801.65$ (sfrut=0.31)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-2816.52$ $M_y, Ed=-4637.82$ $M_z, Ed=17.45$ $L=1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.90$ $M_{cr}=154968.00$ $\lambda_{LT}=0.31$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.52$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.31$ $N_{cr,y}=7355950.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.81$ $N_{cr,z}=531499.00$ $\lambda^*_z=0.53$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.30+0.01=0.33$
Verifica ZZ: $0.02+0.24+0.01=0.27$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/7661)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/5408)

Asta n. 2029 (-1446 -1350) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 34 SLU $X_l=0.65$ - Classe 1
Sollecitazioni: $T_y=-49.12$ $M_x=2.12$
 $V, Ed=-49.12$ $V_c, Rd, Red=54500.90$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 34 SLU $X_l=0.65$ - Classe 1
Sollecitazioni: $T_z=-4998.27$ $M_x=2.12$
 $V, Ed=-4998.27$ $V_c, Rd, Red=38706.90$ $V, Ed/V_c, Rd, Red=0.13$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=1.09$ - Classe 3
Sollecitazioni: $N=-2547.64$ $T_z=-6747.05$ $M_y=7924.01$ $T_y=-60.04$ $M_z=-30.60$ $M_x=2.77$
Tensioni: $\sigma_N=-47.34$ $\sigma_{m,d}=-1460.41$ $\tau=16.43$ $\sigma_{max}=-1507.76$ (sfrut=0.58)
Tensioni: $\sigma_N=-47.34$ $\sigma_{m,d}=-1.80$ $\tau=377.09$ $\tau_{max}=377.09$ (sfrut=0.25)
Tensioni: $\sigma_N=-47.34$ $\sigma_{m,d}=-1460.41$ $\tau=16.43$ $\sigma_{ID,max}=1508.02$ (sfrut=0.58)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-2552.30$ $M_y, Ed=7924.01$ $M_z, Ed=34.58$ $L=1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$

$L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.67$ $M_{cr}=136214.00$ $\lambda_{LT}=0.34$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.31$ $N_{cr,y}=7355860.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.81$ $N_{cr,z}=531492.00$ $\lambda^*_z=0.53$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.02+0.52+0.02=0.55$
 Verifica ZZ: $0.02+0.41+0.02=0.45$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G}=0.05$ (L/2290)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.06$ (L/1839)

Asta n. 2030 (-121 -122) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=1.26$ - Classe 1
 Sollecitazioni: $T_y=-39.02$
 $V, Ed=-39.02$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 5 SLV $X_l=1.26$ - Classe 1
 Sollecitazioni: $T_z=447.27$
 $V, Ed=447.27$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 30 SLU $X_l=0.30$ - Classe 3
 Sollecitazioni: $N=-435.60$ $T_z=871.31$ $M_y=863.95$ $T_y=-109.10$ $M_z=114.90$
 Tensioni: $\sigma_N=-8.09$ $\sigma_{m,d}=-297.81$ $\tau=0.00$ $\sigma_{max}=-305.91$ (sfrut=0.12)
 Tensioni: $\sigma_N=-8.09$ $\sigma_{m,d}=6.76$ $\tau=48.65$ $\tau_{max}=48.65$ (sfrut=0.03)
 Tensioni: $\sigma_N=-8.09$ $\sigma_{m,d}=-297.81$ $\tau=0.00$ $\sigma_{ID,max}=305.91$ (sfrut=0.12)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 3
 Sollecitazioni: $N, Ed=-435.60$ $M_y, Ed=863.95$ $M_z, Ed=-116.39$ $L=2.57$
 $\alpha_y, \alpha_z, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.57$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.53$ $M_{cr}=80862.80$ $\lambda_{LT}=0.44$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.58$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=20.62$ $N_{cr,y}=2622220.00$ $\lambda^*_y=0.24$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=76.73$ $N_{cr,z}=189466.00$ $\lambda^*_z=0.88$ Curva b: $\Phi_z=1.01$ $\chi_z=0.67$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.06+0.05=0.11$
 Verifica ZZ: $0.00+0.05+0.05=0.10$

- Verifica freccia massima per soli carichi accidentali - CC 21
 $f_{z,L}=0.01$ (L/24977)

- Verifica freccia massima carichi totali - CC 21
 $f_{z,L}=0.01$ (L/23648)

Asta n. 2030 (-122 -1502) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 13 SLV $X_l=0.15$ - Classe 1
 Sollecitazioni: $T_z=457.64$
 $V, Ed=457.64$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.15$ - Classe 3
 Sollecitazioni: $N=-871.09$ $T_z=776.92$ $M_y=874.42$ $T_y=-26.59$ $M_z=43.24$ $M_x=1.26$
 Tensioni: $\sigma_N=-16.19$ $\sigma_{m,d}=-210.68$ $\tau=7.48$ $\sigma_{max}=-226.87$ (sfrut=0.09)
 Tensioni: $\sigma_N=-16.19$ $\sigma_{m,d}=2.54$ $\tau=44.03$ $\tau_{max}=44.03$ (sfrut=0.03)
 Tensioni: $\sigma_N=-16.19$ $\sigma_{m,d}=-210.68$ $\tau=7.48$ $\sigma_{ID,max}=227.24$ (sfrut=0.09)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 3
 Sollecitazioni: $N, Ed=-1152.86$ $M_y, Ed=832.40$ $M_z, Ed=44.93$ $L=3.08$
 $\alpha_y, \alpha_z, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.14$ $M_{cr}=50632.50$ $\lambda_{LT}=0.55$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.64$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=24.68$ $N_{cr,y}=1831660.00$ $\lambda^*_y=0.28$ Curva a: $\Phi_y=0.55$ $\chi_y=0.98$
 $\lambda_z=91.80$ $N_{cr,z}=132345.00$ $\lambda^*_z=1.06$ Curva b: $\Phi_z=1.20$ $\chi_z=0.56$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.01+0.06+0.02=0.08$
 Verifica ZZ: $0.01+0.05+0.02=0.07$

- Verifica freccia massima per soli carichi accidentali - CC 21
 $f_{z,L}=0.01$ (L/42598)

- Verifica freccia massima carichi totali - CC 21
 $f_{z,L}=0.01$ (L/22387)

Asta n. 2030 (-1502 -123) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 7 SLV $X_l=2.92$ - Classe 1

Sollecitazioni: $T_z = -332.75$
 $V, Ed = -332.75$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 32 SLU $X_l = 2.92$ - Classe 3
 Sollecitazioni: $N = -495.58$ $T_z = -697.02$ $M_y = 673.17$ $T_y = -2.28$ $M_z = -18.49$ $M_x = -1.21$
 Tensioni: $\sigma_N = -9.21$ $\sigma_{m,d} = -143.81$ $\tau = 7.20$ $\sigma_{max} = -153.02$ (sfrut=0.06)
 Tensioni: $\sigma_N = -9.21$ $\sigma_{m,d} = 1.09$ $\tau = 39.58$ $\tau_{max} = 39.58$ (sfrut=0.03)
 Tensioni: $\sigma_N = -9.21$ $\sigma_{m,d} = -143.81$ $\tau = 7.20$ $\sigma_{ID,max} = 153.53$ (sfrut=0.06)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 3
 Sollecitazioni: $N, Ed = -495.58$ $M_y, Ed = 673.17$ $M_z, Ed = -18.49$ $L = 3.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 3.08$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 2.38$ $M_{cr} = 56333.30$ $\lambda_{LT} = 0.52$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.62$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.98$
 $\lambda_y = 24.68$ $N_{cr,y} = 1831660.00$ $\lambda^*_y = 0.28$ Curva a: $\Phi_y = 0.55$ $\chi_y = 0.98$
 $\lambda_z = 91.80$ $N_{cr,z} = 132345.00$ $\lambda^*_z = 1.06$ Curva b: $\Phi_z = 1.20$ $\chi_z = 0.56$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00 + 0.04 + 0.01 = 0.06$
 Verifica ZZ: $0.00 + 0.04 + 0.01 = 0.05$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L} = 0.01$ (L/47923)

- Verifica freccia massima carichi totali - CC 21
 $f_{z,L} = 0.01$ (L/28398)

Asta n. 2030 (-123 -1510) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 15 SLV $X_l = 1.50$ - Classe 1
 Sollecitazioni: $T_z = 340.62$
 $V, Ed = 340.62$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 13 SLV $X_l = 0.15$ - Classe 3
 Sollecitazioni: $N = -1879.51$ $T_z = 467.46$ $M_y = 955.20$ $T_y = -8.48$ $M_z = 19.78$
 Tensioni: $\sigma_N = -34.93$ $\sigma_{m,d} = -196.03$ $\tau = 0.00$ $\sigma_{max} = -230.96$ (sfrut=0.09)
 Tensioni: $\sigma_N = -34.93$ $\sigma_{m,d} = 1.16$ $\tau = 26.10$ $\tau_{max} = 26.10$ (sfrut=0.02)
 Tensioni: $\sigma_N = -34.93$ $\sigma_{m,d} = -196.03$ $\tau = 0.00$ $\sigma_{ID,max} = 230.96$ (sfrut=0.09)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
 Sollecitazioni: $N, Ed = -1879.51$ $M_y, Ed = 955.20$ $M_z, Ed = 19.78$ $L = 3.12$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 3.12$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.91$ $M_{cr} = 44250.60$ $\lambda_{LT} = 0.59$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.66$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.95$
 $\lambda_y = 25.00$ $N_{cr,y} = 1784920.00$ $\lambda^*_y = 0.29$ Curva a: $\Phi_y = 0.55$ $\chi_y = 0.98$
 $\lambda_z = 93.00$ $N_{cr,z} = 128968.00$ $\lambda^*_z = 1.07$ Curva b: $\Phi_z = 1.22$ $\chi_z = 0.55$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.01 + 0.07 + 0.01 = 0.09$
 Verifica ZZ: $0.01 + 0.05 + 0.01 = 0.07$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L} = 0.01$ (L/55518)

- Verifica freccia massima carichi totali - CC 23
 $f_{z,L} = 0.01$ (L/33793)

Asta n. 2030 (-1510 -1694) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 7 SLV $X_l = 0.87$ - Classe 1
 Sollecitazioni: $T_y = 8.23$
 $V, Ed = 8.23$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 7 SLV $X_l = 0.87$ - Classe 1
 Sollecitazioni: $T_z = -244.25$
 $V, Ed = -244.25$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 30 SLU $X_l = 1.60$ - Classe 3
 Sollecitazioni: $N = -1328.22$ $T_z = -344.24$ $M_y = -50.08$ $T_y = 128.70$ $M_z = 139.81$ $M_x = -1.78$
 Tensioni: $\sigma_N = -24.68$ $\sigma_{m,d} = -182.66$ $\tau = 10.56$ $\sigma_{max} = -207.34$ (sfrut=0.08)
 Tensioni: $\sigma_N = -24.68$ $\sigma_{m,d} = 8.22$ $\tau = 22.15$ $\tau_{max} = 22.15$ (sfrut=0.01)
 Tensioni: $\sigma_N = -24.68$ $\sigma_{m,d} = -182.66$ $\tau = 10.56$ $\sigma_{ID,max} = 208.15$ (sfrut=0.08)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 3
 Sollecitazioni: $N, Ed = -1328.22$ $M_y, Ed = -349.42$ $M_z, Ed = 139.81$ $L = 1.60$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.60$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.61$ $M_{cr} = 120812.00$ $\lambda_{LT} = 0.36$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.54$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 12.86$ $N_{cr,y} = 6743510.00$ $\lambda^*_y = 0.15$ Curva a: $\Phi_y = 0.51$ $\chi_y = 1.00$
 $\lambda_z = 47.84$ $N_{cr,z} = 487247.00$ $\lambda^*_z = 0.55$ Curva b: $\Phi_z = 0.71$ $\chi_z = 0.86$

Relazione di calcolo

Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.01+0.02+0.06=0.10
Verifica ZZ: 0.01+0.02+0.06=0.09

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.00$ (L/40986)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.01$ (L/27103)

Asta n. 2030 (-1694 -1686) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 7 SLV $X_l=0.33$ - Classe 1
Sollecitazioni: $T_y=4.71$
 $V, Ed=4.71$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 7 SLV $X_l=0.33$ - Classe 1
Sollecitazioni: $T_z=-636.80$
 $V, Ed=-636.80$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.02$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-540.88$ $T_z=-1108.70$ $M_y=-514.36$ $T_y=-29.57$ $M_z=42.54$
Tensioni: $\sigma_N=-10.05$ $\sigma_{m,d}=-145.17$ $\tau=0.00$ $\sigma_{max}=-155.22$ (sfrut=0.06)
Tensioni: $\sigma_N=-10.05$ $\sigma_{m,d}=2.50$ $\tau=61.90$ $\tau_{max}=61.90$ (sfrut=0.04)
Tensioni: $\sigma_N=-10.05$ $\sigma_{m,d}=-145.17$ $\tau=0.00$ $\sigma_{ID,max}=155.22$ (sfrut=0.06)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-540.88$ $M_y, Ed=-514.36$ $M_z, Ed=42.54$ $L=0.33$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.33$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.48$ $M_{cr}=2440140.00$ $\lambda_{LT}=0.08$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.45$ $\beta_{LT}=0.75$ $f=1.00$ $\chi_{LT}=1.00$
 $\lambda_y=2.66$ Ncr,y=157509000.00 $\lambda^*_y=0.03$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=9.90$ Ncr,z=11380700.00 $\lambda^*_z=0.11$ Curva b: $\Phi_z=0.00$ $\chi_z=1.00$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.00+0.03+0.02=0.06
Verifica ZZ: 0.00+0.03+0.02=0.05

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.00$

Asta n. 2030 (-1686 -1525) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 30 SLU $X_l=1.03$ - Classe 1
Sollecitazioni: $T_y=-38.24$
 $V, Ed=-38.24$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 30 SLU $X_l=1.03$ - Classe 1
Sollecitazioni: $T_z=-1053.62$
 $V, Ed=-1053.62$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.03$

- Verifica in termini tensionali [4.2.4] - CC 32 SLU $X_l=1.03$ - Classe 3
Sollecitazioni: $N=-709.33$ $T_z=-1252.18$ $M_y=1198.45$ $T_y=-24.65$ $M_z=10.12$
Tensioni: $\sigma_N=-13.18$ $\sigma_{m,d}=-227.70$ $\tau=0.00$ $\sigma_{max}=-240.88$ (sfrut=0.09)
Tensioni: $\sigma_N=-13.18$ $\sigma_{m,d}=0.59$ $\tau=69.92$ $\tau_{max}=69.92$ (sfrut=0.05)
Tensioni: $\sigma_N=-13.18$ $\sigma_{m,d}=-227.70$ $\tau=0.00$ $\sigma_{ID,max}=240.88$ (sfrut=0.09)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 3
Sollecitazioni: $N, Ed=-709.33$ $M_y, Ed=1198.45$ $M_z, Ed=35.52$ $L=1.18$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.18$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.81$ $M_{cr}=243047.00$ $\lambda_{LT}=0.25$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.50$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=9.48$ Ncr,y=12421700.00 $\lambda^*_y=0.11$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=35.25$ Ncr,z=897517.00 $\lambda^*_z=0.41$ Curva b: $\Phi_z=0.62$ $\chi_z=0.92$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.01+0.08+0.02=0.10
Verifica ZZ: 0.01+0.06+0.02=0.08

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.00$ (L/30024)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.00$ (L/23497)

Asta n. 2031 (-1811 -1798) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1

Relazione di calcolo

- Sollecitazioni: $T_z=868.98$
 $V, Ed=868.98$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.04$
- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-593.77$ $T_z=868.98$ $M_y=868.40$
 $M_y, Ed=868.40$ $M_y, V, c, Rd=5804.95$
 $N, Ed=-593.77$ $N_c, Rd=-74603.30$ YY $n=N, Ed/N_c, Rd=0.01$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.15$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-593.77$ $M_y, Ed=868.40$ $M_z, Ed=-1.60$ $L=2.57$
 $\alpha_y, \alpha_z, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.57$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M, cr=11117.60$ $\lambda_{LT}=0.74$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.76$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.88$
 $\lambda_y=31.12$ $N_{cr,y}=609784.00$ $\lambda_y^*=0.36$ Curva a: $\Phi_y=0.58$ $\chi_y=0.96$
 $\lambda_z=114.96$ $N_{cr,z}=44675.30$ $\lambda_z^*=1.32$ Curva b: $\Phi_z=1.57$ $\chi_z=0.42$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.59, 0.57, 0.98$
Verifica YY: $0.01+0.16+0.00=0.17$
Verifica ZZ: $0.01+0.10+0.00=0.11$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,l}=0.02$ (L/15225)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.03$ (L/9556)
- Asta n. 2031 (-1811 -1818) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=2.26$
 $V, Ed=2.26$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=1105.90$
 $V, Ed=1105.90$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.05$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-1486.86$ $T_z=1105.90$ $M_y=872.09$ $T_y=2.26$ $M_z=-6.76$
 $N, Ed=-1486.86$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.02$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=872.09$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.15$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-6.76$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.15$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-1486.86$ $M_y, Ed=872.09$ $M_z, Ed=-6.76$ $L=3.08$
 $\alpha_y, \alpha_z, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.57$ $M, cr=12693.00$ $\lambda_{LT}=0.69$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.73$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.90$
 $\lambda_y=37.23$ $N_{cr,y}=425944.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.95$
 $\lambda_z=137.54$ $N_{cr,z}=31206.40$ $\lambda_z^*=1.58$ Curva b: $\Phi_z=1.99$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.62, 0.57, 1.03$
Verifica YY: $0.02+0.16+0.00=0.18$
Verifica ZZ: $0.06+0.10+0.01=0.17$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,l}=0.04$ (L/7395)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,l}=0.06$ (L/5455)
- Asta n. 2031 (-1818 -1825) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=3.08$ - Classe 1
Sollecitazioni: $T_y=1.02$
 $V, Ed=1.02$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=3.08$ - Classe 1
Sollecitazioni: $T_z=-1242.61$
 $V, Ed=-1242.61$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.06$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=3.08$ - Classe 1
Sollecitazioni: $N=-1517.08$ $T_z=-1242.61$ $M_y=1292.41$ $T_y=1.02$ $M_z=3.31$
 $N, Ed=-1517.08$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.02$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1292.41$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.22$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=3.31$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.22$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: N,Ed=-1517.08 My,Ed=1292.41 Mz,Ed=3.31 L=3.08
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=2.28 M_{cr}=11234.70 \lambda_{LT}=0.74$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.76 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.88$
 $\lambda_y=37.23 N_{cr,y}=425944.00 \lambda^*_y=0.43$ Curva a: $\Phi_y=0.62 \chi_y=0.95$
 $\lambda_z=137.54 N_{cr,z}=31206.40 \lambda^*_z=1.58$ Curva b: $\Phi_z=1.99 \chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.62, 0.57, 1.04$
 Verifica YY: $0.02+0.24+0.00=0.27$
 Verifica ZZ: $0.06+0.15+0.00=0.21$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/14858)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/10203)

Asta n. 2031 (-1825 -1832) - Sez. 6 (IPE200) - Crit. 1

 - Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_y=21.53$
 $V,Ed=21.53 V_c,Rd=29609.30 V,Ed/V_c,Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_z=1239.16$
 $V,Ed=1239.16 V_c,Rd=21171.50 V,Ed/V_c,Rd=0.06$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU X1=0.00 - Classe 1
 Sollecitazioni: N=-1954.12 $T_z=1239.16 M_y=1289.87 T_y=21.53 M_z=-36.19$
 $N,Ed=-1954.12 N_c,Rd=74603.30 n=N,Ed/N_c,Rd=0.03$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=1289.87 M_y,V,c,Rd=5804.95 M_{Ny},c,Rd=5804.95 M_y,Ed/M_{Ny},c,Rd=0.22$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-36.19 M_z,V,c,Rd=1170.59 M_{Nz},c,Rd=1170.59 M_z,Ed/M_{Nz},c,Rd=0.03$
 $\alpha=2.00 \beta=1.00 (M_y,Ed/M_{Ny},c,Rd)^2 + (M_z,Ed/M_{Nz},c,Rd)^1 = 0.22$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: N,Ed=-1954.12 My,Ed=1289.87 Mz,Ed=-36.19 L=3.12
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.12$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=2.27 M_{cr}=10996.50 \lambda_{LT}=0.74$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.77 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.87$
 $\lambda_y=37.71 N_{cr,y}=415075.00 \lambda^*_y=0.43$ Curva a: $\Phi_y=0.62 \chi_y=0.94$
 $\lambda_z=139.33 N_{cr,z}=30410.10 \lambda^*_z=1.60$ Curva b: $\Phi_z=2.03 \chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.64, 0.57, 1.06$
 Verifica YY: $0.03+0.24+0.02=0.29$
 Verifica ZZ: $0.09+0.15+0.03=0.26$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/14846)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/11072)

Asta n. 2031 (-1832 -1384) - Sez. 6 (IPE200) - Crit. 1

 - Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU X1=3.12 - Classe 1
 Sollecitazioni: $T_y=7.25$
 $V,Ed=7.25 V_c,Rd=29609.30 V,Ed/V_c,Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU X1=3.12 - Classe 1
 Sollecitazioni: $T_z=-968.52$
 $V,Ed=-968.52 V_c,Rd=21171.50 V,Ed/V_c,Rd=0.05$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU X1=3.12 - Classe 1
 Sollecitazioni: N=-1951.18 $T_z=-968.52 M_y=768.28 T_y=7.25 M_z=10.22$
 $N,Ed=-1951.18 N_c,Rd=74603.30 n=N,Ed/N_c,Rd=0.03$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=768.28 M_y,V,c,Rd=5804.95 M_{Ny},c,Rd=5804.95 M_y,Ed/M_{Ny},c,Rd=0.13$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=10.22 M_z,V,c,Rd=1170.59 M_{Nz},c,Rd=1170.59 M_z,Ed/M_{Nz},c,Rd=0.01$
 $\alpha=2.00 \beta=1.00 (M_y,Ed/M_{Ny},c,Rd)^2 + (M_z,Ed/M_{Nz},c,Rd)^1 = 0.13$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: N,Ed=-1951.18 My,Ed=768.28 Mz,Ed=-12.37 L=3.12
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$

$L_{cr}=3.12$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.69$ $M_{cr}=13046.20$ $\lambda_{LT}=0.68$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.72$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.90$
 $\lambda_y=37.71$ $N_{cr,y}=415075.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=139.33$ $N_{cr,z}=30410.10$ $\lambda^*_z=1.60$ Curva b: $\Phi_z=2.03$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.64, 0.57, 1.06$
 Verifica YY: $0.03+0.14+0.01=0.17$
 Verifica ZZ: $0.09+0.08+0.01=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.05$ (L/6367)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.07$ (L/4646)

Asta n. 2031 (-1834 -1384) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU $X1=0.22$ - Classe 1
 Sollecitazioni: $T_y=482.58$ $M_x=1.52$
 $V, Ed=482.58$ $V_c, Rd, Red=29443.90$ $V, Ed/V_c, Rd, Red=0.02$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU $X1=0.22$ - Classe 1
 Sollecitazioni: $T_z=-2575.63$ $M_x=1.52$
 $V, Ed=-2575.63$ $V_c, Rd, Red=21053.20$ $V, Ed/V_c, Rd, Red=0.12$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X1=0.22$ - Classe 1
 Sollecitazioni: $N=-1886.77$ $T_z=-2575.63$ $M_y=755.06$ $T_y=482.58$ $M_z=50.57$ $M_x=1.52$
 $N, Ed=-1886.77$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.03$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=755.06$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.13$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=50.57$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.04$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.13$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-1886.77$ $M_y, Ed=755.06$ $M_z, Ed=-54.36$ $L=0.22$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.22$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.49$ $M_{cr}=893312.00$ $\lambda_{LT}=0.08$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.45$ $\beta_{LT}=0.75$ $f=1.00$ $\chi_{LT}=1.00$
 $\lambda_y=2.63$ $N_{cr,y}=85186100.00$ $\lambda^*_y=0.03$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=9.73$ $N_{cr,z}=6241090.00$ $\lambda^*_z=0.11$ Curva b: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.56, 0.57, 0.94$
 Verifica YY: $0.03+0.12+0.03=0.17$
 Verifica ZZ: $0.03+0.07+0.04=0.14$

- Verifica freccia massima per soli carichi accidentali - CC 23
 $f_{z,G}=0.00$

- Verifica freccia massima carichi totali - CC 23
 $f_{z,L}=0.00$

Asta n. 2033 (-1800 -1809) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X1=2.57$ - Classe 1
 Sollecitazioni: $T_y=-24.27$
 $V, Ed=-24.27$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X1=2.57$ - Classe 1
 Sollecitazioni: $T_z=-1005.54$
 $V, Ed=-1005.54$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.05$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X1=2.57$ - Classe 1
 Sollecitazioni: $N=-380.20$ $T_z=-1005.54$ $M_y=1224.97$ $T_y=-24.27$ $M_z=-36.09$
 $N, Ed=-380.20$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1224.97$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.21$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-36.09$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.03$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.21$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-380.20$ $M_y, Ed=1224.97$ $M_z, Ed=-36.09$ $L=2.57$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.57$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=11116.90$ $\lambda_{LT}=0.74$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.76$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.88$
 $\lambda_y=31.12$ $N_{cr,y}=609784.00$ $\lambda^*_y=0.36$ Curva a: $\Phi_y=0.58$ $\chi_y=0.96$
 $\lambda_z=114.96$ $N_{cr,z}=44675.30$ $\lambda^*_z=1.32$ Curva b: $\Phi_z=1.57$ $\chi_z=0.42$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.97$

Relazione di calcolo

Verifica YY: $0.01+0.23+0.02=0.25$
Verifica ZZ: $0.01+0.14+0.03=0.17$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.03$ (L/7811)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.05$ (L/5294)

Asta n. 2033 (-1809 -1816) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-1.51$
 $V, Ed=-1.51$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=1445.34$
 $V, Ed=1445.34$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.07$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=3.08$ - Classe 1
Sollecitazioni: $N=-1481.76$ $T_z=178.74$ $M_y=-1259.67$ $T_y=-1.51$ $M_z=4.09$
 $N, Ed=-1481.76$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.02$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-1259.67$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.22$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=4.09$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.22$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-1481.76$ $M_y, Ed=-1259.67$ $M_z, Ed=8.73$ $L=3.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=3.07$ $M_{cr}=15163.30$ $\lambda_{LT}=0.63$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.69$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.93$
 $\lambda_y=37.23$ $N_{cr,y}=425944.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.95$
 $\lambda_z=137.54$ $N_{cr,z}=31206.40$ $\lambda_z^*=1.58$ Curva b: $\Phi_z=1.99$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.62, 0.57, 1.03$
Verifica YY: $0.02+0.22+0.00=0.25$
Verifica ZZ: $0.06+0.13+0.01=0.21$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.07$ (L/4459)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.09$ (L/3286)

Asta n. 2033 (-1816 -1823) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=3.08$ - Classe 1
Sollecitazioni: $T_y=1.25$
 $V, Ed=1.25$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=3.08$ - Classe 1
Sollecitazioni: $T_z=-1686.09$
 $V, Ed=-1686.09$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.08$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 33 SLU $X_l=3.08$ - Classe 1
Sollecitazioni: $N=-1479.37$ $T_z=-1686.09$ $M_y=1976.93$ $T_y=1.25$
 $M_y, Ed=1976.93$ $M_y, V, c, Rd=5804.95$
 $N, Ed=-1479.37$ $N_c, Rd=74603.30$ YY $n=N, Ed/N_c, Rd=0.02$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.34$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-1479.37$ $M_y, Ed=1976.93$ $M_z, Ed=-3.73$ $L=3.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.54$ $M_{cr}=12548.90$ $\lambda_{LT}=0.70$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.73$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.90$
 $\lambda_y=37.23$ $N_{cr,y}=425944.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.95$
 $\lambda_z=137.54$ $N_{cr,z}=31206.40$ $\lambda_z^*=1.58$ Curva b: $\Phi_z=1.99$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.62, 0.57, 1.03$
Verifica YY: $0.02+0.36+0.00=0.39$
Verifica ZZ: $0.06+0.22+0.00=0.28$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.03$ (L/8907)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.05$ (L/6347)

Asta n. 2033 (-1823 -1831) - Sez. 6 (IPE200) - Crit. 1

Relazione di calcolo

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=24.64$
 $V, Ed=24.64$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=1650.76$
 $V, Ed=1650.76$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.08$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-1714.36$ $T_z=1650.76$ $M_y=1974.55$ $T_y=24.64$ $M_z=-39.64$
 $N, Ed=-1714.36$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.02$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1974.55$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.34$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-39.64$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.03$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.34$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-1714.36$ $M_y, Ed=1974.55$ $M_z, Ed=-39.64$ $L=3.12$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.12$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.48$ $M, cr=12017.20$ $\lambda_{LT}=0.71$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.74$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.89$
 $\lambda_y=37.71$ $N_{cr,y}=415075.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=139.33$ $N_{cr,z}=30410.10$ $\lambda_z^*=1.60$ Curva b: $\Phi_z=2.03$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.63, 0.57, 1.05$
Verifica YY: $0.02+0.37+0.02=0.41$
Verifica ZZ: $0.08+0.22+0.04=0.33$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.03$ (L/9413)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.05$ (L/6734)
- Asta n. 2033 (-1831 -1732) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=3.12$ - Classe 1
Sollecitazioni: $T_y=23.71$
 $V, Ed=23.71$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=3.12$ - Classe 1
Sollecitazioni: $T_z=-1490.56$
 $V, Ed=-1490.56$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.07$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=3.12$ - Classe 1
Sollecitazioni: $N=-1733.51$ $T_z=-1490.56$ $M_y=1470.50$ $T_y=23.71$ $M_z=44.53$
 $N, Ed=-1733.51$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.02$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1470.50$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.25$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=44.53$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.04$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.25$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-1733.51$ $M_y, Ed=1470.50$ $M_z, Ed=44.53$ $L=3.12$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.12$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.78$ $M, cr=13486.30$ $\lambda_{LT}=0.67$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.72$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.91$
 $\lambda_y=37.71$ $N_{cr,y}=415075.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=139.33$ $N_{cr,z}=30410.10$ $\lambda_z^*=1.60$ Curva b: $\Phi_z=2.03$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.63, 0.57, 1.05$
Verifica YY: $0.02+0.27+0.02=0.31$
Verifica ZZ: $0.08+0.16+0.04=0.28$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.06$ (L/5328)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.08$ (L/4088)
- Asta n. 2033 (-1732 -1733) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=33.76$
 $V, Ed=33.76$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=1410.07$

V,Ed=1410.07 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.07

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: N=-461.09 Tz=1410.07 My=1458.40 Ty=33.76 Mz=-44.01
 N,Ed=-461.09 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.01
 Pressoflessione retta YY [4.2.33]:
 My,Ed=1458.40 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.25
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=-44.01 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.04
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.25$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: N,Ed=-461.09 My,Ed=1458.40 Mz,Ed=-44.01 L=2.02
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 L_{cr}=2.02 Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=2.28 M_{cr}=20850.70 \lambda_{LT}=0.54$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.63 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.97$
 $\lambda_y=24.49 N_{cr,y}=984714.00 \lambda_y^*=0.28$ Curva a: $\Phi_y=0.55 \chi_y=0.98$
 $\lambda_z=90.46 N_{cr,z}=72144.20 \lambda_z^*=1.04$ Curva b: $\Phi_z=1.19 \chi_z=0.57$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.58, 0.57, 0.96
 Verifica YY: 0.01+0.25+0.02=0.27
 Verifica ZZ: 0.01+0.15+0.04=0.19

- Verifica freccia massima per soli carichi accidentali - CC 38
 f_{z,L}=0.02 (L/8251)

- Verifica freccia massima carichi totali - CC 38
 f_{z,L}=0.03 (L/6274)

Asta n. 2034 (-1801 -1808) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU Xl=2.57 - Classe 1
 Sollecitazioni: Ty=1.71
 V,Ed=1.71 Vc,Rd=29609.30 V,Ed/Vc,Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU Xl=2.57 - Classe 1
 Sollecitazioni: Tz=-825.51
 V,Ed=-825.51 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.04

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=2.57 - Classe 1
 Sollecitazioni: N=-17.65 Tz=-825.51 My=812.28 Ty=1.71 Mz=1.75
 N,Ed=-17.65 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.00
 Pressoflessione retta YY [4.2.33]:
 My,Ed=812.28 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.14
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=1.75 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.00
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.14$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: N,Ed=-17.65 My,Ed=812.28 Mz,Ed=-2.65 L=2.57
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 L_{cr}=2.57 Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=1.75 M_{cr}=11121.30 \lambda_{LT}=0.74$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.76 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.88$
 $\lambda_y=31.12 N_{cr,y}=609784.00 \lambda_y^*=0.36$ Curva a: $\Phi_y=0.58 \chi_y=0.96$
 $\lambda_z=114.96 N_{cr,z}=44675.30 \lambda_z^*=1.32$ Curva b: $\Phi_z=1.57 \chi_z=0.42$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
 Verifica YY: 0.00+0.15+0.00=0.15
 Verifica ZZ: 0.00+0.09+0.00=0.09

- Verifica freccia massima per soli carichi accidentali - CC 38
 f_{z,L}=0.01 (L/17164)

- Verifica freccia massima carichi totali - CC 38
 f_{z,L}=0.02 (L/11370)

Asta n. 2034 (-1808 -1815) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: Ty=8.72
 V,Ed=8.72 Vc,Rd=29609.30 V,Ed/Vc,Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: Tz=1194.46
 V,Ed=1194.46 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.06

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=3.01 - Classe 1
 Sollecitazioni: N=37.37 My=-987.86 Ty=8.72 Mz=13.28
 N,Ed=37.37 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.00
 Pressoflessione retta YY [4.2.33]:

My,Ed=-987.86 My,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.17
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=13.28 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.01
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.17$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: My,Ed=-987.09 Mz,Ed=13.83 L=3.08
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34 k_e=0.94 \psi=2.82 M_{cr}=13903.10 \lambda_{LT}=0.66$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.71 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.91$
 $\lambda_y=37.23 N_{cr,y}=425944.00 \lambda_y^*=0.43$ Curva a: $\Phi_y=0.62 \chi_y=0.95$
 $\lambda_z=137.54 N_{cr,z}=31206.40 \lambda_z^*=1.58$ Curva b: $\Phi_z=1.99 \chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.18+0.01=0.18$
 Verifica ZZ: $0.00+0.11+0.01=0.12$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.07 (L/4128)$

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.10 (L/3103)$

Asta n. 2034 (-1815 -1822) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU Xl=3.08 - Classe 1
 Sollecitazioni: $T_y=6.33$
 $V,Ed=6.33 V_c,Rd=29609.30 V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU Xl=3.08 - Classe 1
 Sollecitazioni: $T_z=-1427.70$
 $V,Ed=-1427.70 V_c,Rd=21171.50 V,Ed/V_c,Rd=0.07$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=3.08 - Classe 1
 Sollecitazioni: $N=21.00 T_z=-1427.70 M_y=1526.81 T_y=6.33 M_z=11.32$
 $N,Ed=21.00 N_c,Rd=74603.30 n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $My,Ed=1526.81 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.26$
 Pressoflessione retta ZZ [4.2.34]:
 $Mz,Ed=11.32 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.01$
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.26$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: My,Ed=1526.81 Mz,Ed=11.32 L=3.08
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34 k_e=0.94 \psi=2.56 M_{cr}=12620.00 \lambda_{LT}=0.69$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.73 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.90$
 $\lambda_y=37.23 N_{cr,y}=425944.00 \lambda_y^*=0.43$ Curva a: $\Phi_y=0.62 \chi_y=0.95$
 $\lambda_z=137.54 N_{cr,z}=31206.40 \lambda_z^*=1.58$ Curva b: $\Phi_z=1.99 \chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.28+0.01=0.28$
 Verifica ZZ: $0.00+0.17+0.01=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.04 (L/8396)$

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.05 (L/6176)$

Asta n. 2034 (-1822 -1829) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: $T_y=30.44$
 $V,Ed=30.44 V_c,Rd=29609.30 V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: $T_z=1323.25$
 $V,Ed=1323.25 V_c,Rd=21171.50 V,Ed/V_c,Rd=0.06$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: $N=21.07 T_z=1323.25 M_y=1522.03 T_y=30.44 M_z=-50.44$
 $N,Ed=21.07 N_c,Rd=74603.30 n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $My,Ed=1522.03 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.26$
 Pressoflessione retta ZZ [4.2.34]:
 $Mz,Ed=-50.44 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.04$
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.26$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $M_y, E_d = 1522.03$ $M_z, E_d = -50.44$ $L = 3.12$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 3.12$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 2.28$ $M_{cr} = 11041.10$ $\lambda_{LT} = 0.74$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.77$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.87$
 $\lambda_y = 37.71$ $N_{cr,y} = 415075.00$ $\lambda_y^* = 0.43$ Curva a: $\Phi_y = 0.62$ $\chi_y = 0.94$
 $\lambda_z = 139.33$ $N_{cr,z} = 30410.10$ $\lambda_z^* = 1.60$ Curva b: $\Phi_z = 2.03$ $\chi_z = 0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00 + 0.29 + 0.02 = 0.31$
 Verifica ZZ: $0.00 + 0.17 + 0.04 = 0.21$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.03$ (L/11302)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.04$ (L/8227)
- Asta n. 2034 (-1829 15) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1 = 3.12$ - Classe 1
 Sollecitazioni: $T_y = 19.80$
 $V, E_d = 19.80$ $V_c, R_d = 29609.30$ $V, E_d / V_c, R_d = 0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1 = 3.12$ - Classe 1
 Sollecitazioni: $T_z = -1208.31$
 $V, E_d = -1208.31$ $V_c, R_d = 21171.50$ $V, E_d / V_c, R_d = 0.06$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1 = 3.12$ - Classe 1
 Sollecitazioni: $N = 20.65$ $T_z = -1208.31$ $M_y = 1158.55$ $T_y = 19.80$ $M_z = 33.50$
 $N, E_d = 20.65$ $N_c, R_d = 74603.30$ $n = N, E_d / N_c, R_d = 0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, E_d = 1158.55$ $M_y, V, c, R_d = 5804.95$ $MN_y, c, R_d = 5804.95$ $M_y, E_d / MN_y, c, R_d = 0.20$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, E_d = 33.50$ $M_z, V, c, R_d = 1170.59$ $MN_z, c, R_d = 1170.59$ $M_z, E_d / MN_z, c, R_d = 0.03$
 $\alpha = 2.00$ $\beta = 1.00$ $(M_y, E_d / MN_y, c, R_d)^2 + (M_z, E_d / MN_z, c, R_d)^2 = 0.20$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $M_y, E_d = 1158.55$ $M_z, E_d = 33.50$ $L = 3.12$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 3.12$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 2.47$ $M_{cr} = 11991.70$ $\lambda_{LT} = 0.71$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.74$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.89$
 $\lambda_y = 37.71$ $N_{cr,y} = 415075.00$ $\lambda_y^* = 0.43$ Curva a: $\Phi_y = 0.62$ $\chi_y = 0.94$
 $\lambda_z = 139.33$ $N_{cr,z} = 30410.10$ $\lambda_z^* = 1.60$ Curva b: $\Phi_z = 2.03$ $\chi_z = 0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00 + 0.21 + 0.02 = 0.23$
 Verifica ZZ: $0.00 + 0.13 + 0.03 = 0.16$
- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L} = 0.04$ (L/8104)
- Verifica freccia massima carichi totali - CC 37
 $f_{z,L} = 0.05$ (L/6342)
- Asta n. 2034 (15 -1701) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1 = 0.00$ - Classe 1
 Sollecitazioni: $T_y = 7.66$
 $V, E_d = 7.66$ $V_c, R_d = 29609.30$ $V, E_d / V_c, R_d = 0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1 = 0.00$ - Classe 1
 Sollecitazioni: $T_z = 894.32$
 $V, E_d = 894.32$ $V_c, R_d = 21171.50$ $V, E_d / V_c, R_d = 0.04$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1 = 0.00$ - Classe 1
 Sollecitazioni: $N = -95.16$ $T_z = 894.32$ $M_y = 1153.75$ $T_y = 7.66$ $M_z = -13.75$
 $N, E_d = -95.16$ $N_c, R_d = 74603.30$ $n = N, E_d / N_c, R_d = 0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, E_d = 1153.75$ $M_y, V, c, R_d = 5804.95$ $MN_y, c, R_d = 5804.95$ $M_y, E_d / MN_y, c, R_d = 0.20$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, E_d = -13.75$ $M_z, V, c, R_d = 1170.59$ $MN_z, c, R_d = 1170.59$ $M_z, E_d / MN_z, c, R_d = 0.01$
 $\alpha = 2.00$ $\beta = 1.00$ $(M_y, E_d / MN_y, c, R_d)^2 + (M_z, E_d / MN_z, c, R_d)^2 = 0.20$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, E_d = -95.16$ $M_y, E_d = 1153.75$ $M_z, E_d = 14.87$ $L = 3.74$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 3.74$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.36$ $M_{cr} = 5184.22$ $\lambda_{LT} = 1.08$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 1.06$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.66$

- $\lambda_y=45.25$ Ncr,y=288289.00 $\lambda^*_y=0.52$ Curva a: $\Phi_y=0.67$ $\chi_y=0.92$
 $\lambda_z=167.19$ Ncr,z=21121.30 $\lambda^*_z=1.93$ Curva b: $\Phi_z=2.65$ $\chi_z=0.22$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.96
 Verifica YY: 0.00+0.28+0.01=0.29
 Verifica ZZ: 0.00+0.17+0.01=0.18
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.06$ (L/5947)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.09$ (L/4288)
- Asta n. 2035 (-1802 -1807) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=2.57$ - Classe 1
 Sollecitazioni: $T_y=-11.60$
 $V, Ed=-11.60$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=2.57$ - Classe 1
 Sollecitazioni: $T_z=-693.48$
 $V, Ed=-693.48$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.03$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=2.57$ - Classe 1
 Sollecitazioni: $N=89.40$ $T_z=-693.48$ $M_y=486.91$ $T_y=-11.60$ $M_z=-15.26$
 $N, Ed=89.40$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=486.91$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.08$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-15.26$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.08$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 1
 Sollecitazioni: $M_y, Ed=469.98$ $M_z, Ed=-27.23$ $L=2.57$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.57$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.74$ $M_{cr}=11071.30$ $\lambda_{LT}=0.74$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.76$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.87$
 $\lambda_y=31.12$ Ncr,y=609784.00 $\lambda^*_y=0.36$ Curva a: $\Phi_y=0.58$ $\chi_y=0.96$
 $\lambda_z=114.96$ Ncr,z=44675.30 $\lambda^*_z=1.32$ Curva b: $\Phi_z=1.57$ $\chi_z=0.42$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
 Verifica YY: 0.00+0.09+0.01=0.10
 Verifica ZZ: 0.00+0.05+0.02=0.07
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.01$ (L/45675)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.01$ (L/40221)
- Asta n. 2035 (-1807 -1814) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=1008.58$
 $V, Ed=1008.58$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.05$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=2.57$ - Classe 1
 Sollecitazioni: $N=174.73$ $M_y=-805.28$ $M_z=3.14$
 $N, Ed=174.73$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-805.28$ $M_y, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.14$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=3.14$ $M_z, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.14$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $M_y, Ed=-805.28$ $M_z, Ed=3.52$ $L=3.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.56$ $M_{cr}=12621.50$ $\lambda_{LT}=0.69$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.73$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.90$
 $\lambda_y=37.23$ Ncr,y=425944.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.95$
 $\lambda_z=137.54$ Ncr,z=31206.40 $\lambda^*_z=1.58$ Curva b: $\Phi_z=1.99$ $\chi_z=0.31$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
 Verifica YY: 0.00+0.15+0.00=0.15
 Verifica ZZ: 0.00+0.09+0.00=0.09
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.08$ (L/3884)

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.10$ (L/2966)

Asta n. 2035 (-1814 -1821) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=3.08$ - Classe 1
 Sollecitazioni: $T_z=-1223.92$
 $V,Ed=-1223.92$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.06$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 33 SLU $X_l=3.08$ - Classe 1
 Sollecitazioni: $N=216.93$ $T_z=-1223.92$ $M_y=1150.74$
 $M_y,Ed=1150.74$ $M_y,V,c,Rd=5804.95$
 $N,Ed=216.93$ $N_c,Rd=74603.30$ YY $n=N,Ed/N_c,Rd=0.00$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.20$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $M_y,Ed=1150.74$ $M_z,Ed=1.22$ $L=3.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.57$ $M_{cr}=12677.00$ $\lambda_{LT}=0.69$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.73$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.90$
 $\lambda_y=37.23$ $N_{cr,y}=425944.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.95$
 $\lambda_z=137.54$ $N_{cr,z}=31206.40$ $\lambda_z^*=1.58$ Curva b: $\Phi_z=1.99$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.21+0.00=0.21$
 Verifica ZZ: $0.00+0.13+0.00=0.13$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.04$ (L/7695)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.05$ (L/5820)

Asta n. 2035 (-1821 -1828) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=20.86$
 $V,Ed=20.86$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=1089.68$
 $V,Ed=1089.68$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.05$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=314.45$ $T_z=1089.68$ $M_y=1147.99$ $T_y=20.86$ $M_z=-34.56$
 $N,Ed=314.45$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=1147.99$ $M_y,V,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.20$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-34.56$ $M_z,V,c,Rd=1170.59$ $MN_z,c,Rd=1170.59$ $M_z,Ed/MN_z,c,Rd=0.03$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.20$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $M_y,Ed=1147.99$ $M_z,Ed=-34.56$ $L=3.12$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.12$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.09$ $M_{cr}=10123.40$ $\lambda_{LT}=0.78$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.79$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.86$
 $\lambda_y=37.71$ $N_{cr,y}=415075.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=139.33$ $N_{cr,z}=30410.10$ $\lambda_z^*=1.60$ Curva b: $\Phi_z=2.03$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.22+0.02=0.24$
 Verifica ZZ: $0.00+0.13+0.03=0.16$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/16413)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/12142)

Asta n. 2035 (-1828 14) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=3.12$ - Classe 1
 Sollecitazioni: $T_y=11.23$
 $V,Ed=11.23$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=3.12$ - Classe 1
 Sollecitazioni: $T_z=-1180.56$
 $V,Ed=-1180.56$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.06$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=3.12$ - Classe 1
 Sollecitazioni: $N=355.11$ $T_z=-1180.56$ $M_y=1427.42$ $T_y=11.23$ $M_z=18.12$

N,Ed=355.11 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.00
 Pressoflessione retta YY [4.2.33]:
 My,Ed=1427.42 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.25
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=18.12 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.02
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.25$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: My,Ed=1427.42 Mz,Ed=18.12 L=3.12
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.12$ Curva b: $\alpha_{imp}=0.34 k_e=0.94 \psi=2.02 M_{cr}=9798.55 \lambda_{LT}=0.79$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.80 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.85$
 $\lambda_y=37.71 N_{cr,y}=415075.00 \lambda_y^*=0.43$ Curva a: $\Phi_y=0.62 \chi_y=0.94$
 $\lambda_z=139.33 N_{cr,z}=30410.10 \lambda_z^*=1.60$ Curva b: $\Phi_z=2.03 \chi_z=0.31$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
 Verifica YY: 0.00+0.28+0.01=0.28
 Verifica ZZ: 0.00+0.17+0.01=0.18

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.03 (L/9226)$

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.05 (L/6611)$

Asta n. 2035 (14 -1729) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: Ty=-3.30
 V,Ed=-3.30 Vc,Rd=29609.30 V,Ed/Vc,Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: Tz=1269.90
 V,Ed=1269.90 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.06

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: N=502.34 Tz=1269.90 My=1427.54 Ty=-3.30 Mz=7.00
 N,Ed=502.34 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.01
 Pressoflessione retta YY [4.2.33]:
 My,Ed=1427.54 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.25
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=7.00 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.01
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.25$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: My,Ed=1427.54 Mz,Ed=-8.20 L=4.60
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.60$ Curva b: $\alpha_{imp}=0.34 k_e=0.94 \psi=1.96 M_{cr}=5768.90 \lambda_{LT}=1.03$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=1.00 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.70$
 $\lambda_y=55.71 N_{cr,y}=190255.00 \lambda_y^*=0.64$ Curva a: $\Phi_y=0.75 \chi_y=0.87$
 $\lambda_z=205.80 N_{cr,z}=13938.90 \lambda_z^*=2.37$ Curva b: $\Phi_z=3.68 \chi_z=0.15$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
 Verifica YY: 0.00+0.33+0.00=0.34
 Verifica ZZ: 0.00+0.20+0.01=0.21

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.11 (L/4148)$

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.14 (L/3348)$

Asta n. 2035 (-1729 -1730) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU Xl=0.80 - Classe 1
 Sollecitazioni: Ty=-66.95 Mx=-1.60
 V,Ed=-66.95 Vc,Rd,Red=29435.60 V,Ed/Vc,Rd,Red=0.00

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU Xl=0.80 - Classe 1
 Sollecitazioni: Tz=-1449.83 Mx=-1.60
 V,Ed=-1449.83 Vc,Rd,Red=21047.30 V,Ed/Vc,Rd,Red=0.07

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=0.80 - Classe 1
 Sollecitazioni: N=395.30 Tz=-1449.83 My=817.90 Ty=-66.95 Mz=-32.56 Mx=-1.60
 N,Ed=395.30 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.01
 Pressoflessione retta YY [4.2.33]:
 My,Ed=817.90 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.14
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=-32.56 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.03
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.14$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y, Ed=817.90$ $M_z, Ed=-32.56$ $L=0.80$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.80$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.12$ $M_{cr}=98768.40$ $\lambda_{LT}=0.25$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.50$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=9.69$ $N_{cr,y}=6291760.00$ $\lambda^*_y=0.11$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=35.79$ $N_{cr,z}=460960.00$ $\lambda^*_z=0.41$ Curva b: $\Phi_z=0.62$ $\chi_z=0.92$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.13+0.02=0.15$
Verifica ZZ: $0.00+0.08+0.03=0.11$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.00$ (L/29962)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.00$ (L/23969)

Asta n. 2036 (-1849 -1484) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU $X_1=0.93$ - Classe 1
Sollecitazioni: $T_y=-21.89$ $M_x=-4.15$
 $V, Ed=-21.89$ $V_c, Rd, Red=54325.50$ $V, Ed/V_c, Rd, Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU $X_1=0.93$ - Classe 1
Sollecitazioni: $T_z=2186.33$ $M_x=-4.15$
 $V, Ed=2186.33$ $V_c, Rd, Red=38582.30$ $V, Ed/V_c, Rd, Red=0.06$
- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=1.14$ - Classe 3
Sollecitazioni: $N=-265.57$ $T_z=2174.97$ $M_y=-2529.56$ $T_y=-21.89$ $M_z=-5.52$ $M_x=-4.15$
Tensioni: $\sigma_N=-4.94$ $\sigma_{m,d}=-460.92$ $\tau=24.65$ $\sigma_{max}=-465.85$ (sfrut=0.18)
Tensioni: $\sigma_N=-4.94$ $\sigma_{m,d}=0.32$ $\tau=123.93$ $\tau_{max}=123.93$ (sfrut=0.08)
Tensioni: $\sigma_N=-4.94$ $\sigma_{m,d}=-460.92$ $\tau=24.65$ $\sigma_{TD,max}=467.81$ (sfrut=0.18)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-270.46$ $M_y, Ed=-2529.56$ $M_z, Ed=19.46$ $L=1.14$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.14$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=250831.00$ $\lambda_{LT}=0.25$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.50$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=9.16$ $N_{cr,y}=13300000.00$ $\lambda^*_y=0.11$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=34.07$ $N_{cr,z}=960982.00$ $\lambda^*_z=0.39$ Curva b: $\Phi_z=0.61$ $\chi_z=0.93$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.16+0.01=0.18$
Verifica ZZ: $0.00+0.13+0.01=0.14$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.01$ (L/21755)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.01$ (L/15340)

Asta n. 2036 (-1484 -1474) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU $X_1=0.42$ - Classe 1
Sollecitazioni: $T_y=25.02$
 $V, Ed=25.02$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU $X_1=0.42$ - Classe 1
Sollecitazioni: $T_z=223.55$
 $V, Ed=223.55$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$
- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=1.53$ - Classe 3
Sollecitazioni: $N=-115.80$ $T_z=243.56$ $M_y=-2967.29$ $T_y=16.91$ $M_z=17.82$
Tensioni: $\sigma_N=-2.15$ $\sigma_{m,d}=-554.77$ $\tau=0.00$ $\sigma_{max}=-556.92$ (sfrut=0.21)
Tensioni: $\sigma_N=-2.15$ $\sigma_{m,d}=1.05$ $\tau=13.60$ $\tau_{max}=13.60$ (sfrut=0.01)
Tensioni: $\sigma_N=-2.15$ $\sigma_{m,d}=-554.77$ $\tau=0.00$ $\sigma_{TD,max}=556.92$ (sfrut=0.21)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-122.38$ $M_y, Ed=-2967.29$ $M_z, Ed=17.82$ $L=1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.07$ $M_{cr}=87604.70$ $\lambda_{LT}=0.42$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.57$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.31$ $N_{cr,y}=7355930.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.81$ $N_{cr,z}=531497.00$ $\lambda^*_z=0.53$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.19+0.01=0.20$
Verifica ZZ: $0.00+0.15+0.01=0.16$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/6704)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/4973)

Asta n. 2036 (-1474 -1475) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 32 SLU $X_1=1.53$ - Classe 1
 Sollecitazioni: $T_y=-28.20$ $M_x=2.90$
 $V,Ed=-28.20$ $V_c,Rd,Red=54434.10$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 32 SLU $X_1=1.53$ - Classe 1
 Sollecitazioni: $T_z=-1742.97$ $M_x=2.90$
 $V,Ed=-1742.97$ $V_c,Rd,Red=38659.40$ $V,Ed/V_c,Rd,Red=0.05$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=56.29$ $T_z=-1895.15$ $M_y=-2967.43$ $T_y=-3.96$ $M_z=31.30$ $M_x=3.18$
 Tensioni: $\sigma_N=1.05$ $\sigma_{m,d}=571.54$ $\tau=18.89$ $\sigma_{max}=572.59$ (sfrut=0.22)
 Tensioni: $\sigma_N=1.05$ $\sigma_{m,d}=1.84$ $\tau=107.49$ $\tau_{max}=107.49$ (sfrut=0.07)
 Tensioni: $\sigma_N=1.05$ $\sigma_{m,d}=571.54$ $\tau=18.89$ $\sigma_{ID,max}=573.52$ (sfrut=0.22)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $M_y,Ed=-2967.43$ $M_z,Ed=31.30$ $L=1.53$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=143023.00$ $\lambda_{LT}=0.33$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.31$ $N_{cr,y}=7355860.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.81$ $N_{cr,z}=531492.00$ $\lambda^*_z=0.53$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.95$, 0.95 , 0.76 , 0.95
 Verifica YY: $0.00+0.19+0.01=0.21$
 Verifica ZZ: $0.00+0.15+0.01=0.17$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/10151)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.02$ (L/7625)

Asta n. 2037 (-1803 -1806) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1=2.57$ - Classe 1
 Sollecitazioni: $T_y=-28.26$
 $V,Ed=-28.26$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1=2.57$ - Classe 1
 Sollecitazioni: $T_z=-841.29$
 $V,Ed=-841.29$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.04$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1=2.57$ - Classe 1
 Sollecitazioni: $N=5.43$ $T_z=-841.29$ $M_y=631.03$ $T_y=-28.26$ $M_z=-36.33$
 $N,Ed=5.43$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=631.03$ $M_y,V,c,Rd=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_y,Ed/M_{Ny,c,Rd}=0.11$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-36.33$ $M_z,V,c,Rd=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_z,Ed/M_{Nz,c,Rd}=0.03$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/M_{Ny,c,Rd})^2 + (M_z,Ed/M_{Nz,c,Rd})^1 = 0.11$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $M_y,Ed=631.03$ $M_z,Ed=-36.33$ $L=2.57$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $L_{cr}=2.57$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.74$ $M_{cr}=11077.60$ $\lambda_{LT}=0.74$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.76$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.87$
 $\lambda_y=31.12$ $N_{cr,y}=609784.00$ $\lambda^*_y=0.36$ Curva a: $\Phi_y=0.58$ $\chi_y=0.96$
 $\lambda_z=114.96$ $N_{cr,z}=44675.30$ $\lambda^*_z=1.32$ Curva b: $\Phi_z=1.57$ $\chi_z=0.42$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.95$, 0.95 , 0.57 , 0.95
 Verifica YY: $0.00+0.12+0.02=0.14$
 Verifica ZZ: $0.00+0.07+0.03=0.10$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.01$ (L/48997)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.01$ (L/33685)

Asta n. 2037 (-1806 -1813) - Sez. 6 (IPE200) - Crit. 1

Relazione di calcolo

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-7.01$
 $V, Ed=-7.01$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=1183.94$
 $V, Ed=1183.94$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.06$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=2.55$ - Classe 1
Sollecitazioni: $N=6.65$ $M_y=-871.74$ $T_y=-7.01$ $M_z=-3.86$
 $N, Ed=6.65$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-871.74$ $M_y, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.15$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-3.86$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.15$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y, Ed=-871.74$ $M_z, Ed=13.99$ $L=3.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.76$ $M, cr=13646.50$ $\lambda_{LT}=0.67$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.71$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.91$
 $\lambda_y=37.23$ $N_{cr,y}=425944.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.95$
 $\lambda_z=137.54$ $N_{cr,z}=31206.40$ $\lambda_z^*=1.58$ Curva b: $\Phi_z=1.99$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.16+0.01=0.16$
Verifica ZZ: $0.00+0.09+0.01=0.11$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.08$ (L/3622)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.11$ (L/2828)
- Asta n. 2037 (-1813 -1820) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=3.08$ - Classe 1
Sollecitazioni: $T_y=-10.57$
 $V, Ed=-10.57$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=3.08$ - Classe 1
Sollecitazioni: $T_z=-1397.04$
 $V, Ed=-1397.04$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.07$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=3.08$ - Classe 1
Sollecitazioni: $N=6.50$ $T_z=-1397.04$ $M_y=1292.91$ $T_y=-10.57$ $M_z=-16.85$
 $N, Ed=6.50$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1292.91$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.22$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-16.85$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.22$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y, Ed=1292.91$ $M_z, Ed=-16.85$ $L=3.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.52$ $M, cr=12443.60$ $\lambda_{LT}=0.70$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.73$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.90$
 $\lambda_y=37.23$ $N_{cr,y}=425944.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.95$
 $\lambda_z=137.54$ $N_{cr,z}=31206.40$ $\lambda_z^*=1.58$ Curva b: $\Phi_z=1.99$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.24+0.01=0.24$
Verifica ZZ: $0.00+0.14+0.01=0.16$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.05$ (L/6675)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.06$ (L/5217)
- Asta n. 2037 (-1820 -1827) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=12.99$
 $V, Ed=12.99$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=1270.69$

- V,Ed=1270.69 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.06
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: N=-12.49 Tz=1270.69 My=1292.26 Ty=12.99 Mz=-21.42
 N,Ed=-12.49 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.00
 Pressoflessione retta YY [4.2.33]:
 My,Ed=1292.26 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.22
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=-21.42 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.02
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.22$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: N,Ed=-12.49 My,Ed=1292.26 Mz,Ed=-21.42 L=3.12
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 Lcr=3.12 Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=2.11 M_{cr}=10255.10 \lambda_{LT}=0.77$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.79 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.86$
 $\lambda_y=37.71 N_{cr,y}=415075.00 \lambda^*_y=0.43$ Curva a: $\Phi_y=0.62 \chi_y=0.94$
 $\lambda_z=139.33 N_{cr,z}=30410.10 \lambda^*_z=1.60$ Curva b: $\Phi_z=2.03 \chi_z=0.31$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
 Verifica YY: 0.00+0.25+0.01=0.26
 Verifica ZZ: 0.00+0.15+0.02=0.17
 - Verifica freccia massima per soli carichi accidentali - CC 38
 fz,L=0.02 (L/16923)
 - Verifica freccia massima carichi totali - CC 38
 fz,L=0.02 (L/12514)
- Asta n. 2037 (-1827 13) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU Xl=3.12 - Classe 1
 Sollecitazioni: Tz=-1476.92
 V,Ed=-1476.92 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.07
 - Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 33 SLU Xl=3.12 - Classe 1
 Sollecitazioni: N=-9.34 Tz=-1476.92 My=1932.99
 My,Ed=1932.99 My,V,c,Rd=5804.95
 N,Ed=-9.34 Nc,Rd=-74603.30 YY n=N,Ed/Nc,Rd=0.00 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.33
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: N,Ed=-9.34 My,Ed=1932.99 Mz,Ed=-1.73 L=3.12
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 Lcr=3.12 Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=1.99 M_{cr}=9642.60 \lambda_{LT}=0.80$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.80 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.85$
 $\lambda_y=37.71 N_{cr,y}=415075.00 \lambda^*_y=0.43$ Curva a: $\Phi_y=0.62 \chi_y=0.94$
 $\lambda_z=139.33 N_{cr,z}=30410.10 \lambda^*_z=1.60$ Curva b: $\Phi_z=2.03 \chi_z=0.31$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
 Verifica YY: 0.00+0.37+0.00=0.38
 Verifica ZZ: 0.00+0.22+0.00=0.23
 - Verifica freccia massima per soli carichi accidentali - CC 38
 fz,L=0.06 (L/5293)
 - Verifica freccia massima carichi totali - CC 38
 fz,L=0.08 (L/4022)
- Asta n. 2037 (13 -1722) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: Ty=-4.89
 V,Ed=-4.89 Vc,Rd=29609.30 V,Ed/Vc,Rd=0.00
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: Tz=1662.17
 V,Ed=1662.17 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.08
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU Xl=0.00 - Classe 1
 Sollecitazioni: N=-103.23 Tz=1662.17 My=1935.63 Ty=-4.89 Mz=12.66
 N,Ed=-103.23 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.00
 Pressoflessione retta YY [4.2.33]:
 My,Ed=1935.63 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.33
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=12.66 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.01
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.33$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: N,Ed=-103.23 My,Ed=1935.63 Mz,Ed=12.66 L=4.60
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$

$L_{cr}=4.60$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.23$ $M_{cr}=6573.62$ $\lambda_{LT}=0.96$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.94$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.74$
 $\lambda_y=55.71$ $N_{cr,y}=190255.00$ $\lambda_y^*=0.64$ Curva a: $\Phi_y=0.75$ $\chi_y=0.87$
 $\lambda_z=205.80$ $N_{cr,z}=13938.90$ $\lambda_z^*=2.37$ Curva b: $\Phi_z=3.68$ $\chi_z=0.15$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.96$
 Verifica YY: $0.00+0.43+0.01=0.43$
 Verifica ZZ: $0.00+0.26+0.01=0.27$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.18$ (L/2512)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.22$ (L/2049)

Asta n. 2037 (-1722 -1723) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=2.48$ - Classe 1
 Sollecitazioni: $T_y=-5.13$
 $V, Ed=-5.13$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=2.48$ - Classe 1
 Sollecitazioni: $T_z=-777.43$
 $V, Ed=-777.43$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.04$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.48$ - Classe 1
 Sollecitazioni: $N=-78.02$ $M_y=-844.11$ $T_y=-5.13$ $M_z=6.89$
 $N, Ed=-78.02$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-844.11$ $M_y, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.15$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=6.89$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.15$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-78.02$ $M_y, Ed=-844.11$ $M_z, Ed=9.35$ $L=2.48$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.48$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=11714.10$ $\lambda_{LT}=0.72$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.75$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.89$
 $\lambda_y=30.07$ $N_{cr,y}=652815.00$ $\lambda_y^*=0.35$ Curva a: $\Phi_y=0.58$ $\chi_y=0.97$
 $\lambda_z=111.10$ $N_{cr,z}=47827.90$ $\lambda_z^*=1.28$ Curva b: $\Phi_z=1.50$ $\chi_z=0.44$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.16+0.00=0.16$
 Verifica ZZ: $0.00+0.09+0.01=0.10$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.06$ (L/3887)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.09$ (L/2858)

Asta n. 2038 (-1804 -1805) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=2.57$ - Classe 1
 Sollecitazioni: $T_y=-21.08$
 $V, Ed=-21.08$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=2.57$ - Classe 1
 Sollecitazioni: $T_z=-1122.66$
 $V, Ed=-1122.66$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.05$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=2.57$ - Classe 1
 Sollecitazioni: $N=-86.64$ $T_z=-1122.66$ $M_y=1001.31$ $T_y=-21.08$ $M_z=-28.49$
 $N, Ed=-86.64$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1001.31$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.17$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-28.49$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.17$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-86.64$ $M_y, Ed=1001.31$ $M_z, Ed=-28.49$ $L=2.57$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.57$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=11108.50$ $\lambda_{LT}=0.74$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.76$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.87$
 $\lambda_y=31.12$ $N_{cr,y}=609784.00$ $\lambda_y^*=0.36$ Curva a: $\Phi_y=0.58$ $\chi_y=0.96$
 $\lambda_z=114.96$ $N_{cr,z}=44675.30$ $\lambda_z^*=1.32$ Curva b: $\Phi_z=1.57$ $\chi_z=0.42$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$

Relazione di calcolo

- Verifica YY: $0.00+0.19+0.01=0.20$
 Verifica ZZ: $0.00+0.11+0.02=0.14$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/16738)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.02$ (L/11924)
- Asta n. 2038 (-1805 -1812) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-2.47$
 $V,Ed=-2.47$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=1475.21$
 $V,Ed=1475.21$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.07$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-156.50$ $T_z=1475.21$ $M_y=1006.08$ $T_y=-2.47$ $M_z=5.68$
 $N,Ed=-156.50$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=1006.08$ $M_y,V,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.17$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=5.68$ $M_z,V,c,Rd=1170.59$ $MN_z,c,Rd=1170.59$ $M_z,Ed/MN_z,c,Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.17$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N,Ed=-156.50$ $M_y,Ed=1006.08$ $M_z,Ed=5.68$ $L=3.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.82$ $M_{cr}=13928.00$ $\lambda_{LT}=0.66$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.71$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.91$
 $\lambda_y=37.23$ $N_{cr,y}=425944.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.95$
 $\lambda_z=137.54$ $N_{cr,z}=31206.40$ $\lambda_z^*=1.58$ Curva b: $\Phi_z=1.99$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.96$
 Verifica YY: $0.00+0.18+0.00=0.18$
 Verifica ZZ: $0.00+0.11+0.00=0.11$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.08$ (L/3951)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.10$ (L/3145)
- Asta n. 2038 (-1812 -1819) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=3.08$ - Classe 1
 Sollecitazioni: $T_y=-9.53$
 $V,Ed=-9.53$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=3.08$ - Classe 1
 Sollecitazioni: $T_z=-1668.99$
 $V,Ed=-1668.99$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.08$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=3.08$ - Classe 1
 Sollecitazioni: $N=-170.47$ $T_z=-1668.99$ $M_y=1603.03$ $T_y=-9.53$ $M_z=-15.23$
 $N,Ed=-170.47$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=1603.03$ $M_y,V,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.28$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-15.23$ $M_z,V,c,Rd=1170.59$ $MN_z,c,Rd=1170.59$ $M_z,Ed/MN_z,c,Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.28$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N,Ed=-170.47$ $M_y,Ed=1603.03$ $M_z,Ed=-15.23$ $L=3.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.37$ $M_{cr}=11718.90$ $\lambda_{LT}=0.72$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.75$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.89$
 $\lambda_y=37.23$ $N_{cr,y}=425944.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.95$
 $\lambda_z=137.54$ $N_{cr,z}=31206.40$ $\lambda_z^*=1.58$ Curva b: $\Phi_z=1.99$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.96$
 Verifica YY: $0.00+0.30+0.01=0.31$
 Verifica ZZ: $0.00+0.18+0.01=0.19$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G}=0.04$ (L/6919)

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.06$ (L/5492)

Asta n. 2038 (-1819 -1826) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=18.00$
 $V,Ed=18.00$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=1599.59$
 $V,Ed=1599.59$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.08$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-202.86$ $T_z=1599.59$ $M_y=1601.71$ $T_y=18.00$ $M_z=-28.79$
 $N,Ed=-202.86$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=1601.71$ $M_y,V,c,Rd=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_y,Ed/M_{Ny,c,Rd}=0.28$
Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-28.79$ $M_z,V,c,Rd=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_z,Ed/M_{Nz,c,Rd}=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/M_{Ny,c,Rd})^2 + (M_z,Ed/M_{Nz,c,Rd})^1 = 0.28$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N,Ed=-202.86$ $M_y,Ed=1601.71$ $M_z,Ed=-28.79$ $L=3.12$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.12$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.19$ $M_{cr}=10642.80$ $\lambda_{LT}=0.76$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.78$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.87$
 $\lambda_y=37.71$ $N_{cr,y}=415075.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=139.33$ $N_{cr,z}=30410.10$ $\lambda_z^*=1.60$ Curva b: $\Phi_z=2.03$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.96$
Verifica YY: $0.00+0.30+0.01=0.32$
Verifica ZZ: $0.00+0.18+0.02=0.21$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.03$ (L/10744)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.04$ (L/8827)

Asta n. 2038 (-1826 12) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=3.12$ - Classe 1
Sollecitazioni: $T_y=-1.68$
 $V,Ed=-1.68$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=3.12$ - Classe 1
Sollecitazioni: $T_z=-1761.42$
 $V,Ed=-1761.42$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.08$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=3.12$ - Classe 1
Sollecitazioni: $N=-230.08$ $T_z=-1761.42$ $M_y=2103.60$ $T_y=-1.68$ $M_z=-5.40$
 $N,Ed=-230.08$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=2103.60$ $M_y,V,c,Rd=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_y,Ed/M_{Ny,c,Rd}=0.36$
Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-5.40$ $M_z,V,c,Rd=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_z,Ed/M_{Nz,c,Rd}=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/M_{Ny,c,Rd})^2 + (M_z,Ed/M_{Nz,c,Rd})^1 = 0.36$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N,Ed=-230.08$ $M_y,Ed=2103.60$ $M_z,Ed=-5.40$ $L=3.12$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.12$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.08$ $M_{cr}=10097.10$ $\lambda_{LT}=0.78$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.79$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.86$
 $\lambda_y=37.71$ $N_{cr,y}=415075.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=139.33$ $N_{cr,z}=30410.10$ $\lambda_z^*=1.60$ Curva b: $\Phi_z=2.03$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.96$
Verifica YY: $0.00+0.40+0.00=0.41$
Verifica ZZ: $0.00+0.24+0.00=0.25$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.05$ (L/6281)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.06$ (L/4904)

Asta n. 2038 (12 -1715) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1

Sollecitazioni: $T_y = -3.42$
 $V, Ed = -3.42$ $V_c, Rd = 29609.30$ $V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_z = 1797.51$
 $V, Ed = 1797.51$ $V_c, Rd = 21171.50$ $V, Ed/V_c, Rd = 0.08$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l = 0.00$ - Classe 1
 Sollecitazioni: $N = -59.25$ $T_z = 1797.51$ $M_y = 2105.86$ $T_y = -3.42$ $M_z = 11.23$
 $N, Ed = -59.25$ $N_c, Rd = 74603.30$ $n = N, Ed/N_c, Rd = 0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed = 2105.86$ $M_y, V, c, Rd = 5804.95$ $M_y, c, Rd = 5804.95$ $M_y, Ed/MN_y, c, Rd = 0.36$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed = 11.23$ $M_z, V, c, Rd = 1170.59$ $MN_z, c, Rd = 1170.59$ $M_z, Ed/MN_z, c, Rd = 0.01$
 $\alpha = 2.00$ $\beta = 1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.36$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed = -59.25$ $M_y, Ed = 2105.86$ $M_z, Ed = 11.23$ $L = 4.60$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 4.60$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.81$ $M, cr = 5339.06$ $\lambda_{LT} = 1.07$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 1.04$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.68$
 $\lambda_y = 55.71$ $N_{cr,y} = 190255.00$ $\lambda_y^* = 0.64$ Curva a: $\Phi_y = 0.75$ $\chi_y = 0.87$
 $\lambda_z = 205.80$ $N_{cr,z} = 13938.90$ $\lambda_z^* = 2.37$ Curva b: $\Phi_z = 3.68$ $\chi_z = 0.15$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.57, 0.57, 0.96$
 Verifica YY: $0.00 + 0.51 + 0.01 = 0.52$
 Verifica ZZ: $0.00 + 0.31 + 0.01 = 0.32$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.12$ (L/3925)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G} = 0.14$ (L/3320)

Asta n. 2038 (-1715 -1717) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_z = 1133.92$
 $V, Ed = 1133.92$ $V_c, Rd = 21171.50$ $V, Ed/V_c, Rd = 0.05$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 33 SLU $X_l = 1.99$ - Classe 1
 Sollecitazioni: $N = -163.09$ $M_y = -1244.50$
 $M_y, Ed = -1244.50$ $M_y, c, Rd = 5804.95$
 $N, Ed = -163.09$ $N_c, Rd = 74603.30$ YY $n = N, Ed/N_c, Rd = 0.00$ $MN_y, c, Rd = 5804.95$ $M_y, Ed/MN_y, c, Rd = 0.21$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed = -163.09$ $M_y, Ed = -1244.50$ $M_z, Ed = 1.36$ $L = 4.18$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 4.18$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.82$ $M, cr = 6044.95$ $\lambda_{LT} = 1.00$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.98$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.72$
 $\lambda_y = 50.59$ $N_{cr,y} = 230645.00$ $\lambda_y^* = 0.58$ Curva a: $\Phi_y = 0.71$ $\chi_y = 0.90$
 $\lambda_z = 186.92$ $N_{cr,z} = 16898.00$ $\lambda_z^* = 2.15$ Curva b: $\Phi_z = 3.15$ $\chi_z = 0.18$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.58, 0.57, 0.97$
 Verifica YY: $0.00 + 0.28 + 0.00 = 0.29$
 Verifica ZZ: $0.00 + 0.17 + 0.00 = 0.17$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.30$ (L/1389)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.38$ (L/1113)

Asta n. 2039 (-1344 -1346) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 19 SLU $X_l = 0.45$ - Classe 1
 Sollecitazioni: $T_z = 1242.20$
 $V, Ed = 1242.20$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.03$

- Verifica in termini tensionali [4.2.4] - CC 30 SLU $X_l = 2.35$ - Classe 3
 Sollecitazioni: $N = -1140.43$ $T_z = 1113.46$ $M_y = -1254.46$ $T_y = -84.02$ $M_z = -83.83$
 Tensioni: $\sigma_N = -21.19$ $\sigma_{m,d} = -329.32$ $\tau = 0.00$ $\sigma_{max} = -350.51$ (sfrut=0.13)
 Tensioni: $\sigma_N = -21.19$ $\sigma_{m,d} = -4.93$ $\tau = 62.17$ $\tau_{max} = 62.17$ (sfrut=0.04)
 Tensioni: $\sigma_N = -21.19$ $\sigma_{m,d} = -329.32$ $\tau = 0.00$ $\sigma_{TD,max} = 350.51$ (sfrut=0.13)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 3
 Sollecitazioni: $N, Ed = -1140.43$ $M_y, Ed = 1309.58$ $M_z, Ed = -83.83$ $L = 2.57$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 2.57$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 3.03$ $M, cr = 97023.50$ $\lambda_{LT} = 0.40$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.56$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$

$\lambda_y=20.62$ Ncr,y=2622220.00 $\lambda'_y=0.24$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=76.73$ Ncr,z=189466.00 $\lambda'_z=0.88$ Curva b: $\Phi_z=1.01$ $\chi_z=0.67$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.01+0.09+0.04=0.13$
 Verifica ZZ: $0.01+0.07+0.04=0.11$

- Verifica freccia massima per soli carichi accidentali - CC 21
 $f_{z,L}=0.01$ (L/14940)

- Verifica freccia massima carichi totali - CC 21
 $f_{z,L}=0.01$ (L/19106)

Asta n. 2039 (-1346 -1503) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 32 SLU $X_1=0.23$ - Classe 1
 Sollecitazioni: $T_y=1.09$ $M_x=-2.55$
 $V, Ed=1.09$ $V_c, Rd, Red=54464.30$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 32 SLU $X_1=0.23$ - Classe 1
 Sollecitazioni: $T_z=1171.70$ $M_x=-2.55$
 $V, Ed=1171.70$ $V_c, Rd, Red=38680.90$ $V, Ed/V_c, Rd, Red=0.03$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=0.23$ - Classe 3
 Sollecitazioni: $N=-2895.50$ $T_z=1371.12$ $M_y=1680.04$ $T_y=3.76$ $M_z=-4.95$ $M_x=-2.89$
 Tensioni: $\sigma_N=-53.81$ $\sigma_{m,d}=-307.73$ $\tau=17.18$ $\sigma_{max}=-361.53$ (sfrut=0.14)
 Tensioni: $\sigma_N=-53.81$ $\sigma_{m,d}=-0.29$ $\tau=78.46$ $\tau_{max}=78.46$ (sfrut=0.05)
 Tensioni: $\sigma_N=-53.81$ $\sigma_{m,d}=-307.73$ $\tau=17.18$ $\sigma_{ID,max}=362.75$ (sfrut=0.14)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed=-2895.50$ $M_y, Ed=1680.04$ $M_z, Ed=5.77$ $L=3.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.34$ $M_{cr}=55317.20$ $\lambda_{LT}=0.53$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.63$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.97$
 $\lambda_y=24.68$ Ncr,y=1831660.00 $\lambda'_y=0.28$ Curva a: $\Phi_y=0.55$ $\chi_y=0.98$
 $\lambda_z=91.80$ Ncr,z=132345.00 $\lambda'_z=1.06$ Curva b: $\Phi_z=1.20$ $\chi_z=0.56$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.97, 0.76, 0.97$
 Verifica YY: $0.02+0.11+0.00=0.14$
 Verifica ZZ: $0.02+0.09+0.00=0.11$

- Verifica freccia massima per soli carichi accidentali - CC 21
 $f_{z,L}=0.01$ (L/22812)

- Verifica freccia massima carichi totali - CC 21
 $f_{z,L}=0.02$ (L/12148)

Asta n. 2039 (-1503 -1347) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 19 SLU $X_1=1.43$ - Classe 2
 Sollecitazioni: $T_y=-3.94$ $M_x=2.14$
 $V, Ed=-3.94$ $V_c, Rd, Red=54499.20$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 19 SLU $X_1=1.43$ - Classe 2
 Sollecitazioni: $T_z=-433.47$ $M_x=2.14$
 $V, Ed=-433.47$ $V_c, Rd, Red=38705.70$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=2.85$ - Classe 3
 Sollecitazioni: $N=-2899.80$ $T_z=-1134.55$ $M_y=1006.35$ $T_y=-12.40$ $M_z=-23.32$ $M_x=2.70$
 Tensioni: $\sigma_N=-53.89$ $\sigma_{m,d}=-209.62$ $\tau=16.01$ $\sigma_{max}=-263.50$ (sfrut=0.10)
 Tensioni: $\sigma_N=-53.89$ $\sigma_{m,d}=-1.37$ $\tau=65.35$ $\tau_{max}=65.35$ (sfrut=0.04)
 Tensioni: $\sigma_N=-53.89$ $\sigma_{m,d}=-209.62$ $\tau=16.01$ $\sigma_{ID,max}=264.96$ (sfrut=0.10)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed=-2899.80$ $M_y, Ed=1006.35$ $M_z, Ed=-23.32$ $L=3.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.82$ $M_{cr}=66586.50$ $\lambda_{LT}=0.48$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.60$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.99$
 $\lambda_y=24.68$ Ncr,y=1831660.00 $\lambda'_y=0.28$ Curva a: $\Phi_y=0.55$ $\chi_y=0.98$
 $\lambda_z=91.80$ Ncr,z=132345.00 $\lambda'_z=1.06$ Curva b: $\Phi_z=1.20$ $\chi_z=0.56$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.97, 0.76, 0.97$
 Verifica YY: $0.02+0.07+0.01=0.10$
 Verifica ZZ: $0.02+0.05+0.01=0.08$

- Verifica freccia massima per soli carichi accidentali - CC 23
 $f_{z,L}=0.01$ (L/39845)

- Verifica freccia massima carichi totali - CC 23
 $f_{z,L}=0.01$ (L/23347)

Asta n. 2039 (-1347 -1511) - Sez. 5 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 7 SLV $X_l=0.80$ - Classe 1
Sollecitazioni: $T_y=1.65$
 $V, Ed=1.65$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 7 SLV $X_l=0.80$ - Classe 1
Sollecitazioni: $T_z=390.41$
 $V, Ed=390.41$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.23$ - Classe 3
Sollecitazioni: $N=-3181.83$ $T_z=1144.74$ $M_y=1213.54$ $T_y=50.44$ $M_z=-97.51$ $M_x=-1.79$
Tensioni: $\sigma_N=-59.13$ $\sigma_{m,d}=-338.96$ $\tau=10.65$ $\sigma_{max}=-398.09$ (sfrut=0.15)
Tensioni: $\sigma_N=-59.13$ $\sigma_{m,d}=-5.73$ $\tau=64.83$ $\tau_{max}=64.83$ (sfrut=0.04)
Tensioni: $\sigma_N=-59.13$ $\sigma_{m,d}=-338.96$ $\tau=10.65$ $\sigma_{ID,max}=398.52$ (sfrut=0.15)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-3181.83$ $M_y, Ed=1213.54$ $M_z, Ed=-97.51$ $L=3.12$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.12$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.41$ $M_{cr}=55652.10$ $\lambda_{LT}=0.52$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.62$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.97$
 $\lambda_y=25.00$ $N_{cr,y}=1784920.00$ $\lambda^*_y=0.29$ Curva a: $\Phi_y=0.55$ $\chi_y=0.98$
 $\lambda_z=93.00$ $N_{cr,z}=128968.00$ $\lambda^*_z=1.07$ Curva b: $\Phi_z=1.22$ $\chi_z=0.55$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.97, 0.76, 0.97$
Verifica YY: $0.02+0.08+0.05=0.15$
Verifica ZZ: $0.02+0.07+0.05=0.13$
 - Verifica freccia massima per soli carichi accidentali - CC 23
 $f_{z,L}=0.01$ (L/42681)
 - Verifica freccia massima carichi totali - CC 23
 $f_{z,L}=0.01$ (L/24050)

Asta n. 2039 (-1511 -1348) - Sez. 5 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 7 SLV $X_l=1.16$ - Classe 2
Sollecitazioni: $T_y=3.47$
 $V, Ed=3.47$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 7 SLV $X_l=1.16$ - Classe 2
Sollecitazioni: $T_z=-400.25$
 $V, Ed=-400.25$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 32 SLU $X_l=2.89$ - Classe 3
Sollecitazioni: $N=-2892.51$ $T_z=-1103.85$ $M_y=1392.17$ $T_y=24.88$ $M_z=78.08$ $M_x=1.86$
Tensioni: $\sigma_N=-53.75$ $\sigma_{m,d}=-346.89$ $\tau=11.05$ $\sigma_{max}=-400.65$ (sfrut=0.15)
Tensioni: $\sigma_N=-53.75$ $\sigma_{m,d}=-4.59$ $\tau=62.63$ $\tau_{max}=62.63$ (sfrut=0.04)
Tensioni: $\sigma_N=-53.75$ $\sigma_{m,d}=-346.89$ $\tau=11.05$ $\sigma_{ID,max}=401.10$ (sfrut=0.15)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 3
Sollecitazioni: $N, Ed=-2892.51$ $M_y, Ed=1392.17$ $M_z, Ed=78.08$ $L=3.12$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.12$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.22$ $M_{cr}=51237.50$ $\lambda_{LT}=0.55$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.64$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.97$
 $\lambda_y=25.00$ $N_{cr,y}=1784920.00$ $\lambda^*_y=0.29$ Curva a: $\Phi_y=0.55$ $\chi_y=0.98$
 $\lambda_z=93.00$ $N_{cr,z}=128968.00$ $\lambda^*_z=1.07$ Curva b: $\Phi_z=1.22$ $\chi_z=0.55$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.97, 0.76, 0.97$
Verifica YY: $0.02+0.09+0.04=0.15$
Verifica ZZ: $0.02+0.08+0.04=0.13$
 - Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.01$ (L/28321)
 - Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.02$ (L/18706)

Asta n. 2039 (-1348 -1345) - Sez. 5 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l=1.35$ - Classe 1
Sollecitazioni: $T_y=23.67$
 $V, Ed=23.67$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 13 SLV $X_l=1.35$ - Classe 1
Sollecitazioni: $T_z=1213.05$
 $V, Ed=1213.05$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.03$
 - Verifica in termini tensionali [4.2.4] - CC 32 SLU $X_l=2.71$ - Classe 3
Sollecitazioni: $N=-1023.58$ $T_z=-868.21$ $M_y=519.75$ $T_y=-456.59$ $M_z=-584.88$
Tensioni: $\sigma_N=-19.02$ $\sigma_{m,d}=-819.82$ $\tau=0.00$ $\sigma_{max}=-838.85$ (sfrut=0.32)
Tensioni: $\sigma_N=-19.02$ $\sigma_{m,d}=-34.39$ $\tau=48.50$ $\tau_{max}=48.50$ (sfrut=0.03)

- Tensioni: $\sigma_N = -19.02$ $\sigma_{m,d} = -819.82$ $\tau = 0.00$ $\sigma_{ID,max} = 838.85$ (sfrut=0.32)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 3
Sollecitazioni: $N, Ed = -1023.58$ My, $Ed = -717.73$ Mz, $Ed = -584.88$ L=2.93
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 2.93$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 2.67$ M, $cr = 68297.10$ $\lambda_{LT} = 0.47$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.60$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 0.99$
 $\lambda_y = 23.51$ Ncr, $y = 2017440.00$ $\lambda^*_y = 0.27$ Curva a: $\Phi_y = 0.54$ $\chi_y = 0.98$
 $\lambda_z = 87.47$ Ncr, $z = 145768.00$ $\lambda^*_z = 1.01$ Curva b: $\Phi_z = 1.14$ $\chi_z = 0.59$
Kyy, Kyz, Kzy, Kzz = 0.95, 0.96, 0.76, 0.96
Verifica YY: $0.01 + 0.05 + 0.27 = 0.32$
Verifica ZZ: $0.01 + 0.04 + 0.27 = 0.31$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.01$ (L/25247)
- Verifica freccia massima carichi totali - CC 24
 $f_{z,L} = 0.02$ (L/13335)
- Asta n. 2039 (-1345 -1518) - Sez. 5 (IPE300) - Crit. 1
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 13 SLV Xl=1.01 - Classe 1
Sollecitazioni: $T_y = -60.78$ Mx = -2.88
V, $Ed = -60.78$ Vc, Rd, Red = 54435.60 V, $Ed/Vc, Rd, Red = 0.00$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 13 SLV Xl=1.01 - Classe 1
Sollecitazioni: $T_z = 717.70$ Mx = -2.88
V, $Ed = 717.70$ Vc, Rd, Red = 38660.50 V, $Ed/Vc, Rd, Red = 0.02$
- Verifica in termini tensionali [4.2.4] - CC 32 SLU Xl=0.23 - Classe 3
Sollecitazioni: $N = -3781.24$ $T_z = 2410.99$ $M_y = 3050.25$ $T_y = 773.59$ $M_z = -766.40$ $M_x = -11.16$
Tensioni: $\sigma_N = -70.27$ $\sigma_{m,d} = -1499.54$ $\tau = 66.22$ $\sigma_{max} = -1569.81$ (sfrut=0.60)
Tensioni: $\sigma_N = -70.27$ $\sigma_{m,d} = -45.06$ $\tau = 151.21$ $\tau_{max} = 151.21$ (sfrut=0.10)
Tensioni: $\sigma_N = -70.27$ $\sigma_{m,d} = -1499.54$ $\tau = 66.22$ $\sigma_{ID,max} = 1573.99$ (sfrut=0.60)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 3
Sollecitazioni: $N, Ed = -3781.24$ My, $Ed = 3050.25$ Mz, $Ed = -766.40$ L=1.67
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.67$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 1.79$ M, $cr = 124795.00$ $\lambda_{LT} = 0.35$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.54$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 13.41$ Ncr, $y = 6202670.00$ $\lambda^*_y = 0.15$ Curva a: $\Phi_y = 0.51$ $\chi_y = 1.00$
 $\lambda_z = 49.89$ Ncr, $z = 448169.00$ $\lambda^*_z = 0.57$ Curva b: $\Phi_z = 0.73$ $\chi_z = 0.85$
Kyy, Kyz, Kzy, Kzz = 0.95, 0.96, 0.76, 0.96
Verifica YY: $0.03 + 0.20 + 0.35 = 0.58$
Verifica ZZ: $0.03 + 0.16 + 0.35 = 0.54$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.02$ (L/8866)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,G} = 0.03$ (L/4665)
- Asta n. 2039 (-1518 -1524) - Sez. 5 (IPE300) - Crit. 1
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 32 SLU Xl=4.12 - Classe 2
Sollecitazioni: $T_y = -49.44$ Mx = 2.96
V, $Ed = -49.44$ Vc, Rd, Red = 54428.60 V, $Ed/Vc, Rd, Red = 0.00$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 32 SLU Xl=4.12 - Classe 2
Sollecitazioni: $T_z = -577.88$ Mx = 2.96
V, $Ed = -577.88$ Vc, Rd, Red = 38655.50 V, $Ed/Vc, Rd, Red = 0.01$
- Verifica in termini tensionali [4.2.4] - CC 32 SLU Xl=1.03 - Classe 3
Sollecitazioni: $N = -3670.62$ $T_z = 342.84$ $M_y = -647.62$ $T_y = -49.44$ $M_z = 153.64$ $M_x = 2.96$
Tensioni: $\sigma_N = -68.21$ $\sigma_{m,d} = -307.10$ $\tau = 17.57$ $\sigma_{max} = -375.31$ (sfrut=0.14)
Tensioni: $\sigma_N = -68.21$ $\sigma_{m,d} = 9.03$ $\tau = 26.10$ $\tau_{max} = 26.10$ (sfrut=0.02)
Tensioni: $\sigma_N = -68.21$ $\sigma_{m,d} = -307.10$ $\tau = 17.57$ $\sigma_{ID,max} = 376.54$ (sfrut=0.14)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 3
Sollecitazioni: $N, Ed = -3916.74$ My, $Ed = 1115.31$ Mz, $Ed = 200.75$ L=6.12
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 6.12$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 1.89$ M, $cr = 16019.40$ $\lambda_{LT} = 0.98$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.96$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.73$
 $\lambda_y = 49.10$ Ncr, $y = 462567.00$ $\lambda^*_y = 0.57$ Curva a: $\Phi_y = 0.70$ $\chi_y = 0.90$
 $\lambda_z = 182.68$ Ncr, $z = 33422.40$ $\lambda^*_z = 2.10$ Curva b: $\Phi_z = 3.04$ $\chi_z = 0.19$
Kyy, Kyz, Kzy, Kzz = 0.96, 1.03, 0.77, 1.03
Verifica YY: $0.03 + 0.10 + 0.10 = 0.23$
Verifica ZZ: $0.15 + 0.08 + 0.10 = 0.32$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.11$ (L/5187)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.12$ (L/4611)

Asta n. 2040 (-1837 -1580) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=2.17$ - Classe 1
 Sollecitazioni: $T_y=-22.11$
 $V,Ed=-22.11$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=2.17$ - Classe 1
 Sollecitazioni: $T_z=-753.40$
 $V,Ed=-753.40$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.04$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=2.17$ - Classe 1
 Sollecitazioni: $N=40.41$ $T_z=-753.40$ $M_y=573.61$ $T_y=-22.11$ $M_z=-23.35$
 $N,Ed=40.41$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=573.61$ $M_y,V,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.10$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-23.35$ $M_z,V,c,Rd=1170.59$ $MN_z,c,Rd=1170.59$ $M_z,Ed/MN_z,c,Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^2 = 0.10$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $M_y,Ed=573.61$ $M_z,Ed=24.64$ $L=2.17$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.17$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=14323.40$ $\lambda_{LT}=0.65$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.70$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.92$
 $\lambda_y=26.27$ $N_{cr,y}=855308.00$ $\lambda_y^*=0.30$ Curva a: $\Phi_y=0.56$ $\chi_y=0.98$
 $\lambda_z=97.06$ $N_{cr,z}=62663.40$ $\lambda_z^*=1.12$ Curva b: $\Phi_z=1.28$ $\chi_z=0.52$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.10+0.01=0.11$
 Verifica ZZ: $0.00+0.06+0.02=0.08$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.01$ (L/32976)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.01$ (L/23702)

Asta n. 2040 (-1580 -1581) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-10.38$
 $V,Ed=-10.38$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=1132.49$
 $V,Ed=1132.49$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.05$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=2.51$ - Classe 1
 Sollecitazioni: $N=73.13$ $M_y=-851.43$ $T_y=-10.38$ $M_z=-12.15$
 $N,Ed=73.13$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-851.43$ $M_y,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.15$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-12.15$ $M_z,V,c,Rd=1170.59$ $MN_z,c,Rd=1170.59$ $M_z,Ed/MN_z,c,Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^2 = 0.15$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $M_y,Ed=-851.43$ $M_z,Ed=-18.00$ $L=3.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.68$ $M_{cr}=13234.70$ $\lambda_{LT}=0.68$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.72$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.91$
 $\lambda_y=37.23$ $N_{cr,y}=425944.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.95$
 $\lambda_z=137.54$ $N_{cr,z}=31206.40$ $\lambda_z^*=1.58$ Curva b: $\Phi_z=1.99$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.15+0.01=0.16$
 Verifica ZZ: $0.00+0.09+0.01=0.11$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.09$ (L/3598)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.11$ (L/2816)

Asta n. 2040 (-1581 -1582) - Sez. 6 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=3.08$ - Classe 1
Sollecitazioni: $T_y=-6.59$
 $V, Ed=-6.59$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=3.08$ - Classe 1
Sollecitazioni: $T_z=-1407.69$
 $V, Ed=-1407.69$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.07$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=3.08$ - Classe 1
Sollecitazioni: $N=77.80$ $T_z=-1407.69$ $M_y=1415.86$ $T_y=-6.59$ $M_z=-10.82$
 $N, Ed=77.80$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1415.86$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.24$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-10.82$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^2 = 0.24$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y, Ed=1415.86$ $M_z, Ed=-10.82$ $L=3.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.08$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.42$ $M_{cr}=11958.60$ $\lambda_{LT}=0.71$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.74$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.89$
 $\lambda_y=37.23$ $N_{cr,y}=425944.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.95$
 $\lambda_z=137.54$ $N_{cr,z}=31206.40$ $\lambda_z^*=1.58$ Curva b: $\Phi_z=1.99$ $\chi_z=0.31$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.26+0.01=0.27$
Verifica ZZ: $0.00+0.16+0.01=0.17$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.04$ (L/8552)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.05$ (L/6675)

Asta n. 2040 (-1582 -1583) - Sez. 6 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-23.68$
 $V, Ed=-23.68$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=1368.56$
 $V, Ed=1368.56$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.06$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=101.21$ $T_z=1368.56$ $M_y=1411.78$ $T_y=-23.68$ $M_z=40.66$
 $N, Ed=101.21$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1411.78$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.24$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=40.66$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.03$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^2 = 0.24$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y, Ed=1411.78$ $M_z, Ed=40.66$ $L=3.43$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.43$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.28$ $M_{cr}=9725.09$ $\lambda_{LT}=0.79$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.80$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.85$
 $\lambda_y=41.53$ $N_{cr,y}=342337.00$ $\lambda_y^*=0.48$ Curva a: $\Phi_y=0.64$ $\chi_y=0.93$
 $\lambda_z=153.42$ $N_{cr,z}=25081.10$ $\lambda_z^*=1.77$ Curva b: $\Phi_z=2.33$ $\chi_z=0.26$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.27+0.02=0.29$
Verifica ZZ: $0.00+0.16+0.03=0.20$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.04$ (L/7751)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.06$ (L/6116)

Asta n. 2040 (-1583 -1584) - Sez. 6 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=2.80$ - Classe 1
Sollecitazioni: $T_y=11.42$
 $V, Ed=11.42$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=2.80$ - Classe 1
Sollecitazioni: $T_z=-1332.87$
 $V, Ed=-1332.87$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.06$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=2.80$ - Classe 1
Sollecitazioni: $N=105.81$ $T_z=-1332.87$ $M_y=1331.98$ $T_y=11.42$ $M_z=15.13$
 $N, Ed=105.81$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1331.98$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.23$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=15.13$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.23$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y, Ed=1331.98$ $M_z, Ed=-16.84$ $L=2.80$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.80$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.32$ $M_{cr}=13030.30$ $\lambda_{LT}=0.68$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.72$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.90$
 $\lambda_y=33.90$ $N_{cr,y}=513720.00$ $\lambda_y^*=0.39$ Curva a: $\Phi_y=0.60$ $\chi_y=0.96$
 $\lambda_z=125.24$ $N_{cr,z}=37637.20$ $\lambda_z^*=1.44$ Curva b: $\Phi_z=1.75$ $\chi_z=0.36$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.24+0.01=0.25$
Verifica ZZ: $0.00+0.14+0.01=0.16$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/15212)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.02$ (L/12388)
- Asta n. 2040 (-1584 -1585) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-8.62$
 $V, Ed=-8.62$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=1047.95$
 $V, Ed=1047.95$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.05$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=98.74$ $T_z=1047.95$ $M_y=1332.69$ $T_y=-8.62$ $M_z=15.94$
 $N, Ed=98.74$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1332.69$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.23$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=15.94$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.23$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y, Ed=1332.69$ $M_z, Ed=15.94$ $L=2.93$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.93$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.60$ $M_{cr}=8452.69$ $\lambda_{LT}=0.85$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.85$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.81$
 $\lambda_y=35.47$ $N_{cr,y}=469145.00$ $\lambda_y^*=0.41$ Curva a: $\Phi_y=0.61$ $\chi_y=0.95$
 $\lambda_z=131.06$ $N_{cr,z}=34371.50$ $\lambda_z^*=1.51$ Curva b: $\Phi_z=1.86$ $\chi_z=0.34$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.27+0.01=0.28$
Verifica ZZ: $0.00+0.16+0.01=0.17$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.05$ (L/5647)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.07$ (L/4118)
- Asta n. 2040 (-1585 -1596) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-2.83$
 $V, Ed=-2.83$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=864.18$
 $V, Ed=864.18$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.04$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=1.92$ - Classe 1

Sollecitazioni: $N=96.71$ $M_y=-632.91$ $T_y=-2.83$ $M_z=-2.12$
 $N, Ed=96.71$ $Nc, Rd=74603.30$ $n=N, Ed/Nc, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-632.91$ $M_y, c, Rd=5804.95$ $MNy, c, Rd=5804.95$ $M_y, Ed/MNy, c, Rd=0.11$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-2.12$ $M_z, V, c, Rd=1170.59$ $MNz, c, Rd=1170.59$ $M_z, Ed/MNz, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MNy, c, Rd)^2 + (M_z, Ed/MNz, c, Rd)^1 = 0.11$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $M_y, Ed=-632.91$ $M_z, Ed=-7.43$ $L=3.79$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.79$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.38$ $M_{cr}=5171.43$ $\lambda_{LT}=1.09$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=1.06$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.66$
 $\lambda_y=45.89$ $Ncr, y=280389.00$ $\lambda^*_y=0.53$ Curva a: $\Phi_y=0.67$ $\chi_y=0.92$
 $\lambda_z=169.53$ $Ncr, z=20542.50$ $\lambda^*_z=1.95$ Curva b: $\Phi_z=2.70$ $\chi_z=0.22$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.16+0.00=0.16$
 Verifica ZZ: $0.00+0.09+0.01=0.10$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.12$ (L/3284)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.15$ (L/2531)

Asta n. 2041 (-1621 -1545) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU $X_l=1.27$ - Classe 2
 Sollecitazioni: $T_y=-8.71$
 $V, Ed=-8.71$ $Vc, Rd=54683.30$ $V, Ed/Vc, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU $X_l=1.27$ - Classe 2
 Sollecitazioni: $T_z=479.87$
 $V, Ed=479.87$ $Vc, Rd=38836.40$ $V, Ed/Vc, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-2641.26$ $T_z=530.88$ $M_y=674.03$ $T_y=26.38$ $M_z=-54.58$
 Tensioni: $\sigma_N=-49.08$ $\sigma_{m,d}=-188.78$ $\tau=0.00$ $\sigma_{max}=-237.87$ (sfrut=0.09)
 Tensioni: $\sigma_N=-49.08$ $\sigma_{m,d}=-3.21$ $\tau=29.64$ $\tau_{max}=29.64$ (sfrut=0.02)
 Tensioni: $\sigma_N=-49.08$ $\sigma_{m,d}=-188.78$ $\tau=0.00$ $\sigma_{ID,max}=237.87$ (sfrut=0.09)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-2641.26$ $M_y, Ed=674.03$ $M_z, Ed=-54.58$ $L=3.50$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.50$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.54$ $M_{cr}=48565.50$ $\lambda_{LT}=0.56$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.65$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=28.11$ $Ncr, y=1411170.00$ $\lambda^*_y=0.32$ Curva a: $\Phi_y=0.57$ $\chi_y=0.97$
 $\lambda_z=104.59$ $Ncr, z=101963.00$ $\lambda^*_z=1.20$ Curva b: $\Phi_z=1.40$ $\chi_z=0.48$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.97, 0.76, 0.97$
 Verifica YY: $0.02+0.05+0.03=0.09$
 Verifica ZZ: $0.02+0.04+0.03=0.08$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.01$ (L/34331)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.01$ (L/27829)

Asta n. 2042 (-1737 -1694) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=1.83$ - Classe 1
 Sollecitazioni: $T_y=-6.64$
 $V, Ed=-6.64$ $Vc, Rd=29609.30$ $V, Ed/Vc, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=1.83$ - Classe 1
 Sollecitazioni: $T_z=-612.21$
 $V, Ed=-612.21$ $Vc, Rd=21171.50$ $V, Ed/Vc, Rd=0.03$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-524.25$ $T_z=-95.05$ $M_y=-472.59$ $T_y=-6.64$ $M_z=2.82$
 $N, Ed=-524.25$ $Nc, Rd=74603.30$ $n=N, Ed/Nc, Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-472.59$ $M_y, V, c, Rd=5804.95$ $MNy, c, Rd=5804.95$ $M_y, Ed/MNy, c, Rd=0.08$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=2.82$ $M_z, V, c, Rd=1170.59$ $MNz, c, Rd=1170.59$ $M_z, Ed/MNz, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MNy, c, Rd)^2 + (M_z, Ed/MNz, c, Rd)^1 = 0.08$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed = -524.25$ My, $Ed = -472.59$ Mz, $Ed = -9.30$ L=1.83
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.83$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 2.18$ M, $cr = 23350.50$ $\lambda_{LT} = 0.51$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.62$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 0.98$
 $\lambda_y = 22.12$ Ncr, $y = 1206730.00$ $\lambda^*_y = 0.25$ Curva a: $\Phi_y = 0.54$ $\chi_y = 0.99$
 $\lambda_z = 81.72$ Ncr, $z = 88410.20$ $\lambda^*_z = 0.94$ Curva b: $\Phi_z = 1.07$ $\chi_z = 0.63$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.58, 0.57, 0.96$
 Verifica YY: $0.01 + 0.08 + 0.00 = 0.09$
 Verifica ZZ: $0.01 + 0.05 + 0.01 = 0.06$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.01$ (L/12856)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.02$ (L/9344)
- Asta n. 2043 (-1863 -1870) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1 = 3.23$ - Classe 1
 Sollecitazioni: $T_y = -9.36$
 $V, Ed = -9.36$ $V_c, Rd = 29609.30$ $V, Ed/V_c, Rd = 0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1 = 3.23$ - Classe 1
 Sollecitazioni: $T_z = -599.39$
 $V, Ed = -599.39$ $V_c, Rd = 21171.50$ $V, Ed/V_c, Rd = 0.03$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1 = 1.61$ - Classe 1
 Sollecitazioni: $N = -208.02$ $M_y = -485.28$ $T_y = -9.36$ $M_z = -1.51$
 $N, Ed = -208.02$ $N_c, Rd = 74603.30$ $n = N, Ed/N_c, Rd = 0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed = -485.28$ $M_y, c, Rd = 5804.95$ $MN_y, c, Rd = 5804.95$ $M_y, Ed/MN_y, c, Rd = 0.08$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed = -1.51$ $M_z, V, c, Rd = 1170.59$ $MN_z, c, Rd = 1170.59$ $M_z, Ed/MN_z, c, Rd = 0.00$
 $\alpha = 2.00$ $\beta = 1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.08$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed = -209.21$ My, $Ed = -485.28$ Mz, $Ed = -16.62$ L=3.23
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 3.23$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 2.28$ M, $cr = 10553.80$ $\lambda_{LT} = 0.76$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.78$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.86$
 $\lambda_y = 39.07$ Ncr, $y = 386671.00$ $\lambda^*_y = 0.45$ Curva a: $\Phi_y = 0.63$ $\chi_y = 0.94$
 $\lambda_z = 144.36$ Ncr, $z = 28329.10$ $\lambda^*_z = 1.66$ Curva b: $\Phi_z = 2.13$ $\chi_z = 0.29$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.58, 0.57, 0.96$
 Verifica YY: $0.00 + 0.09 + 0.01 = 0.10$
 Verifica ZZ: $0.00 + 0.06 + 0.01 = 0.07$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.06$ (L/5028)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.09$ (L/3714)
- Asta n. 2044 (-1862 -1868) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1 = 2.92$ - Classe 1
 Sollecitazioni: $T_y = -28.99$
 $V, Ed = -28.99$ $V_c, Rd = 29609.30$ $V, Ed/V_c, Rd = 0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1 = 2.92$ - Classe 1
 Sollecitazioni: $T_z = -568.38$
 $V, Ed = -568.38$ $V_c, Rd = 21171.50$ $V, Ed/V_c, Rd = 0.03$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1 = 1.44$ - Classe 1
 Sollecitazioni: $N = -1182.17$ $M_y = -407.43$ $T_y = -28.99$ $M_z = 4.65$
 $N, Ed = -1182.17$ $N_c, Rd = 74603.30$ $n = N, Ed/N_c, Rd = 0.02$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed = -407.43$ $M_y, c, Rd = 5804.95$ $MN_y, c, Rd = 5804.95$ $M_y, Ed/MN_y, c, Rd = 0.07$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed = 4.65$ $M_z, V, c, Rd = 1170.59$ $MN_z, c, Rd = 1170.59$ $M_z, Ed/MN_z, c, Rd = 0.00$
 $\alpha = 2.00$ $\beta = 1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.07$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 1
 Sollecitazioni: $N, Ed = -1634.40$ My, $Ed = -313.47$ Mz, $Ed = 69.47$ L=2.92
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 2.92$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.87$ M, $cr = 9927.48$ $\lambda_{LT} = 0.78$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.80$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.85$

- $\lambda_y=35.30$ Ncr,y=473862.00 $\lambda^*_y=0.41$ Curva a: $\Phi_y=0.60$ $\chi_y=0.95$
 $\lambda_z=130.41$ Ncr,z=34717.10 $\lambda^*_z=1.50$ Curva b: $\Phi_z=1.85$ $\chi_z=0.34$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.62, 0.57, 1.04
 Verifica YY: 0.02+0.06+0.04=0.12
 Verifica ZZ: 0.06+0.04+0.06=0.16
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.04$ (L/6602)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.06$ (L/4891)
- Asta n. 2045 (-1711 -1834) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-44.47$
 $V,Ed=-44.47$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=501.14$
 $V,Ed=501.14$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.02$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 17 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-2869.02$ $T_z=220.80$ $M_y=85.62$ $T_y=-87.63$ $M_z=84.36$
 $N,Ed=-2869.02$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.04$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=85.62$ $M_y,V,c,Rd=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_y,Ed/M_{Ny,c,Rd}=0.01$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=84.36$ $M_z,V,c,Rd=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_z,Ed/M_{Nz,c,Rd}=0.07$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/M_{Ny,c,Rd})^2 + (M_z,Ed/M_{Nz,c,Rd})^2 = 0.07$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 1
 Sollecitazioni: $N,Ed=-2869.02$ $M_y,Ed=85.62$ $M_z,Ed=84.36$ $L=1.57$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.57$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.16$ $M_{cr}=16027.60$ $\lambda_{LT}=0.62$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.68$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.94$
 $\lambda_y=18.99$ Ncr,y=1636980.00 $\lambda^*_y=0.22$ Curva a: $\Phi_y=0.53$ $\chi_y=1.00$
 $\lambda_z=70.16$ Ncr,z=119932.00 $\lambda^*_z=0.81$ Curva b: $\Phi_z=0.93$ $\chi_z=0.72$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.60, 0.57, 1.00
 Verifica YY: 0.04+0.01+0.04=0.10
 Verifica ZZ: 0.04+0.01+0.07=0.12
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.00$ (L/126519)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.00$ (L/74761)
- Asta n. 2046 (-1861 -1866) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=2.61$ - Classe 1
 Sollecitazioni: $T_y=-16.08$
 $V,Ed=-16.08$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=2.61$ - Classe 1
 Sollecitazioni: $T_z=-518.68$
 $V,Ed=-518.68$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.02$
- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 33 SLU $X_l=1.30$ - Classe 1
 Sollecitazioni: $N=-313.93$ $M_y=-335.78$ $T_y=-16.08$
 $M_y,Ed=-335.78$ $M_y,c,Rd=5804.95$
 $N,Ed=-313.93$ $N_c,Rd=74603.30$ $Y_n=N,Ed/N_c,Rd=0.00$ $M_{Ny,c,Rd}=5804.95$ $M_y,Ed/M_{Ny,c,Rd}=0.06$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N,Ed=-315.01$ $M_y,Ed=-335.78$ $M_z,Ed=-21.94$ $L=2.61$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.61$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.01$ $M_{cr}=6288.58$ $\lambda_{LT}=0.98$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.96$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.73$
 $\lambda_y=31.59$ Ncr,y=591442.00 $\lambda^*_y=0.36$ Curva a: $\Phi_y=0.58$ $\chi_y=0.96$
 $\lambda_z=116.72$ Ncr,z=43331.50 $\lambda^*_z=1.34$ Curva b: $\Phi_z=1.60$ $\chi_z=0.41$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.58, 0.57, 0.96
 Verifica YY: 0.00+0.08+0.01=0.09
 Verifica ZZ: 0.00+0.05+0.02=0.07
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.03$ (L/8942)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.04$ (L/6657)

Asta n. 2047 (-1733 -1852) - Sez. 6 (IPE200) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU $X_l=0.78$ - Classe 1
 Sollecitazioni: $T_y=219.32$ $M_x=-2.74$
 $V, Ed=219.32$ $V_c, Rd, Red=29311.60$ $V, Ed/V_c, Rd, Red=0.01$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU $X_l=0.78$ - Classe 1
 Sollecitazioni: $T_z=-3770.59$ $M_x=-2.74$
 $V, Ed=-3770.59$ $V_c, Rd, Red=20958.60$ $V, Ed/V_c, Rd, Red=0.18$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.78$ - Classe 1
 Sollecitazioni: $N=-210.84$ $T_z=-3770.59$ $M_y=2287.92$ $T_y=219.32$ $M_z=76.51$ $M_x=-2.74$
 $N, Ed=-210.84$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=2287.92$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.39$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=76.51$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.07$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.39$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-211.10$ $M_y, Ed=2287.92$ $M_z, Ed=-93.74$ $L=1.09$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.09$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.98$ $M_{cr}=51907.10$ $\lambda_{LT}=0.34$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=13.17$ $N_{cr,y}=3402380.00$ $\lambda'_y=0.15$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=48.67$ $N_{cr,z}=249272.00$ $\lambda'_z=0.56$ Curva b: $\Phi_z=0.72$ $\chi_z=0.86$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.37+0.05=0.42$
 Verifica ZZ: $0.00+0.22+0.08=0.30$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.03$ (L/3003)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/2379)

Asta n. 2047 (-1852 -1851) - Sez. 6 (IPE200) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU $X_l=0.06$ - Classe 1
 Sollecitazioni: $T_y=-64.22$ $M_x=14.22$
 $V, Ed=-64.22$ $V_c, Rd, Red=28027.10$ $V, Ed/V_c, Rd, Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU $X_l=0.06$ - Classe 1
 Sollecitazioni: $T_z=8702.10$ $M_x=14.22$
 $V, Ed=8702.10$ $V_c, Rd, Red=20040.10$ $V, Ed/V_c, Rd, Red=0.43$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.06$ - Classe 1
 Sollecitazioni: $N=-1889.24$ $T_z=8702.10$ $M_y=1363.09$ $T_y=-64.22$ $M_z=195.04$ $M_x=14.22$
 $N, Ed=-1889.24$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.03$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1363.09$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.23$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=195.04$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.17$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.23$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-1889.24$ $M_y, Ed=1363.09$ $M_z, Ed=195.04$ $L=0.21$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.21$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.70$ $M_{cr}=1058650.00$ $\lambda_{LT}=0.08$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.45$ $\beta_{LT}=0.75$ $f=1.00$ $\chi_{LT}=1.00$
 $\lambda_y=2.58$ $N_{cr,y}=88719600.00$ $\lambda'_y=0.03$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=9.53$ $N_{cr,z}=6499970.00$ $\lambda'_z=0.11$ Curva b: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.56, 0.57, 0.94$
 Verifica YY: $0.03+0.22+0.09=0.34$
 Verifica ZZ: $0.03+0.13+0.16=0.32$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.00$ (L/4748)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.00$ (L/3134)

Asta n. 2048 (-1864 -1872) - Sez. 5 (IPE300) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 30 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-153.34$ $M_x=2.92$
 $V, Ed=-153.34$ $V_c, Rd, Red=54431.70$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 30 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=-4042.28$ $M_x=2.92$
 $V, Ed=-4042.28$ $V_c, Rd, Red=38657.70$ $V, Ed/V_c, Rd, Red=0.10$
- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.79$ - Classe 3
Sollecitazioni: $N=897.68$ $T_z=-5765.27$ $M_y=4418.24$ $T_y=-361.60$ $M_z=-200.11$ $M_x=4.83$
Tensioni: $\sigma_N=16.68$ $\sigma_{m,d}=1041.67$ $\tau=28.65$ $\sigma_{max}=1058.35$ (sfrut=0.40)
Tensioni: $\sigma_N=16.68$ $\sigma_{m,d}=-11.77$ $\tau=323.29$ $\tau_{max}=323.29$ (sfrut=0.21)
Tensioni: $\sigma_N=16.68$ $\sigma_{m,d}=1041.67$ $\tau=28.65$ $\sigma_{ID,max}=1059.51$ (sfrut=0.40)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $M_y, Ed=4418.24$ $M_z, Ed=-200.11$ $L=1.11$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.11$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=266899.00$ $\lambda_{LT}=0.24$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.49$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=8.88$ $N_{cr,y}=14132200.00$ $\lambda'_y=0.10$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=33.05$ $N_{cr,z}=1021110.00$ $\lambda'_z=0.38$ Curva b: $\Phi_z=0.60$ $\chi_z=0.93$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.29+0.09=0.38$
Verifica ZZ: $0.00+0.23+0.09=0.32$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.01$ (L/6172)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.02$ (L/4198)

Asta n. 2048 (-1872 -1860) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 30 SLU $X_l=0.42$ - Classe 1
Sollecitazioni: $T_y=282.09$ $M_x=-2.73$
 $V, Ed=282.09$ $V_c, Rd, Red=54448.10$ $V, Ed/V_c, Rd, Red=0.01$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 30 SLU $X_l=0.42$ - Classe 1
Sollecitazioni: $T_z=5570.30$ $M_x=-2.73$
 $V, Ed=5570.30$ $V_c, Rd, Red=38669.30$ $V, Ed/V_c, Rd, Red=0.14$
- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.32$ - Classe 3
Sollecitazioni: $N=-1393.11$ $T_z=7102.47$ $M_y=5834.82$ $T_y=497.32$ $M_z=-136.26$ $M_x=-4.97$
Tensioni: $\sigma_N=-25.89$ $\sigma_{m,d}=-1216.64$ $\tau=29.50$ $\sigma_{max}=-1242.53$ (sfrut=0.47)
Tensioni: $\sigma_N=-25.89$ $\sigma_{m,d}=-8.01$ $\tau=397.79$ $\tau_{max}=397.79$ (sfrut=0.26)
Tensioni: $\sigma_N=-25.89$ $\sigma_{m,d}=-1216.64$ $\tau=29.50$ $\sigma_{ID,max}=1243.58$ (sfrut=0.47)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-1393.79$ $M_y, Ed=5834.82$ $M_z, Ed=282.84$ $L=1.16$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.16$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=243646.00$ $\lambda_{LT}=0.25$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.50$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=9.32$ $N_{cr,y}=12850700.00$ $\lambda'_y=0.11$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=34.66$ $N_{cr,z}=928514.00$ $\lambda'_z=0.40$ Curva b: $\Phi_z=0.61$ $\chi_z=0.93$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.38+0.13=0.52$
Verifica ZZ: $0.01+0.30+0.13=0.44$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/4035)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/2661)

Asta n. 2049 (-1859 -1857) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=120.96$
 $V, Ed=120.96$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=559.48$
 $V, Ed=559.48$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.03$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-2171.62$ $T_z=559.48$ $M_y=929.21$ $T_y=120.96$ $M_z=-126.94$
 $N, Ed=-2171.62$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.03$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=929.21$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.16$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-126.94$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.11$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.16$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: N,Ed=-2171.62 My,Ed=929.21 Mz,Ed=-126.94 L=2.04
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.04$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=1.26 M_{cr}=11307.80 \lambda_{LT}=0.73$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.76 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.88$
 $\lambda_y=24.73 N_{cr,y}=965488.00 \lambda^*_y=0.28$ Curva a: $\Phi_y=0.55 \chi_y=0.98$
 $\lambda_z=91.36 N_{cr,z}=70735.60 \lambda^*_z=1.05$ Curva b: $\Phi_z=1.20 \chi_z=0.56$
Kyy, Kyz, Kzy, Kzz=0.95, 0.61, 0.57, 1.02
Verifica YY: 0.03+0.17+0.07=0.27
Verifica ZZ: 0.03+0.10+0.11=0.24
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.04$ (L/5562)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.05$ (L/4079)

Asta n. 2050 (-1621 -1870) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 3 SLV Xl=1.16 - Classe 2
Sollecitazioni: T_y=47.61
V,Ed=47.61 Vc,Rd=54683.30 V,Ed/Vc,Rd=0.00
- Verifica a taglio Dir. Z [4.2.16] - CC 3 SLV Xl=1.16 - Classe 2
Sollecitazioni: T_z=395.57
V,Ed=395.57 Vc,Rd=38836.40 V,Ed/Vc,Rd=0.01
- Verifica in termini tensionali [4.2.4] - CC 13 SLV Xl=0.00 - Classe 3
Sollecitazioni: N=-1440.89 T_z=434.79 M_y=715.82 T_y=110.96 M_z=-89.42
Tensioni: $\sigma_N=-26.78 \sigma_{m,d}=-239.57 \tau=0.00 \sigma_{max}=-266.34$ (sfrut=0.10)
Tensioni: $\sigma_N=-26.78 \sigma_{m,d}=-5.26 \tau=24.28 \tau_{max}=24.28$ (sfrut=0.02)
Tensioni: $\sigma_N=-26.78 \sigma_{m,d}=-239.57 \tau=0.00 \sigma_{TD,max}=266.34$ (sfrut=0.10)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: N,Ed=-1622.77 My,Ed=692.58 Mz,Ed=-147.47 L=1.41
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.41$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=1.51 M_{cr}=143653.00 \lambda_{LT}=0.33$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.53 \beta_{LT}=0.75 f=0.98 \chi_{LT}=1.00$
 $\lambda_y=11.34 N_{cr,y}=8668740.00 \lambda^*_y=0.13$ Curva a: $\Phi_y=0.50 \chi_y=1.00$
 $\lambda_z=42.20 N_{cr,z}=626353.00 \lambda^*_z=0.49$ Curva b: $\Phi_z=0.67 \chi_z=0.89$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.01+0.05+0.07=0.12
Verifica ZZ: 0.01+0.04+0.07=0.11
- Verifica freccia massima per soli carichi accidentali - CC 23
 $f_{z,g}=0.00$ (L/64440)
- Verifica freccia massima carichi totali - CC 23
 $f_{z,g}=0.01$ (L/25121)

Asta n. 2050 (-1870 -1869) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 1 SLV Xl=0.31 - Classe 1
Sollecitazioni: T_y=-31.70 M_x=-2.85
V,Ed=-31.70 Vc,Rd,Red=54438.10 V,Ed/Vc,Rd,Red=0.00
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 1 SLV Xl=0.31 - Classe 1
Sollecitazioni: T_z=325.10 M_x=-2.85
V,Ed=325.10 Vc,Rd,Red=38662.30 V,Ed/Vc,Rd,Red=0.01
- Verifica in termini tensionali [4.2.4] - CC 17 SLU Xl=0.00 - Classe 3
Sollecitazioni: N=-1583.87 T_z=13.14 M_y=172.87 T_y=291.34 M_z=-177.66 M_x=-4.32
Tensioni: $\sigma_N=-29.43 \sigma_{m,d}=-251.72 \tau=25.63 \sigma_{max}=-281.15$ (sfrut=0.11)
Tensioni: $\sigma_N=-29.43 \sigma_{m,d}=-36.16 \tau=31.46 \tau_{max}=31.46$ (sfrut=0.02)
Tensioni: $\sigma_N=-29.43 \sigma_{m,d}=-251.72 \tau=25.63 \sigma_{TD,max}=284.64$ (sfrut=0.11)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: N,Ed=-1583.87 My,Ed=197.91 Mz,Ed=-177.66 L=1.02
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.02$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=1.06 M_{cr}=190137.00 \lambda_{LT}=0.28$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.51 \beta_{LT}=0.75 f=0.99 \chi_{LT}=1.00$
 $\lambda_y=8.18 N_{cr,y}=16685200.00 \lambda^*_y=0.09$ Curva a: $\Phi_y=0.49 \chi_y=1.00$
 $\lambda_z=30.42 N_{cr,z}=1205570.00 \lambda^*_z=0.35$ Curva b: $\Phi_z=0.59 \chi_z=0.95$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.01+0.01+0.08=0.10
Verifica ZZ: 0.01+0.01+0.08=0.10

- Verifica freccia massima per soli carichi accidentali - CC 21
 $f_{z,g}=0.00$ (L/97120)

- Verifica freccia massima carichi totali - CC 21
 $f_{z,g}=0.00$ (L/82178)

Asta n. 2050 (-1869 -1868) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU $X_l=0.21$ - Classe 2
 Sollecitazioni: $T_y=-357.33$ $M_x=11.37$
 $V,Ed=-357.33$ $V_c,Rd,Red=53698.40$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU $X_l=0.21$ - Classe 2
 Sollecitazioni: $T_z=-674.97$ $M_x=11.37$
 $V,Ed=-674.97$ $V_c,Rd,Red=38136.90$ $V,Ed/V_c,Rd,Red=0.02$

- Verifica in termini tensionali [4.2.4] - CC 30 SLU $X_l=0.52$ - Classe 3
 Sollecitazioni: $N=-2270.77$ $T_z=-710.05$ $M_y=630.38$ $T_y=-356.03$ $M_z=-103.59$ $M_x=10.59$
 Tensioni: $\sigma_N=-42.20$ $\sigma_{m,d}=-241.83$ $\tau=62.85$ $\sigma_{max}=-284.03$ (sfrut=0.11)
 Tensioni: $\sigma_N=-42.20$ $\sigma_{m,d}=-99.86$ $\tau=77.39$ $\tau_{max}=77.39$ (sfrut=0.05)
 Tensioni: $\sigma_N=-42.20$ $\sigma_{m,d}=-241.83$ $\tau=62.85$ $\sigma_{ID,max}=304.17$ (sfrut=0.12)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 3
 Sollecitazioni: $N,Ed=-2274.94$ $M_y,Ed=630.38$ $M_z,Ed=-103.59$ $L=0.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.34$ $M_{cr}=893280.00$ $\lambda_{LT}=0.13$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.46$ $\beta_{LT}=0.75$ $f=1.00$ $\chi_{LT}=1.00$
 $\lambda_y=4.20$ $N_{cr,y}=63322500.00$ $\lambda^*_y=0.05$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=15.61$ $N_{cr,z}=4575320.00$ $\lambda^*_z=0.18$ Curva b: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.02+0.04+0.05=0.10$
 Verifica ZZ: $0.02+0.03+0.05=0.10$

- Verifica freccia massima per soli carichi accidentali - CC 35
 $f_{z,g}=0.00$

- Verifica freccia massima carichi totali - CC 35
 $f_{z,g}=0.00$

Asta n. 2050 (-1868 -1867) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 9 SLV $X_l=0.12$ - Classe 1
 Sollecitazioni: $T_y=-201.93$ $M_x=-4.79$
 $V,Ed=-201.93$ $V_c,Rd,Red=54270.70$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 9 SLV $X_l=0.12$ - Classe 1
 Sollecitazioni: $T_z=-510.98$ $M_x=-4.79$
 $V,Ed=-510.98$ $V_c,Rd,Red=38543.40$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.37$ - Classe 3
 Sollecitazioni: $N=-2175.90$ $T_z=-701.14$ $M_y=659.48$ $T_y=1443.35$ $M_z=371.37$ $M_x=-7.13$
 Tensioni: $\sigma_N=-40.43$ $\sigma_{m,d}=-579.68$ $\tau=42.32$ $\sigma_{max}=-620.12$ (sfrut=0.24)
 Tensioni: $\sigma_N=-40.43$ $\sigma_{m,d}=-76.26$ $\tau=78.28$ $\tau_{max}=78.28$ (sfrut=0.05)
 Tensioni: $\sigma_N=-40.43$ $\sigma_{m,d}=-579.68$ $\tau=42.32$ $\sigma_{ID,max}=624.43$ (sfrut=0.24)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-2177.70$ $M_y,Ed=659.48$ $M_z,Ed=371.37$ $L=0.37$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.37$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.21$ $M_{cr}=1632040.00$ $\lambda_{LT}=0.10$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.45$ $\beta_{LT}=0.75$ $f=1.00$ $\chi_{LT}=1.00$
 $\lambda_y=2.95$ $N_{cr,y}=128274000.00$ $\lambda^*_y=0.03$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=10.97$ $N_{cr,z}=9268370.00$ $\lambda^*_z=0.13$ Curva b: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.02+0.04+0.17=0.23$
 Verifica ZZ: $0.02+0.03+0.17=0.22$

- Verifica freccia massima per soli carichi accidentali - CC 35
 $f_{z,g}=0.00$

- Verifica freccia massima carichi totali - CC 35
 $f_{z,g}=0.00$

Asta n. 2050 (-1867 -1866) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 3 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-30.30$
 $V,Ed=-30.30$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

-
- Verifica a taglio Dir. Z [4.2.16] - CC 3 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=-504.39$
 $V, Ed=-504.39$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$

 - Verifica in termini tensionali [4.2.4] - CC 30 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-939.78$ $T_z=129.27$ $M_y=1048.49$ $T_y=-309.48$ $M_z=218.59$ $M_x=2.62$
Tensioni: $\sigma_N=-17.46$ $\sigma_{m,d}=-459.74$ $\tau=15.52$ $\sigma_{max}=-477.20$ (sfrut=0.18)
Tensioni: $\sigma_N=-17.46$ $\sigma_{m,d}=-143.11$ $\tau=22.52$ $\tau_{max}=22.52$ (sfrut=0.01)
Tensioni: $\sigma_N=-17.46$ $\sigma_{m,d}=-459.74$ $\tau=15.52$ $\sigma_{ID,max}=477.96$ (sfrut=0.18)

 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 3
Sollecitazioni: $N, Ed=-939.78$ $M_y, Ed=1048.49$ $M_z, Ed=218.59$ $L=1.11$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.11$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.03$ $M_{cr}=155475.00$ $\lambda_{LT}=0.31$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.52$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=8.94$ Ncr, $y=13948100.00$ $\lambda'_y=0.10$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=33.27$ Ncr, $z=1007810.00$ $\lambda'_z=0.38$ Curva b: $\Phi_z=0.60$ $\chi_z=0.93$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.07+0.10=0.17$
Verifica ZZ: $0.01+0.05+0.10=0.16$

 - Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,g}=0.01$ (L/19474)

 - Verifica freccia massima carichi totali - CC 37
 $f_{z,g}=0.01$ (L/15174)

 - Asta n. 2050 (-1866 -1865) - Sez. 5 (IPE300) - Crit. 1

 - Verifica in termini tensionali [4.2.4] - CC 32 SLU $X_l=0.43$ - Classe 3
Sollecitazioni: $N=-1294.59$ $T_z=-684.36$ $M_y=1521.14$ $T_y=-110.56$ $M_z=-151.15$ $M_x=-11.26$
Tensioni: $\sigma_N=-24.06$ $\sigma_{m,d}=-460.80$ $\tau=66.83$ $\sigma_{max}=-484.86$ (sfrut=0.19)
Tensioni: $\sigma_N=-24.06$ $\sigma_{m,d}=8.89$ $\tau=77.31$ $\tau_{max}=77.31$ (sfrut=0.05)
Tensioni: $\sigma_N=-24.06$ $\sigma_{m,d}=-460.80$ $\tau=66.83$ $\sigma_{ID,max}=498.48$ (sfrut=0.19)

 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-1386.47$ $M_y, Ed=1740.29$ $M_z, Ed=-142.15$ $L=0.43$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.43$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.12$ $M_{cr}=1115080.00$ $\lambda_{LT}=0.12$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.46$ $\beta_{LT}=0.75$ $f=1.00$ $\chi_{LT}=1.00$
 $\lambda_y=3.43$ Ncr, $y=94743200.00$ $\lambda'_y=0.04$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=12.76$ Ncr, $z=6845590.00$ $\lambda'_z=0.15$ Curva b: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.11+0.06=0.19$
Verifica ZZ: $0.01+0.09+0.06=0.16$

 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.00$ (L/40756)

 - Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.00$ (L/28020)

 - Asta n. 2050 (-1865 -1864) - Sez. 5 (IPE300) - Crit. 1

 - Verifica a taglio Dir. Y [4.2.16] - CC 1 SLV $X_l=0.34$ - Classe 1
Sollecitazioni: $T_y=277.20$
 $V, Ed=277.20$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.01$

 - Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.34$ - Classe 1
Sollecitazioni: $T_z=-836.24$
 $V, Ed=-836.24$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.02$

 - Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=1.24$ - Classe 3
Sollecitazioni: $N=-793.97$ $T_z=-2072.52$ $M_y=4205.07$ $T_y=464.93$ $M_z=423.05$
Tensioni: $\sigma_N=-14.75$ $\sigma_{m,d}=-1280.33$ $\tau=0.00$ $\sigma_{max}=-1295.08$ (sfrut=0.49)
Tensioni: $\sigma_N=-14.75$ $\sigma_{m,d}=24.87$ $\tau=115.73$ $\tau_{max}=115.73$ (sfrut=0.08)
Tensioni: $\sigma_N=-14.75$ $\sigma_{m,d}=-1280.33$ $\tau=0.00$ $\sigma_{ID,max}=1295.08$ (sfrut=0.49)

 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-804.89$ $M_y, Ed=4205.07$ $M_z, Ed=423.05$ $L=1.24$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.24$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.36$ $M_{cr}=165946.00$ $\lambda_{LT}=0.30$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.52$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=9.98$ Ncr, $y=11190600.00$ $\lambda'_y=0.12$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=37.14$ Ncr, $z=808565.00$ $\lambda'_z=0.43$ Curva b: $\Phi_z=0.63$ $\chi_z=0.91$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.27+0.19=0.47$
Verifica ZZ: $0.01+0.22+0.19=0.42$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.01$ (L/8874)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.02$ (L/5929)

Asta n. 2050 (-1864 -1857) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 31 SLU $X_l=0.81$ - Classe 1
 Sollecitazioni: $T_y=-421.78$
 $V, Ed=-421.78$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.01$

- Verifica a taglio Dir. Z [4.2.16] - CC 31 SLU $X_l=0.81$ - Classe 1
 Sollecitazioni: $T_z=2462.97$
 $V, Ed=2462.97$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.06$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-1503.89$ $T_z=3351.67$ $M_y=4210.40$ $T_y=-407.67$ $M_z=337.83$
 Tensioni: $\sigma_N=-27.95$ $\sigma_{m,d}=-1175.44$ $\tau=0.00$ $\sigma_{max}=-1203.38$ (sfrut=0.46)
 Tensioni: $\sigma_N=-27.95$ $\sigma_{m,d}=19.86$ $\tau=187.15$ $\tau_{max}=187.15$ (sfrut=0.12)
 Tensioni: $\sigma_N=-27.95$ $\sigma_{m,d}=-1175.44$ $\tau=0.00$ $\sigma_{ID,max}=1203.38$ (sfrut=0.46)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed=-1503.89$ $M_y, Ed=4210.40$ $M_z, Ed=337.83$ $L=1.27$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.27$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.74$ $M_{cr}=202743.00$ $\lambda_{LT}=0.27$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.51$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=10.22$ $N_{cr,y}=10679500.00$ $\lambda^*_y=0.12$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=38.02$ $N_{cr,z}=771641.00$ $\lambda^*_z=0.44$ Curva b: $\Phi_z=0.64$ $\chi_z=0.91$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.27+0.15=0.44$
 Verifica ZZ: $0.01+0.22+0.15=0.38$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.01$ (L/9209)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.02$ (L/6069)

Asta n. 2050 (-1857 -1856) - Sez. 5 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=1.57$ - Classe 3
 Sollecitazioni: $N=-1321.02$ $T_z=1493.35$ $M_y=-1869.60$ $T_y=94.52$ $M_z=-44.97$ $M_x=1.68$
 Tensioni: $\sigma_N=-24.55$ $\sigma_{m,d}=-391.46$ $\tau=9.95$ $\sigma_{max}=-416.01$ (sfrut=0.16)
 Tensioni: $\sigma_N=-24.55$ $\sigma_{m,d}=2.64$ $\tau=84.01$ $\tau_{max}=84.01$ (sfrut=0.06)
 Tensioni: $\sigma_N=-24.55$ $\sigma_{m,d}=-391.46$ $\tau=9.95$ $\sigma_{ID,max}=416.36$ (sfrut=0.16)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed=-1333.56$ $M_y, Ed=-1869.60$ $M_z, Ed=-193.59$ $L=1.57$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.57$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.16$ $M_{cr}=168523.00$ $\lambda_{LT}=0.30$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.52$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.62$ $N_{cr,y}=7004270.00$ $\lambda^*_y=0.15$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=46.95$ $N_{cr,z}=506088.00$ $\lambda^*_z=0.54$ Curva b: $\Phi_z=0.70$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.12+0.09=0.22$
 Verifica ZZ: $0.01+0.10+0.09=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.01$ (L/27030)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.01$ (L/19865)

Asta n. 2050 (-1856 -1547) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 18 SLU $X_l=0.55$ - Classe 1
 Sollecitazioni: $T_y=101.06$
 $V, Ed=101.06$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 18 SLU $X_l=0.55$ - Classe 1
 Sollecitazioni: $T_z=535.49$
 $V, Ed=535.49$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.88$ - Classe 3
 Sollecitazioni: $N=-1314.88$ $T_z=1084.78$ $M_y=-2857.50$ $T_y=82.32$ $M_z=20.18$ $M_x=-2.74$
 Tensioni: $\sigma_N=-24.43$ $\sigma_{m,d}=-538.01$ $\tau=16.27$ $\sigma_{max}=-562.44$ (sfrut=0.21)
 Tensioni: $\sigma_N=-24.43$ $\sigma_{m,d}=1.19$ $\tau=62.79$ $\tau_{max}=62.79$ (sfrut=0.04)

Tensioni: $\sigma_N = -24.43$ $\sigma_{m,d} = -538.01$ $\tau = 16.27$ $\sigma_{ID,max} = 563.15$ (sfrut=0.22)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed = -1318.59$ $M_y, Ed = -2857.50$ $M_z, Ed = -52.42$ $L = 0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 0.88$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 1.19$ $M, cr = 282750.00$ $\lambda_{LT} = 0.23$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.49$ $\beta_{LT} = 0.75$ $f = 0.99$ $\chi_{LT} = 1.00$
 $\lambda_y = 7.08$ $N_{cr,y} = 22266100.00$ $\lambda^*_y = 0.08$ Curva a: $\Phi_y = 0.49$ $\chi_y = 1.00$
 $\lambda_z = 26.33$ $N_{cr,z} = 1608820.00$ $\lambda^*_z = 0.30$ Curva b: $\Phi_z = 0.56$ $\chi_z = 0.96$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01 + 0.19 + 0.02 = 0.22$
 Verifica ZZ: $0.01 + 0.15 + 0.02 = 0.18$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.01$ (L/15944)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.01$ (L/11277)

Asta n. 2050 (-1547 -1855) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 30 SLU $X_1 = 0.21$ - Classe 1
 Sollecitazioni: $T_y = 53.40$ $M_x = 2.25$
 $V, Ed = 53.40$ $V_c, Rd, Red = 54490.00$ $V, Ed/V_c, Rd, Red = 0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 30 SLU $X_1 = 0.21$ - Classe 1
 Sollecitazioni: $T_z = 453.96$ $M_x = 2.25$
 $V, Ed = 453.96$ $V_c, Rd, Red = 38699.20$ $V, Ed/V_c, Rd, Red = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1 = 0.63$ - Classe 3
 Sollecitazioni: $N = -1240.12$ $T_z = 667.64$ $M_y = -3299.58$ $T_y = 86.80$ $M_z = 37.25$ $M_x = 3.98$
 Tensioni: $\sigma_N = -23.04$ $\sigma_{m,d} = -638.56$ $\tau = 23.63$ $\sigma_{max} = -661.60$ (sfrut=0.25)
 Tensioni: $\sigma_N = -23.04$ $\sigma_{m,d} = -2.19$ $\tau = 44.29$ $\tau_{max} = 44.29$ (sfrut=0.03)
 Tensioni: $\sigma_N = -23.04$ $\sigma_{m,d} = -638.56$ $\tau = 23.63$ $\sigma_{ID,max} = 662.87$ (sfrut=0.25)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed = -1245.66$ $M_y, Ed = -3299.58$ $M_z, Ed = 37.25$ $L = 0.63$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 0.63$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 1.07$ $M, cr = 497362.00$ $\lambda_{LT} = 0.18$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.47$ $\beta_{LT} = 0.75$ $f = 0.99$ $\chi_{LT} = 1.00$
 $\lambda_y = 5.02$ $N_{cr,y} = 44175000.00$ $\lambda^*_y = 0.06$ Curva a: $\Phi_y = 0.49$ $\chi_y = 1.00$
 $\lambda_z = 18.69$ $N_{cr,z} = 3191830.00$ $\lambda^*_z = 0.22$ Curva b: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01 + 0.21 + 0.02 = 0.24$
 Verifica ZZ: $0.01 + 0.17 + 0.02 = 0.20$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.00$ (L/16835)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.01$ (L/11518)

Asta n. 2050 (-1855 -1596) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1 = 0.71$ - Classe 1
 Sollecitazioni: $T_y = -40.55$
 $V, Ed = -40.55$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1 = 0.71$ - Classe 1
 Sollecitazioni: $T_z = 312.80$
 $V, Ed = 312.80$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1 = 1.56$ - Classe 3
 Sollecitazioni: $N = -1242.31$ $T_z = 233.24$ $M_y = -3782.66$ $T_y = -40.55$ $M_z = -34.62$
 Tensioni: $\sigma_N = -23.09$ $\sigma_{m,d} = -722.01$ $\tau = 0.00$ $\sigma_{max} = -745.10$ (sfrut=0.28)
 Tensioni: $\sigma_N = -23.09$ $\sigma_{m,d} = -2.04$ $\tau = 13.02$ $\tau_{max} = 13.02$ (sfrut=0.01)
 Tensioni: $\sigma_N = -23.09$ $\sigma_{m,d} = -722.01$ $\tau = 0.00$ $\sigma_{ID,max} = 745.10$ (sfrut=0.28)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed = -1250.77$ $M_y, Ed = -3782.66$ $M_z, Ed = -34.62$ $L = 1.56$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.56$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 1.06$ $M, cr = 84164.50$ $\lambda_{LT} = 0.43$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.57$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 12.51$ $N_{cr,y} = 7124610.00$ $\lambda^*_y = 0.14$ Curva a: $\Phi_y = 0.50$ $\chi_y = 1.00$
 $\lambda_z = 46.55$ $N_{cr,z} = 514783.00$ $\lambda^*_z = 0.54$ Curva b: $\Phi_z = 0.70$ $\chi_z = 0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01 + 0.25 + 0.02 = 0.27$
 Verifica ZZ: $0.01 + 0.20 + 0.02 = 0.22$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.03$ (L/5223)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.04$ (L/3732)

Asta n. 2050 (-1596 -1578) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l=1.10$ - Classe 1
 Sollecitazioni: $T_y=11.41$
 $V,Ed=11.41$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 13 SLV $X_l=1.10$ - Classe 1
 Sollecitazioni: $T_z=-302.67$
 $V,Ed=-302.67$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-1081.60$ $T_z=-1256.47$ $M_y=-3497.42$ $T_y=38.36$ $M_z=-44.54$
 Tensioni: $\sigma_N=-20.10$ $\sigma_{m,d}=-683.13$ $\tau=0.00$ $\sigma_{max}=-703.23$ (sfrut=0.27)
 Tensioni: $\sigma_N=-20.10$ $\sigma_{m,d}=-2.62$ $\tau=70.15$ $\tau_{max}=70.15$ (sfrut=0.05)
 Tensioni: $\sigma_N=-20.10$ $\sigma_{m,d}=-683.13$ $\tau=0.00$ $\sigma_{ID,max}=703.23$ (sfrut=0.27)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N,Ed=-1081.60$ $M_y,Ed=-3497.42$ $M_z,Ed=48.06$ $L=2.41$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.41$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.78$ $M_{cr}=63601.30$ $\lambda_{LT}=0.49$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.61$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.99$
 $\lambda_y=19.37$ Ncr,y=2972010.00 $\lambda^*_y=0.22$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=72.07$ Ncr,z=214740.00 $\lambda^*_z=0.83$ Curva b: $\Phi_z=0.95$ $\chi_z=0.71$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.01+0.23+0.02=0.26$
 Verifica ZZ: $0.01+0.18+0.02=0.21$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.04$ (L/5845)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.06$ (L/4341)

Asta n. 2050 (-1578 -1338) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 15 SLV $X_l=1.74$ - Classe 1
 Sollecitazioni: $T_y=-12.26$
 $V,Ed=-12.26$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 15 SLV $X_l=1.74$ - Classe 1
 Sollecitazioni: $T_z=-549.23$
 $V,Ed=-549.23$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=2.13$ - Classe 3
 Sollecitazioni: $N=-1144.19$ $T_z=-2755.54$ $M_y=5501.22$ $T_y=-50.77$ $M_z=-43.95$
 Tensioni: $\sigma_N=-21.26$ $\sigma_{m,d}=-1042.09$ $\tau=0.00$ $\sigma_{max}=-1063.35$ (sfrut=0.41)
 Tensioni: $\sigma_N=-21.26$ $\sigma_{m,d}=-2.58$ $\tau=153.85$ $\tau_{max}=153.85$ (sfrut=0.10)
 Tensioni: $\sigma_N=-21.26$ $\sigma_{m,d}=-1042.09$ $\tau=0.00$ $\sigma_{ID,max}=1063.35$ (sfrut=0.41)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N,Ed=-1168.57$ $M_y,Ed=5501.22$ $M_z,Ed=64.27$ $L=2.76$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.76$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.73$ $M_{cr}=48885.90$ $\lambda_{LT}=0.56$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.64$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=22.18$ Ncr,y=2267060.00 $\lambda^*_y=0.26$ Curva a: $\Phi_y=0.54$ $\chi_y=0.99$
 $\lambda_z=82.52$ Ncr,z=163804.00 $\lambda^*_z=0.95$ Curva b: $\Phi_z=1.08$ $\chi_z=0.63$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.01+0.37+0.03=0.41$
 Verifica ZZ: $0.01+0.30+0.03=0.34$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G}=0.08$ (L/2539)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.12$ (L/1803)

Asta n. 2051 (-1701 -1710) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=1.04$ - Classe 1
 Sollecitazioni: $T_y=148.45$
 $V,Ed=148.45$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.01$

Relazione di calcolo

-
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=1.04$ - Classe 1
Sollecitazioni: $T_z=-1241.40$
 $V, Ed=-1241.40$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.06$

 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=1.04$ - Classe 1
Sollecitazioni: $N=-297.21$ $T_z=-1241.40$ $M_y=1335.99$ $T_y=148.45$ $M_z=61.25$
 $N, Ed=-297.21$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1335.99$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=0.23$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=61.25$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.05$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.23$

 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-297.21$ $M_y, Ed=1335.99$ $M_z, Ed=-93.55$ $L=1.04$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.04$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.51$ $M, cr=42791.30$ $\lambda_{LT}=0.38$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.55$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.63$ $N_{cr,y}=3703730.00$ $\lambda^*_y=0.15$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=46.64$ $N_{cr,z}=271351.00$ $\lambda^*_z=0.54$ Curva b: $\Phi_z=0.70$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.22+0.05=0.27$
Verifica ZZ: $0.00+0.13+0.08=0.21$

 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.01$ (L/8962)

 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.02$ (L/6394)
- Asta n. 2052 (-1694 -1835) - Sez. 5 (IPE300) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 15 SLV $X_l=1.11$ - Classe 1
Sollecitazioni: $T_y=13.11$
 $V, Ed=13.11$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

 - Verifica a taglio Dir. Z [4.2.16] - CC 15 SLV $X_l=1.11$ - Classe 1
Sollecitazioni: $T_z=-242.07$
 $V, Ed=-242.07$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$

 - Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=2.03$ - Classe 3
Sollecitazioni: $N=-936.76$ $T_z=-180.41$ $M_y=292.74$ $T_y=-74.37$ $M_z=-79.30$
Tensioni: $\sigma_N=-17.41$ $\sigma_{m,d}=-151.06$ $\tau=0.00$ $\sigma_{max}=-168.46$ (sfrut=0.06)
Tensioni: $\sigma_N=-17.41$ $\sigma_{m,d}=-4.66$ $\tau=10.08$ $\tau_{max}=10.08$ (sfrut=0.01)
Tensioni: $\sigma_N=-17.41$ $\sigma_{m,d}=-151.06$ $\tau=0.00$ $\sigma_{TD,max}=168.46$ (sfrut=0.06)

 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-946.31$ $M_y, Ed=292.74$ $M_z, Ed=-79.30$ $L=2.03$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.03$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.43$ $M, cr=69206.30$ $\lambda_{LT}=0.47$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.59$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=16.32$ $N_{cr,y}=4185720.00$ $\lambda^*_y=0.19$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=60.73$ $N_{cr,z}=302436.00$ $\lambda^*_z=0.70$ Curva b: $\Phi_z=0.83$ $\chi_z=0.78$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.02+0.04=0.06$
Verifica ZZ: $0.01+0.02+0.04=0.06$

 - Verifica freccia massima per soli carichi accidentali - CC 21
 $f_{z,G}=0.00$ (L/101569)

 - Verifica freccia massima carichi totali - CC 21
 $f_{z,G}=0.00$ (L/49603)
- Asta n. 2052 (-1835 -1834) - Sez. 5 (IPE300) - Crit. 1
-
- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.29$ - Classe 3
Sollecitazioni: $N=576.54$ $T_z=-3375.16$ $M_y=1188.63$ $T_y=496.98$ $M_z=75.25$ $M_x=4.60$
Tensioni: $\sigma_N=10.71$ $\sigma_{m,d}=306.84$ $\tau=27.32$ $\sigma_{max}=317.55$ (sfrut=0.12)
Tensioni: $\sigma_N=10.71$ $\sigma_{m,d}=-4.42$ $\tau=190.67$ $\tau_{max}=190.67$ (sfrut=0.13)
Tensioni: $\sigma_N=10.71$ $\sigma_{m,d}=181.23$ $\tau=158.21$ $\sigma_{TD,max}=334.56$ (sfrut=0.13)

 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $M_y, Ed=1188.63$ $M_z, Ed=75.25$ $L=0.29$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.29$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.58$ $M, cr=3342460.00$ $\lambda_{LT}=0.07$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.45$ $\beta_{LT}=0.75$ $f=1.00$ $\chi_{LT}=1.00$
 $\lambda_y=2.35$ $N_{cr,y}=202501000.00$ $\lambda^*_y=0.03$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$

Relazione di calcolo

$\lambda_z=8.73$ Ncr,z=14631500.00 $\lambda^*_z=0.10$ Curva b: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.08+0.03=0.11$
 Verifica ZZ: $0.00+0.06+0.03=0.10$

- Verifica freccia massima per soli carichi accidentali - CC 35
 $f_{z,g}=0.00$

- Verifica freccia massima carichi totali - CC 21
 $f_{z,g}=0.00$

Asta n. 2052 (-1834 -1733) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU $X1=1.32$ - Classe 1
 Sollecitazioni: $T_y=-78.72$ $M_x=1.38$
 $V, Ed=-78.72$ $V_c, Rd, Red=54564.90$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU $X1=1.32$ - Classe 1
 Sollecitazioni: $T_z=-1480.91$ $M_x=1.38$
 $V, Ed=-1480.91$ $V_c, Rd, Red=38752.30$ $V, Ed/V_c, Rd, Red=0.04$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X1=2.43$ - Classe 3
 Sollecitazioni: $N=-5.14$ $T_z=-1591.40$ $M_y=4834.88$ $T_y=-78.72$ $M_z=-86.50$ $M_x=1.38$
 Tensioni: $\sigma_N=-0.10$ $\sigma_{m,d}=-975.33$ $\tau=8.18$ $\sigma_{max}=-975.43$ (sfrut=0.37)
 Tensioni: $\sigma_N=-0.10$ $\sigma_{m,d}=-5.09$ $\tau=89.26$ $\tau_{max}=89.26$ (sfrut=0.06)
 Tensioni: $\sigma_N=-0.10$ $\sigma_{m,d}=-975.33$ $\tau=8.18$ $\sigma_{ID,max}=975.53$ (sfrut=0.37)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed=-21.97$ $M_y, Ed=4834.88$ $M_z, Ed=104.60$ $L=2.43$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.43$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.49$ $M_{cr}=52602.00$ $\lambda_{LT}=0.54$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.63$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.97$
 $\lambda_y=19.48$ Ncr,y=2938810.00 $\lambda^*_y=0.22$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=72.47$ Ncr,z=212341.00 $\lambda^*_z=0.83$ Curva b: $\Phi_z=0.96$ $\chi_z=0.70$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.32+0.05=0.37$
 Verifica ZZ: $0.00+0.26+0.05=0.31$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.06$ (L/4179)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.08$ (L/2869)

Asta n. 2052 (-1733 -1701) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 20 SLU $X1=0.42$ - Classe 1
 Sollecitazioni: $T_y=12.41$
 $V, Ed=12.41$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 20 SLU $X1=0.42$ - Classe 1
 Sollecitazioni: $T_z=1125.72$
 $V, Ed=1125.72$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.03$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X1=0.00$ - Classe 3
 Sollecitazioni: $N=-692.30$ $T_z=2467.35$ $M_y=4465.69$ $T_y=-7.39$ $M_z=31.78$ $M_x=-1.11$
 Tensioni: $\sigma_N=-12.86$ $\sigma_{m,d}=-841.09$ $\tau=6.60$ $\sigma_{max}=-853.96$ (sfrut=0.33)
 Tensioni: $\sigma_N=-12.86$ $\sigma_{m,d}=-1.87$ $\tau=137.92$ $\tau_{max}=137.92$ (sfrut=0.09)
 Tensioni: $\sigma_N=-12.86$ $\sigma_{m,d}=-841.09$ $\tau=6.60$ $\sigma_{ID,max}=854.03$ (sfrut=0.33)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed=-692.30$ $M_y, Ed=4465.69$ $M_z, Ed=31.78$ $L=2.31$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.31$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.95$ $M_{cr}=75534.40$ $\lambda_{LT}=0.45$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.58$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=18.51$ Ncr,y=3253940.00 $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.88$ Ncr,z=235111.00 $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.92$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.29+0.01=0.31$
 Verifica ZZ: $0.00+0.23+0.01=0.25$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.04$ (L/6124)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.05$ (L/4406)

Asta n. 2052 (-1701 -1833) - Sez. 5 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 7 SLV Xl=0.63 - Classe 1
Sollecitazioni: $T_y = -16.43$
 $V, Ed = -16.43$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 7 SLV Xl=0.63 - Classe 1
Sollecitazioni: $T_z = 473.66$
 $V, Ed = 473.66$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.01$
 - Verifica in termini tensionali [4.2.4] - CC 32 SLU Xl=1.16 - Classe 3
Sollecitazioni: $N = -553.47$ $T_z = 2048.26$ $M_y = -3022.71$ $T_y = -346.36$ $M_z = -243.32$
Tensioni: $\sigma_N = -10.29$ $\sigma_{m,d} = -844.84$ $\tau = 0.00$ $\sigma_{max} = -855.13$ (sfrut=0.33)
Tensioni: $\sigma_N = -10.29$ $\sigma_{m,d} = -14.31$ $\tau = 114.37$ $\tau_{max} = 114.37$ (sfrut=0.08)
Tensioni: $\sigma_N = -10.29$ $\sigma_{m,d} = -844.84$ $\tau = 0.00$ $\sigma_{ID,max} = 855.13$ (sfrut=0.33)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 3
Sollecitazioni: $N, Ed = -562.64$ $M_y, Ed = -3022.71$ $M_z, Ed = -243.32$ $L = 1.16$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.16$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.57$ $M_{cr} = 218213.00$ $\lambda_{LT} = 0.26$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.50$ $\beta_{LT} = 0.75$ $f = 0.99$ $\chi_{LT} = 1.00$
 $\lambda_y = 9.32$ $N_{cr,y} = 12847000.00$ $\lambda^*_y = 0.11$ Curva a: $\Phi_y = 0.50$ $\chi_y = 1.00$
 $\lambda_z = 34.66$ $N_{cr,z} = 928247.00$ $\lambda^*_z = 0.40$ Curva b: $\Phi_z = 0.61$ $\chi_z = 0.93$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00 + 0.20 + 0.11 = 0.31$
Verifica ZZ: $0.00 + 0.16 + 0.11 = 0.27$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.01$ (L/14493)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.01$ (L/10450)
- Asta n. 2052 (-1833 -1730) - Sez. 5 (IPE300) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU Xl=0.86 - Classe 1
Sollecitazioni: $T_y = 143.44$ $M_x = -2.17$
 $V, Ed = 143.44$ $V_c, Rd, Red = 54496.70$ $V, Ed/V_c, Rd, Red = 0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU Xl=0.86 - Classe 1
Sollecitazioni: $T_z = 1653.19$ $M_x = -2.17$
 $V, Ed = 1653.19$ $V_c, Rd, Red = 38703.90$ $V, Ed/V_c, Rd, Red = 0.04$
 - Verifica in termini tensionali [4.2.4] - CC 33 SLU Xl=1.08 - Classe 3
Sollecitazioni: $N = -271.68$ $T_z = 1637.03$ $M_y = -5035.70$ $T_y = 143.44$ $M_z = 30.90$ $M_x = -2.17$
Tensioni: $\sigma_N = -5.05$ $\sigma_{m,d} = -942.32$ $\tau = 12.88$ $\sigma_{max} = -947.37$ (sfrut=0.36)
Tensioni: $\sigma_N = -5.05$ $\sigma_{m,d} = 1.82$ $\tau = 92.38$ $\tau_{max} = 92.38$ (sfrut=0.06)
Tensioni: $\sigma_N = -5.05$ $\sigma_{m,d} = -942.32$ $\tau = 12.88$ $\sigma_{ID,max} = 947.63$ (sfrut=0.36)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed = -277.08$ $M_y, Ed = -5035.70$ $M_z, Ed = -123.45$ $L = 1.08$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.08$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.20$ $M_{cr} = 193385.00$ $\lambda_{LT} = 0.28$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.51$ $\beta_{LT} = 0.75$ $f = 0.99$ $\chi_{LT} = 1.00$
 $\lambda_y = 8.64$ $N_{cr,y} = 14956600.00$ $\lambda^*_y = 0.10$ Curva a: $\Phi_y = 0.49$ $\chi_y = 1.00$
 $\lambda_z = 32.13$ $N_{cr,z} = 1080680.00$ $\lambda^*_z = 0.37$ Curva b: $\Phi_z = 0.60$ $\chi_z = 0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00 + 0.33 + 0.06 = 0.39$
Verifica ZZ: $0.00 + 0.26 + 0.06 = 0.32$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.02$ (L/6776)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.02$ (L/4905)
- Asta n. 2052 (-1730 -1723) - Sez. 5 (IPE300) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU Xl=2.06 - Classe 1
Sollecitazioni: $T_y = -22.05$
 $V, Ed = -22.05$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU Xl=2.06 - Classe 1
Sollecitazioni: $T_z = -485.43$
 $V, Ed = -485.43$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.01$
 - Verifica in termini tensionali [4.2.4] - CC 33 SLU Xl=0.00 - Classe 3
Sollecitazioni: $N = -95.75$ $T_z = -207.72$ $M_y = -4644.52$ $T_y = -11.40$ $M_z = 30.03$
Tensioni: $\sigma_N = -1.78$ $\sigma_{m,d} = -871.02$ $\tau = 0.00$ $\sigma_{max} = -872.79$ (sfrut=0.33)
Tensioni: $\sigma_N = -1.78$ $\sigma_{m,d} = 1.77$ $\tau = 11.60$ $\tau_{max} = 11.60$ (sfrut=0.01)
Tensioni: $\sigma_N = -1.78$ $\sigma_{m,d} = -871.02$ $\tau = 0.00$ $\sigma_{ID,max} = 872.79$ (sfrut=0.33)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: N,Ed=-95.75 My,Ed=-4644.52 Mz,Ed=30.03 L=2.26
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.26$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.09$ M,cr=43685.70 $\lambda_{LT}=0.59$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.66$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.95$
 $\lambda_y=18.17$ Ncr,y=3377060.00 $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=67.61$ Ncr,z=244007.00 $\lambda^*_z=0.78$ Curva b: $\Phi_z=0.90$ $\chi_z=0.74$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.00+0.32+0.01=0.33
Verifica ZZ: 0.00+0.26+0.01=0.27
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.08$ (L/2901)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.11$ (L/2105)
- Asta n. 2052 (-1723 -1717) - Sez. 5 (IPE300) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 32 SLU X1=1.04 - Classe 1
Sollecitazioni: T_y=-44.79 M_x=1.02
V,Ed=-44.79 Vc,Rd,Red=54595.40 V,Ed/Vc,Rd,Red=0.00
 - Verifica a taglio e torsione Dir. Z [4.2.24] - CC 32 SLU X1=1.04 - Classe 1
Sollecitazioni: T_z=-1715.63 M_x=1.02
V,Ed=-1715.63 Vc,Rd,Red=38774.00 V,Ed/Vc,Rd,Red=0.04
 - Verifica in termini tensionali [4.2.4] - CC 33 SLU X1=0.00 - Classe 3
Sollecitazioni: N=-151.66 T_z=-1658.97 M_y=-3786.66 T_y=-45.50 M_z=46.00 M_x=1.29
Tensioni: $\sigma_N=-2.82$ $\sigma_{m,d}=-736.86$ $\tau=7.68$ $\sigma_{max}=-739.68$ (sfrut=0.28)
Tensioni: $\sigma_N=-2.82$ $\sigma_{m,d}=2.70$ $\tau=92.96$ $\tau_{max}=92.96$ (sfrut=0.06)
Tensioni: $\sigma_N=-2.82$ $\sigma_{m,d}=-736.86$ $\tau=7.68$ $\sigma_{ID,max}=739.80$ (sfrut=0.28)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: N,Ed=-151.66 My,Ed=-3786.66 Mz,Ed=-57.72 L=2.28
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.28$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.89$ M,cr=74569.10 $\lambda_{LT}=0.45$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.59$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=18.29$ Ncr,y=3332780.00 $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.06$ Ncr,z=240807.00 $\lambda^*_z=0.78$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.00+0.25+0.03=0.27
Verifica ZZ: 0.00+0.20+0.03=0.22
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.04$ (L/6224)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.05$ (L/4596)
- Asta n. 2052 (-1717 -1524) - Sez. 5 (IPE300) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 34 SLU X1=0.90 - Classe 1
Sollecitazioni: T_y=63.57 M_x=-2.45
V,Ed=63.57 Vc,Rd,Red=54472.80 V,Ed/Vc,Rd,Red=0.00
 - Verifica a taglio e torsione Dir. Z [4.2.24] - CC 34 SLU X1=0.90 - Classe 1
Sollecitazioni: T_z=-2483.31 M_x=-2.45
V,Ed=-2483.31 Vc,Rd,Red=38686.90 V,Ed/Vc,Rd,Red=0.06
 - Verifica in termini tensionali [4.2.4] - CC 33 SLU X1=1.97 - Classe 3
Sollecitazioni: N=-179.15 T_z=-3491.97 M_y=7007.37 T_y=63.81 M_z=69.89 M_x=-3.35
Tensioni: $\sigma_N=-3.33$ $\sigma_{m,d}=-1344.68$ $\tau=19.86$ $\sigma_{max}=-1348.01$ (sfrut=0.51)
Tensioni: $\sigma_N=-3.33$ $\sigma_{m,d}=4.11$ $\tau=196.00$ $\tau_{max}=196.00$ (sfrut=0.13)
Tensioni: $\sigma_N=-3.33$ $\sigma_{m,d}=-1344.68$ $\tau=19.86$ $\sigma_{ID,max}=1348.45$ (sfrut=0.51)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: N,Ed=-201.04 My,Ed=7007.37 Mz,Ed=69.89 L=2.61
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.61$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.68$ M,cr=52329.60 $\lambda_{LT}=0.54$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.63$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.97$
 $\lambda_y=20.94$ Ncr,y=2543320.00 $\lambda^*_y=0.24$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=77.91$ Ncr,z=183766.00 $\lambda^*_z=0.90$ Curva b: $\Phi_z=1.02$ $\chi_z=0.66$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.00+0.47+0.03=0.50
Verifica ZZ: 0.00+0.38+0.03=0.41

Relazione di calcolo

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.10$ (L/2008)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.14$ (L/1412)

Asta n. 2053 (-1858 -1856) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_y=-12.60$
 $V,Ed=-12.60$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=336.75$
 $V,Ed=336.75$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.02$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1=0.84$ - Classe 1
Sollecitazioni: $N=13.47$ $M_y=-142.41$ $T_y=-12.60$ $M_z=3.02$
 $N,Ed=13.47$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-142.41$ $M_y,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.02$
Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=3.02$ $M_z,V,c,Rd=1170.59$ $MN_z,c,Rd=1170.59$ $M_z,Ed/MN_z,c,Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.02$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y,Ed=-142.41$ $M_z,Ed=13.58$ $L=1.69$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.69$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.08$ $M_{cr}=13202.20$ $\lambda_{LT}=0.68$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.72$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.91$
 $\lambda_y=20.41$ $N_{cr,y}=1417450.00$ $\lambda^*_y=0.24$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=75.40$ $N_{cr,z}=103848.00$ $\lambda^*_z=0.87$ Curva b: $\Phi_z=0.99$ $\chi_z=0.68$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.03+0.01=0.03$
Verifica ZZ: $0.00+0.02+0.01=0.03$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.01$ (L/33349)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.01$ (L/24894)

Asta n. 2054 (-1338 -1557) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU $X_1=1.62$ - Classe 1
Sollecitazioni: $T_y=78.76$
 $V,Ed=78.76$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU $X_1=1.62$ - Classe 1
Sollecitazioni: $T_z=2393.34$
 $V,Ed=2393.34$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.06$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=0.63$ - Classe 3
Sollecitazioni: $N=-1882.91$ $T_z=3047.04$ $M_y=5593.79$ $T_y=88.68$ $M_z=-85.12$
Tensioni: $\sigma_N=-34.99$ $\sigma_{m,d}=-1109.85$ $\tau=0.00$ $\sigma_{max}=-1144.84$ (sfrut=0.44)
Tensioni: $\sigma_N=-34.99$ $\sigma_{m,d}=-5.00$ $\tau=170.13$ $\tau_{max}=170.13$ (sfrut=0.11)
Tensioni: $\sigma_N=-34.99$ $\sigma_{m,d}=-1109.85$ $\tau=0.00$ $\sigma_{TD,max}=1144.84$ (sfrut=0.44)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N,Ed=-1917.97$ $M_y,Ed=5593.79$ $M_z,Ed=-85.12$ $L=2.44$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.44$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.61$ $M_{cr}=56475.20$ $\lambda_{LT}=0.52$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.62$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.98$
 $\lambda_y=19.56$ $N_{cr,y}=2914420.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=72.78$ $N_{cr,z}=210579.00$ $\lambda^*_z=0.84$ Curva b: $\Phi_z=0.96$ $\chi_z=0.70$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.01+0.37+0.04=0.43$
Verifica ZZ: $0.01+0.30+0.04=0.35$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.08$ (L/2378)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.11$ (L/1707)

Asta n. 2054 (-1853 -1557) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 34 SLU $X_1=0.99$ - Classe 1

Relazione di calcolo

Sollecitazioni: $T_y = -29.20$
 $V, Ed = -29.20$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 34 SLU $X_l = 0.99$ - Classe 1
Sollecitazioni: $T_z = -1095.25$
 $V, Ed = -1095.25$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.03$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l = 0.00$ - Classe 3
Sollecitazioni: $N = -1789.05$ $T_z = -1305.65$ $M_y = -3292.81$ $T_y = -34.11$ $M_z = 36.84$
Tensioni: $\sigma_N = -33.25$ $\sigma_{m,d} = -636.84$ $\tau = 0.00$ $\sigma_{max} = -670.09$ (sfrut=0.26)
Tensioni: $\sigma_N = -33.25$ $\sigma_{m,d} = 2.17$ $\tau = 72.90$ $\tau_{max} = 72.90$ (sfrut=0.05)
Tensioni: $\sigma_N = -33.25$ $\sigma_{m,d} = -636.84$ $\tau = 0.00$ $\sigma_{ID,max} = 670.09$ (sfrut=0.26)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed = -1789.05$ $M_y, Ed = -3292.81$ $M_z, Ed = -56.04$ $L = 2.72$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 2.72$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 2.02$ $M_{cr} = 58424.70$ $\lambda_{LT} = 0.51$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.62$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.98$
 $\lambda_y = 21.85$ $N_{cr,y} = 2336120.00$ $\lambda^*_y = 0.25$ Curva a: $\Phi_y = 0.54$ $\chi_y = 0.99$
 $\lambda_z = 81.29$ $N_{cr,z} = 168795.00$ $\lambda^*_z = 0.94$ Curva b: $\Phi_z = 1.06$ $\chi_z = 0.64$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.96, 0.96$
Verifica YY: $0.01 + 0.22 + 0.03 = 0.26$
Verifica ZZ: $0.01 + 0.18 + 0.03 = 0.21$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.04$ (L/6702)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.06$ (L/4830)

Asta n. 2054 (-1854 -1853) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l = 0.00$ - Classe 1
Sollecitazioni: $T_y = 3.39$
 $V, Ed = 3.39$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 5 SLV $X_l = 0.00$ - Classe 1
Sollecitazioni: $T_z = 89.16$
 $V, Ed = 89.16$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.00$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l = 1.58$ - Classe 3
Sollecitazioni: $N = -1856.07$ $T_z = -183.05$ $M_y = -3495.36$ $T_y = 34.55$ $M_z = 36.19$
Tensioni: $\sigma_N = -34.49$ $\sigma_{m,d} = -672.39$ $\tau = 0.00$ $\sigma_{max} = -706.88$ (sfrut=0.27)
Tensioni: $\sigma_N = -34.49$ $\sigma_{m,d} = 2.13$ $\tau = 10.22$ $\tau_{max} = 10.22$ (sfrut=0.01)
Tensioni: $\sigma_N = -34.49$ $\sigma_{m,d} = -672.39$ $\tau = 0.00$ $\sigma_{ID,max} = 706.88$ (sfrut=0.27)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed = -1879.97$ $M_y, Ed = -3495.36$ $M_z, Ed = 36.19$ $L = 1.58$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.58$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.02$ $M_{cr} = 78315.20$ $\lambda_{LT} = 0.44$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.58$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 12.69$ $N_{cr,y} = 6922800.00$ $\lambda^*_y = 0.15$ Curva a: $\Phi_y = 0.51$ $\chi_y = 1.00$
 $\lambda_z = 47.22$ $N_{cr,z} = 500202.00$ $\lambda^*_z = 0.54$ Curva b: $\Phi_z = 0.71$ $\chi_z = 0.86$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01 + 0.23 + 0.02 = 0.26$
Verifica ZZ: $0.01 + 0.18 + 0.02 = 0.21$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.03$ (L/5150)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.04$ (L/3677)

Asta n. 2054 (-1556 -1854) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 18 SLU $X_l = 0.34$ - Classe 1
Sollecitazioni: $T_y = -46.07$ $M_x = -1.02$
 $V, Ed = -46.07$ $V_c, Rd, Red = 54595.80$ $V, Ed/V_c, Rd, Red = 0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 18 SLU $X_l = 0.34$ - Classe 1
Sollecitazioni: $T_z = 307.40$ $M_x = -1.02$
 $V, Ed = 307.40$ $V_c, Rd, Red = 38774.30$ $V, Ed/V_c, Rd, Red = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l = 0.57$ - Classe 3
Sollecitazioni: $N = -1889.87$ $T_z = 561.66$ $M_y = -3376.93$ $T_y = -94.62$ $M_z = -12.22$ $M_x = -2.33$
Tensioni: $\sigma_N = -35.12$ $\sigma_{m,d} = -621.35$ $\tau = 13.86$ $\sigma_{max} = -656.47$ (sfrut=0.25)
Tensioni: $\sigma_N = -35.12$ $\sigma_{m,d} = 0.72$ $\tau = 34.42$ $\tau_{max} = 34.42$ (sfrut=0.02)
Tensioni: $\sigma_N = -35.12$ $\sigma_{m,d} = -621.35$ $\tau = 13.86$ $\sigma_{ID,max} = 656.91$ (sfrut=0.25)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed = -1896.87 \text{ My}, Ed = -3376.93 \text{ Mz}, Ed = 41.81 \text{ L} = 0.57$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 0.57$ Curva b: $\alpha_{imp} = 0.34 \quad k_e = 0.94 \quad \psi = 1.05 \quad M, cr = 588308.00 \quad \lambda_{LT} = 0.16$
 $\lambda_{LT,0} = 0.40 \quad \Phi_{LT} = 0.47 \quad \beta_{LT} = 0.75 \quad f = 0.99 \quad \chi_{LT} = 1.00$
 $\lambda_y = 4.58 \quad N_{cr,y} = 53123200.00 \quad \lambda^*_y = 0.05$ Curva a: $\Phi_y = 0.00 \quad \chi_y = 1.00$
 $\lambda_z = 17.05 \quad N_{cr,z} = 3838370.00 \quad \lambda^*_z = 0.20$ Curva b: $\Phi_z = 0.00 \quad \chi_z = 1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01 + 0.22 + 0.02 = 0.25$
 Verifica ZZ: $0.01 + 0.18 + 0.02 = 0.21$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.00 \quad (L/16631)$

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.00 \quad (L/11739)$

Asta n. 2054 (-1858 -1556) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 30 SLU $X1 = 0.42$ - Classe 1
 Sollecitazioni: $T_y = 80.89$
 $V, Ed = 80.89 \quad V_c, Rd = 54683.30 \quad V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 30 SLU $X1 = 0.42$ - Classe 1
 Sollecitazioni: $T_z = 519.37$
 $V, Ed = 519.37 \quad V_c, Rd = 38836.40 \quad V, Ed/V_c, Rd = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X1 = 0.95$ - Classe 3
 Sollecitazioni: $N = -2114.32 \quad T_z = 627.15 \quad M_y = -3017.18 \quad T_y = 119.06 \quad M_z = 71.71 \quad M_x = 1.04$
 Tensioni: $\sigma_N = -39.29 \quad \sigma_{m,d} = -630.67 \quad \tau = 6.17 \quad \sigma_{max} = -669.96 \quad (sfrut = 0.26)$
 Tensioni: $\sigma_N = -39.29 \quad \sigma_{m,d} = -4.22 \quad \tau = 35.63 \quad \tau_{max} = 35.63 \quad (sfrut = 0.02)$
 Tensioni: $\sigma_N = -39.29 \quad \sigma_{m,d} = -630.67 \quad \tau = 6.17 \quad \sigma_{ID,max} = 670.05 \quad (sfrut = 0.26)$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed = -2123.38 \text{ My}, Ed = -3017.18 \text{ Mz}, Ed = 71.71 \text{ L} = 0.95$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 0.95$ Curva b: $\alpha_{imp} = 0.34 \quad k_e = 0.94 \quad \psi = 1.12 \quad M, cr = 231465.00 \quad \lambda_{LT} = 0.26$
 $\lambda_{LT,0} = 0.40 \quad \Phi_{LT} = 0.50 \quad \beta_{LT} = 0.75 \quad f = 0.99 \quad \chi_{LT} = 1.00$
 $\lambda_y = 7.59 \quad N_{cr,y} = 19369400.00 \quad \lambda^*_y = 0.09$ Curva a: $\Phi_y = 0.49 \quad \chi_y = 1.00$
 $\lambda_z = 28.23 \quad N_{cr,z} = 1399520.00 \quad \lambda^*_z = 0.33$ Curva b: $\Phi_z = 0.57 \quad \chi_z = 0.95$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.02 + 0.20 + 0.03 = 0.24$
 Verifica ZZ: $0.02 + 0.16 + 0.03 = 0.20$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.01 \quad (L/11529)$

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.01 \quad (L/8127)$

Asta n. 2054 (-1859 -1858) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X1 = 0.16$ - Classe 2
 Sollecitazioni: $T_y = 44.00$
 $V, Ed = 44.00 \quad V_c, Rd = 54683.30 \quad V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X1 = 0.16$ - Classe 2
 Sollecitazioni: $T_z = 318.39$
 $V, Ed = 318.39 \quad V_c, Rd = 38836.40 \quad V, Ed/V_c, Rd = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X1 = 1.79$ - Classe 3
 Sollecitazioni: $N = -2150.94 \quad T_z = 1146.94 \quad M_y = -2331.72 \quad T_y = 104.48 \quad M_z = -27.14 \quad M_x = -1.50$
 Tensioni: $\sigma_N = -39.97 \quad \sigma_{m,d} = -452.27 \quad \tau = 8.90 \quad \sigma_{max} = -492.24 \quad (sfrut = 0.19)$
 Tensioni: $\sigma_N = -39.97 \quad \sigma_{m,d} = -1.60 \quad \tau = 64.71 \quad \tau_{max} = 64.71 \quad (sfrut = 0.04)$
 Tensioni: $\sigma_N = -39.97 \quad \sigma_{m,d} = -452.27 \quad \tau = 8.90 \quad \sigma_{ID,max} = 492.48 \quad (sfrut = 0.19)$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed = -2161.44 \text{ My}, Ed = -2331.72 \text{ Mz}, Ed = -214.37 \text{ L} = 1.79$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.79$ Curva b: $\alpha_{imp} = 0.34 \quad k_e = 0.94 \quad \psi = 1.73 \quad M, cr = 105549.00 \quad \lambda_{LT} = 0.38$
 $\lambda_{LT,0} = 0.40 \quad \Phi_{LT} = 0.55 \quad \beta_{LT} = 0.75 \quad f = 0.98 \quad \chi_{LT} = 1.00$
 $\lambda_y = 14.38 \quad N_{cr,y} = 5393130.00 \quad \lambda^*_y = 0.17$ Curva a: $\Phi_y = 0.51 \quad \chi_y = 1.00$
 $\lambda_z = 53.50 \quad N_{cr,z} = 389677.00 \quad \lambda^*_z = 0.62$ Curva b: $\Phi_z = 0.76 \quad \chi_z = 0.83$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.02 + 0.15 + 0.10 = 0.26$
 Verifica ZZ: $0.02 + 0.12 + 0.10 = 0.23$

- Verifica freccia massima per soli carichi accidentali - CC 38

$f_{z,L}=0.01$ (L/12696)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.02$ (L/10212)

Asta n. 2054 (-1860 -1859) - Sez. 5 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=0.00$ - Classe 3
Sollecitazioni: $N=-5042.20$ $T_z=4414.05$ $M_y=5499.31$ $T_y=-1008.15$ $M_z=660.58$ $M_x=1.24$
Tensioni: $\sigma_N=-93.70$ $\sigma_{m,d}=-1807.70$ $\tau=7.35$ $\sigma_{max}=-1901.40$ (sfrut=0.73)
Tensioni: $\sigma_N=-93.70$ $\sigma_{m,d}=38.84$ $\tau=246.69$ $\tau_{max}=246.69$ (sfrut=0.16)
Tensioni: $\sigma_N=-93.70$ $\sigma_{m,d}=-1807.70$ $\tau=7.35$ $\sigma_{ID,max}=1901.44$ (sfrut=0.73)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N,Ed=-5042.20$ $M_y,Ed=5499.31$ $M_z,Ed=660.58$ $L=1.06$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.06$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.59$ $M_{cr}=262302.00$ $\lambda_{LT}=0.24$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.49$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=8.53$ $N_{cr,y}=15327000.00$ $\lambda^*_y=0.10$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=31.74$ $N_{cr,z}=1107440.00$ $\lambda^*_z=0.37$ Curva b: $\Phi_z=0.59$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.04+0.36+0.30=0.69$
Verifica ZZ: $0.04+0.29+0.30=0.62$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G}=0.01$ (L/7531)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.02$ (L/4888)

Asta n. 2054 (-1561 -1860) - Sez. 5 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=1.30$ - Classe 3
Sollecitazioni: $N=-4372.92$ $T_z=-2340.83$ $M_y=5493.68$ $T_y=446.69$ $M_z=377.52$
Tensioni: $\sigma_N=-81.26$ $\sigma_{m,d}=-1455.09$ $\tau=0.00$ $\sigma_{max}=-1536.35$ (sfrut=0.59)
Tensioni: $\sigma_N=-81.26$ $\sigma_{m,d}=22.20$ $\tau=130.71$ $\tau_{max}=130.71$ (sfrut=0.09)
Tensioni: $\sigma_N=-81.26$ $\sigma_{m,d}=-1455.09$ $\tau=0.00$ $\sigma_{ID,max}=1536.35$ (sfrut=0.59)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N,Ed=-4384.87$ $M_y,Ed=5493.68$ $M_z,Ed=377.52$ $L=1.30$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.30$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.32$ $M_{cr}=147706.00$ $\lambda_{LT}=0.32$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=10.43$ $N_{cr,y}=10248900.00$ $\lambda^*_y=0.12$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=38.81$ $N_{cr,z}=740523.00$ $\lambda^*_z=0.45$ Curva b: $\Phi_z=0.64$ $\chi_z=0.91$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.03+0.36+0.17=0.56$
Verifica ZZ: $0.03+0.29+0.17=0.49$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G}=0.02$ (L/6310)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.03$ (L/4181)

Asta n. 2054 (-1861 -1561) - Sez. 5 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=0.37$ - Classe 3
Sollecitazioni: $N=-3344.83$ $T_z=-1560.67$ $M_y=2583.68$ $T_y=-423.28$ $M_z=-210.47$ $M_x=11.46$
Tensioni: $\sigma_N=-62.16$ $\sigma_{m,d}=-725.22$ $\tau=68.01$ $\sigma_{max}=-787.38$ (sfrut=0.30)
Tensioni: $\sigma_N=-62.16$ $\sigma_{m,d}=-12.37$ $\tau=111.43$ $\tau_{max}=111.43$ (sfrut=0.07)
Tensioni: $\sigma_N=-62.16$ $\sigma_{m,d}=-725.22$ $\tau=68.01$ $\sigma_{ID,max}=796.14$ (sfrut=0.30)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N,Ed=-3346.09$ $M_y,Ed=2583.68$ $M_z,Ed=-210.47$ $L=0.37$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.37$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.12$ $M_{cr}=1454630.00$ $\lambda_{LT}=0.10$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.45$ $\beta_{LT}=0.75$ $f=1.00$ $\chi_{LT}=1.00$
 $\lambda_y=2.99$ $N_{cr,y}=124472000.00$ $\lambda^*_y=0.03$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=11.14$ $N_{cr,z}=8993600.00$ $\lambda^*_z=0.13$ Curva b: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.02+0.17+0.10=0.29$
Verifica ZZ: $0.02+0.13+0.10=0.25$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G}=0.00$

- Verifica freccia massima carichi totali - CC 38

$f_{z,L}=0.00$ (L/32594)

Asta n. 2054 (-1862 -1861) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 7 SLV $X_l=0.91$ - Classe 2
 Sollecitazioni: $T_y=-46.24$
 $V, Ed=-46.24$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 7 SLV $X_l=0.91$ - Classe 2
 Sollecitazioni: $T_z=-341.48$
 $V, Ed=-341.48$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=1.51$ - Classe 3
 Sollecitazioni: $N=-3422.44$ $T_z=-1019.41$ $M_y=2007.57$ $T_y=-113.08$ $M_z=-31.98$
 Tensioni: $\sigma_N=-63.60$ $\sigma_{m,d}=-400.09$ $\tau=0.00$ $\sigma_{max}=-463.69$ (sfrut=0.18)
 Tensioni: $\sigma_N=-63.60$ $\sigma_{m,d}=-1.88$ $\tau=56.92$ $\tau_{max}=56.92$ (sfrut=0.04)
 Tensioni: $\sigma_N=-63.60$ $\sigma_{m,d}=-400.09$ $\tau=0.00$ $\sigma_{ID,max}=463.69$ (sfrut=0.18)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3905.64$ $M_y, Ed=1451.13$ $M_z, Ed=212.52$ $L=1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.49$ $M_{cr}=125204.00$ $\lambda_{LT}=0.35$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.54$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.11$ $N_{cr,y}=7602220.00$ $\lambda'_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.06$ $N_{cr,z}=549293.00$ $\lambda'_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.88$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.03+0.09+0.10=0.22$
 Verifica ZZ: $0.03+0.08+0.10=0.20$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G}=0.01$ (L/15218)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.01$ (L/10915)

Asta n. 2054 (-1553 -1862) - Sez. 5 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.37$ - Classe 3
 Sollecitazioni: $N=-4222.71$ $T_z=-202.83$ $M_y=180.65$ $T_y=1601.66$ $M_z=316.79$ $M_x=5.05$
 Tensioni: $\sigma_N=-78.47$ $\sigma_{m,d}=-425.94$ $\tau=30.00$ $\sigma_{max}=-504.41$ (sfrut=0.19)
 Tensioni: $\sigma_N=-78.47$ $\sigma_{m,d}=67.21$ $\tau=73.25$ $\tau_{max}=73.25$ (sfrut=0.05)
 Tensioni: $\sigma_N=-78.47$ $\sigma_{m,d}=-425.94$ $\tau=30.00$ $\sigma_{ID,max}=507.08$ (sfrut=0.19)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-4224.81$ $M_y, Ed=180.65$ $M_z, Ed=316.79$ $L=0.37$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.37$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.21$ $M_{cr}=1594820.00$ $\lambda_{LT}=0.10$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.45$ $\beta_{LT}=0.75$ $f=1.00$ $\chi_{LT}=1.00$
 $\lambda_y=2.98$ $N_{cr,y}=125857000.00$ $\lambda'_y=0.03$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=11.07$ $N_{cr,z}=9093730.00$ $\lambda'_z=0.13$ Curva b: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.03+0.01+0.14=0.18$
 Verifica ZZ: $0.03+0.01+0.14=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,G}=0.00$

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.00$

Asta n. 2054 (-1863 -1553) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 5 SLV $X_l=0.42$ - Classe 2
 Sollecitazioni: $T_y=-28.88$ $M_x=-1.18$
 $V, Ed=-28.88$ $V_c, Rd, Red=54581.80$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 5 SLV $X_l=0.42$ - Classe 2
 Sollecitazioni: $T_z=-235.23$ $M_x=-1.18$
 $V, Ed=-235.23$ $V_c, Rd, Red=38764.30$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 30 SLU $X_l=1.15$ - Classe 3
 Sollecitazioni: $N=-2005.11$ $T_z=-561.77$ $M_y=346.86$ $T_y=-168.21$ $M_z=-191.64$ $M_x=-1.90$
 Tensioni: $\sigma_N=-37.26$ $\sigma_{m,d}=-300.31$ $\tau=11.28$ $\sigma_{max}=-337.57$ (sfrut=0.13)
 Tensioni: $\sigma_N=-37.26$ $\sigma_{m,d}=11.27$ $\tau=33.53$ $\tau_{max}=33.53$ (sfrut=0.02)
 Tensioni: $\sigma_N=-37.26$ $\sigma_{m,d}=-300.31$ $\tau=11.28$ $\sigma_{ID,max}=338.14$ (sfrut=0.13)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-1880.46$ $M_y, Ed=-269.40$ $M_z, Ed=-205.27$ $L=1.15$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$

$L_{cr}=1.15$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.31$ $M_{cr}=329336.00$ $\lambda_{LT}=0.22$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.49$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=9.19$ $N_{cr,y}=13199000.00$ $\lambda^*_y=0.11$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=34.20$ $N_{cr,z}=953681.00$ $\lambda^*_z=0.39$ Curva b: $\Phi_z=0.61$ $\chi_z=0.93$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.02+0.09=0.12$
Verifica ZZ: $0.01+0.01+0.09=0.12$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,c}=0.00$ (L/75071)

- Verifica freccia massima carichi totali - CC 23
 $f_{z,L}=0.00$ (L/92396)

Asta n. 2054 (-1871 -1863) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 5 SLV $X_1=0.00$ - Classe 1
Sollecitazioni: $T_y=-203.15$ $M_x=2.37$
 $V, Ed=-203.15$ $V_c, Rd, Red=54479.60$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 5 SLV $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=31.41$ $M_x=2.37$
 $V, Ed=31.41$ $V_c, Rd, Red=38691.70$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica in termini tensionali [4.2.4] - CC 13 SLV $X_1=0.00$ - Classe 3
Sollecitazioni: $N=-1443.53$ $T_z=-77.73$ $M_y=-387.54$ $T_y=-226.67$ $M_z=129.25$ $M_x=2.35$
Tensioni: $\sigma_N=-26.82$ $\sigma_{m,d}=-230.11$ $\tau=13.93$ $\sigma_{max}=-256.94$ (sfrut=0.10)
Tensioni: $\sigma_N=-26.82$ $\sigma_{m,d}=65.25$ $\tau=18.80$ $\tau_{max}=18.80$ (sfrut=0.01)
Tensioni: $\sigma_N=-26.82$ $\sigma_{m,d}=-230.11$ $\tau=13.93$ $\sigma_{ID,max}=258.07$ (sfrut=0.10)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
Sollecitazioni: $N, Ed=-1443.53$ $My, Ed=-387.54$ $Mz, Ed=129.25$ $L=0.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.06$ $M_{cr}=685110.00$ $\lambda_{LT}=0.15$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.47$ $\beta_{LT}=0.75$ $f=1.00$ $\chi_{LT}=1.00$
 $\lambda_y=4.26$ $N_{cr,y}=61367900.00$ $\lambda^*_y=0.05$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=15.86$ $N_{cr,z}=4434090.00$ $\lambda^*_z=0.18$ Curva b: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.03+0.06=0.09$
Verifica ZZ: $0.01+0.02+0.06=0.09$

- Verifica freccia massima per soli carichi accidentali - CC 23
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 23
 $f_{z,L}=0.00$

Asta n. 2054 (-1545 -1871) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU $X_1=0.74$ - Classe 2
Sollecitazioni: $T_y=46.65$ $M_x=-4.07$
 $V, Ed=46.65$ $V_c, Rd, Red=54332.50$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU $X_1=0.74$ - Classe 2
Sollecitazioni: $T_z=-601.53$ $M_x=-4.07$
 $V, Ed=-601.53$ $V_c, Rd, Red=38587.20$ $V, Ed/V_c, Rd, Red=0.02$

- Verifica in termini tensionali [4.2.4] - CC 13 SLV $X_1=0.74$ - Classe 3
Sollecitazioni: $N=-1376.24$ $T_z=-244.04$ $M_y=-391.17$ $T_y=537.86$ $M_z=228.28$ $M_x=-2.02$
Tensioni: $\sigma_N=-25.57$ $\sigma_{m,d}=-353.78$ $\tau=12.01$ $\sigma_{max}=-379.35$ (sfrut=0.14)
Tensioni: $\sigma_N=-25.57$ $\sigma_{m,d}=4.93$ $\tau=25.48$ $\tau_{max}=25.48$ (sfrut=0.02)
Tensioni: $\sigma_N=-25.57$ $\sigma_{m,d}=-353.78$ $\tau=12.01$ $\sigma_{ID,max}=379.92$ (sfrut=0.15)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-2582.42$ $My, Ed=-491.83$ $Mz, Ed=-203.51$ $L=0.74$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.74$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.24$ $M_{cr}=417667.00$ $\lambda_{LT}=0.19$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.48$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=5.93$ $N_{cr,y}=31710700.00$ $\lambda^*_y=0.07$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=22.06$ $N_{cr,z}=2291230.00$ $\lambda^*_z=0.25$ Curva b: $\Phi_z=0.54$ $\chi_z=0.98$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.02+0.03+0.09=0.14$
Verifica ZZ: $0.02+0.03+0.09=0.14$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.00$ (L/45584)

Asta n. 2055 (-1737 -1711) - Sez. 5 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 19 SLU $X_l=0.21$ - Classe 1
Sollecitazioni: $T_y=-74.42$
 $V, Ed=-74.42$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 19 SLU $X_l=0.21$ - Classe 1
Sollecitazioni: $T_z=-491.56$
 $V, Ed=-491.56$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=2.28$ - Classe 3
Sollecitazioni: $N=-643.75$ $T_z=-951.55$ $M_y=1283.56$ $T_y=-82.80$ $M_z=-124.95$
Tensioni: $\sigma_N=-11.96$ $\sigma_{m,d}=-385.62$ $\tau=0.00$ $\sigma_{max}=-397.58$ (sfrut=0.15)
Tensioni: $\sigma_N=-11.96$ $\sigma_{m,d}=-7.35$ $\tau=53.13$ $\tau_{max}=53.13$ (sfrut=0.04)
Tensioni: $\sigma_N=-11.96$ $\sigma_{m,d}=-385.62$ $\tau=0.00$ $\sigma_{ID,max}=397.58$ (sfrut=0.15)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-659.33$ $M_y, Ed=1283.56$ $M_z, Ed=-124.95$ $L=2.28$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.28$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.30$ $M_{cr}=91074.50$ $\lambda_{LT}=0.41$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.56$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=18.28$ $N_{cr,y}=3337410.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.01$ $N_{cr,z}=241142.00$ $\lambda^*_z=0.78$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.08+0.06=0.14$
Verifica ZZ: $0.00+0.07+0.06=0.13$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.01$ (L/31849)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.01$ (L/24625)

Asta n. 2055 (-1711 -1850) - Sez. 5 (IPE300) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 1 SLV $X_l=0.32$ - Classe 1
Sollecitazioni: $T_y=333.95$ $M_x=-2.49$
 $V, Ed=333.95$ $V_c, Rd, Red=54469.50$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica a taglio e torsione Dir. Z [4.2.24] - CC 1 SLV $X_l=0.32$ - Classe 1
Sollecitazioni: $T_z=-428.89$ $M_x=-2.49$
 $V, Ed=-428.89$ $V_c, Rd, Red=38684.50$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 19 SLU $X_l=1.18$ - Classe 3
Sollecitazioni: $N=-2549.31$ $T_z=-1484.66$ $M_y=2811.28$ $T_y=760.83$ $M_z=620.58$ $M_x=-8.49$
Tensioni: $\sigma_N=-47.37$ $\sigma_{m,d}=-1275.50$ $\tau=50.39$ $\sigma_{max}=-1322.88$ (sfrut=0.51)
Tensioni: $\sigma_N=-47.37$ $\sigma_{m,d}=36.49$ $\tau=98.39$ $\tau_{max}=98.39$ (sfrut=0.07)
Tensioni: $\sigma_N=-47.37$ $\sigma_{m,d}=-1275.50$ $\tau=50.39$ $\sigma_{ID,max}=1325.75$ (sfrut=0.51)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 19 SLU - Classe 3
Sollecitazioni: $N, Ed=-2556.73$ $M_y, Ed=2811.28$ $M_z, Ed=620.58$ $L=1.18$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.18$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.37$ $M_{cr}=184731.00$ $\lambda_{LT}=0.29$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.51$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=9.48$ $N_{cr,y}=12403300.00$ $\lambda^*_y=0.11$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=35.28$ $N_{cr,z}=896194.00$ $\lambda^*_z=0.41$ Curva b: $\Phi_z=0.62$ $\chi_z=0.92$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.02+0.18+0.28=0.48$
Verifica ZZ: $0.02+0.15+0.28=0.45$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.01$ (L/10073)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.02$ (L/7162)

Asta n. 2055 (-1850 -1706) - Sez. 5 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 3 SLV $X_l=0.94$ - Classe 1
Sollecitazioni: $T_y=-93.55$
 $V, Ed=-93.55$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 3 SLV $X_l=0.94$ - Classe 1
Sollecitazioni: $T_z=-714.85$
 $V, Ed=-714.85$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.02$
 - Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.94$ - Classe 3
Sollecitazioni: $N=-1146.92$ $T_z=-2146.38$ $M_y=5724.96$ $T_y=-53.03$ $M_z=90.61$ $M_x=-1.19$

Tensioni: $\sigma_N = -21.31$ $\sigma_{m,d} = -1140.21$ $\tau = 7.05$ $\sigma_{max} = -1161.52$ (sfrut=0.44)
Tensioni: $\sigma_N = -21.31$ $\sigma_{m,d} = -5.33$ $\tau = 120.06$ $\tau_{max} = 120.06$ (sfrut=0.08)
Tensioni: $\sigma_N = -21.31$ $\sigma_{m,d} = -1140.21$ $\tau = 7.05$ $\sigma_{ID,max} = 1161.58$ (sfrut=0.44)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed = -1151.57$ $M_y, Ed = 5724.96$ $M_z, Ed = 140.62$ $L = 0.94$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 0.94$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.19$ $M_{cr} = 248142.00$ $\lambda_{LT} = 0.25$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.50$ $\beta_{LT} = 0.75$ $f = 0.99$ $\chi_{LT} = 1.00$
 $\lambda_y = 7.57$ $N_{cr,y} = 19468300.00$ $\lambda^*_y = 0.09$ Curva a: $\Phi_y = 0.49$ $\chi_y = 1.00$
 $\lambda_z = 28.16$ $N_{cr,z} = 1406670.00$ $\lambda^*_z = 0.32$ Curva b: $\Phi_z = 0.57$ $\chi_z = 0.96$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01 + 0.37 + 0.06 = 0.44$
Verifica ZZ: $0.01 + 0.30 + 0.06 = 0.37$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g} = 0.01$ (L/7064)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,g} = 0.02$ (L/4801)

Asta n. 2055 (-1706 -1851) - Sez. 5 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1 = 0.27$ - Classe 3
Sollecitazioni: $N = -3092.04$ $T_z = -3834.76$ $M_y = 6804.39$ $T_y = -1772.54$ $M_z = -343.86$ $M_x = 53.62$
Tensioni: $\sigma_N = -57.46$ $\sigma_{m,d} = -1648.56$ $\tau = 318.26$ $\sigma_{max} = -1706.02$ (sfrut=0.65)
Tensioni: $\sigma_N = -57.46$ $\sigma_{m,d} = -1032.37$ $\tau = 396.23$ $\tau_{max} = 396.23$ (sfrut=0.26)
Tensioni: $\sigma_N = -57.46$ $\sigma_{m,d} = -1648.56$ $\tau = 318.26$ $\sigma_{ID,max} = 1792.87$ (sfrut=0.68)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed = -3095.01$ $M_y, Ed = 6804.39$ $M_z, Ed = -343.86$ $L = 0.27$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 0.27$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.07$ $M_{cr} = 2726300.00$ $\lambda_{LT} = 0.07$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.45$ $\beta_{LT} = 0.75$ $f = 1.00$ $\chi_{LT} = 1.00$
 $\lambda_y = 2.14$ $N_{cr,y} = 242794000.00$ $\lambda^*_y = 0.02$ Curva a: $\Phi_y = 0.00$ $\chi_y = 1.00$
 $\lambda_z = 7.97$ $N_{cr,z} = 17542900.00$ $\lambda^*_z = 0.09$ Curva b: $\Phi_z = 0.00$ $\chi_z = 1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.02 + 0.44 + 0.16 = 0.62$
Verifica ZZ: $0.02 + 0.35 + 0.16 = 0.53$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.00$ (L/24352)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,g} = 0.00$ (L/16474)

Asta n. 2055 (-1851 -1710) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 34 SLU $X_1 = 1.84$ - Classe 2
Sollecitazioni: $T_y = 94.58$
 $V, Ed = 94.58$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 34 SLU $X_1 = 1.84$ - Classe 2
Sollecitazioni: $T_z = 3468.53$
 $V, Ed = 3468.53$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.09$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1 = 0.00$ - Classe 3
Sollecitazioni: $N = -3877.41$ $T_z = 4769.21$ $M_y = 6828.25$ $T_y = 81.67$ $M_z = -155.23$ $M_x = -1.13$
Tensioni: $\sigma_N = -72.05$ $\sigma_{m,d} = -1418.52$ $\tau = 6.70$ $\sigma_{max} = -1490.57$ (sfrut=0.57)
Tensioni: $\sigma_N = -72.05$ $\sigma_{m,d} = -9.13$ $\tau = 266.38$ $\tau_{max} = 266.38$ (sfrut=0.18)
Tensioni: $\sigma_N = -72.05$ $\sigma_{m,d} = -1418.52$ $\tau = 6.70$ $\sigma_{ID,max} = 1490.62$ (sfrut=0.57)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed = -3877.41$ $M_y, Ed = 6828.25$ $M_z, Ed = -155.23$ $L = 2.24$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 2.24$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 2.37$ $M_{cr} = 96126.60$ $\lambda_{LT} = 0.40$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.56$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 18.01$ $N_{cr,y} = 3439630.00$ $\lambda^*_y = 0.21$ Curva a: $\Phi_y = 0.52$ $\chi_y = 1.00$
 $\lambda_z = 66.99$ $N_{cr,z} = 248528.00$ $\lambda^*_z = 0.77$ Curva b: $\Phi_z = 0.89$ $\chi_z = 0.74$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.97, 0.76, 0.97$
Verifica YY: $0.03 + 0.45 + 0.07 = 0.54$
Verifica ZZ: $0.03 + 0.36 + 0.07 = 0.46$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g} = 0.04$ (L/6033)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,g} = 0.06$ (L/3967)

Asta n. 2055 (-1710 -1705) - Sez. 5 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 34 SLU $X_l=1.25$ - Classe 1
Sollecitazioni: $T_y=-48.90$
 $V, Ed=-48.90$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 34 SLU $X_l=1.25$ - Classe 1
Sollecitazioni: $T_z=1213.58$
 $V, Ed=1213.58$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.03$
 - Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=2.30$ - Classe 3
Sollecitazioni: $N=-4075.89$ $T_z=1528.45$ $M_y=-5645.19$ $T_y=-53.40$ $M_z=-58.30$
Tensioni: $\sigma_N=-75.74$ $\sigma_{m,d}=-1085.76$ $\tau=0.00$ $\sigma_{max}=-1161.50$ (sfrut=0.44)
Tensioni: $\sigma_N=-75.74$ $\sigma_{m,d}=-3.43$ $\tau=85.34$ $\tau_{max}=85.34$ (sfrut=0.06)
Tensioni: $\sigma_N=-75.74$ $\sigma_{m,d}=-1085.76$ $\tau=0.00$ $\sigma_{ID,max}=1161.50$ (sfrut=0.44)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-4091.69$ $M_y, Ed=-5645.19$ $M_z, Ed=64.45$ $L=2.30$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.30$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.44$ $M_{cr}=56040.40$ $\lambda_{LT}=0.52$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.62$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.98$
 $\lambda_y=18.45$ $N_{cr,y}=3277530.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.63$ $N_{cr,z}=236815.00$ $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.97, 0.76, 0.97$
Verifica YY: $0.03+0.38+0.03=0.44$
Verifica ZZ: $0.03+0.30+0.03=0.36$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.07$ (L/3392)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.10$ (L/2403)

Asta n. 2055 (-1705 -1849) - Sez. 5 (IPE300) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU $X_l=0.35$ - Classe 1
Sollecitazioni: $T_y=41.82$ $M_x=6.50$
 $V, Ed=41.82$ $V_c, Rd, Red=54122.80$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU $X_l=0.35$ - Classe 1
Sollecitazioni: $T_z=628.39$ $M_x=6.50$
 $V, Ed=628.39$ $V_c, Rd, Red=38438.30$ $V, Ed/V_c, Rd, Red=0.02$
 - Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.59$ - Classe 3
Sollecitazioni: $N=-3571.67$ $T_z=588.85$ $M_y=-5441.17$ $T_y=41.82$ $M_z=10.13$ $M_x=6.50$
Tensioni: $\sigma_N=-66.37$ $\sigma_{m,d}=-989.30$ $\tau=38.55$ $\sigma_{max}=-1055.67$ (sfrut=0.40)
Tensioni: $\sigma_N=-66.37$ $\sigma_{m,d}=-0.60$ $\tau=50.78$ $\tau_{max}=50.78$ (sfrut=0.03)
Tensioni: $\sigma_N=-66.37$ $\sigma_{m,d}=-989.30$ $\tau=38.55$ $\sigma_{ID,max}=1057.78$ (sfrut=0.40)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-3577.11$ $M_y, Ed=-5441.17$ $M_z, Ed=-14.51$ $L=0.59$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.59$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.03$ $M_{cr}=542754.00$ $\lambda_{LT}=0.17$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.47$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=4.73$ $N_{cr,y}=49889700.00$ $\lambda^*_y=0.05$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=17.59$ $N_{cr,z}=3604740.00$ $\lambda^*_z=0.20$ Curva b: $\Phi_z=0.52$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.03+0.35+0.01=0.39$
Verifica ZZ: $0.03+0.28+0.01=0.32$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.01$ (L/9806)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.01$ (L/6903)

Asta n. 2055 (-1849 -1704) - Sez. 5 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 18 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $T_y=-18.49$
 $V, Ed=-18.49$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 18 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $T_z=-882.47$
 $V, Ed=-882.47$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.02$
 - Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-3374.83$ $T_z=-1655.64$ $M_y=-5428.94$ $T_y=-14.66$ $M_z=-8.66$

- Tensioni: $\sigma_N = -62.71$ $\sigma_{m,d} = -985.28$ $\tau = 0.00$ $\sigma_{max} = -1047.99$ (sfrut=0.40)
 Tensioni: $\sigma_N = -62.71$ $\sigma_{m,d} = -0.51$ $\tau = 92.44$ $\tau_{max} = 92.44$ (sfrut=0.06)
 Tensioni: $\sigma_N = -62.71$ $\sigma_{m,d} = -985.28$ $\tau = 0.00$ $\sigma_{ID,max} = 1047.99$ (sfrut=0.40)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed = -3374.83$ $M_y, Ed = -5428.94$ $M_z, Ed = -33.72$ $L = 1.71$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.71$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.34$ $M_{cr} = 89595.10$ $\lambda_{LT} = 0.41$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.57$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 13.72$ $N_{cr,y} = 5926040.00$ $\lambda^*_y = 0.16$ Curva a: $\Phi_y = 0.51$ $\chi_y = 1.00$
 $\lambda_z = 51.04$ $N_{cr,z} = 428181.00$ $\lambda^*_z = 0.59$ Curva b: $\Phi_z = 0.74$ $\chi_z = 0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.02 + 0.35 + 0.02 = 0.39$
 Verifica ZZ: $0.02 + 0.28 + 0.02 = 0.32$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.04$ (L/4064)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.06$ (L/2924)
- Asta n. 2055 (-1704 -1848) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_1 = 0.63$ - Classe 2
 Sollecitazioni: $T_y = 35.07$
 $V, Ed = 35.07$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1 = 0.63$ - Classe 2
 Sollecitazioni: $T_z = -1016.00$
 $V, Ed = -1016.00$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.03$
- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1 = 0.00$ - Classe 3
 Sollecitazioni: $N = -3326.71$ $T_z = -1574.21$ $M_y = -2574.42$ $T_y = 34.69$ $M_z = -21.54$ $M_x = -1.07$
 Tensioni: $\sigma_N = -61.82$ $\sigma_{m,d} = -488.88$ $\tau = 6.33$ $\sigma_{max} = -550.70$ (sfrut=0.21)
 Tensioni: $\sigma_N = -61.82$ $\sigma_{m,d} = -1.27$ $\tau = 88.13$ $\tau_{max} = 88.13$ (sfrut=0.06)
 Tensioni: $\sigma_N = -61.82$ $\sigma_{m,d} = -488.88$ $\tau = 6.33$ $\sigma_{ID,max} = 550.81$ (sfrut=0.21)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed = -3326.71$ $M_y, Ed = -2574.42$ $M_z, Ed = 58.21$ $L = 2.30$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 2.30$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 2.49$ $M_{cr} = 96763.60$ $\lambda_{LT} = 0.40$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.56$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 18.45$ $N_{cr,y} = 3277570.00$ $\lambda^*_y = 0.21$ Curva a: $\Phi_y = 0.52$ $\chi_y = 1.00$
 $\lambda_z = 68.63$ $N_{cr,z} = 236819.00$ $\lambda^*_z = 0.79$ Curva b: $\Phi_z = 0.91$ $\chi_z = 0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.02 + 0.17 + 0.03 = 0.22$
 Verifica ZZ: $0.02 + 0.13 + 0.03 = 0.18$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.02$ (L/14095)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.02$ (L/10022)
- Asta n. 2055 (-1848 -1524) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_1 = 0.61$ - Classe 1
 Sollecitazioni: $T_y = 9.90$
 $V, Ed = 9.90$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_1 = 0.61$ - Classe 1
 Sollecitazioni: $T_z = -593.61$
 $V, Ed = -593.61$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.02$
- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1 = 1.66$ - Classe 3
 Sollecitazioni: $N = -3398.86$ $T_z = -2777.41$ $M_y = 5907.21$ $T_y = -75.27$ $M_z = -54.23$
 Tensioni: $\sigma_N = -63.16$ $\sigma_{m,d} = -1127.74$ $\tau = 0.00$ $\sigma_{max} = -1190.90$ (sfrut=0.45)
 Tensioni: $\sigma_N = -63.16$ $\sigma_{m,d} = -3.19$ $\tau = 155.08$ $\tau_{max} = 155.08$ (sfrut=0.10)
 Tensioni: $\sigma_N = -63.16$ $\sigma_{m,d} = -1127.74$ $\tau = 0.00$ $\sigma_{ID,max} = 1190.90$ (sfrut=0.45)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed = -3416.71$ $M_y, Ed = 5907.21$ $M_z, Ed = 71.03$ $L = 2.30$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 2.30$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.50$ $M_{cr} = 58236.50$ $\lambda_{LT} = 0.51$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.62$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.98$
 $\lambda_y = 18.45$ $N_{cr,y} = 3277510.00$ $\lambda^*_y = 0.21$ Curva a: $\Phi_y = 0.52$ $\chi_y = 1.00$
 $\lambda_z = 68.63$ $N_{cr,z} = 236814.00$ $\lambda^*_z = 0.79$ Curva b: $\Phi_z = 0.91$ $\chi_z = 0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.96, 0.76, 0.96$

Relazione di calcolo

- Verifica YY: $0.02+0.39+0.03=0.45$
Verifica ZZ: $0.02+0.32+0.03=0.37$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.07$ (L/2361)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.10$ (L/1643)
- Asta n. 2056 (-1730 -1705) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=97.98$
 $V, Ed=97.98$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=402.93$
 $V, Ed=402.93$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.02$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=206.75$ $T_z=402.93$ $M_y=591.25$ $T_y=97.98$ $M_z=-31.83$
 $N, Ed=206.75$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=591.25$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.10$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-31.83$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.03$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.10$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y, Ed=591.25$ $M_z, Ed=48.11$ $L=0.82$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.82$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.14$ $M, cr=51338.10$ $\lambda_{LT}=0.34$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.54$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=9.88$ $N_{cr,y}=6050390.00$ $\lambda^*_y=0.11$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=36.49$ $N_{cr,z}=443277.00$ $\lambda^*_z=0.42$ Curva b: $\Phi_z=0.63$ $\chi_z=0.92$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.10+0.02=0.12$
Verifica ZZ: $0.00+0.06+0.04=0.10$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.01$ (L/15554)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.01$ (L/12398)
- Asta n. 2057 (-1854 -1855) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=1.38$ - Classe 1
Sollecitazioni: $T_y=-10.85$
 $V, Ed=-10.85$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=1.38$ - Classe 1
Sollecitazioni: $T_z=-261.18$
 $V, Ed=-261.18$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.01$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.69$ - Classe 1
Sollecitazioni: $N=129.04$ $M_y=-91.21$ $T_y=-10.85$ $M_z=-1.33$
 $N, Ed=129.04$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-91.21$ $M_y, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.02$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-1.33$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.02$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y, Ed=-91.21$ $M_z, Ed=-8.81$ $L=1.38$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.38$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.13$ $M, cr=19447.00$ $\lambda_{LT}=0.56$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.64$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=16.67$ $N_{cr,y}=2125050.00$ $\lambda^*_y=0.19$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=61.58$ $N_{cr,z}=155690.00$ $\lambda^*_z=0.71$ Curva b: $\Phi_z=0.84$ $\chi_z=0.78$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.02+0.00=0.02$
Verifica ZZ: $0.00+0.01+0.01=0.02$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.00$ (L/60148)

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.00$ (L/45111)

Asta n. 2058 (-1596 -1853) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-5.34$
 $V,Ed=-5.34$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=314.30$
 $V,Ed=314.30$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.01$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.57$ - Classe 1
 Sollecitazioni: $N=-45.19$ $M_y=-304.47$ $T_y=-5.34$ $M_z=4.13$
 $N,Ed=-45.19$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-304.47$ $M_y,c,Rd=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_y,Ed/M_{Ny,c,Rd}=0.05$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=4.13$ $M_z,V,c,Rd=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_z,Ed/M_{Nz,c,Rd}=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/M_{Ny,c,Rd})^2 + (M_z,Ed/M_{Nz,c,Rd})^1 = 0.05$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N,Ed=-45.52$ $M_y,Ed=-304.47$ $M_z,Ed=7.15$ $L=1.06$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.06$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.07$ $M_{cr}=29827.60$ $\lambda_{LT}=0.45$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.59$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.79$ $N_{cr,y}=3611410.00$ $\lambda^*_y=0.15$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=47.24$ $N_{cr,z}=264587.00$ $\lambda^*_z=0.54$ Curva b: $\Phi_z=0.71$ $\chi_z=0.86$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.05+0.00=0.05$
 Verifica ZZ: $0.00+0.03+0.01=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.00$ (L/34604)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.01$ (L/15596)

Asta n. 2059 (-1723 -1704) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=101.84$
 $V,Ed=101.84$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=373.42$
 $V,Ed=373.42$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.02$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 30 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-175.25$ $T_z=285.44$ $M_y=28.55$ $T_y=114.48$ $M_z=-51.85$
 $N,Ed=-175.25$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=28.55$ $M_y,V,c,Rd=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_y,Ed/M_{Ny,c,Rd}=0.00$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-51.85$ $M_z,V,c,Rd=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_z,Ed/M_{Nz,c,Rd}=0.04$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/M_{Ny,c,Rd})^2 + (M_z,Ed/M_{Nz,c,Rd})^1 = 0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 1
 Sollecitazioni: $N,Ed=-37.85$ $M_y,Ed=-142.59$ $M_z,Ed=-49.65$ $L=0.60$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.60$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.55$ $M_{cr}=126272.00$ $\lambda_{LT}=0.22$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.49$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=7.25$ $N_{cr,y}=11245600.00$ $\lambda^*_y=0.08$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=26.77$ $N_{cr,z}=823899.00$ $\lambda^*_z=0.31$ Curva b: $\Phi_z=0.57$ $\chi_z=0.96$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.02+0.02=0.05$
 Verifica ZZ: $0.00+0.01+0.04=0.05$

- Verifica freccia massima per soli carichi accidentali - CC 21
 $f_{z,G}=0.00$

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.00$

Asta n. 2062 (-122 -1811) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 11 SLV $X_l=1.21$ - Classe 2

Sollecitazioni: $T_y=99.36$
 $V, Ed=99.36$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 11 SLV $X_l=1.21$ - Classe 2
 Sollecitazioni: $T_z=1005.41$
 $V, Ed=1005.41$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.03$

- Verifica in termini tensionali [4.2.4] - CC 32 SLU $X_l=1.56$ - Classe 3
 Sollecitazioni: $N=24.20$ $T_z=880.92$ $M_y=-341.28$ $T_y=264.90$ $M_z=204.88$ $M_x=-1.21$
 Tensioni: $\sigma_N=0.45$ $\sigma_{m,d}=315.76$ $\tau=7.16$ $\sigma_{max}=316.21$ (sfrut=0.12)
 Tensioni: $\sigma_N=0.45$ $\sigma_{m,d}=12.05$ $\tau=49.84$ $\tau_{max}=49.84$ (sfrut=0.03)
 Tensioni: $\sigma_N=0.45$ $\sigma_{m,d}=315.76$ $\tau=7.16$ $\sigma_{ID,max}=316.45$ (sfrut=0.12)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 3
 Sollecitazioni: $M_y, Ed=809.04$ $M_z, Ed=204.88$ $L=1.56$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.56$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.25$ $M_{cr}=178675.00$ $\lambda_{LT}=0.29$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.51$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=12.49$ $N_{cr,y}=7154730.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=46.45$ $N_{cr,z}=516959.00$ $\lambda^*_z=0.54$ Curva b: $\Phi_z=0.70$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.05+0.09=0.14$
 Verifica ZZ: $0.00+0.04+0.09=0.13$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,g}=0.01$ (L/17807)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,g}=0.01$ (L/21963)

Asta n. 2062 (-1811 -1810) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 9 SLV $X_l=0.34$ - Classe 1
 Sollecitazioni: $T_y=-296.54$ $M_x=1.10$
 $V, Ed=-296.54$ $V_c, Rd, Red=54588.60$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 9 SLV $X_l=0.34$ - Classe 1
 Sollecitazioni: $T_z=-1861.72$ $M_x=1.10$
 $V, Ed=-1861.72$ $V_c, Rd, Red=38769.10$ $V, Ed/V_c, Rd, Red=0.05$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.80$ - Classe 3
 Sollecitazioni: $N=835.87$ $T_z=-2060.16$ $M_y=2298.30$ $T_y=-419.10$ $M_z=-218.88$
 Tensioni: $\sigma_N=15.53$ $\sigma_{m,d}=684.45$ $\tau=0.00$ $\sigma_{max}=699.98$ (sfrut=0.27)
 Tensioni: $\sigma_N=15.53$ $\sigma_{m,d}=-12.87$ $\tau=115.04$ $\tau_{max}=115.04$ (sfrut=0.08)
 Tensioni: $\sigma_N=15.53$ $\sigma_{m,d}=684.45$ $\tau=0.00$ $\sigma_{ID,max}=699.98$ (sfrut=0.27)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed=-537.15$ $M_y, Ed=2298.30$ $M_z, Ed=-218.88$ $L=1.02$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.02$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.47$ $M_{cr}=261781.00$ $\lambda_{LT}=0.24$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.50$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=8.20$ $N_{cr,y}=16592800.00$ $\lambda^*_y=0.09$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=30.50$ $N_{cr,z}=1198900.00$ $\lambda^*_z=0.35$ Curva b: $\Phi_z=0.59$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.15+0.10=0.25$
 Verifica ZZ: $0.00+0.12+0.10=0.22$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.00$ (L/32786)

- Verifica freccia massima carichi totali - CC 23
 $f_{z,g}=0.01$ (L/14414)

Asta n. 2062 (-1810 -1809) - Sez. 5 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.22$ - Classe 3
 Sollecitazioni: $N=-3703.15$ $T_z=6469.55$ $M_y=7810.31$ $T_y=1015.66$ $M_z=-220.90$ $M_x=-9.61$
 Tensioni: $\sigma_N=-68.81$ $\sigma_{m,d}=-1676.39$ $\tau=57.05$ $\sigma_{max}=-1745.20$ (sfrut=0.67)
 Tensioni: $\sigma_N=-68.81$ $\sigma_{m,d}=-12.99$ $\tau=366.26$ $\tau_{max}=366.26$ (sfrut=0.24)
 Tensioni: $\sigma_N=-68.81$ $\sigma_{m,d}=-1676.39$ $\tau=57.05$ $\sigma_{ID,max}=1748.00$ (sfrut=0.67)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3703.15$ $M_y, Ed=7810.31$ $M_z, Ed=-220.90$ $L=0.60$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.60$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.17$ $M_{cr}=589653.00$ $\lambda_{LT}=0.16$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.47$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=4.83$ $N_{cr,y}=47828800.00$ $\lambda^*_y=0.06$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=17.96$ $N_{cr,z}=3455830.00$ $\lambda^*_z=0.21$ Curva b: $\Phi_z=0.52$ $\chi_z=1.00$

Relazione di calcolo

Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.03+0.51+0.10=0.64
Verifica ZZ: 0.03+0.41+0.10=0.53

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.01$ (L/3597)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.02$ (L/2504)

Asta n. 2062 (-1809 -1808) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 31 SLU $X_l=1.40$ - Classe 2
Sollecitazioni: $T_y=-71.49$
 $V, Ed=-71.49$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 31 SLU $X_l=1.40$ - Classe 2
Sollecitazioni: $T_z=3054.48$
 $V, Ed=3054.48$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.08$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-3537.22$ $T_z=4003.37$ $M_y=5372.60$ $T_y=-85.89$ $M_z=116.79$
Tensioni: $\sigma_N=-65.73$ $\sigma_{m,d}=-1109.48$ $\tau=0.00$ $\sigma_{max}=-1175.22$ (sfrut=0.45)
Tensioni: $\sigma_N=-65.73$ $\sigma_{m,d}=6.87$ $\tau=223.53$ $\tau_{max}=223.53$ (sfrut=0.15)
Tensioni: $\sigma_N=-65.73$ $\sigma_{m,d}=-1109.48$ $\tau=0.00$ $\sigma_{ID,max}=1175.22$ (sfrut=0.45)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-3537.22$ $M_y, Ed=5372.60$ $M_z, Ed=116.79$ $L=1.54$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.54$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.90$ $M_{cr}=153548.00$ $\lambda_{LT}=0.32$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.52$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.38$ $N_{cr,y}=7276390.00$ $\lambda'_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=46.06$ $N_{cr,z}=525750.00$ $\lambda'_z=0.53$ Curva b: $\Phi_z=0.70$ $\chi_z=0.87$
Kyy, Kyz, Kzy, Kzz=0.95, 0.96, 0.76, 0.96
Verifica YY: 0.03+0.35+0.05=0.43
Verifica ZZ: 0.03+0.28+0.05=0.36

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,g}=0.02$ (L/6684)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,g}=0.03$ (L/4557)

Asta n. 2062 (-1808 -1807) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 2
Sollecitazioni: $T_y=-30.87$
 $V, Ed=-30.87$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 2
Sollecitazioni: $T_z=1904.31$
 $V, Ed=1904.31$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.05$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=1.50$ - Classe 3
Sollecitazioni: $N=-3377.21$ $T_z=1822.39$ $M_y=-3525.80$ $T_y=-30.87$ $M_z=-47.14$
Tensioni: $\sigma_N=-62.76$ $\sigma_{m,d}=-691.46$ $\tau=0.00$ $\sigma_{max}=-754.21$ (sfrut=0.29)
Tensioni: $\sigma_N=-62.76$ $\sigma_{m,d}=-2.77$ $\tau=101.75$ $\tau_{max}=101.75$ (sfrut=0.07)
Tensioni: $\sigma_N=-62.76$ $\sigma_{m,d}=-691.46$ $\tau=0.00$ $\sigma_{ID,max}=754.21$ (sfrut=0.29)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-3383.48$ $M_y, Ed=-3525.80$ $M_z, Ed=-47.14$ $L=1.50$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.50$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.54$ $M_{cr}=132171.00$ $\lambda_{LT}=0.34$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.01$ $N_{cr,y}=7738040.00$ $\lambda'_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=44.66$ $N_{cr,z}=559106.00$ $\lambda'_z=0.51$ Curva b: $\Phi_z=0.69$ $\chi_z=0.88$
Kyy, Kyz, Kzy, Kzz=0.95, 0.96, 0.76, 0.96
Verifica YY: 0.02+0.23+0.02=0.28
Verifica ZZ: 0.02+0.18+0.02=0.23

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/9227)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.02$ (L/6805)

Asta n. 2062 (-1807 -1806) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_l=0.96$ - Classe 1

Sollecitazioni: $T_y = -21.63$
 $V, Ed = -21.63$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l = 0.96$ - Classe 1
 Sollecitazioni: $T_z = 206.83$
 $V, Ed = 206.83$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l = 0.00$ - Classe 3
 Sollecitazioni: $N = -3259.57$ $T_z = 124.36$ $M_y = -3525.64$ $T_y = 54.47$ $M_z = -63.72$
 Tensioni: $\sigma_N = -60.57$ $\sigma_{m,d} = -712.02$ $\tau = 0.00$ $\sigma_{max} = -772.59$ (sfrut=0.29)
 Tensioni: $\sigma_N = -60.57$ $\sigma_{m,d} = -3.75$ $\tau = 6.95$ $\tau_{max} = 6.95$ (sfrut=0.00)
 Tensioni: $\sigma_N = -60.57$ $\sigma_{m,d} = -712.02$ $\tau = 0.00$ $\sigma_{ID,max} = 772.59$ (sfrut=0.29)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed = -3259.57$ $M_y, Ed = -3651.19$ $M_z, Ed = -63.72$ $L = 1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.51$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.02$ $M_{cr} = 85015.70$ $\lambda_{LT} = 0.42$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.57$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 12.15$ $N_{cr,y} = 7551620.00$ $\lambda^*_y = 0.14$ Curva a: $\Phi_y = 0.50$ $\chi_y = 1.00$
 $\lambda_z = 45.21$ $N_{cr,z} = 545637.00$ $\lambda^*_z = 0.52$ Curva b: $\Phi_z = 0.69$ $\chi_z = 0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.02 + 0.24 + 0.03 = 0.29$
 Verifica ZZ: $0.02 + 0.19 + 0.03 = 0.24$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.03$ (L/5215)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.04$ (L/3799)

Asta n. 2062 (-1806 -1805) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l = 0.55$ - Classe 1
 Sollecitazioni: $T_y = 55.69$
 $V, Ed = 55.69$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l = 0.55$ - Classe 1
 Sollecitazioni: $T_z = -2009.86$
 $V, Ed = -2009.86$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.05$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l = 0.00$ - Classe 3
 Sollecitazioni: $N = -3119.79$ $T_z = -1979.51$ $M_y = -3651.49$ $T_y = 55.69$ $M_z = -31.76$
 Tensioni: $\sigma_N = -57.97$ $\sigma_{m,d} = -694.91$ $\tau = 0.00$ $\sigma_{max} = -752.89$ (sfrut=0.29)
 Tensioni: $\sigma_N = -57.97$ $\sigma_{m,d} = -1.87$ $\tau = 110.53$ $\tau_{max} = 110.53$ (sfrut=0.07)
 Tensioni: $\sigma_N = -57.97$ $\sigma_{m,d} = -694.91$ $\tau = 0.00$ $\sigma_{ID,max} = 752.89$ (sfrut=0.29)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed = -3119.79$ $M_y, Ed = -3651.49$ $M_z, Ed = 53.13$ $L = 1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.52$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.59$ $M_{cr} = 131700.00$ $\lambda_{LT} = 0.34$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.53$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 12.23$ $N_{cr,y} = 7452600.00$ $\lambda^*_y = 0.14$ Curva a: $\Phi_y = 0.50$ $\chi_y = 1.00$
 $\lambda_z = 45.51$ $N_{cr,z} = 538482.00$ $\lambda^*_z = 0.52$ Curva b: $\Phi_z = 0.69$ $\chi_z = 0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.02 + 0.24 + 0.02 = 0.28$
 Verifica ZZ: $0.02 + 0.19 + 0.02 = 0.24$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.02$ (L/7874)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.03$ (L/5750)

Asta n. 2062 (-1805 -1346) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU $X_l = 1.30$ - Classe 1
 Sollecitazioni: $T_y = -14.18$ $M_x = 2.99$
 $V, Ed = -14.18$ $V_c, Rd, Red = 54425.90$ $V, Ed/V_c, Rd, Red = 0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU $X_l = 1.30$ - Classe 1
 Sollecitazioni: $T_z = -4725.69$ $M_x = 2.99$
 $V, Ed = -4725.69$ $V_c, Rd, Red = 38653.60$ $V, Ed/V_c, Rd, Red = 0.12$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l = 1.18$ - Classe 3
 Sollecitazioni: $N = -2928.66$ $T_z = -4719.23$ $M_y = 4953.35$ $T_y = -14.18$ $M_z = 1.99$ $M_x = 2.99$
 Tensioni: $\sigma_N = -54.42$ $\sigma_{m,d} = -891.62$ $\tau = 17.75$ $\sigma_{max} = -946.04$ (sfrut=0.36)
 Tensioni: $\sigma_N = -54.42$ $\sigma_{m,d} = 0.12$ $\tau = 264.10$ $\tau_{max} = 264.10$ (sfrut=0.17)
 Tensioni: $\sigma_N = -54.42$ $\sigma_{m,d} = -891.62$ $\tau = 17.75$ $\sigma_{ID,max} = 946.54$ (sfrut=0.36)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed = -2933.60 \text{ My}, Ed = 5509.91 \text{ Mz}, Ed = 18.70 \text{ L} = 1.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.75$ Curva b: $\alpha_{imp} = 0.34 \quad k_c = 0.94 \quad \psi = 1.86 \text{ M}, cr = 119517.00 \quad \lambda_{LT} = 0.36$
 $\lambda_{LT,0} = 0.40 \quad \Phi_{LT} = 0.54 \quad \beta_{LT} = 0.75 \quad f = 0.98 \quad \chi_{LT} = 1.00$
 $\lambda_y = 14.00 \text{ Ncr}, y = 5687190.00 \quad \lambda_y^* = 0.16$ Curva a: $\Phi_y = 0.51 \quad \chi_y = 1.00$
 $\lambda_z = 52.10 \text{ Ncr}, z = 410924.00 \quad \lambda_z^* = 0.60$ Curva b: $\Phi_z = 0.75 \quad \chi_z = 0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.02 + 0.36 + 0.01 = 0.39$
 Verifica ZZ: $0.02 + 0.29 + 0.01 = 0.32$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g} = 0.04 \text{ (L/3530)}$
- Verifica freccia massima carichi totali - CC 38
 $f_{z,g} = 0.05 \text{ (L/2713)}$
- Asta n. 2063 (-1502 -1818) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 19 SLU $X_l = 1.56$ - Classe 1
 Sollecitazioni: $T_y = 8.65$
 $V, Ed = 8.65 \quad V_c, Rd = 29609.30 \quad V, Ed/V_c, Rd = 0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 19 SLU $X_l = 1.56$ - Classe 1
 Sollecitazioni: $T_z = -51.36$
 $V, Ed = -51.36 \quad V_c, Rd = 21171.50 \quad V, Ed/V_c, Rd = 0.00$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 32 SLU $X_l = 0.00$ - Classe 1
 Sollecitazioni: $N = -28.31 \quad T_z = 37.87 \quad M_y = 2.45 \quad T_y = 26.60 \quad M_z = -24.27$
 $N, Ed = -28.31 \quad N_c, Rd = 74603.30 \quad n = N, Ed/N_c, Rd = 0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed = 2.45 \quad M_y, V, c, Rd = 5804.95 \quad M_{Ny}, c, Rd = 5804.95 \quad M_y, Ed/M_{Ny}, c, Rd = 0.00$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed = -24.27 \quad M_z, V, c, Rd = 1170.59 \quad M_{Nz}, c, Rd = 1170.59 \quad M_z, Ed/M_{Nz}, c, Rd = 0.02$
 $\alpha = 2.00 \quad \beta = 1.00 \quad (M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^1 = 0.02$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 1
 Sollecitazioni: $N, Ed = -28.31 \quad M_y, Ed = -22.29 \quad M_z, Ed = -24.27 \quad L = 1.56$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.56$ Curva b: $\alpha_{imp} = 0.34 \quad k_c = 0.94 \quad \psi = 1.87 \text{ M}, cr = 26248.00 \quad \lambda_{LT} = 0.48$
 $\lambda_{LT,0} = 0.40 \quad \Phi_{LT} = 0.60 \quad \beta_{LT} = 0.75 \quad f = 0.98 \quad \chi_{LT} = 0.99$
 $\lambda_y = 18.84 \text{ Ncr}, y = 1663800.00 \quad \lambda_y^* = 0.22$ Curva a: $\Phi_y = 0.53 \quad \chi_y = 1.00$
 $\lambda_z = 69.59 \text{ Ncr}, z = 121897.00 \quad \lambda_z^* = 0.80$ Curva b: $\Phi_z = 0.92 \quad \chi_z = 0.72$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00 + 0.00 + 0.01 = 0.02$
 Verifica ZZ: $0.00 + 0.00 + 0.02 = 0.02$
- Verifica freccia massima per soli carichi accidentali - CC 21
 $f_{z,g} = 0.00 \text{ (L/85865)} \quad f_{z,L} = 0.00$
- Verifica freccia massima carichi totali - CC 21
 $f_{z,g} = 0.00 \text{ (L/74156)} \quad f_{z,L} = 0.00$
- Asta n. 2063 (-1818 -1817) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU $X_l = 1.02$ - Classe 1
 Sollecitazioni: $T_y = -6.05$
 $V, Ed = -6.05 \quad V_c, Rd = 29609.30 \quad V, Ed/V_c, Rd = 0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU $X_l = 1.02$ - Classe 1
 Sollecitazioni: $T_z = -253.94$
 $V, Ed = -253.94 \quad V_c, Rd = 21171.50 \quad V, Ed/V_c, Rd = 0.01$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l = 1.02$ - Classe 1
 Sollecitazioni: $N = -8.65 \quad T_z = -250.90 \quad M_y = 252.25 \quad T_y = -9.80 \quad M_z = 3.08$
 $N, Ed = -8.65 \quad N_c, Rd = 74603.30 \quad n = N, Ed/N_c, Rd = 0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed = 252.25 \quad M_y, V, c, Rd = 5804.95 \quad M_{Ny}, c, Rd = 5804.95 \quad M_y, Ed/M_{Ny}, c, Rd = 0.04$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed = 3.08 \quad M_z, V, c, Rd = 1170.59 \quad M_{Nz}, c, Rd = 1170.59 \quad M_z, Ed/M_{Nz}, c, Rd = 0.00$
 $\alpha = 2.00 \quad \beta = 1.00 \quad (M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^1 = 0.04$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed = -10.92 \quad M_y, Ed = 252.25 \quad M_z, Ed = 13.09 \quad L = 1.02$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.02$ Curva b: $\alpha_{imp} = 0.34 \quad k_c = 0.94 \quad \psi = 1.70 \text{ M}, cr = 50263.50 \quad \lambda_{LT} = 0.35$
 $\lambda_{LT,0} = 0.40 \quad \Phi_{LT} = 0.54 \quad \beta_{LT} = 0.75 \quad f = 0.98 \quad \chi_{LT} = 1.00$

$\lambda_y=12.37$ Ncr,y=3858580.00 $\lambda'_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.70$ Ncr,z=282696.00 $\lambda'_z=0.53$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
 Verifica YY: 0.00+0.04+0.01=0.05
 Verifica ZZ: 0.00+0.02+0.01=0.04

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G}=0.00$ (L/71419)

- Verifica freccia massima carichi totali - CC 23
 $f_{z,G}=0.00$ (L/38260)

Asta n. 2063 (-1817 -1816) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU $X_l=0.60$ - Classe 1
 Sollecitazioni: $T_y=-6.05$
 $V, Ed=-6.05$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU $X_l=0.60$ - Classe 1
 Sollecitazioni: $T_z=-271.38$
 $V, Ed=-271.38$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.01$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.60$ - Classe 1
 Sollecitazioni: $N=-7.32$ $T_z=-268.34$ $M_y=408.48$ $T_y=-9.80$ $M_z=-2.82$
 $N, Ed=-7.32$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=408.48$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.07$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-2.82$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.07$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-8.65$ $M_y, Ed=408.48$ $M_z, Ed=3.08$ $L=0.60$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.60$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.22$ $M_{cr}=97752.40$ $\lambda_{LT}=0.25$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.50$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=7.29$ Ncr,y=11122400.00 $\lambda'_y=0.08$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=26.92$ Ncr,z=814872.00 $\lambda'_z=0.31$ Curva b: $\Phi_z=0.57$ $\chi_z=0.96$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
 Verifica YY: 0.00+0.07+0.00=0.07
 Verifica ZZ: 0.00+0.04+0.00=0.04

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G}=0.00$ (L/31549)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.00$ (L/21758)

Asta n. 2063 (-1816 -1815) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-7.42$
 $V, Ed=-7.42$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=327.94$
 $V, Ed=327.94$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.02$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-55.74$ $T_z=327.94$ $M_y=408.81$ $T_y=-7.42$ $M_z=5.03$
 $N, Ed=-55.74$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=408.81$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.07$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=5.03$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.07$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-55.74$ $M_y, Ed=408.81$ $M_z, Ed=-6.41$ $L=1.54$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.54$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.92$ $M_{cr}=27243.30$ $\lambda_{LT}=0.47$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.60$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.99$
 $\lambda_y=18.68$ Ncr,y=1692090.00 $\lambda'_y=0.22$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=69.01$ Ncr,z=123970.00 $\lambda'_z=0.79$ Curva b: $\Phi_z=0.92$ $\chi_z=0.73$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
 Verifica YY: 0.00+0.07+0.00=0.07
 Verifica ZZ: 0.00+0.04+0.01=0.05

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.01$ (L/24511)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.01$ (L/15555)

Asta n. 2063 (-1815 -1814) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-23.79$
 $V,Ed=-23.79$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=466.52$
 $V,Ed=466.52$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.02$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=1.50$ - Classe 1
 Sollecitazioni: $N=-60.64$ $T_z=423.16$ $M_y=-728.35$ $T_y=-23.79$ $M_z=-19.96$
 $N,Ed=-60.64$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-728.35$ $M_y,V,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.13$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-19.96$ $M_z,V,c,Rd=1170.59$ $MN_z,c,Rd=1170.59$ $M_z,Ed/MN_z,c,Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^2 = 0.13$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N,Ed=-63.96$ $M_y,Ed=-728.35$ $M_z,Ed=-19.96$ $L=1.50$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.50$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.66$ $M_{cr}=24871.00$ $\lambda_{LT}=0.50$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.61$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.99$
 $\lambda_y=18.11$ $N_{cr,y}=1799450.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=66.92$ $N_{cr,z}=131835.00$ $\lambda^*_z=0.77$ Curva b: $\Phi_z=0.89$ $\chi_z=0.74$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.12+0.01=0.13$
 Verifica ZZ: $0.00+0.07+0.02=0.09$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,l}=0.01$ (L/11047)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,l}=0.02$ (L/8149)

Asta n. 2063 (-1814 -1813) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=18.41$
 $V,Ed=18.41$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=238.90$
 $V,Ed=238.90$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.01$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=1.51$ - Classe 1
 Sollecitazioni: $N=-41.79$ $T_z=195.01$ $M_y=-1056.88$ $T_y=18.41$ $M_z=10.23$
 $N,Ed=-41.79$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-1056.88$ $M_y,V,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.18$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=10.23$ $M_z,V,c,Rd=1170.59$ $MN_z,c,Rd=1170.59$ $M_z,Ed/MN_z,c,Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^2 = 0.18$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N,Ed=-45.15$ $M_y,Ed=-1056.88$ $M_z,Ed=-17.65$ $L=1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.17$ $M_{cr}=17135.50$ $\lambda_{LT}=0.60$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.67$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.94$
 $\lambda_y=18.34$ $N_{cr,y}=1756100.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=67.74$ $N_{cr,z}=128659.00$ $\lambda^*_z=0.78$ Curva b: $\Phi_z=0.90$ $\chi_z=0.74$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.18+0.01=0.19$
 Verifica ZZ: $0.00+0.11+0.01=0.12$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,l}=0.03$ (L/4841)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,l}=0.04$ (L/3580)

Asta n. 2063 (-1813 -1812) - Sez. 6 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU $X_l=1.52$ - Classe 1
Sollecitazioni: $T_y=22.39$
 $V, Ed=22.39$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU $X_l=1.52$ - Classe 1
Sollecitazioni: $T_z=-140.55$
 $V, Ed=-140.55$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.01$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-17.00$ $T_z=-82.09$ $M_y=-1056.76$ $T_y=18.27$ $M_z=-13.06$
 $N, Ed=-17.00$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-1056.76$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.18$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-13.06$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.18$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-17.00$ $M_y, Ed=-1056.76$ $M_z, Ed=14.78$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.07$ $M_{cr}=15574.50$ $\lambda_{LT}=0.63$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.69$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.93$
 $\lambda_y=18.46$ $N_{cr,y}=1733070.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.19$ $N_{cr,z}=126972.00$ $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.19+0.01=0.19$
Verifica ZZ: $0.00+0.11+0.01=0.12$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.04$ (L/4195)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.05$ (L/3213)

Asta n. 2063 (-1812 -1503) - Sez. 6 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=1.75$ - Classe 1
Sollecitazioni: $T_y=4.30$
 $V, Ed=4.30$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=1.75$ - Classe 1
Sollecitazioni: $T_z=-543.27$
 $V, Ed=-543.27$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.03$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=21.52$ $T_z=-492.69$ $M_y=-898.34$ $T_y=4.30$ $M_z=-1.23$
 $N, Ed=21.52$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-898.34$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.15$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-1.23$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.15$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $M_y, Ed=-898.34$ $M_z, Ed=6.27$ $L=1.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.75$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.76$ $M_{cr}=20316.00$ $\lambda_{LT}=0.55$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.64$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.97$
 $\lambda_y=21.13$ $N_{cr,y}=1322530.00$ $\lambda^*_y=0.24$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=78.06$ $N_{cr,z}=96894.10$ $\lambda^*_z=0.90$ Curva b: $\Phi_z=1.02$ $\chi_z=0.66$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.15+0.00=0.16$
Verifica ZZ: $0.00+0.09+0.01=0.10$
 - Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/7246)
 - Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/5639)

Asta n. 2064 (-123 -1825) - Sez. 5 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_l=0.87$ - Classe 1
Sollecitazioni: $T_y=15.80$
 $V, Ed=15.80$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=0.87$ - Classe 1
Sollecitazioni: $T_z=-1617.34$
 $V, Ed=-1617.34$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.04$
- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.30$ - Classe 3
Sollecitazioni: $N=636.92$ $T_z=-1713.98$ $M_y=-1384.46$ $T_y=82.71$ $M_z=-39.61$
Tensioni: $\sigma_N=11.84$ $\sigma_{m,d}=297.72$ $\tau=0.00$ $\sigma_{max}=309.56$ (sfrut=0.12)
Tensioni: $\sigma_N=11.84$ $\sigma_{m,d}=-2.33$ $\tau=95.70$ $\tau_{max}=95.70$ (sfrut=0.06)
Tensioni: $\sigma_N=11.84$ $\sigma_{m,d}=297.72$ $\tau=0.00$ $\sigma_{ID,max}=309.56$ (sfrut=0.12)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed=-585.04$ $M_y, Ed=-1384.46$ $M_z, Ed=70.40$ $L=1.56$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.56$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.46$ $M_{cr}=195652.00$ $\lambda_{LT}=0.28$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.51$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=12.49$ $N_{cr,y}=7154730.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=46.45$ $N_{cr,z}=516959.00$ $\lambda^*_z=0.54$ Curva b: $\Phi_z=0.70$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.09+0.03=0.13$
Verifica ZZ: $0.00+0.07+0.03=0.11$
- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,g}=0.01$ (L/14642)
- Verifica freccia massima carichi totali - CC 37
 $f_{z,g}=0.01$ (L/15503)

Asta n. 2064 (-1825 -1824) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 15 SLV $X_l=0.57$ - Classe 1
Sollecitazioni: $T_y=-77.28$ $M_x=1.35$
 $V, Ed=-77.28$ $V_c, Rd, Red=54567.40$ $V, Ed/V_c, Rd, Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 15 SLV $X_l=0.57$ - Classe 1
Sollecitazioni: $T_z=-959.46$ $M_x=1.35$
 $V, Ed=-959.46$ $V_c, Rd, Red=38754.10$ $V, Ed/V_c, Rd, Red=0.02$
- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.80$ - Classe 3
Sollecitazioni: $N=690.42$ $T_z=-2313.70$ $M_y=2633.94$ $T_y=-329.92$ $M_z=-163.50$
Tensioni: $\sigma_N=12.83$ $\sigma_{m,d}=675.90$ $\tau=0.00$ $\sigma_{max}=688.73$ (sfrut=0.26)
Tensioni: $\sigma_N=12.83$ $\sigma_{m,d}=-9.61$ $\tau=129.19$ $\tau_{max}=129.19$ (sfrut=0.09)
Tensioni: $\sigma_N=12.83$ $\sigma_{m,d}=675.90$ $\tau=0.00$ $\sigma_{ID,max}=688.73$ (sfrut=0.26)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed=-560.16$ $M_y, Ed=2633.94$ $M_z, Ed=-163.50$ $L=1.02$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.02$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.46$ $M_{cr}=259679.00$ $\lambda_{LT}=0.24$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.50$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=8.20$ $N_{cr,y}=16592800.00$ $\lambda^*_y=0.09$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=30.50$ $N_{cr,z}=1198900.00$ $\lambda^*_z=0.35$ Curva b: $\Phi_z=0.59$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.17+0.07=0.25$
Verifica ZZ: $0.00+0.14+0.07=0.21$
- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.00$ (L/23550)
- Verifica freccia massima carichi totali - CC 23
 $f_{z,g}=0.01$ (L/11611)

Asta n. 2064 (-1824 -1823) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 11 SLV $X_l=0.48$ - Classe 1
Sollecitazioni: $T_y=-21.82$
 $V, Ed=-21.82$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 11 SLV $X_l=0.48$ - Classe 1
Sollecitazioni: $T_z=1916.07$
 $V, Ed=1916.07$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.05$
- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.22$ - Classe 3
Sollecitazioni: $N=-4701.17$ $T_z=8627.08$ $M_y=10172.90$ $T_y=163.73$ $M_z=-24.51$
Tensioni: $\sigma_N=-87.36$ $\sigma_{m,d}=-1856.53$ $\tau=0.00$ $\sigma_{max}=-1943.89$ (sfrut=0.74)
Tensioni: $\sigma_N=-87.36$ $\sigma_{m,d}=-1.44$ $\tau=481.69$ $\tau_{max}=481.69$ (sfrut=0.32)
Tensioni: $\sigma_N=-87.36$ $\sigma_{m,d}=-1856.53$ $\tau=0.00$ $\sigma_{ID,max}=1943.89$ (sfrut=0.74)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-4701.17$ $M_y, Ed=10172.90$ $M_z, Ed=37.28$ $L=0.60$

$\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.60$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.17$ $M_{cr}=592089.00$ $\lambda_{LT}=0.16$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.47$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=4.83$ $N_{cr,y}=47828800.00$ $\lambda^*_y=0.06$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=17.96$ $N_{cr,z}=3455830.00$ $\lambda^*_z=0.21$ Curva b: $\Phi_z=0.52$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.03+0.66+0.02=0.71$
Verifica ZZ: $0.03+0.53+0.02=0.58$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G}=0.01$ (L/2710)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.02$ (L/1959)

Asta n. 2064 (-1823 -1822) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 20 SLU $X_1=1.26$ - Classe 2
Sollecitazioni: $T_y=-11.63$
 $V, Ed=-11.63$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 20 SLU $X_1=1.26$ - Classe 2
Sollecitazioni: $T_z=2526.16$
 $V, Ed=2526.16$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.07$

- Verifica in termini tensionali [4.2.4] - CC 32 SLU $X_1=0.00$ - Classe 3
Sollecitazioni: $N=-4603.33$ $T_z=5115.01$ $M_y=6871.73$ $T_y=-79.64$ $M_z=82.81$
Tensioni: $\sigma_N=-85.54$ $\sigma_{m,d}=-1336.38$ $\tau=0.00$ $\sigma_{max}=-1421.92$ (sfrut=0.54)
Tensioni: $\sigma_N=-85.54$ $\sigma_{m,d}=4.87$ $\tau=285.60$ $\tau_{max}=285.60$ (sfrut=0.19)
Tensioni: $\sigma_N=-85.54$ $\sigma_{m,d}=-1336.38$ $\tau=0.00$ $\sigma_{ID,max}=1421.92$ (sfrut=0.54)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 3
Sollecitazioni: $N, Ed=-4603.33$ $M_y, Ed=6871.73$ $M_z, Ed=82.81$ $L=1.54$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.54$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.90$ $M_{cr}=153678.00$ $\lambda_{LT}=0.32$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.52$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.38$ $N_{cr,y}=7276390.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=46.06$ $N_{cr,z}=525750.00$ $\lambda^*_z=0.53$ Curva b: $\Phi_z=0.70$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.03+0.45+0.04=0.52$
Verifica ZZ: $0.03+0.36+0.04=0.43$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,G}=0.03$ (L/5071)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,G}=0.04$ (L/3627)

Asta n. 2064 (-1822 -1821) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1=0.41$ - Classe 1
Sollecitazioni: $T_y=-71.19$
 $V, Ed=-71.19$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1=0.41$ - Classe 1
Sollecitazioni: $T_z=2425.91$
 $V, Ed=2425.91$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.06$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=1.50$ - Classe 3
Sollecitazioni: $N=-4269.46$ $T_z=2366.34$ $M_y=-4757.25$ $T_y=-71.19$ $M_z=-77.41$
Tensioni: $\sigma_N=-79.34$ $\sigma_{m,d}=-950.11$ $\tau=0.00$ $\sigma_{max}=-1029.45$ (sfrut=0.39)
Tensioni: $\sigma_N=-79.34$ $\sigma_{m,d}=-4.55$ $\tau=132.12$ $\tau_{max}=132.12$ (sfrut=0.09)
Tensioni: $\sigma_N=-79.34$ $\sigma_{m,d}=-950.11$ $\tau=0.00$ $\sigma_{ID,max}=1029.45$ (sfrut=0.39)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
Sollecitazioni: $N, Ed=-4275.74$ $M_y, Ed=-4757.25$ $M_z, Ed=-77.41$ $L=1.50$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.50$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.51$ $M_{cr}=129540.00$ $\lambda_{LT}=0.34$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.01$ $N_{cr,y}=7738040.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=44.66$ $N_{cr,z}=559106.00$ $\lambda^*_z=0.51$ Curva b: $\Phi_z=0.69$ $\chi_z=0.88$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.03+0.31+0.04=0.38$
Verifica ZZ: $0.03+0.25+0.04=0.31$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/6661)

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/4933)

Asta n. 2064 (-1821 -1820) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 11 SLV $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_y=5.12$
 $V,Ed=5.12$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 11 SLV $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=198.50$
 $V,Ed=198.50$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-4114.25$ $T_z=57.86$ $M_y=-4757.08$ $T_y=26.33$ $M_z=-43.46$
 Tensioni: $\sigma_N=-76.45$ $\sigma_{m,d}=-907.91$ $\tau=0.00$ $\sigma_{max}=-984.36$ (sfrut=0.38)
 Tensioni: $\sigma_N=-76.45$ $\sigma_{m,d}=-2.56$ $\tau=3.23$ $\tau_{max}=3.23$ (sfrut=0.00)
 Tensioni: $\sigma_N=-76.45$ $\sigma_{m,d}=-907.91$ $\tau=0.00$ $\sigma_{ID,max}=984.36$ (sfrut=0.38)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4114.25$ $M_y,Ed=-4781.91$ $M_z,Ed=-43.46$ $L=1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.00$ $M_{cr}=83887.20$ $\lambda_{LT}=0.43$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.57$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.15$ $N_{cr,y}=7551620.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.21$ $N_{cr,z}=545637.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.03+0.31+0.02=0.36$
 Verifica ZZ: $0.03+0.25+0.02=0.30$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.04$ (L/3863)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.05$ (L/2861)

Asta n. 2064 (-1820 -1819) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 19 SLU $X_1=1.52$ - Classe 2
 Sollecitazioni: $T_y=-8.52$
 $V,Ed=-8.52$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 19 SLU $X_1=1.52$ - Classe 2
 Sollecitazioni: $T_z=-2147.48$
 $V,Ed=-2147.48$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.06$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-3927.72$ $T_z=-2686.82$ $M_y=-4782.11$ $T_y=7.34$ $M_z=1.01$
 Tensioni: $\sigma_N=-72.99$ $\sigma_{m,d}=-859.67$ $\tau=0.00$ $\sigma_{max}=-932.65$ (sfrut=0.36)
 Tensioni: $\sigma_N=-72.99$ $\sigma_{m,d}=0.06$ $\tau=150.02$ $\tau_{max}=150.02$ (sfrut=0.10)
 Tensioni: $\sigma_N=-72.99$ $\sigma_{m,d}=-859.67$ $\tau=0.00$ $\sigma_{ID,max}=932.65$ (sfrut=0.36)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N,Ed=-3927.72$ $M_y,Ed=-4782.11$ $M_z,Ed=12.19$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.62$ $M_{cr}=133769.00$ $\lambda_{LT}=0.34$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.23$ $N_{cr,y}=7452600.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.51$ $N_{cr,z}=538482.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.03+0.31+0.01=0.35$
 Verifica ZZ: $0.03+0.25+0.01=0.28$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.03$ (L/5964)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/4471)

Asta n. 2064 (-1819 -1347) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1=1.06$ - Classe 1
 Sollecitazioni: $T_y=-25.06$
 $V,Ed=-25.06$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1=1.06$ - Classe 1
 Sollecitazioni: $T_z=-6089.53$
 $V,Ed=-6089.53$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.16$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=1.30$ - Classe 3
 Sollecitazioni: $N=-3693.77$ $T_z=-6102.44$ $M_y=7242.69$ $T_y=-25.06$ $M_z=-6.67$
 Tensioni: $\sigma_N=-68.64$ $\sigma_{m,d}=-1308.38$ $\tau=0.00$ $\sigma_{max}=-1377.02$ (sfrut=0.53)
 Tensioni: $\sigma_N=-68.64$ $\sigma_{m,d}=-0.39$ $\tau=340.73$ $\tau_{max}=340.73$ (sfrut=0.23)
 Tensioni: $\sigma_N=-68.64$ $\sigma_{m,d}=-1308.38$ $\tau=0.00$ $\sigma_{ID,max}=1377.02$ (sfrut=0.53)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N,Ed=-3699.21$ $M_y,Ed=7242.69$ $M_z,Ed=25.81$ $L=1.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.75$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.84$ $M_{cr}=118267.00$ $\lambda_{LT}=0.36$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.54$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=14.00$ $N_{cr,y}=5687190.00$ $\lambda^*_y=0.16$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=52.10$ $N_{cr,z}=410924.00$ $\lambda^*_z=0.60$ Curva b: $\Phi_z=0.75$ $\chi_z=0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.03+0.47+0.01=0.51$
 Verifica ZZ: $0.03+0.38+0.01=0.42$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.05$ (L/2713)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.06$ (L/2050)
- Asta n. 2067 (-1460 -1545) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 3 SLV $X_1=0.32$ - Classe 1
 Sollecitazioni: $T_y=-3.49$
 $V,Ed=-3.49$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 3 SLV $X_1=0.32$ - Classe 1
 Sollecitazioni: $T_z=142.78$
 $V,Ed=142.78$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.00$
- Verifica in termini tensionali [4.2.4] - CC 32 SLU $X_1=2.24$ - Classe 3
 Sollecitazioni: $N=-2317.77$ $T_z=-230.26$ $M_y=-1242.18$ $T_y=-28.39$ $M_z=-40.15$
 Tensioni: $\sigma_N=-43.07$ $\sigma_{m,d}=-272.85$ $\tau=0.00$ $\sigma_{max}=-315.92$ (sfrut=0.12)
 Tensioni: $\sigma_N=-43.07$ $\sigma_{m,d}=-2.36$ $\tau=12.86$ $\tau_{max}=12.86$ (sfrut=0.01)
 Tensioni: $\sigma_N=-43.07$ $\sigma_{m,d}=-272.85$ $\tau=0.00$ $\sigma_{ID,max}=315.92$ (sfrut=0.12)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 3
 Sollecitazioni: $N,Ed=-2317.77$ $M_y,Ed=-1356.26$ $M_z,Ed=-67.45$ $L=3.21$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.21$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.11$ $M_{cr}=24587.70$ $\lambda_{LT}=0.79$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.80$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.85$
 $\lambda_y=25.73$ $N_{cr,y}=1685300.00$ $\lambda^*_y=0.30$ Curva a: $\Phi_y=0.55$ $\chi_y=0.98$
 $\lambda_z=95.70$ $N_{cr,z}=121770.00$ $\lambda^*_z=1.10$ Curva b: $\Phi_z=1.26$ $\chi_z=0.53$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.97, 0.76, 0.97$
 Verifica YY: $0.02+0.10+0.03=0.15$
 Verifica ZZ: $0.02+0.08+0.03=0.13$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.04$ (L/8139)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,l}=0.07$ (L/4741)
- Asta n. 2067 (-119 -1460) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 19 SLU $X_1=1.80$ - Classe 2
 Sollecitazioni: $T_y=-13.53$
 $V,Ed=-13.53$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 19 SLU $X_1=1.80$ - Classe 2
 Sollecitazioni: $T_z=710.87$
 $V,Ed=710.87$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.02$
- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=0.15$ - Classe 3
 Sollecitazioni: $N=-2765.78$ $T_z=1285.75$ $M_y=1921.78$ $T_y=-26.04$ $M_z=57.17$
 Tensioni: $\sigma_N=-51.40$ $\sigma_{m,d}=-415.99$ $\tau=0.00$ $\sigma_{max}=-467.38$ (sfrut=0.18)
 Tensioni: $\sigma_N=-51.40$ $\sigma_{m,d}=3.36$ $\tau=71.79$ $\tau_{max}=71.79$ (sfrut=0.05)
 Tensioni: $\sigma_N=-51.40$ $\sigma_{m,d}=-415.99$ $\tau=0.00$ $\sigma_{ID,max}=467.38$ (sfrut=0.18)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N,Ed=-2765.78$ $M_y,Ed=1921.78$ $M_z,Ed=57.17$ $L=3.78$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.78$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.50$ $M_{cr}=42429.00$ $\lambda_{LT}=0.60$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.67$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.94$
 $\lambda_y=30.33$ $N_{cr,y}=1212140.00$ $\lambda^*_y=0.35$ Curva a: $\Phi_y=0.58$ $\chi_y=0.97$

$\lambda_z=112.85$ Ncr, $z=87581.90$ $\lambda^*_z=1.30$ Curva b: $\Phi_z=1.53$ $\chi_z=0.43$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.98, 0.76, 0.98$
 Verifica YY: $0.02+0.13+0.03=0.18$
 Verifica ZZ: $0.02+0.11+0.03=0.15$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.01$ (L/31719)

- Verifica freccia massima carichi totali - CC 23
 $f_{z,L}=0.02$ (L/14926)

Asta n. 2067 (-1452 -119) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 32 SLU $X_1=1.85$ - Classe 2
 Sollecitazioni: $T_y=13.03$ $M_x=-2.04$
 $V, Ed=13.03$ $V_c, Rd, Red=54508.00$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 32 SLU $X_1=1.85$ - Classe 2
 Sollecitazioni: $T_z=-773.87$ $M_x=-2.04$
 $V, Ed=-773.87$ $V_c, Rd, Red=38711.90$ $V, Ed/V_c, Rd, Red=0.02$

- Verifica in termini tensionali [4.2.4] - CC 32 SLU $X_1=4.08$ - Classe 3
 Sollecitazioni: $N=-3117.89$ $T_z=-1291.04$ $M_y=2479.77$ $T_y=13.03$ $M_z=28.15$ $M_x=-2.04$
 Tensioni: $\sigma_N=-57.94$ $\sigma_{m,d}=-480.10$ $\tau=12.10$ $\sigma_{max}=-538.04$ (sfrut=0.21)
 Tensioni: $\sigma_N=-57.94$ $\sigma_{m,d}=1.66$ $\tau=73.10$ $\tau_{max}=73.10$ (sfrut=0.05)
 Tensioni: $\sigma_N=-57.94$ $\sigma_{m,d}=-480.10$ $\tau=12.10$ $\sigma_{ID,max}=538.45$ (sfrut=0.21)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3117.89$ $M_y, Ed=2479.77$ $M_z, Ed=28.15$ $L=4.23$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.23$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.15$ $M_{cr}=30653.30$ $\lambda_{LT}=0.71$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.74$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.89$
 $\lambda_y=33.95$ Ncr, $y=967952.00$ $\lambda^*_y=0.39$ Curva a: $\Phi_y=0.60$ $\chi_y=0.96$
 $\lambda_z=126.28$ Ncr, $z=69938.60$ $\lambda^*_z=1.45$ Curva b: $\Phi_z=1.77$ $\chi_z=0.36$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.99, 0.76, 0.99$
 Verifica YY: $0.02+0.18+0.01=0.22$
 Verifica ZZ: $0.06+0.15+0.01=0.22$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,G}=0.04$ (L/10749)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.05$ (L/7764)

Asta n. 2067 (-125 -1452) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 20 SLU $X_1=0.52$ - Classe 2
 Sollecitazioni: $T_y=-4.98$ $M_x=1.03$
 $V, Ed=-4.98$ $V_c, Rd, Red=54594.60$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 20 SLU $X_1=0.52$ - Classe 2
 Sollecitazioni: $T_z=542.77$ $M_x=1.03$
 $V, Ed=542.77$ $V_c, Rd, Red=38773.40$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=0.15$ - Classe 3
 Sollecitazioni: $N=-3299.75$ $T_z=995.14$ $M_y=1184.13$ $T_y=-15.95$ $M_z=33.57$ $M_x=2.13$
 Tensioni: $\sigma_N=-61.32$ $\sigma_{m,d}=-254.26$ $\tau=12.65$ $\sigma_{max}=-315.58$ (sfrut=0.12)
 Tensioni: $\sigma_N=-61.32$ $\sigma_{m,d}=1.97$ $\tau=57.00$ $\tau_{max}=57.00$ (sfrut=0.04)
 Tensioni: $\sigma_N=-61.32$ $\sigma_{m,d}=-254.26$ $\tau=12.65$ $\sigma_{ID,max}=316.34$ (sfrut=0.12)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3299.75$ $M_y, Ed=1184.13$ $M_z, Ed=33.57$ $L=4.23$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.23$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.71$ $M_{cr}=38652.80$ $\lambda_{LT}=0.63$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.69$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.93$
 $\lambda_y=33.95$ Ncr, $y=967952.00$ $\lambda^*_y=0.39$ Curva a: $\Phi_y=0.60$ $\chi_y=0.96$
 $\lambda_z=126.28$ Ncr, $z=69938.60$ $\lambda^*_z=1.45$ Curva b: $\Phi_z=1.77$ $\chi_z=0.36$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.99, 0.76, 0.99$
 Verifica YY: $0.02+0.08+0.02=0.12$
 Verifica ZZ: $0.07+0.07+0.02=0.15$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.03$ (L/16144)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.03$ (L/13800)

Asta n. 2067 (-125 -1737) - Sez. 5 (IPE300) - Crit. 1

Relazione di calcolo

-
- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_l=0.66$ - Classe 1
Sollecitazioni: $T_y=-267.38$
 $V, Ed=-267.38$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=0.66$ - Classe 1
Sollecitazioni: $T_z=-1105.81$
 $V, Ed=-1105.81$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.03$
 - Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.15$ - Classe 3
Sollecitazioni: $N=-2929.68$ $T_z=-185.27$ $M_y=-600.24$ $T_y=-667.82$ $M_z=335.16$
Tensioni: $\sigma_N=-54.44$ $\sigma_{m,d}=-524.07$ $\tau=0.00$ $\sigma_{max}=-578.51$ (sfrut=0.22)
Tensioni: $\sigma_N=-54.44$ $\sigma_{m,d}=203.03$ $\tau=29.24$ $\tau_{max}=29.24$ (sfrut=0.02)
Tensioni: $\sigma_N=-54.44$ $\sigma_{m,d}=-524.07$ $\tau=0.00$ $\sigma_{ID,max}=578.51$ (sfrut=0.22)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-2929.68$ $M_y, Ed=-600.24$ $M_z, Ed=-349.50$ $L=1.18$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.18$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.25$ $M_{cr}=170033.00$ $\lambda_{LT}=0.30$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.52$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=9.43$ $N_{cr,y}=12540400.00$ $\lambda^*_y=0.11$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=35.08$ $N_{cr,z}=906093.00$ $\lambda^*_z=0.40$ Curva b: $\Phi_z=0.62$ $\chi_z=0.92$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.04+0.16=0.22$
Verifica ZZ: $0.02+0.03+0.16=0.21$
 - Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.00$ (L/21500)
 - Verifica freccia massima carichi totali - CC 21
 $f_{z,L}=0.00$ (L/28289)
- Asta n. 2067 (-1737 -1525) - Sez. 5 (IPE300) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 3 SLV $X_l=0.41$ - Classe 1
Sollecitazioni: $T_y=-22.22$
 $V, Ed=-22.22$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 3 SLV $X_l=0.41$ - Classe 1
Sollecitazioni: $T_z=1016.72$
 $V, Ed=1016.72$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.03$
 - Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-1941.44$ $T_z=-3.62$ $M_y=13.31$ $T_y=427.36$ $M_z=-290.60$
Tensioni: $\sigma_N=-36.08$ $\sigma_{m,d}=-363.37$ $\tau=0.00$ $\sigma_{max}=-399.44$ (sfrut=0.15)
Tensioni: $\sigma_N=-36.08$ $\sigma_{m,d}=-91.50$ $\tau=18.69$ $\tau_{max}=18.69$ (sfrut=0.01)
Tensioni: $\sigma_N=-36.08$ $\sigma_{m,d}=-363.37$ $\tau=0.00$ $\sigma_{ID,max}=399.44$ (sfrut=0.15)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-1941.44$ $M_y, Ed=45.86$ $M_z, Ed=-290.60$ $L=1.02$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.02$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.47$ $M_{cr}=260368.00$ $\lambda_{LT}=0.24$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.50$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=8.22$ $N_{cr,y}=16491400.00$ $\lambda^*_y=0.09$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=30.59$ $N_{cr,z}=1191570.00$ $\lambda^*_z=0.35$ Curva b: $\Phi_z=0.59$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.00+0.13=0.15$
Verifica ZZ: $0.01+0.00+0.13=0.15$
 - Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.00$ (L/76755)
 - Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.00$ (L/56556)
- Asta n. 2067 (-1525 -1835) - Sez. 5 (IPE300) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 1 SLV $X_l=0.51$ - Classe 1
Sollecitazioni: $T_y=-56.23$
 $V, Ed=-56.23$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.51$ - Classe 1
Sollecitazioni: $T_z=-1279.86$
 $V, Ed=-1279.86$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.03$
 - Verifica in termini tensionali [4.2.4] - CC 30 SLU $X_l=1.36$ - Classe 3
Sollecitazioni: $N=-2141.85$ $T_z=-1248.47$ $M_y=915.53$ $T_y=-92.92$ $M_z=-80.64$
Tensioni: $\sigma_N=-39.80$ $\sigma_{m,d}=-264.51$ $\tau=0.00$ $\sigma_{max}=-304.31$ (sfrut=0.12)
Tensioni: $\sigma_N=-39.80$ $\sigma_{m,d}=-4.74$ $\tau=69.71$ $\tau_{max}=69.71$ (sfrut=0.05)
Tensioni: $\sigma_N=-39.80$ $\sigma_{m,d}=-264.51$ $\tau=0.00$ $\sigma_{ID,max}=304.31$ (sfrut=0.12)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 3
 Sollecitazioni: N,Ed=-2146.30 My,Ed=915.53 Mz,Ed=-80.64 L=1.36
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.36$ Curva b: $\alpha_{imp}=0.34 k_e=0.94 \psi=2.24 M, cr=229320.00 \lambda_{LT}=0.26$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.50 \beta_{LT}=0.75 f=0.99 \chi_{LT}=1.00$
 $\lambda_y=10.92 Ncr,y=9359910.00 \lambda^*_y=0.13$ Curva a: $\Phi_y=0.50 \chi_y=1.00$
 $\lambda_z=40.61 Ncr,z=676293.00 \lambda^*_z=0.47$ Curva b: $\Phi_z=0.65 \chi_z=0.90$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.02+0.06+0.04=0.11$
 Verifica ZZ: $0.02+0.05+0.04=0.10$

- Verifica freccia massima per soli carichi accidentali - CC 21
 $f_{z,L}=0.00$ (L/31344)

- Verifica freccia massima carichi totali - CC 21
 $f_{z,L}=0.00$ (L/34772)

Asta n. 2067 (-1835 -1384) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 3 SLV X1=0.20 - Classe 1
 Sollecitazioni: $T_y=13.14 M_x=1.36$
 $V, Ed=13.14 Vc, Rd, Red=54566.40 V, Ed/Vc, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 3 SLV X1=0.20 - Classe 1
 Sollecitazioni: $T_z=1208.19 M_x=1.36$
 $V, Ed=1208.19 Vc, Rd, Red=38753.40 V, Ed/Vc, Rd, Red=0.03$

- Verifica in termini tensionali [4.2.4] - CC 30 SLU X1=0.00 - Classe 3
 Sollecitazioni: N=-3605.85 $T_z=1103.85 M_y=907.47 T_y=132.85 M_z=-48.23 M_x=4.47$
 Tensioni: $\sigma_N=-67.01 \sigma_{m,d}=-222.81 \tau=26.56 \sigma_{max}=-289.82$ (sfrut=0.11)
 Tensioni: $\sigma_N=-67.01 \sigma_{m,d}=2.84 \tau=67.29 \tau_{max}=67.29$ (sfrut=0.04)
 Tensioni: $\sigma_N=-67.01 \sigma_{m,d}=-222.81 \tau=26.56 \sigma_{TD,max}=293.44$ (sfrut=0.11)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 3
 Sollecitazioni: N,Ed=-3605.85 My,Ed=907.47 Mz,Ed=-48.23 L=0.20
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.20$ Curva b: $\alpha_{imp}=0.34 k_e=0.94 \psi=1.12 M, cr=5313720.00 \lambda_{LT}=0.05$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.44 \beta_{LT}=0.75 f=1.00 \chi_{LT}=1.00$
 $\lambda_y=1.57 Ncr,y=452821000.00 \lambda^*_y=0.02$ Curva a: $\Phi_y=0.00 \chi_y=1.00$
 $\lambda_z=5.84 Ncr,z=32718200.00 \lambda^*_z=0.07$ Curva b: $\Phi_z=0.00 \chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.03+0.06+0.02=0.11$
 Verifica ZZ: $0.03+0.05+0.02=0.09$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 37
 $f_{z,G}=0.00$

Asta n. 2067 (-1384 -1357) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV X1=0.80 - Classe 1
 Sollecitazioni: $T_y=-26.12$
 $V, Ed=-26.12 Vc, Rd=54683.30 V, Ed/Vc, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV X1=0.80 - Classe 1
 Sollecitazioni: $T_z=-1835.91$
 $V, Ed=-1835.91 Vc, Rd=38836.40 V, Ed/Vc, Rd=0.05$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU X1=0.80 - Classe 3
 Sollecitazioni: N=-3449.80 $T_z=-2037.65 M_y=2385.00 T_y=127.82 M_z=149.62 M_x=-1.35$
 Tensioni: $\sigma_N=-64.11 \sigma_{m,d}=-613.97 \tau=8.02 \sigma_{max}=-678.07$ (sfrut=0.26)
 Tensioni: $\sigma_N=-64.11 \sigma_{m,d}=8.80 \tau=114.09 \tau_{max}=114.09$ (sfrut=0.08)
 Tensioni: $\sigma_N=-64.11 \sigma_{m,d}=-613.97 \tau=8.02 \sigma_{TD,max}=678.22$ (sfrut=0.26)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: N,Ed=-3453.14 My,Ed=2385.00 Mz,Ed=149.62 L=1.02
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.02$ Curva b: $\alpha_{imp}=0.34 k_e=0.94 \psi=1.44 M, cr=256399.00 \lambda_{LT}=0.24$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.50 \beta_{LT}=0.75 f=0.99 \chi_{LT}=1.00$
 $\lambda_y=8.20 Ncr,y=16592800.00 \lambda^*_y=0.09$ Curva a: $\Phi_y=0.49 \chi_y=1.00$
 $\lambda_z=30.50 Ncr,z=1198900.00 \lambda^*_z=0.35$ Curva b: $\Phi_z=0.59 \chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.02+0.16+0.07=0.25$
 Verifica ZZ: $0.02+0.12+0.07=0.22$

Relazione di calcolo

- Verifica freccia massima per soli carichi accidentali - CC 21
 $f_{z,g}=0.01$ (L/11611)

- Verifica freccia massima carichi totali - CC 21
 $f_{z,g}=0.01$ (L/8531)

Asta n. 2067 (-1357 -1732) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 34 SLU $X_1=0.48$ - Classe 1
 Sollecitazioni: $T_y=-1407.05$ $M_x=3.96$
 $V, Ed=-1407.05$ $V_c, Rd, Red=54342.10$ $V, Ed/V_c, Rd, Red=0.03$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 34 SLU $X_1=0.48$ - Classe 1
 Sollecitazioni: $T_z=5907.95$ $M_x=3.96$
 $V, Ed=5907.95$ $V_c, Rd, Red=38594.10$ $V, Ed/V_c, Rd, Red=0.15$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=0.22$ - Classe 3
 Sollecitazioni: $N=-6115.91$ $T_z=7675.17$ $M_y=8959.38$ $T_y=-1240.54$ $M_z=325.74$ $M_x=4.59$
 Tensioni: $\sigma_N=-113.65$ $\sigma_{m,d}=-2012.88$ $\tau=27.25$ $\sigma_{max}=-2126.53$ (sfrut=0.81)
 Tensioni: $\sigma_N=-113.65$ $\sigma_{m,d}=19.15$ $\tau=429.70$ $\tau_{max}=429.70$ (sfrut=0.28)
 Tensioni: $\sigma_N=-113.65$ $\sigma_{m,d}=-2012.88$ $\tau=27.25$ $\sigma_{ID,max}=2127.06$ (sfrut=0.81)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed=-6115.91$ $M_y, Ed=8959.38$ $M_z, Ed=325.74$ $L=0.60$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.60$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.18$ $M_{cr}=593128.00$ $\lambda_{LT}=0.16$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.47$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=4.83$ $N_{cr,y}=47828900.00$ $\lambda^*_y=0.06$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=17.96$ $N_{cr,z}=3455840.00$ $\lambda^*_z=0.21$ Curva b: $\Phi_z=0.52$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.04+0.58+0.15=0.78$
 Verifica ZZ: $0.04+0.47+0.15=0.66$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.01$ (L/3191)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.02$ (L/2235)

Asta n. 2067 (-1732 15) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 1 SLV $X_1=1.12$ - Classe 1
 Sollecitazioni: $T_y=28.73$
 $V, Ed=28.73$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_1=1.12$ - Classe 1
 Sollecitazioni: $T_z=1086.29$
 $V, Ed=1086.29$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.03$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-5902.96$ $T_z=4761.51$ $M_y=6065.93$ $T_y=31.89$ $M_z=-53.25$
 Tensioni: $\sigma_N=-109.69$ $\sigma_{m,d}=-1155.01$ $\tau=0.00$ $\sigma_{max}=-1264.70$ (sfrut=0.48)
 Tensioni: $\sigma_N=-109.69$ $\sigma_{m,d}=-3.13$ $\tau=265.86$ $\tau_{max}=265.86$ (sfrut=0.18)
 Tensioni: $\sigma_N=-109.69$ $\sigma_{m,d}=-1155.01$ $\tau=0.00$ $\sigma_{ID,max}=1264.70$ (sfrut=0.48)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed=-5902.96$ $M_y, Ed=6065.93$ $M_z, Ed=-53.25$ $L=1.54$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.54$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.97$ $M_{cr}=159391.00$ $\lambda_{LT}=0.31$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.52$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.38$ $N_{cr,y}=7276350.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=46.06$ $N_{cr,z}=525747.00$ $\lambda^*_z=0.53$ Curva b: $\Phi_z=0.70$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.04+0.40+0.02=0.46$
 Verifica ZZ: $0.04+0.32+0.02=0.38$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.03$ (L/6151)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,g}=0.04$ (L/4291)

Asta n. 2067 (15 14) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_1=0.82$ - Classe 1
 Sollecitazioni: $T_y=-63.21$
 $V, Ed=-63.21$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=0.82$ - Classe 1

Sollecitazioni: $T_z=1083.59$
 $V, Ed=1083.59$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.03$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=1.50$ - Classe 3
 Sollecitazioni: $N=-5717.56$ $T_z=2499.59$ $M_y=-5015.58$ $T_y=-83.92$ $M_z=-82.13$ $M_x=-1.90$
 Tensioni: $\sigma_N=-106.25$ $\sigma_{m,d}=-1002.34$ $\tau=11.27$ $\sigma_{max}=-1108.59$ (sfrut=0.42)
 Tensioni: $\sigma_N=-106.25$ $\sigma_{m,d}=4.83$ $\tau=140.04$ $\tau_{max}=140.04$ (sfrut=0.09)
 Tensioni: $\sigma_N=-106.25$ $\sigma_{m,d}=-1002.34$ $\tau=11.27$ $\sigma_{ID,max}=1108.76$ (sfrut=0.42)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed=-5723.83$ $M_y, Ed=-5015.58$ $M_z, Ed=-82.13$ $L=1.50$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.50$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.51$ $M_{cr}=129598.00$ $\lambda_{LT}=0.34$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.01$ $N_{cr,y}=7738040.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=44.66$ $N_{cr,z}=559106.00$ $\lambda^*_z=0.51$ Curva b: $\Phi_z=0.69$ $\chi_z=0.88$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.04+0.33+0.04=0.41$
 Verifica ZZ: $0.04+0.26+0.04=0.34$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/6377)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/4725)

Asta n. 2067 (14 13) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=1.73$
 $V, Ed=1.73$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=150.19$
 $V, Ed=150.19$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-5515.98$ $T_z=57.39$ $M_y=-5015.75$ $T_y=63.30$ $M_z=-71.05$
 Tensioni: $\sigma_N=-102.50$ $\sigma_{m,d}=-988.61$ $\tau=0.00$ $\sigma_{max}=-1091.12$ (sfrut=0.42)
 Tensioni: $\sigma_N=-102.50$ $\sigma_{m,d}=-4.18$ $\tau=3.21$ $\tau_{max}=3.21$ (sfrut=0.00)
 Tensioni: $\sigma_N=-102.50$ $\sigma_{m,d}=-988.61$ $\tau=0.00$ $\sigma_{ID,max}=1091.12$ (sfrut=0.42)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed=-5515.98$ $M_y, Ed=-5039.88$ $M_z, Ed=-71.05$ $L=1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.00$ $M_{cr}=83872.30$ $\lambda_{LT}=0.43$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.57$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.15$ $N_{cr,y}=7551670.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.21$ $N_{cr,z}=545640.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.04+0.33+0.03=0.40$
 Verifica ZZ: $0.04+0.26+0.03=0.33$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.04$ (L/3671)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.06$ (L/2702)

Asta n. 2067 (13 12) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.42$ - Classe 1
 Sollecitazioni: $T_y=-30.58$
 $V, Ed=-30.58$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.42$ - Classe 1
 Sollecitazioni: $T_z=-3177.83$
 $V, Ed=-3177.83$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.08$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-5264.62$ $T_z=-3155.07$ $M_y=-5040.33$ $T_y=-30.58$ $M_z=11.73$
 Tensioni: $\sigma_N=-97.83$ $\sigma_{m,d}=-919.34$ $\tau=0.00$ $\sigma_{max}=-1017.17$ (sfrut=0.39)
 Tensioni: $\sigma_N=-97.83$ $\sigma_{m,d}=0.69$ $\tau=176.16$ $\tau_{max}=176.16$ (sfrut=0.12)
 Tensioni: $\sigma_N=-97.83$ $\sigma_{m,d}=-919.34$ $\tau=0.00$ $\sigma_{ID,max}=1017.17$ (sfrut=0.39)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed=-5264.62$ $M_y, Ed=-5040.33$ $M_z, Ed=-34.89$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$

- $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.72$ $M_{cr}=141800.00$ $\lambda_{LT}=0.33$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.23$ $N_{cr,y}=7452600.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.51$ $N_{cr,z}=538482.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.04+0.33+0.02=0.38$
 Verifica ZZ: $0.04+0.26+0.02=0.32$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/6101)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/4496)
- Asta n. 2067 (12 -1348) - Sez. 5 (IPE300) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 32 SLU $X_1=0.35$ - Classe 2
 Sollecitazioni: $T_y=162.36$ $M_x=1.36$
 $V, Ed=162.36$ $V_c, Rd, Red=54566.50$ $V, Ed/V_c, Rd, Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 32 SLU $X_1=0.35$ - Classe 2
 Sollecitazioni: $T_z=-6026.23$ $M_x=1.36$
 $V, Ed=-6026.23$ $V_c, Rd, Red=38753.40$ $V, Ed/V_c, Rd, Red=0.16$
- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=1.30$ - Classe 3
 Sollecitazioni: $N=-4979.32$ $T_z=-6857.95$ $M_y=8678.01$ $T_y=140.24$ $M_z=130.16$ $M_x=1.69$
 Tensioni: $\sigma_N=-92.53$ $\sigma_{m,d}=-1719.43$ $\tau=10.03$ $\sigma_{max}=-1811.96$ (sfrut=0.69)
 Tensioni: $\sigma_N=-92.53$ $\sigma_{m,d}=-7.65$ $\tau=383.06$ $\tau_{max}=383.06$ (sfrut=0.25)
 Tensioni: $\sigma_N=-92.53$ $\sigma_{m,d}=-1719.43$ $\tau=10.03$ $\sigma_{ID,max}=1812.04$ (sfrut=0.69)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed=-4984.75$ $M_y, Ed=8678.01$ $M_z, Ed=130.16$ $L=1.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.75$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.77$ $M_{cr}=113633.00$ $\lambda_{LT}=0.37$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.54$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=14.00$ $N_{cr,y}=5687190.00$ $\lambda^*_y=0.16$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=52.10$ $N_{cr,z}=410924.00$ $\lambda^*_z=0.60$ Curva b: $\Phi_z=0.75$ $\chi_z=0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.04+0.57+0.06=0.66$
 Verifica ZZ: $0.04+0.45+0.06=0.55$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,G}=0.06$ (L/2154)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,G}=0.08$ (L/1665)
- Asta n. 2069 (-1360 -1561) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU $X_1=3.05$ - Classe 1
 Sollecitazioni: $T_y=4.85$
 $V, Ed=4.85$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU $X_1=3.05$ - Classe 1
 Sollecitazioni: $T_z=-516.36$
 $V, Ed=-516.36$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.02$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 1 SLV $X_1=0.23$ - Classe 1
 Sollecitazioni: $N=-40.53$ $T_z=246.66$ $M_y=-482.00$ $T_y=-7.51$ $M_z=7.04$
 $N, Ed=-40.53$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-482.00$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.08$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=7.04$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.08$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 1
 Sollecitazioni: $N, Ed=-1990.76$ $M_y, Ed=-248.17$ $M_z, Ed=-28.10$ $L=3.05$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.05$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.82$ $M_{cr}=9095.91$ $\lambda_{LT}=0.82$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.82$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.83$
 $\lambda_y=36.97$ $N_{cr,y}=431859.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.61$ $\chi_y=0.95$
 $\lambda_z=136.60$ $N_{cr,z}=31639.80$ $\lambda^*_z=1.57$ Curva b: $\Phi_z=1.97$ $\chi_z=0.32$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.64, 0.57, 1.06$
 Verifica YY: $0.03+0.05+0.02=0.09$
 Verifica ZZ: $0.08+0.03+0.03=0.14$
- Verifica freccia massima per soli carichi accidentali - CC 37

$f_{z,L}=0.06$ (L/4761)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.07$ (L/3832)

Asta n. 2069 (-1463 -1360) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=3.56$ - Classe 1
 Sollecitazioni: $T_y=-7.32$
 $V,Ed=-7.32$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=3.56$ - Classe 1
 Sollecitazioni: $T_z=-1830.87$
 $V,Ed=-1830.87$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.09$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 32 SLU $X_l=3.56$ - Classe 1
 Sollecitazioni: $N=-3675.58$ $T_z=-1803.47$ $M_y=2515.58$ $T_y=-10.29$ $M_z=-20.07$
 $N,Ed=-3675.58$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.05$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=2515.58$ $M_y,V,c,Rd=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_y,Ed/M_{Ny,c,Rd}=0.43$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-20.07$ $M_z,V,c,Rd=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_z,Ed/M_{Nz,c,Rd}=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/M_{Ny,c,Rd})^2 + (M_z,Ed/M_{Nz,c,Rd})^1 = 0.43$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 1
 Sollecitazioni: $N,Ed=-3675.58$ $M_y,Ed=2515.58$ $M_z,Ed=-20.07$ $L=3.78$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.78$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.44$ $M_{cr}=9191.47$ $\lambda_{LT}=0.81$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.82$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.83$
 $\lambda_y=45.77$ $N_{cr,y}=281876.00$ $\lambda^*_y=0.53$ Curva a: $\Phi_y=0.67$ $\chi_y=0.92$
 $\lambda_z=169.08$ $N_{cr,z}=20651.40$ $\lambda^*_z=1.95$ Curva b: $\Phi_z=2.69$ $\chi_z=0.22$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.75, 0.58, 1.25$
 Verifica YY: $0.05+0.50+0.01=0.57$
 Verifica ZZ: $0.22+0.30+0.02=0.55$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.09$ (L/3887)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.12$ (L/2932)

Asta n. 2069 (-1846 -1463) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.23$ - Classe 1
 Sollecitazioni: $T_y=-3.26$
 $V,Ed=-3.26$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.23$ - Classe 1
 Sollecitazioni: $T_z=1724.57$
 $V,Ed=1724.57$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.08$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.23$ - Classe 1
 Sollecitazioni: $N=-3813.41$ $T_z=1724.57$ $M_y=2106.75$ $T_y=-3.26$ $M_z=6.96$
 $N,Ed=-3813.41$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.05$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=2106.75$ $M_y,V,c,Rd=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_y,Ed/M_{Ny,c,Rd}=0.36$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=6.96$ $M_z,V,c,Rd=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_z,Ed/M_{Nz,c,Rd}=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/M_{Ny,c,Rd})^2 + (M_z,Ed/M_{Nz,c,Rd})^1 = 0.36$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N,Ed=-3813.41$ $M_y,Ed=2106.75$ $M_z,Ed=6.96$ $L=3.78$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.78$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.63$ $M_{cr}=9903.72$ $\lambda_{LT}=0.78$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.80$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.85$
 $\lambda_y=45.77$ $N_{cr,y}=281877.00$ $\lambda^*_y=0.53$ Curva a: $\Phi_y=0.67$ $\chi_y=0.92$
 $\lambda_z=169.08$ $N_{cr,z}=20651.40$ $\lambda^*_z=1.95$ Curva b: $\Phi_z=2.69$ $\chi_z=0.22$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.76, 0.58, 1.26$
 Verifica YY: $0.06+0.41+0.00=0.47$
 Verifica ZZ: $0.23+0.25+0.01=0.49$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.07$ (L/5023)

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.09$ (L/3796)

Asta n. 2069 (-1455 -1846) - Sez. 6 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=4.00$ - Classe 1
 Sollecitazioni: $T_y=-2.48$
 $V, Ed=-2.48$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=4.00$ - Classe 1
 Sollecitazioni: $T_z=-2048.86$
 $V, Ed=-2048.86$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.10$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=4.00$ - Classe 1
 Sollecitazioni: $N=-4611.63$ $T_z=-2048.86$ $M_y=3034.54$ $T_y=-2.48$ $M_z=-4.73$
 $N, Ed=-4611.63$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.06$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=3034.54$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.52$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-4.73$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.52$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-4611.63$ $M_y, Ed=3034.54$ $M_z, Ed=5.19$ $L=4.23$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.23$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.54$ $M_{cr}=8306.24$ $\lambda_{LT}=0.86$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.85$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.81$
 $\lambda_y=51.21$ $N_{cr,y}=225093.00$ $\lambda^*_y=0.59$ Curva a: $\Phi_y=0.71$ $\chi_y=0.89$
 $\lambda_z=189.21$ $N_{cr,z}=16491.20$ $\lambda^*_z=2.18$ Curva b: $\Phi_z=3.21$ $\chi_z=0.18$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.84, 0.59, 1.41$
 Verifica YY: $0.07+0.63+0.00=0.70$
 Verifica ZZ: $0.34+0.38+0.01=0.73$
- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.12$ (L/3453)
- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.15$ (L/2616)
- Asta n. 2069 (-1358 -1455) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.23$ - Classe 1
 Sollecitazioni: $T_y=4.69$
 $V, Ed=4.69$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.23$ - Classe 1
 Sollecitazioni: $T_z=2030.85$
 $V, Ed=2030.85$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.10$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=0.23$ - Classe 1
 Sollecitazioni: $N=-4578.24$ $T_z=2030.85$ $M_y=2962.53$ $T_y=4.69$ $M_z=-9.35$
 $N, Ed=-4578.24$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.06$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=2962.53$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.51$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-9.35$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.51$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-4578.24$ $M_y, Ed=2962.53$ $M_z, Ed=9.42$ $L=4.23$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.23$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.56$ $M_{cr}=8378.93$ $\lambda_{LT}=0.85$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.85$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.81$
 $\lambda_y=51.21$ $N_{cr,y}=225093.00$ $\lambda^*_y=0.59$ Curva a: $\Phi_y=0.71$ $\chi_y=0.89$
 $\lambda_z=189.21$ $N_{cr,z}=16491.20$ $\lambda^*_z=2.18$ Curva b: $\Phi_z=3.21$ $\chi_z=0.18$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.84, 0.59, 1.40$
 Verifica YY: $0.07+0.61+0.01=0.69$
 Verifica ZZ: $0.34+0.37+0.01=0.72$
- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.10$ (L/4117)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.14$ (L/2856)
- Asta n. 2069 (-1485 -1358) - Sez. 6 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=3.53$ - Classe 1
 Sollecitazioni: $T_y=12.52$
 $V, Ed=12.52$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=3.53$ - Classe 1

- Sollecitazioni: $T_z = -1282.16$
 $V, Ed = -1282.16$ $V_c, Rd = 21171.50$ $V, Ed/V_c, Rd = 0.06$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 32 SLU $X_l = 3.53$ - Classe 1
 Sollecitazioni: $N = -1821.85$ $T_z = -1265.61$ $M_y = 1145.93$ $T_y = 13.93$ $M_z = 22.20$
 $N, Ed = -1821.85$ $N_c, Rd = 74603.30$ $n = N, Ed/N_c, Rd = 0.02$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed = 1145.93$ $M_y, V, c, Rd = 5804.95$ $M_{Ny, c, Rd} = 5804.95$ $M_y, Ed/M_{Ny, c, Rd} = 0.20$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed = 22.20$ $M_z, V, c, Rd = 1170.59$ $M_{Nz, c, Rd} = 1170.59$ $M_z, Ed/M_{Nz, c, Rd} = 0.02$
 $\alpha = 2.00$ $\beta = 1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.20$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 1
 Sollecitazioni: $N, Ed = -1821.85$ $M_y, Ed = 1145.93$ $M_z, Ed = -26.94$ $L = 3.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 3.75$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 2.76$ $M, cr = 10494.50$ $\lambda_{LT} = 0.76$
 $\lambda_{LT, 0} = 0.40$ $\Phi_{LT} = 0.78$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.86$
 $\lambda_y = 45.42$ $N_{cr, y} = 286203.00$ $\lambda_y^* = 0.52$ Curva a: $\Phi_y = 0.67$ $\chi_y = 0.92$
 $\lambda_z = 167.80$ $N_{cr, z} = 20968.40$ $\lambda_z^* = 1.93$ Curva b: $\Phi_z = 2.66$ $\chi_z = 0.22$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.96, 0.66, 0.57, 1.10$
 Verifica YY: $0.03 + 0.22 + 0.02 = 0.26$
 Verifica ZZ: $0.11 + 0.13 + 0.03 = 0.27$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z, L} = 0.08$ (L/4324)
- Verifica freccia massima carichi totali - CC 38
 $f_{z, G} = 0.13$ (L/2775)
- Asta n. 2069 (-1706 -1485) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_y = 70.40$ $M_x = -1.62$
 $V, Ed = 70.40$ $V_c, Rd, Red = 29433.80$ $V, Ed/V_c, Rd, Red = 0.00$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_z = 1527.68$ $M_x = -1.62$
 $V, Ed = 1527.68$ $V_c, Rd, Red = 21046.00$ $V, Ed/V_c, Rd, Red = 0.07$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l = 0.70$ - Classe 1
 Sollecitazioni: $N = -2660.01$ $T_z = 1338.22$ $M_y = -926.86$ $T_y = 70.40$ $M_z = 7.62$ $M_x = -1.62$
 $N, Ed = -2660.01$ $N_c, Rd = 74603.30$ $n = N, Ed/N_c, Rd = 0.04$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed = -926.86$ $M_y, V, c, Rd = 5804.95$ $M_{Ny, c, Rd} = 5804.95$ $M_y, Ed/M_{Ny, c, Rd} = 0.16$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed = 7.62$ $M_z, V, c, Rd = 1170.59$ $M_{Nz, c, Rd} = 1170.59$ $M_z, Ed/M_{Nz, c, Rd} = 0.01$
 $\alpha = 2.00$ $\beta = 1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.16$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed = -2660.01$ $M_y, Ed = -926.86$ $M_z, Ed = -41.82$ $L = 0.70$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 0.70$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.85$ $M, cr = 110176.00$ $\lambda_{LT} = 0.24$
 $\lambda_{LT, 0} = 0.40$ $\Phi_{LT} = 0.49$ $\beta_{LT} = 0.75$ $f = 0.99$ $\chi_{LT} = 1.00$
 $\lambda_y = 8.50$ $N_{cr, y} = 8165570.00$ $\lambda_y^* = 0.10$ Curva a: $\Phi_y = 0.49$ $\chi_y = 1.00$
 $\lambda_z = 31.41$ $N_{cr, z} = 598243.00$ $\lambda_z^* = 0.36$ Curva b: $\Phi_z = 0.59$ $\chi_z = 0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.04 + 0.15 + 0.02 = 0.21$
 Verifica ZZ: $0.04 + 0.09 + 0.03 = 0.16$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z, L} = 0.00$ (L/25393)
- Verifica freccia massima carichi totali - CC 38
 $f_{z, L} = 0.00$ (L/17533)
- Asta n. 2070 (-1833 -1729) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 32 SLU $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_y = 146.48$
 $V, Ed = 146.48$ $V_c, Rd = 29609.30$ $V, Ed/V_c, Rd = 0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 32 SLU $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_z = 487.99$
 $V, Ed = 487.99$ $V_c, Rd = 21171.50$ $V, Ed/V_c, Rd = 0.02$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 32 SLU $X_l = 0.00$ - Classe 1
 Sollecitazioni: $N = -908.26$ $T_z = 487.99$ $M_y = 3.19$ $T_y = 146.48$ $M_z = -74.13$
 $N, Ed = -908.26$ $N_c, Rd = 74603.30$ $n = N, Ed/N_c, Rd = 0.01$

Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=3.19$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.00$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-74.13$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.06$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^1 = 0.06$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 32 SLU - Classe 1
 Sollecitazioni: $N, Ed=-908.26$ $M_y, Ed=-340.48$ $M_z, Ed=-74.13$ $L=0.72$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.72$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.76$ $M, cr=100251.00$ $\lambda_{LT}=0.25$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.50$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=8.71$ $N_{cr,y}=7777550.00$ $\lambda'_y=0.10$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=32.19$ $N_{cr,z}=569816.00$ $\lambda'_z=0.37$ Curva b: $\Phi_z=0.60$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.01+0.06+0.04=0.10$
 Verifica ZZ: $0.01+0.03+0.06=0.11$

- Verifica freccia massima per soli carichi accidentali - CC 37
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 37
 $f_{z,L}=0.00$ (L/41920)

Asta n. 2070 (-1729 -1722) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=5.81$
 $V, Ed=5.81$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=1190.45$
 $V, Ed=1190.45$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.06$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=1.51$ - Classe 1
 Sollecitazioni: $N=-672.26$ $T_z=1146.55$ $M_y=-2088.70$ $T_y=5.81$ $M_z=2.65$
 $N, Ed=-672.26$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-2088.70$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.36$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=2.65$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^1 = 0.36$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-675.62$ $M_y, Ed=-2088.70$ $M_z, Ed=-6.15$ $L=1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.60$ $M, cr=23405.50$ $\lambda_{LT}=0.51$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.62$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.98$
 $\lambda_y=18.34$ $N_{cr,y}=1756100.00$ $\lambda'_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=67.74$ $N_{cr,z}=128659.00$ $\lambda'_z=0.78$ Curva b: $\Phi_z=0.90$ $\chi_z=0.74$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.96$
 Verifica YY: $0.01+0.35+0.00=0.36$
 Verifica ZZ: $0.01+0.21+0.01=0.22$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.04$ (L/3835)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.06$ (L/2682)

Asta n. 2070 (-1722 -1715) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=31.01$
 $V, Ed=31.01$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=448.59$
 $V, Ed=448.59$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.02$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_l=1.52$ - Classe 1
 Sollecitazioni: $N=-615.19$ $T_z=404.41$ $M_y=-2738.38$ $T_y=31.01$ $M_z=30.74$
 $N, Ed=-615.19$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-2738.38$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.47$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=30.74$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.03$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^1 = 0.47$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed = -618.58$ $My, Ed = -2738.38$ $Mz, Ed = 30.74$ $L = 1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.52$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 1.12$ $M, cr = 16290.00$ $\lambda_{LT} = 0.61$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.68$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.94$
 $\lambda_y = 18.46$ $Ncr, y = 1733070.00$ $\lambda^*_y = 0.21$ Curva a: $\Phi_y = 0.52$ $\chi_y = 1.00$
 $\lambda_z = 68.19$ $Ncr, z = 126972.00$ $\lambda^*_z = 0.79$ Curva b: $\Phi_z = 0.91$ $\chi_z = 0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.58, 0.57, 0.96$
 Verifica YY: $0.01 + 0.48 + 0.02 = 0.50$
 Verifica ZZ: $0.01 + 0.29 + 0.03 = 0.32$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.09$ (L/1752)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.12$ (L/1316)

Asta n. 2070 (-1715 -1518) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X1 = 1.75$ - Classe 1
 Sollecitazioni: $T_y = -72.83$
 $V, Ed = -72.83$ $Vc, Rd = 29609.30$ $V, Ed/Vc, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X1 = 1.75$ - Classe 1
 Sollecitazioni: $T_z = -1604.76$
 $V, Ed = -1604.76$ $Vc, Rd = 21171.50$ $V, Ed/Vc, Rd = 0.08$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X1 = 0.00$ - Classe 1
 Sollecitazioni: $N = -469.21$ $T_z = -1554.18$ $My, Ed = -2739.75$ $T_y = -72.83$ $M_z = 27.16$
 $N, Ed = -469.21$ $Nc, Rd = 74603.30$ $n = N, Ed/Nc, Rd = 0.01$
 Pressoflessione retta YY [4.2.33]:
 $My, Ed = -2739.75$ $My, V, c, Rd = 5804.95$ $MNy, c, Rd = 5804.95$ $My, Ed/MNy, c, Rd = 0.47$
 Pressoflessione retta ZZ [4.2.34]:
 $Mz, Ed = 27.16$ $Mz, V, c, Rd = 1170.59$ $MNz, c, Rd = 1170.59$ $Mz, Ed/MNz, c, Rd = 0.02$
 $\alpha = 2.00$ $\beta = 1.00$ $(My, Ed/MNy, c, Rd)^2 + (Mz, Ed/MNz, c, Rd)^2 = 0.47$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed = -469.21$ $My, Ed = -2739.75$ $Mz, Ed = -99.93$ $L = 1.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.75$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 1.76$ $M, cr = 20313.80$ $\lambda_{LT} = 0.55$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.64$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.97$
 $\lambda_y = 21.13$ $Ncr, y = 1322530.00$ $\lambda^*_y = 0.24$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 78.06$ $Ncr, z = 96894.10$ $\lambda^*_z = 0.90$ Curva b: $\Phi_z = 1.02$ $\chi_z = 0.66$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.58, 0.57, 0.96$
 Verifica YY: $0.01 + 0.46 + 0.05 = 0.52$
 Verifica ZZ: $0.01 + 0.28 + 0.08 = 0.37$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.07$ (L/2443)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.09$ (L/1878)

Asta n. 2081 (-1859 -1610) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU $X1 = 0.00$ - Classe 1
 Sollecitazioni: $T_y = -193.48$ $M_x = 8.17$
 $V, Ed = -193.48$ $Vc, Rd, Red = 28711.30$ $V, Ed/Vc, Rd, Red = 0.01$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU $X1 = 0.00$ - Classe 1
 Sollecitazioni: $T_z = 2176.51$ $M_x = 8.17$
 $V, Ed = 2176.51$ $Vc, Rd, Red = 20529.40$ $V, Ed/Vc, Rd, Red = 0.11$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X1 = 0.00$ - Classe 1
 Sollecitazioni: $N = -4211.55$ $T_z = 2176.51$ $My = 1171.40$ $T_y = -193.48$ $M_z = -70.30$ $M_x = 8.17$
 $N, Ed = -4211.55$ $Nc, Rd = 74603.30$ $n = N, Ed/Nc, Rd = 0.06$
 Pressoflessione retta YY [4.2.33]:
 $My, Ed = 1171.40$ $My, V, c, Rd = 5804.95$ $MNy, c, Rd = 5804.95$ $My, Ed/MNy, c, Rd = 0.20$
 Pressoflessione retta ZZ [4.2.34]:
 $Mz, Ed = -70.30$ $Mz, V, c, Rd = 1170.59$ $MNz, c, Rd = 1170.59$ $Mz, Ed/MNz, c, Rd = 0.06$
 $\alpha = 2.00$ $\beta = 1.00$ $(My, Ed/MNy, c, Rd)^2 + (Mz, Ed/MNz, c, Rd)^2 = 0.20$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed = -4211.55$ $My, Ed = 1171.40$ $Mz, Ed = -106.82$ $L = 0.19$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 0.19$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 1.19$ $M, cr = 947852.00$ $\lambda_{LT} = 0.08$

$\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.45$ $\beta_{LT}=0.75$ $f=1.00$ $\chi_{LT}=1.00$
 $\lambda_y=2.29$ $N_{cr,y}=113040000.00$ $\lambda^*_y=0.03$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=8.44$ $N_{cr,z}=8281790.00$ $\lambda^*_z=0.10$ Curva b: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.94, 0.56, 0.56, 0.93$
 Verifica YY: $0.06+0.19+0.05=0.30$
 Verifica ZZ: $0.06+0.11+0.08=0.26$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.00$ (L/17993)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.00$ (L/14137)

Asta n. 2081 (-1610 -1609) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_y=55.32$
 $V, Ed=55.32$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=1641.23$
 $V, Ed=1641.23$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.08$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1=1.53$ - Classe 1
 Sollecitazioni: $N=-4133.77$ $T_z=1378.51$ $M_y=-1600.21$ $T_y=55.32$ $M_z=19.22$
 $N, Ed=-4133.77$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.06$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-1600.21$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.28$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=19.22$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.28$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-4154.35$ $M_y, Ed=-1600.21$ $M_z, Ed=-65.66$ $L=1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.32$ $M_{cr}=33224.00$ $\lambda_{LT}=0.43$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.57$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=18.58$ $N_{cr,y}=1710580.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.64$ $N_{cr,z}=125324.00$ $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.61, 0.57, 1.02$
 Verifica YY: $0.06+0.26+0.03=0.35$
 Verifica ZZ: $0.06+0.16+0.06=0.27$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/8864)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.02$ (L/6260)

Asta n. 2081 (-1609 -1607) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_y=9.06$
 $V, Ed=9.06$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=568.92$
 $V, Ed=568.92$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.03$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1=1.45$ - Classe 1
 Sollecitazioni: $N=-3996.79$ $M_y=-2049.01$ $T_y=9.06$ $M_z=5.53$
 $N, Ed=-3996.79$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.05$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-2049.01$ $M_y, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.35$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=5.53$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.35$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
 Sollecitazioni: $N, Ed=-4041.37$ $M_y, Ed=-2047.22$ $M_z, Ed=-7.59$ $L=1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.11$ $M_{cr}=15952.00$ $\lambda_{LT}=0.62$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.68$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.94$
 $\lambda_y=18.58$ $N_{cr,y}=1710580.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.64$ $N_{cr,z}=125324.00$ $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.61, 0.57, 1.02$
 Verifica YY: $0.05+0.36+0.00=0.42$

Relazione di calcolo

Verifica ZZ: $0.05+0.22+0.01=0.28$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.07$ (L/2237)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.09$ (L/1644)

Asta n. 2081 (-1607 -1605) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1=1.53$ - Classe 1
Sollecitazioni: $T_y=-7.03$
 $V, Ed=-7.03$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1=1.53$ - Classe 1
Sollecitazioni: $T_z=-1959.59$
 $V, Ed=-1959.59$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.09$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 33 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $N=-3916.60$ $T_z=-951.55$ $M_y=-2047.59$ $T_y=-7.03$
 $M_y, Ed=-2047.59$ $M_y, V, c, Rd=5804.95$
 $N, Ed=-3916.60$ $N_c, Rd=-74603.30$ YY $n=N, Ed/N_c, Rd=0.05$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.35$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-3916.60$ $M_y, Ed=-2047.59$ $M_z, Ed=-10.93$ $L=1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.85$ $M_{cr}=26490.30$ $\lambda_{LT}=0.48$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.60$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.99$
 $\lambda_y=18.58$ $N_{cr,y}=1710590.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.64$ $N_{cr,z}=125325.00$ $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.61, 0.57, 1.02$
Verifica YY: $0.05+0.34+0.01=0.40$
Verifica ZZ: $0.05+0.20+0.01=0.26$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.04$ (L/3423)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.06$ (L/2629)

Asta n. 2081 (-1605 -1471) - Sez. 6 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X_1=1.09$ - Classe 1
Sollecitazioni: $T_y=77.69$
 $V, Ed=77.69$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X_1=1.09$ - Classe 1
Sollecitazioni: $T_z=-4395.33$
 $V, Ed=-4395.33$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.21$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 33 SLU $X_1=1.09$ - Classe 1
Sollecitazioni: $N=-3645.42$ $T_z=-4395.33$ $M_y=4570.32$ $T_y=77.69$ $M_z=48.09$
 $N, Ed=-3645.42$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.05$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=4570.32$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.79$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=48.09$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.04$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.79$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 1
Sollecitazioni: $N, Ed=-3701.31$ $M_y, Ed=4570.32$ $M_z, Ed=48.09$ $L=1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.71$ $M_{cr}=24485.60$ $\lambda_{LT}=0.50$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.61$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.98$
 $\lambda_y=18.58$ $N_{cr,y}=1710570.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.64$ $N_{cr,z}=125323.00$ $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.61, 0.57, 1.01$
Verifica YY: $0.05+0.76+0.02=0.83$
Verifica ZZ: $0.05+0.46+0.04=0.55$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,g}=0.10$ (L/1079)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.13$ (L/809)

Asta n. 2090 (-1850 -1485) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 19 SLU $X_1=0.10$ - Classe 1

- Sollecitazioni: $T_y = -1079.17$ $M_x = 3.61$
 $V, Ed = -1079.17$ $V_c, Rd, Red = 54372.80$ $V, Ed/V_c, Rd, Red = 0.02$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 19 SLU $X_l = 0.10$ - Classe 1
 Sollecitazioni: $T_z = 126.16$ $M_x = 3.61$
 $V, Ed = 126.16$ $V_c, Rd, Red = 38615.90$ $V, Ed/V_c, Rd, Red = 0.00$
- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l = 0.00$ - Classe 3
 Sollecitazioni: $N = -2484.54$ $T_z = 166.05$ $M_y = 8.76$ $T_y = -1179.63$ $M_z = 453.01$ $M_x = 2.37$
 Tensioni: $\sigma_N = -46.17$ $\sigma_{m,d} = -564.29$ $\tau = 14.06$ $\sigma_{max} = -610.46$ (sfrut=0.23)
 Tensioni: $\sigma_N = -46.17$ $\sigma_{m,d} = 140.64$ $\tau = 52.66$ $\tau_{max} = 52.66$ (sfrut=0.03)
 Tensioni: $\sigma_N = -46.17$ $\sigma_{m,d} = -564.29$ $\tau = 14.06$ $\sigma_{ID,max} = 610.94$ (sfrut=0.23)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed = -2484.54$ $M_y, Ed = -84.93$ $M_z, Ed = 453.01$ $L = 0.63$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 0.63$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.86$ $M_{cr} = 858081.00$ $\lambda_{LT} = 0.13$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.46$ $\beta_{LT} = 0.75$ $f = 1.00$ $\chi_{LT} = 1.00$
 $\lambda_y = 5.05$ $N_{cr,y} = 43693100.00$ $\lambda'_y = 0.06$ Curva a: $\Phi_y = 0.49$ $\chi_y = 1.00$
 $\lambda_z = 18.80$ $N_{cr,z} = 3157010.00$ $\lambda'_z = 0.22$ Curva b: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.02 + 0.01 + 0.20 = 0.23$
 Verifica ZZ: $0.02 + 0.00 + 0.20 = 0.23$
- Verifica freccia massima per soli carichi accidentali - CC 35
 $f_{z,g} = 0.00$
- Verifica freccia massima carichi totali - CC 21
 $f_{z,g} = 0.00$
- Asta n. 2090 (-1485 -1480) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 3 SLV $X_l = 0.30$ - Classe 1
 Sollecitazioni: $T_y = 98.56$
 $V, Ed = 98.56$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 3 SLV $X_l = 0.30$ - Classe 1
 Sollecitazioni: $T_z = 200.72$
 $V, Ed = 200.72$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.01$
- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l = 1.68$ - Classe 3
 Sollecitazioni: $N = -1535.56$ $T_z = 1207.03$ $M_y = -2130.39$ $T_y = 127.23$ $M_z = 48.91$ $M_x = 3.20$
 Tensioni: $\sigma_N = -28.54$ $\sigma_{m,d} = -443.17$ $\tau = 18.98$ $\sigma_{max} = -471.71$ (sfrut=0.18)
 Tensioni: $\sigma_N = -28.54$ $\sigma_{m,d} = -2.88$ $\tau = 70.13$ $\tau_{max} = 70.13$ (sfrut=0.05)
 Tensioni: $\sigma_N = -28.54$ $\sigma_{m,d} = -443.17$ $\tau = 18.98$ $\sigma_{ID,max} = 472.85$ (sfrut=0.18)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 19 SLU - Classe 3
 Sollecitazioni: $N, Ed = -2271.24$ $M_y, Ed = -1533.53$ $M_z, Ed = -248.06$ $L = 1.68$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.68$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.71$ $M_{cr} = 118284.00$ $\lambda_{LT} = 0.36$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.54$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 13.45$ $N_{cr,y} = 6164850.00$ $\lambda'_y = 0.15$ Curva a: $\Phi_y = 0.51$ $\chi_y = 1.00$
 $\lambda_z = 50.04$ $N_{cr,z} = 445436.00$ $\lambda'_z = 0.58$ Curva b: $\Phi_z = 0.73$ $\chi_z = 0.85$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.02 + 0.10 + 0.11 = 0.23$
 Verifica ZZ: $0.02 + 0.08 + 0.11 = 0.21$
- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.01$ (L/17315)
- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.01$ (L/12037)
- Asta n. 2090 (-1480 -1479) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 33 SLU $X_l = 1.53$ - Classe 1
 Sollecitazioni: $T_y = -16.21$ $M_x = 2.04$
 $V, Ed = -16.21$ $V_c, Rd, Red = 54507.90$ $V, Ed/V_c, Rd, Red = 0.00$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 33 SLU $X_l = 1.53$ - Classe 1
 Sollecitazioni: $T_z = 1613.51$ $M_x = 2.04$
 $V, Ed = 1613.51$ $V_c, Rd, Red = 38711.80$ $V, Ed/V_c, Rd, Red = 0.04$
- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_l = 1.39$ - Classe 3
 Sollecitazioni: $N = -1586.60$ $T_z = 1621.15$ $M_y = -4444.76$ $T_y = -16.21$ $M_z = 2.91$ $M_x = 2.04$
 Tensioni: $\sigma_N = -29.48$ $\sigma_{m,d} = -801.48$ $\tau = 12.11$ $\sigma_{max} = -830.96$ (sfrut=0.32)
 Tensioni: $\sigma_N = -29.48$ $\sigma_{m,d} = 0.17$ $\tau = 91.33$ $\tau_{max} = 91.33$ (sfrut=0.06)
 Tensioni: $\sigma_N = -29.48$ $\sigma_{m,d} = -801.48$ $\tau = 12.11$ $\sigma_{ID,max} = 831.22$ (sfrut=0.32)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed = -1592.59 \text{ My}, Ed = -4670.37 \text{ Mz}, Ed = 25.52 \text{ L} = 1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.53$ Curva b: $\alpha_{imp} = 0.34 \quad k_e = 0.94 \quad \psi = 1.33 \quad M, cr = 108874.00 \quad \lambda_{LT} = 0.38$
 $\lambda_{LT,0} = 0.40 \quad \Phi_{LT} = 0.55 \quad \beta_{LT} = 0.75 \quad f = 0.98 \quad \chi_{LT} = 1.00$
 $\lambda_y = 12.31 \quad N_{cr,y} = 7355880.00 \quad \lambda^*_y = 0.14$ Curva a: $\Phi_y = 0.50 \quad \chi_y = 1.00$
 $\lambda_z = 45.81 \quad N_{cr,z} = 531493.00 \quad \lambda^*_z = 0.53$ Curva b: $\Phi_z = 0.69 \quad \chi_z = 0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01 + 0.30 + 0.01 = 0.33$
 Verifica ZZ: $0.01 + 0.24 + 0.01 = 0.27$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.03 \quad (L/5725)$

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.04 \quad (L/4120)$

Asta n. 2090 (-1479 -1481) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 33 SLU $X1 = 0.42$ - Classe 1
 Sollecitazioni: $T_y = -21.54$
 $V, Ed = -21.54 \quad V_c, Rd = 54683.30 \quad V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 33 SLU $X1 = 0.42$ - Classe 1
 Sollecitazioni: $T_z = 676.10$
 $V, Ed = 676.10 \quad V_c, Rd = 38836.40 \quad V, Ed/V_c, Rd = 0.02$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X1 = 1.53$ - Classe 3
 Sollecitazioni: $N = -1511.10 \quad T_z = 615.00 \quad M_y = -5678.32 \quad T_y = -21.54 \quad M_z = -23.92$
 Tensioni: $\sigma_N = -28.08 \quad \sigma_{m,d} = -1049.00 \quad \tau = 0.00 \quad \sigma_{max} = -1077.08 \quad (sfrut = 0.41)$
 Tensioni: $\sigma_N = -28.08 \quad \sigma_{m,d} = -1.41 \quad \tau = 34.34 \quad \tau_{max} = 34.34 \quad (sfrut = 0.02)$
 Tensioni: $\sigma_N = -28.08 \quad \sigma_{m,d} = -1049.00 \quad \tau = 0.00 \quad \sigma_{ID,max} = 1077.08 \quad (sfrut = 0.41)$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed = -1517.68 \text{ My}, Ed = -5678.32 \text{ Mz}, Ed = -23.92 \text{ L} = 1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.53$ Curva b: $\alpha_{imp} = 0.34 \quad k_e = 0.94 \quad \psi = 1.09 \quad M, cr = 88939.60 \quad \lambda_{LT} = 0.42$
 $\lambda_{LT,0} = 0.40 \quad \Phi_{LT} = 0.57 \quad \beta_{LT} = 0.75 \quad f = 0.98 \quad \chi_{LT} = 1.00$
 $\lambda_y = 12.31 \quad N_{cr,y} = 7355890.00 \quad \lambda^*_y = 0.14$ Curva a: $\Phi_y = 0.50 \quad \chi_y = 1.00$
 $\lambda_z = 45.81 \quad N_{cr,z} = 531494.00 \quad \lambda^*_z = 0.53$ Curva b: $\Phi_z = 0.69 \quad \chi_z = 0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01 + 0.37 + 0.01 = 0.39$
 Verifica ZZ: $0.01 + 0.30 + 0.01 = 0.32$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L} = 0.04 \quad (L/3640)$

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L} = 0.06 \quad (L/2646)$

Asta n. 2090 (-1481 -1478) - Sez. 5 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 30 SLU $X1 = 0.28$ - Classe 1
 Sollecitazioni: $T_y = 92.55$
 $V, Ed = 92.55 \quad V_c, Rd = 54683.30 \quad V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 30 SLU $X1 = 0.28$ - Classe 1
 Sollecitazioni: $T_z = -648.94$
 $V, Ed = -648.94 \quad V_c, Rd = 38836.40 \quad V, Ed/V_c, Rd = 0.02$

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X1 = 0.00$ - Classe 3
 Sollecitazioni: $N = -1400.29 \quad T_z = -821.60 \quad M_y = -5678.15 \quad T_y = 73.96 \quad M_z = -17.30$
 Tensioni: $\sigma_N = -26.02 \quad \sigma_{m,d} = -1040.74 \quad \tau = 0.00 \quad \sigma_{max} = -1066.76 \quad (sfrut = 0.41)$
 Tensioni: $\sigma_N = -26.02 \quad \sigma_{m,d} = -1.02 \quad \tau = 45.87 \quad \tau_{max} = 45.87 \quad (sfrut = 0.03)$
 Tensioni: $\sigma_N = -26.02 \quad \sigma_{m,d} = -1040.74 \quad \tau = 0.00 \quad \sigma_{ID,max} = 1066.76 \quad (sfrut = 0.41)$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 33 SLU - Classe 3
 Sollecitazioni: $N, Ed = -1400.29 \text{ My}, Ed = -5678.15 \text{ Mz}, Ed = 96.19 \text{ L} = 1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.53$ Curva b: $\alpha_{imp} = 0.34 \quad k_e = 0.94 \quad \psi = 1.12 \quad M, cr = 91553.50 \quad \lambda_{LT} = 0.41$
 $\lambda_{LT,0} = 0.40 \quad \Phi_{LT} = 0.56 \quad \beta_{LT} = 0.75 \quad f = 0.98 \quad \chi_{LT} = 1.00$
 $\lambda_y = 12.31 \quad N_{cr,y} = 7355930.00 \quad \lambda^*_y = 0.14$ Curva a: $\Phi_y = 0.50 \quad \chi_y = 1.00$
 $\lambda_z = 45.81 \quad N_{cr,z} = 531497.00 \quad \lambda^*_z = 0.53$ Curva b: $\Phi_z = 0.69 \quad \chi_z = 0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01 + 0.37 + 0.04 = 0.42$
 Verifica ZZ: $0.01 + 0.30 + 0.04 = 0.35$

- Verifica freccia massima per soli carichi accidentali - CC 38

$f_{z,L}=0.04$ (L/3575)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.06$ (L/2644)

Asta n. 2090 (-1478 -1477) - Sez. 5 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 33 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-1250.59$ $T_z=-2806.65$ $M_y=-4353.48$ $T_y=-336.47$ $M_z=132.81$ $M_x=-4.09$
 Tensioni: $\sigma_N=-23.24$ $\sigma_{m,d}=-946.45$ $\tau=24.27$ $\sigma_{max}=-969.69$ (sfrut=0.37)
 Tensioni: $\sigma_N=-23.24$ $\sigma_{m,d}=-7.81$ $\tau=158.76$ $\tau_{max}=158.76$ (sfrut=0.10)
 Tensioni: $\sigma_N=-23.24$ $\sigma_{m,d}=-946.45$ $\tau=24.27$ $\sigma_{ID,max}=970.60$ (sfrut=0.37)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 19 SLU - Classe 3
 Sollecitazioni: $N,Ed=-2057.76$ $M_y,Ed=-3373.45$ $M_z,Ed=-526.32$ $L=1.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=143208.00$ $\lambda_{LT}=0.33$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.31$ $N_{cr,y}=7355860.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.81$ $N_{cr,z}=531492.00$ $\lambda^*_z=0.53$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.01+0.22+0.24=0.47$
 Verifica ZZ: $0.01+0.18+0.24=0.43$

- Verifica freccia massima per soli carichi accidentali - CC 38
 $f_{z,L}=0.02$ (L/7072)

- Verifica freccia massima carichi totali - CC 38
 $f_{z,L}=0.03$ (L/5258)

FONDAZIONI CORPO A

Sommario

Verifiche e armature travi.....	2
Travata n. 401	2
Travata n. 402	5
Travata n. 403	7
Travata n. 405	10
Travata n. 408	13
Travata n. 416	22
Travata n. 417	30
Travata n. 422	35
Travata n. 424	38
Travata n. 425	41
Travata n. 427	44
Travata n. 429	46
Travata n. 430	49
Travata n. 439	52
Travata n. 462	58
Travata n. 464	60
Travata n. 491	63
Verifiche e armature solette/platee.....	66
Armatura platea a quota 0.00	66
Fondazioni superficiali.....	67
Verifiche capacità portante	68
Cedimenti	79

Verifiche e armature travi

Simbologia

- Δ_{sm} = Distanza media tra le fessure
- Φ_{eq} = Diametro equivalente delle barre
- ϵ_{sm} = Deformazione unitaria media dell'armatura (*1000)
- σ_c = Tensione nel calcestruzzo
- σ_f inf = Tensione nel ferro - inferiore
- σ_f sup = Tensione nel ferro - superiore
- σ_s = Tensione nell'acciaio nella sezione fessurata
- $A_{c\ eff}$ = Area di calcestruzzo efficace
- A_s = Area complessiva dei ferri nell'area di calcestruzzo efficace
- AfE I = Area di ferro effettiva totale presente nel punto di verifica, inferiore
- AfE S = Area di ferro effettiva totale presente nel punto di verifica, superiore
- AfE St. = Area di ferro effettiva della staffatura (d'anima per travi a T o L)
- AfEP I = Area di ferro effettiva parziale presente nella CC considerata, per la sollecitazione indicata, inferiore
- AfEP S = Area di ferro effettiva parziale presente nella CC considerata, per la sollecitazione indicata, superiore
- B = Base
- CC = Combinazione delle condizioni di carico elementari
 - c = momento fittizio in campata
 - a = momento fittizio agli appoggi
 - T = momento traslato per taglio
 - e = eccentricità aggiuntiva in caso di compressione o pressoflessione
 - TG = taglio da gerarchia delle resistenze
 - TCND = taglio non dissipativo limitante la gerarchia
 - TG (Li) = taglio da gerarchia delle resistenze, limite inferiore
 - TG (Ls) = taglio da gerarchia delle resistenze, limite superiore
- Caso = Caso di verifica
- Cf inf = Copriferro inferiore
- Cf sup = Copriferro superiore
- Cls = Tipo di calcestruzzo
- El = Elemento (asta) in cui viene effettuato il progetto/verifica (progressivo sul numero di aste)
- Fcd = Resistenza di calcolo a compressione del calcestruzzo
- Fck = Resistenza caratteristica cilindrica a compressione del calcestruzzo
- Fctd = Resistenza di calcolo a trazione del calcestruzzo
- Fctk = Resistenza caratteristica a trazione del calcestruzzo
- Fyd = Resistenza di calcolo dell'acciaio
- Fyk = Tensione caratteristica di snervamento dell'acciaio
- H = Altezza
- K₂ = Coefficiente per distribuzione deformazioni
- Lung. = Lunghezza del tratto di progettazione
- M'ydy = Momento resistente massimo in campo sostanzialmente elastico intorno all'asse Y
- MRdy = Momento resistente allo stato limite ultimo intorno all'asse Y
- My = Momento flettente intorno all'asse Y
- Sez. = Numero della sezione
- Sic. = Sicurezza
- Staff. = Staffatura adottata
- TCC = Tipo di combinazione di carico
 - SLU = Stato limite ultimo
 - SLE R = Stato limite d'esercizio, combinazione rara
 - SLE F = Stato limite d'esercizio, combinazione frequente
 - SLE Q = Stato limite d'esercizio, combinazione quasi permanente
 - SLD = Stato limite di danno
 - SLV = Stato limite di salvaguardia della vita
 - SLU I = Stato limite di resistenza al fuoco
 - SND = Stato limite di salvaguardia della vita (non dissipativo)
- Tipo = Tipologia
 - Cir. = Circolare
 - R = Rettangolare
 - Is = I stondata
- Tp = Tipo di acciaio
- VRcd = Taglio ultimo lato calcestruzzo
- VRsd = Taglio ultimo lato armatura
- Vrdu = Taglio ultimo resistente
- Vsdu = Taglio agente nella direzione del momento ultimo
- Wk = Ampiezza caratteristica delle fessure
- X = Coordinata progressiva rispetto al nodo iniziale
- X0 = Coordinata progressiva (dal nodo iniziale) dell'inizio del tratto
- X1 = Coordinata progressiva (dal nodo iniziale) della fine del tratto
- Xg = Coordinata progressiva (dal primo nodo) in cui viene effettuato il progetto/verifica
- bw = Larghezza membratura resistente al taglio
- c = Ricoprimento dell'armatura
- ctg θ = Cotangente dell'angolo di inclinazione dei puntoni di calcestruzzo
- s = Distanza massima tra le barre

Travata n. 401

Nodi: -6 -1154 -1663 -5 -1662 -1661 -1164 -1660 -1659 -1167 -1658 -1169 -4

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fctd	Tp	Fyk	Fyd
		<cm>	<cm>	<cm>	<cm>		<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>		<daN/cmq>	<daN/cmq>
4	R	90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	X	AfE S	AfE I	AfEP S	AfEP I	My	MRdy	Sic.
<m>				<cm>	<cmq>	<cmq>	<cmq>	<cmq>	<daNm>	<daNm>	
0.30	20	SLU	1	30.00	14.07	14.07	14.07	14.07	1328.90	35450.10	26.676
0.86	20	SLU	1	85.67	14.07	14.07	14.07	14.07	1328.90	35450.10	26.676
0.86	20	SLU	2	0.00	14.07	14.07	14.07	14.07	1219.39	35450.10	29.072
1.71	20	SLU	2	85.67	14.07	14.07	14.07	14.07	1485.89	35450.10	23.858
1.71	20	SLU	3	0.00	14.07	14.07	14.07	14.07	5298.23	35450.10	6.691
2.35	20	SLU	3	63.17	14.07	14.07	14.07	14.07	5298.23	35450.10	6.691
2.79	20	SLU	4	22.50	14.07	14.07	14.07	14.07	6828.11	35450.10	5.192
3.50	20	SLU	4	93.33	14.07	14.07	14.07	14.07	6828.11	35450.10	5.192
3.50	32	SLU	5	0.00	14.07	14.07	14.07	14.07	-6005.08	-35450.10	5.903

Relazione di calcolo

4.44	32	SLU	5	93.33	28.15	14.07	28.15	14.07	-6429.92	-69959.00	10.880
4.44	32	SLU	6	0.00	28.15	14.07	28.15	14.07	-8048.75	-69959.00	8.692
4.75	34	SLU	6	31.11	14.07	14.07	14.07	14.07	-8452.82	-35450.10	4.194
5.37	34	SLU	6	93.33	14.07	14.07	14.07	14.07	-8452.82	-35450.10	4.194
5.37	20	SLU	7	0.00	14.07	14.07	14.07	14.07	-10578.00	-35450.10	3.351
5.68	20	SLU	7	31.11	14.07	14.07	14.07	14.07	-11072.80	-35450.10	3.202
6.30	20	SLU	7	93.33	14.07	14.07	14.07	14.07	-11072.80	-35450.10	3.202
6.30	20	SLU	8	0.00	14.07	14.07	14.07	14.07	-12810.90	-35450.10	2.767
6.61	20	SLU	8	31.11	14.07	14.07	14.07	14.07	-13130.10	-35450.10	2.700
7.24	20	SLU	8	93.33	14.07	14.07	14.07	14.07	-13130.10	-35450.10	2.700
7.24	20	SLU	9	0.00	14.07	14.07	14.07	14.07	-13843.60	-35450.10	2.561
7.55	20	SLU	9	31.11	14.07	14.07	14.07	14.07	-13884.70	-35450.10	2.553
8.17	20	SLU	9	93.33	28.15	14.07	28.15	14.07	-13884.70	-69959.00	5.039
8.17	20	SLU	10	0.00	28.15	14.07	28.15	14.07	-14022.20	-69959.00	4.989
8.48	20	SLU	10	31.11	14.07	14.07	14.07	14.07	-14022.20	-35450.10	2.528
9.10	20	SLU	10	93.33	14.07	14.07	14.07	14.07	-13766.00	-35450.10	2.575
9.10	20	SLU	11	0.00	14.07	14.07	14.07	14.07	-12071.00	-35450.10	2.937
10.04	20	SLU	11	93.33	14.07	14.07	14.07	14.07	-11097.10	-35450.10	3.195
10.04	20	SLU	12	0.00	14.07	14.07	14.07	14.07	-5856.95	-35450.10	6.053
10.52	20	SLU	12	48.33	14.07	14.07	14.07	14.07	-5856.95	-35450.10	6.053

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.30	9	SLV (E)	1	30.00	14.07	14.07	14.07	14.07	-2523.43	-34082.90	13.507
0.86	9	SLV (E)	1	85.67	14.07	14.07	14.07	14.07	-2523.43	-34082.90	13.507
0.86	1	SLV (E)	2	0.00	14.07	14.07	14.07	14.07	2576.56	34082.90	13.228
1.71	1	SLV (E)	2	85.67	14.07	14.07	14.07	14.07	2773.08	34082.90	12.291
1.71	13	SLV (E)	3	0.00	14.07	14.07	14.07	14.07	7090.47	34082.90	4.807
2.35	13	SLV (E)	3	63.17	14.07	14.07	14.07	14.07	7090.47	34082.90	4.807
2.79	1	SLV (E)	4	22.50	14.07	14.07	14.07	14.07	19295.30	34082.90	1.766
3.50	1	SLV (E)	4	93.33	14.07	14.07	14.07	14.07	19295.30	34082.90	1.766
3.50	1	SLV (E)	5	0.00	14.07	14.07	14.07	14.07	9931.05	34082.90	3.432
4.44	1	SLV (E)	5	93.33	28.15	14.07	28.15	14.07	8512.67	34362.70	4.037
4.44	13	SLV (E)	6	0.00	28.15	14.07	28.15	14.07	-10000.80	-66258.60	6.625
4.75	13	SLV (E)	6	31.11	14.07	14.07	14.07	14.07	-10404.00	-34082.90	3.276
5.37	13	SLV (E)	6	93.33	14.07	14.07	14.07	14.07	-10404.00	-34082.90	3.276
5.37	13	SLV (E)	7	0.00	14.07	14.07	14.07	14.07	-11714.90	-34082.90	2.909
5.68	13	SLV (E)	7	31.11	14.07	14.07	14.07	14.07	-12072.50	-34082.90	2.823
6.30	13	SLV (E)	7	93.33	14.07	14.07	14.07	14.07	-12072.50	-34082.90	2.823
6.30	13	SLV (E)	8	0.00	14.07	14.07	14.07	14.07	-13653.70	-34082.90	2.496
6.61	13	SLV (E)	8	31.11	14.07	14.07	14.07	14.07	-13900.80	-34082.90	2.452
7.24	13	SLV (E)	8	93.33	14.07	14.07	14.07	14.07	-13900.80	-34082.90	2.452
7.24	9	SLV (E)	9	0.00	14.07	14.07	14.07	14.07	-15097.50	-34082.90	2.258
7.55	9	SLV (E)	9	31.11	14.07	14.07	14.07	14.07	-15419.10	-34082.90	2.210
8.17	9	SLV (E)	9	93.33	28.15	14.07	28.15	14.07	-15419.10	-66258.60	4.297
8.17	1	SLV (E)	10	0.00	28.15	14.07	28.15	14.07	-16241.00	-66258.60	4.080
8.48	1	SLV (E)	10	31.11	14.07	14.07	14.07	14.07	-16327.30	-34082.90	2.087
9.10	1	SLV (E)	10	93.33	14.07	14.07	14.07	14.07	-16327.30	-34082.90	2.087
9.10	1	SLV (E)	11	0.00	14.07	14.07	14.07	14.07	-16360.40	-34082.90	2.083
10.04	1	SLV (E)	11	93.33	14.07	14.07	14.07	14.07	-16150.30	-34082.90	2.110
10.04	1	SLV (E)	12	0.00	14.07	14.07	14.07	14.07	-14714.40	-34082.90	2.316
10.52	1	SLV (E)	12	48.33	14.07	14.07	14.07	14.07	-14714.40	-34082.90	2.316

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cm ² >	σ_f inf <daN/cm ² >	σ_c <daN/cm ² >
0.30	24	SLE R	1	30.00	14.07	14.07	916.78	-21.06	104.96	1.87
0.30	29	SLE Q	1	30.00	14.07	14.07	626.45	-14.39	71.72	1.28
0.86	24	SLE R	1	85.67	14.07	14.07	916.78	-21.06	104.96	1.87
0.86	29	SLE Q	1	85.67	14.07	14.07	626.45	-14.39	71.72	1.28
0.86	24	SLE R	2	0.00	14.07	14.07	876.65	-20.14	100.37	1.79
0.86	29	SLE Q	2	0.00	14.07	14.07	776.66	-17.84	88.92	1.58
1.71	24	SLE R	2	85.67	14.07	14.07	1074.55	-24.68	123.02	2.19
1.71	29	SLE Q	2	85.67	14.07	14.07	968.33	-22.24	110.86	1.98
1.71	24	SLE R	3	0.00	14.07	14.07	3908.60	-89.78	447.49	7.98
1.71	29	SLE Q	3	0.00	14.07	14.07	3606.97	-82.85	412.95	7.36
2.35	24	SLE R	3	63.17	14.07	14.07	3908.60	-89.78	447.49	7.98
2.35	29	SLE Q	3	63.17	14.07	14.07	3606.97	-82.85	412.95	7.36
2.79	24	SLE R	4	22.50	14.07	14.07	5013.22	-115.16	573.95	10.23
2.79	29	SLE Q	4	22.50	14.07	14.07	4505.70	-103.50	515.85	9.19
3.50	24	SLE R	4	93.33	14.07	14.07	5013.22	-115.16	573.95	10.23
3.50	29	SLE Q	4	93.33	14.07	14.07	4505.70	-103.50	515.85	9.19
3.50	37	SLE R	5	0.00	14.07	14.07	-4231.71	484.48	-97.20	8.63
3.50	29	SLE Q	5	0.00	14.07	14.07	-2205.84	252.54	-50.67	4.50
4.44	37	SLE R	5	93.33	28.15	14.07	-4580.53	268.64	-89.39	7.29
4.44	29	SLE Q	5	93.33	28.15	14.07	-2837.18	166.40	-55.37	4.51
4.44	37	SLE R	6	0.00	28.15	14.07	-5861.12	343.74	-114.38	9.32

Relazione di calcolo

4.44	29	SLE Q	6	0.00	28.15	14.07	-4981.76	292.17	-97.22	7.92
4.75	39	SLE R	6	31.11	14.07	14.07	-6175.90	707.07	-141.86	12.60
4.75	29	SLE Q	6	31.11	14.07	14.07	-5432.51	621.96	-124.79	11.08
5.37	39	SLE R	6	93.33	14.07	14.07	-6175.90	707.07	-141.86	12.60
5.37	29	SLE Q	6	93.33	14.07	14.07	-5432.51	621.96	-124.79	11.08
5.37	24	SLE R	7	0.00	14.07	14.07	-7739.00	886.02	-177.77	15.79
5.37	29	SLE Q	7	0.00	14.07	14.07	-7070.66	809.51	-162.42	14.43
5.68	24	SLE R	7	31.11	14.07	14.07	-8102.53	927.64	-186.12	16.53
5.68	29	SLE Q	7	31.11	14.07	14.07	-7412.80	848.68	-170.28	15.13
6.30	24	SLE R	7	93.33	14.07	14.07	-8102.53	927.64	-186.12	16.53
6.30	29	SLE Q	7	93.33	14.07	14.07	-7412.80	848.68	-170.28	15.13
6.30	24	SLE R	8	0.00	14.07	14.07	-9362.13	1071.85	-215.05	19.10
6.30	29	SLE Q	8	0.00	14.07	14.07	-8583.79	982.74	-197.17	17.52
6.61	24	SLE R	8	31.11	14.07	14.07	-9597.61	1098.81	-220.46	19.58
6.61	29	SLE Q	8	31.11	14.07	14.07	-8814.00	1009.10	-202.46	17.98
7.24	24	SLE R	8	93.33	14.07	14.07	-9597.61	1098.81	-220.46	19.58
7.24	29	SLE Q	8	93.33	14.07	14.07	-8814.00	1009.10	-202.46	17.98
7.24	24	SLE R	9	0.00	14.07	14.07	-10113.30	1157.85	-232.31	20.64
7.24	29	SLE Q	9	0.00	14.07	14.07	-9325.42	1067.65	-214.21	19.03
7.55	24	SLE R	9	31.11	14.07	14.07	-10146.50	1161.66	-233.07	20.70
7.55	29	SLE Q	9	31.11	14.07	14.07	-9375.72	1073.41	-215.37	19.13
8.17	24	SLE R	9	93.33	28.15	14.07	-10146.50	595.07	-198.00	16.14
8.17	29	SLE Q	9	93.33	28.15	14.07	-9375.72	549.87	-182.96	14.91
8.17	24	SLE R	10	0.00	28.15	14.07	-10246.50	600.93	-199.95	16.30
8.17	29	SLE Q	10	0.00	28.15	14.07	-9460.90	554.86	-184.62	15.05
8.48	24	SLE R	10	31.11	14.07	14.07	-10246.50	1173.10	-235.37	20.91
8.48	29	SLE Q	10	31.11	14.07	14.07	-9460.90	1083.16	-217.32	19.30
9.10	24	SLE R	10	93.33	14.07	14.07	-10056.90	1151.40	-231.01	20.52
9.10	29	SLE Q	10	93.33	14.07	14.07	-9297.40	1064.44	-213.57	18.97
9.10	24	SLE R	11	0.00	14.07	14.07	-8826.79	1010.56	-202.75	18.01
9.10	29	SLE Q	11	0.00	14.07	14.07	-8237.67	943.12	-189.22	16.81
10.04	24	SLE R	11	93.33	14.07	14.07	-8113.79	928.93	-186.38	16.56
10.04	29	SLE Q	11	93.33	14.07	14.07	-7601.61	870.29	-174.61	15.51
10.04	24	SLE R	12	0.00	14.07	14.07	-4296.33	491.88	-98.69	8.77
10.04	29	SLE Q	12	0.00	14.07	14.07	-4180.60	478.63	-96.03	8.53
10.52	24	SLE R	12	48.33	14.07	14.07	-4296.33	491.88	-98.69	8.77
10.52	29	SLE Q	12	48.33	14.07	14.07	-4180.60	478.63	-96.03	8.53

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
56	0.30	29	SLE Q	1	4	30.00	626.45	27.00	135.67	0.50	16.00	143.53	14.07	787.50	71.72	0.02	0.01
60	0.30	25	SLE F	1	4	30.00	689.79	27.00	135.67	0.50	16.00	143.53	14.07	787.50	78.97	0.02	0.01
132	0.86	29	SLE Q	1	4	85.67	626.45	27.00	135.67	0.50	16.00	143.53	14.07	787.50	71.72	0.02	0.01
136	0.86	25	SLE F	1	4	85.67	689.79	27.00	135.67	0.50	16.00	143.53	14.07	787.50	78.97	0.02	0.01
199	0.86	29	SLE Q	2	4	0.00	776.66	27.00	135.67	0.50	16.00	143.53	14.07	787.50	88.92	0.03	0.01
209	0.86	28	SLE F	2	4	0.00	823.41	27.00	135.67	0.50	16.00	143.53	14.07	787.50	94.27	0.03	0.01
266	1.71	29	SLE Q	2	4	85.67	968.33	27.00	135.67	0.50	16.00	143.53	14.07	787.50	110.86	0.03	0.01
272	1.71	28	SLE F	2	4	85.67	1018.83	27.00	135.67	0.50	16.00	143.53	14.07	787.50	116.64	0.03	0.01
318	1.71	29	SLE Q	3	4	0.00	3606.97	27.00	135.67	0.50	16.00	143.53	14.07	787.50	412.95	0.12	0.03
323	1.71	28	SLE F	3	4	0.00	3694.06	27.00	135.67	0.50	16.00	143.53	14.07	787.50	422.93	0.12	0.03
367	2.35	29	SLE Q	3	4	63.17	3606.97	27.00	135.67	0.50	16.00	143.53	14.07	787.50	412.95	0.12	0.03
372	2.35	28	SLE F	3	4	63.17	3694.06	27.00	135.67	0.50	16.00	143.53	14.07	787.50	422.93	0.12	0.03
421	2.79	29	SLE Q	4	4	22.50	4505.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	515.85	0.15	0.04
426	2.79	28	SLE F	4	4	22.50	4602.55	27.00	135.67	0.50	16.00	143.53	14.07	787.50	526.94	0.15	0.04
476	3.50	29	SLE Q	4	4	93.33	4505.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	515.85	0.15	0.04
481	3.50	28	SLE F	4	4	93.33	4602.55	27.00	135.67	0.50	16.00	143.53	14.07	787.50	526.94	0.15	0.04
533	3.50	29	SLE Q	5	4	0.00	-2205.84	27.00	135.67	0.50	16.00	143.53	14.07	787.50	252.54	0.07	0.02
549	3.50	42	SLE F	5	4	0.00	-2577.97	27.00	135.67	0.50	16.00	143.53	14.07	787.50	295.15	0.09	0.02
590	4.44	29	SLE Q	5	4	93.33	-2837.18	27.00	62.62	0.50	16.00	98.76	28.15	787.50	166.40	0.05	0.01
598	4.44	42	SLE F	5	4	93.33	-3146.78	27.00	62.62	0.50	16.00	98.76	28.15	787.50	184.55	0.05	0.01
641	4.44	29	SLE Q	6	4	0.00	-4981.76	27.00	62.62	0.50	16.00	98.76	28.15	787.50	292.17	0.09	0.01
643	4.44	25	SLE F	6	4	0.00	-5110.31	27.00	62.62	0.50	16.00	98.76	28.15	787.50	299.71	0.09	0.01
692	4.75	29	SLE Q	6	4	31.11	-5432.51	27.00	135.67	0.50	16.00	143.53	14.07	787.50	621.96	0.18	0.04
694	4.75	25	SLE F	6	4	31.11	-5560.41	27.00	135.67	0.50	16.00	143.53	14.07	787.50	636.60	0.19	0.05
741	5.37	29	SLE Q	6	4	93.33	-5432.51	27.00	135.67	0.50	16.00	143.53	14.07	787.50	621.96	0.18	0.04
743	5.37	25	SLE F	6	4	93.33	-5560.41	27.00	135.67	0.50	16.00	143.53	14.07	787.50	636.60	0.19	0.05
786	5.37	29	SLE Q	7	4	0.00	-7070.66	27.00	135.67	0.50	16.00	143.53	14.07	787.50	809.51	0.24	0.06
788	5.37	25	SLE F	7	4	0.00	-7184.01	27.00	135.67	0.50	16.00	143.53	14.07	787.50	822.48	0.24	0.06
831	5.68	29	SLE Q	7	4	31.11	-7412.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	848.68	0.25	0.06
833	5.68	25	SLE F	7	4	31.11	-7521.82	27.00	135.67	0.50	16.00	143.53	14.07	787.50	861.16	0.25	0.06
876	6.30	29	SLE Q	7	4	93.33	-7412.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	848.68	0.25	0.06
878	6.30	25	SLE F	7	4	93.33	-7521.82	27.00	135.67	0.50	16.00	143.53	14.07	787.50	861.16	0.25	0.06
921	6.30	29	SLE Q	8	4	0.00	-8583.79	27.00	135.67	0.50	16.00	143.53	14.07	787.50	982.74	0.29	0.07
926	6.30	28	SLE F	8	4	0.00	-8713.48	27.00	135.67	0.50	16.00	143.53	14.07	787.50	997.59	0.29	0.07
966	6.61	29	SLE Q	8	4	31.11	-8814.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1009.10	0.29	0.07
971	6.61	28	SLE F	8	4	31.11	-8946.19	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1024.23	0.30	0.07
1011	7.24	29	SLE Q	8	4	93.33	-8814.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1009.10	0.29	0.07
1016	7.24	28	SLE F	8	4	93.33	-8946.19	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1024.23	0.30	0.07

Relazione di calcolo

1056	7.24	29	SLE Q	9	4	0.00	-9325.42	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1067.65	0.31	0.08
1061	7.24	28	SLE F	9	4	0.00	-9466.99	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1083.86	0.32	0.08
1101	7.55	29	SLE Q	9	4	31.11	-9375.72	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1073.41	0.31	0.08
1106	7.55	28	SLE F	9	4	31.11	-9516.57	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1089.53	0.32	0.08
1146	8.17	29	SLE Q	9	4	93.33	-9375.72	27.00	62.62	0.50	16.00	98.76	28.15	787.50	549.87	0.16	0.03
1151	8.17	28	SLE F	9	4	93.33	-9516.57	27.00	62.62	0.50	16.00	98.76	28.15	787.50	558.13	0.16	0.03
1191	8.17	29	SLE Q	10	4	0.00	-9460.90	27.00	62.62	0.50	16.00	98.76	28.15	787.50	554.86	0.16	0.03
1196	8.17	28	SLE F	10	4	0.00	-9603.37	27.00	62.62	0.50	16.00	98.76	28.15	787.50	563.22	0.16	0.03
1236	8.48	29	SLE Q	10	4	31.11	-9460.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1083.16	0.32	0.08
1241	8.48	28	SLE F	10	4	31.11	-9603.37	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1099.47	0.32	0.08
1281	9.10	29	SLE Q	10	4	93.33	-9297.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1064.44	0.31	0.08
1286	9.10	28	SLE F	10	4	93.33	-9438.34	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1080.58	0.31	0.08
1330	9.10	29	SLE Q	11	4	0.00	-8237.67	27.00	135.67	0.50	16.00	143.53	14.07	787.50	943.12	0.27	0.07
1335	9.10	28	SLE F	11	4	0.00	-8359.96	27.00	135.67	0.50	16.00	143.53	14.07	787.50	957.12	0.28	0.07
1380	10.04	29	SLE Q	11	4	93.33	-7601.61	27.00	135.67	0.50	16.00	143.53	14.07	787.50	870.29	0.25	0.06
1385	10.04	28	SLE F	11	4	93.33	-7715.59	27.00	135.67	0.50	16.00	143.53	14.07	787.50	883.34	0.26	0.06
1440	10.04	29	SLE Q	12	4	0.00	-4180.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	478.63	0.14	0.03
1445	10.04	28	SLE F	12	4	0.00	-4242.37	27.00	135.67	0.50	16.00	143.53	14.07	787.50	485.70	0.14	0.03
1501	10.52	29	SLE Q	12	4	48.33	-4180.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	478.63	0.14	0.03
1506	10.52	28	SLE F	12	4	48.33	-4242.37	27.00	135.67	0.50	16.00	143.53	14.07	787.50	485.70	0.14	0.03

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
32 SLU	0.30	0.86	0.56	ø10/20 4 br.	15.71	0.90	3821.92	2.50	91968.40	131041.00	91968.40	24.063
13 SLV	0.86	1.71	0.86	ø10/20 4 br.	15.71	0.90	4692.98	2.50	91968.40	131041.00	91968.40	19.597
13 SLV	1.71	2.35	0.63	ø10/20 4 br.	15.71	0.90	9905.39	2.50	91968.40	131041.00	91968.40	9.285
1 SLV	2.79	3.50	0.71	ø10/20 4 br.	15.71	0.90	14366.80	2.50	91968.40	131041.00	91968.40	6.401
1 SLV	3.50	4.44	0.93	ø10/20 4 br.	15.71	0.90	8487.05	2.50	91968.40	131041.00	91968.40	10.836
1 SLV	4.44	5.37	0.93	ø10/20 4 br.	15.71	0.90	6034.81	2.50	91968.40	131041.00	91968.40	15.240
1 SLV	5.37	6.30	0.93	ø10/20 4 br.	15.71	0.90	4539.62	2.50	91968.40	131041.00	91968.40	20.259
1 SLV	6.30	7.24	0.93	ø10/20 4 br.	15.71	0.90	3511.04	2.50	91968.40	131041.00	91968.40	26.194
1 SLV	7.24	8.17	0.93	ø10/20 4 br.	15.71	0.90	2791.31	2.50	91968.40	131041.00	91968.40	32.948
13 SLV	8.17	9.10	0.93	ø10/20 4 br.	15.71	0.90	5174.24	2.50	91968.40	131041.00	91968.40	17.774
13 SLV	9.10	10.04	0.93	ø10/20 4 br.	15.71	0.90	10498.40	2.50	91968.40	131041.00	91968.40	8.760
13 SLV	10.04	10.52	0.48	ø10/20 4 br.	15.71	0.90	18964.40	2.50	91968.40	131041.00	91968.40	4.850

Travata n. 402

Nodi: 1 -237 -1531 -1541 -240 -1540 -242 -1539 -2 -263 -264 -265 -1

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
4R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.25	32	SLU	1	25.00	14.07	14.07	14.07	14.07	-9008.52	-35450.10	3.935
0.98	32	SLU	1	97.62	14.07	14.07	14.07	14.07	-9008.52	-35450.10	3.935
0.98	32	SLU	2	0.00	14.07	14.07	14.07	14.07	-12357.70	-35450.10	2.869
1.22	32	SLU	2	24.29	14.07	14.07	14.07	14.07	-12972.90	-35450.10	2.733
1.95	32	SLU	2	97.62	14.07	14.07	14.07	14.07	-12972.90	-35450.10	2.733
1.95	34	SLU	3	0.00	14.07	14.07	14.07	14.07	-13344.70	-35450.10	2.656
2.93	34	SLU	3	97.62	14.07	14.07	14.07	14.07	-13384.20	-35450.10	2.649
2.93	34	SLU	4	0.00	14.07	14.07	14.07	14.07	-13247.20	-35450.10	2.676
3.90	34	SLU	4	97.62	28.15	14.07	28.15	14.07	-12943.40	-69959.00	5.405
3.90	34	SLU	5	0.00	28.15	14.07	28.15	14.07	-11382.80	-69959.00	6.146
4.88	20	SLU	5	97.62	14.07	14.07	14.07	14.07	-10866.50	-35450.10	3.262
4.88	20	SLU	6	0.00	14.07	14.07	14.07	14.07	-8570.39	-35450.10	4.136
5.86	20	SLU	6	97.62	14.07	14.07	14.07	14.07	-7780.01	-35450.10	4.557
5.86	17	SLU	7	0.00	14.07	14.07	14.07	14.07	-4554.40	-35450.10	7.784
6.18	17	SLU	7	32.54	14.07	14.07	14.07	14.07	-4554.40	-35450.10	7.784
6.83	32	SLU	7	97.62	14.07	14.07	14.07	14.07	3546.78	35450.10	9.995
6.83	32	SLU	8	0.00	14.07	14.07	14.07	14.07	10313.90	35450.10	3.437
7.56	32	SLU	8	72.62	28.15	28.15	28.15	28.15	10313.90	70123.70	6.799
8.06	20	SLU	9	25.00	14.07	28.15	14.07	28.15	4980.51	69959.00	14.046
8.58	20	SLU	9	77.00	14.07	28.15	14.07	28.15	4980.51	69959.00	14.046
8.58	17	SLU	10	0.00	14.07	28.15	14.07	28.15	-1059.72	-35445.00	33.448
8.96	34	SLU	10	38.50	14.07	14.07	14.07	14.07	1962.94	35450.10	18.060
9.35	32	SLU	10	77.00	14.07	14.07	14.07	14.07	1896.56	35450.10	18.692
9.35	17	SLU	11	0.00	14.07	14.07	14.07	14.07	-1386.83	-35450.10	25.562
10.12	17	SLU	11	77.00	14.07	14.07	14.07	14.07	-1386.83	-35450.10	25.562
10.12	32	SLU	12	0.00	14.07	14.07	14.07	14.07	1753.49	35450.10	20.217
10.59	32	SLU	12	47.00	14.07	14.07	14.07	14.07	1753.49	35450.10	20.217

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	X	AfE S	AfE I	AfEP S	AfEP I	My	M'ydy	Sic.
----	----	-----	----	---	-------	-------	--------	--------	----	-------	------

Relazione di calcolo

<m>			<cm>	<cmq>	<cmq>	<cmq>	<cmq>	<daNm>	<daNm>	
0.259	SLV(E)	1	25.00	14.07	14.07	14.07	14.07	-13606.80	-34082.90	2.505
0.989	SLV(E)	1	97.62	14.07	14.07	14.07	14.07	-13606.80	-34082.90	2.505
0.989	SLV(E)	2	0.00	14.07	14.07	14.07	14.07	-15167.80	-34082.90	2.247
1.229	SLV(E)	2	24.29	14.07	14.07	14.07	14.07	-15282.50	-34082.90	2.230
1.959	SLV(E)	2	97.62	14.07	14.07	14.07	14.07	-15282.50	-34082.90	2.230
1.959	SLV(E)	3	0.00	14.07	14.07	14.07	14.07	-15256.60	-34082.90	2.234
2.939	SLV(E)	3	97.62	14.07	14.07	14.07	14.07	-14989.30	-34082.90	2.274
2.931	SLV(E)	4	0.00	14.07	14.07	14.07	14.07	-13639.70	-34082.90	2.499
3.901	SLV(E)	4	97.62	28.15	14.07	28.15	14.07	-13077.90	-66258.60	5.066
3.905	SLV(E)	5	0.00	28.15	14.07	28.15	14.07	-11007.30	-66258.60	6.020
4.885	SLV(E)	5	97.62	14.07	14.07	14.07	14.07	-10419.60	-34082.90	3.271
4.885	SLV(E)	6	0.00	14.07	14.07	14.07	14.07	-8511.79	-34082.90	4.004
5.865	SLV(E)	6	97.62	14.07	14.07	14.07	14.07	-8014.56	-34082.90	4.253
5.861	SLV(E)	7	0.00	14.07	14.07	14.07	14.07	-7997.25	-34082.90	4.262
6.181	SLV(E)	7	32.54	14.07	14.07	14.07	14.07	-8029.52	-34082.90	4.245
6.831	SLV(E)	7	97.62	14.07	14.07	14.07	14.07	-8029.52	-34082.90	4.245
6.839	SLV(E)	8	0.00	14.07	14.07	14.07	14.07	16912.00	34082.90	2.015
7.569	SLV(E)	8	72.62	28.15	28.15	28.15	28.15	16912.00	67205.10	3.974
8.065	SLV(E)	9	25.00	14.07	28.15	14.07	28.15	6019.34	66258.60	11.008
8.585	SLV(E)	9	77.00	14.07	28.15	14.07	28.15	6019.34	66258.60	11.008
8.581	SLV(E)	10	0.00	14.07	28.15	14.07	28.15	-2378.85	-34362.70	14.445
8.961	SLV(E)	10	38.50	14.07	14.07	14.07	14.07	-2456.51	-34082.90	13.874
9.351	SLV(E)	10	77.00	14.07	14.07	14.07	14.07	-2456.51	-34082.90	13.874
9.351	SLV(E)	11	0.00	14.07	14.07	14.07	14.07	-3322.29	-34082.90	10.259
10.121	SLV(E)	11	77.00	14.07	14.07	14.07	14.07	-3322.29	-34082.90	10.259
10.121	SLV(E)	12	0.00	14.07	14.07	14.07	14.07	-3412.04	-34082.90	9.989
10.591	SLV(E)	12	47.00	14.07	14.07	14.07	14.07	-3412.04	-34082.90	9.989

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cm<sup>q> <th>σ_f inf <daN/cm<sup>q><th>σ_c <daN/cm<sup>q></th></th>	σ_f inf <daN/cm<sup>q> <th>σ_c <daN/cm<sup>q></th>	σ_c <daN/cm<sup>q>
0.2537	SLE	R	1	25.00	14.07	14.07	-6425.06	735.59	-147.59	13.11
0.2529	SLE	Q	1	25.00	14.07	14.07	-4234.83	484.84	-97.28	8.64
0.9837	SLE	R	1	97.62	14.07	14.07	-6425.06	735.59	-147.59	13.11
0.9829	SLE	Q	1	97.62	14.07	14.07	-4234.83	484.84	-97.28	8.64
0.9837	SLE	R	2	0.00	14.07	14.07	-8937.67	1023.26	-205.30	18.24
0.9829	SLE	Q	2	0.00	14.07	14.07	-7098.13	812.65	-163.05	14.48
1.2237	SLE	R	2	24.29	14.07	14.07	-9412.67	1077.64	-216.21	19.21
1.2229	SLE	Q	2	24.29	14.07	14.07	-7725.47	884.48	-177.46	15.76
1.9537	SLE	R	2	97.62	14.07	14.07	-9412.67	1077.64	-216.21	19.21
1.9529	SLE	Q	2	97.62	14.07	14.07	-7725.47	884.48	-177.46	15.76
1.9539	SLE	R	3	0.00	14.07	14.07	-9730.34	1114.01	-223.51	19.85
1.9529	SLE	Q	3	0.00	14.07	14.07	-8464.40	969.07	-194.43	17.27
2.9339	SLE	R	3	97.62	14.07	14.07	-9770.75	1118.63	-224.44	19.94
2.9329	SLE	Q	3	97.62	14.07	14.07	-8579.17	982.21	-197.07	17.51
2.9339	SLE	R	4	0.00	14.07	14.07	-9671.88	1107.32	-222.17	19.74
2.9329	SLE	Q	4	0.00	14.07	14.07	-8494.30	972.50	-195.12	17.33
3.9039	SLE	R	4	97.62	28.15	14.07	-9454.47	554.49	-184.50	15.04
3.9029	SLE	Q	4	97.62	28.15	14.07	-8364.72	490.57	-163.23	13.30
3.9039	SLE	R	5	0.00	28.15	14.07	-8346.61	489.51	-162.88	13.27
3.9029	SLE	Q	5	0.00	28.15	14.07	-7610.04	446.31	-148.50	12.10
4.8824	SLE	R	5	97.62	14.07	14.07	-7964.83	911.88	-182.96	16.25
4.8829	SLE	Q	5	97.62	14.07	14.07	-7246.99	829.70	-166.47	14.79
4.8824	SLE	R	6	0.00	14.07	14.07	-6291.59	720.31	-144.52	12.84
4.8829	SLE	Q	6	0.00	14.07	14.07	-5709.41	653.66	-131.15	11.65
5.8624	SLE	R	6	97.62	14.07	14.07	-5709.19	653.63	-131.14	11.65
5.8629	SLE	Q	6	97.62	14.07	14.07	-5171.49	592.07	-118.79	10.55
5.8621	SLE	R	7	0.00	14.07	14.07	-3350.96	383.64	-76.97	6.84
5.8629	SLE	Q	7	0.00	14.07	14.07	-2997.04	343.12	-68.84	6.12
6.1821	SLE	R	7	32.54	14.07	14.07	-3350.96	383.64	-76.97	6.84
6.1829	SLE	Q	7	32.54	14.07	14.07	-2997.04	343.12	-68.84	6.12
6.8321	SLE	R	7	97.62	14.07	14.07	-2570.01	294.24	-59.03	5.24
6.8329	SLE	Q	7	97.62	14.07	14.07	-2268.44	259.71	-52.11	4.63
6.8337	SLE	R	8	0.00	14.07	14.07	7284.07	-167.32	833.94	14.86
6.8329	SLE	Q	8	0.00	14.07	14.07	3931.02	-90.30	450.06	8.02
7.5637	SLE	R	8	72.62	28.15	28.15	7284.07	-125.25	422.40	10.38
7.5629	SLE	Q	8	72.62	28.15	28.15	3931.02	-67.60	227.96	5.60
8.0624	SLE	R	9	25.00	14.07	28.15	3667.28	-71.56	215.08	5.83
8.0629	SLE	Q	9	25.00	14.07	28.15	3282.99	-64.07	192.54	5.22
8.5824	SLE	R	9	77.00	14.07	28.15	3667.28	-71.56	215.08	5.83
8.5829	SLE	Q	9	77.00	14.07	28.15	3282.99	-64.07	192.54	5.22
8.5839	SLE	R	10	0.00	14.07	28.15	1406.09	-27.44	82.46	2.24
8.5821	SLE	R	10	0.00	14.07	28.15	-796.27	90.53	-15.72	1.44
8.5829	SLE	Q	10	0.00	14.07	28.15	1055.88	-20.60	61.92	1.68
8.9639	SLE	R	10	38.50	14.07	14.07	1406.09	-32.30	160.98	2.87
8.9629	SLE	Q	10	38.50	14.07	14.07	1055.88	-24.25	120.89	2.15
9.3537	SLE	R	10	77.00	14.07	14.07	1355.79	-31.14	155.22	2.77
9.3529	SLE	Q	10	77.00	14.07	14.07	998.51	-22.94	114.32	2.04

Relazione di calcolo

9.35	21	SLE R	11	0.00	14.07	14.07	-1038.88	118.94	-23.86	2.12
9.35	29	SLE Q	11	0.00	14.07	14.07	-887.41	101.60	-20.38	1.81
10.12	21	SLE R	11	77.00	14.07	14.07	-1038.88	118.94	-23.86	2.12
10.12	29	SLE Q	11	77.00	14.07	14.07	-887.41	101.60	-20.38	1.81
10.12	37	SLE R	12	0.00	14.07	14.07	1152.71	-26.48	131.97	2.35
10.12	29	SLE Q	12	0.00	14.07	14.07	-817.08	93.55	-18.77	1.67
10.59	37	SLE R	12	47.00	14.07	14.07	1152.71	-26.48	131.97	2.35
10.59	29	SLE Q	12	47.00	14.07	14.07	-817.08	93.55	-18.77	1.67

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
46	0.25	29	SLE Q	1	4	25.00	-4234.83	27.00	135.67	0.50	16.00	143.53	14.07	787.50	484.84	0.14	0.03
62	0.25	42	SLE F	1	4	25.00	-4678.06	27.00	135.67	0.50	16.00	143.53	14.07	787.50	535.58	0.16	0.04
112	0.98	29	SLE Q	1	4	97.62	-4234.83	27.00	135.67	0.50	16.00	143.53	14.07	787.50	484.84	0.14	0.03
128	0.98	42	SLE F	1	4	97.62	-4678.06	27.00	135.67	0.50	16.00	143.53	14.07	787.50	535.58	0.16	0.04
172	0.98	29	SLE Q	2	4	0.00	-7098.13	27.00	135.67	0.50	16.00	143.53	14.07	787.50	812.65	0.24	0.06
180	0.98	42	SLE F	2	4	0.00	-7427.68	27.00	135.67	0.50	16.00	143.53	14.07	787.50	850.38	0.25	0.06
222	1.22	29	SLE Q	2	4	24.29	-7725.47	27.00	135.67	0.50	16.00	143.53	14.07	787.50	884.48	0.26	0.06
230	1.22	42	SLE F	2	4	24.29	-8013.43	27.00	135.67	0.50	16.00	143.53	14.07	787.50	917.44	0.27	0.07
271	1.95	29	SLE Q	2	4	97.62	-7725.47	27.00	135.67	0.50	16.00	143.53	14.07	787.50	884.48	0.26	0.06
279	1.95	42	SLE F	2	4	97.62	-8013.43	27.00	135.67	0.50	16.00	143.53	14.07	787.50	917.44	0.27	0.07
316	1.95	29	SLE Q	3	4	0.00	-8464.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	969.07	0.28	0.07
324	1.95	42	SLE F	3	4	0.00	-8637.83	27.00	135.67	0.50	16.00	143.53	14.07	787.50	988.93	0.29	0.07
361	2.93	29	SLE Q	3	4	97.62	-8579.17	27.00	135.67	0.50	16.00	143.53	14.07	787.50	982.21	0.29	0.07
369	2.93	42	SLE F	3	4	97.62	-8720.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	998.34	0.29	0.07
406	2.93	29	SLE Q	4	4	0.00	-8494.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	972.50	0.28	0.07
414	2.93	42	SLE F	4	4	0.00	-8634.52	27.00	135.67	0.50	16.00	143.53	14.07	787.50	988.55	0.29	0.07
451	3.90	29	SLE Q	4	4	97.62	-8364.72	27.00	62.62	0.50	16.00	98.76	28.15	787.50	490.57	0.14	0.02
456	3.90	28	SLE F	4	4	97.62	-8494.49	27.00	62.62	0.50	16.00	98.76	28.15	787.50	498.18	0.15	0.02
496	3.90	29	SLE Q	5	4	0.00	-7610.04	27.00	62.62	0.50	16.00	98.76	28.15	787.50	446.31	0.13	0.02
501	3.90	28	SLE F	5	4	0.00	-7724.07	27.00	62.62	0.50	16.00	98.76	28.15	787.50	453.00	0.13	0.02
541	4.88	29	SLE Q	5	4	97.62	-7246.99	27.00	135.67	0.50	16.00	143.53	14.07	787.50	829.70	0.24	0.06
543	4.88	25	SLE F	5	4	97.62	-7368.17	27.00	135.67	0.50	16.00	143.53	14.07	787.50	843.57	0.25	0.06
586	4.88	29	SLE Q	6	4	0.00	-5709.41	27.00	135.67	0.50	16.00	143.53	14.07	787.50	653.66	0.19	0.05
588	4.88	25	SLE F	6	4	0.00	-5854.27	27.00	135.67	0.50	16.00	143.53	14.07	787.50	670.25	0.20	0.05
632	5.86	29	SLE Q	6	4	97.62	-5171.49	27.00	135.67	0.50	16.00	143.53	14.07	787.50	592.07	0.17	0.04
634	5.86	25	SLE F	6	4	97.62	-5317.26	27.00	135.67	0.50	16.00	143.53	14.07	787.50	608.76	0.18	0.04
691	5.86	29	SLE Q	7	4	0.00	-2997.04	27.00	135.67	0.50	16.00	143.53	14.07	787.50	343.12	0.10	0.02
693	5.86	25	SLE F	7	4	0.00	-3145.08	27.00	135.67	0.50	16.00	143.53	14.07	787.50	360.07	0.10	0.03
761	6.18	29	SLE Q	7	4	32.54	-2997.04	27.00	135.67	0.50	16.00	143.53	14.07	787.50	343.12	0.10	0.02
765	6.18	25	SLE F	7	4	32.54	-3145.08	27.00	135.67	0.50	16.00	143.53	14.07	787.50	360.07	0.10	0.03
839	6.83	29	SLE Q	7	4	97.62	-2268.44	27.00	135.67	0.50	16.00	143.53	14.07	787.50	259.71	0.08	0.02
843	6.83	25	SLE F	7	4	97.62	-2404.28	27.00	135.67	0.50	16.00	143.53	14.07	787.50	275.26	0.08	0.02
895	6.83	29	SLE Q	8	4	0.00	3931.02	27.00	135.67	0.50	16.00	143.53	14.07	787.50	450.06	0.13	0.03
903	6.83	42	SLE F	8	4	0.00	4548.03	27.00	135.67	0.50	16.00	143.53	14.07	787.50	520.70	0.15	0.04
941	7.56	29	SLE Q	8	4	72.62	3931.02	27.00	62.62	0.50	16.00	98.76	28.15	787.50	227.96	0.07	0.01
949	7.56	42	SLE F	8	4	72.62	4548.03	27.00	62.62	0.50	16.00	98.76	28.15	787.50	263.74	0.08	0.01
986	8.06	29	SLE Q	9	4	25.00	3282.99	27.00	62.62	0.50	16.00	98.76	28.15	787.50	192.54	0.06	0.01
991	8.06	28	SLE F	9	4	25.00	3362.75	27.00	62.62	0.50	16.00	98.76	28.15	787.50	197.22	0.06	0.01
1031	8.58	29	SLE Q	9	4	77.00	3282.99	27.00	62.62	0.50	16.00	98.76	28.15	787.50	192.54	0.06	0.01
1036	8.58	28	SLE F	9	4	77.00	3362.75	27.00	62.62	0.50	16.00	98.76	28.15	787.50	197.22	0.06	0.01
1100	8.58	29	SLE Q	10	4	0.00	-608.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	69.20	0.02	0.00
1104	8.58	25	SLE F	10	4	0.00	-732.03	27.00	135.67	0.50	16.00	143.53	14.07	787.50	83.23	0.02	0.01
1183	8.96	29	SLE Q	10	4	38.50	1055.88	27.00	135.67	0.50	16.00	143.53	14.07	787.50	120.89	0.04	0.01
1199	8.96	42	SLE F	10	4	38.50	1129.65	27.00	135.67	0.50	16.00	143.53	14.07	787.50	129.33	0.04	0.01
1265	9.35	29	SLE Q	10	4	77.00	998.51	27.00	135.67	0.50	16.00	143.53	14.07	787.50	114.32	0.03	0.01
1281	9.35	42	SLE F	10	4	77.00	1075.99	27.00	135.67	0.50	16.00	143.53	14.07	787.50	123.19	0.04	0.01
1324	9.35	29	SLE Q	11	4	0.00	-887.41	27.00	135.67	0.50	16.00	143.53	14.07	787.50	101.60	0.03	0.01
1326	9.35	25	SLE F	11	4	0.00	-979.66	27.00	135.67	0.50	16.00	143.53	14.07	787.50	112.16	0.03	0.01
1374	10.12	29	SLE Q	11	4	77.00	-887.41	27.00	135.67	0.50	16.00	143.53	14.07	787.50	101.60	0.03	0.01
1376	10.12	25	SLE F	11	4	77.00	-979.66	27.00	135.67	0.50	16.00	143.53	14.07	787.50	112.16	0.03	0.01
1438	10.12	29	SLE Q	12	4	0.00	-817.08	27.00	135.67	0.50	16.00	143.53	14.07	787.50	93.55	0.03	0.01
1442	10.12	25	SLE F	12	4	0.00	-863.93	27.00	135.67	0.50	16.00	143.53	14.07	787.50	98.91	0.03	0.01
1512	10.59	29	SLE Q	12	4	47.00	-817.08	27.00	135.67	0.50	16.00	143.53	14.07	787.50	93.55	0.03	0.01
1516	10.59	25	SLE F	12	4	47.00	-863.93	27.00	135.67	0.50	16.00	143.53	14.07	787.50	98.91	0.03	0.01

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
5 SLV	0.25	0.70	0.45	ø10/20 4 br.	15.71	0.90	12410.70	2.50	91968.40	131041.00	91968.40	7.410
9 SLV	0.70	7.11	6.41	ø10/20 4 br.	15.71	0.90	11221.30	2.50	91968.40	131041.00	91968.40	8.196
9 SLV	7.11	7.56	0.45	ø10/20 4 br.	15.71	0.90	12917.30	2.50	91968.40	131041.00	91968.40	7.120
5 SLV	8.06	8.51	0.45	ø10/20 4 br.	15.71	0.90	8501.27	2.50	91968.40	131041.00	91968.40	10.818
5 SLV	8.51	10.14	1.63	ø10/20 4 br.	15.71	0.90	6852.24	2.50	91968.40	131041.00	91968.40	13.422
17 SLU	10.14	10.59	0.45	ø10/20 4 br.	15.71	0.90	3924.22	2.50	91968.40	131041.00	91968.40	23.436

Travata n. 403

Nodi: -11 -234 -233 -232 -231 -230 -229 -228 -12 -262 -261 -260 -13

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
4R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cm²>	AfE I <cm²>	AfEP S <cm²>	AfEP I <cm²>	My <daNm>	MRdy <daNm>	Sic.
0.25	32	SLU	1	25.00	14.07	14.07	14.07	14.07	-8879.77	-35450.10	3.992
0.98	32	SLU	1	97.62	14.07	14.07	14.07	14.07	-8879.77	-35450.10	3.992
0.98	32	SLU	2	0.00	14.07	14.07	14.07	14.07	-13587.70	-35450.10	2.609
1.30	32	SLU	2	32.54	14.07	14.07	14.07	14.07	-14539.10	-35450.10	2.438
1.95	32	SLU	2	97.62	14.07	28.15	14.07	28.15	-14539.10	-35445.00	2.438
1.95	32	SLU	3	0.00	14.07	28.15	14.07	28.15	-14921.70	-35445.00	2.375
2.93	32	SLU	3	97.62	14.07	14.07	14.07	14.07	-14923.10	-35450.10	2.376
2.93	32	SLU	4	0.00	14.07	14.07	14.07	14.07	-14715.90	-35450.10	2.409
3.90	32	SLU	4	97.62	28.15	14.07	28.15	14.07	-14295.40	-69959.00	4.894
3.90	34	SLU	5	0.00	28.15	14.07	28.15	14.07	-12643.80	-69959.00	5.533
4.88	34	SLU	5	97.62	14.07	14.07	14.07	14.07	-11967.50	-35450.10	2.962
4.88	34	SLU	6	0.00	14.07	14.07	14.07	14.07	-9408.75	-35450.10	3.768
5.86	34	SLU	6	97.62	14.07	28.15	14.07	28.15	-8314.01	-35445.00	4.263
5.86	20	SLU	7	0.00	14.07	28.15	14.07	28.15	-4748.44	-35445.00	7.465
6.83	32	SLU	7	97.62	14.07	14.07	14.07	14.07	5294.91	35450.10	6.695
6.83	32	SLU	8	0.00	14.07	14.07	14.07	14.07	20678.70	35450.10	1.714
7.56	32	SLU	8	72.62	28.15	14.07	28.15	14.07	20678.70	35445.00	1.714
8.06	34	SLU	9	25.00	14.07	14.07	14.07	14.07	15293.00	35450.10	2.318
8.58	34	SLU	9	77.00	14.07	14.07	14.07	14.07	15293.00	35450.10	2.318
8.58	32	SLU	10	0.00	14.07	14.07	14.07	14.07	5622.93	35450.10	6.305
8.96	32	SLU	10	38.50	14.07	14.07	14.07	14.07	5622.93	35450.10	6.305
9.35	32	SLU	10	77.00	14.07	14.07	14.07	14.07	5433.18	35450.10	6.525
9.35	20	SLU	11	0.00	14.07	14.07	14.07	14.07	-3854.51	-35450.10	9.197
9.73	20	SLU	11	38.50	14.07	14.07	14.07	14.07	-3889.35	-35450.10	9.115
10.12	20	SLU	11	77.00	14.07	14.07	14.07	14.07	-3889.35	-35450.10	9.115
10.12	20	SLU	12	0.00	14.07	14.07	14.07	14.07	-3469.43	-35450.10	10.218
10.59	20	SLU	12	47.00	14.07	14.07	14.07	14.07	-3469.43	-35450.10	10.218

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cm²>	AfE I <cm²>	AfEP S <cm²>	AfEP I <cm²>	My <daNm>	M'ydy <daNm>	Sic.
0.25	9	SLV (E)	1	25.00	14.07	14.07	14.07	14.07	-12290.00	-34082.90	2.773
0.98	9	SLV (E)	1	97.62	14.07	14.07	14.07	14.07	-12290.00	-34082.90	2.773
0.98	9	SLV (E)	2	0.00	14.07	14.07	14.07	14.07	-14907.40	-34082.90	2.286
1.30	9	SLV (E)	2	32.54	14.07	14.07	14.07	14.07	-15208.80	-34082.90	2.241
1.95	9	SLV (E)	2	97.62	14.07	28.15	14.07	28.15	-15208.80	-34362.70	2.259
1.95	9	SLV (E)	3	0.00	14.07	28.15	14.07	28.15	-15160.90	-34362.70	2.267
2.93	9	SLV (E)	3	97.62	14.07	14.07	14.07	14.07	-14851.80	-34082.90	2.295
2.93	9	SLV (E)	4	0.00	14.07	14.07	14.07	14.07	-13378.60	-34082.90	2.548
3.90	9	SLV (E)	4	97.62	28.15	14.07	28.15	14.07	-12716.10	-66258.60	5.211
3.90	9	SLV (E)	5	0.00	28.15	14.07	28.15	14.07	-10199.50	-66258.60	6.496
4.88	9	SLV (E)	5	97.62	14.07	14.07	14.07	14.07	-9342.42	-34082.90	3.648
4.88	1	SLV (E)	6	0.00	14.07	14.07	14.07	14.07	-7482.53	-34082.90	4.555
5.86	1	SLV (E)	6	97.62	14.07	28.15	14.07	28.15	-7256.55	-34362.70	4.735
5.86	1	SLV (E)	7	0.00	14.07	28.15	14.07	28.15	-6563.25	-34362.70	5.236
6.83	9	SLV (E)	7	97.62	14.07	14.07	14.07	14.07	6927.59	34082.90	4.920
6.83	9	SLV (E)	8	0.00	14.07	14.07	14.07	14.07	20396.90	34082.90	1.671
7.56	9	SLV (E)	8	72.62	28.15	14.07	28.15	14.07	20396.90	34362.70	1.685
8.06	13	SLV (E)	9	25.00	14.07	14.07	14.07	14.07	12125.20	34082.90	2.811
8.58	13	SLV (E)	9	77.00	14.07	14.07	14.07	14.07	12125.20	34082.90	2.811
8.58	13	SLV (E)	10	0.00	14.07	14.07	14.07	14.07	4005.32	34082.90	8.509
8.96	13	SLV (E)	10	38.50	14.07	14.07	14.07	14.07	4005.32	34082.90	8.509
9.35	13	SLV (E)	10	77.00	14.07	14.07	14.07	14.07	3858.60	34082.90	8.833
9.35	1	SLV (E)	11	0.00	14.07	14.07	14.07	14.07	-5911.99	-34082.90	5.765
9.73	1	SLV (E)	11	38.50	14.07	14.07	14.07	14.07	-5959.97	-34082.90	5.719
10.12	1	SLV (E)	11	77.00	14.07	14.07	14.07	14.07	-5959.97	-34082.90	5.719
10.12	1	SLV (E)	12	0.00	14.07	14.07	14.07	14.07	-5645.84	-34082.90	6.037
10.59	1	SLV (E)	12	47.00	14.07	14.07	14.07	14.07	-5645.84	-34082.90	6.037

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cm²>	AfE I <cm²>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.25	37	SLE R	1	25.00	14.07	14.07	-6381.16	730.57	-146.58	13.02
0.25	29	SLE Q	1	25.00	14.07	14.07	-4777.89	547.01	-109.75	9.75
0.98	37	SLE R	1	97.62	14.07	14.07	-6381.16	730.57	-146.58	13.02
0.98	29	SLE Q	1	97.62	14.07	14.07	-4777.89	547.01	-109.75	9.75
0.98	37	SLE R	2	0.00	14.07	14.07	-9807.75	1122.87	-225.29	20.01
0.98	29	SLE Q	2	0.00	14.07	14.07	-7849.03	898.62	-180.30	16.02
1.30	37	SLE R	2	32.54	14.07	14.07	-10509.80	1203.25	-241.41	21.45

Relazione di calcolo

1.30	29	SLE Q	2	32.54	14.07	14.07	-8522.15	975.68	-195.76	17.39
1.95	37	SLE R	2	97.62	14.07	28.15	-10509.80	1194.87	-207.48	19.03
1.95	29	SLE Q	2	97.62	14.07	28.15	-8522.15	968.89	-168.24	15.43
1.95	37	SLE R	3	0.00	14.07	28.15	-10805.70	1228.51	-213.32	19.56
1.95	29	SLE Q	3	0.00	14.07	28.15	-8988.34	1021.89	-177.44	16.27
2.93	37	SLE R	3	97.62	14.07	14.07	-10815.60	1238.26	-248.44	22.07
2.93	29	SLE Q	3	97.62	14.07	14.07	-9061.33	1037.41	-208.14	18.49
2.93	37	SLE R	4	0.00	14.07	14.07	-10671.50	1221.75	-245.13	21.77
2.93	29	SLE Q	4	0.00	14.07	14.07	-8974.08	1027.43	-206.14	18.31
3.90	37	SLE R	4	97.62	28.15	14.07	-10366.20	607.96	-202.29	16.49
3.90	29	SLE Q	4	97.62	28.15	14.07	-8764.28	514.01	-171.03	13.94
3.90	39	SLE R	5	0.00	28.15	14.07	-9191.91	539.09	-179.37	14.62
3.90	29	SLE Q	5	0.00	28.15	14.07	-7970.22	467.44	-155.53	12.68
4.88	39	SLE R	5	97.62	14.07	14.07	-8699.45	995.98	-199.83	17.75
4.88	29	SLE Q	5	97.62	14.07	14.07	-7578.60	867.66	-174.08	15.46
4.88	39	SLE R	6	0.00	14.07	14.07	-6867.11	786.20	-157.74	14.01
4.88	29	SLE Q	6	0.00	14.07	14.07	-6198.23	709.62	-142.38	12.65
5.86	39	SLE R	6	97.62	14.07	28.15	-6076.02	690.79	-119.95	11.00
5.86	29	SLE Q	6	97.62	14.07	28.15	-5575.55	633.89	-110.07	10.09
5.86	24	SLE R	7	0.00	14.07	28.15	-3494.96	397.35	-69.00	6.33
5.86	29	SLE Q	7	0.00	14.07	28.15	-3285.76	373.56	-64.87	5.95
6.83	37	SLE R	7	97.62	14.07	14.07	-3633.52	-83.46	416.00	7.41
6.83	29	SLE Q	7	97.62	14.07	14.07	-2144.30	245.50	-49.26	4.38
6.83	37	SLE R	8	0.00	14.07	14.07	14627.40	-336.00	1674.66	29.85
6.83	29	SLE Q	8	0.00	14.07	14.07	9997.80	-229.65	1144.63	20.40
7.56	37	SLE R	8	72.62	28.15	14.07	14627.40	-288.77	1663.01	26.48
7.56	29	SLE Q	8	72.62	28.15	14.07	9997.80	-197.37	1136.66	18.10
8.06	39	SLE R	9	25.00	14.07	14.07	10928.90	-251.04	1251.22	22.30
8.06	29	SLE Q	9	25.00	14.07	14.07	8874.06	-203.84	1015.97	18.11
8.58	39	SLE R	9	77.00	14.07	14.07	10928.90	-251.04	1251.22	22.30
8.58	29	SLE Q	9	77.00	14.07	14.07	8874.06	-203.84	1015.97	18.11
8.58	37	SLE R	10	0.00	14.07	14.07	3933.44	-90.35	450.33	8.03
8.58	29	SLE Q	10	0.00	14.07	14.07	2635.49	-60.54	301.73	5.38
8.96	37	SLE R	10	38.50	14.07	14.07	3933.44	-90.35	450.33	8.03
8.96	29	SLE Q	10	38.50	14.07	14.07	2635.49	-60.54	301.73	5.38
9.35	37	SLE R	10	77.00	14.07	14.07	3796.41	-87.21	434.64	7.75
9.35	29	SLE Q	10	77.00	14.07	14.07	2509.97	-57.66	287.36	5.12
9.35	24	SLE R	11	0.00	14.07	14.07	-2829.89	323.99	-65.00	5.77
9.35	29	SLE Q	11	0.00	14.07	14.07	-2652.24	303.65	-60.92	5.41
9.73	24	SLE R	11	38.50	14.07	14.07	-2854.79	326.84	-65.58	5.83
9.73	29	SLE Q	11	38.50	14.07	14.07	-2673.56	306.09	-61.41	5.46
10.12	24	SLE R	11	77.00	14.07	14.07	-2854.79	326.84	-65.58	5.83
10.12	29	SLE Q	11	77.00	14.07	14.07	-2673.56	306.09	-61.41	5.46
10.12	24	SLE R	12	0.00	14.07	14.07	-2547.95	291.71	-58.53	5.20
10.12	29	SLE Q	12	0.00	14.07	14.07	-2387.53	273.34	-54.84	4.87
10.59	24	SLE R	12	47.00	14.07	14.07	-2547.95	291.71	-58.53	5.20
10.59	29	SLE Q	12	47.00	14.07	14.07	-2387.53	273.34	-54.84	4.87

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
48	0.25	29	SLE Q	1	4	25.00	-4777.89	27.00	135.67	0.50	16.00	143.53	14.07	787.50	547.01	0.16	0.04
64	0.25	42	SLE F	1	4	25.00	-5096.66	27.00	135.67	0.50	16.00	143.53	14.07	787.50	583.51	0.17	0.04
116	0.98	29	SLE Q	1	4	97.62	-4777.89	27.00	135.67	0.50	16.00	143.53	14.07	787.50	547.01	0.16	0.04
132	0.98	42	SLE F	1	4	97.62	-5096.66	27.00	135.67	0.50	16.00	143.53	14.07	787.50	583.51	0.17	0.04
174	0.98	29	SLE Q	2	4	0.00	-7849.03	27.00	135.67	0.50	16.00	143.53	14.07	787.50	898.62	0.26	0.06
182	0.98	42	SLE F	2	4	0.00	-8212.18	27.00	135.67	0.50	16.00	143.53	14.07	787.50	940.20	0.27	0.07
222	1.30	29	SLE Q	2	4	32.54	-8522.15	27.00	135.67	0.50	16.00	143.53	14.07	787.50	975.68	0.28	0.07
230	1.30	42	SLE F	2	4	32.54	-8884.67	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1017.19	0.30	0.07
268	1.95	29	SLE Q	2	4	97.62	-8522.15	27.00	135.67	0.50	16.00	143.53	14.07	787.50	968.89	0.28	0.07
276	1.95	42	SLE F	2	4	97.62	-8884.67	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1010.11	0.29	0.07
313	1.95	29	SLE Q	3	4	0.00	-8988.34	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1021.89	0.30	0.07
321	1.95	42	SLE F	3	4	0.00	-9302.55	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1057.62	0.31	0.08
358	2.93	29	SLE Q	3	4	97.62	-9061.33	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1037.41	0.30	0.07
366	2.93	42	SLE F	3	4	97.62	-9360.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1071.67	0.31	0.08
403	2.93	29	SLE Q	4	4	0.00	-8974.08	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1027.43	0.30	0.07
411	2.93	42	SLE F	4	4	0.00	-9260.84	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1060.26	0.31	0.08
448	3.90	29	SLE Q	4	4	97.62	-8764.28	27.00	62.62	0.50	16.00	98.76	28.15	787.50	514.01	0.15	0.03
456	3.90	42	SLE F	4	4	97.62	-9031.05	27.00	62.62	0.50	16.00	98.76	28.15	787.50	529.65	0.15	0.03
493	3.90	29	SLE Q	5	4	0.00	-7970.22	27.00	62.62	0.50	16.00	98.76	28.15	787.50	467.44	0.14	0.02
501	3.90	42	SLE F	5	4	0.00	-8154.21	27.00	62.62	0.50	16.00	98.76	28.15	787.50	478.23	0.14	0.02
538	4.88	29	SLE Q	5	4	97.62	-7578.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	867.66	0.25	0.06
546	4.88	42	SLE F	5	4	97.62	-7735.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	885.67	0.26	0.06
583	4.88	29	SLE Q	6	4	0.00	-6198.23	27.00	135.67	0.50	16.00	143.53	14.07	787.50	709.62	0.21	0.05
588	4.88	28	SLE F	6	4	0.00	-6301.09	27.00	135.67	0.50	16.00	143.53	14.07	787.50	721.40	0.21	0.05
628	5.86	29	SLE Q	6	4	97.62	-5575.55	27.00	135.67	0.50	16.00	143.53	14.07	787.50	633.89	0.18	0.05
633	5.86	28	SLE F	6	4	97.62	-5667.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	644.33	0.19	0.05
702	5.86	29	SLE Q	7	4	0.00	-3285.76	27.00	135.67	0.50	16.00	143.53	14.07	787.50	373.56	0.11	0.03
712	5.86	28	SLE F	7	4	0.00	-3324.19	27.00	135.67	0.50	16.00	143.53	14.07	787.50	377.93	0.11	0.03

Relazione di calcolo

782	6.83	29	SLE Q	7	4	97.62	-2144.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	245.50	0.07	0.02
786	6.83	25	SLE F	7	4	97.62	-2172.46	27.00	135.67	0.50	16.00	143.53	14.07	787.50	248.72	0.07	0.02
843	6.83	29	SLE Q	8	4	0.00	9997.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1144.63	0.33	0.08
851	6.83	42	SLE F	8	4	0.00	10846.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1241.83	0.36	0.09
894	7.56	29	SLE Q	8	4	72.62	9997.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1136.66	0.33	0.08
902	7.56	42	SLE F	8	4	72.62	10846.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1233.18	0.36	0.09
939	8.06	29	SLE Q	9	4	25.00	8874.06	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1015.97	0.30	0.07
947	8.06	42	SLE F	9	4	25.00	9202.63	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1053.59	0.31	0.07
984	8.58	29	SLE Q	9	4	77.00	8874.06	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1015.97	0.30	0.07
992	8.58	42	SLE F	9	4	77.00	9202.63	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1053.59	0.31	0.07
1062	8.58	29	SLE Q	10	4	0.00	2635.49	27.00	135.67	0.50	16.00	143.53	14.07	787.50	301.73	0.09	0.02
1078	8.58	42	SLE F	10	4	0.00	2880.93	27.00	135.67	0.50	16.00	143.53	14.07	787.50	329.83	0.10	0.02
1151	8.96	29	SLE Q	10	4	38.50	2635.49	27.00	135.67	0.50	16.00	143.53	14.07	787.50	301.73	0.09	0.02
1167	8.96	42	SLE F	10	4	38.50	2880.93	27.00	135.67	0.50	16.00	143.53	14.07	787.50	329.83	0.10	0.02
1240	9.35	29	SLE Q	10	4	77.00	2509.97	27.00	135.67	0.50	16.00	143.53	14.07	787.50	287.36	0.08	0.02
1256	9.35	42	SLE F	10	4	77.00	2753.86	27.00	135.67	0.50	16.00	143.53	14.07	787.50	315.28	0.09	0.02
1296	9.35	29	SLE Q	11	4	0.00	-2652.24	27.00	135.67	0.50	16.00	143.53	14.07	787.50	303.65	0.09	0.02
1301	9.35	28	SLE F	11	4	0.00	-2682.97	27.00	135.67	0.50	16.00	143.53	14.07	787.50	307.17	0.09	0.02
1342	9.73	29	SLE Q	11	4	38.50	-2673.56	27.00	135.67	0.50	16.00	143.53	14.07	787.50	306.09	0.09	0.02
1347	9.73	28	SLE F	11	4	38.50	-2705.31	27.00	135.67	0.50	16.00	143.53	14.07	787.50	309.73	0.09	0.02
1388	10.12	29	SLE Q	11	4	77.00	-2673.56	27.00	135.67	0.50	16.00	143.53	14.07	787.50	306.09	0.09	0.02
1393	10.12	28	SLE F	11	4	77.00	-2705.31	27.00	135.67	0.50	16.00	143.53	14.07	787.50	309.73	0.09	0.02
1437	10.12	29	SLE Q	12	4	0.00	-2387.53	27.00	135.67	0.50	16.00	143.53	14.07	787.50	273.34	0.08	0.02
1442	10.12	28	SLE F	12	4	0.00	-2414.29	27.00	135.67	0.50	16.00	143.53	14.07	787.50	276.41	0.08	0.02
1486	10.59	29	SLE Q	12	4	47.00	-2387.53	27.00	135.67	0.50	16.00	143.53	14.07	787.50	273.34	0.08	0.02
1491	10.59	28	SLE F	12	4	47.00	-2414.29	27.00	135.67	0.50	16.00	143.53	14.07	787.50	276.41	0.08	0.02

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
1 SLV	0.25	0.70	0.45	ø10/20 4 br.	15.71	0.90	12143.60	2.50	91968.40	131041.00	91968.40	7.573
32 SLU	0.70	7.11	6.41	ø10/20 4 br.	15.71	0.90	21979.00	2.50	91968.40	131041.00	91968.40	4.184
32 SLU	7.11	7.56	0.45	ø10/20 4 br.	15.71	0.90	22645.80	2.50	91968.40	131041.00	91968.40	4.061
34 SLU	8.06	8.51	0.45	ø10/20 4 br.	15.71	0.90	20690.40	2.50	91968.40	131041.00	91968.40	4.445
34 SLU	8.51	10.14	1.63	ø10/20 4 br.	15.71	0.90	19876.60	2.50	91968.40	131041.00	91968.40	4.627
5 SLV	10.14	10.59	0.45	ø10/20 4 br.	15.71	0.90	2822.41	2.50	91968.40	131041.00	91968.40	32.585

Travata n. 405

Nodi: -16 -313 -312 -311 -310 -1761 -308 -307 -226 -276 -275 -274 -14

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
4R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CCT	CC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.25	32	SLU	1	72.62	14.07	14.07	14.07	14.07	-8874.08	-35450.10	3.995
0.98	32	SLU	1	0.00	14.07	14.07	14.07	14.07	-8874.08	-35450.10	3.995
0.98	32	SLU	2	97.62	14.07	14.07	14.07	14.07	-13933.60	-35450.10	2.544
1.30	32	SLU	2	65.08	14.07	14.07	14.07	14.07	-14989.40	-35450.10	2.365
1.95	32	SLU	2	0.00	14.07	14.07	14.07	14.07	-14989.40	-35450.10	2.365
1.95	34	SLU	3	97.62	14.07	14.07	14.07	14.07	-15526.60	-35450.10	2.283
2.18	34	SLU	3	74.73	14.07	14.07	14.07	14.07	-15599.30	-35450.10	2.273
2.93	34	SLU	3	0.00	14.07	14.07	14.07	14.07	-15599.30	-35450.10	2.273
2.93	34	SLU	4	97.62	14.07	14.07	14.07	14.07	-15397.00	-35450.10	2.302
3.90	34	SLU	4	0.00	28.15	14.07	28.15	14.07	-15013.30	-69959.00	4.660
3.90	34	SLU	5	97.62	28.15	14.07	28.15	14.07	-13481.00	-69959.00	5.189
4.88	34	SLU	5	0.00	14.07	28.15	14.07	28.15	-12741.90	-35445.00	2.782
4.88	34	SLU	6	97.62	14.07	28.15	14.07	28.15	-10023.50	-35445.00	3.536
5.86	34	SLU	6	0.00	14.07	14.07	14.07	14.07	-8746.84	-35450.10	4.053
5.86	32	SLU	7	97.62	14.07	14.07	14.07	14.07	4376.31	35450.10	8.100
6.83	32	SLU	7	0.00	14.07	14.07	14.07	14.07	6833.10	35450.10	5.188
6.83	34	SLU	8	97.62	14.07	14.07	14.07	14.07	25981.40	35450.10	1.364
7.56	34	SLU	8	25.00	28.15	28.15	28.15	28.15	25981.40	70123.70	2.699
8.06	34	SLU	9	52.00	14.07	28.15	14.07	28.15	22197.50	69959.00	3.152
8.58	34	SLU	9	0.00	14.07	28.15	14.07	28.15	22197.50	69959.00	3.152
8.58	34	SLU	10	77.00	14.07	28.15	14.07	28.15	8761.19	69959.00	7.985
8.96	34	SLU	10	38.50	14.07	14.07	14.07	14.07	8761.19	35450.10	4.046
9.35	34	SLU	10	0.00	14.07	14.07	14.07	14.07	8484.09	35450.10	4.178
9.35	20	SLU	11	77.00	14.07	14.07	14.07	14.07	-4526.81	-35450.10	7.831
9.73	20	SLU	11	38.50	14.07	14.07	14.07	14.07	-4619.08	-35450.10	7.675
10.12	20	SLU	11	0.00	14.07	14.07	14.07	14.07	-4619.08	-35450.10	7.675
10.12	20	SLU	12	77.00	14.07	14.07	14.07	14.07	-4933.06	-35450.10	7.186
10.59	20	SLU	12	30.00	14.07	14.07	14.07	14.07	-4933.06	-35450.10	7.186

Stato limite elastico - Verifiche a flessione/pressoflessione

Relazione di calcolo

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.25	9	SLV(E)	1	72.62	14.07	14.07	14.07	14.07	-10963.70	-34082.90	3.109
0.98	9	SLV(E)	1	0.00	14.07	14.07	14.07	14.07	-10963.70	-34082.90	3.109
0.98	9	SLV(E)	2	97.62	14.07	14.07	14.07	14.07	-13561.90	-34082.90	2.513
1.30	9	SLV(E)	2	65.08	14.07	14.07	14.07	14.07	-13904.40	-34082.90	2.451
1.95	9	SLV(E)	2	0.00	14.07	14.07	14.07	14.07	-13904.40	-34082.90	2.451
1.95	9	SLV(E)	3	97.62	14.07	14.07	14.07	14.07	-13877.30	-34082.90	2.456
2.18	9	SLV(E)	3	74.73	14.07	14.07	14.07	14.07	-13877.30	-34082.90	2.456
2.93	9	SLV(E)	3	0.00	14.07	14.07	14.07	14.07	-13615.50	-34082.90	2.503
2.93	9	SLV(E)	4	97.62	14.07	14.07	14.07	14.07	-12467.60	-34082.90	2.734
3.90	9	SLV(E)	4	0.00	28.15	14.07	28.15	14.07	-11920.30	-66258.60	5.558
3.90	9	SLV(E)	5	97.62	28.15	14.07	28.15	14.07	-9966.94	-66258.60	6.648
4.88	9	SLV(E)	5	0.00	14.07	28.15	14.07	28.15	-9235.70	-34362.70	3.721
4.88	9	SLV(E)	6	97.62	14.07	28.15	14.07	28.15	-7096.11	-34362.70	4.842
5.86	1	SLV(E)	6	0.00	14.07	14.07	14.07	14.07	-6536.36	-34082.90	5.214
5.86	9	SLV(E)	7	97.62	14.07	14.07	14.07	14.07	4716.99	34082.90	7.226
6.83	9	SLV(E)	7	0.00	14.07	14.07	14.07	14.07	6655.16	34082.90	5.121
6.83	9	SLV(E)	8	97.62	14.07	14.07	14.07	14.07	21957.80	34082.90	1.552
7.56	9	SLV(E)	8	25.00	28.15	28.15	28.15	28.15	21957.80	67205.10	3.061
8.06	1	SLV(E)	9	52.00	14.07	28.15	14.07	28.15	17318.70	66258.60	3.826
8.58	1	SLV(E)	9	0.00	14.07	28.15	14.07	28.15	17318.70	66258.60	3.826
8.58	1	SLV(E)	10	77.00	14.07	28.15	14.07	28.15	6347.84	66258.60	10.438
8.96	1	SLV(E)	10	38.50	14.07	14.07	14.07	14.07	6347.84	34082.90	5.369
9.35	1	SLV(E)	10	0.00	14.07	14.07	14.07	14.07	6117.51	34082.90	5.571
9.35	1	SLV(E)	11	77.00	14.07	14.07	14.07	14.07	-5186.00	-34082.90	6.572
9.73	1	SLV(E)	11	38.50	14.07	14.07	14.07	14.07	-5283.28	-34082.90	6.451
10.12	1	SLV(E)	11	0.00	14.07	14.07	14.07	14.07	-5283.28	-34082.90	6.451
10.12	1	SLV(E)	12	77.00	14.07	14.07	14.07	14.07	-6302.96	-34082.90	5.407
10.59	1	SLV(E)	12	30.00	14.07	14.07	14.07	14.07	-6302.96	-34082.90	5.407

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.25	37	SLE R	1	72.62	14.07	14.07	-6390.53	731.64	-146.79	13.04
0.25	29	SLE Q	1	72.62	14.07	14.07	-5190.18	594.21	-119.22	10.59
0.98	37	SLE R	1	0.00	14.07	14.07	-6390.53	731.64	-146.79	13.04
0.98	29	SLE Q	1	0.00	14.07	14.07	-5190.18	594.21	-119.22	10.59
0.98	37	SLE R	2	97.62	14.07	14.07	-10033.50	1148.72	-230.47	20.47
0.98	29	SLE Q	2	97.62	14.07	14.07	-8405.65	962.35	-193.08	17.15
1.30	37	SLE R	2	65.08	14.07	14.07	-10799.80	1236.45	-248.08	22.04
1.30	29	SLE Q	2	65.08	14.07	14.07	-9103.45	1042.24	-209.11	18.58
1.95	37	SLE R	2	0.00	14.07	14.07	-10799.80	1236.45	-248.08	22.04
1.95	29	SLE Q	2	0.00	14.07	14.07	-9103.45	1042.24	-209.11	18.58
1.95	39	SLE R	3	97.62	14.07	14.07	-11181.30	1280.12	-256.84	22.82
1.95	29	SLE Q	3	97.62	14.07	14.07	-9474.01	1084.66	-217.62	19.33
2.18	39	SLE R	3	74.73	14.07	14.07	-11238.80	1286.71	-258.16	22.93
2.18	29	SLE Q	3	74.73	14.07	14.07	-9536.26	1091.79	-219.05	19.46
2.93	39	SLE R	3	0.00	14.07	14.07	-11238.80	1286.71	-258.16	22.93
2.93	29	SLE Q	3	0.00	14.07	14.07	-9536.26	1091.79	-219.05	19.46
2.93	39	SLE R	4	97.62	14.07	14.07	-11093.60	1270.09	-254.83	22.64
2.93	29	SLE Q	4	97.62	14.07	14.07	-9410.25	1077.36	-216.16	19.20
3.90	39	SLE R	4	0.00	28.15	14.07	-10809.60	633.96	-210.94	17.19
3.90	29	SLE Q	4	0.00	28.15	14.07	-9158.91	537.15	-178.73	14.57
3.90	39	SLE R	5	97.62	28.15	14.07	-9711.26	569.54	-189.51	15.45
3.90	29	SLE Q	5	97.62	28.15	14.07	-8251.25	483.92	-161.02	13.12
4.88	39	SLE R	5	0.00	14.07	28.15	-9174.31	1043.04	-181.11	16.61
4.88	29	SLE Q	5	0.00	14.07	28.15	-7800.40	886.84	-153.99	14.12
4.88	39	SLE R	6	97.62	14.07	28.15	-7234.49	822.50	-142.82	13.10
4.88	29	SLE Q	6	97.62	14.07	28.15	-6246.24	710.14	-123.31	11.31
5.86	39	SLE R	6	0.00	14.07	14.07	-6315.92	723.10	-145.08	12.89
5.86	29	SLE Q	6	0.00	14.07	14.07	-5501.03	629.80	-126.36	11.22
5.86	37	SLE R	7	97.62	14.07	14.07	3042.46	-69.89	348.33	6.21
5.86	29	SLE Q	7	97.62	14.07	14.07	-2767.71	316.87	-63.58	5.65
6.83	37	SLE R	7	0.00	14.07	14.07	4790.08	-110.03	548.41	9.77
6.83	29	SLE Q	7	0.00	14.07	14.07	3240.65	-74.44	371.01	6.61
6.83	39	SLE R	8	97.62	14.07	14.07	18468.00	-424.22	2114.36	37.68
6.83	29	SLE Q	8	97.62	14.07	14.07	14208.40	-326.37	1626.69	28.99
7.56	39	SLE R	8	25.00	28.15	28.15	18468.00	-317.57	1070.94	26.31
7.56	29	SLE Q	8	25.00	28.15	28.15	14208.40	-244.32	823.93	20.24
8.06	39	SLE R	9	52.00	14.07	28.15	15833.40	-308.98	928.60	25.18
8.06	29	SLE Q	9	52.00	14.07	28.15	12995.80	-253.60	762.17	20.67
8.58	39	SLE R	9	0.00	14.07	28.15	15833.40	-308.98	928.60	25.18
8.58	29	SLE Q	9	0.00	14.07	28.15	12995.80	-253.60	762.17	20.67
8.58	39	SLE R	10	77.00	14.07	28.15	6184.06	-120.68	362.68	9.84
8.58	29	SLE Q	10	77.00	14.07	28.15	4744.56	-92.59	278.26	7.55
8.96	39	SLE R	10	38.50	14.07	14.07	6184.06	-142.05	708.00	12.62
8.96	29	SLE Q	10	38.50	14.07	14.07	4744.56	-108.98	543.20	9.68
9.35	39	SLE R	10	0.00	14.07	14.07	5985.71	-137.50	685.29	12.21

Relazione di calcolo

9.35	29	SLE Q	10	0.00	14.07	14.07	4575.67	-105.11	523.86	9.34
9.35	24	SLE R	11	77.00	14.07	14.07	-3317.15	379.77	-76.20	6.77
9.35	29	SLE Q	11	77.00	14.07	14.07	-3084.76	353.17	-70.86	6.29
9.73	24	SLE R	11	38.50	14.07	14.07	-3383.48	387.37	-77.72	6.90
9.73	29	SLE Q	11	38.50	14.07	14.07	-3140.97	359.60	-72.15	6.41
10.12	24	SLE R	11	0.00	14.07	14.07	-3383.48	387.37	-77.72	6.90
10.12	29	SLE Q	11	0.00	14.07	14.07	-3140.97	359.60	-72.15	6.41
10.12	24	SLE R	12	77.00	14.07	14.07	-3587.82	410.76	-82.41	7.32
10.12	29	SLE Q	12	77.00	14.07	14.07	-3222.82	368.97	-74.03	6.58
10.59	24	SLE R	12	30.00	14.07	14.07	-3587.82	410.76	-82.41	7.32
10.59	29	SLE Q	12	30.00	14.07	14.07	-3222.82	368.97	-74.03	6.58

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
44	0.25	29	SLE Q	1	4	72.62	-5190.18	27.00	135.67	0.50	16.00	143.53	14.07	787.50	594.21	0.17	0.04
52	0.25	42	SLE F	1	4	72.62	-5438.03	27.00	135.67	0.50	16.00	143.53	14.07	787.50	622.59	0.18	0.04
98	0.98	29	SLE Q	1	4	0.00	-5190.18	27.00	135.67	0.50	16.00	143.53	14.07	787.50	594.21	0.17	0.04
106	0.98	42	SLE F	1	4	0.00	-5438.03	27.00	135.67	0.50	16.00	143.53	14.07	787.50	622.59	0.18	0.04
143	0.98	29	SLE Q	2	4	97.62	-8405.65	27.00	135.67	0.50	16.00	143.53	14.07	787.50	962.35	0.28	0.07
151	0.98	42	SLE F	2	4	97.62	-8696.75	27.00	135.67	0.50	16.00	143.53	14.07	787.50	995.67	0.29	0.07
188	1.30	29	SLE Q	2	4	65.08	-9103.45	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1042.24	0.30	0.07
196	1.30	42	SLE F	2	4	65.08	-9397.29	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1075.88	0.31	0.08
233	1.95	29	SLE Q	2	4	0.00	-9103.45	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1042.24	0.30	0.07
241	1.95	42	SLE F	2	4	0.00	-9397.29	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1075.88	0.31	0.08
278	1.95	29	SLE Q	3	4	97.62	-9474.01	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1084.66	0.32	0.08
286	1.95	42	SLE F	3	4	97.62	-9742.81	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1115.44	0.32	0.08
323	2.18	29	SLE Q	3	4	74.73	-9536.26	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1091.79	0.32	0.08
331	2.18	42	SLE F	3	4	74.73	-9797.02	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1121.64	0.33	0.08
368	2.93	29	SLE Q	3	4	0.00	-9536.26	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1091.79	0.32	0.08
376	2.93	42	SLE F	3	4	0.00	-9797.02	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1121.64	0.33	0.08
413	2.93	29	SLE Q	4	4	97.62	-9410.25	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1077.36	0.31	0.08
421	2.93	42	SLE F	4	4	97.62	-9664.71	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1106.50	0.32	0.08
458	3.90	29	SLE Q	4	4	0.00	-9158.91	27.00	62.62	0.50	16.00	98.76	28.15	787.50	537.15	0.16	0.03
466	3.90	42	SLE F	4	4	0.00	-9400.83	27.00	62.62	0.50	16.00	98.76	28.15	787.50	551.34	0.16	0.03
503	3.90	29	SLE Q	5	4	97.62	-8251.25	27.00	62.62	0.50	16.00	98.76	28.15	787.50	483.92	0.14	0.02
511	3.90	42	SLE F	5	4	97.62	-8443.34	27.00	62.62	0.50	16.00	98.76	28.15	787.50	495.18	0.14	0.02
548	4.88	29	SLE Q	5	4	0.00	-7800.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	886.84	0.26	0.06
556	4.88	42	SLE F	5	4	0.00	-7974.33	27.00	135.67	0.50	16.00	143.53	14.07	787.50	906.61	0.26	0.06
593	4.88	29	SLE Q	6	4	97.62	-6246.24	27.00	135.67	0.50	16.00	143.53	14.07	787.50	710.14	0.21	0.05
598	4.88	28	SLE F	6	4	97.62	-6373.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	724.64	0.21	0.05
638	5.86	29	SLE Q	6	4	0.00	-5501.03	27.00	135.67	0.50	16.00	143.53	14.07	787.50	629.80	0.18	0.04
643	5.86	28	SLE F	6	4	0.00	-5612.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	642.54	0.19	0.05
713	5.86	29	SLE Q	7	4	97.62	-2767.71	27.00	135.67	0.50	16.00	143.53	14.07	787.50	316.87	0.09	0.02
723	5.86	28	SLE F	7	4	97.62	-2803.06	27.00	135.67	0.50	16.00	143.53	14.07	787.50	320.92	0.09	0.02
800	6.83	29	SLE Q	7	4	0.00	3240.65	27.00	135.67	0.50	16.00	143.53	14.07	787.50	371.01	0.11	0.03
816	6.83	42	SLE F	7	4	0.00	3490.74	27.00	135.67	0.50	16.00	143.53	14.07	787.50	399.65	0.12	0.03
855	6.83	29	SLE Q	8	4	97.62	14208.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1626.69	0.48	0.12
863	6.83	42	SLE F	8	4	97.62	14853.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1700.56	0.50	0.12
900	7.56	29	SLE Q	8	4	25.00	14208.40	27.00	62.62	0.50	16.00	98.76	28.15	787.50	823.93	0.24	0.04
908	7.56	42	SLE F	8	4	25.00	14853.60	27.00	62.62	0.50	16.00	98.76	28.15	787.50	861.35	0.25	0.04
945	8.06	29	SLE Q	9	4	52.00	12995.80	27.00	62.62	0.50	16.00	98.76	28.15	787.50	762.17	0.22	0.04
950	8.06	28	SLE F	9	4	52.00	13415.70	27.00	62.62	0.50	16.00	98.76	28.15	787.50	786.80	0.23	0.04
990	8.58	29	SLE Q	9	4	0.00	12995.80	27.00	62.62	0.50	16.00	98.76	28.15	787.50	762.17	0.22	0.04
995	8.58	28	SLE F	9	4	0.00	13415.70	27.00	62.62	0.50	16.00	98.76	28.15	787.50	786.80	0.23	0.04
1068	8.58	29	SLE Q	10	4	77.00	4744.56	27.00	62.62	0.50	16.00	98.76	28.15	787.50	278.26	0.08	0.01
1078	8.58	28	SLE F	10	4	77.00	4937.98	27.00	62.62	0.50	16.00	98.76	28.15	787.50	289.60	0.08	0.01
1158	8.96	29	SLE Q	10	4	38.50	4744.56	27.00	135.67	0.50	16.00	143.53	14.07	787.50	543.20	0.16	0.04
1168	8.96	28	SLE F	10	4	38.50	4937.98	27.00	135.67	0.50	16.00	143.53	14.07	787.50	565.34	0.16	0.04
1248	9.35	29	SLE Q	10	4	0.00	4575.67	27.00	135.67	0.50	16.00	143.53	14.07	787.50	523.86	0.15	0.04
1258	9.35	28	SLE F	10	4	0.00	4764.08	27.00	135.67	0.50	16.00	143.53	14.07	787.50	545.43	0.16	0.04
1305	9.35	29	SLE Q	11	4	77.00	-3084.76	27.00	135.67	0.50	16.00	143.53	14.07	787.50	353.17	0.10	0.03
1310	9.35	28	SLE F	11	4	77.00	-3126.85	27.00	135.67	0.50	16.00	143.53	14.07	787.50	357.99	0.10	0.03
1351	9.73	29	SLE Q	11	4	38.50	-3140.97	27.00	135.67	0.50	16.00	143.53	14.07	787.50	359.60	0.10	0.03
1356	9.73	28	SLE F	11	4	38.50	-3184.95	27.00	135.67	0.50	16.00	143.53	14.07	787.50	364.64	0.11	0.03
1396	10.12	29	SLE Q	11	4	0.00	-3140.97	27.00	135.67	0.50	16.00	143.53	14.07	787.50	359.60	0.10	0.03
1401	10.12	28	SLE F	11	4	0.00	-3184.95	27.00	135.67	0.50	16.00	143.53	14.07	787.50	364.64	0.11	0.03
1441	10.12	29	SLE Q	12	4	77.00	-3222.82	27.00	135.67	0.50	16.00	143.53	14.07	787.50	368.97	0.11	0.03
1446	10.12	28	SLE F	12	4	77.00	-3290.09	27.00	135.67	0.50	16.00	143.53	14.07	787.50	376.68	0.11	0.03
1486	10.59	29	SLE Q	12	4	30.00	-3222.82	27.00	135.67	0.50	16.00	143.53	14.07	787.50	368.97	0.11	0.03
1491	10.59	28	SLE F	12	4	30.00	-3290.09	27.00	135.67	0.50	16.00	143.53	14.07	787.50	376.68	0.11	0.03

Stato limite ultimo - Verifiche a taglio

CC	X0	X1	Lung.	Staff.	AfE St.	bw	Vsdu	ctgθ	VRsd	VRcd	Vrdu	Sic.
	<m>	<m>	<m>		<cmq/m>	<m>	<daN>		<daN>	<daN>	<daN>	
1 SLV	0.25	0.70	0.45	ø10/15 4 br.	20.94	0.90	11233.70	2.50	122625.00	131041.00	122625.00	10.916
34 SLU	0.70	7.11	6.41	ø10/15 4 br.	20.94	0.90	27770.80	2.50	122625.00	131041.00	122625.00	4.416
34 SLU	7.11	7.56	0.45	ø10/15 4 br.	20.94	0.90	28604.90	2.50	122625.00	131041.00	122625.00	4.287

Relazione di calcolo

34 SLU	8.06	8.51	0.45	ø10/15 4 br.	20.94	0.90	28522.10	2.50	122625.00	131041.00	122625.00	4.299
34 SLU	8.51	10.14	1.63	ø10/15 4 br.	20.94	0.90	27587.70	2.50	122625.00	131041.00	122625.00	4.445
1 SLV	10.14	10.59	0.45	ø10/15 4 br.	20.94	0.90	3217.41	2.50	122625.00	131041.00	122625.00	38.113

Travata n. 408

Nodi: -25 -374 -373 -372 -371 -1762 -369 -368 -26 -425 -424 -423 -1611 -1624 -1613 -1543 -619 -620 -621 -622 -623 -624 -223 -783 -784 -785 -786 -787 -788 -789 -790 -21 -1690 -934 -22 -935 -936 -224 -950 -951 -952 -953 -954 -955 -956 -957 -24

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
4R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCCEl	X <cm>	Afe S <cmq>	Afe I <cmq>	AfePS <cmq>	AfeP I <cmq>	My <daNm>	MRdy <daNm>	Sic.	
0.25	32	SLU	1	72.62	14.07	14.07	14.07	-9479.78	-35450.10	3.740	
0.98	32	SLU	1	0.00	14.07	14.07	14.07	-9479.78	-35450.10	3.740	
0.98	32	SLU	2	97.62	14.07	14.07	14.07	-14822.90	-35450.10	2.392	
1.30	32	SLU	2	65.08	14.07	14.07	14.07	-15866.60	-35450.10	2.234	
1.95	32	SLU	2	0.00	14.07	14.07	14.07	-15866.60	-35450.10	2.234	
1.95	34	SLU	3	97.62	14.07	14.07	14.07	-16791.40	-35450.10	2.111	
2.22	34	SLU	3	71.03	14.07	14.07	14.07	-16906.00	-35450.10	2.097	
2.93	34	SLU	3	0.00	14.07	28.15	14.07	28.15	-16906.00	-35445.00	2.097
2.93	34	SLU	4	97.62	14.07	28.15	14.07	28.15	-16728.40	-35445.00	2.111
3.90	34	SLU	4	0.00	28.15	14.07	28.15	14.07	-16291.10	-69959.00	4.292
3.90	34	SLU	5	97.62	28.15	14.07	28.15	14.07	-14350.30	-69959.00	4.875
4.88	34	SLU	5	0.00	14.07	14.07	14.07	14.07	-13471.80	-35450.10	2.631
4.88	34	SLU	6	97.62	14.07	14.07	14.07	14.07	-9889.57	-35450.10	3.585
5.86	34	SLU	6	0.00	14.07	28.15	14.07	28.15	-8474.83	-35445.00	4.182
5.86	20	SLU	7	97.62	14.07	28.15	14.07	28.15	-3098.96	-35445.00	11.438
6.83	32	SLU	7	0.00	14.07	14.07	14.07	14.07	7496.32	35450.10	4.729
6.83	32	SLU	8	97.62	14.07	14.07	14.07	14.07	23220.20	35450.10	1.527
7.58	32	SLU	8	22.50	28.15	14.07	28.15	14.07	23289.30	35445.00	1.522
8.04	20	SLU	9	54.50	14.07	14.07	14.07	14.07	18681.10	35450.10	1.898
8.58	20	SLU	9	0.00	14.07	14.07	14.07	14.07	18681.10	35450.10	1.898
8.58	20	SLU	10	77.00	14.07	14.07	14.07	14.07	8154.20	35450.10	4.347
8.96	20	SLU	10	38.50	14.07	28.15	14.07	28.15	8154.20	69959.00	8.579
9.35	20	SLU	10	0.00	14.07	28.15	14.07	28.15	7926.33	69959.00	8.826
9.35	34	SLU	11	77.00	14.07	28.15	14.07	28.15	-3405.96	-35445.00	10.407
9.73	34	SLU	11	38.50	14.07	14.07	14.07	14.07	-3498.38	-35450.10	10.133
10.12	34	SLU	11	0.00	14.07	14.07	14.07	14.07	-3498.38	-35450.10	10.133
10.12	20	SLU	12	77.00	14.07	14.07	14.07	14.07	-4015.00	-35450.10	8.829
10.51	20	SLU	12	38.50	14.07	14.07	14.07	14.07	-4021.89	-35450.10	8.814
10.89	20	SLU	12	0.00	14.07	14.07	14.07	14.07	-4021.89	-35450.10	8.814
10.89	34	SLU	13	0.00	14.07	14.07	14.07	14.07	-2368.71	-35450.10	14.966
11.79	32	SLU	13	90.50	28.15	14.07	28.15	14.07	2634.24	35445.00	13.456
11.79	34	SLU	14	0.00	28.15	14.07	28.15	14.07	10093.50	35445.00	3.512
12.55	34	SLU	14	75.50	14.07	14.07	14.07	14.07	10164.30	35450.10	3.488
12.85	20	SLU	15	79.50	14.07	14.07	14.07	14.07	8934.60	35450.10	3.968
13.25	20	SLU	15	39.75	14.07	14.07	14.07	14.07	8934.60	35450.10	3.968
13.64	20	SLU	15	0.00	14.07	14.07	14.07	14.07	8474.84	35450.10	4.183
13.64	32	SLU	16	0.00	14.07	14.07	14.07	14.07	-3448.90	-35450.10	10.279
13.96	32	SLU	16	31.50	14.07	14.07	14.07	14.07	-4324.62	-35450.10	8.197
14.59	32	SLU	16	94.50	14.07	28.15	14.07	28.15	-4324.62	-35445.00	8.196
14.59	34	SLU	17	0.00	14.07	28.15	14.07	28.15	-6879.04	-35445.00	5.153
14.90	34	SLU	17	31.50	14.07	14.07	14.07	14.07	-7378.38	-35450.10	4.805
15.54	34	SLU	17	94.50	28.15	14.07	28.15	14.07	-7378.38	-69959.00	9.482
15.54	34	SLU	18	0.00	28.15	14.07	28.15	14.07	-7862.50	-69959.00	8.898
15.85	34	SLU	18	31.50	14.07	14.07	14.07	14.07	-7921.07	-35450.10	4.475
16.48	34	SLU	18	94.50	14.07	14.07	14.07	14.07	-7921.07	-35450.10	4.475
16.48	20	SLU	19	0.00	14.07	14.07	14.07	14.07	-7826.31	-35450.10	4.530
17.43	20	SLU	19	94.50	14.07	28.15	14.07	28.15	-7471.73	-35445.00	4.744
17.43	20	SLU	20	0.00	14.07	28.15	14.07	28.15	-5606.08	-35445.00	6.323
18.37	20	SLU	20	94.50	14.07	14.07	14.07	14.07	-4733.66	-35450.10	7.489
18.37	32	SLU	21	0.00	14.07	14.07	14.07	14.07	5485.34	35450.10	6.463
19.32	34	SLU	21	94.50	28.15	14.07	28.15	14.07	6948.20	35445.00	5.101
19.32	34	SLU	22	0.00	28.15	14.07	28.15	14.07	17619.20	35445.00	2.012
20.11	34	SLU	22	79.50	14.07	14.07	14.07	14.07	18301.40	35450.10	1.937
20.41	20	SLU	23	15.00	14.07	14.07	14.07	14.07	16821.50	35450.10	2.107
21.20	20	SLU	23	94.00	14.07	28.15	14.07	28.15	16254.90	69959.00	4.304
21.20	20	SLU	24	0.00	14.07	28.15	14.07	28.15	6332.21	69959.00	11.048
21.51	20	SLU	24	31.33	14.07	14.07	14.07	14.07	6332.21	35450.10	5.598
22.14	20	SLU	24	94.00	14.07	14.07	14.07	14.07	4994.58	35450.10	7.098
22.14	34	SLU	25	0.00	14.07	14.07	14.07	14.07	-4501.50	-35450.10	7.875
22.45	34	SLU	25	31.33	14.07	14.07	14.07	14.07	-5338.87	-35450.10	6.640
23.08	34	SLU	25	94.00	28.15	28.15	28.15	28.15	-5338.87	-70123.70	13.135
23.08	34	SLU	26	0.00	28.15	28.15	28.15	28.15	-7394.98	-70123.70	9.483

Relazione di calcolo

23.39	34	SLU	26	31.33	14.07	14.07	14.07	14.07	-7811.07	-35450.10	4.538
24.02	34	SLU	26	94.00	14.07	14.07	14.07	14.07	-7811.07	-35450.10	4.538
24.02	34	SLU	27	0.00	14.07	14.07	14.07	14.07	-8288.20	-35450.10	4.277
24.33	34	SLU	27	31.33	14.07	14.07	14.07	14.07	-8389.05	-35450.10	4.226
24.96	34	SLU	27	94.00	14.07	14.07	14.07	14.07	-8389.05	-35450.10	4.226
24.96	34	SLU	28	0.00	14.07	14.07	14.07	14.07	-8324.04	-35450.10	4.259
25.90	34	SLU	28	94.00	14.07	14.07	14.07	14.07	-8098.35	-35450.10	4.377
25.90	34	SLU	29	0.00	14.07	14.07	14.07	14.07	-6938.87	-35450.10	5.109
26.84	34	SLU	29	94.00	28.15	28.15	28.15	28.15	-6343.95	-70123.70	11.054
26.84	20	SLU	30	0.00	28.15	28.15	28.15	28.15	-3467.80	-70123.70	20.221
27.78	20	SLU	30	94.00	14.07	14.07	14.07	14.07	-2493.40	-35450.10	14.218
27.78	32	SLU	31	0.00	14.07	14.07	14.07	14.07	10369.80	35450.10	3.419
28.57	32	SLU	31	79.00	14.07	14.07	14.07	14.07	10827.60	35450.10	3.274
28.87	34	SLU	32	15.00	14.07	14.07	14.07	14.07	10210.60	35450.10	3.472
29.45	34	SLU	32	73.33	14.07	14.07	14.07	14.07	10210.60	35450.10	3.472
29.45	34	SLU	33	0.00	14.07	14.07	14.07	14.07	4469.20	35450.10	7.932
30.19	34	SLU	33	73.33	14.07	14.07	14.07	14.07	4469.20	35450.10	7.932
30.19	32	SLU	34	0.00	14.07	14.07	14.07	14.07	2174.51	35450.10	16.303
30.92	32	SLU	34	73.33	14.07	28.15	14.07	28.15	2174.51	69959.00	32.172
31.22	33	SLU	35	30.00	14.07	14.07	14.07	14.07	-1594.03	-35450.10	22.239
31.78	33	SLU	35	85.67	14.07	14.07	14.07	14.07	-1594.03	-35450.10	22.239
31.78	34	SLU	36	0.00	14.07	14.07	14.07	14.07	6276.83	35450.10	5.648
32.63	34	SLU	36	85.67	14.07	14.07	14.07	14.07	7274.26	35450.10	4.873
32.63	34	SLU	37	0.00	14.07	14.07	14.07	14.07	20236.50	35450.10	1.752
33.27	34	SLU	37	63.17	14.07	14.07	14.07	14.07	20236.50	35450.10	1.752
33.72	20	SLU	38	22.50	14.07	14.07	14.07	14.07	21511.70	35450.10	1.648
34.42	20	SLU	38	93.33	14.07	28.15	14.07	28.15	21511.70	69959.00	3.252
34.42	20	SLU	39	0.00	14.07	28.15	14.07	28.15	7081.51	69959.00	9.879
34.73	20	SLU	39	31.11	14.07	14.07	14.07	14.07	7081.51	35450.10	5.006
35.36	20	SLU	39	93.33	28.15	14.07	28.15	14.07	5238.72	35445.00	6.766
35.36	34	SLU	40	0.00	28.15	14.07	28.15	14.07	-7774.36	-69959.00	8.999
35.67	34	SLU	40	31.11	14.07	14.07	14.07	14.07	-8816.59	-35450.10	4.021
36.29	34	SLU	40	93.33	14.07	28.15	14.07	28.15	-8816.59	-35445.00	4.020
36.29	34	SLU	41	0.00	14.07	28.15	14.07	28.15	-11958.50	-35445.00	2.964
36.60	34	SLU	41	31.11	14.07	14.07	14.07	14.07	-12621.80	-35450.10	2.809
37.22	34	SLU	41	93.33	14.07	14.07	14.07	14.07	-12621.80	-35450.10	2.809
37.22	34	SLU	42	0.00	14.07	14.07	14.07	14.07	-14714.00	-35450.10	2.409
37.53	34	SLU	42	31.11	14.07	14.07	14.07	14.07	-15156.20	-35450.10	2.339
38.16	34	SLU	42	93.33	14.07	14.07	14.07	14.07	-15156.20	-35450.10	2.339
38.16	20	SLU	43	0.00	14.07	14.07	14.07	14.07	-16377.60	-35450.10	2.165
38.47	20	SLU	43	31.11	14.07	14.07	14.07	14.07	-16590.70	-35450.10	2.137
39.09	20	SLU	43	93.33	28.15	14.07	28.15	14.07	-16590.70	-69959.00	4.217
39.09	20	SLU	44	0.00	28.15	14.07	28.15	14.07	-16726.30	-69959.00	4.183
40.02	20	SLU	44	93.33	14.07	28.15	14.07	28.15	-16490.10	-35445.00	2.149
40.02	20	SLU	45	0.00	14.07	28.15	14.07	28.15	-14813.10	-35445.00	2.393
40.96	20	SLU	45	93.33	14.07	14.07	14.07	14.07	-13668.30	-35450.10	2.594
40.96	20	SLU	46	0.00	14.07	14.07	14.07	14.07	-7374.38	-35450.10	4.807
41.44	20	SLU	46	48.33	14.07	14.07	14.07	14.07	-7374.38	-35450.10	4.807

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cmq>	Afe I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.259	SLV (E)	1	72.62	14.07	14.07	14.07	14.07	14.07	-11902.70	-34082.90	2.863
0.989	SLV (E)	1	0.00	14.07	14.07	14.07	14.07	14.07	-11902.70	-34082.90	2.863
0.981	SLV (E)	2	97.62	14.07	14.07	14.07	14.07	14.07	-15120.10	-34082.90	2.254
1.301	SLV (E)	2	65.08	14.07	14.07	14.07	14.07	14.07	-15553.50	-34082.90	2.191
1.951	SLV (E)	2	0.00	14.07	14.07	14.07	14.07	14.07	-15553.50	-34082.90	2.191
1.951	SLV (E)	3	97.62	14.07	14.07	14.07	14.07	14.07	-15657.00	-34082.90	2.177
2.221	SLV (E)	3	71.03	14.07	14.07	14.07	14.07	14.07	-15657.00	-34082.90	2.177
2.931	SLV (E)	3	0.00	14.07	28.15	14.07	28.15	14.07	-15461.40	-34362.70	2.222
2.931	SLV (E)	4	97.62	14.07	28.15	14.07	28.15	14.07	-14409.20	-34362.70	2.385
3.901	SLV (E)	4	0.00	28.15	14.07	28.15	14.07	14.07	-13786.60	-66258.60	4.806
3.901	SLV (E)	5	97.62	28.15	14.07	28.15	14.07	14.07	-11340.60	-66258.60	5.843
4.881	SLV (E)	5	0.00	14.07	14.07	14.07	14.07	14.07	-10424.00	-34082.90	3.270
4.885	SLV (E)	6	97.62	14.07	14.07	14.07	14.07	14.07	-7735.08	-34082.90	4.406
5.861	SLV (E)	6	0.00	14.07	28.15	14.07	28.15	14.07	-7061.35	-34362.70	4.866
5.861	SLV (E)	7	97.62	14.07	28.15	14.07	28.15	14.07	-4607.47	-34362.70	7.458
6.831	SLV (E)	7	0.00	14.07	14.07	14.07	14.07	14.07	8573.85	34082.90	3.975
6.831	SLV (E)	8	97.62	14.07	14.07	14.07	14.07	14.07	23320.60	34082.90	1.462
7.581	SLV (E)	8	22.50	28.15	14.07	28.15	14.07	14.07	23385.90	34362.70	1.469
8.041	SLV (E)	9	54.50	14.07	14.07	14.07	14.07	14.07	18296.00	34082.90	1.863
8.581	SLV (E)	9	0.00	14.07	14.07	14.07	14.07	14.07	18296.00	34082.90	1.863
8.581	SLV (E)	10	77.00	14.07	14.07	14.07	14.07	14.07	8674.69	34082.90	3.929
8.961	SLV (E)	10	38.50	14.07	28.15	14.07	28.15	14.07	8674.69	66258.60	7.638
9.351	SLV (E)	10	0.00	14.07	28.15	14.07	28.15	14.07	8469.04	66258.60	7.824
9.355	SLV (E)	11	77.00	14.07	28.15	14.07	28.15	14.07	-3065.83	-34362.70	11.208
9.735	SLV (E)	11	38.50	14.07	14.07	14.07	14.07	14.07	-3138.64	-34082.90	10.859
10.125	SLV (E)	11	0.00	14.07	14.07	14.07	14.07	14.07	-3138.64	-34082.90	10.859
10.121	SLV (E)	12	77.00	14.07	14.07	14.07	14.07	14.07	-3676.95	-34082.90	9.269

Relazione di calcolo

10.51	1	SLV(E)	12	38.50	14.07	14.07	14.07	14.07	-3708.54	-34082.90	9.190
10.89	1	SLV(E)	12	0.00	14.07	14.07	14.07	14.07	-3708.54	-34082.90	9.190
10.89	5	SLV(E)	13	0.00	14.07	14.07	14.07	14.07	-2125.52	-34082.90	16.035
11.79	9	SLV(E)	13	90.50	28.15	14.07	28.15	14.07	2782.67	34362.70	12.349
11.79	1	SLV(E)	14	0.00	28.15	14.07	28.15	14.07	9001.24	34362.70	3.818
12.55	1	SLV(E)	14	75.50	14.07	14.07	14.07	14.07	9060.16	34082.90	3.762
12.85	1	SLV(E)	15	79.50	14.07	14.07	14.07	14.07	10763.10	34082.90	3.167
13.25	1	SLV(E)	15	39.75	14.07	14.07	14.07	14.07	10763.10	34082.90	3.167
13.64	1	SLV(E)	15	0.00	14.07	14.07	14.07	14.07	10303.50	34082.90	3.308
13.64	1	SLV(E)	16	0.00	14.07	14.07	14.07	14.07	-3379.56	-34082.90	10.085
13.96	1	SLV(E)	16	31.50	14.07	14.07	14.07	14.07	-3932.89	-34082.90	8.666
14.59	1	SLV(E)	16	94.50	14.07	28.15	14.07	28.15	-3932.89	-34362.70	8.737
14.59	1	SLV(E)	17	0.00	14.07	28.15	14.07	28.15	-5301.10	-34362.70	6.482
14.90	5	SLV(E)	17	31.50	14.07	14.07	14.07	14.07	-5630.46	-34082.90	6.053
15.54	5	SLV(E)	17	94.50	28.15	14.07	28.15	14.07	-5630.46	-66258.60	11.768
15.54	5	SLV(E)	18	0.00	28.15	14.07	28.15	14.07	-6189.38	-66258.60	10.705
15.85	5	SLV(E)	18	31.50	14.07	14.07	14.07	14.07	-6316.59	-34082.90	5.396
16.48	5	SLV(E)	18	94.50	14.07	14.07	14.07	14.07	-6316.59	-34082.90	5.396
16.48	1	SLV(E)	19	0.00	14.07	14.07	14.07	14.07	-6308.06	-34082.90	5.403
17.43	1	SLV(E)	19	94.50	14.07	28.15	14.07	28.15	-6124.39	-34362.70	5.611
17.43	1	SLV(E)	20	0.00	14.07	28.15	14.07	28.15	-5192.22	-34362.70	6.618
18.37	1	SLV(E)	20	94.50	14.07	14.07	14.07	14.07	-4621.99	-34082.90	7.374
18.37	1	SLV(E)	21	0.00	14.07	14.07	14.07	14.07	5150.58	34082.90	6.617
19.32	1	SLV(E)	21	94.50	28.15	14.07	28.15	14.07	6286.56	34362.70	5.466
19.32	1	SLV(E)	22	0.00	28.15	14.07	28.15	14.07	14558.20	34362.70	2.360
20.11	1	SLV(E)	22	79.50	14.07	14.07	14.07	14.07	15089.20	34082.90	2.259
20.41	9	SLV(E)	23	15.00	14.07	14.07	14.07	14.07	14465.30	34082.90	2.356
21.20	9	SLV(E)	23	94.00	14.07	28.15	14.07	28.15	14015.20	66258.60	4.728
21.20	9	SLV(E)	24	0.00	14.07	28.15	14.07	28.15	6177.57	66258.60	10.726
21.51	9	SLV(E)	24	31.33	14.07	14.07	14.07	14.07	6177.57	34082.90	5.517
22.14	9	SLV(E)	24	94.00	14.07	14.07	14.07	14.07	5134.55	34082.90	6.638
22.14	9	SLV(E)	25	0.00	14.07	14.07	14.07	14.07	-4066.74	-34082.90	8.381
22.45	9	SLV(E)	25	31.33	14.07	14.07	14.07	14.07	-4632.32	-34082.90	7.358
23.08	9	SLV(E)	25	94.00	28.15	28.15	28.15	28.15	-4632.32	-67205.10	14.508
23.08	9	SLV(E)	26	0.00	28.15	28.15	28.15	28.15	-5880.95	-67205.10	11.428
23.39	9	SLV(E)	26	31.33	14.07	14.07	14.07	14.07	-6156.75	-34082.90	5.536
24.02	9	SLV(E)	26	94.00	14.07	14.07	14.07	14.07	-6156.75	-34082.90	5.536
24.02	9	SLV(E)	27	0.00	14.07	14.07	14.07	14.07	-6323.57	-34082.90	5.390
24.33	9	SLV(E)	27	31.33	14.07	14.07	14.07	14.07	-6373.67	-34082.90	5.347
24.96	9	SLV(E)	27	94.00	14.07	14.07	14.07	14.07	-6373.67	-34082.90	5.347
24.96	9	SLV(E)	28	0.00	14.07	14.07	14.07	14.07	-6306.90	-34082.90	5.404
25.90	13	SLV(E)	28	94.00	14.07	14.07	14.07	14.07	-6114.20	-34082.90	5.574
25.90	13	SLV(E)	29	0.00	14.07	14.07	14.07	14.07	-5316.49	-34082.90	6.411
26.84	13	SLV(E)	29	94.00	28.15	28.15	28.15	28.15	-4918.53	-67205.10	13.664
26.84	9	SLV(E)	30	0.00	28.15	28.15	28.15	28.15	-3508.40	-67205.10	19.155
27.78	1	SLV(E)	30	94.00	14.07	14.07	14.07	14.07	3009.76	34082.90	11.324
27.78	9	SLV(E)	31	0.00	14.07	14.07	14.07	14.07	10527.80	34082.90	3.237
28.57	9	SLV(E)	31	79.00	14.07	14.07	14.07	14.07	10959.30	34082.90	3.110
28.87	9	SLV(E)	32	15.00	14.07	14.07	14.07	14.07	8768.83	34082.90	3.887
29.45	9	SLV(E)	32	73.33	14.07	14.07	14.07	14.07	8768.83	34082.90	3.887
29.45	9	SLV(E)	33	0.00	14.07	14.07	14.07	14.07	3697.75	34082.90	9.217
30.19	9	SLV(E)	33	73.33	14.07	14.07	14.07	14.07	3697.75	34082.90	9.217
30.19	1	SLV(E)	34	0.00	14.07	14.07	14.07	14.07	4101.96	34082.90	8.309
30.92	9	SLV(E)	34	73.33	14.07	28.15	14.07	28.15	-2860.06	-34362.70	12.015
31.22	13	SLV(E)	35	30.00	14.07	14.07	14.07	14.07	-2071.26	-34082.90	16.455
31.78	13	SLV(E)	35	85.67	14.07	14.07	14.07	14.07	-2071.26	-34082.90	16.455
31.78	9	SLV(E)	36	0.00	14.07	14.07	14.07	14.07	5873.96	34082.90	5.802
32.63	9	SLV(E)	36	85.67	14.07	14.07	14.07	14.07	6719.29	34082.90	5.072
32.63	9	SLV(E)	37	0.00	14.07	14.07	14.07	14.07	17521.00	34082.90	1.945
33.27	9	SLV(E)	37	63.17	14.07	14.07	14.07	14.07	17521.00	34082.90	1.945
33.72	9	SLV(E)	38	22.50	14.07	14.07	14.07	14.07	25552.50	34082.90	1.334
34.42	9	SLV(E)	38	93.33	14.07	28.15	14.07	28.15	25552.50	66258.60	2.593
34.42	9	SLV(E)	39	0.00	14.07	28.15	14.07	28.15	10157.60	66258.60	6.523
34.73	9	SLV(E)	39	31.11	14.07	14.07	14.07	14.07	10157.60	34082.90	3.355
35.36	9	SLV(E)	39	93.33	28.15	14.07	28.15	14.07	8279.96	34362.70	4.150
35.36	9	SLV(E)	40	0.00	28.15	14.07	28.15	14.07	-6516.85	-66258.60	10.167
35.67	9	SLV(E)	40	31.11	14.07	14.07	14.07	14.07	-7037.53	-34082.90	4.843
36.29	9	SLV(E)	40	93.33	14.07	28.15	14.07	28.15	-7037.53	-34362.70	4.883
36.29	13	SLV(E)	41	0.00	14.07	28.15	14.07	28.15	-9488.91	-34362.70	3.621
36.60	13	SLV(E)	41	31.11	14.07	14.07	14.07	14.07	-10138.60	-34082.90	3.362
37.22	13	SLV(E)	41	93.33	14.07	14.07	14.07	14.07	-10138.60	-34082.90	3.362
37.22	9	SLV(E)	42	0.00	14.07	14.07	14.07	14.07	-12493.20	-34082.90	2.728
37.53	9	SLV(E)	42	31.11	14.07	14.07	14.07	14.07	-13090.10	-34082.90	2.604
38.16	9	SLV(E)	42	93.33	14.07	14.07	14.07	14.07	-13090.10	-34082.90	2.604
38.16	9	SLV(E)	43	0.00	14.07	14.07	14.07	14.07	-15231.80	-34082.90	2.238
38.47	9	SLV(E)	43	31.11	14.07	14.07	14.07	14.07	-15693.00	-34082.90	2.172
39.09	9	SLV(E)	43	93.33	28.15	14.07	28.15	14.07	-15693.00	-66258.60	4.222
39.09	9	SLV(E)	44	0.00	28.15	14.07	28.15	14.07	-16594.80	-66258.60	3.993
40.02	9	SLV(E)	44	93.33	14.07	28.15	14.07	28.15	-16712.60	-34362.70	2.056

Relazione di calcolo

40.02	9	SLV(E)	45	0.00	14.07	28.15	14.07	28.15	-16621.00	-34362.70	2.067
40.96	9	SLV(E)	45	93.33	14.07	14.07	14.07	14.07	-16228.70	-34082.90	2.100
40.96	1	SLV(E)	46	0.00	14.07	14.07	14.07	14.07	-12672.10	-34082.90	2.690
41.44	1	SLV(E)	46	48.33	14.07	14.07	14.07	14.07	-12672.10	-34082.90	2.690

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.25	37	SLE R	1	72.62	14.07	14.07	-6813.79	780.10	-156.52	13.90
0.25	29	SLE Q	1	72.62	14.07	14.07	-5404.11	618.71	-124.14	11.03
0.98	37	SLE R	1	0.00	14.07	14.07	-6813.79	780.10	-156.52	13.90
0.98	29	SLE Q	1	0.00	14.07	14.07	-5404.11	618.71	-124.14	11.03
0.98	37	SLE R	2	97.62	14.07	14.07	-10695.70	1224.53	-245.69	21.82
0.98	29	SLE Q	2	97.62	14.07	14.07	-9037.88	1034.73	-207.60	18.44
1.30	37	SLE R	2	65.08	14.07	14.07	-11462.80	1312.35	-263.31	23.39
1.30	29	SLE Q	2	65.08	14.07	14.07	-9795.25	1121.44	-225.00	19.99
1.95	37	SLE R	2	0.00	14.07	14.07	-11462.80	1312.35	-263.31	23.39
1.95	29	SLE Q	2	0.00	14.07	14.07	-9795.25	1121.44	-225.00	19.99
1.95	39	SLE R	3	97.62	14.07	14.07	-12139.70	1389.85	-278.86	24.77
1.95	29	SLE Q	3	97.62	14.07	14.07	-10509.10	1203.17	-241.40	21.44
2.22	39	SLE R	3	71.03	14.07	14.07	-12230.30	1400.22	-280.94	24.96
2.22	29	SLE Q	3	71.03	14.07	14.07	-10611.20	1214.86	-243.75	21.65
2.93	39	SLE R	3	0.00	14.07	28.15	-12230.30	1390.47	-241.44	22.14
2.93	29	SLE Q	3	0.00	14.07	28.15	-10611.20	1206.40	-209.48	19.21
2.93	39	SLE R	4	97.62	14.07	28.15	-12103.60	1376.07	-238.94	21.91
2.93	29	SLE Q	4	97.62	14.07	28.15	-10501.50	1193.93	-207.32	19.01
3.90	39	SLE R	4	0.00	28.15	14.07	-11782.20	691.00	-229.92	18.74
3.90	29	SLE Q	4	0.00	28.15	14.07	-10220.90	599.44	-199.45	16.26
3.90	39	SLE R	5	97.62	28.15	14.07	-10391.40	609.43	-202.78	16.53
3.90	29	SLE Q	5	97.62	28.15	14.07	-9064.58	531.62	-176.89	14.42
4.88	39	SLE R	5	0.00	14.07	14.07	-9751.59	1116.44	-224.00	19.90
4.88	29	SLE Q	5	0.00	14.07	14.07	-8516.98	975.09	-195.64	17.38
4.88	39	SLE R	6	97.62	14.07	14.07	-7176.56	821.63	-164.85	14.64
4.88	29	SLE Q	6	97.62	14.07	14.07	-6385.18	731.03	-146.67	13.03
5.86	39	SLE R	6	0.00	14.07	28.15	-6150.12	699.21	-121.41	11.13
5.86	29	SLE Q	6	0.00	14.07	28.15	-5520.83	627.67	-108.99	9.99
5.86	37	SLE R	7	97.62	14.07	28.15	3694.08	-72.09	216.65	5.88
5.86	24	SLE R	7	97.62	14.07	28.15	-2252.25	256.06	-44.46	4.08
5.86	29	SLE Q	7	97.62	14.07	28.15	2422.00	-47.26	142.04	3.85
6.83	37	SLE R	7	0.00	14.07	14.07	5337.53	-122.61	611.08	10.89
6.83	29	SLE Q	7	0.00	14.07	14.07	3781.08	-86.85	432.89	7.72
6.83	37	SLE R	8	97.62	14.07	14.07	16679.10	-383.13	1909.56	34.03
6.83	29	SLE Q	8	97.62	14.07	14.07	13250.40	-304.37	1517.01	27.04
7.58	37	SLE R	8	22.50	28.15	14.07	16728.80	-330.25	1901.92	30.28
7.58	29	SLE Q	8	22.50	28.15	14.07	13291.70	-262.40	1511.15	24.06
8.04	24	SLE R	9	54.50	14.07	14.07	13492.50	-309.93	1544.74	27.53
8.04	29	SLE Q	9	54.50	14.07	14.07	11653.20	-267.68	1334.15	23.78
8.58	24	SLE R	9	0.00	14.07	14.07	13492.50	-309.93	1544.74	27.53
8.58	29	SLE Q	9	0.00	14.07	14.07	11653.20	-267.68	1334.15	23.78
8.58	24	SLE R	10	77.00	14.07	14.07	5877.54	-135.01	672.91	11.99
8.58	29	SLE Q	10	77.00	14.07	14.07	5003.34	-114.93	572.82	10.21
8.96	24	SLE R	10	38.50	14.07	28.15	5877.54	-114.70	344.70	9.35
8.96	29	SLE Q	10	38.50	14.07	28.15	5003.34	-97.64	293.44	7.96
9.35	24	SLE R	10	0.00	14.07	28.15	5713.30	-111.49	335.07	9.09
9.35	29	SLE Q	10	0.00	14.07	28.15	4860.79	-94.86	285.07	7.73
9.35	39	SLE R	11	77.00	14.07	28.15	-2467.25	280.50	-48.71	4.47
9.35	29	SLE Q	11	77.00	14.07	28.15	-2221.22	252.53	-43.85	4.02
9.73	39	SLE R	11	38.50	14.07	14.07	-2534.70	290.19	-58.22	5.17
9.73	29	SLE Q	11	38.50	14.07	14.07	-2283.86	261.47	-52.46	4.66
10.12	39	SLE R	11	0.00	14.07	14.07	-2534.70	290.19	-58.22	5.17
10.12	29	SLE Q	11	0.00	14.07	14.07	-2283.86	261.47	-52.46	4.66
10.12	24	SLE R	12	77.00	14.07	14.07	-2885.04	330.30	-66.27	5.89
10.12	29	SLE Q	12	77.00	14.07	14.07	-2504.55	286.74	-57.53	5.11
10.51	24	SLE R	12	38.50	14.07	14.07	-2889.93	330.86	-66.38	5.90
10.51	29	SLE Q	12	38.50	14.07	14.07	-2506.78	287.00	-57.58	5.12
10.89	24	SLE R	12	0.00	14.07	14.07	-2889.93	330.86	-66.38	5.90
10.89	29	SLE Q	12	0.00	14.07	14.07	-2506.78	287.00	-57.58	5.12
10.89	39	SLE R	13	0.00	14.07	14.07	-1656.61	189.66	-38.05	3.38
10.89	29	SLE Q	13	0.00	14.07	14.07	-1332.66	152.57	-30.61	2.72
11.79	37	SLE R	13	90.50	28.15	14.07	1960.08	-38.69	222.84	3.55
11.79	29	SLE Q	13	90.50	28.15	14.07	1891.02	-37.33	214.99	3.42
11.79	39	SLE R	14	0.00	28.15	14.07	7362.00	-145.34	836.99	13.33
11.79	29	SLE Q	14	0.00	28.15	14.07	6773.06	-133.71	770.04	12.26
12.55	39	SLE R	14	75.50	14.07	14.07	7413.17	-170.28	848.72	15.13
12.55	29	SLE Q	14	75.50	14.07	14.07	6819.08	-156.64	780.70	13.91
12.85	24	SLE R	15	79.50	14.07	14.07	6559.88	-150.68	751.03	13.39
12.85	29	SLE Q	15	79.50	14.07	14.07	6196.01	-142.32	709.37	12.64
13.25	24	SLE R	15	39.75	14.07	14.07	6559.88	-150.68	751.03	13.39
13.25	29	SLE Q	15	39.75	14.07	14.07	6196.01	-142.32	709.37	12.64

Relazione di calcolo

13.64	24	SLE R	15	0.00	14.07	14.07	6224.21	-142.97	712.60	12.70
13.64	29	SLE Q	15	0.00	14.07	14.07	5885.48	-135.19	673.82	12.01
13.64	37	SLE R	16	0.00	14.07	14.07	-2459.84	281.62	-56.50	5.02
13.64	29	SLE Q	16	0.00	14.07	14.07	-1828.91	209.39	-42.01	3.73
13.96	37	SLE R	16	31.50	14.07	14.07	-3112.88	356.39	-71.50	6.35
13.96	29	SLE Q	16	31.50	14.07	14.07	-2526.05	289.20	-58.02	5.15
14.59	37	SLE R	16	94.50	14.07	28.15	-3112.88	353.91	-61.45	5.64
14.59	29	SLE Q	16	94.50	14.07	28.15	-2526.05	287.19	-49.87	4.57
14.59	39	SLE R	17	0.00	14.07	28.15	-4988.39	567.13	-98.48	9.03
14.59	29	SLE Q	17	0.00	14.07	28.15	-4371.69	497.02	-86.30	7.91
14.90	39	SLE R	17	31.50	14.07	14.07	-5359.54	613.60	-123.11	10.94
14.90	29	SLE Q	17	31.50	14.07	14.07	-4747.42	543.52	-109.05	9.69
15.54	39	SLE R	17	94.50	28.15	14.07	-5359.54	314.33	-104.59	8.52
15.54	29	SLE Q	17	94.50	28.15	14.07	-4747.42	278.43	-92.64	7.55
15.54	39	SLE R	18	0.00	28.15	14.07	-5718.02	335.35	-111.58	9.09
15.54	29	SLE Q	18	0.00	28.15	14.07	-5160.05	302.63	-100.69	8.21
15.85	39	SLE R	18	31.50	14.07	14.07	-5766.94	660.25	-132.47	11.77
15.85	29	SLE Q	18	31.50	14.07	14.07	-5234.89	599.33	-120.25	10.68
16.48	39	SLE R	18	94.50	14.07	14.07	-5766.94	660.25	-132.47	11.77
16.48	29	SLE Q	18	94.50	14.07	14.07	-5234.89	599.33	-120.25	10.68
16.48	24	SLE R	19	0.00	14.07	14.07	-5698.73	652.44	-130.90	11.63
16.48	29	SLE Q	19	0.00	14.07	14.07	-5182.70	593.36	-119.05	10.58
17.43	24	SLE R	19	94.50	14.07	28.15	-5436.90	618.13	-107.33	9.84
17.43	29	SLE Q	19	94.50	14.07	28.15	-4936.80	561.27	-97.46	8.94
17.43	24	SLE R	20	0.00	14.07	28.15	-4086.44	464.59	-80.67	7.40
17.43	29	SLE Q	20	0.00	14.07	28.15	-3731.74	424.27	-73.67	6.76
18.37	24	SLE R	20	94.50	14.07	14.07	-3449.52	394.93	-79.24	7.04
18.37	29	SLE Q	20	94.50	14.07	14.07	-3147.79	360.38	-72.31	6.42
18.37	37	SLE R	21	0.00	14.07	14.07	3921.12	-90.07	448.92	8.00
18.37	29	SLE Q	21	0.00	14.07	14.07	3134.67	-72.00	358.88	6.40
19.32	39	SLE R	21	94.50	28.15	14.07	4975.17	-98.22	565.63	9.01
19.32	29	SLE Q	21	94.50	28.15	14.07	4064.15	-80.23	462.06	7.36
19.32	39	SLE R	22	0.00	28.15	14.07	12677.50	-250.27	1441.32	22.95
19.32	29	SLE Q	22	0.00	28.15	14.07	10832.40	-213.85	1231.55	19.61
20.11	39	SLE R	22	79.50	14.07	14.07	13168.60	-302.49	1507.65	26.87
20.11	29	SLE Q	22	79.50	14.07	14.07	11260.40	-258.66	1289.18	22.98
20.41	24	SLE R	23	15.00	14.07	14.07	12151.40	-279.12	1391.20	24.79
20.41	29	SLE Q	23	15.00	14.07	14.07	10857.60	-249.40	1243.06	22.15
21.20	24	SLE R	23	94.00	14.07	28.15	11743.00	-229.16	688.70	18.68
21.20	29	SLE Q	23	94.00	14.07	28.15	10493.50	-204.77	615.42	16.69
21.20	24	SLE R	24	0.00	14.07	28.15	4572.90	-89.24	268.19	7.27
21.20	29	SLE Q	24	0.00	14.07	28.15	4063.53	-79.30	238.32	6.46
21.51	24	SLE R	24	31.33	14.07	14.07	4572.90	-105.04	523.54	9.33
21.51	29	SLE Q	24	31.33	14.07	14.07	4063.53	-93.34	465.23	8.29
22.14	24	SLE R	24	94.00	14.07	14.07	3609.70	-82.92	413.27	7.37
22.14	29	SLE Q	24	94.00	14.07	14.07	3209.49	-73.72	367.45	6.55
22.14	39	SLE R	25	0.00	14.07	14.07	-3239.82	370.92	-74.42	6.61
22.14	29	SLE Q	25	0.00	14.07	14.07	-2720.35	311.45	-62.49	5.55
22.45	39	SLE R	25	31.33	14.07	14.07	-3849.97	440.77	-88.44	7.86
22.45	29	SLE Q	25	31.33	14.07	14.07	-3275.23	374.98	-75.23	6.68
23.08	39	SLE R	25	94.00	28.15	28.15	-3849.97	223.26	-66.20	5.49
23.08	29	SLE Q	25	94.00	28.15	28.15	-3275.23	189.93	-56.32	4.67
23.08	39	SLE R	26	0.00	28.15	28.15	-5336.36	309.45	-91.76	7.60
23.08	29	SLE Q	26	0.00	28.15	28.15	-4600.60	266.79	-79.11	6.56
23.39	39	SLE R	26	31.33	14.07	14.07	-5642.49	646.00	-129.61	11.51
23.39	29	SLE Q	26	31.33	14.07	14.07	-4887.32	559.54	-112.26	9.97
24.02	39	SLE R	26	94.00	14.07	14.07	-5642.49	646.00	-129.61	11.51
24.02	29	SLE Q	26	94.00	14.07	14.07	-4887.32	559.54	-112.26	9.97
24.02	39	SLE R	27	0.00	14.07	14.07	-5989.17	685.69	-137.57	12.22
24.02	29	SLE Q	27	0.00	14.07	14.07	-5216.02	597.17	-119.81	10.64
24.33	39	SLE R	27	31.33	14.07	14.07	-6067.81	694.69	-139.38	12.38
24.33	29	SLE Q	27	31.33	14.07	14.07	-5304.29	607.28	-121.84	10.82
24.96	39	SLE R	27	94.00	14.07	14.07	-6067.81	694.69	-139.38	12.38
24.96	29	SLE Q	27	94.00	14.07	14.07	-5304.29	607.28	-121.84	10.82
24.96	39	SLE R	28	0.00	14.07	14.07	-6022.11	689.46	-138.33	12.29
24.96	29	SLE Q	28	0.00	14.07	14.07	-5273.41	603.74	-121.13	10.76
25.90	39	SLE R	28	94.00	14.07	14.07	-5856.35	670.48	-134.52	11.95
25.90	29	SLE Q	28	94.00	14.07	14.07	-5129.31	587.25	-117.82	10.47
25.90	39	SLE R	29	0.00	14.07	14.07	-5031.41	576.04	-115.57	10.27
25.90	29	SLE Q	29	0.00	14.07	14.07	-4486.17	513.61	-103.05	9.15
26.84	39	SLE R	29	94.00	28.15	28.15	-4599.05	266.69	-79.08	6.55
26.84	29	SLE Q	29	94.00	28.15	28.15	-4113.44	238.53	-70.73	5.86
26.84	24	SLE R	30	0.00	28.15	28.15	-2523.67	146.34	-43.40	3.60
26.84	29	SLE Q	30	0.00	28.15	28.15	-2291.55	132.88	-39.40	3.27
27.78	24	SLE R	30	94.00	14.07	14.07	-1811.96	207.45	-41.62	3.70
27.78	29	SLE Q	30	94.00	14.07	14.07	-1626.76	186.25	-37.37	3.32
27.78	37	SLE R	31	0.00	14.07	14.07	7435.69	-170.80	851.30	15.17
27.78	29	SLE Q	31	0.00	14.07	14.07	5934.44	-136.32	679.42	12.11
28.57	37	SLE R	31	79.00	14.07	14.07	7765.14	-178.37	889.02	15.84

Relazione di calcolo

28.57	29	SLE Q	31	79.00	14.07	14.07	6213.27	-142.72	711.35	12.68
28.87	39	SLE R	32	15.00	14.07	14.07	7395.59	-169.88	846.71	15.09
28.87	29	SLE Q	32	15.00	14.07	14.07	6906.27	-158.64	790.69	14.09
29.45	39	SLE R	32	73.33	14.07	14.07	7395.59	-169.88	846.71	15.09
29.45	29	SLE Q	32	73.33	14.07	14.07	6906.27	-158.64	790.69	14.09
29.45	39	SLE R	33	0.00	14.07	14.07	3249.92	-74.65	372.08	6.63
29.45	29	SLE Q	33	0.00	14.07	14.07	3091.19	-71.01	353.90	6.31
30.19	39	SLE R	33	73.33	14.07	14.07	3249.92	-74.65	372.08	6.63
30.19	29	SLE Q	33	73.33	14.07	14.07	3091.19	-71.01	353.90	6.31
30.19	37	SLE R	34	0.00	14.07	14.07	1557.23	-35.77	178.28	3.18
30.19	29	SLE Q	34	0.00	14.07	14.07	823.78	-18.92	94.31	1.68
30.92	37	SLE R	34	73.33	14.07	28.15	1557.23	-30.39	91.33	2.48
30.92	29	SLE Q	34	73.33	14.07	28.15	823.78	-16.08	48.31	1.31
31.22	38	SLE R	35	30.00	14.07	14.07	-1082.57	123.94	-24.87	2.21
31.22	29	SLE Q	35	30.00	14.07	14.07	-525.05	60.11	-12.06	1.07
31.78	38	SLE R	35	85.67	14.07	14.07	-1082.57	123.94	-24.87	2.21
31.78	29	SLE Q	35	85.67	14.07	14.07	-525.05	60.11	-12.06	1.07
31.78	39	SLE R	36	0.00	14.07	14.07	4501.20	-103.39	515.33	9.18
31.78	29	SLE Q	36	0.00	14.07	14.07	3511.79	-80.67	402.06	7.17
32.63	39	SLE R	36	85.67	14.07	14.07	5212.67	-119.74	596.79	10.64
32.63	29	SLE Q	36	85.67	14.07	14.07	4074.12	-93.58	466.44	8.31
32.63	39	SLE R	37	0.00	14.07	14.07	14534.40	-333.86	1664.01	29.66
32.63	29	SLE Q	37	0.00	14.07	14.07	11790.50	-270.83	1349.87	24.06
33.27	39	SLE R	37	63.17	14.07	14.07	14534.40	-333.86	1664.01	29.66
33.27	29	SLE Q	37	63.17	14.07	14.07	11790.50	-270.83	1349.87	24.06
33.72	24	SLE R	38	22.50	14.07	14.07	15533.30	-356.81	1778.37	31.70
33.72	29	SLE Q	38	22.50	14.07	14.07	13555.20	-311.37	1551.91	27.66
34.42	24	SLE R	38	93.33	14.07	28.15	15533.30	-303.12	910.99	24.70
34.42	29	SLE Q	38	93.33	14.07	28.15	13555.20	-264.52	794.99	21.56
34.42	24	SLE R	39	0.00	14.07	28.15	5103.63	-99.59	299.32	8.12
34.42	29	SLE Q	39	0.00	14.07	28.15	4417.08	-86.20	259.05	7.03
34.73	24	SLE R	39	31.11	14.07	14.07	5103.63	-117.23	584.30	10.41
34.73	29	SLE Q	39	31.11	14.07	14.07	4417.08	-101.46	505.70	9.01
35.36	24	SLE R	39	93.33	28.15	14.07	3777.08	-74.57	429.42	6.84
35.36	29	SLE Q	39	93.33	28.15	14.07	3261.15	-64.38	370.76	5.90
35.36	39	SLE R	40	0.00	28.15	14.07	-5600.00	328.43	-109.28	8.91
35.36	29	SLE Q	40	0.00	28.15	14.07	-4757.86	279.04	-92.85	7.57
35.67	39	SLE R	40	31.11	14.07	14.07	-6360.89	728.25	-146.11	12.98
35.67	29	SLE Q	40	31.11	14.07	14.07	-5474.34	626.75	-125.75	11.17
36.29	39	SLE R	40	93.33	14.07	28.15	-6360.89	723.18	-125.57	11.52
36.29	29	SLE Q	40	93.33	14.07	28.15	-5474.34	622.38	-108.07	9.91
36.29	39	SLE R	41	0.00	14.07	28.15	-8632.64	981.45	-170.42	15.63
36.29	29	SLE Q	41	0.00	14.07	28.15	-7625.32	866.93	-150.53	13.80
36.60	39	SLE R	41	31.11	14.07	14.07	-9118.96	1044.01	-209.47	18.61
36.60	29	SLE Q	41	31.11	14.07	14.07	-8100.26	927.38	-186.07	16.53
37.22	39	SLE R	41	93.33	14.07	14.07	-9118.96	1044.01	-209.47	18.61
37.22	29	SLE Q	41	93.33	14.07	14.07	-8100.26	927.38	-186.07	16.53
37.22	39	SLE R	42	0.00	14.07	14.07	-10633.10	1217.37	-244.25	21.70
37.22	29	SLE Q	42	0.00	14.07	14.07	-9621.16	1101.51	-221.00	19.63
37.53	39	SLE R	42	31.11	14.07	14.07	-10960.30	1254.83	-251.76	22.36
37.53	29	SLE Q	42	31.11	14.07	14.07	-9965.47	1140.93	-228.91	20.33
38.16	39	SLE R	42	93.33	14.07	14.07	-10960.30	1254.83	-251.76	22.36
38.16	29	SLE Q	42	93.33	14.07	14.07	-9965.47	1140.93	-228.91	20.33
38.16	24	SLE R	43	0.00	14.07	14.07	-11841.80	1355.75	-272.01	24.16
38.16	29	SLE Q	43	0.00	14.07	14.07	-10881.30	1245.78	-249.95	22.20
38.47	24	SLE R	43	31.11	14.07	14.07	-12002.40	1374.13	-275.70	24.49
38.47	29	SLE Q	43	31.11	14.07	14.07	-11061.90	1266.45	-254.10	22.57
39.09	24	SLE R	43	93.33	28.15	14.07	-12002.40	703.92	-234.22	19.09
39.09	29	SLE Q	43	93.33	28.15	14.07	-11061.90	648.76	-215.87	17.59
39.09	24	SLE R	44	0.00	28.15	14.07	-12099.60	709.62	-236.12	19.24
39.09	29	SLE Q	44	0.00	28.15	14.07	-11167.80	654.97	-217.93	17.76
40.02	24	SLE R	44	93.33	14.07	28.15	-11926.00	1355.88	-235.44	21.59
40.02	29	SLE Q	44	93.33	14.07	28.15	-11031.60	1254.20	-217.78	19.97
40.02	24	SLE R	45	0.00	14.07	28.15	-10729.40	1219.84	-211.81	19.42
40.02	29	SLE Q	45	0.00	14.07	28.15	-10094.30	1147.63	-199.28	18.27
40.96	24	SLE R	45	93.33	14.07	14.07	-9901.99	1133.66	-227.45	20.20
40.96	29	SLE Q	45	93.33	14.07	14.07	-9370.52	1072.81	-215.25	19.12
40.96	24	SLE R	46	0.00	14.07	14.07	-5371.10	614.93	-123.38	10.96
40.96	29	SLE Q	46	0.00	14.07	14.07	-5344.69	611.90	-122.77	10.91
41.44	24	SLE R	46	48.33	14.07	14.07	-5371.10	614.93	-123.38	10.96
41.44	29	SLE Q	46	48.33	14.07	14.07	-5344.69	611.90	-122.77	10.91

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
49	0.25	29	SLE Q	1	4	72.62	-5404.11	27.00	135.67	0.50	16.00	143.53	14.07	787.50	618.71	0.18	0.04
59	0.25	42	SLE F	1	4	72.62	-5732.47	27.00	135.67	0.50	16.00	143.53	14.07	787.50	656.30	0.19	0.05
110	0.98	29	SLE Q	1	4	0.00	-5404.11	27.00	135.67	0.50	16.00	143.53	14.07	787.50	618.71	0.18	0.04
120	0.98	42	SLE F	1	4	0.00	-5732.47	27.00	135.67	0.50	16.00	143.53	14.07	787.50	656.30	0.19	0.05

Relazione di calcolo

157	0.98	29	SLE Q	2	4	97.62	-9037.88	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1034.73	0.30	0.07
165	0.98	42	SLE F	2	4	97.62	-9368.25	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1072.55	0.31	0.08
202	1.30	29	SLE Q	2	4	65.08	-9795.25	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1121.44	0.33	0.08
210	1.30	42	SLE F	2	4	65.08	-10114.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1157.95	0.34	0.08
247	1.95	29	SLE Q	2	4	0.00	-9795.25	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1121.44	0.33	0.08
255	1.95	42	SLE F	2	4	0.00	-10114.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1157.95	0.34	0.08
292	1.95	29	SLE Q	3	4	97.62	-10509.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1203.17	0.35	0.09
300	1.95	42	SLE F	3	4	97.62	-10771.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1233.16	0.36	0.09
337	2.22	29	SLE Q	3	4	71.03	-10611.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1214.86	0.35	0.09
345	2.22	42	SLE F	3	4	71.03	-10857.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1243.06	0.36	0.09
382	2.93	29	SLE Q	3	4	0.00	-10611.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1206.40	0.35	0.09
390	2.93	42	SLE F	3	4	0.00	-10857.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1234.41	0.36	0.09
427	2.93	29	SLE Q	4	4	97.62	-10501.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1193.93	0.35	0.08
435	2.93	42	SLE F	4	4	97.62	-10738.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1220.87	0.36	0.09
472	3.90	29	SLE Q	4	4	0.00	-10220.90	27.00	62.62	0.50	16.00	98.76	28.15	787.50	599.44	0.17	0.03
480	3.90	42	SLE F	4	4	0.00	-10439.80	27.00	62.62	0.50	16.00	98.76	28.15	787.50	612.27	0.18	0.03
517	3.90	29	SLE Q	5	4	97.62	-9064.58	27.00	62.62	0.50	16.00	98.76	28.15	787.50	531.62	0.15	0.03
522	3.90	28	SLE F	5	4	97.62	-9239.73	27.00	62.62	0.50	16.00	98.76	28.15	787.50	541.89	0.16	0.03
562	4.88	29	SLE Q	5	4	0.00	-8516.98	27.00	135.67	0.50	16.00	143.53	14.07	787.50	975.09	0.28	0.07
567	4.88	28	SLE F	5	4	0.00	-8684.53	27.00	135.67	0.50	16.00	143.53	14.07	787.50	994.28	0.29	0.07
607	4.88	29	SLE Q	6	4	97.62	-6385.18	27.00	135.67	0.50	16.00	143.53	14.07	787.50	731.03	0.21	0.05
612	4.88	28	SLE F	6	4	97.62	-6509.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	745.28	0.22	0.05
652	5.86	29	SLE Q	6	4	0.00	-5520.83	27.00	135.67	0.50	16.00	143.53	14.07	787.50	627.67	0.18	0.04
657	5.86	28	SLE F	6	4	0.00	-5629.97	27.00	135.67	0.50	16.00	143.53	14.07	787.50	640.08	0.19	0.05
724	5.86	29	SLE Q	7	4	97.62	-2022.18	27.00	135.67	0.50	16.00	143.53	14.07	787.50	229.90	0.07	0.02
728	5.86	25	SLE F	7	4	97.62	-2070.23	27.00	135.67	0.50	16.00	143.53	14.07	787.50	235.37	0.07	0.02
805	6.83	29	SLE Q	7	4	0.00	3781.08	27.00	135.67	0.50	16.00	143.53	14.07	787.50	432.89	0.13	0.03
821	6.83	42	SLE F	7	4	0.00	4062.67	27.00	135.67	0.50	16.00	143.53	14.07	787.50	465.13	0.14	0.03
861	6.83	29	SLE Q	8	4	97.62	13250.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1517.01	0.44	0.11
869	6.83	42	SLE F	8	4	97.62	13813.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1581.42	0.46	0.11
907	7.58	29	SLE Q	8	4	22.50	13291.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1511.15	0.44	0.11
915	7.58	42	SLE F	8	4	22.50	13855.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1575.26	0.46	0.11
952	8.04	29	SLE Q	9	4	54.50	11653.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1334.15	0.39	0.09
957	8.04	28	SLE F	9	4	54.50	11947.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1367.86	0.40	0.10
997	8.58	29	SLE Q	9	4	0.00	11653.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1334.15	0.39	0.09
1002	8.58	28	SLE F	9	4	0.00	11947.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1367.86	0.40	0.10
1048	8.58	29	SLE Q	10	4	77.00	5003.34	27.00	135.67	0.50	16.00	143.53	14.07	787.50	572.82	0.17	0.04
1053	8.58	28	SLE F	10	4	77.00	5135.31	27.00	135.67	0.50	16.00	143.53	14.07	787.50	587.93	0.17	0.04
1101	8.96	29	SLE Q	10	4	38.50	5003.34	27.00	62.62	0.50	16.00	98.76	28.15	787.50	293.44	0.09	0.01
1106	8.96	28	SLE F	10	4	38.50	5135.31	27.00	62.62	0.50	16.00	98.76	28.15	787.50	301.18	0.09	0.01
1154	9.35	29	SLE Q	10	4	0.00	4860.79	27.00	62.62	0.50	16.00	98.76	28.15	787.50	285.07	0.08	0.01
1156	9.35	25	SLE F	10	4	0.00	4989.63	27.00	62.62	0.50	16.00	98.76	28.15	787.50	292.63	0.09	0.01
1226	9.35	29	SLE Q	11	4	77.00	-2221.22	27.00	135.67	0.50	16.00	143.53	14.07	787.50	252.53	0.07	0.02
1236	9.35	28	SLE F	11	4	77.00	-2270.64	27.00	135.67	0.50	16.00	143.53	14.07	787.50	258.15	0.08	0.02
1308	9.73	29	SLE Q	11	4	38.50	-2283.86	27.00	135.67	0.50	16.00	143.53	14.07	787.50	261.47	0.08	0.02
1318	9.73	28	SLE F	11	4	38.50	-2334.71	27.00	135.67	0.50	16.00	143.53	14.07	787.50	267.30	0.08	0.02
1388	10.12	29	SLE Q	11	4	0.00	-2283.86	27.00	135.67	0.50	16.00	143.53	14.07	787.50	261.47	0.08	0.02
1398	10.12	28	SLE F	11	4	0.00	-2334.71	27.00	135.67	0.50	16.00	143.53	14.07	787.50	267.30	0.08	0.02
1443	10.12	29	SLE Q	12	4	77.00	-2504.55	27.00	135.67	0.50	16.00	143.53	14.07	787.50	286.74	0.08	0.02
1448	10.12	28	SLE F	12	4	77.00	-2571.28	27.00	135.67	0.50	16.00	143.53	14.07	787.50	294.38	0.09	0.02
1488	10.51	29	SLE Q	12	4	38.50	-2506.78	27.00	135.67	0.50	16.00	143.53	14.07	787.50	287.00	0.08	0.02
1493	10.51	28	SLE F	12	4	38.50	-2573.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	294.65	0.09	0.02
1533	10.89	29	SLE Q	12	4	0.00	-2506.78	27.00	135.67	0.50	16.00	143.53	14.07	787.50	287.00	0.08	0.02
1538	10.89	28	SLE F	12	4	0.00	-2573.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	294.65	0.09	0.02
1613	10.89	29	SLE Q	13	4	0.00	-1332.66	27.00	135.67	0.50	16.00	143.53	14.07	787.50	152.57	0.04	0.01
1623	10.89	28	SLE F	13	4	0.00	-1393.41	27.00	135.67	0.50	16.00	143.53	14.07	787.50	159.53	0.05	0.01
1702	11.79	29	SLE Q	13	4	90.50	1891.02	27.00	135.67	0.50	16.00	143.53	14.07	787.50	214.99	0.06	0.02
1718	11.79	42	SLE F	13	4	90.50	1916.54	27.00	135.67	0.50	16.00	143.53	14.07	787.50	217.89	0.06	0.02
1758	11.79	29	SLE Q	14	4	0.00	6773.06	27.00	135.67	0.50	16.00	143.53	14.07	787.50	770.04	0.22	0.05
1763	11.79	28	SLE F	14	4	0.00	6893.22	27.00	135.67	0.50	16.00	143.53	14.07	787.50	783.70	0.23	0.06
1803	12.55	29	SLE Q	14	4	75.50	6819.08	27.00	135.67	0.50	16.00	143.53	14.07	787.50	780.70	0.23	0.06
1808	12.55	28	SLE F	14	4	75.50	6940.31	27.00	135.67	0.50	16.00	143.53	14.07	787.50	794.58	0.23	0.06
1852	12.85	29	SLE Q	15	4	79.50	6196.01	27.00	135.67	0.50	16.00	143.53	14.07	787.50	709.37	0.21	0.05
1857	12.85	28	SLE F	15	4	79.50	6299.65	27.00	135.67	0.50	16.00	143.53	14.07	787.50	721.23	0.21	0.05
1901	13.25	29	SLE Q	15	4	39.75	6196.01	27.00	135.67	0.50	16.00	143.53	14.07	787.50	709.37	0.21	0.05
1906	13.25	28	SLE F	15	4	39.75	6299.65	27.00	135.67	0.50	16.00	143.53	14.07	787.50	721.23	0.21	0.05
1950	13.64	29	SLE Q	15	4	0.00	5885.48	27.00	135.67	0.50	16.00	143.53	14.07	787.50	673.82	0.20	0.05
1955	13.64	28	SLE F	15	4	0.00	5982.88	27.00	135.67	0.50	16.00	143.53	14.07	787.50	684.97	0.20	0.05
2022	13.64	29	SLE Q	16	4	0.00	-1828.91	27.00	135.67	0.50	16.00	143.53	14.07	787.50	209.39	0.06	0.01
2038	13.64	42	SLE F	16	4	0.00	-1930.18	27.00	135.67	0.50	16.00	143.53	14.07	787.50	220.98	0.06	0.02
2105	13.96	29	SLE Q	16	4	31.50	-2526.05	27.00	135.67	0.50	16.00	143.53	14.07	787.50	289.20	0.08	0.02
2121	13.96	42	SLE F	16	4	31.50	-2615.86	27.00									

Relazione di calcolo

2328	15.54	28	SLE F	17	4	94.50	-4844.11	27.00	62.62	0.50	16.00	98.76	28.15	787.50	284.10	0.08	0.01
2368	15.54	29	SLE Q	18	4	0.00	-5160.05	27.00	62.62	0.50	16.00	98.76	28.15	787.50	302.63	0.09	0.01
2373	15.54	28	SLE F	18	4	0.00	-5265.55	27.00	62.62	0.50	16.00	98.76	28.15	787.50	308.81	0.09	0.02
2413	15.85	29	SLE Q	18	4	31.50	-5234.89	27.00	135.67	0.50	16.00	143.53	14.07	787.50	599.33	0.17	0.04
2418	15.85	28	SLE F	18	4	31.50	-5338.99	27.00	135.67	0.50	16.00	143.53	14.07	787.50	611.25	0.18	0.04
2458	16.48	29	SLE Q	18	4	94.50	-5234.89	27.00	135.67	0.50	16.00	143.53	14.07	787.50	599.33	0.17	0.04
2463	16.48	28	SLE F	18	4	94.50	-5338.99	27.00	135.67	0.50	16.00	143.53	14.07	787.50	611.25	0.18	0.04
2503	16.48	29	SLE Q	19	4	0.00	-5182.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	593.36	0.17	0.04
2508	16.48	28	SLE F	19	4	0.00	-5285.43	27.00	135.67	0.50	16.00	143.53	14.07	787.50	605.12	0.18	0.04
2548	17.43	29	SLE Q	19	4	94.50	-4936.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	561.27	0.16	0.04
2553	17.43	28	SLE F	19	4	94.50	-5036.78	27.00	135.67	0.50	16.00	143.53	14.07	787.50	572.64	0.17	0.04
2593	17.43	29	SLE Q	20	4	0.00	-3731.74	27.00	135.67	0.50	16.00	143.53	14.07	787.50	424.27	0.12	0.03
2598	17.43	28	SLE F	20	4	0.00	-3802.66	27.00	135.67	0.50	16.00	143.53	14.07	787.50	432.33	0.13	0.03
2642	18.37	29	SLE Q	20	4	94.50	-3147.79	27.00	135.67	0.50	16.00	143.53	14.07	787.50	360.38	0.10	0.03
2647	18.37	28	SLE F	20	4	94.50	-3208.66	27.00	135.67	0.50	16.00	143.53	14.07	787.50	367.35	0.11	0.03
2705	18.37	29	SLE Q	21	4	0.00	3134.67	27.00	135.67	0.50	16.00	143.53	14.07	787.50	358.88	0.10	0.03
2721	18.37	42	SLE F	21	4	0.00	3258.37	27.00	135.67	0.50	16.00	143.53	14.07	787.50	373.05	0.11	0.03
2765	19.32	29	SLE Q	21	4	94.50	4064.15	27.00	135.67	0.50	16.00	143.53	14.07	787.50	462.06	0.13	0.03
2773	19.32	42	SLE F	21	4	94.50	4198.44	27.00	135.67	0.50	16.00	143.53	14.07	787.50	477.32	0.14	0.03
2810	19.32	29	SLE Q	22	4	0.00	10832.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1231.55	0.36	0.09
2815	19.32	28	SLE F	22	4	0.00	11077.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1259.38	0.37	0.09
2855	20.11	29	SLE Q	22	4	79.50	11260.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1289.18	0.38	0.09
2860	20.11	28	SLE F	22	4	79.50	11515.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1318.35	0.38	0.09
2900	20.41	29	SLE Q	23	4	15.00	10857.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1243.06	0.36	0.09
2905	20.41	28	SLE F	23	4	15.00	11099.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1270.76	0.37	0.09
2945	21.20	29	SLE Q	23	4	94.00	10493.50	27.00	62.62	0.50	16.00	98.76	28.15	787.50	615.42	0.18	0.03
2950	21.20	28	SLE F	23	4	94.00	10726.90	27.00	62.62	0.50	16.00	98.76	28.15	787.50	629.11	0.18	0.03
2994	21.20	29	SLE Q	24	4	0.00	4063.53	27.00	62.62	0.50	16.00	98.76	28.15	787.50	238.32	0.07	0.01
2999	21.20	28	SLE F	24	4	0.00	4156.42	27.00	62.62	0.50	16.00	98.76	28.15	787.50	243.76	0.07	0.01
3058	21.51	29	SLE Q	24	4	31.33	4063.53	27.00	135.67	0.50	16.00	143.53	14.07	787.50	465.23	0.14	0.03
3066	21.51	28	SLE F	24	4	31.33	4156.42	27.00	135.67	0.50	16.00	143.53	14.07	787.50	475.86	0.14	0.03
3128	22.14	29	SLE Q	24	4	94.00	3209.49	27.00	135.67	0.50	16.00	143.53	14.07	787.50	367.45	0.11	0.03
3136	22.14	28	SLE F	24	4	94.00	3281.29	27.00	135.67	0.50	16.00	143.53	14.07	787.50	375.67	0.11	0.03
3183	22.14	29	SLE Q	25	4	0.00	-2720.35	27.00	135.67	0.50	16.00	143.53	14.07	787.50	311.45	0.09	0.02
3191	22.14	42	SLE F	25	4	0.00	-2799.89	27.00	135.67	0.50	16.00	143.53	14.07	787.50	320.56	0.09	0.02
3232	22.45	29	SLE Q	25	4	31.33	-3275.23	27.00	135.67	0.50	16.00	143.53	14.07	787.50	374.98	0.11	0.03
3240	22.45	42	SLE F	25	4	31.33	-3355.92	27.00	135.67	0.50	16.00	143.53	14.07	787.50	384.21	0.11	0.03
3278	23.08	29	SLE Q	25	4	94.00	-3275.23	27.00	62.62	0.50	16.00	98.76	28.15	787.50	189.93	0.06	0.01
3286	23.08	42	SLE F	25	4	94.00	-3355.92	27.00	62.62	0.50	16.00	98.76	28.15	787.50	194.61	0.06	0.01
3323	23.08	29	SLE Q	26	4	0.00	-4600.60	27.00	62.62	0.50	16.00	98.76	28.15	787.50	266.79	0.08	0.01
3328	23.08	28	SLE F	26	4	0.00	-4699.81	27.00	62.62	0.50	16.00	98.76	28.15	787.50	272.54	0.08	0.01
3368	23.39	29	SLE Q	26	4	31.33	-4887.32	27.00	135.67	0.50	16.00	143.53	14.07	787.50	559.54	0.16	0.04
3373	23.39	28	SLE F	26	4	31.33	-4990.08	27.00	135.67	0.50	16.00	143.53	14.07	787.50	571.30	0.17	0.04
3413	24.02	29	SLE Q	26	4	94.00	-4887.32	27.00	135.67	0.50	16.00	143.53	14.07	787.50	559.54	0.16	0.04
3418	24.02	28	SLE F	26	4	94.00	-4990.08	27.00	135.67	0.50	16.00	143.53	14.07	787.50	571.30	0.17	0.04
3458	24.02	29	SLE Q	27	4	0.00	-5216.02	27.00	135.67	0.50	16.00	143.53	14.07	787.50	597.17	0.17	0.04
3463	24.02	28	SLE F	27	4	0.00	-5327.82	27.00	135.67	0.50	16.00	143.53	14.07	787.50	609.97	0.18	0.04
3503	24.33	29	SLE Q	27	4	31.33	-5304.29	27.00	135.67	0.50	16.00	143.53	14.07	787.50	607.28	0.18	0.04
3508	24.33	28	SLE F	27	4	31.33	-5415.31	27.00	135.67	0.50	16.00	143.53	14.07	787.50	619.99	0.18	0.04
3548	24.96	29	SLE Q	27	4	94.00	-5304.29	27.00	135.67	0.50	16.00	143.53	14.07	787.50	607.28	0.18	0.04
3553	24.96	28	SLE F	27	4	94.00	-5415.31	27.00	135.67	0.50	16.00	143.53	14.07	787.50	619.99	0.18	0.04
3593	24.96	29	SLE Q	28	4	0.00	-5273.41	27.00	135.67	0.50	16.00	143.53	14.07	787.50	603.74	0.18	0.04
3598	24.96	28	SLE F	28	4	0.00	-5383.62	27.00	135.67	0.50	16.00	143.53	14.07	787.50	616.36	0.18	0.04
3638	25.90	29	SLE Q	28	4	94.00	-5129.31	27.00	135.67	0.50	16.00	143.53	14.07	787.50	587.25	0.17	0.04
3643	25.90	28	SLE F	28	4	94.00	-5238.92	27.00	135.67	0.50	16.00	143.53	14.07	787.50	599.79	0.17	0.04
3683	25.90	29	SLE Q	29	4	0.00	-4486.17	27.00	135.67	0.50	16.00	143.53	14.07	787.50	513.61	0.15	0.04
3688	25.90	28	SLE F	29	4	0.00	-4579.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	524.26	0.15	0.04
3728	26.84	29	SLE Q	29	4	94.00	-4113.44	27.00	62.62	0.50	16.00	98.76	28.15	787.50	238.53	0.07	0.01
3733	26.84	28	SLE F	29	4	94.00	-4201.19	27.00	62.62	0.50	16.00	98.76	28.15	787.50	243.62	0.07	0.01
3800	26.84	29	SLE Q	30	4	0.00	-2291.55	27.00	62.62	0.50	16.00	98.76	28.15	787.50	132.88	0.04	0.01
3810	26.84	28	SLE F	30	4	0.00	-2338.62	27.00	62.62	0.50	16.00	98.76	28.15	787.50	135.61	0.04	0.01
3886	27.78	29	SLE Q	30	4	94.00	-1626.76	27.00	135.67	0.50	16.00	143.53	14.07	787.50	186.25	0.05	0.01
3896	27.78	28	SLE F	30	4	94.00	-1663.02	27.00	135.67	0.50	16.00	143.53	14.07	787.50	190.40	0.06	0.01
3945	27.78	29	SLE Q	31	4	0.00	5934.44	27.00	135.67	0.50	16.00	143.53	14.07	787.50	679.42	0.20	0.05
3953	27.78	42	SLE F	31	4	0.00	6214.29	27.00	135.67	0.50	16.00	143.53	14.07	787.50	711.46	0.21	0.05
3994	28.57	29	SLE Q	31	4	79.00	6213.27	27.00	135.67	0.50	16.00	143.53	14.07	787.50	711.35	0.21	0.05
4002	28.57	42	SLE F	31	4	79.00	6502.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	744.40	0.22	0.05
4039	28.87	29	SLE Q	32	4	15.00	6906.27	27.00	135.67	0.50	16.00	143.53	14.07	787.50	790.69	0.23	0.06
4044	28.87	28	SLE F	32	4	15.00	7049.18	27.00	135.67	0.50	16.00	143.53	14.07	787.50	807.05	0.24	0.06
4084	29.45	29	SLE Q	32	4	73.33	6906.27	27.00	135.67	0.50	16.00	143.53	14.07	787.50	790.69	0.23	0.06
4089	29.45	28	SLE F	32	4	73.33	7049.18	27.00	135.67	0.50	16.00	143.53	14.07	787.50	807.05	0.24	0.06</

Relazione di calcolo

4328	31.22	29	SLE Q	35	4	30.00	-525.05	27.00	135.67	0.50	16.00	143.53	14.07	787.50	60.11	0.02	0.00
4331	31.22	25	SLE F	35	4	30.00	-612.95	27.00	135.67	0.50	16.00	143.53	14.07	787.50	70.18	0.02	0.00
4386	31.78	29	SLE Q	35	4	85.67	-525.05	27.00	135.67	0.50	16.00	143.53	14.07	787.50	60.11	0.02	0.00
4389	31.78	25	SLE F	35	4	85.67	-612.95	27.00	135.67	0.50	16.00	143.53	14.07	787.50	70.18	0.02	0.00
4443	31.78	29	SLE Q	36	4	0.00	3511.79	27.00	135.67	0.50	16.00	143.53	14.07	787.50	402.06	0.12	0.03
4445	31.78	25	SLE F	36	4	0.00	3685.01	27.00	135.67	0.50	16.00	143.53	14.07	787.50	421.89	0.12	0.03
4496	32.63	29	SLE Q	36	4	85.67	4074.12	27.00	135.67	0.50	16.00	143.53	14.07	787.50	466.44	0.14	0.03
4498	32.63	25	SLE F	36	4	85.67	4267.58	27.00	135.67	0.50	16.00	143.53	14.07	787.50	488.59	0.14	0.03
4541	32.63	29	SLE Q	37	4	0.00	11790.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1349.87	0.39	0.10
4543	32.63	25	SLE F	37	4	0.00	12172.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1393.65	0.41	0.10
4586	33.27	29	SLE Q	37	4	63.17	11790.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1349.87	0.39	0.10
4588	33.27	25	SLE F	37	4	63.17	12172.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1393.65	0.41	0.10
4633	33.72	29	SLE Q	38	4	22.50	13555.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1551.91	0.45	0.11
4638	33.72	28	SLE F	38	4	22.50	13888.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1590.05	0.46	0.11
4680	34.42	29	SLE Q	38	4	93.33	13555.20	27.00	62.62	0.50	16.00	98.76	28.15	787.50	794.99	0.23	0.04
4685	34.42	28	SLE F	38	4	93.33	13888.40	27.00	62.62	0.50	16.00	98.76	28.15	787.50	814.52	0.24	0.04
4750	34.42	29	SLE Q	39	4	0.00	4417.08	27.00	62.62	0.50	16.00	98.76	28.15	787.50	259.05	0.08	0.01
4760	34.42	28	SLE F	39	4	0.00	4534.54	27.00	62.62	0.50	16.00	98.76	28.15	787.50	265.94	0.08	0.01
4834	34.73	29	SLE Q	39	4	31.11	4417.08	27.00	135.67	0.50	16.00	143.53	14.07	787.50	505.70	0.15	0.04
4844	34.73	28	SLE F	39	4	31.11	4534.54	27.00	135.67	0.50	16.00	143.53	14.07	787.50	519.15	0.15	0.04
4916	35.36	29	SLE Q	39	4	93.33	3261.15	27.00	135.67	0.50	16.00	143.53	14.07	787.50	370.76	0.11	0.03
4926	35.36	28	SLE F	39	4	93.33	3349.35	27.00	135.67	0.50	16.00	143.53	14.07	787.50	380.79	0.11	0.03
4975	35.36	29	SLE Q	40	4	0.00	-4757.86	27.00	62.62	0.50	16.00	98.76	28.15	787.50	279.04	0.08	0.01
4983	35.36	42	SLE F	40	4	0.00	-4854.16	27.00	62.62	0.50	16.00	98.76	28.15	787.50	284.69	0.08	0.01
5024	35.67	29	SLE Q	40	4	31.11	-5474.34	27.00	135.67	0.50	16.00	143.53	14.07	787.50	626.75	0.18	0.04
5029	35.67	28	SLE F	40	4	31.11	-5582.92	27.00	135.67	0.50	16.00	143.53	14.07	787.50	639.18	0.19	0.05
5069	36.29	29	SLE Q	40	4	93.33	-5474.34	27.00	135.67	0.50	16.00	143.53	14.07	787.50	622.38	0.18	0.04
5074	36.29	28	SLE F	40	4	93.33	-5582.92	27.00	135.67	0.50	16.00	143.53	14.07	787.50	634.73	0.18	0.05
5114	36.29	29	SLE Q	41	4	0.00	-7625.32	27.00	135.67	0.50	16.00	143.53	14.07	787.50	866.93	0.25	0.06
5119	36.29	28	SLE F	41	4	0.00	-7779.12	27.00	135.67	0.50	16.00	143.53	14.07	787.50	884.42	0.26	0.06
5159	36.60	29	SLE Q	41	4	31.11	-8100.26	27.00	135.67	0.50	16.00	143.53	14.07	787.50	927.38	0.27	0.07
5164	36.60	28	SLE F	41	4	31.11	-8261.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	945.80	0.28	0.07
5204	37.22	29	SLE Q	41	4	93.33	-8100.26	27.00	135.67	0.50	16.00	143.53	14.07	787.50	927.38	0.27	0.07
5209	37.22	28	SLE F	41	4	93.33	-8261.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	945.80	0.28	0.07
5249	37.22	29	SLE Q	42	4	0.00	-9621.16	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1101.51	0.32	0.08
5254	37.22	28	SLE F	42	4	0.00	-9809.32	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1123.05	0.33	0.08
5294	37.53	29	SLE Q	42	4	31.11	-9965.47	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1140.93	0.33	0.08
5299	37.53	28	SLE F	42	4	31.11	-10157.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1162.86	0.34	0.08
5339	38.16	29	SLE Q	42	4	93.33	-9965.47	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1140.93	0.33	0.08
5344	38.16	28	SLE F	42	4	93.33	-10157.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1162.86	0.34	0.08
5384	38.16	29	SLE Q	43	4	0.00	-10881.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1245.78	0.36	0.09
5389	38.16	28	SLE F	43	4	0.00	-11086.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1269.28	0.37	0.09
5429	38.47	29	SLE Q	43	4	31.11	-11061.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1266.45	0.37	0.09
5434	38.47	28	SLE F	43	4	31.11	-11267.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1289.94	0.38	0.09
5474	39.09	29	SLE Q	43	4	93.33	-11061.90	27.00	62.62	0.50	16.00	98.76	28.15	787.50	648.76	0.19	0.03
5479	39.09	28	SLE F	43	4	93.33	-11267.10	27.00	62.62	0.50	16.00	98.76	28.15	787.50	660.79	0.19	0.03
5519	39.09	29	SLE Q	44	4	0.00	-11167.80	27.00	62.62	0.50	16.00	98.76	28.15	787.50	654.97	0.19	0.03
5524	39.09	28	SLE F	44	4	0.00	-11374.50	27.00	62.62	0.50	16.00	98.76	28.15	787.50	667.09	0.19	0.03
5564	40.02	29	SLE Q	44	4	93.33	-11031.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1254.20	0.37	0.09
5569	40.02	28	SLE F	44	4	93.33	-11236.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1277.53	0.37	0.09
5609	40.02	29	SLE Q	45	4	0.00	-10094.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1147.63	0.33	0.08
5614	40.02	28	SLE F	45	4	0.00	-10275.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1168.21	0.34	0.08
5658	40.96	29	SLE Q	45	4	93.33	-9370.52	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1072.81	0.31	0.08
5663	40.96	28	SLE F	45	4	93.33	-9539.12	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1092.12	0.32	0.08
5717	40.96	29	SLE Q	46	4	0.00	-5344.69	27.00	135.67	0.50	16.00	143.53	14.07	787.50	611.90	0.18	0.04
5722	40.96	28	SLE F	46	4	0.00	-5435.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	622.27	0.18	0.04
5776	41.44	29	SLE Q	46	4	48.33	-5344.69	27.00	135.67	0.50	16.00	143.53	14.07	787.50	611.90	0.18	0.04
5781	41.44	28	SLE F	46	4	48.33	-5435.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	622.27	0.18	0.04

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
1 SLV	0.25	0.70	0.45	ø10/20 4 br.	15.71	0.90	12730.20	2.50	91968.40	131041.00	91968.40	7.224
34 SLU	0.70	7.13	6.43	ø10/20 4 br.	15.71	0.90	21595.40	2.50	91968.40	131041.00	91968.40	4.259
34 SLU	7.13	7.58	0.45	ø10/20 4 br.	15.71	0.90	22360.40	2.50	91968.40	131041.00	91968.40	4.113
20 SLU	8.04	8.48	0.45	ø10/20 4 br.	15.71	0.90	21008.00	2.50	91968.40	131041.00	91968.40	4.378
20 SLU	8.48	12.10	3.61	ø10/20 4 br.	15.71	0.90	20210.40	2.50	91968.40	131041.00	91968.40	4.551
34 SLU	12.10	12.55	0.45	ø10/20 4 br.	15.71	0.90	10309.20	2.50	91968.40	131041.00	91968.40	8.921
20 SLU	12.85	13.30	0.45	ø10/20 4 br.	15.71	0.90	9830.01	2.50	91968.40	131041.00	91968.40	9.356
34 SLU	13.30	19.66	6.36	ø10/20 4 br.	15.71	0.90	14062.30	2.50	91968.40	131041.00	91968.40	6.540
34 SLU	19.66	20.11	0.45	ø10/20 4 br.	15.71	0.90	14580.60	2.50	91968.40	131041.00	91968.40	6.308
20 SLU	20.41	20.86	0.45	ø10/20 4 br.	15.71	0.90	13554.50	2.50	91968.40	131041.00	91968.40	6.785
20 SLU	20.86	28.12	7.26	ø10/20 4 br.	15.71	0.90	13061.70	2.50	91968.40	131041.00	91968.40	7.041
34 SLU	28.12	28.57	0.45	ø10/20 4 br.	15.71	0.90	10966.50	2.50	91968.40	131041.00	91968.40	8.386
20 SLU	28.87	29.32	0.45	ø10/20 4 br.	15.71	0.90	10460.80	2.50	91968.40	131041.00	91968.40	8.792
20 SLU	29.32	30.47	1.15	ø10/20 4 br.	15.71	0.90	9849.06	2.50	91968.40	131041.00	91968.40	9.338
1 SLV	30.47	30.92	0.45	ø10/20 4 br.	15.71	0.90	3103.29	2.50	91968.40	131041.00	91968.40	29.636
9 SLV	31.22	31.67	0.45	ø10/20 4 br.	15.71	0.90	2873.13	2.50	91968.40	131041.00	91968.40	32.010
34 SLU	31.67	32.81	1.14	ø10/20 4 br.	15.71	0.90	21085.60	2.50	91968.40	131041.00	91968.40	4.366

Relazione di calcolo

34 SLU	32.81	33.27	0.45	ø10/20 4 br.	15.71	0.90	22037.80	2.50	91968.40	131041.00	91968.40	4.173
9 SLV	33.72	34.16	0.45	ø10/20 4 br.	15.71	0.90	23349.70	2.50	91968.40	131041.00	91968.40	3.939
20 SLU	34.16	40.99	6.82	ø10/20 4 br.	15.71	0.90	20878.50	2.50	91968.40	131041.00	91968.40	4.405
32 SLU	40.99	41.44	0.45	ø10/20 4 br.	15.71	0.90	16404.50	2.50	91968.40	131041.00	91968.40	5.606

Travata n. 416

Nodi: -39 -488 -487 -486 -1598 -484 -483 -482 -40 -548 -547 -546 -545 -42 -647 -646 -645 -644 -643 -642 -641 -49 -711 -710 -709 -708 -707 -706 -705 -704 -35 -823 -822 -821 -820 -37 -859 -858 -857 -856 -855 -854 -853 -852 -38

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
4R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CCT	CEl	X <cm>	Afe S <cmq>	Afe I <cmq>	AfeP S <cmq>	AfeP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.25	32	SLU	1 25.00	14.07	14.07	14.07	14.07	-11383.40	-35450.10	3.114
0.98	32	SLU	1 97.62	14.07	14.07	14.07	14.07	-11383.40	-35450.10	3.114
0.98	32	SLU	2 0.00	14.07	14.07	14.07	14.07	-18690.30	-35450.10	1.897
1.30	32	SLU	2 32.54	14.07	14.07	14.07	14.07	-20424.60	-35450.10	1.736
1.95	32	SLU	2 97.62	14.07	28.15	14.07	28.15	-20424.60	-35445.00	1.735
1.95	32	SLU	3 0.00	14.07	28.15	14.07	28.15	-21975.20	-35445.00	1.613
2.28	32	SLU	3 32.54	14.07	28.15	14.07	28.15	-22250.00	-35445.00	1.593
2.93	32	SLU	3 97.62	14.07	14.07	14.07	14.07	-22250.00	-35450.10	1.593
2.93	32	SLU	4 0.00	14.07	14.07	14.07	14.07	-21703.00	-35450.10	1.633
3.90	32	SLU	4 97.62	28.15	14.07	28.15	14.07	-21378.40	-69959.00	3.272
3.90	32	SLU	5 0.00	28.15	14.07	28.15	14.07	-19067.30	-69959.00	3.669
4.88	32	SLU	5 97.62	14.07	14.07	14.07	14.07	-17942.70	-35450.10	1.976
4.88	32	SLU	6 0.00	14.07	14.07	14.07	14.07	-13106.20	-35450.10	2.705
5.86	32	SLU	6 97.62	14.07	28.15	14.07	28.15	-11088.40	-35445.00	3.197
5.86	20	SLU	7 0.00	14.07	28.15	14.07	28.15	-4128.44	-35445.00	8.586
6.83	32	SLU	7 97.62	14.07	14.07	14.07	14.07	11108.90	35450.10	3.191
6.83	32	SLU	8 0.00	14.07	14.07	14.07	14.07	30711.30	35450.10	1.154
7.58	32	SLU	8 75.12	28.15	14.07	28.15	14.07	30799.50	35445.00	1.151
8.04	32	SLU	9 22.50	14.07	14.07	14.07	14.07	15512.30	35450.10	2.285
8.79	32	SLU	9 97.80	14.07	14.07	14.07	14.07	15420.50	35450.10	2.299
8.79	30	SLU	10 0.00	14.07	14.07	14.07	14.07	-3703.86	-35450.10	9.571
9.11	30	SLU	10 32.60	14.07	14.07	14.07	14.07	-5002.99	-35450.10	7.086
9.77	30	SLU	10 97.80	14.07	14.07	14.07	14.07	-5002.99	-35450.10	7.086
9.77	30	SLU	11 0.00	14.07	14.07	14.07	14.07	-5684.68	-35450.10	6.236
10.74	30	SLU	11 97.80	14.07	28.15	14.07	28.15	-5684.68	-35445.00	6.235
10.74	30	SLU	12 0.00	14.07	28.15	14.07	28.15	-5043.89	-35445.00	7.027
11.72	32	SLU	12 97.80	28.15	14.07	28.15	14.07	2648.24	35445.00	13.384
11.72	32	SLU	13 0.00	28.15	14.07	28.15	14.07	15632.00	35445.00	2.267
12.47	32	SLU	13 75.30	14.07	14.07	14.07	14.07	15724.00	35450.10	2.255
12.93	17	SLU	14 22.50	14.07	14.07	14.07	14.07	23698.50	35450.10	1.496
13.64	17	SLU	14 94.50	14.07	14.07	14.07	14.07	23698.50	35450.10	1.496
13.64	17	SLU	15 0.00	14.07	14.07	14.07	14.07	8417.67	35450.10	4.211
13.96	32	SLU	15 31.50	14.07	28.15	14.07	28.15	-4794.86	-35445.00	7.392
14.59	32	SLU	15 94.50	14.07	28.15	14.07	28.15	-4794.86	-35445.00	7.392
14.59	32	SLU	16 0.00	14.07	28.15	14.07	28.15	-9730.87	-35445.00	3.643
14.90	32	SLU	16 31.50	14.07	14.07	14.07	14.07	-10750.30	-35450.10	3.298
15.54	32	SLU	16 94.50	28.15	14.07	28.15	14.07	-10750.30	-69959.00	6.508
15.54	34	SLU	17 0.00	28.15	14.07	28.15	14.07	-12105.90	-69959.00	5.779
15.85	34	SLU	17 31.50	14.07	14.07	14.07	14.07	-12251.90	-35450.10	2.893
16.48	34	SLU	17 94.50	14.07	14.07	14.07	14.07	-12251.90	-35450.10	2.893
16.48	34	SLU	18 0.00	14.07	14.07	14.07	14.07	-12149.10	-35450.10	2.918
17.43	34	SLU	18 94.50	14.07	28.15	14.07	28.15	-11752.30	-35445.00	3.016
17.43	34	SLU	19 0.00	14.07	28.15	14.07	28.15	-9111.46	-35445.00	3.890
18.37	34	SLU	19 94.50	14.07	28.15	14.07	28.15	-7713.56	-35445.00	4.595
18.37	32	SLU	20 0.00	14.07	28.15	14.07	28.15	9449.46	69959.00	7.403
19.32	32	SLU	20 94.50	28.15	14.07	28.15	14.07	12339.90	35445.00	2.872
19.32	32	SLU	21 0.00	28.15	14.07	28.15	14.07	30041.60	35445.00	1.180
20.04	32	SLU	21 72.00	14.07	14.07	14.07	14.07	30041.60	35450.10	1.180
20.48	34	SLU	22 22.50	14.07	14.07	14.07	14.07	26571.80	35450.10	1.334
21.20	34	SLU	22 94.00	14.07	28.15	14.07	28.15	26571.80	69959.00	2.633
21.20	20	SLU	23 0.00	14.07	28.15	14.07	28.15	10683.50	69959.00	6.548
21.51	20	SLU	23 31.33	14.07	14.07	14.07	14.07	10683.50	35450.10	3.318
22.14	20	SLU	23 94.00	14.07	14.07	14.07	14.07	8165.29	35450.10	4.342
22.14	32	SLU	24 0.00	14.07	14.07	14.07	14.07	-7771.04	-35450.10	4.562
22.45	32	SLU	24 31.33	14.07	14.07	14.07	14.07	-9037.86	-35450.10	3.922
23.08	32	SLU	24 94.00	28.15	14.07	28.15	14.07	-9037.86	-69959.00	7.741
23.08	34	SLU	25 0.00	28.15	14.07	28.15	14.07	-11897.10	-69959.00	5.880
23.39	34	SLU	25 31.33	14.07	14.07	14.07	14.07	-12461.10	-35450.10	2.845
24.02	34	SLU	25 94.00	14.07	14.07	14.07	14.07	-12461.10	-35450.10	2.845
24.02	34	SLU	26 0.00	14.07	14.07	14.07	14.07	-12915.10	-35450.10	2.745
24.96	34	SLU	26 94.00	14.07	14.07	14.07	14.07	-12915.10	-35450.10	2.745
24.96	34	SLU	27 0.00	14.07	14.07	14.07	14.07	-12926.20	-35450.10	2.743

Relazione di calcolo

25.90	34	SLU	27	94.00	14.07	14.07	14.07	14.07	-12545.40	-35450.10	2.826
25.90	34	SLU	28	0.00	14.07	14.07	14.07	14.07	-10483.20	-35450.10	3.382
26.84	34	SLU	28	94.00	28.15	28.15	28.15	28.15	-9399.70	-70123.70	7.460
26.84	32	SLU	29	0.00	28.15	28.15	28.15	28.15	4733.74	70123.70	14.814
27.78	32	SLU	29	94.00	14.07	28.15	14.07	28.15	7050.26	69959.00	9.923
27.78	32	SLU	30	0.00	14.07	28.15	14.07	28.15	21440.30	69959.00	3.263
28.50	32	SLU	30	71.50	14.07	14.07	14.07	14.07	21440.30	35450.10	1.653
28.95	34	SLU	31	22.50	14.07	14.07	14.07	14.07	19406.00	35450.10	1.827
29.67	34	SLU	31	95.40	14.07	14.07	14.07	14.07	19406.00	35450.10	1.827
29.67	20	SLU	32	0.00	14.07	14.07	14.07	14.07	6452.90	35450.10	5.494
29.99	20	SLU	32	31.80	14.07	14.07	14.07	14.07	6452.90	35450.10	5.494
30.63	20	SLU	32	95.40	28.15	28.15	28.15	28.15	4626.18	70123.70	15.158
30.63	32	SLU	33	0.00	28.15	28.15	28.15	28.15	-1955.76	-70123.70	35.855
31.58	32	SLU	33	95.40	14.07	14.07	14.07	14.07	-1955.76	-35450.10	18.126
31.58	32	SLU	34	0.00	14.07	14.07	14.07	14.07	4968.32	35450.10	7.135
32.54	32	SLU	34	95.40	14.07	14.07	14.07	14.07	6929.29	35450.10	5.116
32.54	32	SLU	35	0.00	14.07	14.07	14.07	14.07	20843.10	35450.10	1.701
33.27	32	SLU	35	72.90	14.07	14.07	14.07	14.07	20843.10	35450.10	1.701
33.72	20	SLU	36	22.50	14.07	14.07	14.07	14.07	21847.60	35450.10	1.623
34.42	20	SLU	36	93.33	28.15	28.15	28.15	28.15	21847.60	70123.70	3.210
34.42	20	SLU	37	0.00	28.15	28.15	28.15	28.15	7247.07	70123.70	9.676
34.73	20	SLU	37	31.11	14.07	14.07	14.07	14.07	7247.07	35450.10	4.892
35.36	32	SLU	37	93.33	14.07	14.07	14.07	14.07	-5163.84	-35450.10	6.865
35.36	32	SLU	38	0.00	14.07	14.07	14.07	14.07	-11106.40	-35450.10	3.192
35.67	34	SLU	38	31.11	14.07	14.07	14.07	14.07	-12434.20	-35450.10	2.851
36.29	34	SLU	38	93.33	14.07	14.07	14.07	14.07	-12434.20	-35450.10	2.851
36.29	34	SLU	39	0.00	14.07	14.07	14.07	14.07	-16426.70	-35450.10	2.158
36.60	34	SLU	39	31.11	14.07	14.07	14.07	14.07	-17233.70	-35450.10	2.057
37.22	34	SLU	39	93.33	14.07	14.07	14.07	14.07	-17233.70	-35450.10	2.057
37.22	34	SLU	40	0.00	14.07	14.07	14.07	14.07	-19700.60	-35450.10	1.799
37.53	34	SLU	40	31.11	14.07	28.15	14.07	28.15	-20088.70	-35445.00	1.764
38.16	34	SLU	40	93.33	28.15	14.07	28.15	14.07	-20088.70	-69959.00	3.482
38.16	34	SLU	41	0.00	28.15	14.07	28.15	14.07	-20872.30	-69959.00	3.352
39.09	34	SLU	41	93.33	14.07	14.07	14.07	14.07	-20872.30	-35450.10	1.698
39.09	34	SLU	42	0.00	14.07	14.07	14.07	14.07	-21301.40	-35450.10	1.664
40.02	34	SLU	42	93.33	14.07	14.07	14.07	14.07	-20644.90	-35450.10	1.717
40.02	20	SLU	43	0.00	14.07	14.07	14.07	14.07	-17938.00	-35450.10	1.976
40.96	20	SLU	43	93.33	14.07	14.07	14.07	14.07	-16154.80	-35450.10	2.194
40.96	20	SLU	44	0.00	14.07	14.07	14.07	14.07	-7605.73	-35450.10	4.661
41.44	20	SLU	44	48.33	14.07	14.07	14.07	14.07	-7605.73	-35450.10	4.661

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE <cmq>	S AfE <cmq>	I AfEP <cmq>	S AfEP <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.251	SLV (E)	1	25.00	14.07	14.07	14.07	14.07	14.07	-14774.90	-34082.90	2.307
0.981	SLV (E)	1	97.62	14.07	14.07	14.07	14.07	14.07	-14774.90	-34082.90	2.307
0.981	SLV (E)	2	0.00	14.07	14.07	14.07	14.07	14.07	-18620.60	-34082.90	1.830
1.301	SLV (E)	2	32.54	14.07	14.07	14.07	14.07	14.07	-19373.70	-34082.90	1.759
1.951	SLV (E)	2	97.62	14.07	28.15	14.07	28.15	28.15	-19373.70	-34362.70	1.774
1.951	SLV (E)	3	0.00	14.07	28.15	14.07	28.15	28.15	-19162.20	-34362.70	1.793
2.281	SLV (E)	3	32.54	14.07	28.15	14.07	28.15	28.15	-19162.20	-34362.70	1.793
2.931	SLV (E)	3	97.62	14.07	14.07	14.07	14.07	14.07	-19162.20	-34082.90	1.779
2.931	SLV (E)	4	0.00	14.07	14.07	14.07	14.07	14.07	-18401.70	-34082.90	1.852
3.909	SLV (E)	4	97.62	28.15	14.07	28.15	14.07	14.07	-17819.30	-66258.60	3.718
3.909	SLV (E)	5	0.00	28.15	14.07	28.15	14.07	14.07	-15142.50	-66258.60	4.376
4.889	SLV (E)	5	97.62	14.07	14.07	14.07	14.07	14.07	-14012.30	-34082.90	2.432
4.8813	SLV (E)	6	0.00	14.07	14.07	14.07	14.07	14.07	-10087.40	-34082.90	3.379
5.8613	SLV (E)	6	97.62	14.07	28.15	14.07	28.15	28.15	-8892.19	-34362.70	3.864
5.869	SLV (E)	7	0.00	14.07	28.15	14.07	28.15	28.15	-7075.25	-34362.70	4.857
6.831	SLV (E)	7	97.62	14.07	14.07	14.07	14.07	14.07	13031.50	34082.90	2.615
6.831	SLV (E)	8	0.00	14.07	14.07	14.07	14.07	14.07	30619.00	34082.90	1.113
7.581	SLV (E)	8	75.12	28.15	14.07	28.15	14.07	14.07	30697.90	34362.70	1.119
8.0413	SLV (E)	9	22.50	14.07	14.07	14.07	14.07	14.07	13458.70	34082.90	2.532
8.7913	SLV (E)	9	97.80	14.07	14.07	14.07	14.07	14.07	13383.00	34082.90	2.547
8.7913	SLV (E)	10	0.00	14.07	14.07	14.07	14.07	14.07	2846.06	34082.90	11.975
9.1113	SLV (E)	10	32.60	14.07	14.07	14.07	14.07	14.07	-3478.22	-34082.90	9.799
9.7713	SLV (E)	10	97.80	14.07	14.07	14.07	14.07	14.07	-3478.22	-34082.90	9.799
9.7713	SLV (E)	11	0.00	14.07	14.07	14.07	14.07	14.07	-4069.10	-34082.90	8.376
10.7413	SLV (E)	11	97.80	14.07	28.15	14.07	28.15	28.15	-4069.10	-34362.70	8.445
10.7413	SLV (E)	12	0.00	14.07	28.15	14.07	28.15	28.15	-3502.94	-34362.70	9.810
11.725	SLV (E)	12	97.80	28.15	14.07	28.15	14.07	14.07	3027.97	34362.70	11.348
11.7213	SLV (E)	13	0.00	28.15	14.07	28.15	14.07	14.07	14326.20	34362.70	2.399
12.4713	SLV (E)	13	75.30	14.07	14.07	14.07	14.07	14.07	14409.60	34082.90	2.365
12.939	SLV (E)	14	22.50	14.07	14.07	14.07	14.07	14.07	29755.40	34082.90	1.145
13.649	SLV (E)	14	94.50	14.07	14.07	14.07	14.07	14.07	29755.40	34082.90	1.145
13.649	SLV (E)	15	0.00	14.07	14.07	14.07	14.07	14.07	12774.00	34082.90	2.668
13.961	SLV (E)	15	31.50	14.07	28.15	14.07	28.15	28.15	-6685.22	-34362.70	5.140
14.591	SLV (E)	15	94.50	14.07	28.15	14.07	28.15	28.15	-6685.22	-34362.70	5.140
14.591	SLV (E)	16	0.00	14.07	28.15	14.07	28.15	28.15	-7844.04	-34362.70	4.381

Relazione di calcolo

14.90	13	SLV(E)	16	31.50	14.07	14.07	14.07	14.07	-8379.17	-34082.90	4.068
15.54	13	SLV(E)	16	94.50	28.15	14.07	28.15	14.07	-8379.17	-66258.60	7.908
15.54	13	SLV(E)	17	0.00	28.15	14.07	28.15	14.07	-9623.62	-66258.60	6.885
15.85	9	SLV(E)	17	31.50	14.07	14.07	14.07	14.07	-9962.22	-34082.90	3.421
16.48	9	SLV(E)	17	94.50	14.07	14.07	14.07	14.07	-9962.22	-34082.90	3.421
16.48	9	SLV(E)	18	0.00	14.07	14.07	14.07	14.07	-9802.60	-34082.90	3.477
17.43	9	SLV(E)	18	94.50	14.07	28.15	14.07	28.15	-9802.07	-34362.70	3.506
17.43	9	SLV(E)	19	0.00	14.07	28.15	14.07	28.15	-9002.62	-34362.70	3.817
18.37	9	SLV(E)	19	94.50	14.07	28.15	14.07	28.15	-8331.33	-34362.70	4.125
18.37	1	SLV(E)	20	0.00	14.07	28.15	14.07	28.15	10294.40	66258.60	6.436
19.32	1	SLV(E)	20	94.50	28.15	14.07	28.15	14.07	12518.80	34362.70	2.745
19.32	1	SLV(E)	21	0.00	28.15	14.07	28.15	14.07	26290.40	34362.70	1.307
20.04	1	SLV(E)	21	72.00	14.07	14.07	14.07	14.07	26290.40	34082.90	1.296
20.48	9	SLV(E)	22	22.50	14.07	14.07	14.07	14.07	24429.20	34082.90	1.395
21.20	9	SLV(E)	22	94.00	14.07	28.15	14.07	28.15	24429.20	66258.60	2.712
21.20	9	SLV(E)	23	0.00	14.07	28.15	14.07	28.15	11417.80	66258.60	5.803
21.51	9	SLV(E)	23	31.33	14.07	14.07	14.07	14.07	11417.80	34082.90	2.985
22.14	9	SLV(E)	23	94.00	14.07	14.07	14.07	14.07	9337.02	34082.90	3.650
22.14	1	SLV(E)	24	0.00	14.07	14.07	14.07	14.07	-6595.89	-34082.90	5.167
22.45	1	SLV(E)	24	31.33	14.07	14.07	14.07	14.07	-7316.96	-34082.90	4.658
23.08	1	SLV(E)	24	94.00	28.15	14.07	28.15	14.07	-7316.96	-66258.60	9.055
23.08	5	SLV(E)	25	0.00	28.15	14.07	28.15	14.07	-8778.62	-66258.60	7.548
23.39	5	SLV(E)	25	31.33	14.07	14.07	14.07	14.07	-9118.62	-34082.90	3.738
24.02	5	SLV(E)	25	94.00	14.07	14.07	14.07	14.07	-9118.62	-34082.90	3.738
24.02	5	SLV(E)	26	0.00	14.07	14.07	14.07	14.07	-9284.34	-34082.90	3.671
24.96	5	SLV(E)	26	94.00	14.07	14.07	14.07	14.07	-9284.34	-34082.90	3.671
24.96	5	SLV(E)	27	0.00	14.07	14.07	14.07	14.07	-9330.61	-34082.90	3.653
25.90	5	SLV(E)	27	94.00	14.07	14.07	14.07	14.07	-9080.20	-34082.90	3.754
25.90	9	SLV(E)	28	0.00	14.07	14.07	14.07	14.07	-8332.10	-34082.90	4.091
26.84	9	SLV(E)	28	94.00	28.15	28.15	28.15	28.15	-7888.04	-67205.10	8.520
26.84	1	SLV(E)	29	0.00	28.15	28.15	28.15	28.15	6056.70	67205.10	11.096
27.78	9	SLV(E)	29	94.00	14.07	28.15	14.07	28.15	-5016.68	-34362.70	6.850
27.78	1	SLV(E)	30	0.00	14.07	28.15	14.07	28.15	20069.90	66258.60	3.301
28.50	1	SLV(E)	30	71.50	14.07	14.07	14.07	14.07	20069.90	34082.90	1.698
28.95	9	SLV(E)	31	22.50	14.07	14.07	14.07	14.07	19059.60	34082.90	1.788
29.67	9	SLV(E)	31	95.40	14.07	14.07	14.07	14.07	19059.60	34082.90	1.788
29.67	9	SLV(E)	32	0.00	14.07	14.07	14.07	14.07	7837.40	34082.90	4.349
29.99	9	SLV(E)	32	31.80	14.07	14.07	14.07	14.07	7837.40	34082.90	4.349
30.63	9	SLV(E)	32	95.40	28.15	28.15	28.15	28.15	6129.18	67205.10	10.965
30.63	1	SLV(E)	33	0.00	28.15	28.15	28.15	28.15	-2116.67	-67205.10	31.750
31.58	9	SLV(E)	33	95.40	14.07	14.07	14.07	14.07	-1921.88	-34082.90	17.734
31.58	1	SLV(E)	34	0.00	14.07	14.07	14.07	14.07	5794.05	34082.90	5.882
32.54	1	SLV(E)	34	95.40	14.07	14.07	14.07	14.07	7557.40	34082.90	4.510
32.54	1	SLV(E)	35	0.00	14.07	14.07	14.07	14.07	19508.30	34082.90	1.747
33.27	1	SLV(E)	35	72.90	14.07	14.07	14.07	14.07	19508.30	34082.90	1.747
33.72	9	SLV(E)	36	22.50	14.07	14.07	14.07	14.07	23023.90	34082.90	1.480
34.42	9	SLV(E)	36	93.33	28.15	28.15	28.15	28.15	23023.90	67205.10	2.919
34.42	9	SLV(E)	37	0.00	28.15	28.15	28.15	28.15	9767.79	67205.10	6.880
34.73	9	SLV(E)	37	31.11	14.07	14.07	14.07	14.07	9767.79	34082.90	3.489
35.36	9	SLV(E)	37	93.33	14.07	14.07	14.07	14.07	7684.84	34082.90	4.435
35.36	5	SLV(E)	38	0.00	14.07	14.07	14.07	14.07	-8860.96	-34082.90	3.846
35.67	5	SLV(E)	38	31.11	14.07	14.07	14.07	14.07	-9775.88	-34082.90	3.486
36.29	5	SLV(E)	38	93.33	14.07	14.07	14.07	14.07	-9775.88	-34082.90	3.486
36.29	5	SLV(E)	39	0.00	14.07	14.07	14.07	14.07	-12849.70	-34082.90	2.652
36.60	5	SLV(E)	39	31.11	14.07	14.07	14.07	14.07	-13537.50	-34082.90	2.518
37.22	5	SLV(E)	39	93.33	14.07	14.07	14.07	14.07	-13537.50	-34082.90	2.518
37.22	1	SLV(E)	40	0.00	14.07	14.07	14.07	14.07	-16373.20	-34082.90	2.082
37.53	1	SLV(E)	40	31.11	14.07	28.15	14.07	28.15	-16952.50	-34362.70	2.027
38.16	1	SLV(E)	40	93.33	28.15	14.07	28.15	14.07	-16952.50	-66258.60	3.908
38.16	9	SLV(E)	41	0.00	28.15	14.07	28.15	14.07	-18950.70	-66258.60	3.496
39.09	9	SLV(E)	41	93.33	14.07	14.07	14.07	14.07	-19240.20	-34082.90	1.771
39.09	9	SLV(E)	42	0.00	14.07	14.07	14.07	14.07	-19904.10	-34082.90	1.712
40.02	9	SLV(E)	42	93.33	14.07	14.07	14.07	14.07	-19875.20	-34082.90	1.715
40.02	9	SLV(E)	43	0.00	14.07	14.07	14.07	14.07	-19716.30	-34082.90	1.729
40.96	9	SLV(E)	43	93.33	14.07	14.07	14.07	14.07	-18896.60	-34082.90	1.804
40.96	9	SLV(E)	44	0.00	14.07	14.07	14.07	14.07	-14370.90	-34082.90	2.372
41.44	9	SLV(E)	44	48.33	14.07	14.07	14.07	14.07	-14370.90	-34082.90	2.372

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.25	37	SLE R	1	25.00	14.07	14.07	-8124.92	930.21	-186.63	16.58
0.25	29	SLE Q	1	25.00	14.07	14.07	-6130.98	701.92	-140.83	12.51
0.98	37	SLE R	1	97.62	14.07	14.07	-8124.92	930.21	-186.63	16.58
0.98	29	SLE Q	1	97.62	14.07	14.07	-6130.98	701.92	-140.83	12.51
0.98	37	SLE R	2	0.00	14.07	14.07	-13368.00	1530.48	-307.07	27.28
0.98	29	SLE Q	2	0.00	14.07	14.07	-10496.90	1201.77	-241.12	21.42
1.30	37	SLE R	2	32.54	14.07	14.07	-14614.40	1673.17	-335.70	29.82
1.30	29	SLE Q	2	32.54	14.07	14.07	-11561.90	1323.70	-265.58	23.59

Relazione di calcolo

1.95	37	SLE R	2	97.62	14.07	28.15	-14614.40	1661.53	-288.51	26.46
1.95	29	SLE Q	2	97.62	14.07	28.15	-11561.90	1314.48	-228.25	20.93
1.95	37	SLE R	3	0.00	14.07	28.15	-15735.60	1789.00	-310.64	28.49
1.95	29	SLE Q	3	0.00	14.07	28.15	-12553.80	1427.26	-247.83	22.73
2.28	37	SLE R	3	32.54	14.07	28.15	-15937.60	1811.96	-314.63	28.85
2.28	29	SLE Q	3	32.54	14.07	28.15	-12764.80	1451.25	-252.00	23.11
2.93	37	SLE R	3	97.62	14.07	14.07	-15937.60	1824.66	-366.09	32.52
2.93	29	SLE Q	3	97.62	14.07	14.07	-12764.80	1461.42	-293.21	26.05
2.93	37	SLE R	4	0.00	14.07	14.07	-15551.30	1780.44	-357.22	31.73
2.93	29	SLE Q	4	0.00	14.07	14.07	-12420.60	1422.01	-285.31	25.34
3.90	37	SLE R	4	97.62	28.15	14.07	-15318.20	898.38	-298.93	24.36
3.90	29	SLE Q	4	97.62	28.15	14.07	-12265.00	719.31	-239.34	19.51
3.90	37	SLE R	5	0.00	28.15	14.07	-13680.40	802.33	-266.96	21.76
3.90	29	SLE Q	5	0.00	28.15	14.07	-11091.00	650.46	-216.43	17.64
4.88	37	SLE R	5	97.62	14.07	14.07	-12877.40	1474.31	-295.80	26.28
4.88	29	SLE Q	5	97.62	14.07	14.07	-10513.90	1203.72	-241.51	21.45
4.88	37	SLE R	6	0.00	14.07	14.07	-9440.34	1080.81	-216.85	19.26
4.88	29	SLE Q	6	0.00	14.07	14.07	-8053.90	922.08	-185.00	16.43
5.86	37	SLE R	6	97.62	14.07	28.15	-8002.16	909.77	-157.97	14.49
5.86	29	SLE Q	6	97.62	14.07	28.15	-7032.65	799.55	-138.84	12.73
5.86	37	SLE R	7	0.00	14.07	28.15	5311.54	-103.65	311.51	8.45
5.86	29	SLE Q	7	0.00	14.07	28.15	-3004.05	341.53	-59.30	5.44
5.86	29	SLE Q	7	0.00	14.07	28.15	-2990.02	339.94	-59.03	5.41
6.83	37	SLE R	7	97.62	14.07	14.07	7795.61	-179.07	892.50	15.91
6.83	29	SLE Q	7	97.62	14.07	14.07	4187.09	-96.18	479.37	8.54
6.83	37	SLE R	8	0.00	14.07	14.07	21733.10	-499.22	2488.18	44.35
6.83	29	SLE Q	8	0.00	14.07	14.07	13896.20	-319.20	1590.95	28.35
7.58	37	SLE R	8	75.12	28.15	14.07	21795.70	-430.28	2477.98	39.46
7.58	29	SLE Q	8	75.12	28.15	14.07	13939.60	-275.19	1584.81	25.23
8.04	37	SLE R	9	22.50	14.07	14.07	11233.90	-258.05	1286.15	22.92
8.04	29	SLE Q	9	22.50	14.07	14.07	9935.58	-228.22	1137.51	20.27
8.79	37	SLE R	9	97.80	14.07	14.07	11168.00	-256.53	1278.60	22.79
8.79	29	SLE Q	9	97.80	14.07	14.07	9881.42	-226.98	1131.31	20.16
8.79	35	SLE R	10	0.00	14.07	14.07	-2571.13	294.36	-59.06	5.25
8.79	29	SLE Q	10	0.00	14.07	14.07	2139.09	-49.14	244.90	4.36
9.11	35	SLE R	10	32.60	14.07	14.07	-3518.61	402.84	-80.82	7.18
9.11	29	SLE Q	10	32.60	14.07	14.07	-2265.14	259.33	-52.03	4.62
9.77	35	SLE R	10	97.80	14.07	14.07	-3518.61	402.84	-80.82	7.18
9.77	29	SLE Q	10	97.80	14.07	14.07	-2265.14	259.33	-52.03	4.62
9.77	35	SLE R	11	0.00	14.07	14.07	-4016.39	459.83	-92.26	8.20
9.77	29	SLE Q	11	0.00	14.07	14.07	-2776.35	317.86	-63.77	5.67
10.74	35	SLE R	11	97.80	14.07	28.15	-4016.39	456.63	-79.29	7.27
10.74	29	SLE Q	11	97.80	14.07	28.15	-2776.35	315.65	-54.81	5.03
10.74	35	SLE R	12	0.00	14.07	28.15	-3557.92	404.50	-70.24	6.44
10.74	29	SLE Q	12	0.00	14.07	28.15	-2389.93	271.71	-47.18	4.33
11.72	35	SLE R	12	97.80	28.15	14.07	-2574.41	150.98	-50.24	4.09
11.72	37	SLE R	12	97.80	28.15	14.07	1967.14	-38.83	223.65	3.56
11.72	29	SLE Q	12	97.80	28.15	14.07	2132.57	-42.10	242.45	3.86
11.72	37	SLE R	13	0.00	28.15	14.07	11333.60	-223.74	1288.53	20.52
11.72	29	SLE Q	13	0.00	28.15	14.07	10174.50	-200.86	1156.75	18.42
12.47	37	SLE R	13	75.30	14.07	14.07	11399.90	-261.86	1305.15	23.26
12.47	29	SLE Q	13	75.30	14.07	14.07	10231.20	-235.01	1171.35	20.88
12.93	21	SLE R	14	22.50	14.07	14.07	17058.20	-391.83	1952.96	34.81
12.93	29	SLE Q	14	22.50	14.07	14.07	13847.60	-318.08	1585.38	28.26
13.64	21	SLE R	14	94.50	14.07	14.07	17058.20	-391.83	1952.96	34.81
13.64	29	SLE Q	14	94.50	14.07	14.07	13847.60	-318.08	1585.38	28.26
13.64	21	SLE R	15	0.00	14.07	14.07	6020.13	-138.28	689.23	12.28
13.64	29	SLE Q	15	0.00	14.07	14.07	4313.58	-99.08	493.85	8.80
13.96	21	SLE R	15	31.50	14.07	28.15	6020.13	-117.48	353.07	9.57
13.96	37	SLE R	15	31.50	14.07	28.15	-3400.55	386.61	-67.13	6.16
13.96	29	SLE Q	15	31.50	14.07	28.15	4313.58	-84.18	252.98	6.86
14.59	21	SLE R	15	94.50	14.07	28.15	4277.83	-83.48	250.89	6.80
14.59	37	SLE R	15	94.50	14.07	28.15	-3400.55	386.61	-67.13	6.16
14.59	29	SLE Q	15	94.50	14.07	28.15	-2584.14	293.79	-51.01	4.68
14.59	37	SLE R	16	0.00	14.07	28.15	-6985.29	794.16	-137.90	12.65
14.59	29	SLE Q	16	0.00	14.07	28.15	-5903.91	671.22	-116.55	10.69
14.90	37	SLE R	16	31.50	14.07	14.07	-7728.49	884.82	-177.53	15.77
14.90	29	SLE Q	16	31.50	14.07	14.07	-6593.62	754.89	-151.46	13.45
15.54	37	SLE R	16	94.50	28.15	14.07	-7728.49	453.26	-150.82	12.29
15.54	29	SLE Q	16	94.50	28.15	14.07	-6593.62	386.70	-128.67	10.49
15.54	39	SLE R	17	0.00	28.15	14.07	-8714.81	511.11	-170.06	13.86
15.54	29	SLE Q	17	0.00	28.15	14.07	-7522.62	441.19	-146.80	11.96
15.85	39	SLE R	17	31.50	14.07	14.07	-8825.99	1010.47	-202.74	18.01
15.85	29	SLE Q	17	31.50	14.07	14.07	-7639.98	874.69	-175.49	15.59
16.48	39	SLE R	17	94.50	14.07	14.07	-8825.99	1010.47	-202.74	18.01
16.48	29	SLE Q	17	94.50	14.07	14.07	-7639.98	874.69	-175.49	15.59
16.48	39	SLE R	18	0.00	14.07	14.07	-8747.55	1001.49	-200.94	17.85
16.48	29	SLE Q	18	0.00	14.07	14.07	-7582.33	868.09	-174.17	15.47
17.43	39	SLE R	18	94.50	14.07	28.15	-8463.11	962.18	-167.07	15.32

Relazione di calcolo

17.43	29	SLE Q	18	94.50	14.07	28.15	-7341.75	834.69	-144.94	13.29
17.43	39	SLE R	19	0.00	14.07	28.15	-6577.14	747.76	-129.84	11.91
17.43	29	SLE Q	19	0.00	14.07	28.15	-5803.89	659.85	-114.58	10.51
18.37	39	SLE R	19	94.50	14.07	28.15	-5576.00	633.94	-110.08	10.09
18.37	29	SLE Q	19	94.50	14.07	28.15	-4961.78	564.11	-97.95	8.98
18.37	37	SLE R	20	0.00	14.07	28.15	6682.09	-130.40	391.89	10.63
18.37	29	SLE Q	20	0.00	14.07	28.15	5139.98	-100.30	301.45	8.17
19.32	37	SLE R	20	94.50	28.15	14.07	8744.37	-172.63	994.16	15.83
19.32	29	SLE Q	20	94.50	28.15	14.07	6862.70	-135.48	780.23	12.42
19.32	37	SLE R	21	0.00	28.15	14.07	21380.50	-422.08	2430.77	38.70
19.32	29	SLE Q	21	0.00	28.15	14.07	17407.00	-343.64	1979.03	31.51
20.04	37	SLE R	21	72.00	14.07	14.07	21380.50	-491.12	2447.81	43.63
20.04	29	SLE Q	21	72.00	14.07	14.07	17407.00	-399.85	1992.90	35.52
20.48	39	SLE R	22	22.50	14.07	14.07	19043.50	-437.44	2180.26	38.86
20.48	29	SLE Q	22	22.50	14.07	14.07	16849.80	-387.05	1929.10	34.38
21.20	39	SLE R	22	94.00	14.07	28.15	19043.50	-371.62	1116.86	30.29
21.20	29	SLE Q	22	94.00	14.07	28.15	16849.80	-328.81	988.21	26.80
21.20	24	SLE R	23	0.00	14.07	28.15	7664.15	-149.56	449.49	12.19
21.20	29	SLE Q	23	0.00	14.07	28.15	6881.23	-134.28	403.57	10.94
21.51	24	SLE R	23	31.33	14.07	14.07	7664.15	-176.05	877.45	15.64
21.51	29	SLE Q	23	31.33	14.07	14.07	6881.23	-158.06	787.82	14.04
22.14	24	SLE R	23	94.00	14.07	14.07	5859.64	-134.60	670.86	11.96
22.14	29	SLE Q	23	94.00	14.07	14.07	5272.08	-121.10	603.59	10.76
22.14	37	SLE R	24	0.00	14.07	14.07	-5538.29	634.07	-127.22	11.30
22.14	29	SLE Q	24	0.00	14.07	14.07	-4421.02	506.15	-101.55	9.02
22.45	37	SLE R	24	31.33	14.07	14.07	-6452.10	738.69	-148.21	13.17
22.45	29	SLE Q	24	31.33	14.07	14.07	-5265.53	602.84	-120.95	10.74
23.08	37	SLE R	24	94.00	28.15	14.07	-6452.10	378.40	-125.91	10.26
23.08	29	SLE Q	24	94.00	28.15	14.07	-5265.53	308.81	-102.75	8.37
23.08	39	SLE R	25	0.00	28.15	14.07	-8507.84	498.97	-166.03	13.53
23.08	29	SLE Q	25	0.00	28.15	14.07	-7120.30	417.59	-138.95	11.32
23.39	39	SLE R	25	31.33	14.07	14.07	-8916.10	1020.79	-204.81	18.19
23.39	29	SLE Q	25	31.33	14.07	14.07	-7499.71	858.63	-172.27	15.30
24.02	39	SLE R	25	94.00	14.07	14.07	-8916.10	1020.79	-204.81	18.19
24.02	29	SLE Q	25	94.00	14.07	14.07	-7499.71	858.63	-172.27	15.30
24.02	39	SLE R	26	0.00	14.07	14.07	-9247.08	1058.68	-212.41	18.87
24.02	29	SLE Q	26	0.00	14.07	14.07	-7861.31	900.03	-180.58	16.04
24.96	39	SLE R	26	94.00	14.07	14.07	-9247.24	1058.70	-212.41	18.87
24.96	29	SLE Q	26	94.00	14.07	14.07	-7882.04	902.40	-181.05	16.08
24.96	39	SLE R	27	0.00	14.07	14.07	-9259.54	1060.11	-212.70	18.89
24.96	29	SLE Q	27	0.00	14.07	14.07	-7903.46	904.85	-181.55	16.13
25.90	39	SLE R	27	94.00	14.07	14.07	-8986.45	1028.84	-206.42	18.34
25.90	29	SLE Q	27	94.00	14.07	14.07	-7690.50	880.47	-176.65	15.69
25.90	39	SLE R	28	0.00	14.07	14.07	-7520.81	861.04	-172.76	15.35
25.90	29	SLE Q	28	0.00	14.07	14.07	-6577.68	753.07	-151.09	13.42
26.84	39	SLE R	28	94.00	28.15	28.15	-6745.73	391.18	-116.00	9.61
26.84	29	SLE Q	28	94.00	28.15	28.15	-5952.45	345.18	-102.36	8.48
26.84	24	SLE R	29	0.00	28.15	28.15	-3321.65	192.62	-57.12	4.73
26.84	29	SLE Q	29	0.00	28.15	28.15	-3019.83	175.12	-51.93	4.30
27.78	37	SLE R	29	94.00	14.07	28.15	4960.38	-96.80	290.92	7.89
27.78	29	SLE Q	29	94.00	14.07	28.15	3138.90	-61.25	184.09	4.99
27.78	37	SLE R	30	0.00	14.07	28.15	15213.20	-296.88	892.22	24.20
27.78	29	SLE Q	30	0.00	14.07	28.15	11284.30	-220.21	661.80	17.95
28.50	37	SLE R	30	71.50	14.07	14.07	15213.20	-349.45	1741.73	31.04
28.50	29	SLE Q	30	71.50	14.07	14.07	11284.30	-259.20	1291.92	23.03
28.95	39	SLE R	31	22.50	14.07	14.07	13911.00	-319.54	1592.64	28.39
28.95	29	SLE Q	31	22.50	14.07	14.07	12531.80	-287.86	1434.74	25.57
29.67	39	SLE R	31	95.40	14.07	14.07	13911.00	-319.54	1592.64	28.39
29.67	29	SLE Q	31	95.40	14.07	14.07	12531.80	-287.86	1434.74	25.57
29.67	24	SLE R	32	0.00	14.07	14.07	4615.54	-106.02	528.42	9.42
29.67	29	SLE Q	32	0.00	14.07	14.07	4200.21	-96.48	480.87	8.57
29.99	24	SLE R	32	31.80	14.07	14.07	4615.54	-106.02	528.42	9.42
29.99	29	SLE Q	32	31.80	14.07	14.07	4200.21	-96.48	480.87	8.57
30.63	24	SLE R	32	95.40	28.15	28.15	3306.67	-56.86	191.75	4.71
30.63	29	SLE Q	32	95.40	28.15	28.15	3022.56	-51.98	175.28	4.31
30.63	37	SLE R	33	0.00	28.15	28.15	-1400.09	81.19	-24.08	1.99
30.63	29	SLE Q	33	0.00	28.15	28.15	-1115.87	64.71	-19.19	1.59
31.58	37	SLE R	33	95.40	14.07	14.07	-1400.09	160.29	-32.16	2.86
31.58	29	SLE Q	33	95.40	14.07	14.07	-1115.87	127.75	-25.63	2.28
31.58	37	SLE R	34	0.00	14.07	14.07	3558.90	-81.75	407.45	7.26
31.58	29	SLE Q	34	0.00	14.07	14.07	2750.51	-63.18	314.90	5.61
32.54	37	SLE R	34	95.40	14.07	14.07	4964.55	-114.04	568.38	10.13
32.54	29	SLE Q	34	95.40	14.07	14.07	3913.11	-89.89	448.00	7.98
32.54	37	SLE R	35	0.00	14.07	14.07	14949.80	-343.40	1711.58	30.50
32.54	29	SLE Q	35	0.00	14.07	14.07	12311.90	-282.81	1409.56	25.12
33.27	37	SLE R	35	72.90	14.07	14.07	14949.80	-343.40	1711.58	30.50
33.27	29	SLE Q	35	72.90	14.07	14.07	12311.90	-282.81	1409.56	25.12
33.72	24	SLE R	36	22.50	14.07	14.07	15790.50	-362.71	1807.82	32.22
33.72	29	SLE Q	36	22.50	14.07	14.07	14422.60	-331.29	1651.22	29.43

Relazione di calcolo

34.42	24	SLE R	36	93.33	28.15	28.15	15790.50	-271.53	915.67	22.50
34.42	29	SLE Q	36	93.33	28.15	28.15	14422.60	-248.01	836.35	20.55
34.42	24	SLE R	37	0.00	28.15	28.15	5255.93	-90.38	304.79	7.49
34.42	29	SLE Q	37	0.00	28.15	28.15	4849.81	-83.40	281.24	6.91
34.73	24	SLE R	37	31.11	14.07	14.07	5255.93	-120.73	601.74	10.72
34.73	29	SLE Q	37	31.11	14.07	14.07	4849.81	-111.40	555.25	9.90
35.36	37	SLE R	37	93.33	14.07	14.07	-3629.58	415.54	-83.37	7.41
35.36	29	SLE Q	37	93.33	14.07	14.07	3335.27	-76.61	381.85	6.81
35.36	37	SLE R	38	0.00	14.07	14.07	-7945.16	909.63	-182.50	16.21
35.36	29	SLE Q	38	0.00	14.07	14.07	-6650.74	761.43	-152.77	13.57
35.67	39	SLE R	38	31.11	14.07	14.07	-8907.68	1019.82	-204.61	18.18
35.67	29	SLE Q	38	31.11	14.07	14.07	-7551.32	864.54	-173.46	15.41
36.29	39	SLE R	38	93.33	14.07	14.07	-8907.68	1019.82	-204.61	18.18
36.29	29	SLE Q	38	93.33	14.07	14.07	-7551.32	864.54	-173.46	15.41
36.29	39	SLE R	39	0.00	14.07	14.07	-11794.70	1350.35	-270.93	24.07
36.29	29	SLE Q	39	0.00	14.07	14.07	-10257.90	1174.40	-235.63	20.93
36.60	39	SLE R	39	31.11	14.07	14.07	-12381.90	1417.58	-284.42	25.26
36.60	29	SLE Q	39	31.11	14.07	14.07	-10826.80	1239.54	-248.70	22.09
37.22	39	SLE R	39	93.33	14.07	14.07	-12381.90	1417.58	-284.42	25.26
37.22	29	SLE Q	39	93.33	14.07	14.07	-10826.80	1239.54	-248.70	22.09
37.22	39	SLE R	40	0.00	14.07	14.07	-14171.10	1622.42	-325.52	28.92
37.22	29	SLE Q	40	0.00	14.07	14.07	-12607.30	1443.38	-289.59	25.72
37.53	39	SLE R	40	31.11	14.07	28.15	-14458.10	1643.76	-285.42	26.17
37.53	29	SLE Q	40	31.11	14.07	28.15	-12926.00	1469.57	-255.18	23.40
38.16	39	SLE R	40	93.33	28.15	14.07	-14458.10	847.94	-282.14	22.99
38.16	29	SLE Q	40	93.33	28.15	14.07	-12926.00	758.08	-252.24	20.56
38.16	39	SLE R	41	0.00	28.15	14.07	-15030.70	881.52	-293.31	23.91
38.16	29	SLE Q	41	0.00	28.15	14.07	-13681.20	802.37	-266.98	21.76
39.09	39	SLE R	41	93.33	14.07	14.07	-15030.70	1720.84	-345.26	30.67
39.09	29	SLE Q	41	93.33	14.07	14.07	-13686.80	1566.98	-314.39	27.93
39.09	39	SLE R	42	0.00	14.07	14.07	-15357.40	1758.24	-352.77	31.34
39.09	29	SLE Q	42	0.00	14.07	14.07	-14117.60	1616.30	-324.29	28.81
40.02	39	SLE R	42	93.33	14.07	14.07	-14892.40	1705.00	-342.08	30.39
40.02	29	SLE Q	42	93.33	14.07	14.07	-13800.70	1580.02	-317.01	28.16
40.02	24	SLE R	43	0.00	14.07	14.07	-12955.60	1483.27	-297.60	26.44
40.02	29	SLE Q	43	0.00	14.07	14.07	-12217.90	1398.81	-280.65	24.93
40.96	24	SLE R	43	93.33	14.07	14.07	-11674.20	1336.56	-268.16	23.82
40.96	29	SLE Q	43	93.33	14.07	14.07	-11091.70	1269.87	-254.78	22.63
40.96	24	SLE R	44	0.00	14.07	14.07	-5531.92	633.34	-127.07	11.29
40.96	29	SLE Q	44	0.00	14.07	14.07	-5670.08	649.16	-130.24	11.57
41.44	24	SLE R	44	48.33	14.07	14.07	-5531.92	633.34	-127.07	11.29
41.44	29	SLE Q	44	48.33	14.07	14.07	-5670.08	649.16	-130.24	11.57

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmqs>	ε _{sm}	Wk <mm>
61	0.25	29	SLE Q	1	4	25.00	-6130.98	27.00	135.67	0.50	16.00	143.53	14.07	787.50	701.92	0.20	0.05
77	0.25	42	SLE F	1	4	25.00	-6580.94	27.00	135.67	0.50	16.00	143.53	14.07	787.50	753.44	0.22	0.05
143	0.98	29	SLE Q	1	4	97.62	-6130.98	27.00	135.67	0.50	16.00	143.53	14.07	787.50	701.92	0.20	0.05
159	0.98	42	SLE F	1	4	97.62	-6580.94	27.00	135.67	0.50	16.00	143.53	14.07	787.50	753.44	0.22	0.05
202	0.98	29	SLE Q	2	4	0.00	-10496.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1201.77	0.35	0.09
210	0.98	42	SLE F	2	4	0.00	-11048.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1264.92	0.37	0.09
250	1.30	29	SLE Q	2	4	32.54	-11561.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1323.70	0.39	0.09
258	1.30	42	SLE F	2	4	32.54	-12131.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1388.89	0.40	0.10
295	1.95	29	SLE Q	2	4	97.62	-11561.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1314.48	0.38	0.09
303	1.95	42	SLE F	2	4	97.62	-12131.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1379.23	0.40	0.10
340	1.95	29	SLE Q	3	4	0.00	-12553.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1427.26	0.42	0.10
348	1.95	42	SLE F	3	4	0.00	-13113.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1490.89	0.43	0.11
385	2.28	29	SLE Q	3	4	32.54	-12764.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1451.25	0.42	0.10
393	2.28	42	SLE F	3	4	32.54	-13316.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1513.98	0.44	0.11
430	2.93	29	SLE Q	3	4	97.62	-12764.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1461.42	0.43	0.10
438	2.93	42	SLE F	3	4	97.62	-13316.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1524.60	0.44	0.11
475	2.93	29	SLE Q	4	4	0.00	-12420.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1422.01	0.41	0.10
483	2.93	42	SLE F	4	4	0.00	-12962.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1484.08	0.43	0.11
520	3.90	29	SLE Q	4	4	97.62	-12265.00	27.00	62.62	0.50	16.00	98.76	28.15	787.50	719.31	0.21	0.04
528	3.90	42	SLE F	4	4	97.62	-12789.90	27.00	62.62	0.50	16.00	98.76	28.15	787.50	750.10	0.22	0.04
565	3.90	29	SLE Q	5	4	0.00	-11091.00	27.00	62.62	0.50	16.00	98.76	28.15	787.50	650.46	0.19	0.03
573	3.90	42	SLE F	5	4	0.00	-11527.70	27.00	62.62	0.50	16.00	98.76	28.15	787.50	676.07	0.20	0.03
610	4.88	29	SLE Q	5	4	97.62	-10513.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1203.72	0.35	0.09
618	4.88	42	SLE F	5	4	97.62	-10911.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1249.27	0.36	0.09
655	4.88	29	SLE Q	6	4	0.00	-8053.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	922.08	0.27	0.07
663	4.88	42	SLE F	6	4	0.00	-8287.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	948.77	0.28	0.07
700	5.86	29	SLE Q	6	4	97.62	-7032.65	27.00	135.67	0.50	16.00	143.53	14.07	787.50	799.55	0.23	0.06
708	5.86	42	SLE F	6	4	97.62	-7196.69	27.00	135.67	0.50	16.00	143.53	14.07	787.50	818.20	0.24	0.06
772	5.86	29	SLE Q	7	4	0.00	-2990.02	27.00	135.67	0.50	16.00	143.53	14.07	787.50	339.94	0.10	0.02
782	5.86	28	SLE F	7	4	0.00	-3040.29	27.00	135.67	0.50	16.00	143.53	14.07	787.50	345.65	0.10	0.02
847	6.83	29	SLE Q	7	4	97.62	4187.09	27.00	135.67	0.50	16.00	143.53	14.07	787.50	479.37	0.14	0.03
863	6.83	42	SLE F	7	4	97.62	4785.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	547.92	0.16	0.04
908	6.83	29	SLE Q	8	4	0.00	13896.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1590.95	0.46	0.11

Relazione di calcolo

916	6.83	42	SLE F	8	4	0.00	15183.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1738.34	0.51	0.12
958	7.58	29	SLE Q	8	4	75.12	13939.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1584.81	0.46	0.11
966	7.58	42	SLE F	8	4	75.12	15230.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1731.52	0.50	0.12
1003	8.04	29	SLE Q	9	4	22.50	9935.58	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1137.51	0.33	0.08
1011	8.04	42	SLE F	9	4	22.50	10283.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1177.32	0.34	0.08
1048	8.79	29	SLE Q	9	4	97.80	9881.42	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1131.31	0.33	0.08
1056	8.79	42	SLE F	9	4	97.80	10227.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1170.88	0.34	0.08
1128	8.79	29	SLE Q	10	4	0.00	2139.09	27.00	135.67	0.50	16.00	143.53	14.07	787.50	244.90	0.07	0.02
1144	8.79	42	SLE F	10	4	0.00	2195.77	27.00	135.67	0.50	16.00	143.53	14.07	787.50	251.39	0.07	0.02
1217	9.11	29	SLE Q	10	4	32.60	-2265.14	27.00	135.67	0.50	16.00	143.53	14.07	787.50	259.33	0.08	0.02
1221	9.11	25	SLE F	10	4	32.60	-2684.73	27.00	135.67	0.50	16.00	143.53	14.07	787.50	307.37	0.09	0.02
1305	9.77	29	SLE Q	10	4	97.80	-2265.14	27.00	135.67	0.50	16.00	143.53	14.07	787.50	259.33	0.08	0.02
1309	9.77	25	SLE F	10	4	97.80	-2684.73	27.00	135.67	0.50	16.00	143.53	14.07	787.50	307.37	0.09	0.02
1361	9.77	29	SLE Q	11	4	0.00	-2776.35	27.00	135.67	0.50	16.00	143.53	14.07	787.50	317.86	0.09	0.02
1363	9.77	25	SLE F	11	4	0.00	-3180.19	27.00	135.67	0.50	16.00	143.53	14.07	787.50	364.09	0.11	0.03
1406	10.74	29	SLE Q	11	4	97.80	-2776.35	27.00	135.67	0.50	16.00	143.53	14.07	787.50	315.65	0.09	0.02
1408	10.74	25	SLE F	11	4	97.80	-3180.19	27.00	135.67	0.50	16.00	143.53	14.07	787.50	361.56	0.11	0.03
1485	10.74	29	SLE Q	12	4	0.00	-2389.93	27.00	135.67	0.50	16.00	143.53	14.07	787.50	271.71	0.08	0.02
1489	10.74	25	SLE F	12	4	0.00	-2817.81	27.00	135.67	0.50	16.00	143.53	14.07	787.50	320.36	0.09	0.02
1574	11.72	29	SLE Q	12	4	97.80	2132.57	27.00	135.67	0.50	16.00	143.53	14.07	787.50	242.45	0.07	0.02
1590	11.72	42	SLE F	12	4	97.80	2188.85	27.00	135.67	0.50	16.00	143.53	14.07	787.50	248.85	0.07	0.02
1630	11.72	29	SLE Q	13	4	0.00	10174.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1156.75	0.34	0.08
1638	11.72	42	SLE F	13	4	0.00	10469.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1190.24	0.35	0.08
1675	12.47	29	SLE Q	13	4	75.30	10231.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1171.35	0.34	0.08
1683	12.47	42	SLE F	13	4	75.30	10527.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1205.27	0.35	0.09
1724	12.93	29	SLE Q	14	4	22.50	13847.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1585.38	0.46	0.11
1726	12.93	25	SLE F	14	4	22.50	15147.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1734.17	0.51	0.12
1773	13.64	29	SLE Q	14	4	94.50	13847.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1585.38	0.46	0.11
1775	13.64	25	SLE F	14	4	94.50	15147.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1734.17	0.51	0.12
1843	13.64	29	SLE Q	15	4	0.00	4313.58	27.00	135.67	0.50	16.00	143.53	14.07	787.50	493.85	0.14	0.04
1847	13.64	25	SLE F	15	4	0.00	5075.55	27.00	135.67	0.50	16.00	143.53	14.07	787.50	581.09	0.17	0.04
1925	13.96	29	SLE Q	15	4	31.50	-2584.14	27.00	135.67	0.50	16.00	143.53	14.07	787.50	293.79	0.09	0.02
1941	13.96	42	SLE F	15	4	31.50	-2827.49	27.00	135.67	0.50	16.00	143.53	14.07	787.50	321.46	0.09	0.02
2007	14.59	29	SLE Q	15	4	94.50	-2584.14	27.00	135.67	0.50	16.00	143.53	14.07	787.50	293.79	0.09	0.02
2023	14.59	42	SLE F	15	4	94.50	-2827.49	27.00	135.67	0.50	16.00	143.53	14.07	787.50	321.46	0.09	0.02
2066	14.59	29	SLE Q	16	4	0.00	-5903.91	27.00	135.67	0.50	16.00	143.53	14.07	787.50	671.22	0.20	0.05
2074	14.59	42	SLE F	16	4	0.00	-6117.51	27.00	135.67	0.50	16.00	143.53	14.07	787.50	695.51	0.20	0.05
2114	14.90	29	SLE Q	16	4	31.50	-6593.62	27.00	135.67	0.50	16.00	143.53	14.07	787.50	754.89	0.22	0.05
2122	14.90	42	SLE F	16	4	31.50	-6800.09	27.00	135.67	0.50	16.00	143.53	14.07	787.50	778.53	0.23	0.06
2159	15.54	29	SLE Q	16	4	94.50	-6593.62	27.00	62.62	0.50	16.00	98.76	28.15	787.50	386.70	0.11	0.02
2167	15.54	42	SLE F	16	4	94.50	-6800.09	27.00	62.62	0.50	16.00	98.76	28.15	787.50	398.81	0.12	0.02
2204	15.54	29	SLE Q	17	4	0.00	-7522.62	27.00	62.62	0.50	16.00	98.76	28.15	787.50	441.19	0.13	0.02
2212	15.54	42	SLE F	17	4	0.00	-7683.12	27.00	62.62	0.50	16.00	98.76	28.15	787.50	450.60	0.13	0.02
2249	15.85	29	SLE Q	17	4	31.50	-7639.98	27.00	135.67	0.50	16.00	143.53	14.07	787.50	874.69	0.25	0.06
2257	15.85	42	SLE F	17	4	31.50	-7787.36	27.00	135.67	0.50	16.00	143.53	14.07	787.50	891.56	0.26	0.06
2294	16.48	29	SLE Q	17	4	94.50	-7639.98	27.00	135.67	0.50	16.00	143.53	14.07	787.50	874.69	0.25	0.06
2302	16.48	42	SLE F	17	4	94.50	-7787.36	27.00	135.67	0.50	16.00	143.53	14.07	787.50	891.56	0.26	0.06
2339	16.48	29	SLE Q	18	4	0.00	-7582.33	27.00	135.67	0.50	16.00	143.53	14.07	787.50	868.09	0.25	0.06
2347	16.48	42	SLE F	18	4	0.00	-7725.37	27.00	135.67	0.50	16.00	143.53	14.07	787.50	884.46	0.26	0.06
2384	17.43	29	SLE Q	18	4	94.50	-7341.75	27.00	135.67	0.50	16.00	143.53	14.07	787.50	834.69	0.24	0.06
2389	17.43	28	SLE F	18	4	94.50	-7473.35	27.00	135.67	0.50	16.00	143.53	14.07	787.50	849.65	0.25	0.06
2432	17.43	29	SLE Q	19	4	0.00	-5803.89	27.00	135.67	0.50	16.00	143.53	14.07	787.50	659.85	0.19	0.05
2437	17.43	28	SLE F	19	4	0.00	-5900.81	27.00	135.67	0.50	16.00	143.53	14.07	787.50	670.87	0.20	0.05
2483	18.37	29	SLE Q	19	4	94.50	-4961.78	27.00	135.67	0.50	16.00	143.53	14.07	787.50	564.11	0.16	0.04
2488	18.37	28	SLE F	19	4	94.50	-5041.79	27.00	135.67	0.50	16.00	143.53	14.07	787.50	573.21	0.17	0.04
2556	18.37	29	SLE Q	20	4	0.00	5139.98	27.00	62.62	0.50	16.00	98.76	28.15	787.50	301.45	0.09	0.01
2572	18.37	42	SLE F	20	4	0.00	5426.97	27.00	62.62	0.50	16.00	98.76	28.15	787.50	318.28	0.09	0.02
2618	19.32	29	SLE Q	20	4	94.50	6862.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	780.23	0.23	0.06
2626	19.32	42	SLE F	20	4	94.50	7201.84	27.00	135.67	0.50	16.00	143.53	14.07	787.50	818.79	0.24	0.06
2663	19.32	29	SLE Q	21	4	0.00	17407.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1979.03	0.65	0.16
2671	19.32	42	SLE F	21	4	0.00	18071.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	2054.54	0.60	0.15
2708	20.04	29	SLE Q	21	4	72.00	17407.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1992.90	0.66	0.16
2716	20.04	42	SLE F	21	4	72.00	18071.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	2068.94	0.60	0.15
2753	20.48	29	SLE Q	22	4	22.50	16849.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1929.10	0.63	0.15
2758	20.48	28	SLE F	22	4	22.50	17239.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1973.67	0.57	0.14
2798	21.20	29	SLE Q	22	4	94.00	16849.80	27.00	62.62	0.50	16.00	98.76	28.15	787.50	988.21	0.31	0.05
2803	21.20	28	SLE F	22	4	94.00	17239.10	27.00	62.62	0.50	16.00	98.76	28.15	787.50	1011.04	0.29	0.05
2849	21.20	29	SLE Q	23	4	0.00	6881.23	27.00	62.62	0.50	16.00	98.76	28.15	787.50	403.57	0.12	0.02
2854	21.20	28	SLE F	23	4	0.00	7041.09	27.00	62.62	0.50	16.00	98.76	28.15	787.50	412.94	0.12	0.02
2923	21.51	29	SLE Q	23	4	31.33	6881.23	27.00	135.67	0.50	16.00	143.53	14.07	787.50	787.82	0.23	0.06
2933	21.51	28	SLE F	23	4	31.33	7041.09	27.00	135.67	0.50	16.00	143.53	14.07	787.50	806.12	0.23	

Relazione di calcolo

3211	23.08	29	SLE Q	25	4	0.00	-7120.30	27.00	62.62	0.50	16.00	98.76	28.15	787.50	417.59	0.12	0.02
3219	23.08	42	SLE F	25	4	0.00	-7312.81	27.00	62.62	0.50	16.00	98.76	28.15	787.50	428.88	0.12	0.02
3256	23.39	29	SLE Q	25	4	31.33	-7499.71	27.00	135.67	0.50	16.00	143.53	14.07	787.50	858.63	0.25	0.06
3264	23.39	42	SLE F	25	4	31.33	-7691.05	27.00	135.67	0.50	16.00	143.53	14.07	787.50	880.53	0.26	0.06
3301	24.02	29	SLE Q	25	4	94.00	-7499.71	27.00	135.67	0.50	16.00	143.53	14.07	787.50	858.63	0.25	0.06
3309	24.02	42	SLE F	25	4	94.00	-7691.05	27.00	135.67	0.50	16.00	143.53	14.07	787.50	880.53	0.26	0.06
3346	24.02	29	SLE Q	26	4	0.00	-7861.31	27.00	135.67	0.50	16.00	143.53	14.07	787.50	900.03	0.26	0.06
3351	24.02	28	SLE F	26	4	0.00	-8034.59	27.00	135.67	0.50	16.00	143.53	14.07	787.50	919.87	0.27	0.07
3391	24.96	29	SLE Q	26	4	94.00	-7882.04	27.00	135.67	0.50	16.00	143.53	14.07	787.50	902.40	0.26	0.06
3396	24.96	28	SLE F	26	4	94.00	-8053.66	27.00	135.67	0.50	16.00	143.53	14.07	787.50	922.05	0.27	0.07
3436	24.96	29	SLE Q	27	4	0.00	-7903.46	27.00	135.67	0.50	16.00	143.53	14.07	787.50	904.85	0.26	0.06
3441	24.96	28	SLE F	27	4	0.00	-8076.13	27.00	135.67	0.50	16.00	143.53	14.07	787.50	924.62	0.27	0.07
3481	25.90	29	SLE Q	27	4	94.00	-7690.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	880.47	0.26	0.06
3486	25.90	28	SLE F	27	4	94.00	-7860.54	27.00	135.67	0.50	16.00	143.53	14.07	787.50	899.94	0.26	0.06
3526	25.90	29	SLE Q	28	4	0.00	-6577.68	27.00	135.67	0.50	16.00	143.53	14.07	787.50	753.07	0.22	0.05
3531	25.90	28	SLE F	28	4	0.00	-6722.63	27.00	135.67	0.50	16.00	143.53	14.07	787.50	769.66	0.22	0.05
3571	26.84	29	SLE Q	28	4	94.00	-5952.45	27.00	62.62	0.50	16.00	98.76	28.15	787.50	345.18	0.10	0.02
3576	26.84	28	SLE F	28	4	94.00	-6085.64	27.00	62.62	0.50	16.00	98.76	28.15	787.50	352.90	0.10	0.02
3646	26.84	29	SLE Q	29	4	0.00	-3019.83	27.00	62.62	0.50	16.00	98.76	28.15	787.50	175.12	0.05	0.01
3656	26.84	28	SLE F	29	4	0.00	-3088.82	27.00	62.62	0.50	16.00	98.76	28.15	787.50	179.12	0.05	0.01
3729	27.78	29	SLE Q	29	4	94.00	-1811.43	27.00	135.67	0.50	16.00	143.53	14.07	787.50	205.94	0.06	0.01
3739	27.78	28	SLE F	29	4	94.00	-1855.34	27.00	135.67	0.50	16.00	143.53	14.07	787.50	210.94	0.06	0.01
3787	27.78	29	SLE Q	30	4	0.00	11284.30	27.00	62.62	0.50	16.00	98.76	28.15	787.50	661.80	0.19	0.03
3795	27.78	42	SLE F	30	4	0.00	11957.90	27.00	62.62	0.50	16.00	98.76	28.15	787.50	701.31	0.20	0.03
3835	28.50	29	SLE Q	30	4	71.50	11284.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1291.92	0.38	0.09
3843	28.50	42	SLE F	30	4	71.50	11957.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1369.04	0.40	0.10
3880	28.95	29	SLE Q	31	4	22.50	12531.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1434.74	0.42	0.10
3885	28.95	28	SLE F	31	4	22.50	12827.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1468.57	0.43	0.10
3925	29.67	29	SLE Q	31	4	95.40	12531.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1434.74	0.42	0.10
3930	29.67	28	SLE F	31	4	95.40	12827.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1468.57	0.43	0.10
3978	29.67	29	SLE Q	32	4	0.00	4200.21	27.00	135.67	0.50	16.00	143.53	14.07	787.50	480.87	0.14	0.03
3983	29.67	28	SLE F	32	4	0.00	4302.49	27.00	135.67	0.50	16.00	143.53	14.07	787.50	492.58	0.14	0.04
4052	29.99	29	SLE Q	32	4	31.80	4200.21	27.00	135.67	0.50	16.00	143.53	14.07	787.50	480.87	0.14	0.03
4062	29.99	28	SLE F	32	4	31.80	4302.49	27.00	135.67	0.50	16.00	143.53	14.07	787.50	492.58	0.14	0.04
4136	30.63	29	SLE Q	32	4	95.40	3022.56	27.00	62.62	0.50	16.00	98.76	28.15	787.50	175.28	0.05	0.01
4146	30.63	28	SLE F	32	4	95.40	3095.23	27.00	62.62	0.50	16.00	98.76	28.15	787.50	179.49	0.05	0.01
4194	30.63	29	SLE Q	33	4	0.00	-1115.87	27.00	62.62	0.50	16.00	98.76	28.15	787.50	64.71	0.02	0.00
4202	30.63	42	SLE F	33	4	0.00	-1155.72	27.00	62.62	0.50	16.00	98.76	28.15	787.50	67.02	0.02	0.00
4240	31.58	29	SLE Q	33	4	95.40	-1115.87	27.00	135.67	0.50	16.00	143.53	14.07	787.50	127.75	0.04	0.01
4248	31.58	42	SLE F	33	4	95.40	-1155.72	27.00	135.67	0.50	16.00	143.53	14.07	787.50	132.32	0.04	0.01
4315	31.58	29	SLE Q	34	4	0.00	2750.51	27.00	135.67	0.50	16.00	143.53	14.07	787.50	314.90	0.09	0.02
4331	31.58	42	SLE F	34	4	0.00	2881.27	27.00	135.67	0.50	16.00	143.53	14.07	787.50	329.87	0.10	0.02
4378	32.54	29	SLE Q	34	4	95.40	3913.11	27.00	135.67	0.50	16.00	143.53	14.07	787.50	448.00	0.13	0.03
4386	32.54	42	SLE F	34	4	95.40	4080.77	27.00	135.67	0.50	16.00	143.53	14.07	787.50	467.20	0.14	0.03
4423	32.54	29	SLE Q	35	4	0.00	12311.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1409.56	0.41	0.10
4431	32.54	42	SLE F	35	4	0.00	12722.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1456.56	0.42	0.10
4468	33.27	29	SLE Q	35	4	72.90	12311.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1409.56	0.41	0.10
4476	33.27	42	SLE F	35	4	72.90	12722.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1456.56	0.42	0.10
4513	33.72	29	SLE Q	36	4	22.50	14422.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1651.22	0.49	0.12
4518	33.72	28	SLE F	36	4	22.50	14744.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1688.07	0.49	0.12
4558	34.42	29	SLE Q	36	4	93.33	14422.60	27.00	62.62	0.50	16.00	98.76	28.15	787.50	836.35	0.24	0.04
4563	34.42	28	SLE F	36	4	93.33	14744.50	27.00	62.62	0.50	16.00	98.76	28.15	787.50	855.02	0.25	0.04
4632	34.42	29	SLE Q	37	4	0.00	4849.81	27.00	62.62	0.50	16.00	98.76	28.15	787.50	281.24	0.08	0.01
4642	34.42	28	SLE F	37	4	0.00	4961.62	27.00	62.62	0.50	16.00	98.76	28.15	787.50	287.72	0.08	0.01
4722	34.73	29	SLE Q	37	4	31.11	4849.81	27.00	135.67	0.50	16.00	143.53	14.07	787.50	555.25	0.16	0.04
4732	34.73	28	SLE F	37	4	31.11	4961.62	27.00	135.67	0.50	16.00	143.53	14.07	787.50	568.05	0.17	0.04
4811	35.36	29	SLE Q	37	4	93.33	3335.27	27.00	135.67	0.50	16.00	143.53	14.07	787.50	381.85	0.11	0.03
4821	35.36	28	SLE F	37	4	93.33	3413.03	27.00	135.67	0.50	16.00	143.53	14.07	787.50	390.75	0.11	0.03
4866	35.36	29	SLE Q	38	4	0.00	-6650.74	27.00	135.67	0.50	16.00	143.53	14.07	787.50	761.43	0.22	0.05
4874	35.36	42	SLE F	38	4	0.00	-6838.85	27.00	135.67	0.50	16.00	143.53	14.07	787.50	782.97	0.23	0.06
4911	35.67	29	SLE Q	38	4	31.11	-7551.32	27.00	135.67	0.50	16.00	143.53	14.07	787.50	864.54	0.25	0.06
4919	35.67	42	SLE F	38	4	31.11	-7737.45	27.00	135.67	0.50	16.00	143.53	14.07	787.50	885.85	0.26	0.06
4956	36.29	29	SLE Q	38	4	93.33	-7551.32	27.00	135.67	0.50	16.00	143.53	14.07	787.50	864.54	0.25	0.06
4964	36.29	42	SLE F	38	4	93.33	-7737.45	27.00	135.67	0.50	16.00	143.53	14.07	787.50	885.85	0.26	0.06
5001	36.29	29	SLE Q	39	4	0.00	-10257.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1174.40	0.34	0.08
5006	36.29	28	SLE F	39	4	0.00	-10443.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1195.68	0.35	0.08
5046	36.60	29	SLE Q	39	4	31.11	-10826.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1239.54	0.36	0.09
5051	36.60	28	SLE F	39	4	31.11	-11020.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1261.70	0.37	0.09
5091	37.22	29	SLE Q	39	4	93.33	-10826.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1239.54	0.36	0.09
5096	37.22	28	SLE F	39	4	93.33	-11020.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1261.70	0.37	0.09
5136	37.22	29	SLE Q	40	4	0.00	-12607.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	144		

Relazione di calcolo

5321	39.09	28	SLE F	41	4	93.33	-13913.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1592.95	0.46	0.11
5361	39.09	29	SLE Q	42	4	0.00	-14117.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1616.30	0.47	0.12
5366	39.09	28	SLE F	42	4	0.00	-14350.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1642.97	0.48	0.12
5406	40.02	29	SLE Q	42	4	93.33	-13800.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1580.02	0.46	0.11
5411	40.02	28	SLE F	42	4	93.33	-14028.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1606.04	0.47	0.11
5452	40.02	29	SLE Q	43	4	0.00	-12217.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1398.81	0.41	0.10
5457	40.02	28	SLE F	43	4	0.00	-12410.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1420.80	0.41	0.10
5501	40.96	29	SLE Q	43	4	93.33	-11091.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1269.87	0.37	0.09
5506	40.96	28	SLE F	43	4	93.33	-11263.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1289.59	0.38	0.09
5570	40.96	29	SLE Q	44	4	0.00	-5670.08	27.00	135.67	0.50	16.00	143.53	14.07	787.50	649.16	0.19	0.05
5580	40.96	28	SLE F	44	4	0.00	-5743.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	657.59	0.19	0.05
5649	41.44	29	SLE Q	44	4	48.33	-5670.08	27.00	135.67	0.50	16.00	143.53	14.07	787.50	649.16	0.19	0.05
5659	41.44	28	SLE F	44	4	48.33	-5743.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	657.59	0.19	0.05

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
34 SLU	0.25	0.70	0.45	ø10/20 4 br.	15.71	0.90	19992.70	2.50	91968.40	131041.00	91968.40	4.600
32 SLU	0.70	7.13	6.43	ø10/20 4 br.	15.71	0.90	26613.20	2.50	91968.40	131041.00	91968.40	3.456
32 SLU	7.13	7.58	0.45	ø10/20 4 br.	15.71	0.90	28215.10	2.50	91968.40	131041.00	91968.40	3.260
32 SLU	8.04	8.48	0.45	ø10/20 4 br.	15.71	0.90	18843.40	2.50	91968.40	131041.00	91968.40	4.881
32 SLU	8.48	12.03	3.54	ø10/20 4 br.	15.71	0.90	17200.10	2.50	91968.40	131041.00	91968.40	5.347
32 SLU	12.03	12.47	0.45	ø10/20 4 br.	15.71	0.90	18878.70	2.50	91968.40	131041.00	91968.40	4.872
9 SLV	12.93	13.38	0.45	ø10/20 4 br.	15.71	0.90	25618.20	2.50	91968.40	131041.00	91968.40	3.590
34 SLU	13.38	19.59	6.21	ø10/20 4 br.	15.71	0.90	24891.00	2.50	91968.40	131041.00	91968.40	3.695
34 SLU	19.59	20.04	0.45	ø10/20 4 br.	15.71	0.90	26499.10	2.50	91968.40	131041.00	91968.40	3.471
34 SLU	20.48	20.93	0.45	ø10/20 4 br.	15.71	0.90	24375.30	2.50	91968.40	131041.00	91968.40	3.773
34 SLU	20.93	28.05	7.11	ø10/20 4 br.	15.71	0.90	22819.50	2.50	91968.40	131041.00	91968.40	4.030
32 SLU	28.05	28.50	0.45	ø10/20 4 br.	15.71	0.90	21899.30	2.50	91968.40	131041.00	91968.40	4.200
34 SLU	28.95	29.39	0.45	ø10/20 4 br.	15.71	0.90	19397.60	2.50	91968.40	131041.00	91968.40	4.741
34 SLU	29.39	32.81	3.42	ø10/20 4 br.	15.71	0.90	19114.80	2.50	91968.40	131041.00	91968.40	4.811
34 SLU	32.81	33.27	0.45	ø10/20 4 br.	15.71	0.90	20797.30	2.50	91968.40	131041.00	91968.40	4.422
34 SLU	33.72	34.16	0.45	ø10/20 4 br.	15.71	0.90	22681.40	2.50	91968.40	131041.00	91968.40	4.055
32 SLU	34.16	40.99	6.82	ø10/20 4 br.	15.71	0.90	22507.30	2.50	91968.40	131041.00	91968.40	4.086
32 SLU	40.99	41.44	0.45	ø10/20 4 br.	15.71	0.90	25170.60	2.50	91968.40	131041.00	91968.40	3.654

Travata n. 417

Nodi: 1 -236 -235 -11 -319 -318 -317 -316 -315 -314 -16 -380 -379 -378 -377 -376 -375 -25 -460 -459 -30 -495 -494 -1575 -1577 -491 -490 -489 -39

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
4R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.25	32	SLU	1	25.00	14.07	14.07	14.07	14.07	3883.61	35450.10	9.128
0.72	32	SLU	1	72.33	14.07	14.07	14.07	14.07	3883.61	35450.10	9.128
0.72	32	SLU	2	0.00	14.07	14.07	14.07	14.07	5483.60	35450.10	6.465
1.45	32	SLU	2	72.33	14.07	14.07	14.07	14.07	5483.60	35450.10	6.465
1.45	32	SLU	3	0.00	14.07	14.07	14.07	14.07	10224.90	35450.10	3.467
1.92	32	SLU	3	47.33	14.07	14.07	14.07	14.07	10224.90	35450.10	3.467
2.42	32	SLU	4	25.00	14.07	14.07	14.07	14.07	12348.80	35450.10	2.871
3.05	32	SLU	4	87.86	14.07	14.07	14.07	14.07	12348.80	35450.10	2.871
3.05	20	SLU	5	0.00	14.07	14.07	14.07	14.07	-7134.35	-35450.10	4.969
3.49	20	SLU	5	43.93	14.07	14.07	14.07	14.07	-7910.43	-35450.10	4.481
3.93	20	SLU	5	87.86	28.15	28.15	28.15	28.15	-7910.43	-70123.70	8.865
3.93	20	SLU	6	0.00	28.15	28.15	28.15	28.15	-9907.18	-70123.70	7.078
4.81	34	SLU	6	87.86	14.07	14.07	14.07	14.07	-10160.00	-35450.10	3.489
4.81	34	SLU	7	0.00	14.07	14.07	14.07	14.07	-10170.30	-35450.10	3.486
5.68	34	SLU	7	87.86	14.07	14.07	14.07	14.07	-10136.20	-35450.10	3.497
5.68	32	SLU	8	0.00	14.07	14.07	14.07	14.07	-8893.67	-35450.10	3.986
6.56	32	SLU	8	87.86	14.07	28.15	14.07	28.15	-8302.59	-35445.00	4.269
6.56	32	SLU	9	0.00	14.07	28.15	14.07	28.15	-3657.55	-35445.00	9.691
7.44	20	SLU	9	87.86	14.07	14.07	14.07	14.07	6977.83	35450.10	5.080
7.44	20	SLU	10	0.00	14.07	14.07	14.07	14.07	18400.30	35450.10	1.927
8.07	20	SLU	10	62.86	28.15	14.07	28.15	14.07	18400.30	35445.00	1.926
8.57	32	SLU	11	25.00	14.07	14.07	14.07	14.07	20396.20	35450.10	1.738
9.21	32	SLU	11	89.00	14.07	14.07	14.07	14.07	20396.20	35450.10	1.738
9.21	32	SLU	12	0.00	14.07	14.07	14.07	14.07	7688.22	35450.10	4.611
9.65	32	SLU	12	44.50	14.07	14.07	14.07	14.07	7688.22	35450.10	4.611
10.10	32	SLU	12	89.00	14.07	14.07	14.07	14.07	5932.51	35450.10	5.976
10.10	34	SLU	13	0.00	14.07	14.07	14.07	14.07	-8560.07	-35450.10	4.141
10.54	34	SLU	13	44.50	14.07	14.07	14.07	14.07	-9353.31	-35450.10	3.790
10.99	34	SLU	13	89.00	14.07	28.15	14.07	28.15	-9353.31	-35445.00	3.790
10.99	34	SLU	14	0.00	14.07	28.15	14.07	28.15	-11122.40	-35445.00	3.187
11.44	34	SLU	14	44.50	14.07	28.15	14.07	28.15	-11237.60	-35445.00	3.154

Relazione di calcolo

11.88	34	SLU	14	89.00	28.15	14.07	28.15	14.07	-11237.60	-69959.00	6.225
11.88	34	SLU	15	0.00	28.15	14.07	28.15	14.07	-11321.70	-69959.00	6.179
12.77	34	SLU	15	89.00	14.07	14.07	14.07	14.07	-11068.00	-35450.10	3.203
12.77	32	SLU	16	0.00	14.07	14.07	14.07	14.07	-8900.39	-35450.10	3.983
13.66	32	SLU	16	89.00	14.07	14.07	14.07	14.07	-7980.37	-35450.10	4.442
13.66	20	SLU	17	0.00	14.07	14.07	14.07	14.07	9015.94	35450.10	3.932
14.30	20	SLU	17	64.00	14.07	14.07	14.07	14.07	9015.94	35450.10	3.932
14.80	32	SLU	18	25.00	14.07	14.07	14.07	14.07	12096.90	35450.10	2.931
15.53	32	SLU	18	97.67	28.15	14.07	28.15	14.07	12096.90	35445.00	2.930
15.53	34	SLU	19	0.00	28.15	14.07	28.15	14.07	11066.60	35445.00	3.203
16.50	34	SLU	19	97.67	14.07	28.15	14.07	28.15	12444.20	69959.00	5.622
16.50	34	SLU	20	0.00	14.07	28.15	14.07	28.15	24749.90	69959.00	2.827
17.23	34	SLU	20	72.67	14.07	14.07	14.07	14.07	24749.90	35450.10	1.432
17.73	32	SLU	21	25.00	14.07	14.07	14.07	14.07	21941.20	35450.10	1.616
18.45	32	SLU	21	97.38	14.07	14.07	14.07	14.07	21941.20	35450.10	1.616
18.45	32	SLU	22	0.00	14.07	14.07	14.07	14.07	5727.79	35450.10	6.189
18.78	20	SLU	22	32.46	14.07	14.07	14.07	14.07	-7279.10	-35450.10	4.870
19.43	20	SLU	22	97.37	28.15	28.15	28.15	28.15	-7279.10	-70123.70	9.634
19.43	34	SLU	23	0.00	28.15	28.15	28.15	28.15	-13576.90	-70123.70	5.165
19.75	34	SLU	23	32.46	14.07	14.07	14.07	14.07	-15178.60	-35450.10	2.336
20.40	34	SLU	23	97.37	14.07	14.07	14.07	14.07	-15178.60	-35450.10	2.336
20.40	32	SLU	24	0.00	14.07	14.07	14.07	14.07	-19337.60	-35450.10	1.833
20.73	32	SLU	24	32.46	14.07	14.07	14.07	14.07	-20361.10	-35450.10	1.741
21.38	32	SLU	24	97.38	14.07	14.07	14.07	14.07	-20361.10	-35450.10	1.741
21.38	32	SLU	25	0.00	14.07	14.07	14.07	14.07	-22929.00	-35450.10	1.546
21.70	32	SLU	25	32.46	14.07	14.07	14.07	14.07	-23361.10	-35450.10	1.517
22.35	32	SLU	25	97.38	14.07	14.07	14.07	14.07	-23361.10	-35450.10	1.517
22.35	32	SLU	26	0.00	14.07	14.07	14.07	14.07	-23918.70	-35450.10	1.482
23.32	32	SLU	26	97.37	28.15	14.07	28.15	14.07	-23894.00	-69959.00	2.928
23.32	32	SLU	27	0.00	28.15	14.07	28.15	14.07	-23230.70	-69959.00	3.011
24.30	32	SLU	27	97.37	14.07	28.15	14.07	28.15	-21880.90	-35445.00	1.620
24.30	32	SLU	28	0.00	14.07	28.15	14.07	28.15	-15471.60	-35445.00	2.291
25.02	32	SLU	28	72.38	14.07	14.07	14.07	14.07	-15471.60	-35450.10	2.291

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	EI	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.25	5	SLV(E)	1	25.00	14.07	14.07	14.07	14.07	-6522.54	-34082.90	5.225
0.72	5	SLV(E)	1	72.33	14.07	14.07	14.07	14.07	-6522.54	-34082.90	5.225
0.72	13	SLV(E)	2	0.00	14.07	14.07	14.07	14.07	7213.42	34082.90	4.725
1.45	13	SLV(E)	2	72.33	14.07	14.07	14.07	14.07	7213.42	34082.90	4.725
1.45	13	SLV(E)	3	0.00	14.07	14.07	14.07	14.07	10581.00	34082.90	3.221
1.92	13	SLV(E)	3	47.33	14.07	14.07	14.07	14.07	10581.00	34082.90	3.221
2.42	13	SLV(E)	4	25.00	14.07	14.07	14.07	14.07	15445.60	34082.90	2.207
3.05	13	SLV(E)	4	87.86	14.07	14.07	14.07	14.07	15445.60	34082.90	2.207
3.05	5	SLV(E)	5	0.00	14.07	14.07	14.07	14.07	-10115.50	-34082.90	3.369
3.49	5	SLV(E)	5	43.93	14.07	14.07	14.07	14.07	-10277.50	-34082.90	3.316
3.93	5	SLV(E)	5	87.86	28.15	28.15	28.15	28.15	-10277.50	-67205.10	6.539
3.93	5	SLV(E)	6	0.00	28.15	28.15	28.15	28.15	-10184.50	-67205.10	6.599
4.81	5	SLV(E)	6	87.86	14.07	14.07	14.07	14.07	-10152.00	-34082.90	3.357
4.81	5	SLV(E)	7	0.00	14.07	14.07	14.07	14.07	-9353.58	-34082.90	3.644
5.68	5	SLV(E)	7	87.86	14.07	14.07	14.07	14.07	-8987.03	-34082.90	3.792
5.68	9	SLV(E)	8	0.00	14.07	14.07	14.07	14.07	-7237.00	-34082.90	4.710
6.56	9	SLV(E)	8	87.86	14.07	28.15	14.07	28.15	-6797.52	-34362.70	5.055
6.56	13	SLV(E)	9	0.00	14.07	28.15	14.07	28.15	-3847.93	-34362.70	8.930
7.44	5	SLV(E)	9	87.86	14.07	14.07	14.07	14.07	7854.77	34082.90	4.339
7.44	5	SLV(E)	10	0.00	14.07	14.07	14.07	14.07	17493.60	34082.90	1.948
8.07	5	SLV(E)	10	62.86	28.15	14.07	28.15	14.07	17493.60	34362.70	1.964
8.57	13	SLV(E)	11	25.00	14.07	14.07	14.07	14.07	16633.90	34082.90	2.049
9.21	13	SLV(E)	11	89.00	14.07	14.07	14.07	14.07	16633.90	34082.90	2.049
9.21	13	SLV(E)	12	0.00	14.07	14.07	14.07	14.07	6856.76	34082.90	4.971
9.65	13	SLV(E)	12	44.50	14.07	14.07	14.07	14.07	6856.76	34082.90	4.971
10.10	13	SLV(E)	12	89.00	14.07	14.07	14.07	14.07	5516.81	34082.90	6.178
10.10	5	SLV(E)	13	0.00	14.07	14.07	14.07	14.07	-6769.37	-34082.90	5.035
10.54	1	SLV(E)	13	44.50	14.07	14.07	14.07	14.07	-7214.95	-34082.90	4.724
10.99	1	SLV(E)	13	89.00	14.07	28.15	14.07	28.15	-7214.95	-34362.70	4.763
10.99	9	SLV(E)	14	0.00	14.07	28.15	14.07	28.15	-8226.02	-34362.70	4.177
11.44	9	SLV(E)	14	44.50	14.07	28.15	14.07	28.15	-8331.93	-34362.70	4.124
11.88	9	SLV(E)	14	89.00	28.15	14.07	28.15	14.07	-8331.93	-66258.60	7.952
11.88	9	SLV(E)	15	0.00	28.15	14.07	28.15	14.07	-8431.91	-66258.60	7.858
12.77	13	SLV(E)	15	89.00	14.07	14.07	14.07	14.07	-8350.76	-34082.90	4.081
12.77	13	SLV(E)	16	0.00	14.07	14.07	14.07	14.07	-7616.61	-34082.90	4.475
13.66	13	SLV(E)	16	89.00	14.07	14.07	14.07	14.07	-7138.78	-34082.90	4.774
13.66	5	SLV(E)	17	0.00	14.07	14.07	14.07	14.07	13248.20	34082.90	2.573
14.30	5	SLV(E)	17	64.00	14.07	14.07	14.07	14.07	13248.20	34082.90	2.573
14.80	13	SLV(E)	18	25.00	14.07	14.07	14.07	14.07	10241.10	34082.90	3.328
15.53	13	SLV(E)	18	97.67	28.15	14.07	28.15	14.07	10241.10	34362.70	3.355
15.53	1	SLV(E)	19	0.00	28.15	14.07	28.15	14.07	8231.24	34362.70	4.175
16.50	1	SLV(E)	19	97.67	14.07	28.15	14.07	28.15	9294.60	66258.60	7.129

Relazione di calcolo

16.50	5	SLV(E)	20	0.00	14.07	28.15	14.07	28.15	18890.70	66258.60	3.507
17.23	5	SLV(E)	20	72.67	14.07	14.07	14.07	14.07	18890.70	34082.90	1.804
17.73	13	SLV(E)	21	25.00	14.07	14.07	14.07	14.07	19453.10	34082.90	1.752
18.45	13	SLV(E)	21	97.38	14.07	14.07	14.07	14.07	19453.10	34082.90	1.752
18.45	13	SLV(E)	22	0.00	14.07	14.07	14.07	14.07	6315.92	34082.90	5.396
18.78	5	SLV(E)	22	32.46	14.07	14.07	14.07	14.07	-7277.27	-34082.90	4.683
19.43	5	SLV(E)	22	97.37	28.15	28.15	28.15	28.15	-7277.27	-67205.10	9.235
19.43	1	SLV(E)	23	0.00	28.15	28.15	28.15	28.15	-10412.20	-67205.10	6.454
19.75	1	SLV(E)	23	32.46	14.07	14.07	14.07	14.07	-11435.40	-34082.90	2.980
20.40	1	SLV(E)	23	97.37	14.07	14.07	14.07	14.07	-11435.40	-34082.90	2.980
20.40	9	SLV(E)	24	0.00	14.07	14.07	14.07	14.07	-14529.10	-34082.90	2.346
20.73	9	SLV(E)	24	32.46	14.07	14.07	14.07	14.07	-15337.50	-34082.90	2.222
21.38	9	SLV(E)	24	97.38	14.07	14.07	14.07	14.07	-15337.50	-34082.90	2.222
21.38	13	SLV(E)	25	0.00	14.07	14.07	14.07	14.07	-17576.20	-34082.90	1.939
21.70	13	SLV(E)	25	32.46	14.07	14.07	14.07	14.07	-18090.00	-34082.90	1.884
22.35	13	SLV(E)	25	97.38	14.07	14.07	14.07	14.07	-18090.00	-34082.90	1.884
22.35	13	SLV(E)	26	0.00	14.07	14.07	14.07	14.07	-18892.20	-34082.90	1.804
23.32	13	SLV(E)	26	97.37	28.15	14.07	28.15	14.07	-18892.20	-66258.60	3.507
23.32	13	SLV(E)	27	0.00	28.15	14.07	28.15	14.07	-19123.30	-66258.60	3.465
24.30	13	SLV(E)	27	97.37	14.07	28.15	14.07	28.15	-18450.20	-34362.70	1.862
24.30	13	SLV(E)	28	0.00	14.07	28.15	14.07	28.15	-14758.90	-34362.70	2.328
25.02	13	SLV(E)	28	72.38	14.07	14.07	14.07	14.07	-14758.90	-34082.90	2.309

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	E1	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.25	37	SLE R	1	25.00	14.07	14.07	2603.26	-59.80	298.04	5.31
0.25	29	SLE Q	1	25.00	14.07	14.07	-103.43	11.84	-2.38	0.21
0.72	37	SLE R	1	72.33	14.07	14.07	2603.26	-59.80	298.04	5.31
0.72	29	SLE Q	1	72.33	14.07	14.07	-80.88	9.26	-1.86	0.17
0.72	37	SLE R	2	0.00	14.07	14.07	3724.09	-85.54	426.36	7.60
0.72	29	SLE Q	2	0.00	14.07	14.07	2093.64	-48.09	239.70	4.27
1.45	37	SLE R	2	72.33	14.07	14.07	3724.09	-85.54	426.36	7.60
1.45	29	SLE Q	2	72.33	14.07	14.07	2093.64	-48.09	239.70	4.27
1.45	37	SLE R	3	0.00	14.07	14.07	7133.30	-163.85	816.68	14.56
1.45	29	SLE Q	3	0.00	14.07	14.07	5426.30	-124.64	621.25	11.07
1.92	37	SLE R	3	47.33	14.07	14.07	7133.30	-163.85	816.68	14.56
1.92	29	SLE Q	3	47.33	14.07	14.07	5426.30	-124.64	621.25	11.07
2.42	37	SLE R	4	25.00	14.07	14.07	8503.86	-195.34	973.59	17.35
2.42	29	SLE Q	4	25.00	14.07	14.07	4201.37	-96.51	481.01	8.57
3.05	37	SLE R	4	87.86	14.07	14.07	8503.86	-195.34	973.59	17.35
3.05	29	SLE Q	4	87.86	14.07	14.07	4201.37	-96.51	481.01	8.57
3.05	24	SLE R	5	0.00	14.07	14.07	-5227.76	598.52	-120.08	10.67
3.05	29	SLE Q	5	0.00	14.07	14.07	-4666.49	534.26	-107.19	9.52
3.49	24	SLE R	5	43.93	14.07	14.07	-5790.74	662.97	-133.02	11.82
3.49	29	SLE Q	5	43.93	14.07	14.07	-5198.85	595.21	-119.42	10.61
3.93	24	SLE R	5	87.86	28.15	28.15	-5790.74	335.80	-99.58	8.25
3.93	29	SLE Q	5	87.86	28.15	28.15	-5198.85	301.48	-89.40	7.41
3.93	24	SLE R	6	0.00	28.15	28.15	-7222.89	418.85	-124.20	10.29
3.93	29	SLE Q	6	0.00	28.15	28.15	-6566.53	380.79	-112.92	9.36
4.81	39	SLE R	6	87.86	14.07	14.07	-7402.82	847.53	-170.05	15.11
4.81	29	SLE Q	6	87.86	14.07	14.07	-6697.58	766.79	-153.85	13.67
4.81	39	SLE R	7	0.00	14.07	14.07	-7404.98	847.78	-170.10	15.11
4.81	29	SLE Q	7	0.00	14.07	14.07	-6690.00	765.93	-153.67	13.65
5.68	39	SLE R	7	87.86	14.07	14.07	-7371.02	843.89	-169.32	15.04
5.68	29	SLE Q	7	87.86	14.07	14.07	-6604.25	756.11	-151.70	13.48
5.68	37	SLE R	8	0.00	14.07	14.07	-6437.62	737.03	-147.88	13.14
5.68	29	SLE Q	8	0.00	14.07	14.07	-5519.12	631.87	-126.78	11.26
6.56	37	SLE R	8	87.86	14.07	28.15	-6001.85	682.36	-118.48	10.87
6.56	29	SLE Q	8	87.86	14.07	28.15	-5063.09	575.63	-99.95	9.17
6.56	24	SLE R	9	0.00	14.07	28.15	3910.77	-76.32	229.36	6.22
6.56	37	SLE R	9	0.00	14.07	28.15	-2613.10	297.09	-51.59	4.73
6.56	29	SLE Q	9	0.00	14.07	28.15	3450.53	-67.33	202.37	5.49
7.44	24	SLE R	9	87.86	14.07	14.07	4987.89	-114.57	571.05	10.18
7.44	29	SLE Q	9	87.86	14.07	14.07	4419.25	-101.51	505.95	9.02
7.44	24	SLE R	10	0.00	14.07	14.07	13211.50	-303.47	1512.55	26.96
7.44	29	SLE Q	10	0.00	14.07	14.07	11849.70	-272.19	1356.65	24.18
8.07	24	SLE R	10	62.86	28.15	14.07	13211.50	-260.81	1502.03	23.92
8.07	29	SLE Q	10	62.86	28.15	14.07	11849.70	-233.93	1347.20	21.45
8.57	37	SLE R	11	25.00	14.07	14.07	14479.70	-332.61	1657.75	29.55
8.57	29	SLE Q	11	25.00	14.07	14.07	11222.20	-257.78	1284.80	22.90
9.21	37	SLE R	11	89.00	14.07	14.07	14479.70	-332.61	1657.75	29.55
9.21	29	SLE Q	11	89.00	14.07	14.07	11222.20	-257.78	1284.80	22.90
9.21	37	SLE R	12	0.00	14.07	14.07	5416.15	-124.41	620.09	11.05
9.21	29	SLE Q	12	0.00	14.07	14.07	3814.05	-87.61	436.66	7.78
9.65	37	SLE R	12	44.50	14.07	14.07	5416.15	-124.41	620.09	11.05
9.65	29	SLE Q	12	44.50	14.07	14.07	3814.05	-87.61	436.66	7.78
10.10	37	SLE R	12	89.00	14.07	14.07	4166.15	-95.70	476.97	8.50
10.10	29	SLE Q	12	89.00	14.07	14.07	2792.88	-64.15	319.75	5.70

Relazione di calcolo

10.10	39	SLE R	13	0.00	14.07	14.07	-6157.19	704.92	-141.43	12.56
10.10	29	SLE Q	13	0.00	14.07	14.07	-5434.76	622.22	-124.84	11.09
10.54	39	SLE R	13	44.50	14.07	14.07	-6724.19	769.84	-154.46	13.72
10.54	29	SLE Q	13	44.50	14.07	14.07	-5887.40	674.04	-135.24	12.01
10.99	39	SLE R	13	89.00	14.07	28.15	-6724.19	764.48	-132.75	12.17
10.99	29	SLE Q	13	89.00	14.07	28.15	-5887.40	669.34	-116.23	10.66
10.99	39	SLE R	14	0.00	14.07	28.15	-7963.50	905.38	-157.21	14.42
10.99	29	SLE Q	14	0.00	14.07	28.15	-6737.99	766.05	-133.02	12.20
11.44	39	SLE R	14	44.50	14.07	28.15	-8043.51	914.48	-158.79	14.56
11.44	29	SLE Q	14	44.50	14.07	28.15	-6769.95	769.68	-133.65	12.26
11.88	39	SLE R	14	89.00	28.15	14.07	-8043.51	471.74	-156.96	12.79
11.88	29	SLE Q	14	89.00	28.15	14.07	-6769.95	397.04	-132.11	10.77
11.88	39	SLE R	15	0.00	28.15	14.07	-8102.48	475.19	-158.11	12.89
11.88	29	SLE Q	15	0.00	28.15	14.07	-6818.90	399.91	-133.07	10.85
12.77	39	SLE R	15	89.00	14.07	14.07	-7910.55	905.66	-181.71	16.14
12.77	29	SLE Q	15	89.00	14.07	14.07	-6600.18	755.64	-151.61	13.47
12.77	37	SLE R	16	0.00	14.07	14.07	-6302.93	721.61	-144.78	12.86
12.77	29	SLE Q	16	0.00	14.07	14.07	-4803.79	549.98	-110.34	9.80
13.66	37	SLE R	16	89.00	14.07	14.07	-5627.11	644.24	-129.26	11.48
13.66	29	SLE Q	16	89.00	14.07	14.07	-4109.08	470.44	-94.39	8.38
13.66	24	SLE R	17	0.00	14.07	14.07	6587.84	-151.33	754.23	13.44
13.66	29	SLE Q	17	0.00	14.07	14.07	6260.50	-143.81	716.75	12.77
14.30	24	SLE R	17	64.00	14.07	14.07	6587.84	-151.33	754.23	13.44
14.30	29	SLE Q	17	64.00	14.07	14.07	6260.50	-143.81	716.75	12.77
14.80	37	SLE R	18	25.00	14.07	14.07	8700.45	-199.85	996.10	17.75
14.80	29	SLE Q	18	25.00	14.07	14.07	7465.93	-171.50	854.76	15.23
15.53	37	SLE R	18	97.67	28.15	14.07	8700.45	-171.76	989.16	15.75
15.53	29	SLE Q	18	97.67	28.15	14.07	7465.93	-147.39	848.81	13.52
15.53	39	SLE R	19	0.00	28.15	14.07	7933.25	-156.61	901.94	14.36
15.53	29	SLE Q	19	0.00	28.15	14.07	6943.93	-137.08	789.46	12.57
16.50	39	SLE R	19	97.67	14.07	28.15	8910.43	-173.88	522.58	14.17
16.50	29	SLE Q	19	97.67	14.07	28.15	7781.83	-151.86	456.39	12.38
16.50	39	SLE R	20	0.00	14.07	28.15	17710.10	-345.60	1038.66	28.17
16.50	29	SLE Q	20	0.00	14.07	28.15	15435.00	-301.20	905.23	24.55
17.23	39	SLE R	20	72.67	14.07	14.07	17710.10	-406.81	2027.59	36.14
17.23	29	SLE Q	20	72.67	14.07	14.07	15435.00	-354.55	1767.12	31.49
17.73	37	SLE R	21	25.00	14.07	14.07	15517.90	-356.45	1776.62	31.66
17.73	29	SLE Q	21	25.00	14.07	14.07	11185.00	-256.93	1280.55	22.82
18.45	37	SLE R	21	97.38	14.07	14.07	15517.90	-356.45	1776.62	31.66
18.45	29	SLE Q	21	97.38	14.07	14.07	11185.00	-256.93	1280.55	22.82
18.45	37	SLE R	22	0.00	14.07	14.07	3978.83	-91.40	455.53	8.12
18.45	29	SLE Q	22	0.00	14.07	14.07	-3289.37	376.59	-75.56	6.71
18.78	24	SLE R	22	32.46	14.07	14.07	-5254.74	601.61	-120.70	10.72
18.78	29	SLE Q	22	32.46	14.07	14.07	-4819.51	551.78	-110.71	9.83
19.43	24	SLE R	22	97.37	28.15	28.15	-5254.74	304.72	-90.36	7.49
19.43	29	SLE Q	22	97.37	28.15	28.15	-4819.51	279.48	-82.87	6.87
19.43	39	SLE R	23	0.00	28.15	28.15	-9739.25	564.77	-167.47	13.88
19.43	29	SLE Q	23	0.00	28.15	28.15	-8433.32	489.04	-145.02	12.02
19.75	39	SLE R	23	32.46	14.07	14.07	-10884.40	1246.14	-250.02	22.21
19.75	29	SLE Q	23	32.46	14.07	14.07	-9351.67	1070.65	-214.81	19.08
20.40	39	SLE R	23	97.37	14.07	14.07	-10884.40	1246.14	-250.02	22.21
20.40	29	SLE Q	23	97.37	14.07	14.07	-9351.67	1070.65	-214.81	19.08
20.40	37	SLE R	24	0.00	14.07	14.07	-13837.10	1584.19	-317.85	28.23
20.40	29	SLE Q	24	0.00	14.07	14.07	-11653.80	1334.22	-267.69	23.78
20.73	37	SLE R	24	32.46	14.07	14.07	-14567.70	1667.83	-334.63	29.72
20.73	29	SLE Q	24	32.46	14.07	14.07	-12206.60	1397.51	-280.39	24.91
21.38	37	SLE R	24	97.38	14.07	14.07	-14567.70	1667.83	-334.63	29.72
21.38	29	SLE Q	24	97.38	14.07	14.07	-12206.60	1397.51	-280.39	24.91
21.38	37	SLE R	25	0.00	14.07	14.07	-16379.10	1875.21	-376.24	33.42
21.38	29	SLE Q	25	0.00	14.07	14.07	-13523.50	1548.28	-310.64	27.59
21.70	37	SLE R	25	32.46	14.07	14.07	-16688.10	1910.58	-383.33	34.05
21.70	29	SLE Q	25	32.46	14.07	14.07	-13735.80	1572.58	-315.52	28.03
22.35	37	SLE R	25	97.38	14.07	14.07	-16688.10	1910.58	-383.33	34.05
22.35	29	SLE Q	25	97.38	14.07	14.07	-13735.80	1572.58	-315.52	28.03
22.35	37	SLE R	26	0.00	14.07	14.07	-17077.40	1955.15	-392.27	34.85
22.35	29	SLE Q	26	0.00	14.07	14.07	-14043.70	1607.84	-322.59	28.66
23.32	37	SLE R	26	97.37	28.15	14.07	-17053.50	1000.15	-332.79	27.12
23.32	29	SLE Q	26	97.37	28.15	14.07	-13971.50	819.40	-272.64	22.22
23.32	37	SLE R	27	0.00	28.15	14.07	-16559.40	971.17	-323.15	26.34
23.32	29	SLE Q	27	0.00	28.15	14.07	-13382.90	784.88	-261.16	21.28
24.30	37	SLE R	27	97.37	14.07	28.15	-15585.30	1771.91	-307.68	28.21
24.30	29	SLE Q	27	97.37	14.07	28.15	-12515.20	1422.87	-247.07	22.66
24.30	37	SLE R	28	0.00	14.07	28.15	-10985.80	1248.99	-216.88	19.89
24.30	29	SLE Q	28	0.00	14.07	28.15	-8533.67	970.20	-168.47	15.45
25.02	37	SLE R	28	72.38	14.07	14.07	-10985.80	1257.74	-252.35	22.42
25.02	29	SLE Q	28	72.38	14.07	14.07	-8533.67	977.00	-196.02	17.41

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg	CC	TCC	El Sez.	X	My	c	s	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	Wk
------	----	----	-----	---------	---	----	---	---	----------------	-----------------	-----------------	----------------	--------------------	----------------	-----------------	----

Relazione di calcolo

	<m>				<cm>	<daNm>	<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cmq>		<mm>		
39	0.25	29	SLE	Q	1	4	25.00	-103.43	27.00	135.67	0.50	16.00	143.53	14.07	787.50	11.84	0.00	0.00
55	0.25	42	SLE	F	1	4	25.00	485.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	55.57	0.02	0.00
98	0.72	29	SLE	Q	1	4	72.33	-80.88	27.00	135.67	0.50	16.00	143.53	14.07	787.50	9.26	0.00	0.00
114	0.72	42	SLE	F	1	4	72.33	485.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	55.57	0.02	0.00
160	0.72	29	SLE	Q	2	4	0.00	2093.64	27.00	135.67	0.50	16.00	143.53	14.07	787.50	239.70	0.07	0.02
176	0.72	42	SLE	F	2	4	0.00	2485.12	27.00	135.67	0.50	16.00	143.53	14.07	787.50	284.52	0.08	0.02
222	1.45	29	SLE	Q	2	4	72.33	2093.64	27.00	135.67	0.50	16.00	143.53	14.07	787.50	239.70	0.07	0.02
238	1.45	42	SLE	F	2	4	72.33	2485.12	27.00	135.67	0.50	16.00	143.53	14.07	787.50	284.52	0.08	0.02
282	1.45	29	SLE	Q	3	4	0.00	5426.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	621.25	0.18	0.04
290	1.45	42	SLE	F	3	4	0.00	5877.34	27.00	135.67	0.50	16.00	143.53	14.07	787.50	672.88	0.20	0.05
332	1.92	29	SLE	Q	3	4	47.33	5426.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	621.25	0.18	0.04
340	1.92	42	SLE	F	3	4	47.33	5877.34	27.00	135.67	0.50	16.00	143.53	14.07	787.50	672.88	0.20	0.05
391	2.42	29	SLE	Q	4	4	25.00	4201.37	27.00	135.67	0.50	16.00	143.53	14.07	787.50	481.01	0.14	0.03
407	2.42	42	SLE	F	4	4	25.00	5111.21	27.00	135.67	0.50	16.00	143.53	14.07	787.50	585.17	0.17	0.04
460	3.05	29	SLE	Q	4	4	87.86	4201.37	27.00	135.67	0.50	16.00	143.53	14.07	787.50	481.01	0.14	0.03
476	3.05	42	SLE	F	4	4	87.86	5111.21	27.00	135.67	0.50	16.00	143.53	14.07	787.50	585.17	0.17	0.04
531	3.05	29	SLE	Q	5	4	0.00	-4666.49	27.00	135.67	0.50	16.00	143.53	14.07	787.50	534.26	0.16	0.04
533	3.05	25	SLE	F	5	4	0.00	-4840.15	27.00	135.67	0.50	16.00	143.53	14.07	787.50	554.14	0.16	0.04
592	3.49	29	SLE	Q	5	4	43.93	-5198.85	27.00	135.67	0.50	16.00	143.53	14.07	787.50	595.21	0.17	0.04
594	3.49	25	SLE	F	5	4	43.93	-5353.68	27.00	135.67	0.50	16.00	143.53	14.07	787.50	612.93	0.18	0.04
645	3.93	29	SLE	Q	5	4	87.86	-5198.85	27.00	62.62	0.50	16.00	98.76	28.15	787.50	301.48	0.09	0.01
647	3.93	25	SLE	F	5	4	87.86	-5353.68	27.00	62.62	0.50	16.00	98.76	28.15	787.50	310.45	0.09	0.02
690	3.93	29	SLE	Q	6	4	0.00	-6566.53	27.00	62.62	0.50	16.00	98.76	28.15	787.50	380.79	0.11	0.02
695	3.93	28	SLE	F	6	4	0.00	-6675.73	27.00	62.62	0.50	16.00	98.76	28.15	787.50	387.12	0.11	0.02
735	4.81	29	SLE	Q	6	4	87.86	-6697.58	27.00	135.67	0.50	16.00	143.53	14.07	787.50	766.79	0.22	0.05
740	4.81	28	SLE	F	6	4	87.86	-6808.62	27.00	135.67	0.50	16.00	143.53	14.07	787.50	779.51	0.23	0.06
780	4.81	29	SLE	Q	7	4	0.00	-6690.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	765.93	0.22	0.05
785	4.81	28	SLE	F	7	4	0.00	-6802.25	27.00	135.67	0.50	16.00	143.53	14.07	787.50	778.78	0.23	0.06
825	5.68	29	SLE	Q	7	4	87.86	-6604.25	27.00	135.67	0.50	16.00	143.53	14.07	787.50	756.11	0.22	0.05
830	5.68	28	SLE	F	7	4	87.86	-6716.27	27.00	135.67	0.50	16.00	143.53	14.07	787.50	768.93	0.22	0.05
870	5.68	29	SLE	Q	8	4	0.00	-5519.12	27.00	135.67	0.50	16.00	143.53	14.07	787.50	631.87	0.18	0.04
878	5.68	42	SLE	F	8	4	0.00	-5659.87	27.00	135.67	0.50	16.00	143.53	14.07	787.50	647.99	0.19	0.05
915	6.56	29	SLE	Q	8	4	87.86	-5063.09	27.00	135.67	0.50	16.00	143.53	14.07	787.50	575.63	0.17	0.04
923	6.56	42	SLE	F	8	4	87.86	-5212.39	27.00	135.67	0.50	16.00	143.53	14.07	787.50	592.60	0.17	0.04
994	6.56	29	SLE	Q	9	4	0.00	-1702.38	27.00	135.67	0.50	16.00	143.53	14.07	787.50	193.54	0.06	0.01
1010	6.56	42	SLE	F	9	4	0.00	-1878.82	27.00	135.67	0.50	16.00	143.53	14.07	787.50	213.60	0.06	0.02
1078	7.44	29	SLE	Q	9	4	87.86	4419.25	27.00	135.67	0.50	16.00	143.53	14.07	787.50	505.95	0.15	0.04
1088	7.44	28	SLE	F	9	4	87.86	4530.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	518.66	0.15	0.04
1134	7.44	29	SLE	Q	10	4	0.00	11849.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1356.65	0.40	0.10
1139	7.44	28	SLE	F	10	4	0.00	12123.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1387.97	0.40	0.10
1179	8.07	29	SLE	Q	10	4	62.86	11849.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1347.20	0.39	0.10
1184	8.07	28	SLE	F	10	4	62.86	12123.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1378.31	0.40	0.10
1224	8.57	29	SLE	Q	11	4	25.00	11222.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1284.80	0.37	0.09
1232	8.57	42	SLE	F	11	4	25.00	11745.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1344.74	0.39	0.10
1269	9.21	29	SLE	Q	11	4	89.00	11222.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1284.80	0.37	0.09
1277	9.21	42	SLE	F	11	4	89.00	11745.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1344.74	0.39	0.10
1347	9.21	29	SLE	Q	12	4	0.00	3814.05	27.00	135.67	0.50	16.00	143.53	14.07	787.50	436.66	0.13	0.03
1363	9.21	42	SLE	F	12	4	0.00	4076.28	27.00	135.67	0.50	16.00	143.53	14.07	787.50	466.69	0.14	0.03
1437	9.65	29	SLE	Q	12	4	44.50	3814.05	27.00	135.67	0.50	16.00	143.53	14.07	787.50	436.66	0.13	0.03
1453	9.65	42	SLE	F	12	4	44.50	4076.28	27.00	135.67	0.50	16.00	143.53	14.07	787.50	466.69	0.14	0.03
1527	10.10	29	SLE	Q	12	4	89.00	2792.88	27.00	135.67	0.50	16.00	143.53	14.07	787.50	319.75	0.09	0.02
1543	10.10	42	SLE	F	12	4	89.00	3019.57	27.00	135.67	0.50	16.00	143.53	14.07	787.50	345.70	0.10	0.02
1582	10.10	29	SLE	Q	13	4	0.00	-5434.76	27.00	135.67	0.50	16.00	143.53	14.07	787.50	622.22	0.18	0.04
1587	10.10	28	SLE	F	13	4	0.00	-5551.68	27.00	135.67	0.50	16.00	143.53	14.07	787.50	635.60	0.19	0.05
1627	10.54	29	SLE	Q	13	4	44.50	-5887.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	674.04	0.20	0.05
1632	10.54	28	SLE	F	13	4	44.50	-6013.07	27.00	135.67	0.50	16.00	143.53	14.07	787.50	688.42	0.20	0.05
1672	10.99	29	SLE	Q	13	4	89.00	-5887.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	669.34	0.19	0.05
1677	10.99	28	SLE	F	13	4	89.00	-6013.07	27.00	135.67	0.50	16.00	143.53	14.07	787.50	683.63	0.20	0.05
1717	10.99	29	SLE	Q	14	4	0.00	-6737.99	27.00	135.67	0.50	16.00	143.53	14.07	787.50	766.05	0.22	0.05
1725	10.99	42	SLE	F	14	4	0.00	-6908.33	27.00	135.67	0.50	16.00	143.53	14.07	787.50	785.42	0.23	0.06
1762	11.44	29	SLE	Q	14	4	44.50	-6769.95	27.00	135.67	0.50	16.00	143.53	14.07	787.50	769.68	0.22	0.05
1770	11.44	42	SLE	F	14	4	44.50	-6953.18	27.00	135.67	0.50	16.00	143.53	14.07	787.50	790.51	0.23	0.06
1807	11.88	29	SLE	Q	14	4	89.00	-6769.95	27.00	62.62	0.50	16.00	98.76	28.15	787.50	397.04	0.12	0.02
1815	11.88	42	SLE	F	14	4	89.00	-6953.18	27.00	62.62	0.50	16.00	98.76	28.15	787.50	407.79	0.12	0.02
1852	11.88	29	SLE	Q	15	4	0.00	-6818.90	27.00	62.62	0.50	16.00	98.76	28.15	787.50	399.91	0.12	0.02
1860	11.88	42	SLE	F	15	4	0.00	-7005.39	27.00	62.62	0.50	16.00	98.76	28.15	787.50	410.85	0.12	0.02
1897	12.77	29	SLE	Q	15	4	89.00	-6600.18	27.00	135.67	0.50	16.00	143.53	14.07	787.50	755.64	0.22	0.05
1905	12.77	42	SLE	F	15	4	89.00	-6797.29	27.00	135.67	0.50	16.00	143.53	14.07	787.50	778.21	0.23	0.06
1948	12.77	29	SLE	Q	16	4	0.00	-4803.79	27.00	135.67	0.50	16.00	143.53	14.07	787.50	549.98	0.16	0.04
1956	12.77	42	SLE															

Relazione di calcolo

2246	15.53	29	SLE Q	18	4	97.67	7465.93	27.00	135.67	0.50	16.00	143.53	14.07	787.50	848.81	0.25	0.06
2254	15.53	42	SLE F	18	4	97.67	7715.33	27.00	135.67	0.50	16.00	143.53	14.07	787.50	877.16	0.26	0.06
2291	15.53	29	SLE Q	19	4	0.00	6943.93	27.00	135.67	0.50	16.00	143.53	14.07	787.50	789.46	0.23	0.06
2296	15.53	28	SLE F	19	4	0.00	7103.43	27.00	135.67	0.50	16.00	143.53	14.07	787.50	807.60	0.24	0.06
2336	16.50	29	SLE Q	19	4	97.67	7781.83	27.00	62.62	0.50	16.00	98.76	28.15	787.50	456.39	0.13	0.02
2341	16.50	28	SLE F	19	4	97.67	7965.58	27.00	62.62	0.50	16.00	98.76	28.15	787.50	467.16	0.14	0.02
2381	16.50	29	SLE Q	20	4	0.00	15435.00	27.00	62.62	0.50	16.00	98.76	28.15	787.50	905.23	0.27	0.04
2386	16.50	28	SLE F	20	4	0.00	15806.80	27.00	62.62	0.50	16.00	98.76	28.15	787.50	927.03	0.27	0.05
2426	17.23	29	SLE Q	20	4	72.67	15435.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1767.12	0.55	0.13
2431	17.23	28	SLE F	20	4	72.67	15806.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1809.69	0.53	0.13
2475	17.73	29	SLE Q	21	4	25.00	11185.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1280.55	0.37	0.09
2483	17.73	42	SLE F	21	4	25.00	11925.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1365.34	0.40	0.10
2524	18.45	29	SLE Q	21	4	97.38	11185.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1280.55	0.37	0.09
2532	18.45	42	SLE F	21	4	97.38	11925.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1365.34	0.40	0.10
2600	18.45	29	SLE Q	22	4	0.00	-3289.37	27.00	135.67	0.50	16.00	143.53	14.07	787.50	376.59	0.11	0.03
2610	18.45	28	SLE F	22	4	0.00	-3343.34	27.00	135.67	0.50	16.00	143.53	14.07	787.50	382.77	0.11	0.03
2687	18.78	29	SLE Q	22	4	32.46	-4819.51	27.00	135.67	0.50	16.00	143.53	14.07	787.50	551.78	0.16	0.04
2697	18.78	28	SLE F	22	4	32.46	-4903.04	27.00	135.67	0.50	16.00	143.53	14.07	787.50	561.34	0.16	0.04
2771	19.43	29	SLE Q	22	4	97.37	-4819.51	27.00	62.62	0.50	16.00	98.76	28.15	787.50	279.48	0.08	0.01
2781	19.43	28	SLE F	22	4	97.37	-4903.04	27.00	62.62	0.50	16.00	98.76	28.15	787.50	284.32	0.08	0.01
2827	19.43	29	SLE Q	23	4	0.00	-8433.32	27.00	62.62	0.50	16.00	98.76	28.15	787.50	489.04	0.14	0.02
2835	19.43	42	SLE F	23	4	0.00	-8591.64	27.00	62.62	0.50	16.00	98.76	28.15	787.50	498.22	0.15	0.02
2872	19.75	29	SLE Q	23	4	32.46	-9351.67	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1070.65	0.31	0.08
2880	19.75	42	SLE F	23	4	32.46	-9556.77	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1094.14	0.32	0.08
2917	20.40	29	SLE Q	23	4	97.37	-9351.67	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1070.65	0.31	0.08
2925	20.40	42	SLE F	23	4	97.37	-9556.77	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1094.14	0.32	0.08
2962	20.40	29	SLE Q	24	4	0.00	-11653.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1334.22	0.39	0.09
2970	20.40	42	SLE F	24	4	0.00	-11988.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1372.49	0.40	0.10
3007	20.73	29	SLE Q	24	4	32.46	-12206.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1397.51	0.41	0.10
3015	20.73	42	SLE F	24	4	32.46	-12573.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1439.45	0.42	0.10
3052	21.38	29	SLE Q	24	4	97.38	-12206.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1397.51	0.41	0.10
3060	21.38	42	SLE F	24	4	97.38	-12573.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1439.45	0.42	0.10
3097	21.38	29	SLE Q	25	4	0.00	-13523.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1548.28	0.45	0.11
3105	21.38	42	SLE F	25	4	0.00	-13984.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1601.00	0.47	0.11
3142	21.70	29	SLE Q	25	4	32.46	-13735.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1572.58	0.46	0.11
3150	21.70	42	SLE F	25	4	32.46	-14216.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1627.65	0.47	0.12
3187	22.35	29	SLE Q	25	4	97.38	-13735.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1572.58	0.46	0.11
3195	22.35	42	SLE F	25	4	97.38	-14216.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1627.65	0.47	0.12
3232	22.35	29	SLE Q	26	4	0.00	-14043.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1607.84	0.47	0.11
3240	22.35	42	SLE F	26	4	0.00	-14539.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1664.54	0.48	0.12
3277	23.32	29	SLE Q	26	4	97.37	-13971.50	27.00	62.62	0.50	16.00	98.76	28.15	787.50	819.40	0.24	0.04
3285	23.32	42	SLE F	26	4	97.37	-14481.20	27.00	62.62	0.50	16.00	98.76	28.15	787.50	849.29	0.25	0.04
3322	23.32	29	SLE Q	27	4	0.00	-13382.90	27.00	62.62	0.50	16.00	98.76	28.15	787.50	784.88	0.23	0.04
3330	23.32	42	SLE F	27	4	0.00	-13935.20	27.00	62.62	0.50	16.00	98.76	28.15	787.50	817.27	0.24	0.04
3367	24.30	29	SLE Q	27	4	97.37	-12515.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1422.87	0.41	0.10
3375	24.30	42	SLE F	27	4	97.37	-13060.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1484.85	0.43	0.11
3418	24.30	29	SLE Q	28	4	0.00	-8533.67	27.00	135.67	0.50	16.00	143.53	14.07	787.50	970.20	0.28	0.07
3426	24.30	42	SLE F	28	4	0.00	-9015.23	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1024.95	0.30	0.07
3469	25.02	29	SLE Q	28	4	72.38	-8533.67	27.00	135.67	0.50	16.00	143.53	14.07	787.50	977.00	0.28	0.07
3477	25.02	42	SLE F	28	4	72.38	-9015.23	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1032.14	0.30	0.07

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
9 SLV	0.25	0.70	0.45	ø10/20 4 br.	15.71	0.90	3911.95	2.50	91968.40	131041.00	91968.40	23.510
34 SLU	0.70	1.47	0.77	ø10/20 4 br.	15.71	0.90	10041.80	2.50	91968.40	131041.00	91968.40	9.159
34 SLU	1.47	1.92	0.45	ø10/20 4 br.	15.71	0.90	11709.50	2.50	91968.40	131041.00	91968.40	7.854
32 SLU	2.42	2.87	0.45	ø10/20 4 br.	15.71	0.90	17351.00	2.50	91968.40	131041.00	91968.40	5.300
34 SLU	2.87	7.62	4.75	ø10/20 4 br.	15.71	0.90	18630.80	2.50	91968.40	131041.00	91968.40	4.936
34 SLU	7.62	8.07	0.45	ø10/20 4 br.	15.71	0.90	20083.10	2.50	91968.40	131041.00	91968.40	4.579
32 SLU	8.57	9.02	0.45	ø10/20 4 br.	15.71	0.90	21296.50	2.50	91968.40	131041.00	91968.40	4.318
32 SLU	9.02	13.85	4.83	ø10/20 4 br.	15.71	0.90	19882.70	2.50	91968.40	131041.00	91968.40	4.626
5 SLV	13.85	14.30	0.45	ø10/20 4 br.	15.71	0.90	15625.20	2.50	91968.40	131041.00	91968.40	5.886
32 SLU	14.80	15.25	0.45	ø10/20 4 br.	15.71	0.90	7398.98	2.50	91968.40	131041.00	91968.40	12.430
34 SLU	15.25	16.78	1.53	ø10/20 4 br.	15.71	0.90	17683.50	2.50	91968.40	131041.00	91968.40	5.201
34 SLU	16.78	17.23	0.45	ø10/20 4 br.	15.71	0.90	19619.50	2.50	91968.40	131041.00	91968.40	4.688
32 SLU	17.73	18.18	0.45	ø10/20 4 br.	15.71	0.90	24445.60	2.50	91968.40	131041.00	91968.40	3.762
32 SLU	18.18	24.57	6.39	ø10/20 4 br.	15.71	0.90	22785.60	2.50	91968.40	131041.00	91968.40	4.036
34 SLU	24.57	25.02	0.45	ø10/20 4 br.	15.71	0.90	17036.40	2.50	91968.40	131041.00	91968.40	5.398

Travata n. 422

Nodi: -26 -1536 -451 -1627 -475 -476 -1234 -478 -479 -480 -481 -40

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
4R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cmq>	Afe I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.23	32	SLU	1	75.17	14.07	14.07	14.07	14.07	6551.02	35450.10	5.411
0.98	32	SLU	1	0.00	14.07	14.07	14.07	14.07	6535.71	35450.10	5.424
0.98	34	SLU	2	97.67	14.07	14.07	14.07	14.07	6594.47	35450.10	5.376
1.95	34	SLU	2	0.00	14.07	14.07	14.07	14.07	7733.26	35450.10	4.584
1.95	34	SLU	3	97.67	14.07	14.07	14.07	14.07	22713.80	35450.10	1.561
2.71	34	SLU	3	22.50	14.07	14.07	14.07	14.07	22793.00	35450.10	1.555
3.15	32	SLU	4	22.50	14.07	14.07	14.07	14.07	21384.10	35450.10	1.658
3.90	32	SLU	4	97.38	28.15	28.15	28.15	28.15	21384.10	70123.70	3.279
3.90	32	SLU	5	0.00	28.15	28.15	28.15	28.15	3990.16	70123.70	17.574
4.23	32	SLU	5	32.46	14.07	14.07	14.07	14.07	-4801.02	-35450.10	7.384
4.88	32	SLU	5	97.37	14.07	14.07	14.07	14.07	-4801.02	-35450.10	7.384
4.88	32	SLU	6	0.00	14.07	14.07	14.07	14.07	-6810.32	-35450.10	5.205
5.62	32	SLU	6	74.25	14.07	14.07	14.07	14.07	-6810.32	-35450.10	5.205
5.62	32	SLU	7	0.00	14.07	14.07	14.07	14.07	-10493.70	-35450.10	3.378
6.22	32	SLU	7	60.25	14.07	14.07	14.07	14.07	-12824.40	-35450.10	2.764
6.83	32	SLU	7	120.50	14.07	14.07	14.07	14.07	-12824.40	-35450.10	2.764
6.83	32	SLU	8	0.00	14.07	14.07	14.07	14.07	-17759.00	-35450.10	1.996
7.15	32	SLU	8	32.46	14.07	14.07	14.07	14.07	-18828.50	-35450.10	1.883
7.80	32	SLU	8	97.38	28.15	14.07	28.15	14.07	-18828.50	-69959.00	3.716
7.80	32	SLU	9	0.00	28.15	14.07	28.15	14.07	-21001.70	-69959.00	3.331
8.12	32	SLU	9	32.46	14.07	14.07	14.07	14.07	-21415.20	-35450.10	1.655
8.77	32	SLU	9	97.37	14.07	14.07	14.07	14.07	-21415.20	-35450.10	1.655
8.77	32	SLU	10	0.00	14.07	14.07	14.07	14.07	-21441.70	-35450.10	1.653
9.75	32	SLU	10	97.37	14.07	37.76	14.07	37.76	-20904.60	-35442.80	1.695
9.75	30	SLU	11	0.00	14.07	37.76	14.07	37.76	-16409.40	-35442.80	2.160
10.27	30	SLU	11	52.38	14.07	14.07	14.07	14.07	-16409.40	-35450.10	2.160

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cmq>	Afe I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.23	13	SLV (E)	1	75.17	14.07	14.07	14.07	14.07	8551.62	34082.90	3.986
0.98	13	SLV (E)	1	0.00	14.07	14.07	14.07	14.07	8530.26	34082.90	3.996
0.98	13	SLV (E)	2	97.67	14.07	14.07	14.07	14.07	5030.82	34082.90	6.775
1.95	1	SLV (E)	2	0.00	14.07	14.07	14.07	14.07	5779.08	34082.90	5.898
1.95	5	SLV (E)	3	97.67	14.07	14.07	14.07	14.07	19242.40	34082.90	1.771
2.71	5	SLV (E)	3	22.50	14.07	14.07	14.07	14.07	19312.70	34082.90	1.765
3.15	13	SLV (E)	4	22.50	14.07	14.07	14.07	14.07	18270.80	34082.90	1.865
3.90	13	SLV (E)	4	97.38	28.15	28.15	28.15	28.15	18270.80	67205.10	3.678
3.90	13	SLV (E)	5	0.00	28.15	28.15	28.15	28.15	3794.45	67205.10	17.711
4.23	13	SLV (E)	5	32.46	14.07	14.07	14.07	14.07	-4654.90	-34082.90	7.322
4.88	13	SLV (E)	5	97.37	14.07	14.07	14.07	14.07	-4654.90	-34082.90	7.322
4.88	13	SLV (E)	6	0.00	14.07	14.07	14.07	14.07	-9589.91	-34082.90	3.554
5.62	13	SLV (E)	6	74.25	14.07	14.07	14.07	14.07	-9589.91	-34082.90	3.554
5.62	13	SLV (E)	7	0.00	14.07	14.07	14.07	14.07	-9472.63	-34082.90	3.598
6.22	13	SLV (E)	7	60.25	14.07	14.07	14.07	14.07	-10597.60	-34082.90	3.216
6.83	13	SLV (E)	7	120.50	14.07	14.07	14.07	14.07	-10597.60	-34082.90	3.216
6.83	13	SLV (E)	8	0.00	14.07	14.07	14.07	14.07	-14123.20	-34082.90	2.413
7.15	13	SLV (E)	8	32.46	14.07	14.07	14.07	14.07	-14888.20	-34082.90	2.289
7.80	13	SLV (E)	8	97.38	28.15	14.07	28.15	14.07	-14888.20	-66258.60	4.450
7.80	13	SLV (E)	9	0.00	28.15	14.07	28.15	14.07	-16358.60	-66258.60	4.050
8.12	13	SLV (E)	9	32.46	14.07	14.07	14.07	14.07	-16615.60	-34082.90	2.051
8.77	13	SLV (E)	9	97.37	14.07	14.07	14.07	14.07	-16615.60	-34082.90	2.051
8.77	13	SLV (E)	10	0.00	14.07	14.07	14.07	14.07	-16624.90	-34082.90	2.050
9.75	13	SLV (E)	10	97.37	14.07	37.76	14.07	37.76	-16058.80	-34486.20	2.147
9.75	13	SLV (E)	11	0.00	14.07	37.76	14.07	37.76	-12067.90	-34486.20	2.858
10.27	13	SLV (E)	11	52.38	14.07	14.07	14.07	14.07	-12067.90	-34082.90	2.824

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	Afe S <cmq>	Afe I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.23	37	SLE R	1	75.17	14.07	14.07	4620.24	-106.13	528.96	9.43
0.23	29	SLE Q	1	75.17	14.07	14.07	3044.91	-69.94	348.61	6.21
0.98	37	SLE R	1	0.00	14.07	14.07	4609.69	-105.89	527.75	9.41
0.98	29	SLE Q	1	0.00	14.07	14.07	3038.91	-69.81	347.92	6.20
0.98	39	SLE R	2	97.67	14.07	14.07	4788.82	-110.00	548.26	9.77
0.98	29	SLE Q	2	97.67	14.07	14.07	4086.78	-93.88	467.89	8.34
1.95	39	SLE R	2	0.00	14.07	14.07	5615.63	-128.99	642.92	11.46
1.95	29	SLE Q	2	0.00	14.07	14.07	4825.48	-110.84	552.46	9.85
1.95	39	SLE R	3	97.67	14.07	14.07	16496.80	-378.94	1888.69	33.66
1.95	29	SLE Q	3	97.67	14.07	14.07	14281.00	-328.04	1635.00	29.14
2.71	39	SLE R	3	22.50	14.07	14.07	16554.20	-380.26	1895.26	33.78
2.71	29	SLE Q	3	22.50	14.07	14.07	14330.40	-329.18	1640.67	29.24
3.15	37	SLE R	4	22.50	14.07	14.07	15227.30	-349.78	1743.34	31.07
3.15	29	SLE Q	4	22.50	14.07	14.07	10237.60	-235.16	1172.09	20.89
3.90	37	SLE R	4	97.38	28.15	28.15	15227.30	-261.84	883.02	21.70
3.90	29	SLE Q	4	97.38	28.15	28.15	10237.60	-176.04	593.67	14.59

Relazione di calcolo

3.90	37	SLE R	5	0.00	28.15	28.15	2788.58	-47.95	161.71	3.97
3.90	29	SLE Q	5	0.00	28.15	28.15	-2158.06	125.14	-37.11	3.07
4.23	37	SLE R	5	32.46	14.07	14.07	-3505.43	401.33	-80.52	7.15
4.23	29	SLE Q	5	32.46	14.07	14.07	-3194.76	365.76	-73.39	6.52
4.88	37	SLE R	5	97.37	14.07	14.07	-3505.43	401.33	-80.52	7.15
4.88	29	SLE Q	5	97.37	14.07	14.07	-3194.76	365.76	-73.39	6.52
4.88	37	SLE R	6	0.00	14.07	14.07	-4982.82	570.47	-114.46	10.17
4.88	29	SLE Q	6	0.00	14.07	14.07	-4522.68	517.79	-103.89	9.23
5.62	37	SLE R	6	74.25	14.07	14.07	-4982.82	570.47	-114.46	10.17
5.62	29	SLE Q	6	74.25	14.07	14.07	-4522.68	517.79	-103.89	9.23
5.62	37	SLE R	7	0.00	14.07	14.07	-7551.52	864.56	-173.46	15.41
5.62	29	SLE Q	7	0.00	14.07	14.07	-5921.48	677.94	-136.02	12.08
6.22	37	SLE R	7	60.25	14.07	14.07	-9200.73	1053.37	-211.34	18.77
6.22	29	SLE Q	7	60.25	14.07	14.07	-6933.75	793.83	-159.27	14.15
6.83	37	SLE R	7	120.50	14.07	14.07	-9200.73	1053.37	-211.34	18.77
6.83	29	SLE Q	7	120.50	14.07	14.07	-6933.75	793.83	-159.27	14.15
6.83	37	SLE R	8	0.00	14.07	14.07	-12739.90	1458.56	-292.64	26.00
6.83	29	SLE Q	8	0.00	14.07	14.07	-9858.52	1128.68	-226.46	20.12
7.15	37	SLE R	8	32.46	14.07	14.07	-13513.30	1547.12	-310.41	27.57
7.15	29	SLE Q	8	32.46	14.07	14.07	-10499.70	1202.09	-241.18	21.42
7.80	37	SLE R	8	97.38	28.15	14.07	-13513.30	792.53	-263.70	21.49
7.80	29	SLE Q	8	97.38	28.15	14.07	-10499.70	615.79	-204.90	16.70
7.80	37	SLE R	9	0.00	28.15	14.07	-15054.10	882.89	-293.77	23.94
7.80	29	SLE Q	9	0.00	28.15	14.07	-11663.60	684.04	-227.61	18.55
8.12	37	SLE R	9	32.46	14.07	14.07	-15352.90	1757.72	-352.66	31.33
8.12	29	SLE Q	9	32.46	14.07	14.07	-11883.80	1360.55	-272.98	24.25
8.77	37	SLE R	9	97.37	14.07	14.07	-15352.90	1757.72	-352.66	31.33
8.77	29	SLE Q	9	97.37	14.07	14.07	-11883.80	1360.55	-272.98	24.25
8.77	37	SLE R	10	0.00	14.07	14.07	-15365.10	1759.12	-352.94	31.35
8.77	29	SLE Q	10	0.00	14.07	14.07	-11861.10	1357.95	-272.45	24.20
9.75	37	SLE R	10	97.37	14.07	37.76	-14967.40	1696.35	-268.65	25.19
9.75	29	SLE Q	10	97.37	14.07	37.76	-11483.20	1301.46	-206.12	19.32
9.75	35	SLE R	11	0.00	14.07	37.76	-11692.10	1325.13	-209.87	19.68
9.75	29	SLE Q	11	0.00	14.07	37.76	-8719.32	988.22	-156.51	14.67
10.27	35	SLE R	11	52.38	14.07	14.07	-11692.10	1338.60	-268.57	23.86
10.27	29	SLE Q	11	52.38	14.07	14.07	-8719.32	998.26	-200.29	17.79

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
39	0.23	29	SLE Q	1	4	75.17	3044.91	27.00	135.67	0.50	16.00	143.53	14.07	787.50	348.61	0.10	0.02
47	0.23	42	SLE F	1	4	75.17	3374.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	386.33	0.11	0.03
88	0.98	29	SLE Q	1	4	0.00	3038.91	27.00	135.67	0.50	16.00	143.53	14.07	787.50	347.92	0.10	0.02
96	0.98	42	SLE F	1	4	0.00	3367.47	27.00	135.67	0.50	16.00	143.53	14.07	787.50	385.54	0.11	0.03
133	0.98	29	SLE Q	2	4	97.67	4086.78	27.00	135.67	0.50	16.00	143.53	14.07	787.50	467.89	0.14	0.03
141	0.98	42	SLE F	2	4	97.67	4198.94	27.00	135.67	0.50	16.00	143.53	14.07	787.50	480.73	0.14	0.03
178	1.95	29	SLE Q	2	4	0.00	4825.48	27.00	135.67	0.50	16.00	143.53	14.07	787.50	552.46	0.16	0.04
186	1.95	42	SLE F	2	4	0.00	4930.71	27.00	135.67	0.50	16.00	143.53	14.07	787.50	564.51	0.16	0.04
223	1.95	29	SLE Q	3	4	97.67	14281.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1635.00	0.48	0.12
228	1.95	28	SLE F	3	4	97.67	14571.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1668.27	0.49	0.12
268	2.71	29	SLE Q	3	4	22.50	14330.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1640.67	0.49	0.12
273	2.71	28	SLE F	3	4	22.50	14622.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1674.05	0.49	0.12
317	3.15	29	SLE Q	4	4	22.50	10237.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1172.09	0.34	0.08
325	3.15	42	SLE F	4	4	22.50	11071.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1267.60	0.37	0.09
366	3.90	29	SLE Q	4	4	97.38	10237.60	27.00	62.62	0.50	16.00	98.76	28.15	787.50	593.67	0.17	0.03
374	3.90	42	SLE F	4	4	97.38	11071.90	27.00	62.62	0.50	16.00	98.76	28.15	787.50	642.05	0.19	0.03
441	3.90	29	SLE Q	5	4	0.00	-2158.06	27.00	62.62	0.50	16.00	98.76	28.15	787.50	125.14	0.04	0.01
451	3.90	28	SLE F	5	4	0.00	-2207.47	27.00	62.62	0.50	16.00	98.76	28.15	787.50	128.01	0.04	0.01
527	4.23	29	SLE Q	5	4	32.46	-3194.76	27.00	135.67	0.50	16.00	143.53	14.07	787.50	365.76	0.11	0.03
543	4.23	42	SLE F	5	4	32.46	-3307.17	27.00	135.67	0.50	16.00	143.53	14.07	787.50	378.63	0.11	0.03
610	4.88	29	SLE Q	5	4	97.37	-3194.76	27.00	135.67	0.50	16.00	143.53	14.07	787.50	365.76	0.11	0.03
626	4.88	42	SLE F	5	4	97.37	-3307.17	27.00	135.67	0.50	16.00	143.53	14.07	787.50	378.63	0.11	0.03
666	4.88	29	SLE Q	6	4	0.00	-4522.68	27.00	135.67	0.50	16.00	143.53	14.07	787.50	517.79	0.15	0.04
674	4.88	42	SLE F	6	4	0.00	-4745.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	543.31	0.16	0.04
711	5.62	29	SLE Q	6	4	74.25	-4522.68	27.00	135.67	0.50	16.00	143.53	14.07	787.50	517.79	0.15	0.04
719	5.62	42	SLE F	6	4	74.25	-4745.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	543.31	0.16	0.04
756	5.62	29	SLE Q	7	4	0.00	-5921.48	27.00	135.67	0.50	16.00	143.53	14.07	787.50	677.94	0.20	0.05
764	5.62	42	SLE F	7	4	0.00	-6249.62	27.00	135.67	0.50	16.00	143.53	14.07	787.50	715.51	0.21	0.05
801	6.22	29	SLE Q	7	4	60.25	-6933.75	27.00	135.67	0.50	16.00	143.53	14.07	787.50	793.83	0.23	0.06
809	6.22	42	SLE F	7	4	60.25	-7326.72	27.00	135.67	0.50	16.00	143.53	14.07	787.50	838.82	0.24	0.06
846	6.83	29	SLE Q	7	4	120.50	-6933.75	27.00	135.67	0.50	16.00	143.53	14.07	787.50	793.83	0.23	0.06
854	6.83	42	SLE F	7	4	120.50	-7326.72	27.00	135.67	0.50	16.00	143.53	14.07	787.50	838.82	0.24	0.06
891	6.83	29	SLE Q	8	4	0.00	-9858.52	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1128.68	0.33	0.08
899	6.83	42	SLE F	8	4	0.00	-10322.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1181.81	0.34	0.08
936	7.15	29	SLE Q	8	4	32.46	-10499.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1202.09	0.35	0.09
944	7.15	42	SLE F	8	4	32.46	-10977.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1256.78	0.37	0.09
981	7.80	29	SLE Q	8	4	97.38	-10499.70	27.00	62.62	0.50	16.00	98.76	28.15	787.50	615.79	0.18	0.03
989	7.80	42	SLE F	8	4	97.38	-10977.40	27.00	62.62	0.50	16.00	98.76	28.15	787.50	643.80	0.19	0.03
1026	7.80	29	SLE Q	9	4	0.00	-11663.60	27.00	62.62	0.50	16.00	98.76	28.15	787.50	684.04	0.20	0.03

Relazione di calcolo

1034	7.80	42	SLE F	9	4	0.00	-12153.30	27.00	62.62	0.50	16.00	98.76	28.15	787.50	712.77	0.21	0.03
1071	8.12	29	SLE Q	9	4	32.46	-11883.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1360.55	0.40	0.10
1079	8.12	42	SLE F	9	4	32.46	-12372.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1416.48	0.41	0.10
1116	8.77	29	SLE Q	9	4	97.37	-11883.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1360.55	0.40	0.10
1124	8.77	42	SLE F	9	4	97.37	-12372.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1416.48	0.41	0.10
1161	8.77	29	SLE Q	10	4	0.00	-11861.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1357.95	0.40	0.10
1163	8.77	25	SLE F	10	4	0.00	-12383.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1417.79	0.41	0.10
1206	9.75	29	SLE Q	10	4	97.37	-11483.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1301.46	0.38	0.09
1208	9.75	25	SLE F	10	4	97.37	-12108.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1372.28	0.40	0.10
1251	9.75	29	SLE Q	11	4	0.00	-8719.32	27.00	135.67	0.50	16.00	143.53	14.07	787.50	988.22	0.29	0.07
1253	9.75	25	SLE F	11	4	0.00	-9574.85	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1085.18	0.32	0.08
1296	10.27	29	SLE Q	11	4	52.38	-8719.32	27.00	135.67	0.50	16.00	143.53	14.07	787.50	998.26	0.29	0.07
1298	10.27	25	SLE F	11	4	52.38	-9574.85	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1096.21	0.32	0.08

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
13 SLV	0.23	0.98	0.75	ø10/20 4 br.	15.71	0.90	6031.96	2.50	91968.40	131041.00	91968.40	15.247
5 SLV	0.98	1.95	0.98	ø10/20 4 br.	15.71	0.90	6173.71	2.50	91968.40	131041.00	91968.40	14.897
34 SLU	1.95	2.71	0.75	ø10/20 4 br.	15.71	0.90	22348.60	2.50	91968.40	131041.00	91968.40	4.115
32 SLU	3.15	3.90	0.75	ø10/20 4 br.	15.71	0.90	24627.80	2.50	91968.40	131041.00	91968.40	3.734
32 SLU	3.90	4.88	0.97	ø10/20 4 br.	15.71	0.90	9238.95	2.50	91968.40	131041.00	91968.40	9.954
9 SLV	4.88	5.62	0.74	ø10/20 4 br.	15.71	0.90	6106.03	2.50	91968.40	131041.00	91968.40	15.062
1 SLV	5.62	6.83	1.21	ø10/20 4 br.	15.71	0.90	5995.93	2.50	91968.40	131041.00	91968.40	15.338
31 SLU	6.83	7.80	0.97	ø10/20 4 br.	15.71	0.90	4508.97	2.50	91968.40	131041.00	91968.40	20.397
30 SLU	7.80	8.77	0.97	ø10/20 4 br.	15.71	0.90	2360.58	2.50	91968.40	131041.00	91968.40	38.960
1 SLV	8.77	9.75	0.97	ø10/20 4 br.	15.71	0.90	3754.86	2.50	91968.40	131041.00	91968.40	24.493
1 SLV	9.75	10.27	0.52	ø10/20 4 br.	15.71	0.90	4561.79	2.50	91968.40	131041.00	91968.40	20.161

Travata n. 424

Nodi: -1 -266 -267 -13 -283 -284 -285 -286 -287 -288 -14 -426 -427 -428 -1542 -1612 -1625 -1611

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
4R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.30	32	SLU	1	30.00	14.07	14.07	14.07	14.07	2463.09	35450.10	14.393
0.72	32	SLU	1	72.33	14.07	14.07	14.07	14.07	2463.09	35450.10	14.393
0.72	32	SLU	2	0.00	14.07	14.07	14.07	14.07	4533.03	35450.10	7.820
1.45	32	SLU	2	72.33	14.07	14.07	14.07	14.07	4533.03	35450.10	7.820
1.45	32	SLU	3	0.00	14.07	14.07	14.07	14.07	7651.84	35450.10	4.633
2.02	32	SLU	3	57.33	14.07	14.07	14.07	14.07	7651.84	35450.10	4.633
2.32	32	SLU	4	15.00	14.07	14.07	14.07	14.07	7196.95	35450.10	4.926
3.05	32	SLU	4	87.86	14.07	14.07	14.07	14.07	7196.95	35450.10	4.926
3.05	17	SLU	5	0.00	14.07	14.07	14.07	14.07	-5698.97	-35450.10	6.220
3.41	17	SLU	5	36.04	14.07	14.07	14.07	14.07	-6215.89	-35450.10	5.703
3.93	17	SLU	5	87.86	14.07	28.15	14.07	28.15	-6215.89	-35445.00	5.702
3.93	20	SLU	6	0.00	14.07	28.15	14.07	28.15	-7921.87	-35445.00	4.474
4.12	20	SLU	6	19.36	14.07	14.07	14.07	14.07	-8125.23	-35450.10	4.363
4.81	20	SLU	6	87.86	28.15	14.07	28.15	14.07	-8125.23	-69959.00	8.610
4.81	20	SLU	7	0.00	28.15	14.07	28.15	14.07	-8092.40	-69959.00	8.645
5.68	20	SLU	7	87.86	14.07	14.07	14.07	14.07	-8001.30	-35450.10	4.431
5.68	20	SLU	8	0.00	14.07	14.07	14.07	14.07	-6803.82	-35450.10	5.210
6.56	20	SLU	8	87.86	14.07	28.15	14.07	28.15	-6322.88	-35445.00	5.606
6.56	34	SLU	9	0.00	14.07	28.15	14.07	28.15	-2721.15	-35445.00	13.026
7.44	20	SLU	9	87.86	14.07	14.07	14.07	14.07	3108.78	35450.10	11.403
7.44	20	SLU	10	0.00	14.07	14.07	14.07	14.07	10283.20	35450.10	3.447
8.17	20	SLU	10	72.86	28.15	14.07	28.15	14.07	10283.20	35445.00	3.447
8.47	34	SLU	11	15.00	28.15	14.07	28.15	14.07	10768.40	35445.00	3.292
9.21	34	SLU	11	89.00	14.07	14.07	14.07	14.07	10768.40	35450.10	3.292
9.21	34	SLU	12	0.00	14.07	14.07	14.07	14.07	4455.32	35450.10	7.957
9.65	34	SLU	12	44.50	14.07	14.07	14.07	14.07	4455.32	35450.10	7.957
10.10	34	SLU	12	89.00	14.07	28.15	14.07	28.15	3721.25	69959.00	18.800
10.10	32	SLU	13	0.00	14.07	28.15	14.07	28.15	-1399.10	-35445.00	25.334
10.54	32	SLU	13	44.50	14.07	14.07	14.07	14.07	-1576.54	-35450.10	22.486
10.99	32	SLU	13	89.00	14.07	14.07	14.07	14.07	-1576.54	-35450.10	22.486
10.99	32	SLU	14	0.00	14.07	14.07	14.07	14.07	-1691.02	-35450.10	20.964
11.60	32	SLU	14	61.00	28.15	14.07	28.15	14.07	-1691.02	-69959.00	41.371
11.90	20	SLU	15	15.00	28.15	14.07	28.15	14.07	-5122.73	-69959.00	13.657
12.34	20	SLU	15	58.50	14.07	14.07	14.07	14.07	-5815.38	-35450.10	6.096
12.77	20	SLU	15	102.00	14.07	28.15	14.07	28.15	-5815.38	-35445.00	6.095
12.77	34	SLU	16	0.00	14.07	28.15	14.07	28.15	-5393.26	-35445.00	6.572
13.66	34	SLU	16	89.00	14.07	14.07	14.07	14.07	-5393.26	-35450.10	6.573
13.66	34	SLU	17	0.00	14.07	14.07	14.07	14.07	-4541.72	-35450.10	7.805
14.55	34	SLU	17	89.00	14.07	14.07	14.07	14.07	-4242.22	-35450.10	8.357

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.30	13	SLV (E)	1	30.00	14.07	14.07	14.07	14.07	4277.63	34082.90	7.968
0.72	13	SLV (E)	1	72.33	14.07	14.07	14.07	14.07	4277.63	34082.90	7.968
0.72	13	SLV (E)	2	0.00	14.07	14.07	14.07	14.07	6068.03	34082.90	5.617
1.45	13	SLV (E)	2	72.33	14.07	14.07	14.07	14.07	6068.03	34082.90	5.617
1.45	13	SLV (E)	3	0.00	14.07	14.07	14.07	14.07	8836.67	34082.90	3.857
2.02	13	SLV (E)	3	57.33	14.07	14.07	14.07	14.07	8836.67	34082.90	3.857
2.32	13	SLV (E)	4	15.00	14.07	14.07	14.07	14.07	9842.04	34082.90	3.463
3.05	13	SLV (E)	4	87.86	14.07	14.07	14.07	14.07	9842.04	34082.90	3.463
3.05	5	SLV (E)	5	0.00	14.07	14.07	14.07	14.07	-7881.04	-34082.90	4.325
3.41	5	SLV (E)	5	36.04	14.07	14.07	14.07	14.07	-8093.46	-34082.90	4.211
3.93	5	SLV (E)	5	87.86	14.07	28.15	14.07	28.15	-8093.46	-34362.70	4.246
3.93	1	SLV (E)	6	0.00	14.07	28.15	14.07	28.15	-8239.37	-34362.70	4.171
4.12	1	SLV (E)	6	19.36	14.07	14.07	14.07	14.07	-8334.38	-34082.90	4.089
4.81	1	SLV (E)	6	87.86	28.15	14.07	28.15	14.07	-8334.38	-66258.60	7.950
4.81	1	SLV (E)	7	0.00	28.15	14.07	28.15	14.07	-8149.76	-66258.60	8.130
5.68	1	SLV (E)	7	87.86	14.07	14.07	14.07	14.07	-8001.16	-34082.90	4.260
5.68	1	SLV (E)	8	0.00	14.07	14.07	14.07	14.07	-6557.74	-34082.90	5.197
6.56	1	SLV (E)	8	87.86	14.07	28.15	14.07	28.15	-6144.88	-34362.70	5.592
6.56	13	SLV (E)	9	0.00	14.07	28.15	14.07	28.15	-3304.43	-34362.70	10.399
7.44	5	SLV (E)	9	87.86	14.07	14.07	14.07	14.07	3963.94	34082.90	8.598
7.44	5	SLV (E)	10	0.00	14.07	14.07	14.07	14.07	10070.60	34082.90	3.384
8.17	5	SLV (E)	10	72.86	28.15	14.07	28.15	14.07	10070.60	34362.70	3.412
8.47	9	SLV (E)	11	15.00	28.15	14.07	28.15	14.07	8810.57	34362.70	3.900
9.21	9	SLV (E)	11	89.00	14.07	14.07	14.07	14.07	8810.57	34082.90	3.868
9.21	13	SLV (E)	12	0.00	14.07	14.07	14.07	14.07	3906.89	34082.90	8.724
9.65	13	SLV (E)	12	44.50	14.07	14.07	14.07	14.07	3906.89	34082.90	8.724
10.10	13	SLV (E)	12	89.00	14.07	28.15	14.07	28.15	3332.99	66258.60	19.880
10.10	5	SLV (E)	13	0.00	14.07	28.15	14.07	28.15	-956.10	-34362.70	35.941
10.54	13	SLV (E)	13	44.50	14.07	14.07	14.07	14.07	-1118.72	-34082.90	30.466
10.99	13	SLV (E)	13	89.00	14.07	14.07	14.07	14.07	-1118.72	-34082.90	30.466
10.99	5	SLV (E)	14	0.00	14.07	14.07	14.07	14.07	1389.83	34082.90	24.523
11.60	5	SLV (E)	14	61.00	28.15	14.07	28.15	14.07	1389.83	34362.70	24.724
11.90	5	SLV (E)	15	15.00	28.15	14.07	28.15	14.07	-4388.23	-66258.60	15.099
12.34	5	SLV (E)	15	58.50	14.07	14.07	14.07	14.07	-4805.98	-34082.90	7.092
12.77	5	SLV (E)	15	102.00	14.07	28.15	14.07	28.15	-4805.98	-34362.70	7.150
12.77	9	SLV (E)	16	0.00	14.07	28.15	14.07	28.15	-4189.82	-34362.70	8.201
13.66	9	SLV (E)	16	89.00	14.07	14.07	14.07	14.07	-4213.05	-34082.90	8.090
13.66	9	SLV (E)	17	0.00	14.07	14.07	14.07	14.07	-3582.02	-34082.90	9.515
14.55	9	SLV (E)	17	89.00	14.07	14.07	14.07	14.07	-3358.05	-34082.90	10.150

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_e <daN/cmq>
0.30	37	SLE R	1	30.00	14.07	14.07	1605.85	-36.89	183.85	3.28
0.30	29	SLE Q	1	30.00	14.07	14.07	354.82	-8.15	40.62	0.72
0.72	37	SLE R	1	72.33	14.07	14.07	1605.85	-36.89	183.85	3.28
0.72	29	SLE Q	1	72.33	14.07	14.07	354.82	-8.15	40.62	0.72
0.72	37	SLE R	2	0.00	14.07	14.07	3070.37	-70.53	351.52	6.26
0.72	29	SLE Q	2	0.00	14.07	14.07	1482.12	-34.04	169.69	3.02
1.45	37	SLE R	2	72.33	14.07	14.07	3070.37	-70.53	351.52	6.26
1.45	29	SLE Q	2	72.33	14.07	14.07	1482.12	-34.04	169.69	3.02
1.45	37	SLE R	3	0.00	14.07	14.07	5339.16	-122.64	611.27	10.89
1.45	29	SLE Q	3	0.00	14.07	14.07	3735.33	-85.80	427.65	7.62
2.02	37	SLE R	3	57.33	14.07	14.07	5339.16	-122.64	611.27	10.89
2.02	29	SLE Q	3	57.33	14.07	14.07	3735.33	-85.80	427.65	7.62
2.32	37	SLE R	4	15.00	14.07	14.07	4972.83	-114.23	569.33	10.15
2.32	29	SLE Q	4	15.00	14.07	14.07	2993.48	-68.76	342.72	6.11
3.05	37	SLE R	4	87.86	14.07	14.07	4972.83	-114.23	569.33	10.15
3.05	29	SLE Q	4	87.86	14.07	14.07	2993.48	-68.76	342.72	6.11
3.05	21	SLE R	5	0.00	14.07	14.07	-4194.66	480.24	-96.35	8.56
3.05	29	SLE Q	5	0.00	14.07	14.07	-3552.22	406.69	-81.60	7.25
3.41	21	SLE R	5	36.04	14.07	14.07	-4574.63	523.74	-105.08	9.33
3.41	29	SLE Q	5	36.04	14.07	14.07	-3955.86	452.90	-90.87	8.07
3.93	21	SLE R	5	87.86	14.07	28.15	-4574.63	520.10	-90.31	8.28
3.93	29	SLE Q	5	87.86	14.07	28.15	-3955.86	449.75	-78.09	7.16
3.93	24	SLE R	6	0.00	14.07	28.15	-5807.46	660.26	-114.65	10.51
3.93	29	SLE Q	6	0.00	14.07	28.15	-5192.37	590.33	-102.50	9.40
4.12	24	SLE R	6	19.36	14.07	14.07	-5955.36	681.82	-136.80	12.15
4.12	29	SLE Q	6	19.36	14.07	14.07	-5342.59	611.66	-122.72	10.90
4.81	24	SLE R	6	87.86	28.15	14.07	-5955.36	349.27	-116.22	9.47
4.81	29	SLE Q	6	87.86	28.15	14.07	-5342.59	313.33	-104.26	8.50
4.81	24	SLE R	7	0.00	28.15	14.07	-5932.13	347.91	-115.76	9.43
4.81	29	SLE Q	7	0.00	28.15	14.07	-5332.74	312.75	-104.06	8.48
5.68	24	SLE R	7	87.86	14.07	14.07	-5861.78	671.10	-134.65	11.96

Relazione di calcolo

5.68	29	SLE Q	7	87.86	14.07	14.07	-5272.48	603.64	-121.11	10.76
5.68	24	SLE R	8	0.00	14.07	14.07	-4981.45	570.32	-114.43	10.16
5.68	29	SLE Q	8	0.00	14.07	14.07	-4528.72	518.49	-104.03	9.24
6.56	24	SLE R	8	87.86	14.07	28.15	-4628.18	526.18	-91.37	8.38
6.56	29	SLE Q	8	87.86	14.07	28.15	-4208.81	478.50	-83.09	7.62
6.56	39	SLE R	9	0.00	14.07	28.15	-1995.94	226.92	-39.40	3.61
6.56	29	SLE Q	9	0.00	14.07	28.15	-1790.68	203.59	-35.35	3.24
7.44	24	SLE R	9	87.86	14.07	14.07	2239.93	-51.45	256.44	4.57
7.44	29	SLE Q	9	87.86	14.07	14.07	1965.42	-45.15	225.02	4.01
7.44	24	SLE R	10	0.00	14.07	14.07	7447.40	-171.07	852.64	15.20
7.44	29	SLE Q	10	0.00	14.07	14.07	6657.97	-152.94	762.26	13.59
8.17	24	SLE R	10	72.86	28.15	14.07	7447.40	-147.02	846.70	13.48
8.17	29	SLE Q	10	72.86	28.15	14.07	6657.97	-131.44	756.95	12.05
8.47	39	SLE R	11	15.00	28.15	14.07	7775.27	-153.50	883.98	14.08
8.47	29	SLE Q	11	15.00	28.15	14.07	6818.98	-134.62	775.26	12.34
9.21	39	SLE R	11	89.00	14.07	14.07	7775.27	-178.60	890.17	15.87
9.21	29	SLE Q	11	89.00	14.07	14.07	6818.98	-156.63	780.69	13.91
9.21	39	SLE R	12	0.00	14.07	14.07	3212.61	-73.80	367.81	6.56
9.21	29	SLE Q	12	0.00	14.07	14.07	2764.28	-63.50	316.48	5.64
9.65	39	SLE R	12	44.50	14.07	14.07	3212.61	-73.80	367.81	6.56
9.65	29	SLE Q	12	44.50	14.07	14.07	2764.28	-63.50	316.48	5.64
10.10	39	SLE R	12	89.00	14.07	28.15	2685.22	-52.40	157.48	4.27
10.10	29	SLE Q	12	89.00	14.07	28.15	2312.19	-45.12	135.60	3.68
10.10	37	SLE R	13	0.00	14.07	28.15	-981.53	111.59	-19.38	1.78
10.10	29	SLE Q	13	0.00	14.07	28.15	-672.01	76.40	-13.27	1.22
10.54	37	SLE R	13	44.50	14.07	14.07	-1105.92	126.61	-25.40	2.26
10.54	29	SLE Q	13	44.50	14.07	14.07	-738.97	84.60	-16.97	1.51
10.99	37	SLE R	13	89.00	14.07	14.07	-1105.92	126.61	-25.40	2.26
10.99	29	SLE Q	13	89.00	14.07	14.07	-738.97	84.60	-16.97	1.51
10.99	37	SLE R	14	0.00	14.07	14.07	-1183.27	135.47	-27.18	2.41
10.99	29	SLE Q	14	0.00	14.07	14.07	-774.19	88.64	-17.78	1.58
11.60	37	SLE R	14	61.00	28.15	14.07	-1183.27	69.40	-23.09	1.88
11.60	29	SLE Q	14	61.00	28.15	14.07	-774.19	45.40	-15.11	1.23
11.90	24	SLE R	15	15.00	28.15	14.07	-3707.05	217.41	-72.34	5.90
11.90	29	SLE Q	15	15.00	28.15	14.07	-3317.03	194.54	-64.73	5.28
12.34	24	SLE R	15	58.50	14.07	14.07	-4217.41	482.84	-96.88	8.61
12.34	29	SLE Q	15	58.50	14.07	14.07	-3796.02	434.60	-87.20	7.75
12.77	24	SLE R	15	102.00	14.07	28.15	-4217.41	479.48	-83.26	7.63
12.77	29	SLE Q	15	102.00	14.07	28.15	-3796.02	431.57	-74.94	6.87
12.77	39	SLE R	16	0.00	14.07	28.15	-3899.92	443.39	-76.99	7.06
12.77	29	SLE Q	16	0.00	14.07	28.15	-3448.71	392.09	-68.08	6.24
13.66	39	SLE R	16	89.00	14.07	14.07	-3899.92	446.49	-89.58	7.96
13.66	29	SLE Q	16	89.00	14.07	14.07	-3448.71	394.84	-79.22	7.04
13.66	39	SLE R	17	0.00	14.07	14.07	-3281.80	375.73	-75.38	6.70
13.66	29	SLE Q	17	0.00	14.07	14.07	-2862.30	327.70	-65.75	5.84
14.55	39	SLE R	17	89.00	14.07	14.07	-3061.31	350.48	-70.32	6.25
14.55	29	SLE Q	17	89.00	14.07	14.07	-2651.10	303.52	-60.90	5.41

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
37	0.30	29	SLE Q	1	4	30.00	354.82	27.00	135.67	0.50	16.00	143.53	14.07	787.50	40.62	0.01	0.00
45	0.30	42	SLE F	1	4	30.00	537.02	27.00	135.67	0.50	16.00	143.53	14.07	787.50	61.48	0.02	0.00
84	0.72	29	SLE Q	1	4	72.33	354.82	27.00	135.67	0.50	16.00	143.53	14.07	787.50	40.62	0.01	0.00
92	0.72	42	SLE F	1	4	72.33	537.02	27.00	135.67	0.50	16.00	143.53	14.07	787.50	61.48	0.02	0.00
131	0.72	29	SLE Q	2	4	0.00	1482.12	27.00	135.67	0.50	16.00	143.53	14.07	787.50	169.69	0.05	0.01
139	0.72	42	SLE F	2	4	0.00	1884.77	27.00	135.67	0.50	16.00	143.53	14.07	787.50	215.78	0.06	0.02
178	1.45	29	SLE Q	2	4	72.33	1482.12	27.00	135.67	0.50	16.00	143.53	14.07	787.50	169.69	0.05	0.01
186	1.45	42	SLE F	2	4	72.33	1884.77	27.00	135.67	0.50	16.00	143.53	14.07	787.50	215.78	0.06	0.02
227	1.45	29	SLE Q	3	4	0.00	3735.33	27.00	135.67	0.50	16.00	143.53	14.07	787.50	427.65	0.12	0.03
235	1.45	42	SLE F	3	4	0.00	4189.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	479.61	0.14	0.03
276	2.02	29	SLE Q	3	4	57.33	3735.33	27.00	135.67	0.50	16.00	143.53	14.07	787.50	427.65	0.12	0.03
284	2.02	42	SLE F	3	4	57.33	4189.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	479.61	0.14	0.03
338	2.32	29	SLE Q	4	4	15.00	2993.48	27.00	135.67	0.50	16.00	143.53	14.07	787.50	342.72	0.10	0.02
354	2.32	42	SLE F	4	4	15.00	3478.36	27.00	135.67	0.50	16.00	143.53	14.07	787.50	398.23	0.12	0.03
410	3.05	29	SLE Q	4	4	87.86	2993.48	27.00	135.67	0.50	16.00	143.53	14.07	787.50	342.72	0.10	0.02
426	3.05	42	SLE F	4	4	87.86	3478.36	27.00	135.67	0.50	16.00	143.53	14.07	787.50	398.23	0.12	0.03
475	3.05	29	SLE Q	5	4	0.00	-3552.22	27.00	135.67	0.50	16.00	143.53	14.07	787.50	406.69	0.12	0.03
477	3.05	25	SLE F	5	4	0.00	-3812.58	27.00	135.67	0.50	16.00	143.53	14.07	787.50	436.50	0.13	0.03
531	3.41	29	SLE Q	5	4	36.04	-3955.86	27.00	135.67	0.50	16.00	143.53	14.07	787.50	452.90	0.13	0.03
533	3.41	25	SLE F	5	4	36.04	-4195.99	27.00	135.67	0.50	16.00	143.53	14.07	787.50	480.39	0.14	0.03
584	3.93	29	SLE Q	5	4	87.86	-3955.86	27.00	135.67	0.50	16.00	143.53	14.07	787.50	449.75	0.13	0.03
586	3.93	25	SLE F	5	4	87.86	-4195.99	27.00	135.67	0.50	16.00	143.53	14.07	787.50	477.05	0.14	0.03
629	3.93	29	SLE Q	6	4	0.00	-5192.37	27.00	135.67	0.50	16.00	143.53	14.07	787.50	590.33	0.17	0.04
631	3.93	25	SLE F	6	4	0.00	-5324.09	27.00	135.67	0.50	16.00	143.53	14.07	787.50	605.30	0.18	0.04
674	4.12	29	SLE Q	6	4	19.36	-5342.59	27.00	135.67	0.50	16.00	143.53	14.07	787.50	611.66	0.18	0.04
676	4.12	25	SLE F	6	4	19.36	-5459.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	624.99	0.18	0.04
719	4.81	29	SLE Q	6	4	87.86	-5342.59	27.00	62.62	0.50	16.00	98.76	28.15	787.50	313.33	0.09	0.02
721	4.81	25	SLE F	6	4	87.86	-5459.00	27.00	62.62	0.50	16.00	98.76	28.15	787.50	320.16	0.09	0.02

Relazione di calcolo

764	4.81	29	SLE Q	7	4	0.00	-5332.74	27.00	62.62	0.50	16.00	98.76	28.15	787.50	312.75	0.09	0.02
766	4.81	25	SLE F	7	4	0.00	-5439.11	27.00	62.62	0.50	16.00	98.76	28.15	787.50	318.99	0.09	0.02
809	5.68	29	SLE Q	7	4	87.86	-5272.48	27.00	135.67	0.50	16.00	143.53	14.07	787.50	603.64	0.18	0.04
811	5.68	25	SLE F	7	4	87.86	-5367.03	27.00	135.67	0.50	16.00	143.53	14.07	787.50	614.46	0.18	0.04
854	5.68	29	SLE Q	8	4	0.00	-4528.72	27.00	135.67	0.50	16.00	143.53	14.07	787.50	518.49	0.15	0.04
859	5.68	28	SLE F	8	4	0.00	-4607.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	527.48	0.15	0.04
899	6.56	29	SLE Q	8	4	87.86	-4208.81	27.00	135.67	0.50	16.00	143.53	14.07	787.50	478.50	0.14	0.03
904	6.56	28	SLE F	8	4	87.86	-4282.99	27.00	135.67	0.50	16.00	143.53	14.07	787.50	486.94	0.14	0.03
977	6.56	29	SLE Q	9	4	0.00	-1790.68	27.00	135.67	0.50	16.00	143.53	14.07	787.50	203.59	0.06	0.01
987	6.56	28	SLE F	9	4	0.00	-1819.58	27.00	135.67	0.50	16.00	143.53	14.07	787.50	206.87	0.06	0.01
1065	7.44	29	SLE Q	9	4	87.86	1965.42	27.00	135.67	0.50	16.00	143.53	14.07	787.50	225.02	0.07	0.02
1069	7.44	25	SLE F	9	4	87.86	2010.22	27.00	135.67	0.50	16.00	143.53	14.07	787.50	230.15	0.07	0.02
1121	7.44	29	SLE Q	10	4	0.00	6657.97	27.00	135.67	0.50	16.00	143.53	14.07	787.50	762.26	0.22	0.05
1126	7.44	28	SLE F	10	4	0.00	6798.19	27.00	135.67	0.50	16.00	143.53	14.07	787.50	778.31	0.23	0.06
1166	8.17	29	SLE Q	10	4	72.86	6657.97	27.00	135.67	0.50	16.00	143.53	14.07	787.50	756.95	0.22	0.05
1171	8.17	28	SLE F	10	4	72.86	6798.19	27.00	135.67	0.50	16.00	143.53	14.07	787.50	772.89	0.23	0.05
1211	8.47	29	SLE Q	11	4	15.00	6818.98	27.00	135.67	0.50	16.00	143.53	14.07	787.50	775.26	0.23	0.06
1216	8.47	28	SLE F	11	4	15.00	6955.07	27.00	135.67	0.50	16.00	143.53	14.07	787.50	790.73	0.23	0.06
1256	9.21	29	SLE Q	11	4	89.00	6818.98	27.00	135.67	0.50	16.00	143.53	14.07	787.50	780.69	0.23	0.06
1261	9.21	28	SLE F	11	4	89.00	6955.07	27.00	135.67	0.50	16.00	143.53	14.07	787.50	796.27	0.23	0.06
1301	9.21	29	SLE Q	12	4	0.00	2764.28	27.00	135.67	0.50	16.00	143.53	14.07	787.50	316.48	0.09	0.02
1303	9.21	25	SLE F	12	4	0.00	2821.34	27.00	135.67	0.50	16.00	143.53	14.07	787.50	323.01	0.09	0.02
1351	9.65	29	SLE Q	12	4	44.50	2764.28	27.00	135.67	0.50	16.00	143.53	14.07	787.50	316.48	0.09	0.02
1353	9.65	25	SLE F	12	4	44.50	2821.34	27.00	135.67	0.50	16.00	143.53	14.07	787.50	323.01	0.09	0.02
1401	10.10	29	SLE Q	12	4	89.00	2312.19	27.00	62.62	0.50	16.00	98.76	28.15	787.50	135.60	0.04	0.01
1403	10.10	25	SLE F	12	4	89.00	2362.13	27.00	62.62	0.50	16.00	98.76	28.15	787.50	138.53	0.04	0.01
1453	10.10	29	SLE Q	13	4	0.00	-672.01	27.00	135.67	0.50	16.00	143.53	14.07	787.50	76.40	0.02	0.01
1461	10.10	42	SLE F	13	4	0.00	-719.43	27.00	135.67	0.50	16.00	143.53	14.07	787.50	81.79	0.02	0.01
1505	10.54	29	SLE Q	13	4	44.50	-738.97	27.00	135.67	0.50	16.00	143.53	14.07	787.50	84.60	0.02	0.01
1513	10.54	42	SLE F	13	4	44.50	-795.87	27.00	135.67	0.50	16.00	143.53	14.07	787.50	91.12	0.03	0.01
1552	10.99	29	SLE Q	13	4	89.00	-738.97	27.00	135.67	0.50	16.00	143.53	14.07	787.50	84.60	0.02	0.01
1560	10.99	42	SLE F	13	4	89.00	-795.87	27.00	135.67	0.50	16.00	143.53	14.07	787.50	91.12	0.03	0.01
1618	10.99	29	SLE Q	14	4	0.00	-774.19	27.00	135.67	0.50	16.00	143.53	14.07	787.50	88.64	0.03	0.01
1634	10.99	42	SLE F	14	4	0.00	-838.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	95.94	0.03	0.01
1693	11.60	29	SLE Q	14	4	61.00	384.76	27.00	135.67	0.50	16.00	143.53	14.07	787.50	43.74	0.01	0.00
1701	11.60	27	SLE F	14	4	61.00	409.74	27.00	135.67	0.50	16.00	143.53	14.07	787.50	46.58	0.01	0.00
1760	11.90	29	SLE Q	15	4	15.00	-3317.03	27.00	62.62	0.50	16.00	98.76	28.15	787.50	194.54	0.06	0.01
1765	11.90	28	SLE F	15	4	15.00	-3385.50	27.00	62.62	0.50	16.00	98.76	28.15	787.50	198.55	0.06	0.01
1816	12.34	29	SLE Q	15	4	58.50	-3796.02	27.00	135.67	0.50	16.00	143.53	14.07	787.50	434.60	0.13	0.03
1821	12.34	28	SLE F	15	4	58.50	-3870.05	27.00	135.67	0.50	16.00	143.53	14.07	787.50	443.07	0.13	0.03
1865	12.77	29	SLE Q	15	4	102.00	-3796.02	27.00	135.67	0.50	16.00	143.53	14.07	787.50	431.57	0.13	0.03
1870	12.77	28	SLE F	15	4	102.00	-3870.05	27.00	135.67	0.50	16.00	143.53	14.07	787.50	439.99	0.13	0.03
1910	12.77	29	SLE Q	16	4	0.00	-3448.71	27.00	135.67	0.50	16.00	143.53	14.07	787.50	392.09	0.11	0.03
1915	12.77	28	SLE F	16	4	0.00	-3516.26	27.00	135.67	0.50	16.00	143.53	14.07	787.50	399.77	0.12	0.03
1955	13.66	29	SLE Q	16	4	89.00	-3448.71	27.00	135.67	0.50	16.00	143.53	14.07	787.50	394.84	0.12	0.03
1960	13.66	28	SLE F	16	4	89.00	-3516.26	27.00	135.67	0.50	16.00	143.53	14.07	787.50	402.57	0.12	0.03
2000	13.66	29	SLE Q	17	4	0.00	-2862.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	327.70	0.10	0.02
2004	13.66	27	SLE F	17	4	0.00	-2916.74	27.00	135.67	0.50	16.00	143.53	14.07	787.50	333.93	0.10	0.02
2045	14.55	29	SLE Q	17	4	89.00	-2651.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	303.52	0.09	0.02
2049	14.55	27	SLE F	17	4	89.00	-2705.15	27.00	135.67	0.50	16.00	143.53	14.07	787.50	309.71	0.09	0.02

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
1 SLV	0.30	0.75	0.45	ø10/20 4 br.	15.71	0.90	4415.36	2.50	91968.40	131041.00	91968.40	20.829
32 SLU	0.75	1.57	0.82	ø10/20 4 br.	15.71	0.90	5233.94	2.50	91968.40	131041.00	91968.40	17.572
34 SLU	1.57	2.02	0.45	ø10/20 4 br.	15.71	0.90	6002.47	2.50	91968.40	131041.00	91968.40	15.322
13 SLV	2.32	2.77	0.45	ø10/20 4 br.	15.71	0.90	9251.79	2.50	91968.40	131041.00	91968.40	9.941
20 SLU	2.77	7.72	4.95	ø10/20 4 br.	15.71	0.90	9280.08	2.50	91968.40	131041.00	91968.40	9.910
20 SLU	7.72	8.17	0.45	ø10/20 4 br.	15.71	0.90	9961.30	2.50	91968.40	131041.00	91968.40	9.233
34 SLU	8.47	8.92	0.45	ø10/20 4 br.	15.71	0.90	8689.95	2.50	91968.40	131041.00	91968.40	10.583
34 SLU	8.92	11.15	2.23	ø10/20 4 br.	15.71	0.90	8000.74	2.50	91968.40	131041.00	91968.40	11.495
5 SLV	11.15	11.60	0.45	ø10/20 4 br.	15.71	0.90	3274.06	2.50	91968.40	131041.00	91968.40	28.090
34 SLU	11.90	12.35	0.45	ø10/20 4 br.	15.71	0.90	6458.81	2.50	91968.40	131041.00	91968.40	14.239
33 SLU	12.35	14.49	2.14	ø10/20 4 br.	15.71	0.90	5879.31	2.50	91968.40	131041.00	91968.40	15.643

Travata n. 425

Nodi: -1613 -599 -600 -43 -553 -554 -555 -556 -557 -558 -559 -42

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
4	R	90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.15	19	SLU	1	82.67	14.07	14.07	14.07	14.07	-1497.44	-35450.10	23.674
0.98	19	SLU	1	0.00	14.07	14.07	14.07	14.07	-1327.04	-35450.10	26.714

Relazione di calcolo

0.98	20	SLU	2	97.67	14.07	14.07	14.07	14.07	6064.98	35450.10	5.845
1.95	20	SLU	2	0.00	14.07	14.07	14.07	14.07	7927.98	35450.10	4.472
1.95	20	SLU	3	97.67	14.07	14.07	14.07	14.07	24096.90	35450.10	1.471
2.71	20	SLU	3	22.50	14.07	14.07	14.07	14.07	24180.40	35450.10	1.466
3.15	32	SLU	4	22.50	14.07	14.07	14.07	14.07	23554.40	35450.10	1.505
3.90	32	SLU	4	97.38	28.15	14.07	28.15	14.07	23554.40	35445.00	1.505
3.90	32	SLU	5	0.00	28.15	14.07	28.15	14.07	6342.30	35445.00	5.589
4.23	20	SLU	5	32.46	14.07	28.15	14.07	28.15	-4181.63	-35445.00	8.476
4.88	20	SLU	5	97.37	14.07	28.15	14.07	28.15	-4181.63	-35445.00	8.476
4.88	34	SLU	6	0.00	14.07	28.15	14.07	28.15	-8719.90	-35445.00	4.065
5.20	34	SLU	6	32.46	14.07	14.07	14.07	14.07	-10010.10	-35450.10	3.541
5.85	34	SLU	6	97.37	14.07	14.07	14.07	14.07	-10010.10	-35450.10	3.541
5.85	34	SLU	7	0.00	14.07	14.07	14.07	14.07	-13422.10	-35450.10	2.641
6.18	34	SLU	7	32.46	14.07	14.07	14.07	14.07	-14339.80	-35450.10	2.472
6.83	34	SLU	7	97.38	14.07	14.07	14.07	14.07	-14339.80	-35450.10	2.472
6.83	32	SLU	8	0.00	14.07	14.07	14.07	14.07	-17052.30	-35450.10	2.079
7.15	32	SLU	8	32.46	14.07	14.07	14.07	14.07	-17798.10	-35450.10	1.992
7.80	32	SLU	8	97.38	28.15	14.07	28.15	14.07	-17798.10	-69959.00	3.931
7.80	32	SLU	9	0.00	28.15	14.07	28.15	14.07	-19342.60	-69959.00	3.617
8.12	32	SLU	9	32.46	14.07	14.07	14.07	14.07	-19631.50	-35450.10	1.806
8.77	32	SLU	9	97.37	14.07	14.07	14.07	14.07	-19631.50	-35450.10	1.806
8.77	32	SLU	10	0.00	14.07	14.07	14.07	14.07	-19743.40	-35450.10	1.796
9.75	32	SLU	10	97.37	14.07	28.15	14.07	28.15	-19370.20	-35445.00	1.830
9.75	32	SLU	11	0.00	14.07	28.15	14.07	28.15	-15264.90	-35445.00	2.322
10.27	32	SLU	11	52.38	14.07	14.07	14.07	14.07	-15264.90	-35450.10	2.322

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.15	5	SLV(E)	1	82.67	14.07	14.07	14.07	14.07	-2783.21	-34082.90	12.246
0.98	5	SLV(E)	1	0.00	14.07	14.07	14.07	14.07	-2489.66	-34082.90	13.690
0.98	5	SLV(E)	2	97.67	14.07	14.07	14.07	14.07	6265.64	34082.90	5.440
1.95	5	SLV(E)	2	0.00	14.07	14.07	14.07	14.07	8164.79	34082.90	4.174
1.95	5	SLV(E)	3	97.67	14.07	14.07	14.07	14.07	24148.80	34082.90	1.411
2.71	5	SLV(E)	3	22.50	14.07	14.07	14.07	14.07	24230.50	34082.90	1.407
3.15	13	SLV(E)	4	22.50	14.07	14.07	14.07	14.07	18500.80	34082.90	1.842
3.90	13	SLV(E)	4	97.38	28.15	14.07	28.15	14.07	18500.80	34362.70	1.857
3.90	13	SLV(E)	5	0.00	28.15	14.07	28.15	14.07	5227.85	34362.70	6.573
4.23	5	SLV(E)	5	32.46	14.07	28.15	14.07	28.15	-4341.31	-34362.70	7.915
4.88	5	SLV(E)	5	97.37	14.07	28.15	14.07	28.15	-4341.31	-34362.70	7.915
4.88	9	SLV(E)	6	0.00	14.07	28.15	14.07	28.15	-7296.72	-34362.70	4.709
5.20	9	SLV(E)	6	32.46	14.07	14.07	14.07	14.07	-8259.99	-34082.90	4.126
5.85	9	SLV(E)	6	97.37	14.07	14.07	14.07	14.07	-8259.99	-34082.90	4.126
5.85	9	SLV(E)	7	0.00	14.07	14.07	14.07	14.07	-11167.60	-34082.90	3.052
6.18	9	SLV(E)	7	32.46	14.07	14.07	14.07	14.07	-11961.80	-34082.90	2.849
6.83	9	SLV(E)	7	97.38	14.07	14.07	14.07	14.07	-11961.80	-34082.90	2.849
6.83	13	SLV(E)	8	0.00	14.07	14.07	14.07	14.07	-14587.60	-34082.90	2.336
7.15	13	SLV(E)	8	32.46	14.07	14.07	14.07	14.07	-15338.70	-34082.90	2.222
7.80	13	SLV(E)	8	97.38	28.15	14.07	28.15	14.07	-15338.70	-66258.60	4.320
7.80	13	SLV(E)	9	0.00	28.15	14.07	28.15	14.07	-17191.90	-66258.60	3.854
8.12	13	SLV(E)	9	32.46	14.07	14.07	14.07	14.07	-17575.40	-34082.90	1.939
8.77	13	SLV(E)	9	97.37	14.07	14.07	14.07	14.07	-17575.40	-34082.90	1.939
8.77	13	SLV(E)	10	0.00	14.07	14.07	14.07	14.07	-17762.80	-34082.90	1.919
9.75	13	SLV(E)	10	97.37	14.07	28.15	14.07	28.15	-17605.90	-34362.70	1.952
9.75	13	SLV(E)	11	0.00	14.07	28.15	14.07	28.15	-14540.80	-34362.70	2.363
10.27	13	SLV(E)	11	52.38	14.07	14.07	14.07	14.07	-14540.80	-34082.90	2.344

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.15	23	SLE R	1	82.67	14.07	14.07	-1066.96	122.16	-24.51	2.18
0.15	29	SLE Q	1	82.67	14.07	14.07	-790.52	90.50	-18.16	1.61
0.98	23	SLE R	1	0.00	14.07	14.07	-941.36	107.78	-21.62	1.92
0.98	29	SLE Q	1	0.00	14.07	14.07	-684.97	78.42	-15.73	1.40
0.98	24	SLE R	2	97.67	14.07	14.07	4421.55	-101.56	506.21	9.02
0.98	29	SLE Q	2	97.67	14.07	14.07	4005.78	-92.01	458.61	8.17
1.95	24	SLE R	2	0.00	14.07	14.07	5769.19	-132.52	660.50	11.77
1.95	29	SLE Q	2	0.00	14.07	14.07	5206.48	-119.59	596.08	10.62
1.95	24	SLE R	3	97.67	14.07	14.07	17532.10	-402.72	2007.21	35.77
1.95	29	SLE Q	3	97.67	14.07	14.07	15842.30	-363.90	1813.75	32.33
2.71	24	SLE R	3	22.50	14.07	14.07	17592.80	-404.12	2014.17	35.90
2.71	29	SLE Q	3	22.50	14.07	14.07	15897.10	-365.16	1820.03	32.44
3.15	37	SLE R	4	22.50	14.07	14.07	16920.10	-388.66	1937.15	34.52
3.15	29	SLE Q	4	22.50	14.07	14.07	13591.30	-312.20	1556.04	27.73
3.90	37	SLE R	4	97.38	28.15	14.07	16920.10	-334.03	1923.66	30.63
3.90	29	SLE Q	4	97.38	28.15	14.07	13591.30	-268.31	1545.21	24.60
3.90	37	SLE R	5	0.00	28.15	14.07	4496.66	-88.77	511.23	8.14
3.90	29	SLE Q	5	0.00	28.15	14.07	3153.38	-62.25	358.51	5.71

Relazione di calcolo

4.23	37	SLE R	5	32.46	14.07	28.15	4496.66	-87.75	263.72	7.15
4.23	24	SLE R	5	32.46	14.07	28.15	-3077.36	349.87	-60.75	5.57
4.23	29	SLE Q	5	32.46	14.07	28.15	-2989.06	339.83	-59.01	5.41
4.88	24	SLE R	5	97.37	14.07	28.15	-3077.36	349.87	-60.75	5.57
4.88	29	SLE Q	5	97.37	14.07	28.15	-2989.06	339.83	-59.01	5.41
4.88	39	SLE R	6	0.00	14.07	28.15	-6350.00	721.94	-125.36	11.50
4.88	29	SLE Q	6	0.00	14.07	28.15	-5829.50	662.76	-115.08	10.55
5.20	39	SLE R	6	32.46	14.07	14.07	-7285.45	834.10	-167.35	14.87
5.20	29	SLE Q	6	32.46	14.07	14.07	-6618.19	757.70	-152.02	13.50
5.85	39	SLE R	6	97.37	14.07	14.07	-7285.45	834.10	-167.35	14.87
5.85	29	SLE Q	6	97.37	14.07	14.07	-6618.19	757.70	-152.02	13.50
5.85	39	SLE R	7	0.00	14.07	14.07	-9732.23	1114.22	-223.55	19.86
5.85	29	SLE Q	7	0.00	14.07	14.07	-8617.37	986.59	-197.94	17.58
6.18	39	SLE R	7	32.46	14.07	14.07	-10398.20	1190.47	-238.85	21.22
6.18	29	SLE Q	7	32.46	14.07	14.07	-9172.96	1050.19	-210.71	18.72
6.83	39	SLE R	7	97.38	14.07	14.07	-10398.20	1190.47	-238.85	21.22
6.83	29	SLE Q	7	97.38	14.07	14.07	-9172.96	1050.19	-210.71	18.72
6.83	37	SLE R	8	0.00	14.07	14.07	-12335.20	1412.23	-283.35	25.17
6.83	29	SLE Q	8	0.00	14.07	14.07	-10681.90	1222.95	-245.37	21.80
7.15	37	SLE R	8	32.46	14.07	14.07	-12872.40	1473.74	-295.69	26.27
7.15	29	SLE Q	8	32.46	14.07	14.07	-11075.80	1268.05	-254.42	22.60
7.80	37	SLE R	8	97.38	28.15	14.07	-12872.40	754.94	-251.20	20.47
7.80	29	SLE Q	8	97.38	28.15	14.07	-11075.80	649.57	-216.14	17.62
7.80	37	SLE R	9	0.00	28.15	14.07	-13940.70	817.59	-272.04	22.17
7.80	29	SLE Q	9	0.00	28.15	14.07	-11566.80	678.37	-225.72	18.40
8.12	37	SLE R	9	32.46	14.07	14.07	-14142.80	1619.19	-324.87	28.86
8.12	29	SLE Q	9	32.46	14.07	14.07	-11615.30	1329.81	-266.81	23.70
8.77	37	SLE R	9	97.37	14.07	14.07	-14142.80	1619.19	-324.87	28.86
8.77	29	SLE Q	9	97.37	14.07	14.07	-11615.30	1329.81	-266.81	23.70
8.77	37	SLE R	10	0.00	14.07	14.07	-14215.60	1627.52	-326.54	29.01
8.77	29	SLE Q	10	0.00	14.07	14.07	-11613.30	1329.58	-266.76	23.70
9.75	37	SLE R	10	97.37	14.07	28.15	-13921.40	1582.74	-274.83	25.20
9.75	29	SLE Q	10	97.37	14.07	28.15	-11133.70	1265.80	-219.79	20.16
9.75	37	SLE R	11	0.00	14.07	28.15	-10913.00	1240.71	-215.44	19.76
9.75	29	SLE Q	11	0.00	14.07	28.15	-8034.15	913.41	-158.61	14.54
10.27	37	SLE R	11	52.38	14.07	14.07	-10913.00	1249.41	-250.68	22.27
10.27	29	SLE Q	11	52.38	14.07	14.07	-8034.15	919.82	-184.55	16.39

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
64	0.15	29	SLE Q	1	4	82.67	-790.52	27.00	135.67	0.50	16.00	143.53	14.07	787.50	90.51	0.03	0.01
72	0.15	27	SLE F	1	4	82.67	-863.12	27.00	135.67	0.50	16.00	143.53	14.07	787.50	98.82	0.03	0.01
149	0.98	29	SLE Q	1	4	0.00	-684.97	27.00	135.67	0.50	16.00	143.53	14.07	787.50	78.42	0.02	0.01
157	0.98	27	SLE F	1	4	0.00	-752.44	27.00	135.67	0.50	16.00	143.53	14.07	787.50	86.15	0.03	0.01
205	0.98	29	SLE Q	2	4	97.67	4005.78	27.00	135.67	0.50	16.00	143.53	14.07	787.50	458.61	0.13	0.03
210	0.98	28	SLE F	2	4	97.67	4086.99	27.00	135.67	0.50	16.00	143.53	14.07	787.50	467.91	0.14	0.03
250	1.95	29	SLE Q	2	4	0.00	5206.48	27.00	135.67	0.50	16.00	143.53	14.07	787.50	596.08	0.17	0.04
255	1.95	28	SLE F	2	4	0.00	5316.22	27.00	135.67	0.50	16.00	143.53	14.07	787.50	608.64	0.18	0.04
295	1.95	29	SLE Q	3	4	97.67	15842.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1813.75	0.57	0.14
300	1.95	28	SLE F	3	4	97.67	16173.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1851.62	0.54	0.13
340	2.71	29	SLE Q	3	4	22.50	15897.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1820.03	0.57	0.14
345	2.71	28	SLE F	3	4	22.50	16229.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1858.03	0.54	0.13
385	3.15	29	SLE Q	4	4	22.50	13591.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1556.04	0.45	0.11
393	3.15	42	SLE F	4	4	22.50	14072.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1611.08	0.47	0.11
430	3.90	29	SLE Q	4	4	97.38	13591.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1545.21	0.45	0.11
438	3.90	42	SLE F	4	4	97.38	14072.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1599.86	0.47	0.11
510	3.90	29	SLE Q	5	4	0.00	3153.38	27.00	135.67	0.50	16.00	143.53	14.07	787.50	358.51	0.10	0.03
526	3.90	42	SLE F	5	4	0.00	3354.03	27.00	135.67	0.50	16.00	143.53	14.07	787.50	381.32	0.11	0.03
599	4.23	29	SLE Q	5	4	32.46	-2989.06	27.00	135.67	0.50	16.00	143.53	14.07	787.50	339.83	0.10	0.02
609	4.23	28	SLE F	5	4	32.46	-3025.53	27.00	135.67	0.50	16.00	143.53	14.07	787.50	343.98	0.10	0.02
689	4.88	29	SLE Q	5	4	97.37	-2989.06	27.00	135.67	0.50	16.00	143.53	14.07	787.50	339.83	0.10	0.02
699	4.88	28	SLE F	5	4	97.37	-3025.53	27.00	135.67	0.50	16.00	143.53	14.07	787.50	343.98	0.10	0.02
745	4.88	29	SLE Q	6	4	0.00	-5829.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	662.76	0.19	0.05
750	4.88	28	SLE F	6	4	0.00	-5917.14	27.00	135.67	0.50	16.00	143.53	14.07	787.50	672.73	0.20	0.05
790	5.20	29	SLE Q	6	4	32.46	-6618.19	27.00	135.67	0.50	16.00	143.53	14.07	787.50	757.70	0.22	0.05
795	5.20	28	SLE F	6	4	32.46	-6716.27	27.00	135.67	0.50	16.00	143.53	14.07	787.50	768.93	0.22	0.05
835	5.85	29	SLE Q	6	4	97.37	-6618.19	27.00	135.67	0.50	16.00	143.53	14.07	787.50	757.70	0.22	0.05
840	5.85	28	SLE F	6	4	97.37	-6716.27	27.00	135.67	0.50	16.00	143.53	14.07	787.50	768.93	0.22	0.05
880	5.85	29	SLE Q	7	4	0.00	-8617.37	27.00	135.67	0.50	16.00	143.53	14.07	787.50	986.59	0.29	0.07
888	5.85	42	SLE F	7	4	0.00	-8745.49	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1001.25	0.29	0.07
925	6.18	29	SLE Q	7	4	32.46	-9172.96	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1050.19	0.31	0.07
933	6.18	42	SLE F	7	4	32.46	-9320.74	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1067.11	0.31	0.08
970	6.83	29	SLE Q	7	4	97.38	-9172.96	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1050.19	0.31	0.07
978	6.83	42	SLE F	7	4	97.38	-9320.74	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1067.11	0.31	0.08
1015	6.83	29	SLE Q	8	4	0.00	-10681.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1222.95	0.36	0.09
1023	6.83	42	SLE F	8	4	0.00	-10897.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1247.61	0.36	0.09
1060	7.15	29	SLE Q	8	4	32.46	-11075.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1268.05	0.37	0.09
1068	7.15	42	SLE F	8	4	32.46	-11311.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1294.98	0.38	0.09

Relazione di calcolo

1105	7.80	29	SLE Q	8	4	97.38	-11075.80	27.00	62.62	0.50	16.00	98.76	28.15	787.50	649.57	0.19	0.03
1113	7.80	42	SLE F	8	4	97.38	-11311.00	27.00	62.62	0.50	16.00	98.76	28.15	787.50	663.37	0.19	0.03
1150	7.80	29	SLE Q	9	4	0.00	-11566.80	27.00	62.62	0.50	16.00	98.76	28.15	787.50	678.37	0.20	0.03
1158	7.80	42	SLE F	9	4	0.00	-11878.30	27.00	62.62	0.50	16.00	98.76	28.15	787.50	696.64	0.20	0.03
1195	8.12	29	SLE Q	9	4	32.46	-11615.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1329.81	0.39	0.09
1197	8.12	25	SLE F	9	4	32.46	-11948.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1368.00	0.40	0.10
1240	8.77	29	SLE Q	9	4	97.37	-11615.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1329.81	0.39	0.09
1242	8.77	25	SLE F	9	4	97.37	-11948.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1368.00	0.40	0.10
1285	8.77	29	SLE Q	10	4	0.00	-11613.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1329.58	0.39	0.09
1287	8.77	25	SLE F	10	4	0.00	-11977.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1371.26	0.40	0.10
1330	9.75	29	SLE Q	10	4	97.37	-11133.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1265.80	0.37	0.09
1332	9.75	25	SLE F	10	4	97.37	-11563.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1314.66	0.38	0.09
1379	9.75	29	SLE Q	11	4	0.00	-8034.15	27.00	135.67	0.50	16.00	143.53	14.07	787.50	913.41	0.27	0.06
1381	9.75	25	SLE F	11	4	0.00	-8619.83	27.00	135.67	0.50	16.00	143.53	14.07	787.50	980.00	0.29	0.07
1428	10.27	29	SLE Q	11	4	52.38	-8034.15	27.00	135.67	0.50	16.00	143.53	14.07	787.50	919.81	0.27	0.07
1430	10.27	25	SLE F	11	4	52.38	-8619.83	27.00	135.67	0.50	16.00	143.53	14.07	787.50	986.87	0.29	0.07

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
5 SLV	0.15	0.98	0.83	ø10/20 4 br.	15.71	0.90	4235.08	2.50	91968.40	131041.00	91968.40	21.716
5 SLV	0.98	1.95	0.98	ø10/20 4 br.	15.71	0.90	8468.72	2.50	91968.40	131041.00	91968.40	10.860
20 SLU	1.95	2.71	0.75	ø10/20 4 br.	15.71	0.90	23603.40	2.50	91968.40	131041.00	91968.40	3.896
34 SLU	3.15	3.90	0.75	ø10/20 4 br.	15.71	0.90	24754.90	2.50	91968.40	131041.00	91968.40	3.715
34 SLU	3.90	4.88	0.97	ø10/20 4 br.	15.71	0.90	10496.60	2.50	91968.40	131041.00	91968.40	8.762
34 SLU	4.88	5.85	0.97	ø10/20 4 br.	15.71	0.90	5550.37	2.50	91968.40	131041.00	91968.40	16.570
32 SLU	5.85	6.83	0.97	ø10/20 4 br.	15.71	0.90	3889.75	2.50	91968.40	131041.00	91968.40	23.644
13 SLV	6.83	7.80	0.97	ø10/20 4 br.	15.71	0.90	3055.84	2.50	91968.40	131041.00	91968.40	30.096
13 SLV	7.80	8.77	0.97	ø10/20 4 br.	15.71	0.90	1721.40	2.50	91968.40	131041.00	91968.40	53.426
5 SLV	8.77	9.75	0.97	ø10/20 4 br.	15.71	0.90	4986.53	2.50	91968.40	131041.00	91968.40	18.443
5 SLV	9.75	10.27	0.52	ø10/20 4 br.	15.71	0.90	11050.80	2.50	91968.40	131041.00	91968.40	8.322

Travata n. 427

Nodi: -223 -625 -626 -48 -648 -649 -650 -651 -652 -653 -654 -49

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
4R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.15	20	SLU	1	82.67	14.07	14.07	14.07	14.07	-1799.25	-35450.10	19.703
0.98	20	SLU	1	0.00	14.07	14.07	14.07	14.07	-1553.65	-35450.10	22.817
0.98	34	SLU	2	97.67	14.07	14.07	14.07	14.07	8377.32	35450.10	4.232
1.95	34	SLU	2	0.00	14.07	14.07	14.07	14.07	10789.10	35450.10	3.286
1.95	34	SLU	3	97.67	14.07	14.07	14.07	14.07	32549.70	35450.10	1.089
2.71	34	SLU	3	22.50	14.07	14.07	14.07	14.07	32663.30	35450.10	1.085
3.15	34	SLU	4	22.50	14.07	14.07	14.07	14.07	34024.50	35450.10	1.042
3.90	34	SLU	4	97.38	28.15	14.07	28.15	14.07	34024.50	35445.00	1.042
3.90	34	SLU	5	0.00	28.15	14.07	28.15	14.07	9182.28	35445.00	3.860
4.23	34	SLU	5	32.46	14.07	14.07	14.07	14.07	9182.28	35450.10	3.861
4.88	20	SLU	5	97.37	14.07	28.15	14.07	28.15	-4152.82	-35445.00	8.535
4.88	34	SLU	6	0.00	14.07	28.15	14.07	28.15	-10566.20	-35445.00	3.355
5.20	34	SLU	6	32.46	14.07	28.15	14.07	28.15	-12179.00	-35445.00	2.910
5.85	34	SLU	6	97.37	14.07	14.07	14.07	14.07	-12179.00	-35450.10	2.911
5.85	34	SLU	7	0.00	14.07	14.07	14.07	14.07	-15672.00	-35450.10	2.262
6.18	34	SLU	7	32.46	14.07	14.07	14.07	14.07	-16569.00	-35450.10	2.140
6.83	34	SLU	7	97.38	14.07	14.07	14.07	14.07	-16569.00	-35450.10	2.140
6.83	34	SLU	8	0.00	14.07	14.07	14.07	14.07	-18374.00	-35450.10	1.929
7.15	34	SLU	8	32.46	14.07	14.07	14.07	14.07	-18777.80	-35450.10	1.888
7.80	34	SLU	8	97.38	28.15	14.07	28.15	14.07	-18777.80	-69959.00	3.726
7.80	34	SLU	9	0.00	28.15	14.07	28.15	14.07	-19034.30	-69959.00	3.675
8.77	34	SLU	9	97.37	14.07	14.07	14.07	14.07	-18871.20	-35450.10	1.879
8.77	34	SLU	10	0.00	14.07	14.07	14.07	14.07	-17717.00	-35450.10	2.001
9.75	34	SLU	10	97.37	14.07	28.15	14.07	28.15	-16227.60	-35445.00	2.184
9.75	32	SLU	11	0.00	14.07	28.15	14.07	28.15	-9508.57	-35445.00	3.728
10.27	32	SLU	11	52.38	14.07	14.07	14.07	14.07	-9508.57	-35450.10	3.728

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.15	13	SLV(E)	1	82.67	14.07	14.07	14.07	14.07	-1769.00	-34082.90	19.267
0.98	13	SLV(E)	1	0.00	14.07	14.07	14.07	14.07	-1521.42	-34082.90	22.402
0.98	13	SLV(E)	2	97.67	14.07	14.07	14.07	14.07	6434.06	34082.90	5.297
1.95	13	SLV(E)	2	0.00	14.07	14.07	14.07	14.07	8217.61	34082.90	4.148
1.95	13	SLV(E)	3	97.67	14.07	14.07	14.07	14.07	24306.60	34082.90	1.402

Relazione di calcolo

2.71	13	SLV(E)	3	22.50	14.07	14.07	14.07	14.07	24389.80	34082.90	1.397
3.15	5	SLV(E)	4	22.50	14.07	14.07	14.07	14.07	25625.30	34082.90	1.330
3.90	5	SLV(E)	4	97.38	28.15	14.07	28.15	14.07	25625.30	34362.70	1.341
3.90	5	SLV(E)	5	0.00	28.15	14.07	28.15	14.07	7551.03	34362.70	4.551
4.23	5	SLV(E)	5	32.46	14.07	14.07	14.07	14.07	7551.03	34082.90	4.514
4.88	13	SLV(E)	5	97.37	14.07	28.15	14.07	28.15	-4112.03	-34362.70	8.357
4.88	13	SLV(E)	6	0.00	14.07	28.15	14.07	28.15	-7591.02	-34362.70	4.527
5.20	13	SLV(E)	6	32.46	14.07	28.15	14.07	28.15	-8495.51	-34362.70	4.045
5.85	13	SLV(E)	6	97.37	14.07	14.07	14.07	14.07	-8495.51	-34082.90	4.012
5.85	13	SLV(E)	7	0.00	14.07	14.07	14.07	14.07	-10920.50	-34082.90	3.121
6.18	13	SLV(E)	7	32.46	14.07	14.07	14.07	14.07	-11691.80	-34082.90	2.915
6.83	13	SLV(E)	7	97.38	14.07	14.07	14.07	14.07	-11691.80	-34082.90	2.915
6.83	13	SLV(E)	8	0.00	14.07	14.07	14.07	14.07	-13575.00	-34082.90	2.511
7.15	13	SLV(E)	8	32.46	14.07	14.07	14.07	14.07	-14061.00	-34082.90	2.424
7.80	13	SLV(E)	8	97.38	28.15	14.07	28.15	14.07	-14061.00	-66258.60	4.712
7.80	13	SLV(E)	9	0.00	28.15	14.07	28.15	14.07	-14671.00	-66258.60	4.516
8.77	13	SLV(E)	9	97.37	14.07	14.07	14.07	14.07	-14734.00	-34082.90	2.313
8.77	13	SLV(E)	10	0.00	14.07	14.07	14.07	14.07	-14663.50	-34082.90	2.324
9.75	13	SLV(E)	10	97.37	14.07	28.15	14.07	28.15	-13974.60	-34362.70	2.459
9.75	13	SLV(E)	11	0.00	14.07	28.15	14.07	28.15	-9952.41	-34362.70	3.453
10.27	13	SLV(E)	11	52.38	14.07	14.07	14.07	14.07	-9952.41	-34082.90	3.425

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.15	24	SLE R	1	82.67	14.07	14.07	-1253.41	143.50	-28.79	2.56
0.15	29	SLE Q	1	82.67	14.07	14.07	-924.76	105.87	-21.24	1.89
0.98	37	SLE R	1	0.00	14.07	14.07	1088.73	-25.01	124.65	2.22
0.98	29	SLE Q	1	0.00	14.07	14.07	880.70	-20.23	100.83	1.80
0.98	39	SLE R	2	97.67	14.07	14.07	6017.76	-138.23	688.96	12.28
0.98	29	SLE Q	2	97.67	14.07	14.07	5011.66	-115.12	573.78	10.23
1.95	39	SLE R	2	0.00	14.07	14.07	7736.07	-177.70	885.69	15.79
1.95	29	SLE Q	2	0.00	14.07	14.07	6424.84	-147.58	735.57	13.11
1.95	39	SLE R	3	97.67	14.07	14.07	23320.30	-535.68	2669.89	47.58
1.95	29	SLE Q	3	97.67	14.07	14.07	19465.40	-447.13	2228.56	39.72
2.71	39	SLE R	3	22.50	14.07	14.07	23401.50	-537.54	2679.19	47.75
2.71	29	SLE Q	3	22.50	14.07	14.07	19533.20	-448.69	2236.32	39.86
3.15	39	SLE R	4	22.50	14.07	14.07	24280.90	-557.74	2779.87	49.54
3.15	29	SLE Q	4	22.50	14.07	14.07	19515.00	-448.27	2234.24	39.82
3.90	39	SLE R	4	97.38	28.15	14.07	24280.90	-479.34	2760.52	43.96
3.90	29	SLE Q	4	97.38	28.15	14.07	19515.00	-385.25	2218.68	35.33
3.90	39	SLE R	5	0.00	28.15	14.07	6523.76	-128.79	741.69	11.81
3.90	29	SLE Q	5	0.00	28.15	14.07	5035.45	-99.41	572.49	9.12
4.23	39	SLE R	5	32.46	14.07	14.07	6523.76	-149.85	746.89	13.31
4.23	29	SLE Q	5	32.46	14.07	14.07	5035.45	-115.67	576.50	10.27
4.88	39	SLE R	5	97.37	14.07	28.15	4273.64	-83.40	250.64	6.80
4.88	24	SLE R	5	97.37	14.07	28.15	-3008.06	341.99	-59.38	5.45
4.88	29	SLE Q	5	97.37	14.07	28.15	3208.15	-62.60	188.15	5.10
4.88	39	SLE R	6	0.00	14.07	28.15	-7583.29	862.15	-149.71	13.73
4.88	29	SLE Q	6	0.00	14.07	28.15	-6534.27	742.89	-129.00	11.83
5.20	39	SLE R	6	32.46	14.07	28.15	-8742.58	993.95	-172.59	15.83
5.20	29	SLE Q	6	32.46	14.07	28.15	-7502.95	853.02	-148.12	13.58
5.85	39	SLE R	6	97.37	14.07	14.07	-8742.58	1000.92	-200.82	17.84
5.85	29	SLE Q	6	97.37	14.07	14.07	-7502.95	859.00	-172.35	15.31
5.85	39	SLE R	7	0.00	14.07	14.07	-11233.00	1286.04	-258.03	22.92
5.85	29	SLE Q	7	0.00	14.07	14.07	-9579.00	1096.68	-220.03	19.55
6.18	39	SLE R	7	32.46	14.07	14.07	-11881.30	1360.27	-272.92	24.24
6.18	29	SLE Q	7	32.46	14.07	14.07	-10136.70	1160.53	-232.84	20.68
6.83	39	SLE R	7	97.38	14.07	14.07	-11881.30	1360.27	-272.92	24.24
6.83	29	SLE Q	7	97.38	14.07	14.07	-10136.70	1160.53	-232.84	20.68
6.83	39	SLE R	8	0.00	14.07	14.07	-13167.30	1507.50	-302.46	26.87
6.83	29	SLE Q	8	0.00	14.07	14.07	-11234.90	1286.26	-258.07	22.92
7.15	39	SLE R	8	32.46	14.07	14.07	-13463.80	1541.44	-309.27	27.47
7.15	29	SLE Q	8	32.46	14.07	14.07	-11503.20	1316.98	-264.23	23.47
7.80	39	SLE R	8	97.38	28.15	14.07	-13463.80	789.62	-262.74	21.41
7.80	29	SLE Q	8	97.38	28.15	14.07	-11503.20	674.64	-224.48	18.30
7.80	39	SLE R	9	0.00	28.15	14.07	-13645.90	800.31	-266.29	21.70
7.80	29	SLE Q	9	0.00	28.15	14.07	-11663.60	684.05	-227.61	18.55
8.77	39	SLE R	9	97.37	14.07	14.07	-13523.20	1548.25	-310.63	27.59
8.77	29	SLE Q	9	97.37	14.07	14.07	-11548.70	1322.19	-265.28	23.56
8.77	39	SLE R	10	0.00	14.07	14.07	-12703.60	1454.41	-291.81	25.92
8.77	29	SLE Q	10	0.00	14.07	14.07	-10861.00	1243.45	-249.48	22.16
9.75	39	SLE R	10	97.37	14.07	28.15	-11632.80	1322.55	-229.65	21.06
9.75	29	SLE Q	10	97.37	14.07	28.15	-9929.57	1128.90	-196.02	17.98
9.75	37	SLE R	11	0.00	14.07	28.15	-6818.58	775.21	-134.61	12.34
9.75	29	SLE Q	11	0.00	14.07	28.15	-5698.31	647.85	-112.49	10.32
10.27	37	SLE R	11	52.38	14.07	14.07	-6818.58	780.65	-156.63	13.91
10.27	29	SLE Q	11	52.38	14.07	14.07	-5698.31	652.39	-130.89	11.63

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
69	0.15	29	SLE Q	1	4	82.67	-924.76	27.00	135.67	0.50	16.00	143.53	14.07	787.50	105.87	0.03	0.01
79	0.15	28	SLE F	1	4	82.67	-998.73	27.00	135.67	0.50	16.00	143.53	14.07	787.50	114.34	0.03	0.01
160	0.98	29	SLE Q	1	4	0.00	880.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	100.83	0.03	0.01
176	0.98	42	SLE F	1	4	0.00	918.28	27.00	135.67	0.50	16.00	143.53	14.07	787.50	105.13	0.03	0.01
215	0.98	29	SLE Q	2	4	97.67	5011.66	27.00	135.67	0.50	16.00	143.53	14.07	787.50	573.78	0.17	0.04
220	0.98	28	SLE F	2	4	97.67	5147.45	27.00	135.67	0.50	16.00	143.53	14.07	787.50	589.32	0.17	0.04
260	1.95	29	SLE Q	2	4	0.00	6424.84	27.00	135.67	0.50	16.00	143.53	14.07	787.50	735.57	0.21	0.05
265	1.95	28	SLE F	2	4	0.00	6607.27	27.00	135.67	0.50	16.00	143.53	14.07	787.50	756.45	0.22	0.05
305	1.95	29	SLE Q	3	4	97.67	19465.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	2228.56	0.77	0.19
310	1.95	28	SLE F	3	4	97.67	20023.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	2292.42	0.67	0.16
350	2.71	29	SLE Q	3	4	22.50	19533.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	2236.32	0.78	0.19
355	2.71	28	SLE F	3	4	22.50	20093.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	2300.41	0.67	0.16
395	3.15	29	SLE Q	4	4	22.50	19515.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	2234.24	0.77	0.19
403	3.15	42	SLE F	4	4	22.50	20069.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	2297.76	0.67	0.16
440	3.90	29	SLE Q	4	4	97.38	19515.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	2218.68	0.77	0.19
448	3.90	42	SLE F	4	4	97.38	20069.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	2281.77	0.66	0.16
516	3.90	29	SLE Q	5	4	0.00	5035.45	27.00	135.67	0.50	16.00	143.53	14.07	787.50	572.49	0.17	0.04
532	3.90	42	SLE F	5	4	0.00	5226.25	27.00	135.67	0.50	16.00	143.53	14.07	787.50	594.18	0.17	0.04
606	4.23	29	SLE Q	5	4	32.46	5035.45	27.00	135.67	0.50	16.00	143.53	14.07	787.50	576.50	0.17	0.04
622	4.23	42	SLE F	5	4	32.46	5226.25	27.00	135.67	0.50	16.00	143.53	14.07	787.50	598.34	0.17	0.04
695	4.88	29	SLE Q	5	4	97.37	-2782.06	27.00	135.67	0.50	16.00	143.53	14.07	787.50	316.30	0.09	0.02
705	4.88	28	SLE F	5	4	97.37	-2827.65	27.00	135.67	0.50	16.00	143.53	14.07	787.50	321.48	0.09	0.02
751	4.88	29	SLE Q	6	4	0.00	-6534.27	27.00	135.67	0.50	16.00	143.53	14.07	787.50	742.89	0.22	0.05
756	4.88	28	SLE F	6	4	0.00	-6675.22	27.00	135.67	0.50	16.00	143.53	14.07	787.50	758.91	0.22	0.05
796	5.20	29	SLE Q	6	4	32.46	-7502.95	27.00	135.67	0.50	16.00	143.53	14.07	787.50	853.02	0.25	0.06
801	5.20	28	SLE F	6	4	32.46	-7664.42	27.00	135.67	0.50	16.00	143.53	14.07	787.50	871.38	0.25	0.06
841	5.85	29	SLE Q	6	4	97.37	-7502.95	27.00	135.67	0.50	16.00	143.53	14.07	787.50	859.00	0.25	0.06
846	5.85	28	SLE F	6	4	97.37	-7664.42	27.00	135.67	0.50	16.00	143.53	14.07	787.50	877.49	0.26	0.06
886	5.85	29	SLE Q	7	4	0.00	-9579.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1096.68	0.32	0.08
891	5.85	28	SLE F	7	4	0.00	-9784.37	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1120.19	0.33	0.08
931	6.18	29	SLE Q	7	4	32.46	-10136.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1160.53	0.34	0.08
936	6.18	28	SLE F	7	4	32.46	-10350.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1184.96	0.35	0.08
976	6.83	29	SLE Q	7	4	97.38	-10136.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1160.53	0.34	0.08
981	6.83	28	SLE F	7	4	97.38	-10350.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1184.96	0.35	0.08
1021	6.83	29	SLE Q	8	4	0.00	-11234.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1286.26	0.37	0.09
1029	6.83	42	SLE F	8	4	0.00	-11467.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1312.88	0.38	0.09
1066	7.15	29	SLE Q	8	4	32.46	-11503.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1316.98	0.38	0.09
1074	7.15	42	SLE F	8	4	32.46	-11744.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1344.65	0.39	0.10
1111	7.80	29	SLE Q	8	4	97.38	-11503.20	27.00	62.62	0.50	16.00	98.76	28.15	787.50	674.64	0.20	0.03
1119	7.80	42	SLE F	8	4	97.38	-11744.90	27.00	62.62	0.50	16.00	98.76	28.15	787.50	688.81	0.20	0.03
1156	7.80	29	SLE Q	9	4	0.00	-11663.60	27.00	62.62	0.50	16.00	98.76	28.15	787.50	684.05	0.20	0.03
1164	7.80	42	SLE F	9	4	0.00	-11911.00	27.00	62.62	0.50	16.00	98.76	28.15	787.50	698.55	0.20	0.03
1201	8.77	29	SLE Q	9	4	97.37	-11548.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1322.19	0.39	0.09
1209	8.77	42	SLE F	9	4	97.37	-11800.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1351.05	0.39	0.10
1246	8.77	29	SLE Q	10	4	0.00	-10861.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1243.45	0.36	0.09
1254	8.77	42	SLE F	10	4	0.00	-11125.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1273.74	0.37	0.09
1291	9.75	29	SLE Q	10	4	97.37	-9929.57	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1128.90	0.33	0.08
1299	9.75	42	SLE F	10	4	97.37	-10186.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1158.14	0.34	0.08
1342	9.75	29	SLE Q	11	4	0.00	-5698.31	27.00	135.67	0.50	16.00	143.53	14.07	787.50	647.85	0.19	0.05
1350	9.75	42	SLE F	11	4	0.00	-5896.17	27.00	135.67	0.50	16.00	143.53	14.07	787.50	670.34	0.20	0.05
1393	10.27	29	SLE Q	11	4	52.38	-5698.31	27.00	135.67	0.50	16.00	143.53	14.07	787.50	652.39	0.19	0.05
1401	10.27	42	SLE F	11	4	52.38	-5896.17	27.00	135.67	0.50	16.00	143.53	14.07	787.50	675.04	0.20	0.05

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
34 SLU	0.15	0.98	0.83	ø10/20 4 br.	15.71	0.90	4353.46	2.50	91968.40	131041.00	91968.40	21.125
34 SLU	0.98	1.95	0.98	ø10/20 4 br.	15.71	0.90	10841.50	2.50	91968.40	131041.00	91968.40	8.483
34 SLU	1.95	2.71	0.75	ø10/20 4 br.	15.71	0.90	32058.20	2.50	91968.40	131041.00	91968.40	2.869
34 SLU	3.15	3.90	0.75	ø10/20 4 br.	15.71	0.90	35587.10	2.50	91968.40	131041.00	91968.40	2.584
34 SLU	3.90	4.88	0.97	ø10/20 4 br.	15.71	0.90	14235.60	2.50	91968.40	131041.00	91968.40	6.460
34 SLU	4.88	5.85	0.97	ø10/20 4 br.	15.71	0.90	7375.90	2.50	91968.40	131041.00	91968.40	12.469
34 SLU	5.85	6.83	0.97	ø10/20 4 br.	15.71	0.90	4004.10	2.50	91968.40	131041.00	91968.40	22.968
13 SLV	6.83	7.80	0.97	ø10/20 4 br.	15.71	0.90	1958.03	2.50	91968.40	131041.00	91968.40	46.970
5 SLV	7.80	8.77	0.97	ø10/20 4 br.	15.71	0.90	1850.34	2.50	91968.40	131041.00	91968.40	49.703
34 SLU	8.77	9.75	0.97	ø10/20 4 br.	15.71	0.90	7667.90	2.50	91968.40	131041.00	91968.40	11.994
13 SLV	9.75	10.27	0.52	ø10/20 4 br.	15.71	0.90	13114.70	2.50	91968.40	131041.00	91968.40	7.013

Travata n. 429

Nodi: -21 -791 -792 -34 -720 -721 -722 -723 -724 -725 -726 -35

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
------	------	-----------	-----------	----------------	----------------	-----	------------------	-------------------	------------------	-------------------	----	------------------	------------------

Relazione di calcolo

4	R	90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04
---	---	-------	-------	------	------	--------	--------	-------	--------	-------	-------	---------	---------

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cmq>	Afe I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.15	32	SLU	1	82.67	14.07	14.07	14.07	14.07	1974.84	35450.10	17.951
0.98	32	SLU	1	0.00	14.07	14.07	14.07	14.07	2076.50	35450.10	17.072
0.98	34	SLU	2	97.67	14.07	14.07	14.07	14.07	7279.23	35450.10	4.870
1.95	34	SLU	2	0.00	14.07	14.07	14.07	14.07	9127.77	35450.10	3.884
1.95	34	SLU	3	97.67	14.07	14.07	14.07	14.07	27732.60	35450.10	1.278
2.71	34	SLU	3	22.50	14.07	14.07	14.07	14.07	27829.90	35450.10	1.274
3.15	34	SLU	4	22.50	14.07	14.07	14.07	14.07	29061.40	35450.10	1.220
3.90	34	SLU	4	97.38	28.15	14.07	28.15	14.07	29061.40	35445.00	1.220
3.90	34	SLU	5	0.00	28.15	14.07	28.15	14.07	7210.04	35445.00	4.916
4.23	34	SLU	5	32.46	14.07	14.07	14.07	14.07	7210.04	35450.10	4.917
4.88	34	SLU	5	97.37	14.07	14.07	14.07	14.07	-4695.07	-35450.10	7.551
4.88	34	SLU	6	0.00	14.07	14.07	14.07	14.07	-10556.40	-35450.10	3.358
5.20	34	SLU	6	32.46	14.07	14.07	14.07	14.07	-12028.00	-35450.10	2.947
5.85	34	SLU	6	97.37	14.07	14.07	14.07	14.07	-12028.00	-35450.10	2.947
5.85	34	SLU	7	0.00	14.07	14.07	14.07	14.07	-15416.80	-35450.10	2.299
6.18	34	SLU	7	32.46	14.07	14.07	14.07	14.07	-16285.10	-35450.10	2.177
6.83	34	SLU	7	97.38	14.07	14.07	14.07	14.07	-16285.10	-35450.10	2.177
6.83	34	SLU	8	0.00	14.07	14.07	14.07	14.07	-18193.10	-35450.10	1.949
7.15	34	SLU	8	32.46	14.07	14.07	14.07	14.07	-18626.40	-35450.10	1.903
7.80	34	SLU	8	97.38	28.15	14.07	28.15	14.07	-18626.40	-69959.00	3.756
7.80	34	SLU	9	0.00	28.15	14.07	28.15	14.07	-18885.30	-69959.00	3.704
8.77	34	SLU	9	97.37	14.07	14.07	14.07	14.07	-18769.20	-35450.10	1.889
8.77	34	SLU	10	0.00	14.07	14.07	14.07	14.07	-17786.40	-35450.10	1.993
9.75	32	SLU	10	97.37	14.07	28.15	14.07	28.15	-16459.20	-35445.00	2.154
9.75	32	SLU	11	0.00	14.07	28.15	14.07	28.15	-10096.40	-35445.00	3.511
10.27	32	SLU	11	52.38	14.07	14.07	14.07	14.07	-10096.40	-35450.10	3.511

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cmq>	Afe I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.15	5	SLV (E)	1	82.67	14.07	14.07	14.07	14.07	2521.09	34082.90	13.519
0.98	5	SLV (E)	1	0.00	14.07	14.07	14.07	14.07	2402.16	34082.90	14.188
0.98	13	SLV (E)	2	97.67	14.07	14.07	14.07	14.07	5761.87	34082.90	5.915
1.95	13	SLV (E)	2	0.00	14.07	14.07	14.07	14.07	7281.18	34082.90	4.681
1.95	13	SLV (E)	3	97.67	14.07	14.07	14.07	14.07	22030.70	34082.90	1.547
2.71	13	SLV (E)	3	22.50	14.07	14.07	14.07	14.07	22106.70	34082.90	1.542
3.15	5	SLV (E)	4	22.50	14.07	14.07	14.07	14.07	23852.30	34082.90	1.429
3.90	5	SLV (E)	4	97.38	28.15	14.07	28.15	14.07	23852.30	34362.70	1.441
3.90	5	SLV (E)	5	0.00	28.15	14.07	28.15	14.07	6969.88	34362.70	4.930
4.23	5	SLV (E)	5	32.46	14.07	14.07	14.07	14.07	6969.88	34082.90	4.890
4.88	5	SLV (E)	5	97.37	14.07	14.07	14.07	14.07	4861.94	34082.90	7.010
4.88	9	SLV (E)	6	0.00	14.07	14.07	14.07	14.07	-7835.29	-34082.90	4.350
5.20	1	SLV (E)	6	32.46	14.07	14.07	14.07	14.07	-8750.34	-34082.90	3.895
5.85	1	SLV (E)	6	97.37	14.07	14.07	14.07	14.07	-8750.34	-34082.90	3.895
5.85	5	SLV (E)	7	0.00	14.07	14.07	14.07	14.07	-11236.90	-34082.90	3.033
6.18	5	SLV (E)	7	32.46	14.07	14.07	14.07	14.07	-12045.40	-34082.90	2.830
6.83	5	SLV (E)	7	97.38	14.07	14.07	14.07	14.07	-12045.40	-34082.90	2.830
6.83	5	SLV (E)	8	0.00	14.07	14.07	14.07	14.07	-14210.70	-34082.90	2.398
7.15	5	SLV (E)	8	32.46	14.07	14.07	14.07	14.07	-14769.10	-34082.90	2.308
7.80	5	SLV (E)	8	97.38	28.15	14.07	28.15	14.07	-14769.10	-66258.60	4.486
7.80	5	SLV (E)	9	0.00	28.15	14.07	28.15	14.07	-15702.30	-66258.60	4.220
8.77	5	SLV (E)	9	97.37	14.07	14.07	14.07	14.07	-15854.90	-34082.90	2.150
8.77	5	SLV (E)	10	0.00	14.07	14.07	14.07	14.07	-15809.80	-34082.90	2.156
9.75	5	SLV (E)	10	97.37	14.07	28.15	14.07	28.15	-15278.10	-34362.70	2.249
9.75	5	SLV (E)	11	0.00	14.07	28.15	14.07	28.15	-11600.60	-34362.70	2.962
10.27	5	SLV (E)	11	52.38	14.07	14.07	14.07	14.07	-11600.60	-34082.90	2.938

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	Afe S <cmq>	Afe I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.15	37	SLE R	1	82.67	14.07	14.07	1432.96	-32.92	164.06	2.92
0.15	29	SLE Q	1	82.67	14.07	14.07	1151.86	-26.46	131.87	2.35
0.98	37	SLE R	1	0.00	14.07	14.07	1504.25	-34.55	172.22	3.07
0.98	29	SLE Q	1	0.00	14.07	14.07	1224.07	-28.12	140.14	2.50
0.98	39	SLE R	2	97.67	14.07	14.07	5220.94	-119.93	597.74	10.65
0.98	29	SLE Q	2	97.67	14.07	14.07	4329.44	-99.45	495.67	8.83
1.95	39	SLE R	2	0.00	14.07	14.07	6534.70	-150.10	748.14	13.33
1.95	29	SLE Q	2	0.00	14.07	14.07	5401.61	-124.08	618.42	11.02
1.95	39	SLE R	3	97.67	14.07	14.07	19861.80	-456.24	2273.94	40.53
1.95	29	SLE Q	3	97.67	14.07	14.07	16525.00	-379.59	1891.92	33.72
2.71	39	SLE R	3	22.50	14.07	14.07	19931.40	-457.83	2281.91	40.67
2.71	29	SLE Q	3	22.50	14.07	14.07	16582.90	-380.92	1898.54	33.84
3.15	39	SLE R	4	22.50	14.07	14.07	20723.40	-476.02	2372.58	42.29

Relazione di calcolo

3.15	29	SLE Q	4	22.50	14.07	14.07	16467.20	-378.26	1885.29	33.60
3.90	39	SLE R	4	97.38	28.15	14.07	20723.40	-409.11	2356.06	37.52
3.90	29	SLE Q	4	97.38	28.15	14.07	16467.20	-325.09	1872.17	29.81
3.90	39	SLE R	5	0.00	28.15	14.07	5103.05	-100.74	580.17	9.24
3.90	29	SLE Q	5	0.00	28.15	14.07	3835.65	-75.72	436.08	6.94
4.23	39	SLE R	5	32.46	14.07	14.07	5103.05	-117.22	584.24	10.41
4.23	29	SLE Q	5	32.46	14.07	14.07	3835.65	-88.11	439.14	7.83
4.88	39	SLE R	5	97.37	14.07	14.07	-3408.59	390.24	-78.30	6.96
4.88	29	SLE Q	5	97.37	14.07	14.07	-3102.76	355.23	-71.27	6.33
4.88	39	SLE R	6	0.00	14.07	14.07	-7588.55	868.80	-174.31	15.48
4.88	29	SLE Q	6	0.00	14.07	14.07	-6506.39	744.90	-149.46	13.28
5.20	39	SLE R	6	32.46	14.07	14.07	-8646.79	989.95	-198.62	17.64
5.20	29	SLE Q	6	32.46	14.07	14.07	-7388.20	845.86	-169.71	15.08
5.85	39	SLE R	6	97.37	14.07	14.07	-8646.79	989.95	-198.62	17.64
5.85	29	SLE Q	6	97.37	14.07	14.07	-7388.20	845.86	-169.71	15.08
5.85	39	SLE R	7	0.00	14.07	14.07	-11062.20	1266.50	-254.10	22.57
5.85	29	SLE Q	7	0.00	14.07	14.07	-9397.79	1075.93	-215.87	19.18
6.18	39	SLE R	7	32.46	14.07	14.07	-11690.00	1338.37	-268.53	23.85
6.18	29	SLE Q	7	32.46	14.07	14.07	-9938.60	1137.85	-228.29	20.28
6.83	39	SLE R	7	97.38	14.07	14.07	-11690.00	1338.37	-268.53	23.85
6.83	29	SLE Q	7	97.38	14.07	14.07	-9938.60	1137.85	-228.29	20.28
6.83	39	SLE R	8	0.00	14.07	14.07	-13048.60	1493.90	-299.73	26.63
6.83	29	SLE Q	8	0.00	14.07	14.07	-11102.50	1271.10	-255.03	22.65
7.15	39	SLE R	8	32.46	14.07	14.07	-13365.50	1530.20	-307.01	27.27
7.15	29	SLE Q	8	32.46	14.07	14.07	-11390.50	1304.08	-261.64	23.24
7.80	39	SLE R	8	97.38	28.15	14.07	-13365.50	783.86	-260.82	21.26
7.80	29	SLE Q	8	97.38	28.15	14.07	-11390.50	668.03	-222.28	18.12
7.80	39	SLE R	9	0.00	28.15	14.07	-13549.50	794.65	-264.41	21.55
7.80	29	SLE Q	9	0.00	28.15	14.07	-11551.90	677.50	-225.43	18.37
8.77	39	SLE R	9	97.37	14.07	14.07	-13459.30	1540.93	-309.17	27.46
8.77	29	SLE Q	9	97.37	14.07	14.07	-11468.20	1312.98	-263.43	23.40
8.77	39	SLE R	10	0.00	14.07	14.07	-12757.50	1460.59	-293.05	26.03
8.77	29	SLE Q	10	0.00	14.07	14.07	-10896.50	1247.52	-250.30	22.23
9.75	37	SLE R	10	97.37	14.07	28.15	-11799.10	1341.45	-232.93	21.36
9.75	29	SLE Q	10	97.37	14.07	28.15	-10055.20	1143.19	-198.50	18.20
9.75	37	SLE R	11	0.00	14.07	28.15	-7233.12	822.34	-142.79	13.09
9.75	29	SLE Q	11	0.00	14.07	28.15	-6074.63	690.63	-119.92	11.00
10.27	37	SLE R	11	52.38	14.07	14.07	-7233.12	828.11	-166.15	14.76
10.27	29	SLE Q	11	52.38	14.07	14.07	-6074.63	695.47	-139.54	12.40

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
41	0.15	29	SLE Q	1	4	82.67	1151.86	27.00	135.67	0.50	16.00	143.53	14.07	787.50	131.87	0.04	0.01
49	0.15	42	SLE F	1	4	82.67	1208.37	27.00	135.67	0.50	16.00	143.53	14.07	787.50	138.34	0.04	0.01
91	0.98	29	SLE Q	1	4	0.00	1224.07	27.00	135.67	0.50	16.00	143.53	14.07	787.50	140.14	0.04	0.01
99	0.98	42	SLE F	1	4	0.00	1277.09	27.00	135.67	0.50	16.00	143.53	14.07	787.50	146.21	0.04	0.01
136	0.98	29	SLE Q	2	4	97.67	4329.44	27.00	135.67	0.50	16.00	143.53	14.07	787.50	495.67	0.14	0.04
141	0.98	28	SLE F	2	4	97.67	4451.94	27.00	135.67	0.50	16.00	143.53	14.07	787.50	509.69	0.15	0.04
181	1.95	29	SLE Q	2	4	0.00	5401.61	27.00	135.67	0.50	16.00	143.53	14.07	787.50	618.42	0.18	0.04
186	1.95	28	SLE F	2	4	0.00	5561.35	27.00	135.67	0.50	16.00	143.53	14.07	787.50	636.71	0.19	0.05
226	1.95	29	SLE Q	3	4	97.67	16525.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1891.92	0.61	0.15
231	1.95	28	SLE F	3	4	97.67	17002.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1946.56	0.57	0.14
271	2.71	29	SLE Q	3	4	22.50	16582.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1898.54	0.61	0.15
276	2.71	28	SLE F	3	4	22.50	17061.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1953.38	0.57	0.14
316	3.15	29	SLE Q	4	4	22.50	16467.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1885.29	0.60	0.15
324	3.15	42	SLE F	4	4	22.50	17035.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1950.34	0.57	0.14
361	3.90	29	SLE Q	4	4	97.38	16467.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1872.17	0.60	0.15
369	3.90	42	SLE F	4	4	97.38	17035.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1936.77	0.56	0.14
440	3.90	29	SLE Q	5	4	0.00	3835.65	27.00	135.67	0.50	16.00	143.53	14.07	787.50	436.08	0.13	0.03
456	3.90	42	SLE F	5	4	0.00	4012.91	27.00	135.67	0.50	16.00	143.53	14.07	787.50	456.23	0.13	0.03
530	4.23	29	SLE Q	5	4	32.46	3835.65	27.00	135.67	0.50	16.00	143.53	14.07	787.50	439.14	0.13	0.03
546	4.23	42	SLE F	5	4	32.46	4012.91	27.00	135.67	0.50	16.00	143.53	14.07	787.50	459.43	0.13	0.03
619	4.88	29	SLE Q	5	4	97.37	-3102.76	27.00	135.67	0.50	16.00	143.53	14.07	787.50	355.23	0.10	0.03
629	4.88	28	SLE F	5	4	97.37	-3151.07	27.00	135.67	0.50	16.00	143.53	14.07	787.50	360.76	0.11	0.03
675	4.88	29	SLE Q	6	4	0.00	-6506.39	27.00	135.67	0.50	16.00	143.53	14.07	787.50	744.90	0.22	0.05
680	4.88	28	SLE F	6	4	0.00	-6640.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	760.22	0.22	0.05
720	5.20	29	SLE Q	6	4	32.46	-7388.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	845.86	0.25	0.06
728	5.20	42	SLE F	6	4	32.46	-7545.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	863.89	0.25	0.06
765	5.85	29	SLE Q	6	4	97.37	-7388.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	845.86	0.25	0.06
773	5.85	42	SLE F	6	4	97.37	-7545.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	863.89	0.25	0.06
810	5.85	29	SLE Q	7	4	0.00	-9397.79	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1075.93	0.31	0.08
818	5.85	42	SLE F	7	4	0.00	-9618.43	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1101.20	0.32	0.08
855	6.18	29	SLE Q	7	4	32.46	-9938.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1137.85	0.33	0.08
863	6.18	42	SLE F	7	4	32.46	-10174.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1164.89	0.34	0.08
900	6.83	29	SLE Q	7	4	97.38	-9938.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1137.85	0.33	0.08
908	6.83	42	SLE F	7	4	97.38	-10174.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1164.89	0.34	0.08
945	6.83	29	SLE Q	8	4	0.00	-11102.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1271.10	0.37	0.09
953	6.83	42	SLE F	8	4	0.00	-11380.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1302.95	0.38	0.09

Relazione di calcolo

990	7.15	29	SLE Q	8	4	32.46	-11390.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1304.08	0.38	0.09
998	7.15	42	SLE F	8	4	32.46	-11678.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1337.03	0.39	0.10
1035	7.80	29	SLE Q	8	4	97.38	-11390.50	27.00	62.62	0.50	16.00	98.76	28.15	787.50	668.03	0.19	0.03
1043	7.80	42	SLE F	8	4	97.38	-11678.30	27.00	62.62	0.50	16.00	98.76	28.15	787.50	684.91	0.20	0.03
1080	7.80	29	SLE Q	9	4	0.00	-11551.90	27.00	62.62	0.50	16.00	98.76	28.15	787.50	677.50	0.20	0.03
1088	7.80	42	SLE F	9	4	0.00	-11845.90	27.00	62.62	0.50	16.00	98.76	28.15	787.50	694.74	0.20	0.03
1125	8.77	29	SLE Q	9	4	97.37	-11468.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1312.98	0.38	0.09
1133	8.77	42	SLE F	9	4	97.37	-11766.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1347.13	0.39	0.10
1170	8.77	29	SLE Q	10	4	0.00	-10896.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1247.52	0.36	0.09
1178	8.77	42	SLE F	10	4	0.00	-11204.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1282.74	0.37	0.09
1215	9.75	29	SLE Q	10	4	97.37	-10055.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1143.19	0.33	0.08
1223	9.75	42	SLE F	10	4	97.37	-10353.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1177.12	0.34	0.08
1266	9.75	29	SLE Q	11	4	0.00	-6074.63	27.00	135.67	0.50	16.00	143.53	14.07	787.50	690.63	0.20	0.05
1274	9.75	42	SLE F	11	4	0.00	-6301.65	27.00	135.67	0.50	16.00	143.53	14.07	787.50	716.44	0.21	0.05
1317	10.27	29	SLE Q	11	4	52.38	-6074.63	27.00	135.67	0.50	16.00	143.53	14.07	787.50	695.47	0.20	0.05
1325	10.27	42	SLE F	11	4	52.38	-6301.65	27.00	135.67	0.50	16.00	143.53	14.07	787.50	721.46	0.21	0.05

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
13 SLV	0.15	0.98	0.83	ø10/20 4 br.	15.71	0.90	2763.57	2.50	91968.40	131041.00	91968.40	33.279
34 SLU	0.98	1.95	0.98	ø10/20 4 br.	15.71	0.90	8363.93	2.50	91968.40	131041.00	91968.40	10.996
34 SLU	1.95	2.71	0.75	ø10/20 4 br.	15.71	0.90	27475.20	2.50	91968.40	131041.00	91968.40	3.347
34 SLU	3.15	3.90	0.75	ø10/20 4 br.	15.71	0.90	31155.20	2.50	91968.40	131041.00	91968.40	2.952
34 SLU	3.90	4.88	0.97	ø10/20 4 br.	15.71	0.90	12590.70	2.50	91968.40	131041.00	91968.40	7.304
34 SLU	4.88	5.85	0.97	ø10/20 4 br.	15.71	0.90	6618.68	2.50	91968.40	131041.00	91968.40	13.895
34 SLU	5.85	6.83	0.97	ø10/20 4 br.	15.71	0.90	3751.91	2.50	91968.40	131041.00	91968.40	24.512
5 SLV	6.83	7.80	0.97	ø10/20 4 br.	15.71	0.90	2313.17	2.50	91968.40	131041.00	91968.40	39.759
13 SLV	7.80	8.77	0.97	ø10/20 4 br.	15.71	0.90	1980.26	2.50	91968.40	131041.00	91968.40	46.443
34 SLU	8.77	9.75	0.97	ø10/20 4 br.	15.71	0.90	7096.83	2.50	91968.40	131041.00	91968.40	12.959
13 SLV	9.75	10.27	0.52	ø10/20 4 br.	15.71	0.90	13977.90	2.50	91968.40	131041.00	91968.40	6.580

Travata n. 430

Nodi: -6 -1153 -1152 -8 -1137 -1136 -1135 -1676 -1133 -1132 -19 -981 -980 -979 -978 -1734 -1685 -22

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
4R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/presoflessione

Xg <m>	CC	TCE	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfE P S <cmq>	AfE P I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.30	32	SLU	1	30.00	14.07	14.07	14.07	14.07	2504.53	35450.10	14.154
0.86	32	SLU	1	85.67	14.07	14.07	14.07	14.07	2504.53	35450.10	14.154
0.86	32	SLU	2	0.00	14.07	14.07	14.07	14.07	1648.20	35450.10	21.508
1.71	32	SLU	2	85.67	14.07	14.07	14.07	14.07	1858.69	35450.10	19.073
1.71	34	SLU	3	0.00	14.07	14.07	14.07	14.07	5936.46	35450.10	5.972
2.42	34	SLU	3	70.67	14.07	14.07	14.07	14.07	5936.46	35450.10	5.972
2.72	32	SLU	4	15.00	14.07	14.07	14.07	14.07	7506.85	35450.10	4.722
3.45	32	SLU	4	87.86	14.07	14.07	14.07	14.07	7506.85	35450.10	4.722
3.45	20	SLU	5	0.00	14.07	14.07	14.07	14.07	-5469.37	-35450.10	6.482
3.76	20	SLU	5	31.28	14.07	14.07	14.07	14.07	-6074.31	-35450.10	5.836
4.33	20	SLU	5	87.86	28.15	14.07	28.15	14.07	-6074.31	-69959.00	11.517
4.33	34	SLU	6	0.00	28.15	14.07	28.15	14.07	-8442.83	-69959.00	8.286
5.21	34	SLU	6	87.86	14.07	28.15	14.07	28.15	-8713.24	-35445.00	4.068
5.21	34	SLU	7	0.00	14.07	28.15	14.07	28.15	-8697.54	-35445.00	4.075
6.08	34	SLU	7	87.86	14.07	14.07	14.07	14.07	-8609.29	-35450.10	4.118
6.08	32	SLU	8	0.00	14.07	14.07	14.07	14.07	-7313.07	-35450.10	4.848
6.96	32	SLU	8	87.86	14.07	14.07	14.07	14.07	-6741.24	-35450.10	5.259
6.96	20	SLU	9	0.00	14.07	14.07	14.07	14.07	4495.11	35450.10	7.886
7.84	20	SLU	9	87.86	28.15	14.07	28.15	14.07	5559.88	35445.00	6.375
7.84	34	SLU	10	0.00	28.15	14.07	28.15	14.07	14474.90	35445.00	2.449
8.57	34	SLU	10	72.86	14.07	28.15	14.07	28.15	14474.90	69959.00	4.833
8.87	32	SLU	11	15.00	14.07	28.15	14.07	28.15	15925.40	69959.00	4.393
9.61	32	SLU	11	89.00	14.07	28.15	14.07	28.15	15925.40	69959.00	4.393
9.61	32	SLU	12	0.00	14.07	28.15	14.07	28.15	6500.81	69959.00	10.762
10.05	32	SLU	12	44.50	14.07	14.07	14.07	14.07	6500.81	35450.10	5.453
10.50	32	SLU	12	89.00	14.07	14.07	14.07	14.07	5236.83	35450.10	6.769
10.50	34	SLU	13	0.00	14.07	14.07	14.07	14.07	-6545.65	-35450.10	5.416
10.95	34	SLU	13	44.50	14.07	14.07	14.07	14.07	-7348.08	-35450.10	4.824
11.39	34	SLU	13	89.00	28.15	14.07	28.15	14.07	-7348.08	-69959.00	9.521
11.39	34	SLU	14	0.00	28.15	14.07	28.15	14.07	-9725.42	-69959.00	7.193
11.84	34	SLU	14	44.50	14.07	14.07	14.07	14.07	-10069.90	-35450.10	3.520
12.28	34	SLU	14	89.00	14.07	14.07	14.07	14.07	-10069.90	-35450.10	3.520
12.28	34	SLU	15	0.00	14.07	14.07	14.07	14.07	-9945.87	-35450.10	3.564
13.17	34	SLU	15	89.00	14.07	28.15	14.07	28.15	-9945.87	-35445.00	3.564
13.17	32	SLU	16	0.00	14.07	28.15	14.07	28.15	-9183.38	-35445.00	3.860
14.06	32	SLU	16	89.00	14.07	14.07	14.07	14.07	-8366.26	-35450.10	4.237

Relazione di calcolo

14.06	32	SLU	17	0.00	14.07	14.07	14.07	14.07	-3962.32	-35450.10	8.947
14.80	32	SLU	17	74.00	14.07	14.07	14.07	14.07	-3962.32	-35450.10	8.947

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cmq>	Afe I <cmq>	AfeP S <cmq>	AfeP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.30	13	SLV (E)	1	30.00	14.07	14.07	14.07	14.07	-7509.77	-34082.90	4.538
0.86	13	SLV (E)	1	85.67	14.07	14.07	14.07	14.07	-7509.77	-34082.90	4.538
0.86	5	SLV (E)	2	0.00	14.07	14.07	14.07	14.07	7644.78	34082.90	4.458
1.71	5	SLV (E)	2	85.67	14.07	14.07	14.07	14.07	7935.72	34082.90	4.295
1.71	5	SLV (E)	3	0.00	14.07	14.07	14.07	14.07	11233.70	34082.90	3.034
2.42	5	SLV (E)	3	70.67	14.07	14.07	14.07	14.07	11233.70	34082.90	3.034
2.72	5	SLV (E)	4	15.00	14.07	14.07	14.07	14.07	13234.70	34082.90	2.575
3.45	5	SLV (E)	4	87.86	14.07	14.07	14.07	14.07	13234.70	34082.90	2.575
3.45	13	SLV (E)	5	0.00	14.07	14.07	14.07	14.07	-9931.10	-34082.90	3.432
3.76	13	SLV (E)	5	31.28	14.07	14.07	14.07	14.07	-10025.60	-34082.90	3.400
4.33	5	SLV (E)	5	87.86	28.15	14.07	28.15	14.07	5580.10	34362.70	6.158
4.33	13	SLV (E)	6	0.00	28.15	14.07	28.15	14.07	-9919.18	-66258.60	6.680
5.21	13	SLV (E)	6	87.86	14.07	28.15	14.07	28.15	-9807.26	-34362.70	3.504
5.21	13	SLV (E)	7	0.00	14.07	28.15	14.07	28.15	-8597.75	-34362.70	3.997
6.08	9	SLV (E)	7	87.86	14.07	14.07	14.07	14.07	-8352.71	-34082.90	4.080
6.08	9	SLV (E)	8	0.00	14.07	14.07	14.07	14.07	-6264.05	-34082.90	5.441
6.96	9	SLV (E)	8	87.86	14.07	14.07	14.07	14.07	-5769.69	-34082.90	5.907
6.96	13	SLV (E)	9	0.00	14.07	14.07	14.07	14.07	5858.71	34082.90	5.817
7.84	13	SLV (E)	9	87.86	28.15	14.07	28.15	14.07	6818.39	34362.70	5.040
7.84	13	SLV (E)	10	0.00	28.15	14.07	28.15	14.07	14239.60	34362.70	2.413
8.57	13	SLV (E)	10	72.86	14.07	28.15	14.07	28.15	14239.60	66258.60	4.653
8.87	5	SLV (E)	11	15.00	14.07	28.15	14.07	28.15	13085.60	66258.60	5.063
9.61	5	SLV (E)	11	89.00	14.07	28.15	14.07	28.15	13085.60	66258.60	5.063
9.61	5	SLV (E)	12	0.00	14.07	28.15	14.07	28.15	6176.00	66258.60	10.728
10.05	5	SLV (E)	12	44.50	14.07	14.07	14.07	14.07	6176.00	34082.90	5.519
10.50	5	SLV (E)	12	89.00	14.07	14.07	14.07	14.07	5219.26	34082.90	6.530
10.50	13	SLV (E)	13	0.00	14.07	14.07	14.07	14.07	-5501.04	-34082.90	6.196
10.95	13	SLV (E)	13	44.50	14.07	14.07	14.07	14.07	-5923.21	-34082.90	5.754
11.39	13	SLV (E)	13	89.00	28.15	14.07	28.15	14.07	-5923.21	-66258.60	11.186
11.39	9	SLV (E)	14	0.00	28.15	14.07	28.15	14.07	-7077.98	-66258.60	9.361
11.84	1	SLV (E)	14	44.50	14.07	14.07	14.07	14.07	-7362.09	-34082.90	4.630
12.28	1	SLV (E)	14	89.00	14.07	14.07	14.07	14.07	-7362.09	-34082.90	4.630
12.28	5	SLV (E)	15	0.00	14.07	14.07	14.07	14.07	-7950.95	-34082.90	4.287
13.17	5	SLV (E)	15	89.00	14.07	28.15	14.07	28.15	-8065.89	-34362.70	4.260
13.17	5	SLV (E)	16	0.00	14.07	28.15	14.07	28.15	-7717.39	-34362.70	4.453
14.06	5	SLV (E)	16	89.00	14.07	14.07	14.07	14.07	-7216.17	-34082.90	4.723
14.06	13	SLV (E)	17	0.00	14.07	14.07	14.07	14.07	5585.07	34082.90	6.103
14.80	13	SLV (E)	17	74.00	14.07	14.07	14.07	14.07	5585.07	34082.90	6.103

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	Afe S <cmq>	Afe I <cmq>	My <daNm>	σ_f sup <daN/cm ² >	σ_f inf <daN/cm ² >	σ_c <daN/cm ² >
0.30	37	SLE R	1	30.00	14.07	14.07	1622.16	-37.26	185.72	3.31
0.30	29	SLE Q	1	30.00	14.07	14.07	-629.84	72.11	-14.47	1.29
0.86	37	SLE R	1	85.67	14.07	14.07	1622.16	-37.26	185.72	3.31
0.86	29	SLE Q	1	85.67	14.07	14.07	-629.84	72.11	-14.47	1.29
0.86	37	SLE R	2	0.00	14.07	14.07	1063.97	-24.44	121.81	2.17
0.86	29	SLE Q	2	0.00	14.07	14.07	568.40	-13.06	65.08	1.16
1.71	37	SLE R	2	85.67	14.07	14.07	1220.86	-28.04	139.77	2.49
1.71	29	SLE Q	2	85.67	14.07	14.07	786.58	-18.07	90.05	1.60
1.71	39	SLE R	3	0.00	14.07	14.07	4192.78	-96.31	480.02	8.56
1.71	29	SLE Q	3	0.00	14.07	14.07	3710.20	-85.22	424.77	7.57
2.42	39	SLE R	3	70.67	14.07	14.07	4192.78	-96.31	480.02	8.56
2.42	29	SLE Q	3	70.67	14.07	14.07	3710.20	-85.22	424.77	7.57
2.72	37	SLE R	4	15.00	14.07	14.07	5205.81	-119.58	596.00	10.62
2.72	29	SLE Q	4	15.00	14.07	14.07	3162.16	-72.64	362.03	6.45
3.45	37	SLE R	4	87.86	14.07	14.07	5205.81	-119.58	596.00	10.62
3.45	29	SLE Q	4	87.86	14.07	14.07	3162.16	-72.64	362.03	6.45
3.45	24	SLE R	5	0.00	14.07	14.07	-4030.04	461.39	-92.57	8.22
3.45	29	SLE Q	5	0.00	14.07	14.07	-3584.17	410.35	-82.33	7.31
3.76	24	SLE R	5	31.28	14.07	14.07	-4469.43	511.70	-102.67	9.12
3.76	29	SLE Q	5	31.28	14.07	14.07	-3995.47	457.43	-91.78	8.15
4.33	24	SLE R	5	87.86	28.15	14.07	-4469.43	262.12	-87.22	7.11
4.33	29	SLE Q	5	87.86	28.15	14.07	-3995.47	234.33	-77.97	6.35
4.33	39	SLE R	6	0.00	28.15	14.07	-6149.14	360.63	-120.00	9.78
4.33	29	SLE Q	6	0.00	28.15	14.07	-5281.65	309.76	-103.07	8.40
5.21	39	SLE R	6	87.86	14.07	28.15	-6341.10	720.93	-125.18	11.48
5.21	29	SLE Q	6	87.86	14.07	28.15	-5421.22	616.34	-107.02	9.81
5.21	39	SLE R	7	0.00	14.07	28.15	-6329.75	719.64	-124.96	11.46
5.21	29	SLE Q	7	0.00	14.07	28.15	-5422.04	616.44	-107.04	9.82
6.08	39	SLE R	7	87.86	14.07	14.07	-6258.75	716.55	-143.77	12.77
6.08	29	SLE Q	7	87.86	14.07	14.07	-5327.82	609.97	-122.38	10.87

Relazione di calcolo

6.08	37	SLE R	8	0.00	14.07	14.07	-5289.35	605.57	-121.50	10.79
6.08	29	SLE Q	8	0.00	14.07	14.07	-4294.41	491.66	-98.64	8.76
6.96	37	SLE R	8	87.86	14.07	14.07	-4869.05	557.45	-111.84	9.94
6.96	29	SLE Q	8	87.86	14.07	14.07	-3894.26	445.85	-89.45	7.95
6.96	24	SLE R	9	0.00	14.07	14.07	3248.02	-74.61	371.86	6.63
6.96	29	SLE Q	9	0.00	14.07	14.07	2915.10	-66.96	333.75	5.95
7.84	24	SLE R	9	87.86	28.15	14.07	4019.10	-79.34	456.94	7.28
7.84	29	SLE Q	9	87.86	28.15	14.07	3609.01	-71.25	410.31	6.53
7.84	39	SLE R	10	0.00	28.15	14.07	10465.90	-206.61	1189.88	18.95
7.84	29	SLE Q	10	0.00	28.15	14.07	9265.71	-182.92	1053.43	16.77
8.57	39	SLE R	10	72.86	14.07	28.15	10465.90	-204.24	613.80	16.65
8.57	29	SLE Q	10	72.86	14.07	28.15	9265.71	-180.81	543.41	14.74
8.87	37	SLE R	11	15.00	14.07	28.15	11449.20	-223.42	671.47	18.21
8.87	29	SLE Q	11	15.00	14.07	28.15	9449.19	-184.40	554.17	15.03
9.61	37	SLE R	11	89.00	14.07	28.15	11449.20	-223.42	671.47	18.21
9.61	29	SLE Q	11	89.00	14.07	28.15	9449.19	-184.40	554.17	15.03
9.61	37	SLE R	12	0.00	14.07	28.15	4660.27	-90.94	273.31	7.41
9.61	29	SLE Q	12	0.00	14.07	28.15	3680.55	-71.82	215.86	5.85
10.05	37	SLE R	12	44.50	14.07	14.07	4660.27	-107.05	533.54	9.51
10.05	29	SLE Q	12	44.50	14.07	14.07	3680.55	-84.54	421.38	7.51
10.50	37	SLE R	12	89.00	14.07	14.07	3751.40	-86.17	429.49	7.65
10.50	29	SLE Q	12	89.00	14.07	14.07	2913.48	-66.92	333.56	5.94
10.50	39	SLE R	13	0.00	14.07	14.07	-4721.89	540.60	-108.46	9.63
10.50	29	SLE Q	13	0.00	14.07	14.07	-4078.76	466.97	-93.69	8.32
10.95	39	SLE R	13	44.50	14.07	14.07	-5301.83	607.00	-121.78	10.82
10.95	29	SLE Q	13	44.50	14.07	14.07	-4564.68	522.60	-104.85	9.31
11.39	39	SLE R	13	89.00	28.15	14.07	-5301.83	310.94	-103.46	8.43
11.39	29	SLE Q	13	89.00	28.15	14.07	-4564.68	267.71	-89.08	7.26
11.39	39	SLE R	14	0.00	28.15	14.07	-7001.71	410.64	-136.63	11.14
11.39	29	SLE Q	14	0.00	28.15	14.07	-5896.65	345.83	-115.07	9.38
11.84	39	SLE R	14	44.50	14.07	14.07	-7251.27	830.18	-166.56	14.80
11.84	29	SLE Q	14	44.50	14.07	14.07	-6098.23	698.17	-140.08	12.44
12.28	39	SLE R	14	89.00	14.07	14.07	-7251.27	830.18	-166.56	14.80
12.28	29	SLE Q	14	89.00	14.07	14.07	-6098.23	698.17	-140.08	12.44
12.28	39	SLE R	15	0.00	14.07	14.07	-7148.92	818.47	-164.21	14.59
12.28	29	SLE Q	15	0.00	14.07	14.07	-5973.78	683.93	-137.22	12.19
13.17	39	SLE R	15	89.00	14.07	28.15	-7148.92	812.77	-141.13	12.94
13.17	29	SLE Q	15	89.00	14.07	28.15	-5958.43	677.42	-117.63	10.79
13.17	37	SLE R	16	0.00	14.07	28.15	-6597.38	750.06	-130.24	11.94
13.17	29	SLE Q	16	0.00	14.07	28.15	-5392.98	613.13	-106.47	9.76
14.06	37	SLE R	16	89.00	14.07	14.07	-5998.34	686.74	-137.78	12.24
14.06	29	SLE Q	16	89.00	14.07	14.07	-4835.15	553.57	-111.07	9.87
14.06	37	SLE R	17	0.00	14.07	14.07	-2784.79	318.83	-63.97	5.68
14.06	29	SLE Q	17	0.00	14.07	14.07	-1848.46	211.63	-42.46	3.77
14.80	37	SLE R	17	74.00	14.07	14.07	-2784.79	318.83	-63.97	5.68
14.80	29	SLE Q	17	74.00	14.07	14.07	-1848.46	211.63	-42.46	3.77

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmqs>	ε _{sm}	Wk <mm>	
46	0.30	29	SLE Q	1		4	30.00	-629.84	27.00	135.67	0.50	16.00	143.53	14.07	787.50	72.11	0.02	0.01
48	0.30	25	SLE F	1		4	30.00	-682.55	27.00	135.67	0.50	16.00	143.53	14.07	787.50	78.14	0.02	0.01
103	0.86	29	SLE Q	1		4	85.67	-629.84	27.00	135.67	0.50	16.00	143.53	14.07	787.50	72.11	0.02	0.01
105	0.86	25	SLE F	1		4	85.67	-682.55	27.00	135.67	0.50	16.00	143.53	14.07	787.50	78.14	0.02	0.01
159	0.86	29	SLE Q	2		4	0.00	568.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	65.08	0.02	0.00
175	0.86	42	SLE F	2		4	0.00	711.56	27.00	135.67	0.50	16.00	143.53	14.07	787.50	81.46	0.02	0.01
226	1.71	29	SLE Q	2		4	85.67	786.58	27.00	135.67	0.50	16.00	143.53	14.07	787.50	90.05	0.03	0.01
242	1.71	42	SLE F	2		4	85.67	922.81	27.00	135.67	0.50	16.00	143.53	14.07	787.50	105.65	0.03	0.01
283	1.71	29	SLE Q	3		4	0.00	3710.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	424.77	0.12	0.03
291	1.71	42	SLE F	3		4	0.00	3878.38	27.00	135.67	0.50	16.00	143.53	14.07	787.50	444.03	0.13	0.03
329	2.42	29	SLE Q	3		4	70.67	3710.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	424.77	0.12	0.03
337	2.42	42	SLE F	3		4	70.67	3878.38	27.00	135.67	0.50	16.00	143.53	14.07	787.50	444.03	0.13	0.03
395	2.72	29	SLE Q	4		4	15.00	3162.16	27.00	135.67	0.50	16.00	143.53	14.07	787.50	362.03	0.11	0.03
411	2.72	42	SLE F	4		4	15.00	3609.05	27.00	135.67	0.50	16.00	143.53	14.07	787.50	413.19	0.12	0.03
471	3.45	29	SLE Q	4		4	87.86	3162.16	27.00	135.67	0.50	16.00	143.53	14.07	787.50	362.03	0.11	0.03
487	3.45	42	SLE F	4		4	87.86	3609.05	27.00	135.67	0.50	16.00	143.53	14.07	787.50	413.19	0.12	0.03
530	3.45	29	SLE Q	5		4	0.00	-3584.17	27.00	135.67	0.50	16.00	143.53	14.07	787.50	410.35	0.12	0.03
532	3.45	25	SLE F	5		4	0.00	-3739.83	27.00	135.67	0.50	16.00	143.53	14.07	787.50	428.17	0.12	0.03
580	3.76	29	SLE Q	5		4	31.28	-3995.47	27.00	135.67	0.50	16.00	143.53	14.07	787.50	457.43	0.13	0.03
582	3.76	25	SLE F	5		4	31.28	-4137.87	27.00	135.67	0.50	16.00	143.53	14.07	787.50	473.74	0.14	0.03
628	4.33	29	SLE Q	5		4	87.86	-3995.47	27.00	62.62	0.50	16.00	98.76	28.15	787.50	234.33	0.07	0.01
630	4.33	25	SLE F	5		4	87.86	-4137.87	27.00	62.62	0.50	16.00	98.76	28.15	787.50	242.68	0.07	0.01
674	4.33	29	SLE Q	6		4	0.00	-5281.65	27.00	62.62	0.50	16.00	98.76	28.15	787.50	309.76	0.09	0.02
682	4.33	42	SLE F	6		4	0.00	-5381.78	27.00	62.62	0.50	16.00	98.76	28.15	787.50	315.63	0.09	0.02
720	5.21	29	SLE Q	6		4	87.86	-5421.22	27.00	135.67	0.50	16.00	143.53	14.07	787.50	616.34	0.18	0.04
728	5.21	42	SLE F	6		4	87.86	-5537.35	27.00	135.67	0.50	16.00	143.53	14.07	787.50	629.55	0.18	0.04
765	5.21	29	SLE Q	7		4	0.00	-5422.04	27.00	135.67	0.50	16.00	143.53	14.07	787.50	616.44	0.18	0.04
773	5.21	42	SLE F	7		4	0.00	-5536.84	27.00	135.67	0.50	16.00	143.53	14.07	787.50	629.49	0.18	0.04
810	6.08	29	SLE Q	7		4	87.86	-5327.82	27.00	135.67	0.50	16.00	143.53	14.07	787.50	609.97	0.18	0.04

Relazione di calcolo

818	6.08	42	SLE F	7	4	87.86	-5452.87	27.00	135.67	0.50	16.00	143.53	14.07	787.50	624.29	0.18	0.04
855	6.08	29	SLE Q	8	4	0.00	-4294.41	27.00	135.67	0.50	16.00	143.53	14.07	787.50	491.66	0.14	0.03
863	6.08	42	SLE F	8	4	0.00	-4455.37	27.00	135.67	0.50	16.00	143.53	14.07	787.50	510.09	0.15	0.04
903	6.96	29	SLE Q	8	4	87.86	-3894.26	27.00	135.67	0.50	16.00	143.53	14.07	787.50	445.85	0.13	0.03
911	6.96	42	SLE F	8	4	87.86	-4054.82	27.00	135.67	0.50	16.00	143.53	14.07	787.50	464.23	0.14	0.03
976	6.96	29	SLE Q	9	4	0.00	2915.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	333.75	0.10	0.02
986	6.96	28	SLE F	9	4	0.00	2981.34	27.00	135.67	0.50	16.00	143.53	14.07	787.50	341.33	0.10	0.02
1060	7.84	29	SLE Q	9	4	87.86	3609.01	27.00	135.67	0.50	16.00	143.53	14.07	787.50	410.31	0.12	0.03
1070	7.84	28	SLE F	9	4	87.86	3690.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	419.61	0.12	0.03
1116	7.84	29	SLE Q	10	4	0.00	9265.71	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1053.43	0.31	0.07
1121	7.84	28	SLE F	10	4	0.00	9467.19	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1076.34	0.31	0.08
1161	8.57	29	SLE Q	10	4	72.86	9265.71	27.00	62.62	0.50	16.00	98.76	28.15	787.50	543.41	0.16	0.03
1166	8.57	28	SLE F	10	4	72.86	9467.19	27.00	62.62	0.50	16.00	98.76	28.15	787.50	555.23	0.16	0.03
1206	8.87	29	SLE Q	11	4	15.00	9449.19	27.00	62.62	0.50	16.00	98.76	28.15	787.50	554.17	0.16	0.03
1214	8.87	42	SLE F	11	4	15.00	9758.41	27.00	62.62	0.50	16.00	98.76	28.15	787.50	572.31	0.17	0.03
1251	9.61	29	SLE Q	11	4	89.00	9449.19	27.00	62.62	0.50	16.00	98.76	28.15	787.50	554.17	0.16	0.03
1259	9.61	42	SLE F	11	4	89.00	9758.41	27.00	62.62	0.50	16.00	98.76	28.15	787.50	572.31	0.17	0.03
1318	9.61	29	SLE Q	12	4	0.00	3680.55	27.00	62.62	0.50	16.00	98.76	28.15	787.50	215.86	0.06	0.01
1334	9.61	42	SLE F	12	4	0.00	3838.08	27.00	62.62	0.50	16.00	98.76	28.15	787.50	225.09	0.07	0.01
1404	10.05	29	SLE Q	12	4	44.50	3680.55	27.00	135.67	0.50	16.00	143.53	14.07	787.50	421.38	0.12	0.03
1420	10.05	42	SLE F	12	4	44.50	3838.08	27.00	135.67	0.50	16.00	143.53	14.07	787.50	439.41	0.13	0.03
1490	10.50	29	SLE Q	12	4	89.00	2913.48	27.00	135.67	0.50	16.00	143.53	14.07	787.50	333.56	0.10	0.02
1506	10.50	42	SLE F	12	4	89.00	3050.21	27.00	135.67	0.50	16.00	143.53	14.07	787.50	349.21	0.10	0.02
1547	10.50	29	SLE Q	13	4	0.00	-4078.76	27.00	135.67	0.50	16.00	143.53	14.07	787.50	466.97	0.14	0.03
1552	10.50	28	SLE F	13	4	0.00	-4180.26	27.00	135.67	0.50	16.00	143.53	14.07	787.50	478.59	0.14	0.03
1594	10.95	29	SLE Q	13	4	44.50	-4564.68	27.00	135.67	0.50	16.00	143.53	14.07	787.50	522.60	0.15	0.04
1599	10.95	28	SLE F	13	4	44.50	-4675.14	27.00	135.67	0.50	16.00	143.53	14.07	787.50	535.25	0.16	0.04
1639	11.39	29	SLE Q	13	4	89.00	-4564.68	27.00	62.62	0.50	16.00	98.76	28.15	787.50	267.71	0.08	0.01
1644	11.39	28	SLE F	13	4	89.00	-4675.14	27.00	62.62	0.50	16.00	98.76	28.15	787.50	274.19	0.08	0.01
1684	11.39	29	SLE Q	14	4	0.00	-5896.65	27.00	62.62	0.50	16.00	98.76	28.15	787.50	345.83	0.10	0.02
1689	11.39	28	SLE F	14	4	0.00	-6037.98	27.00	62.62	0.50	16.00	98.76	28.15	787.50	354.12	0.10	0.02
1729	11.84	29	SLE Q	14	4	44.50	-6098.23	27.00	135.67	0.50	16.00	143.53	14.07	787.50	698.17	0.20	0.05
1734	11.84	28	SLE F	14	4	44.50	-6241.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	714.62	0.21	0.05
1774	12.28	29	SLE Q	14	4	89.00	-6098.23	27.00	135.67	0.50	16.00	143.53	14.07	787.50	698.17	0.20	0.05
1779	12.28	28	SLE F	14	4	89.00	-6241.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	714.62	0.21	0.05
1819	12.28	29	SLE Q	15	4	0.00	-5973.78	27.00	135.67	0.50	16.00	143.53	14.07	787.50	683.93	0.20	0.05
1824	12.28	28	SLE F	15	4	0.00	-6118.59	27.00	135.67	0.50	16.00	143.53	14.07	787.50	700.51	0.20	0.05
1864	13.17	29	SLE Q	15	4	89.00	-5958.43	27.00	135.67	0.50	16.00	143.53	14.07	787.50	677.42	0.20	0.05
1872	13.17	42	SLE F	15	4	89.00	-6109.19	27.00	135.67	0.50	16.00	143.53	14.07	787.50	694.56	0.20	0.05
1909	13.17	29	SLE Q	16	4	0.00	-5392.98	27.00	135.67	0.50	16.00	143.53	14.07	787.50	613.13	0.18	0.04
1917	13.17	42	SLE F	16	4	0.00	-5579.93	27.00	135.67	0.50	16.00	143.53	14.07	787.50	634.39	0.18	0.05
1958	14.06	29	SLE Q	16	4	89.00	-4835.15	27.00	135.67	0.50	16.00	143.53	14.07	787.50	553.57	0.16	0.04
1966	14.06	42	SLE F	16	4	89.00	-5017.44	27.00	135.67	0.50	16.00	143.53	14.07	787.50	574.44	0.17	0.04
2029	14.06	29	SLE Q	17	4	0.00	-1848.46	27.00	135.67	0.50	16.00	143.53	14.07	787.50	211.63	0.06	0.02
2045	14.06	42	SLE F	17	4	0.00	-2007.93	27.00	135.67	0.50	16.00	143.53	14.07	787.50	229.88	0.07	0.02
2110	14.80	29	SLE Q	17	4	74.00	-1848.46	27.00	135.67	0.50	16.00	143.53	14.07	787.50	211.63	0.06	0.02
2126	14.80	42	SLE F	17	4	74.00	-2007.93	27.00	135.67	0.50	16.00	143.53	14.07	787.50	229.88	0.07	0.02

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	Afe St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
9 SLV	0.30	0.75	0.45	ø10/20 4 br.	15.71	0.90	5677.94	2.50	91968.40	131041.00	91968.40	16.198
34 SLU	0.75	1.97	1.22	ø10/20 4 br.	15.71	0.90	5333.80	2.50	91968.40	131041.00	91968.40	17.243
34 SLU	1.97	2.42	0.45	ø10/20 4 br.	15.71	0.90	6434.21	2.50	91968.40	131041.00	91968.40	14.294
32 SLU	2.72	3.17	0.45	ø10/20 4 br.	15.71	0.90	10667.60	2.50	91968.40	131041.00	91968.40	8.621
34 SLU	3.17	8.12	4.95	ø10/20 4 br.	15.71	0.90	11775.30	2.50	91968.40	131041.00	91968.40	7.810
34 SLU	8.12	8.57	0.45	ø10/20 4 br.	15.71	0.90	12633.20	2.50	91968.40	131041.00	91968.40	7.280
34 SLU	8.87	9.32	0.45	ø10/20 4 br.	15.71	0.90	13246.40	2.50	91968.40	131041.00	91968.40	6.943
34 SLU	9.32	14.35	5.03	ø10/20 4 br.	15.71	0.90	12406.40	2.50	91968.40	131041.00	91968.40	7.413
13 SLV	14.35	14.80	0.45	ø10/20 4 br.	15.71	0.90	7232.58	2.50	91968.40	131041.00	91968.40	12.716

Travata n. 439

Nodi: -4 -1170 -1171 -10 -1078 -1079 -1675 -1081 -1082 -1083 -17 -1010 -1011 -1012 -1013 -1014 -1015 -24 -958 -959
-31 -868 -869 -870 -871 -872 -873 -874 -38

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
	4R	90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <m>	Afe S <cmq>	Afe I <cmq>	AfeP S <cmq>	AfeP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.45	32	SLU	1	40.67	14.07	14.07	14.07	14.07	1391.85	35450.10	25.470
0.86	32	SLU	1	0.00	14.07	14.07	14.07	14.07	1391.85	35450.10	25.470
0.86	32	SLU	2	85.67	14.07	14.07	14.07	14.07	2956.38	35450.10	11.991
1.71	32	SLU	2	0.00	14.07	14.07	14.07	14.07	3440.67	35450.10	10.303
1.71	32	SLU	3	85.67	14.07	14.07	14.07	14.07	9510.93	35450.10	3.727
2.35	32	SLU	3	22.50	14.07	14.07	14.07	14.07	9510.93	35450.10	3.727

Relazione di calcolo

2.79	32	SLU	4	65.36	14.07	14.07	14.07	14.07	10182.50	35450.10	3.481
3.45	32	SLU	4	0.00	14.07	14.07	14.07	14.07	10182.50	35450.10	3.481
3.45	20	SLU	5	87.86	14.07	14.07	14.07	14.07	-7296.33	-35450.10	4.859
4.33	20	SLU	5	0.00	28.15	14.07	28.15	14.07	-8161.43	-69959.00	8.572
4.33	20	SLU	6	87.86	28.15	14.07	28.15	14.07	-10397.60	-69959.00	6.728
5.21	20	SLU	6	0.00	14.07	28.15	14.07	28.15	-10623.20	-35445.00	3.337
5.21	20	SLU	7	87.86	14.07	28.15	14.07	28.15	-10616.90	-35445.00	3.339
6.08	20	SLU	7	0.00	14.07	14.07	14.07	14.07	-10486.50	-35450.10	3.381
6.08	34	SLU	8	87.86	14.07	14.07	14.07	14.07	-8961.48	-35450.10	3.956
6.96	34	SLU	8	0.00	14.07	14.07	14.07	14.07	-8259.96	-35450.10	4.292
6.96	20	SLU	9	87.86	14.07	14.07	14.07	14.07	5499.07	35450.10	6.447
7.84	20	SLU	9	0.00	14.07	14.07	14.07	14.07	7052.53	35450.10	5.027
7.84	20	SLU	10	87.86	14.07	14.07	14.07	14.07	19352.70	35450.10	1.832
8.49	20	SLU	10	22.50	28.15	28.15	28.15	28.15	19352.70	70123.70	3.623
8.95	34	SLU	11	66.50	14.07	28.15	14.07	28.15	19997.10	69959.00	3.498
9.61	34	SLU	11	0.00	14.07	28.15	14.07	28.15	19997.10	69959.00	3.498
9.61	32	SLU	12	89.00	14.07	28.15	14.07	28.15	7144.06	69959.00	9.793
10.05	32	SLU	12	44.50	14.07	14.07	14.07	14.07	7144.06	35450.10	4.962
10.50	32	SLU	12	0.00	14.07	14.07	14.07	14.07	5447.81	35450.10	6.507
10.50	34	SLU	13	89.00	14.07	14.07	14.07	14.07	-8904.61	-35450.10	3.981
10.95	34	SLU	13	44.50	14.07	14.07	14.07	14.07	-9711.95	-35450.10	3.650
11.39	34	SLU	13	0.00	14.07	14.07	14.07	14.07	-9711.95	-35450.10	3.650
11.39	34	SLU	14	89.00	14.07	14.07	14.07	14.07	-11344.10	-35450.10	3.125
11.82	34	SLU	14	46.14	14.07	28.15	14.07	28.15	-11454.10	-35445.00	3.095
12.28	34	SLU	14	0.00	28.15	28.15	28.15	28.15	-11454.10	-70123.70	6.122
12.28	34	SLU	15	89.00	28.15	28.15	28.15	28.15	-11503.70	-70123.70	6.096
13.17	34	SLU	15	0.00	14.07	14.07	14.07	14.07	-11190.60	-35450.10	3.168
13.17	34	SLU	16	89.00	14.07	14.07	14.07	14.07	-8499.39	-35450.10	4.171
14.06	34	SLU	16	0.00	14.07	14.07	14.07	14.07	-7413.07	-35450.10	4.782
14.06	20	SLU	17	89.00	14.07	14.07	14.07	14.07	10057.90	35450.10	3.525
14.72	20	SLU	17	22.50	14.07	14.07	14.07	14.07	10057.90	35450.10	3.525
15.18	34	SLU	18	75.17	14.07	14.07	14.07	14.07	12463.10	35450.10	2.844
15.93	34	SLU	18	0.00	28.15	14.07	28.15	14.07	12437.60	35445.00	2.850
15.93	34	SLU	19	97.67	28.15	14.07	28.15	14.07	10743.60	35445.00	3.299
16.90	20	SLU	19	0.00	14.07	28.15	14.07	28.15	11936.60	69959.00	5.861
16.90	20	SLU	20	97.67	14.07	28.15	14.07	28.15	24162.40	69959.00	2.895
17.66	20	SLU	20	22.50	14.07	14.07	14.07	14.07	24228.40	35450.10	1.463
18.11	32	SLU	21	74.88	14.07	14.07	14.07	14.07	19322.80	35450.10	1.835
18.85	32	SLU	21	0.00	14.07	14.07	14.07	14.07	19322.80	35450.10	1.835
18.85	20	SLU	22	97.37	14.07	14.07	14.07	14.07	-5955.85	-35450.10	5.952
19.18	20	SLU	22	64.92	14.07	14.07	14.07	14.07	-8386.30	-35450.10	4.227
19.83	20	SLU	22	0.00	28.15	28.15	28.15	28.15	-8386.30	-70123.70	8.362
19.83	34	SLU	23	97.37	28.15	28.15	28.15	28.15	-14525.30	-70123.70	4.828
20.15	34	SLU	23	64.92	14.07	14.07	14.07	14.07	-16104.40	-35450.10	2.201
20.80	34	SLU	23	0.00	14.07	14.07	14.07	14.07	-16104.40	-35450.10	2.201
20.80	34	SLU	24	97.38	14.07	14.07	14.07	14.07	-20162.90	-35450.10	1.758
21.13	34	SLU	24	64.92	14.07	14.07	14.07	14.07	-21124.50	-35450.10	1.678
21.77	34	SLU	24	0.00	14.07	14.07	14.07	14.07	-21124.50	-35450.10	1.678
21.77	34	SLU	25	97.38	14.07	14.07	14.07	14.07	-23470.40	-35450.10	1.510
22.10	34	SLU	25	64.92	14.07	14.07	14.07	14.07	-23834.60	-35450.10	1.487
22.75	34	SLU	25	0.00	14.07	14.07	14.07	14.07	-23834.60	-35450.10	1.487
22.75	34	SLU	26	97.37	14.07	14.07	14.07	14.07	-24454.60	-35450.10	1.450
23.72	34	SLU	26	0.00	28.15	28.15	28.15	28.15	-24295.30	-70123.70	2.886
23.72	34	SLU	27	97.37	28.15	28.15	28.15	28.15	-23211.50	-70123.70	3.021
24.70	34	SLU	27	0.00	14.07	14.07	14.07	14.07	-21604.20	-35450.10	1.641
24.70	34	SLU	28	97.38	14.07	14.07	14.07	14.07	-14316.30	-35450.10	2.476
25.22	34	SLU	28	45.00	14.07	14.07	14.07	14.07	-14316.30	-35450.10	2.476

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cmq>	Afe I <cmq>	AfeP S <cmq>	AfeP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.45	13	SLV (E)	1	40.67	14.07	14.07	14.07	14.07	-12850.50	-34082.90	2.652
0.86	13	SLV (E)	1	0.00	14.07	14.07	14.07	14.07	-12850.50	-34082.90	2.652
0.86	13	SLV (E)	2	85.67	14.07	14.07	14.07	14.07	-11684.40	-34082.90	2.917
1.71	13	SLV (E)	2	0.00	14.07	14.07	14.07	14.07	-11285.70	-34082.90	3.020
1.71	5	SLV (E)	3	85.67	14.07	14.07	14.07	14.07	12633.40	34082.90	2.698
2.35	5	SLV (E)	3	22.50	14.07	14.07	14.07	14.07	12633.40	34082.90	2.698
2.79	5	SLV (E)	4	65.36	14.07	14.07	14.07	14.07	23953.20	34082.90	1.423
3.45	5	SLV (E)	4	0.00	14.07	14.07	14.07	14.07	23953.20	34082.90	1.423
3.45	13	SLV (E)	5	87.86	14.07	14.07	14.07	14.07	-13976.10	-34082.90	2.439
4.33	5	SLV (E)	5	0.00	28.15	14.07	28.15	14.07	9287.40	34362.70	3.700
4.33	13	SLV (E)	6	87.86	28.15	14.07	28.15	14.07	-12966.70	-66258.60	5.110
5.21	13	SLV (E)	6	0.00	14.07	28.15	14.07	28.15	-12663.40	-34362.70	2.714
5.21	13	SLV (E)	7	87.86	14.07	28.15	14.07	28.15	-10478.60	-34362.70	3.279
6.08	13	SLV (E)	7	0.00	14.07	14.07	14.07	14.07	-9895.14	-34082.90	3.444
6.08	1	SLV (E)	8	87.86	14.07	14.07	14.07	14.07	-7867.42	-34082.90	4.332
6.96	1	SLV (E)	8	0.00	14.07	14.07	14.07	14.07	-7488.81	-34082.90	4.551
6.96	13	SLV (E)	9	87.86	14.07	14.07	14.07	14.07	9212.72	34082.90	3.700
7.84	13	SLV (E)	9	0.00	14.07	14.07	14.07	14.07	10653.80	34082.90	3.199

Relazione di calcolo

7.84	13	SLV(E)	10	87.86	14.07	14.07	14.07	14.07	22038.20	34082.90	1.547
8.49	13	SLV(E)	10	22.50	28.15	28.15	28.15	28.15	22038.20	67205.10	3.049
8.95	5	SLV(E)	11	66.50	14.07	28.15	14.07	28.15	21443.80	66258.60	3.090
9.61	5	SLV(E)	11	0.00	14.07	28.15	14.07	28.15	21443.80	66258.60	3.090
9.61	13	SLV(E)	12	89.00	14.07	28.15	14.07	28.15	-5154.35	-34362.70	6.667
10.05	5	SLV(E)	12	44.50	14.07	14.07	14.07	14.07	9569.25	34082.90	3.562
10.50	5	SLV(E)	12	0.00	14.07	14.07	14.07	14.07	7999.14	34082.90	4.261
10.50	13	SLV(E)	13	89.00	14.07	14.07	14.07	14.07	-7857.85	-34082.90	4.337
10.95	13	SLV(E)	13	44.50	14.07	14.07	14.07	14.07	-8062.08	-34082.90	4.228
11.39	13	SLV(E)	13	0.00	14.07	14.07	14.07	14.07	-8062.08	-34082.90	4.228
11.39	5	SLV(E)	14	89.00	14.07	14.07	14.07	14.07	-8907.05	-34082.90	3.827
11.82	5	SLV(E)	14	46.14	14.07	28.15	14.07	28.15	-9332.48	-34362.70	3.682
12.28	5	SLV(E)	14	0.00	28.15	28.15	28.15	28.15	-9332.48	-67205.10	7.201
12.28	5	SLV(E)	15	89.00	28.15	28.15	28.15	28.15	-9923.95	-67205.10	6.772
13.17	5	SLV(E)	15	0.00	14.07	14.07	14.07	14.07	-9937.39	-34082.90	3.430
13.17	5	SLV(E)	16	89.00	14.07	14.07	14.07	14.07	-9950.91	-34082.90	3.425
14.06	5	SLV(E)	16	0.00	14.07	14.07	14.07	14.07	-9718.80	-34082.90	3.507
14.06	13	SLV(E)	17	89.00	14.07	14.07	14.07	14.07	19651.00	34082.90	1.734
14.72	13	SLV(E)	17	22.50	14.07	14.07	14.07	14.07	19651.00	34082.90	1.734
15.18	5	SLV(E)	18	75.17	14.07	14.07	14.07	14.07	12345.70	34082.90	2.761
15.93	5	SLV(E)	18	0.00	28.15	14.07	28.15	14.07	12316.60	34362.70	2.790
15.93	13	SLV(E)	19	97.67	28.15	14.07	28.15	14.07	8488.27	34362.70	4.048
16.90	13	SLV(E)	19	0.00	14.07	28.15	14.07	28.15	9851.89	66258.60	6.725
16.90	13	SLV(E)	20	97.67	14.07	28.15	14.07	28.15	20892.10	66258.60	3.171
17.66	13	SLV(E)	20	22.50	14.07	14.07	14.07	14.07	20949.30	34082.90	1.627
18.11	5	SLV(E)	21	74.88	14.07	14.07	14.07	14.07	26021.60	34082.90	1.310
18.85	5	SLV(E)	21	0.00	14.07	14.07	14.07	14.07	26021.60	34082.90	1.310
18.85	5	SLV(E)	22	97.37	14.07	14.07	14.07	14.07	9309.75	34082.90	3.661
19.18	13	SLV(E)	22	64.92	14.07	14.07	14.07	14.07	-9690.72	-34082.90	3.517
19.83	13	SLV(E)	22	0.00	28.15	28.15	28.15	28.15	-9690.72	-67205.10	6.935
19.83	9	SLV(E)	23	97.37	28.15	28.15	28.15	28.15	-11523.90	-67205.10	5.832
20.15	9	SLV(E)	23	64.92	14.07	14.07	14.07	14.07	-12487.00	-34082.90	2.729
20.80	9	SLV(E)	23	0.00	14.07	14.07	14.07	14.07	-12487.00	-34082.90	2.729
20.80	5	SLV(E)	24	97.38	14.07	14.07	14.07	14.07	-16122.70	-34082.90	2.114
21.13	5	SLV(E)	24	64.92	14.07	14.07	14.07	14.07	-17344.70	-34082.90	1.965
21.77	5	SLV(E)	24	0.00	14.07	14.07	14.07	14.07	-17344.70	-34082.90	1.965
21.77	5	SLV(E)	25	97.38	14.07	14.07	14.07	14.07	-20763.40	-34082.90	1.641
22.10	5	SLV(E)	25	64.92	14.07	14.07	14.07	14.07	-21541.70	-34082.90	1.582
22.75	5	SLV(E)	25	0.00	14.07	14.07	14.07	14.07	-21541.70	-34082.90	1.582
22.75	5	SLV(E)	26	97.37	14.07	14.07	14.07	14.07	-23191.10	-34082.90	1.470
23.72	5	SLV(E)	26	0.00	28.15	28.15	28.15	28.15	-23313.60	-67205.10	2.883
23.72	5	SLV(E)	27	97.37	28.15	28.15	28.15	28.15	-23788.10	-67205.10	2.825
24.70	5	SLV(E)	27	0.00	14.07	14.07	14.07	14.07	-23269.80	-34082.90	1.465
24.70	5	SLV(E)	28	97.38	14.07	14.07	14.07	14.07	-19690.90	-34082.90	1.731
25.22	5	SLV(E)	28	45.00	14.07	14.07	14.07	14.07	-19690.90	-34082.90	1.731

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.45	24	SLE R	1	40.67	14.07	14.07	-1017.05	116.44	-23.36	2.08
0.45	29	SLE Q	1	40.67	14.07	14.07	-1079.60	123.60	-24.80	2.20
0.86	24	SLE R	1	0.00	14.07	14.07	-1017.05	116.44	-23.36	2.08
0.86	29	SLE Q	1	0.00	14.07	14.07	-1079.60	123.60	-24.80	2.20
0.86	37	SLE R	2	85.67	14.07	14.07	1913.46	-43.95	219.07	3.90
0.86	29	SLE Q	2	85.67	14.07	14.07	-1097.41	125.64	-25.21	2.24
1.71	37	SLE R	2	0.00	14.07	14.07	2256.78	-51.84	258.37	4.60
1.71	29	SLE Q	2	0.00	14.07	14.07	967.92	-22.23	110.81	1.98
1.71	37	SLE R	3	85.67	14.07	14.07	6645.00	-152.64	760.77	13.56
1.71	29	SLE Q	3	85.67	14.07	14.07	5474.10	-125.74	626.72	11.17
2.35	37	SLE R	3	22.50	14.07	14.07	6645.00	-152.64	760.77	13.56
2.35	29	SLE Q	3	22.50	14.07	14.07	5474.10	-125.74	626.72	11.17
2.79	37	SLE R	4	65.36	14.07	14.07	7125.77	-163.68	815.82	14.54
2.79	29	SLE Q	4	65.36	14.07	14.07	4825.12	-110.83	552.42	9.85
3.45	37	SLE R	4	0.00	14.07	14.07	7125.77	-163.68	815.82	14.54
3.45	29	SLE Q	4	0.00	14.07	14.07	4825.12	-110.83	552.42	9.85
3.45	24	SLE R	5	87.86	14.07	14.07	-5338.91	611.24	-122.64	10.89
3.45	29	SLE Q	5	87.86	14.07	14.07	-4806.51	550.29	-110.41	9.81
4.33	24	SLE R	5	0.00	28.15	14.07	-5964.95	349.83	-116.40	9.49
4.33	29	SLE Q	5	0.00	28.15	14.07	-5389.55	316.09	-105.17	8.57
4.33	24	SLE R	6	87.86	28.15	14.07	-7569.31	443.92	-147.71	12.04
4.33	29	SLE Q	6	87.86	28.15	14.07	-6881.34	403.58	-134.28	10.94
5.21	24	SLE R	6	0.00	14.07	28.15	-7732.83	879.15	-152.66	14.00
5.21	29	SLE Q	6	0.00	14.07	28.15	-7041.11	800.51	-139.00	12.75
5.21	24	SLE R	7	87.86	14.07	28.15	-7723.07	878.04	-152.47	13.98
5.21	29	SLE Q	7	87.86	14.07	28.15	-7029.49	799.19	-138.77	12.73
6.08	24	SLE R	7	0.00	14.07	14.07	-7626.02	873.09	-175.17	15.56
6.08	29	SLE Q	7	0.00	14.07	14.07	-6940.40	794.59	-159.42	14.16
6.08	39	SLE R	8	87.86	14.07	14.07	-6506.91	744.96	-149.47	13.28
6.08	29	SLE Q	8	87.86	14.07	14.07	-5870.30	672.08	-134.84	11.98

Relazione di calcolo

6.96	39	SLE R	8	0.00	14.07	14.07	-5996.86	686.57	-137.75	12.24
6.96	29	SLE Q	8	0.00	14.07	14.07	-5389.86	617.07	-123.81	11.00
6.96	24	SLE R	9	87.86	14.07	14.07	3927.07	-90.21	449.60	8.01
6.96	29	SLE Q	9	87.86	14.07	14.07	3477.28	-79.87	398.11	7.10
7.84	24	SLE R	9	0.00	14.07	14.07	5044.55	-115.88	577.54	10.29
7.84	29	SLE Q	9	0.00	14.07	14.07	4479.39	-102.89	512.84	9.14
7.84	24	SLE R	10	87.86	14.07	14.07	13900.30	-319.30	1591.41	28.36
7.84	29	SLE Q	10	87.86	14.07	14.07	12472.80	-286.50	1427.98	25.45
8.49	24	SLE R	10	22.50	28.15	28.15	13900.30	-239.02	806.06	19.81
8.49	29	SLE Q	10	22.50	28.15	28.15	12472.80	-214.48	723.28	17.77
8.95	39	SLE R	11	66.50	14.07	28.15	14278.60	-278.64	837.41	22.71
8.95	29	SLE Q	11	66.50	14.07	28.15	11940.80	-233.02	700.30	18.99
9.61	39	SLE R	11	0.00	14.07	28.15	14278.60	-278.64	837.41	22.71
9.61	29	SLE Q	11	0.00	14.07	28.15	11940.80	-233.02	700.30	18.99
9.61	37	SLE R	12	89.00	14.07	28.15	5066.00	-98.86	297.11	8.06
9.61	29	SLE Q	12	89.00	14.07	28.15	3929.98	-76.69	230.49	6.25
10.05	37	SLE R	12	44.50	14.07	14.07	5066.00	-116.37	580.00	10.34
10.05	29	SLE Q	12	44.50	14.07	14.07	3929.98	-90.27	449.94	8.02
10.50	37	SLE R	12	0.00	14.07	14.07	3850.71	-88.45	440.86	7.86
10.50	29	SLE Q	12	0.00	14.07	14.07	2866.00	-65.83	328.12	5.85
10.50	39	SLE R	13	89.00	14.07	14.07	-6415.29	734.47	-147.36	13.09
10.50	29	SLE Q	13	89.00	14.07	14.07	-5777.32	661.43	-132.71	11.79
10.95	39	SLE R	13	44.50	14.07	14.07	-6993.43	800.66	-160.64	14.27
10.95	29	SLE Q	13	44.50	14.07	14.07	-6263.09	717.05	-143.87	12.78
11.39	39	SLE R	13	0.00	14.07	14.07	-6993.43	800.66	-160.64	14.27
11.39	29	SLE Q	13	0.00	14.07	14.07	-6263.09	717.05	-143.87	12.78
11.39	39	SLE R	14	89.00	14.07	14.07	-8143.11	932.29	-187.05	16.62
11.39	29	SLE Q	14	89.00	14.07	14.07	-7124.22	815.64	-163.65	14.54
11.82	39	SLE R	14	46.14	14.07	28.15	-8219.46	934.48	-162.26	14.88
11.82	29	SLE Q	14	46.14	14.07	28.15	-7166.47	814.76	-141.48	12.97
12.28	39	SLE R	14	0.00	28.15	28.15	-8219.46	476.64	-141.34	11.71
12.28	29	SLE Q	14	0.00	28.15	28.15	-7166.47	415.58	-123.23	10.21
12.28	39	SLE R	15	89.00	28.15	28.15	-8255.19	478.71	-141.95	11.76
12.28	29	SLE Q	15	89.00	28.15	28.15	-7211.26	418.17	-124.00	10.27
13.17	39	SLE R	15	0.00	14.07	14.07	-8022.65	918.50	-184.28	16.37
13.17	29	SLE Q	15	0.00	14.07	14.07	-6967.04	797.64	-160.04	14.22
13.17	39	SLE R	16	89.00	14.07	14.07	-6056.83	693.43	-139.13	12.36
13.17	29	SLE Q	16	89.00	14.07	14.07	-5069.21	580.36	-116.44	10.34
14.06	39	SLE R	16	0.00	14.07	14.07	-5266.93	603.00	-120.98	10.75
14.06	29	SLE Q	16	0.00	14.07	14.07	-4324.20	495.07	-99.33	8.82
14.06	24	SLE R	17	89.00	14.07	14.07	7331.24	-168.40	839.34	14.96
14.06	29	SLE Q	17	89.00	14.07	14.07	6832.97	-156.96	782.29	13.94
14.72	24	SLE R	17	22.50	14.07	14.07	7331.24	-168.40	839.34	14.96
14.72	29	SLE Q	17	22.50	14.07	14.07	6832.97	-156.96	782.29	13.94
15.18	39	SLE R	18	75.17	14.07	14.07	8987.49	-206.45	1028.96	18.34
15.18	29	SLE Q	18	75.17	14.07	14.07	7962.79	-182.91	911.64	16.25
15.93	39	SLE R	18	0.00	28.15	14.07	8969.07	-177.06	1019.70	16.24
15.93	29	SLE Q	18	0.00	28.15	14.07	7946.46	-156.88	903.44	14.39
15.93	39	SLE R	19	97.67	28.15	14.07	7711.61	-152.24	876.74	13.96
15.93	29	SLE Q	19	97.67	28.15	14.07	6926.40	-136.74	787.47	12.54
16.90	24	SLE R	19	0.00	14.07	28.15	8561.37	-167.07	502.11	13.62
16.90	29	SLE Q	19	0.00	14.07	28.15	7700.69	-150.27	451.63	12.25
16.90	24	SLE R	20	97.67	14.07	28.15	17313.50	-337.86	1015.40	27.54
16.90	29	SLE Q	20	97.67	14.07	28.15	15486.40	-302.21	908.24	24.63
17.66	24	SLE R	20	22.50	14.07	14.07	17360.70	-398.78	1987.60	35.42
17.66	29	SLE Q	20	22.50	14.07	14.07	15528.40	-356.69	1777.82	31.69
18.11	37	SLE R	21	74.88	14.07	14.07	13775.70	-316.44	1577.16	28.11
18.11	29	SLE Q	21	74.88	14.07	14.07	11261.50	-258.68	1289.30	22.98
18.85	37	SLE R	21	0.00	14.07	14.07	13775.70	-316.44	1577.16	28.11
18.85	29	SLE Q	21	0.00	14.07	14.07	11261.50	-258.68	1289.30	22.98
18.85	24	SLE R	22	97.37	14.07	14.07	-4298.73	492.15	-98.74	8.77
18.85	29	SLE Q	22	97.37	14.07	14.07	-3915.68	448.30	-89.94	7.99
19.18	24	SLE R	22	64.92	14.07	14.07	-6048.77	692.51	-138.94	12.34
19.18	29	SLE Q	22	64.92	14.07	14.07	-5507.95	630.59	-126.52	11.24
19.83	24	SLE R	22	0.00	28.15	28.15	-6048.77	350.76	-104.01	8.62
19.83	29	SLE Q	22	0.00	28.15	28.15	-5507.95	319.40	-94.71	7.85
19.83	39	SLE R	23	97.37	28.15	28.15	-10441.60	605.50	-179.55	14.88
19.83	29	SLE Q	23	97.37	28.15	28.15	-9280.98	538.20	-159.59	13.22
20.15	39	SLE R	23	64.92	14.07	14.07	-11574.60	1325.15	-265.87	23.62
20.15	29	SLE Q	23	64.92	14.07	14.07	-10256.80	1174.28	-235.60	20.93
20.80	39	SLE R	23	0.00	14.07	14.07	-11574.60	1325.15	-265.87	23.62
20.80	29	SLE Q	23	0.00	14.07	14.07	-10256.80	1174.28	-235.60	20.93
20.80	39	SLE R	24	97.38	14.07	14.07	-14474.00	1657.10	-332.48	29.53
20.80	29	SLE Q	24	97.38	14.07	14.07	-12719.60	1456.24	-292.17	25.95
21.13	39	SLE R	24	64.92	14.07	14.07	-15165.00	1736.21	-348.35	30.94
21.13	29	SLE Q	24	64.92	14.07	14.07	-13320.10	1524.99	-305.97	27.18
21.77	39	SLE R	24	0.00	14.07	14.07	-15165.00	1736.21	-348.35	30.94
21.77	29	SLE Q	24	0.00	14.07	14.07	-13320.10	1524.99	-305.97	27.18
21.77	39	SLE R	25	97.38	14.07	14.07	-16837.00	1927.64	-386.75	34.36

Relazione di calcolo

21.77	29	SLE Q	25	97.38	14.07	14.07	-14745.50	1688.18	-338.71	30.09
22.10	39	SLE R	25	64.92	14.07	14.07	-17099.70	1957.71	-392.79	34.89
22.10	29	SLE Q	25	64.92	14.07	14.07	-14976.60	1714.64	-344.02	30.56
22.75	39	SLE R	25	0.00	14.07	14.07	-17099.70	1957.71	-392.79	34.89
22.75	29	SLE Q	25	0.00	14.07	14.07	-14976.60	1714.64	-344.02	30.56
22.75	39	SLE R	26	97.37	14.07	14.07	-17540.90	2008.22	-402.92	35.79
22.75	29	SLE Q	26	97.37	14.07	14.07	-15369.90	1759.67	-353.05	31.36
23.72	39	SLE R	26	0.00	28.15	28.15	-17421.40	1010.25	-299.57	24.82
23.72	29	SLE Q	26	0.00	28.15	28.15	-15249.30	884.29	-262.22	21.73
23.72	39	SLE R	27	97.37	28.15	28.15	-16634.40	964.61	-286.04	23.70
23.72	29	SLE Q	27	97.37	28.15	28.15	-14562.50	844.47	-250.41	20.75
24.70	39	SLE R	27	0.00	14.07	14.07	-15475.50	1771.77	-355.48	31.58
24.70	29	SLE Q	27	0.00	14.07	14.07	-13535.10	1549.61	-310.91	27.62
24.70	39	SLE R	28	97.38	14.07	14.07	-10238.70	1172.21	-235.19	20.89
24.70	29	SLE Q	28	97.38	14.07	14.07	-8976.83	1027.74	-206.20	18.32
25.22	39	SLE R	28	45.00	14.07	14.07	-10238.70	1172.21	-235.19	20.89
25.22	29	SLE Q	28	45.00	14.07	14.07	-8976.83	1027.74	-206.20	18.32

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm<sup>q> <th>ε_{sm}</th> <th>Wk <mm></th>	ε _{sm}	Wk <mm>
44	0.45	29	SLE Q	1	1	40.67	-1079.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	123.60	0.04	0.01
49	0.45	28	SLE F	1	1	40.67	-1081.37	27.00	135.67	0.50	16.00	143.53	14.07	787.50	123.80	0.04	0.01
98	0.86	29	SLE Q	1	4	0.00	-1079.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	123.60	0.04	0.01
103	0.86	28	SLE F	1	4	0.00	-1081.37	27.00	135.67	0.50	16.00	143.53	14.07	787.50	123.80	0.04	0.01
160	0.86	29	SLE Q	2	4	85.67	-1097.41	27.00	135.67	0.50	16.00	143.53	14.07	787.50	125.64	0.04	0.01
168	0.86	27	SLE F	2	4	85.67	-1099.08	27.00	135.67	0.50	16.00	143.53	14.07	787.50	125.83	0.04	0.01
231	1.71	29	SLE Q	2	4	0.00	967.92	27.00	135.67	0.50	16.00	143.53	14.07	787.50	110.81	0.03	0.01
247	1.71	42	SLE F	2	4	0.00	1277.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	146.20	0.04	0.01
291	1.71	29	SLE Q	3	4	85.67	5474.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	626.72	0.18	0.04
299	1.71	42	SLE F	3	4	85.67	5796.66	27.00	135.67	0.50	16.00	143.53	14.07	787.50	663.65	0.19	0.05
341	2.35	29	SLE Q	3	4	22.50	5474.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	626.72	0.18	0.04
349	2.35	42	SLE F	3	4	22.50	5796.66	27.00	135.67	0.50	16.00	143.53	14.07	787.50	663.65	0.19	0.05
400	2.79	29	SLE Q	4	4	65.36	4825.12	27.00	135.67	0.50	16.00	143.53	14.07	787.50	552.42	0.16	0.04
416	2.79	42	SLE F	4	4	65.36	5305.11	27.00	135.67	0.50	16.00	143.53	14.07	787.50	607.37	0.18	0.04
470	3.45	29	SLE Q	4	4	0.00	4825.12	27.00	135.67	0.50	16.00	143.53	14.07	787.50	552.42	0.16	0.04
486	3.45	42	SLE F	4	4	0.00	5305.11	27.00	135.67	0.50	16.00	143.53	14.07	787.50	607.37	0.18	0.04
534	3.45	29	SLE Q	5	4	87.86	-4806.51	27.00	135.67	0.50	16.00	143.53	14.07	787.50	550.29	0.16	0.04
536	3.45	25	SLE F	5	4	87.86	-4929.35	27.00	135.67	0.50	16.00	143.53	14.07	787.50	564.35	0.16	0.04
585	4.33	29	SLE Q	5	4	0.00	-5389.55	27.00	62.62	0.50	16.00	98.76	28.15	787.50	316.09	0.09	0.02
587	4.33	25	SLE F	5	4	0.00	-5496.92	27.00	62.62	0.50	16.00	98.76	28.15	787.50	322.38	0.09	0.02
632	4.33	29	SLE Q	6	4	87.86	-6881.34	27.00	62.62	0.50	16.00	98.76	28.15	787.50	403.58	0.12	0.02
637	4.33	28	SLE F	6	4	87.86	-7004.22	27.00	62.62	0.50	16.00	98.76	28.15	787.50	410.78	0.12	0.02
677	5.21	29	SLE Q	6	4	0.00	-7041.11	27.00	135.67	0.50	16.00	143.53	14.07	787.50	800.51	0.23	0.06
682	5.21	28	SLE F	6	4	0.00	-7166.46	27.00	135.67	0.50	16.00	143.53	14.07	787.50	814.76	0.24	0.06
722	5.21	29	SLE Q	7	4	87.86	-7029.49	27.00	135.67	0.50	16.00	143.53	14.07	787.50	799.19	0.23	0.06
727	5.21	28	SLE F	7	4	87.86	-7155.87	27.00	135.67	0.50	16.00	143.53	14.07	787.50	813.56	0.24	0.06
767	6.08	29	SLE Q	7	4	0.00	-6940.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	794.59	0.23	0.06
772	6.08	28	SLE F	7	4	0.00	-7066.81	27.00	135.67	0.50	16.00	143.53	14.07	787.50	809.07	0.24	0.06
813	6.08	29	SLE Q	8	4	87.86	-5870.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	672.08	0.20	0.05
818	6.08	28	SLE F	8	4	87.86	-5977.67	27.00	135.67	0.50	16.00	143.53	14.07	787.50	684.37	0.20	0.05
861	6.96	29	SLE Q	8	4	0.00	-5389.86	27.00	135.67	0.50	16.00	143.53	14.07	787.50	617.07	0.18	0.04
866	6.96	28	SLE F	8	4	0.00	-5488.66	27.00	135.67	0.50	16.00	143.53	14.07	787.50	628.39	0.18	0.04
933	6.96	29	SLE Q	9	4	87.86	3477.28	27.00	135.67	0.50	16.00	143.53	14.07	787.50	398.11	0.12	0.03
943	6.96	28	SLE F	9	4	87.86	3566.39	27.00	135.67	0.50	16.00	143.53	14.07	787.50	408.31	0.12	0.03
1015	7.84	29	SLE Q	9	4	0.00	4479.39	27.00	135.67	0.50	16.00	143.53	14.07	787.50	512.84	0.15	0.04
1025	7.84	28	SLE F	9	4	0.00	4591.98	27.00	135.67	0.50	16.00	143.53	14.07	787.50	525.73	0.15	0.04
1072	7.84	29	SLE Q	10	4	87.86	12472.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1427.98	0.42	0.10
1077	7.84	28	SLE F	10	4	87.86	12765.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1461.46	0.43	0.10
1119	8.49	29	SLE Q	10	4	22.50	12472.80	27.00	62.62	0.50	16.00	98.76	28.15	787.50	723.28	0.21	0.04
1124	8.49	28	SLE F	10	4	22.50	12765.20	27.00	62.62	0.50	16.00	98.76	28.15	787.50	740.24	0.22	0.04
1166	8.95	29	SLE Q	11	4	66.50	11940.80	27.00	62.62	0.50	16.00	98.76	28.15	787.50	700.30	0.20	0.03
1174	8.95	42	SLE F	11	4	66.50	12229.30	27.00	62.62	0.50	16.00	98.76	28.15	787.50	717.23	0.21	0.04
1213	9.61	29	SLE Q	11	4	0.00	11940.80	27.00	62.62	0.50	16.00	98.76	28.15	787.50	700.30	0.20	0.03
1221	9.61	42	SLE F	11	4	0.00	12229.30	27.00	62.62	0.50	16.00	98.76	28.15	787.50	717.23	0.21	0.04
1287	9.61	29	SLE Q	12	4	89.00	-1443.09	27.00	135.67	0.50	16.00	143.53	14.07	787.50	164.07	0.05	0.01
1297	9.61	28	SLE F	12	4	89.00	-1473.05	27.00	135.67	0.50	16.00	143.53	14.07	787.50	167.47	0.05	0.01
1372	10.05	29	SLE Q	12	4	44.50	3929.98	27.00	135.67	0.50	16.00	143.53	14.07	787.50	449.94	0.13	0.03
1388	10.05	42	SLE F	12	4	44.50	4102.35	27.00	135.67	0.50	16.00	143.53	14.07	787.50	469.67	0.14	0.03
1456	10.50	29	SLE Q	12	4	0.00	2866.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	328.12	0.10	0.02
1472	10.50	42	SLE F	12	4	0.00	3018.74	27.00	135.67	0.50	16.00	143.53	14.07	787.50	345.61	0.10	0.02
1514	10.50	29	SLE Q	13	4	89.00	-5777.32	27.00	135.67	0.50	16.00	143.53	14.07	787.50	661.43	0.19	0.05
1519	10.50	28	SLE F	13	4	89.00	-5904.43	27.00	135.67	0.50	16.00	143.53	14.07	787.50	675.99	0.20	0.05
1561	10.95	29	SLE Q	13	4	44.50	-6263.09	27.00	135.67	0.50	16.00	143.53	14.07	787.50	717.05	0.21	0.05
1566	10.95	28	SLE F	13	4	44.50	-6399.88	27.00	135.67	0.50	16.00	143.53	14.07	787.50	732.71	0.21	0.05
1606	11.39	29	SLE Q	13	4	0.00	-6263.09	27.00	135.67	0.50	16.00	143.53	14.07	787.50	717.05	0.21	0.05
1611	11.39	28	SLE F	13	4	0.00	-6399.88	27.00	135.67	0.50	16.00	143.53	14.07	787.50	732.71	0.21	0.05
1651	11.39	29	SLE Q	14	4	89.00	-7124.22	27.00	135.67	0.50	16.00	143.53	14.07	787.50	815.64	0.24	0.06
1656	11.39	28	SLE F	14	4	89.00	-7284.76	27.00	135.67	0.50	16.00	143.53	14.07	787.50	834.02	0.24	0.06

Relazione di calcolo

1696	11.82	29	SLE Q	14	4	46.14	-7166.47	27.00	135.67	0.50	16.00	143.53	14.07	787.50	814.76	0.24	0.06
1701	11.82	28	SLE F	14	4	46.14	-7327.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	833.04	0.24	0.06
1741	12.28	29	SLE Q	14	4	0.00	-7166.47	27.00	62.62	0.50	16.00	98.76	28.15	787.50	415.58	0.12	0.02
1746	12.28	28	SLE F	14	4	0.00	-7327.20	27.00	62.62	0.50	16.00	98.76	28.15	787.50	424.90	0.12	0.02
1786	12.28	29	SLE Q	15	4	89.00	-7211.26	27.00	62.62	0.50	16.00	98.76	28.15	787.50	418.17	0.12	0.02
1791	12.28	28	SLE F	15	4	89.00	-7373.77	27.00	62.62	0.50	16.00	98.76	28.15	787.50	427.60	0.12	0.02
1831	13.17	29	SLE Q	15	4	0.00	-6967.04	27.00	135.67	0.50	16.00	143.53	14.07	787.50	797.64	0.23	0.06
1836	13.17	28	SLE F	15	4	0.00	-7126.84	27.00	135.67	0.50	16.00	143.53	14.07	787.50	815.94	0.24	0.06
1883	13.17	29	SLE Q	16	4	89.00	-5069.21	27.00	135.67	0.50	16.00	143.53	14.07	787.50	580.36	0.17	0.04
1891	13.17	42	SLE F	16	4	89.00	-5198.35	27.00	135.67	0.50	16.00	143.53	14.07	787.50	595.15	0.17	0.04
1943	14.06	29	SLE Q	16	4	0.00	-4324.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	495.07	0.14	0.04
1959	14.06	42	SLE F	16	4	0.00	-4459.16	27.00	135.67	0.50	16.00	143.53	14.07	787.50	510.52	0.15	0.04
2014	14.06	29	SLE Q	17	4	89.00	6832.97	27.00	135.67	0.50	16.00	143.53	14.07	787.50	782.29	0.23	0.06
2019	14.06	28	SLE F	17	4	89.00	6955.77	27.00	135.67	0.50	16.00	143.53	14.07	787.50	796.35	0.23	0.06
2074	14.72	29	SLE Q	17	4	22.50	6832.97	27.00	135.67	0.50	16.00	143.53	14.07	787.50	782.29	0.23	0.06
2079	14.72	28	SLE F	17	4	22.50	6955.77	27.00	135.67	0.50	16.00	143.53	14.07	787.50	796.35	0.23	0.06
2119	15.18	29	SLE Q	18	4	75.17	7962.79	27.00	135.67	0.50	16.00	143.53	14.07	787.50	911.64	0.27	0.06
2124	15.18	28	SLE F	18	4	75.17	8124.57	27.00	135.67	0.50	16.00	143.53	14.07	787.50	930.17	0.27	0.07
2164	15.93	29	SLE Q	18	4	0.00	7946.46	27.00	135.67	0.50	16.00	143.53	14.07	787.50	903.44	0.26	0.06
2169	15.93	28	SLE F	18	4	0.00	8107.89	27.00	135.67	0.50	16.00	143.53	14.07	787.50	921.79	0.27	0.07
2209	15.93	29	SLE Q	19	4	97.67	6926.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	787.47	0.23	0.06
2214	15.93	28	SLE F	19	4	97.67	7092.23	27.00	135.67	0.50	16.00	143.53	14.07	787.50	806.32	0.23	0.06
2254	16.90	29	SLE Q	19	4	0.00	7700.69	27.00	62.62	0.50	16.00	98.76	28.15	787.50	451.63	0.13	0.02
2259	16.90	28	SLE F	19	4	0.00	7890.70	27.00	62.62	0.50	16.00	98.76	28.15	787.50	462.77	0.13	0.02
2299	16.90	29	SLE Q	20	4	97.67	15486.40	27.00	62.62	0.50	16.00	98.76	28.15	787.50	908.24	0.27	0.05
2304	16.90	28	SLE F	20	4	97.67	15874.90	27.00	62.62	0.50	16.00	98.76	28.15	787.50	931.03	0.27	0.05
2344	17.66	29	SLE Q	20	4	22.50	15528.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1777.82	0.55	0.13
2349	17.66	28	SLE F	20	4	22.50	15918.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1822.43	0.53	0.13
2393	18.11	29	SLE Q	21	4	74.88	11261.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1289.30	0.38	0.09
2401	18.11	42	SLE F	21	4	74.88	11673.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1336.52	0.39	0.09
2442	18.85	29	SLE Q	21	4	0.00	11261.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1289.30	0.38	0.09
2450	18.85	42	SLE F	21	4	0.00	11673.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1336.52	0.39	0.09
2514	18.85	29	SLE Q	22	4	97.37	-3915.68	27.00	135.67	0.50	16.00	143.53	14.07	787.50	448.30	0.13	0.03
2524	18.85	28	SLE F	22	4	97.37	-3978.73	27.00	135.67	0.50	16.00	143.53	14.07	787.50	455.52	0.13	0.03
2598	19.18	29	SLE Q	22	4	64.92	-5507.95	27.00	135.67	0.50	16.00	143.53	14.07	787.50	630.59	0.18	0.04
2608	19.18	28	SLE F	22	4	64.92	-5603.03	27.00	135.67	0.50	16.00	143.53	14.07	787.50	641.48	0.19	0.05
2678	19.83	29	SLE Q	22	4	0.00	-5507.95	27.00	62.62	0.50	16.00	98.76	28.15	787.50	319.40	0.09	0.02
2688	19.83	28	SLE F	22	4	0.00	-5603.03	27.00	62.62	0.50	16.00	98.76	28.15	787.50	324.91	0.09	0.02
2733	19.83	29	SLE Q	23	4	97.37	-9280.98	27.00	62.62	0.50	16.00	98.76	28.15	787.50	538.20	0.16	0.03
2738	19.83	28	SLE F	23	4	97.37	-9452.90	27.00	62.62	0.50	16.00	98.76	28.15	787.50	548.16	0.16	0.03
2778	20.15	29	SLE Q	23	4	64.92	-10256.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1174.28	0.34	0.08
2783	20.15	28	SLE F	23	4	64.92	-10446.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1195.95	0.35	0.08
2823	20.80	29	SLE Q	23	4	0.00	-10256.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1174.28	0.34	0.08
2828	20.80	28	SLE F	23	4	0.00	-10446.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1195.95	0.35	0.08
2868	20.80	29	SLE Q	24	4	97.38	-12719.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1456.24	0.42	0.10
2873	20.80	28	SLE F	24	4	97.38	-12955.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1483.21	0.43	0.11
2913	21.13	29	SLE Q	24	4	64.92	-13320.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1524.99	0.44	0.11
2918	21.13	28	SLE F	24	4	64.92	-13564.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1552.97	0.45	0.11
2958	21.77	29	SLE Q	24	4	0.00	-13320.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1524.99	0.44	0.11
2963	21.77	28	SLE F	24	4	0.00	-13564.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1552.97	0.45	0.11
3003	21.77	29	SLE Q	25	4	97.38	-14745.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1688.18	0.51	0.12
3008	21.77	28	SLE F	25	4	97.38	-15017.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1719.28	0.50	0.12
3048	22.10	29	SLE Q	25	4	64.92	-14976.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1714.64	0.52	0.13
3053	22.10	28	SLE F	25	4	64.92	-15250.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1745.99	0.51	0.12
3093	22.75	29	SLE Q	25	4	0.00	-14976.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1714.64	0.52	0.13
3098	22.75	28	SLE F	25	4	0.00	-15250.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1745.99	0.51	0.12
3138	22.75	29	SLE Q	26	4	97.37	-15369.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1759.67	0.54	0.13
3143	22.75	28	SLE F	26	4	97.37	-15650.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1791.83	0.52	0.13
3183	23.72	29	SLE Q	26	4	0.00	-15249.30	27.00	62.62	0.50	16.00	98.76	28.15	787.50	884.29	0.26	0.04
3188	23.72	28	SLE F	26	4	0.00	-15531.70	27.00	62.62	0.50	16.00	98.76	28.15	787.50	900.67	0.26	0.04
3228	23.72	29	SLE Q	27	4	97.37	-14562.50	27.00	62.62	0.50	16.00	98.76	28.15	787.50	844.47	0.25	0.04
3236	23.72	42	SLE F	27	4	97.37	-14851.40	27.00	62.62	0.50	16.00	98.76	28.15	787.50	861.22	0.25	0.04
3274	24.70	29	SLE Q	27	4	0.00	-13535.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1549.61	0.45	0.11
3282	24.70	42	SLE F	27	4	0.00	-13821.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1582.45	0.46	0.11
3325	24.70	29	SLE Q	28	4	97.38	-8976.83	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1027.74	0.30	0.07
3333	24.70	42	SLE F	28	4	97.38	-9222.86	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1055.91	0.31	0.08
3376	25.22	29	SLE Q	28	4	45.00	-8976.83	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1027.74	0.30	0.07
3384	25.22	42	SLE F	28	4	45.00	-9222.86	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1055.91	0.31	0.08

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
1 SLV	0.45	0.90	0.45	ø10/20 4 br.	15.71	0.90	6770.10	2.50	91968.40	131041.00	91968.40	13.585
34 SLU	0.90	1.90	0.99	ø10/20 4 br.	15.71	0.90	10114.70	2.50	91968.40	131041.00	91968.40	9.093
34 SLU	1.90	2.35	0.45	ø10/20 4 br.	15.71	0.90	11592.40	2.50	91968.40	131041.00	91968.40	7.933
5 SLV	2.79	3.25	0.45	ø10/20 4 br.	15.71	0.90	21453.80	2.50	91968.40	131041.00	91968.40	4.287
20 SLU	3.25	8.04	4.80	ø10/20 4 br.	15.71	0.90	18784.80	2.50	91968.40	131041.00	91968.40	4.896
20 SLU	8.04	8.49	0.45	ø10/20 4 br.	15.71	0.90	20086.10	2.50	91968.40	131041.00	91968.40	4.579
34 SLU	8.95	9.39	0.45	ø10/20 4 br.	15.71	0.90	20645.50	2.50	91968.40	131041.00	91968.40	4.455

Relazione di calcolo

34 SLU	9.39	14.28	4.88	ø10/20 4 br.	15.71	0.90	19302.70	2.50	91968.40	131041.00	91968.40	4.765
13 SLV	14.28	14.72	0.45	ø10/20 4 br.	15.71	0.90	19588.80	2.50	91968.40	131041.00	91968.40	4.695
5 SLV	15.18	15.62	0.45	ø10/20 4 br.	15.71	0.90	8230.44	2.50	91968.40	131041.00	91968.40	11.174
20 SLU	15.62	17.20	1.58	ø10/20 4 br.	15.71	0.90	16938.80	2.50	91968.40	131041.00	91968.40	5.429
20 SLU	17.20	17.66	0.45	ø10/20 4 br.	15.71	0.90	18658.50	2.50	91968.40	131041.00	91968.40	4.929
5 SLV	18.11	18.55	0.45	ø10/20 4 br.	15.71	0.90	23983.20	2.50	91968.40	131041.00	91968.40	3.835
34 SLU	18.55	24.77	6.21	ø10/20 4 br.	15.71	0.90	21173.50	2.50	91968.40	131041.00	91968.40	4.344
13 SLV	24.77	25.22	0.45	ø10/20 4 br.	15.71	0.90	18363.60	2.50	91968.40	131041.00	91968.40	5.008

Travata n. 462

Nodi: -8 -1138 -1139 -225 -1070 -1071 -1072 -1073 -1074 -1075 -1076 -1077 -10

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
4R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cm²>	Afe I <cm²>	AfEP S <cm²>	AfEP I <cm²>	My <daNm>	MRdy <daNm>	Sic.
0.30	32	SLU	1	30.00	14.07	14.07	14.07	14.07	-5345.12	-35450.10	6.632
0.86	32	SLU	1	85.67	14.07	14.07	14.07	14.07	-5345.12	-35450.10	6.632
0.86	32	SLU	2	0.00	14.07	14.07	14.07	14.07	-4090.86	-35450.10	8.666
1.71	20	SLU	2	85.67	14.07	14.07	14.07	14.07	3554.97	35450.10	9.972
1.71	34	SLU	3	0.00	14.07	14.07	14.07	14.07	15474.00	35450.10	2.291
2.35	34	SLU	3	63.17	14.07	14.07	14.07	14.07	15474.00	35450.10	2.291
2.79	20	SLU	4	22.50	14.07	14.07	14.07	14.07	16729.20	35450.10	2.119
3.50	20	SLU	4	93.33	14.07	14.07	14.07	14.07	16729.20	35450.10	2.119
3.50	32	SLU	5	0.00	14.07	14.07	14.07	14.07	-4132.12	-35450.10	8.579
3.81	32	SLU	5	31.11	14.07	14.07	14.07	14.07	-5474.68	-35450.10	6.475
4.44	32	SLU	5	93.33	28.15	28.15	28.15	28.15	-5474.68	-70123.70	12.809
4.44	32	SLU	6	0.00	28.15	28.15	28.15	28.15	-8443.92	-70123.70	8.305
4.75	32	SLU	6	31.11	14.07	14.07	14.07	14.07	-9112.79	-35450.10	3.890
5.37	32	SLU	6	93.33	14.07	14.07	14.07	14.07	-9112.79	-35450.10	3.890
5.37	34	SLU	7	0.00	14.07	14.07	14.07	14.07	-10968.60	-35450.10	3.232
5.68	34	SLU	7	31.11	14.07	14.07	14.07	14.07	-11420.50	-35450.10	3.104
6.30	34	SLU	7	93.33	14.07	14.07	14.07	14.07	-11420.50	-35450.10	3.104
6.30	34	SLU	8	0.00	14.07	14.07	14.07	14.07	-12753.30	-35450.10	2.780
6.61	20	SLU	8	31.11	14.07	14.07	14.07	14.07	-13092.50	-35450.10	2.708
7.24	20	SLU	8	93.33	14.07	14.07	14.07	14.07	-13092.50	-35450.10	2.708
7.24	20	SLU	9	0.00	14.07	14.07	14.07	14.07	-14183.60	-35450.10	2.499
7.55	20	SLU	9	31.11	14.07	14.07	14.07	14.07	-14394.10	-35450.10	2.463
8.17	20	SLU	9	93.33	28.15	14.07	28.15	14.07	-14394.10	-69959.00	4.860
8.17	20	SLU	10	0.00	28.15	14.07	28.15	14.07	-14539.20	-69959.00	4.812
8.48	20	SLU	10	31.11	14.07	14.07	14.07	14.07	-14539.20	-35450.10	2.438
9.10	20	SLU	10	93.33	14.07	14.07	14.07	14.07	-14397.70	-35450.10	2.462
9.10	20	SLU	11	0.00	14.07	14.07	14.07	14.07	-13356.60	-35450.10	2.654
10.04	20	SLU	11	93.33	14.07	14.07	14.07	14.07	-12382.20	-35450.10	2.863
10.04	20	SLU	12	0.00	14.07	14.07	14.07	14.07	-7081.31	-35450.10	5.006
10.52	20	SLU	12	48.33	14.07	14.07	14.07	14.07	-7081.31	-35450.10	5.006

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cm²>	Afe I <cm²>	AfEP S <cm²>	AfEP I <cm²>	My <daNm>	M'ydy <daNm>	Sic.
0.30	9	SLV(E)	1	30.00	14.07	14.07	14.07	14.07	-5710.33	-34082.90	5.969
0.86	9	SLV(E)	1	85.67	14.07	14.07	14.07	14.07	-5710.33	-34082.90	5.969
0.86	9	SLV(E)	2	0.00	14.07	14.07	14.07	14.07	-4791.96	-34082.90	7.113
1.71	9	SLV(E)	2	85.67	14.07	14.07	14.07	14.07	-4176.26	-34082.90	8.161
1.71	5	SLV(E)	3	0.00	14.07	14.07	14.07	14.07	12929.90	34082.90	2.636
2.35	5	SLV(E)	3	63.17	14.07	14.07	14.07	14.07	12929.90	34082.90	2.636
2.79	1	SLV(E)	4	22.50	14.07	14.07	14.07	14.07	22945.60	34082.90	1.485
3.50	1	SLV(E)	4	93.33	14.07	14.07	14.07	14.07	22945.60	34082.90	1.485
3.50	1	SLV(E)	5	0.00	14.07	14.07	14.07	14.07	8663.53	34082.90	3.934
3.81	1	SLV(E)	5	31.11	14.07	14.07	14.07	14.07	8663.53	34082.90	3.934
4.44	1	SLV(E)	5	93.33	28.15	28.15	28.15	28.15	7015.97	67205.10	9.579
4.44	9	SLV(E)	6	0.00	28.15	28.15	28.15	28.15	-7479.74	-67205.10	8.985
4.75	9	SLV(E)	6	31.11	14.07	14.07	14.07	14.07	-7647.66	-34082.90	4.457
5.37	9	SLV(E)	6	93.33	14.07	14.07	14.07	14.07	-7647.66	-34082.90	4.457
5.37	5	SLV(E)	7	0.00	14.07	14.07	14.07	14.07	-7997.14	-34082.90	4.262
5.68	1	SLV(E)	7	31.11	14.07	14.07	14.07	14.07	-8632.40	-34082.90	3.948
6.30	1	SLV(E)	7	93.33	14.07	14.07	14.07	14.07	-8632.40	-34082.90	3.948
6.30	1	SLV(E)	8	0.00	14.07	14.07	14.07	14.07	-11306.60	-34082.90	3.014
6.61	1	SLV(E)	8	31.11	14.07	14.07	14.07	14.07	-11918.00	-34082.90	2.860
7.24	1	SLV(E)	8	93.33	14.07	14.07	14.07	14.07	-11918.00	-34082.90	2.860
7.24	1	SLV(E)	9	0.00	14.07	14.07	14.07	14.07	-14281.70	-34082.90	2.386
7.55	1	SLV(E)	9	31.11	14.07	14.07	14.07	14.07	-14791.70	-34082.90	2.304
8.17	1	SLV(E)	9	93.33	28.15	14.07	28.15	14.07	-14791.70	-66258.60	4.479
8.17	1	SLV(E)	10	0.00	28.15	14.07	28.15	14.07	-16038.80	-66258.60	4.131
8.48	1	SLV(E)	10	31.11	14.07	14.07	14.07	14.07	-16229.90	-34082.90	2.100

Relazione di calcolo

9.101	1	SLV(E)	10	93.33	14.07	14.07	14.07	14.07	-16229.90	-34082.90	2.100
9.101	1	SLV(E)	11	0.00	14.07	14.07	14.07	14.07	-16234.10	-34082.90	2.099
10.041	1	SLV(E)	11	93.33	14.07	14.07	14.07	14.07	-15931.40	-34082.90	2.139
10.041	1	SLV(E)	12	0.00	14.07	14.07	14.07	14.07	-12839.60	-34082.90	2.655
10.521	1	SLV(E)	12	48.33	14.07	14.07	14.07	14.07	-12839.60	-34082.90	2.655

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.30	37	SLE R	1	30.00	14.07	14.07	-3732.22	427.30	-85.73	7.62
0.30	29	SLE Q	1	30.00	14.07	14.07	-1952.15	223.50	-44.84	3.98
0.86	37	SLE R	1	85.67	14.07	14.07	-3732.22	427.30	-85.73	7.62
0.86	29	SLE Q	1	85.67	14.07	14.07	-1952.15	223.50	-44.84	3.98
0.86	37	SLE R	2	0.00	14.07	14.07	-2897.64	331.75	-66.56	5.91
0.86	29	SLE Q	2	0.00	14.07	14.07	-1590.73	182.12	-36.54	3.25
1.71	24	SLE R	2	85.67	14.07	14.07	2499.00	-57.40	286.11	5.10
1.71	29	SLE Q	2	85.67	14.07	14.07	2059.91	-47.32	235.84	4.20
1.71	39	SLE R	3	0.00	14.07	14.07	11061.50	-254.09	1266.40	22.57
1.71	29	SLE Q	3	0.00	14.07	14.07	9240.74	-212.26	1057.95	18.86
2.35	39	SLE R	3	63.17	14.07	14.07	11061.50	-254.09	1266.40	22.57
2.35	29	SLE Q	3	63.17	14.07	14.07	9240.74	-212.26	1057.95	18.86
2.79	24	SLE R	4	22.50	14.07	14.07	12017.20	-276.04	1375.83	24.52
2.79	29	SLE Q	4	22.50	14.07	14.07	10480.50	-240.74	1199.89	21.39
3.50	24	SLE R	4	93.33	14.07	14.07	12017.20	-276.04	1375.83	24.52
3.50	29	SLE Q	4	93.33	14.07	14.07	10480.50	-240.74	1199.89	21.39
3.50	37	SLE R	5	0.00	14.07	14.07	-2953.89	338.19	-67.85	6.03
3.50	29	SLE Q	5	0.00	14.07	14.07	2008.28	-46.13	229.92	4.10
3.81	37	SLE R	5	31.11	14.07	14.07	-3935.72	450.59	-90.41	8.03
3.81	29	SLE Q	5	31.11	14.07	14.07	-2822.34	323.12	-64.83	5.76
4.44	37	SLE R	5	93.33	28.15	28.15	-3935.72	228.23	-67.68	5.61
4.44	29	SLE Q	5	93.33	28.15	28.15	-2822.34	163.66	-48.53	4.02
4.44	37	SLE R	6	0.00	28.15	28.15	-6106.87	354.13	-105.01	8.70
4.44	29	SLE Q	6	0.00	28.15	28.15	-5104.92	296.03	-87.78	7.27
4.75	37	SLE R	6	31.11	14.07	14.07	-6601.33	755.77	-151.64	13.47
4.75	29	SLE Q	6	31.11	14.07	14.07	-5625.74	644.08	-129.23	11.48
5.37	37	SLE R	6	93.33	14.07	14.07	-6601.33	755.77	-151.64	13.47
5.37	29	SLE Q	6	93.33	14.07	14.07	-5625.74	644.08	-129.23	11.48
5.37	39	SLE R	7	0.00	14.07	14.07	-7957.66	911.06	-182.79	16.24
5.37	29	SLE Q	7	0.00	14.07	14.07	-7047.63	806.87	-161.89	14.38
5.68	39	SLE R	7	31.11	14.07	14.07	-8293.24	949.48	-190.50	16.92
5.68	29	SLE Q	7	31.11	14.07	14.07	-7397.77	846.96	-169.93	15.09
6.30	39	SLE R	7	93.33	14.07	14.07	-8293.24	949.48	-190.50	16.92
6.30	29	SLE Q	7	93.33	14.07	14.07	-7397.77	846.96	-169.93	15.09
6.30	39	SLE R	8	0.00	14.07	14.07	-9275.54	1061.94	-213.06	18.93
6.30	29	SLE Q	8	0.00	14.07	14.07	-8513.06	974.64	-195.55	17.37
6.61	24	SLE R	8	31.11	14.07	14.07	-9529.87	1091.06	-218.91	19.45
6.61	29	SLE Q	8	31.11	14.07	14.07	-8788.95	1006.23	-201.89	17.93
7.24	24	SLE R	8	93.33	14.07	14.07	-9529.87	1091.06	-218.91	19.45
7.24	29	SLE Q	8	93.33	14.07	14.07	-8788.95	1006.23	-201.89	17.93
7.24	24	SLE R	9	0.00	14.07	14.07	-10320.80	1181.61	-237.07	21.06
7.24	29	SLE Q	9	0.00	14.07	14.07	-9558.99	1094.39	-219.57	19.50
7.55	24	SLE R	9	31.11	14.07	14.07	-10479.60	1199.79	-240.72	21.38
7.55	29	SLE Q	9	31.11	14.07	14.07	-9723.90	1113.27	-223.36	19.84
8.17	24	SLE R	9	93.33	28.15	14.07	-10479.60	614.61	-204.50	16.67
8.17	29	SLE Q	9	93.33	28.15	14.07	-9723.90	570.29	-189.75	15.47
8.17	24	SLE R	10	0.00	28.15	14.07	-10585.10	620.79	-206.56	16.84
8.17	29	SLE Q	10	0.00	28.15	14.07	-9830.36	576.53	-191.83	15.63
8.48	24	SLE R	10	31.11	14.07	14.07	-10585.10	1211.87	-243.15	21.60
8.48	29	SLE Q	10	31.11	14.07	14.07	-9830.36	1125.46	-225.81	20.06
9.10	24	SLE R	10	93.33	14.07	14.07	-10478.00	1199.60	-240.68	21.38
9.10	29	SLE Q	10	93.33	14.07	14.07	-9735.29	1114.58	-223.62	19.86
9.10	24	SLE R	11	0.00	14.07	14.07	-9728.68	1113.82	-223.47	19.85
9.10	29	SLE Q	11	0.00	14.07	14.07	-9105.73	1042.50	-209.16	18.58
10.04	24	SLE R	11	93.33	14.07	14.07	-9017.37	1032.38	-207.13	18.40
10.04	29	SLE Q	11	93.33	14.07	14.07	-8453.70	967.85	-194.19	17.25
10.04	24	SLE R	12	0.00	14.07	14.07	-5172.02	592.13	-118.80	10.55
10.04	29	SLE Q	12	0.00	14.07	14.07	-4937.77	565.32	-113.42	10.08
10.52	24	SLE R	12	48.33	14.07	14.07	-5172.02	592.13	-118.80	10.55
10.52	29	SLE Q	12	48.33	14.07	14.07	-4937.77	565.32	-113.42	10.08

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cmq>	ϵ_{sm}	Wk <mm>
36	0.30	29	SLE Q	1	4	30.00	-1952.15	27.00	135.67	0.50	16.00	143.53	14.07	787.50	223.50	0.07	0.02
44	0.30	42	SLE F	1	4	30.00	-2294.69	27.00	135.67	0.50	16.00	143.53	14.07	787.50	262.71	0.08	0.02
82	0.86	29	SLE Q	1	4	85.67	-1952.15	27.00	135.67	0.50	16.00	143.53	14.07	787.50	223.50	0.07	0.02
90	0.86	42	SLE F	1	4	85.67	-2294.69	27.00	135.67	0.50	16.00	143.53	14.07	787.50	262.71	0.08	0.02
155	0.86	29	SLE Q	2	4	0.00	-1590.73	27.00	135.67	0.50	16.00	143.53	14.07	787.50	182.12	0.05	0.01

Relazione di calcolo

171	0.86	42	SLE F	2	4	0.00	-1843.03	27.00	135.67	0.50	16.00	143.53	14.07	787.50	211.00	0.06	0.01
238	1.71	29	SLE Q	2	4	85.67	2059.91	27.00	135.67	0.50	16.00	143.53	14.07	787.50	235.84	0.07	0.02
248	1.71	28	SLE F	2	4	85.67	2172.02	27.00	135.67	0.50	16.00	143.53	14.07	787.50	248.67	0.07	0.02
294	1.71	29	SLE Q	3	4	0.00	9240.74	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1057.95	0.31	0.08
299	1.71	28	SLE F	3	4	0.00	9545.77	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1092.88	0.32	0.08
339	2.35	29	SLE Q	3	4	63.17	9240.74	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1057.95	0.31	0.08
344	2.35	28	SLE F	3	4	63.17	9545.77	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1092.88	0.32	0.08
390	2.79	29	SLE Q	4	4	22.50	10480.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1199.89	0.35	0.09
395	2.79	28	SLE F	4	4	22.50	10794.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1235.81	0.36	0.09
441	3.50	29	SLE Q	4	4	93.33	10480.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1199.89	0.35	0.09
446	3.50	28	SLE F	4	4	93.33	10794.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1235.81	0.36	0.09
509	3.50	29	SLE Q	5	4	0.00	2008.28	27.00	135.67	0.50	16.00	143.53	14.07	787.50	229.92	0.07	0.02
519	3.50	28	SLE F	5	4	0.00	2104.61	27.00	135.67	0.50	16.00	143.53	14.07	787.50	240.95	0.07	0.02
589	3.81	29	SLE Q	5	4	31.11	-2822.34	27.00	135.67	0.50	16.00	143.53	14.07	787.50	323.12	0.09	0.02
605	3.81	42	SLE F	5	4	31.11	-3033.64	27.00	135.67	0.50	16.00	143.53	14.07	787.50	347.32	0.10	0.02
670	4.44	29	SLE Q	5	4	93.33	-2822.34	27.00	62.62	0.50	16.00	98.76	28.15	787.50	163.66	0.05	0.01
686	4.44	42	SLE F	5	4	93.33	-3033.64	27.00	62.62	0.50	16.00	98.76	28.15	787.50	175.92	0.05	0.01
727	4.44	29	SLE Q	6	4	0.00	-5104.92	27.00	62.62	0.50	16.00	98.76	28.15	787.50	296.03	0.09	0.01
735	4.44	42	SLE F	6	4	0.00	-5269.51	27.00	62.62	0.50	16.00	98.76	28.15	787.50	305.57	0.09	0.01
773	4.75	29	SLE Q	6	4	31.11	-5625.74	27.00	135.67	0.50	16.00	143.53	14.07	787.50	644.08	0.19	0.05
781	4.75	42	SLE F	6	4	31.11	-5780.53	27.00	135.67	0.50	16.00	143.53	14.07	787.50	661.80	0.19	0.05
818	5.37	29	SLE Q	6	4	93.33	-5625.74	27.00	135.67	0.50	16.00	143.53	14.07	787.50	644.08	0.19	0.05
826	5.37	42	SLE F	6	4	93.33	-5780.53	27.00	135.67	0.50	16.00	143.53	14.07	787.50	661.80	0.19	0.05
863	5.37	29	SLE Q	7	4	0.00	-7047.63	27.00	135.67	0.50	16.00	143.53	14.07	787.50	806.87	0.24	0.06
868	5.37	28	SLE F	7	4	0.00	-7170.06	27.00	135.67	0.50	16.00	143.53	14.07	787.50	820.89	0.24	0.06
908	5.68	29	SLE Q	7	4	31.11	-7397.77	27.00	135.67	0.50	16.00	143.53	14.07	787.50	846.96	0.25	0.06
913	5.68	28	SLE F	7	4	31.11	-7524.84	27.00	135.67	0.50	16.00	143.53	14.07	787.50	861.50	0.25	0.06
953	6.30	29	SLE Q	7	4	93.33	-7397.77	27.00	135.67	0.50	16.00	143.53	14.07	787.50	846.96	0.25	0.06
958	6.30	28	SLE F	7	4	93.33	-7524.84	27.00	135.67	0.50	16.00	143.53	14.07	787.50	861.50	0.25	0.06
998	6.30	29	SLE Q	8	4	0.00	-8513.06	27.00	135.67	0.50	16.00	143.53	14.07	787.50	974.64	0.28	0.07
1003	6.30	28	SLE F	8	4	0.00	-8658.42	27.00	135.67	0.50	16.00	143.53	14.07	787.50	991.29	0.29	0.07
1043	6.61	29	SLE Q	8	4	31.11	-8788.95	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1006.23	0.29	0.07
1048	6.61	28	SLE F	8	4	31.11	-8936.34	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1023.10	0.30	0.07
1088	7.24	29	SLE Q	8	4	93.33	-8788.95	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1006.23	0.29	0.07
1093	7.24	28	SLE F	8	4	93.33	-8936.34	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1023.10	0.30	0.07
1133	7.24	29	SLE Q	9	4	0.00	-9558.99	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1094.39	0.32	0.08
1138	7.24	28	SLE F	9	4	0.00	-9716.89	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1112.47	0.32	0.08
1178	7.55	29	SLE Q	9	4	31.11	-9723.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1113.27	0.32	0.08
1183	7.55	28	SLE F	9	4	31.11	-9881.63	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1131.33	0.33	0.08
1223	8.17	29	SLE Q	9	4	93.33	-9723.90	27.00	62.62	0.50	16.00	98.76	28.15	787.50	570.29	0.17	0.03
1228	8.17	28	SLE F	9	4	93.33	-9881.63	27.00	62.62	0.50	16.00	98.76	28.15	787.50	579.54	0.17	0.03
1268	8.17	29	SLE Q	10	4	0.00	-9830.36	27.00	62.62	0.50	16.00	98.76	28.15	787.50	576.53	0.17	0.03
1273	8.17	28	SLE F	10	4	0.00	-9989.46	27.00	62.62	0.50	16.00	98.76	28.15	787.50	585.86	0.17	0.03
1313	8.48	29	SLE Q	10	4	31.11	-9830.36	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1125.46	0.33	0.08
1318	8.48	28	SLE F	10	4	31.11	-9989.46	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1143.67	0.33	0.08
1358	9.10	29	SLE Q	10	4	93.33	-9735.29	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1114.58	0.32	0.08
1363	9.10	28	SLE F	10	4	93.33	-9894.34	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1132.78	0.33	0.08
1406	9.10	29	SLE Q	11	4	0.00	-9105.73	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1042.50	0.30	0.07
1411	9.10	28	SLE F	11	4	0.00	-9251.25	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1059.16	0.31	0.08
1455	10.04	29	SLE Q	11	4	93.33	-8453.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	967.85	0.28	0.07
1460	10.04	28	SLE F	11	4	93.33	-8590.25	27.00	135.67	0.50	16.00	143.53	14.07	787.50	983.48	0.29	0.07
1513	10.04	29	SLE Q	12	4	0.00	-4937.77	27.00	135.67	0.50	16.00	143.53	14.07	787.50	565.32	0.16	0.04
1518	10.04	28	SLE F	12	4	0.00	-5015.88	27.00	135.67	0.50	16.00	143.53	14.07	787.50	574.26	0.17	0.04
1571	10.52	29	SLE Q	12	4	48.33	-4937.77	27.00	135.67	0.50	16.00	143.53	14.07	787.50	565.32	0.16	0.04
1576	10.52	28	SLE F	12	4	48.33	-5015.88	27.00	135.67	0.50	16.00	143.53	14.07	787.50	574.26	0.17	0.04

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	Afe St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
32 SLU	0.30	0.75	0.45	ø10/20 4 br.	15.71	0.90	3435.22	2.50	91968.40	131041.00	91968.40	26.772
34 SLU	0.75	1.90	1.14	ø10/20 4 br.	15.71	0.90	20140.60	2.50	91968.40	131041.00	91968.40	4.566
34 SLU	1.90	2.35	0.45	ø10/20 4 br.	15.71	0.90	21052.50	2.50	91968.40	131041.00	91968.40	4.369
1 SLV	2.79	3.25	0.45	ø10/20 4 br.	15.71	0.90	21760.80	2.50	91968.40	131041.00	91968.40	4.226
1 SLV	3.25	10.07	6.82	ø10/20 4 br.	15.71	0.90	19293.10	2.50	91968.40	131041.00	91968.40	4.767
9 SLV	10.07	10.52	0.45	ø10/20 4 br.	15.71	0.90	15237.00	2.50	91968.40	131041.00	91968.40	6.036

Travata n. 464

Nodi: -19 -982 -983 -18 -1002 -1003 -1004 -1005 -1006 -1007 -1008 -1009 -17

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
4	R	90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cmq>	Afe I <cmq>	Afep S <cmq>	Afep I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.30	32	SLU	1	30.00	14.07	14.07	14.07	14.07	-5948.36	-35450.10	5.960
0.86	32	SLU	1	85.67	14.07	14.07	14.07	14.07	-5948.36	-35450.10	5.960

Relazione di calcolo

0.86	20	SLU	2	0.00	14.07	14.07	14.07	14.07	5532.05	35450.10	6.408
1.71	34	SLU	2	85.67	14.07	14.07	14.07	14.07	6733.24	35450.10	5.265
1.71	34	SLU	3	0.00	14.07	14.07	14.07	14.07	22796.90	35450.10	1.555
2.35	34	SLU	3	63.17	14.07	14.07	14.07	14.07	22796.90	35450.10	1.555
2.79	20	SLU	4	22.50	14.07	14.07	14.07	14.07	23685.80	35450.10	1.497
3.50	20	SLU	4	93.33	14.07	14.07	14.07	14.07	23685.80	35450.10	1.497
3.50	20	SLU	5	0.00	14.07	14.07	14.07	14.07	6359.64	35450.10	5.574
3.81	20	SLU	5	31.11	14.07	14.07	14.07	14.07	6359.64	35450.10	5.574
4.44	20	SLU	5	93.33	28.15	28.15	28.15	28.15	4442.00	70123.70	15.787
4.44	34	SLU	6	0.00	28.15	28.15	28.15	28.15	-7964.94	-70123.70	8.804
4.75	34	SLU	6	31.11	14.07	28.15	14.07	28.15	-8927.92	-35445.00	3.970
5.37	34	SLU	6	93.33	14.07	14.07	14.07	14.07	-8927.92	-35450.10	3.971
5.37	34	SLU	7	0.00	14.07	14.07	14.07	14.07	-11288.80	-35450.10	3.140
5.68	34	SLU	7	31.11	14.07	14.07	14.07	14.07	-11851.70	-35450.10	2.991
6.30	34	SLU	7	93.33	14.07	14.07	14.07	14.07	-11851.70	-35450.10	2.991
6.30	34	SLU	8	0.00	14.07	14.07	14.07	14.07	-13493.50	-35450.10	2.627
6.61	34	SLU	8	31.11	14.07	14.07	14.07	14.07	-13880.30	-35450.10	2.554
7.24	34	SLU	8	93.33	14.07	14.07	14.07	14.07	-13880.30	-35450.10	2.554
7.24	34	SLU	9	0.00	14.07	14.07	14.07	14.07	-14869.50	-35450.10	2.384
7.55	34	SLU	9	31.11	14.07	14.07	14.07	14.07	-15050.00	-35450.10	2.355
8.17	34	SLU	9	93.33	28.15	28.15	28.15	28.15	-15050.00	-70123.70	4.659
8.17	34	SLU	10	0.00	28.15	28.15	28.15	28.15	-15249.50	-70123.70	4.598
9.10	20	SLU	10	93.33	14.07	28.15	14.07	28.15	-15083.70	-35445.00	2.350
9.10	20	SLU	11	0.00	14.07	28.15	14.07	28.15	-14147.60	-35445.00	2.505
10.04	20	SLU	11	93.33	14.07	14.07	14.07	14.07	-13112.90	-35450.10	2.703
10.04	20	SLU	12	0.00	14.07	14.07	14.07	14.07	-7520.00	-35450.10	4.714
10.52	20	SLU	12	48.33	14.07	14.07	14.07	14.07	-7520.00	-35450.10	4.714

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.30	9	SLV (E)	1	30.00	14.07	14.07	14.07	14.07	-5622.67	-34082.90	6.062
0.86	9	SLV (E)	1	85.67	14.07	14.07	14.07	14.07	-5622.67	-34082.90	6.062
0.86	9	SLV (E)	2	0.00	14.07	14.07	14.07	14.07	3923.31	34082.90	8.687
1.71	9	SLV (E)	2	85.67	14.07	14.07	14.07	14.07	4901.27	34082.90	6.954
1.71	9	SLV (E)	3	0.00	14.07	14.07	14.07	14.07	17670.70	34082.90	1.929
2.35	9	SLV (E)	3	63.17	14.07	14.07	14.07	14.07	17670.70	34082.90	1.929
2.79	1	SLV (E)	4	22.50	14.07	14.07	14.07	14.07	23182.20	34082.90	1.470
3.50	1	SLV (E)	4	93.33	14.07	14.07	14.07	14.07	23182.20	34082.90	1.470
3.50	1	SLV (E)	5	0.00	14.07	14.07	14.07	14.07	7758.14	34082.90	4.393
3.81	1	SLV (E)	5	31.11	14.07	14.07	14.07	14.07	7758.14	34082.90	4.393
4.44	1	SLV (E)	5	93.33	28.15	28.15	28.15	28.15	6077.19	67205.10	11.059
4.44	9	SLV (E)	6	0.00	28.15	28.15	28.15	28.15	-6258.78	-67205.10	10.738
4.75	9	SLV (E)	6	31.11	14.07	28.15	14.07	28.15	-6703.49	-34362.70	5.126
5.37	9	SLV (E)	6	93.33	14.07	14.07	14.07	14.07	-6703.49	-34082.90	5.084
5.37	1	SLV (E)	7	0.00	14.07	14.07	14.07	14.07	-7918.27	-34082.90	4.304
5.68	1	SLV (E)	7	31.11	14.07	14.07	14.07	14.07	-8517.90	-34082.90	4.001
6.30	1	SLV (E)	7	93.33	14.07	14.07	14.07	14.07	-8517.90	-34082.90	4.001
6.30	1	SLV (E)	8	0.00	14.07	14.07	14.07	14.07	-10567.40	-34082.90	3.225
6.61	1	SLV (E)	8	31.11	14.07	14.07	14.07	14.07	-11073.60	-34082.90	3.078
7.24	1	SLV (E)	8	93.33	14.07	14.07	14.07	14.07	-11073.60	-34082.90	3.078
7.24	1	SLV (E)	9	0.00	14.07	14.07	14.07	14.07	-13017.20	-34082.90	2.618
7.55	1	SLV (E)	9	31.11	14.07	14.07	14.07	14.07	-13463.60	-34082.90	2.531
8.17	1	SLV (E)	9	93.33	28.15	28.15	28.15	28.15	-13463.60	-67205.10	4.992
8.17	1	SLV (E)	10	0.00	28.15	28.15	28.15	28.15	-14632.20	-67205.10	4.593
9.10	1	SLV (E)	10	93.33	14.07	28.15	14.07	28.15	-14836.90	-34362.70	2.316
9.10	1	SLV (E)	11	0.00	14.07	28.15	14.07	28.15	-14885.90	-34362.70	2.308
10.04	1	SLV (E)	11	93.33	14.07	14.07	14.07	14.07	-14597.40	-34082.90	2.335
10.04	1	SLV (E)	12	0.00	14.07	14.07	14.07	14.07	-11777.90	-34082.90	2.894
10.52	1	SLV (E)	12	48.33	14.07	14.07	14.07	14.07	-11777.90	-34082.90	2.894

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.30	37	SLE R	1	30.00	14.07	14.07	-4236.75	485.06	-97.32	8.64
0.30	29	SLE Q	1	30.00	14.07	14.07	-2896.18	331.58	-66.53	5.91
0.86	37	SLE R	1	85.67	14.07	14.07	-4236.75	485.06	-97.32	8.64
0.86	29	SLE Q	1	85.67	14.07	14.07	-2896.18	331.58	-66.53	5.91
0.86	24	SLE R	2	0.00	14.07	14.07	3907.83	-89.76	447.40	7.97
0.86	29	SLE Q	2	0.00	14.07	14.07	3153.83	-72.44	361.08	6.44
1.71	39	SLE R	2	85.67	14.07	14.07	4763.08	-109.41	545.32	9.72
1.71	29	SLE Q	2	85.67	14.07	14.07	3844.51	-88.31	440.15	7.84
1.71	39	SLE R	3	0.00	14.07	14.07	16257.90	-373.45	1861.33	33.17
1.71	29	SLE Q	3	0.00	14.07	14.07	13290.30	-305.29	1521.58	27.12
2.35	39	SLE R	3	63.17	14.07	14.07	16257.90	-373.45	1861.33	33.17
2.35	29	SLE Q	3	63.17	14.07	14.07	13290.30	-305.29	1521.58	27.12
2.79	24	SLE R	4	22.50	14.07	14.07	16954.40	-389.45	1941.07	34.59
2.79	29	SLE Q	4	22.50	14.07	14.07	14467.60	-332.33	1656.37	29.52

Relazione di calcolo

3.50	24	SLE R	4	93.33	14.07	14.07	16954.40	-389.45	1941.07	34.59
3.50	29	SLE Q	4	93.33	14.07	14.07	14467.60	-332.33	1656.37	29.52
3.50	24	SLE R	5	0.00	14.07	14.07	4509.06	-103.58	516.23	9.20
3.50	29	SLE Q	5	0.00	14.07	14.07	3685.33	-84.65	421.93	7.52
3.81	24	SLE R	5	31.11	14.07	14.07	4509.06	-103.58	516.23	9.20
3.81	29	SLE Q	5	31.11	14.07	14.07	3685.33	-84.65	421.93	7.52
4.44	24	SLE R	5	93.33	28.15	28.15	3138.57	-53.97	182.00	4.47
4.44	29	SLE Q	5	93.33	28.15	28.15	2509.66	-43.16	145.53	3.58
4.44	39	SLE R	6	0.00	28.15	28.15	-5733.86	332.50	-98.60	8.17
4.44	29	SLE Q	6	0.00	28.15	28.15	-4892.72	283.72	-84.13	6.97
4.75	39	SLE R	6	31.11	14.07	28.15	-6429.28	730.95	-126.92	11.64
4.75	29	SLE Q	6	31.11	14.07	28.15	-5505.92	625.98	-108.69	9.97
5.37	39	SLE R	6	93.33	14.07	14.07	-6429.28	736.08	-147.68	13.12
5.37	29	SLE Q	6	93.33	14.07	14.07	-5505.92	630.36	-126.47	11.23
5.37	39	SLE R	7	0.00	14.07	14.07	-8117.56	929.36	-186.46	16.56
5.37	29	SLE Q	7	0.00	14.07	14.07	-7024.41	804.21	-161.35	14.33
5.68	39	SLE R	7	31.11	14.07	14.07	-8527.56	976.30	-195.88	17.40
5.68	29	SLE Q	7	31.11	14.07	14.07	-7407.20	848.04	-170.15	15.11
6.30	39	SLE R	7	93.33	14.07	14.07	-8527.56	976.30	-195.88	17.40
6.30	29	SLE Q	7	93.33	14.07	14.07	-7407.20	848.04	-170.15	15.11
6.30	39	SLE R	8	0.00	14.07	14.07	-9709.87	1111.66	-223.04	19.81
6.30	29	SLE Q	8	0.00	14.07	14.07	-8569.34	981.09	-196.84	17.49
6.61	39	SLE R	8	31.11	14.07	14.07	-9995.85	1144.41	-229.61	20.40
6.61	29	SLE Q	8	31.11	14.07	14.07	-8863.22	1014.73	-203.59	18.09
7.24	39	SLE R	8	93.33	14.07	14.07	-9995.85	1144.41	-229.61	20.40
7.24	29	SLE Q	8	93.33	14.07	14.07	-8863.22	1014.73	-203.59	18.09
7.24	39	SLE R	9	0.00	14.07	14.07	-10720.60	1227.38	-246.26	21.88
7.24	29	SLE Q	9	0.00	14.07	14.07	-9718.02	1112.60	-223.23	19.83
7.55	39	SLE R	9	31.11	14.07	14.07	-10861.00	1243.46	-249.48	22.16
7.55	29	SLE Q	9	31.11	14.07	14.07	-9905.54	1134.07	-227.53	20.21
8.17	39	SLE R	9	93.33	28.15	28.15	-10861.00	629.82	-186.76	15.48
8.17	29	SLE Q	9	93.33	28.15	28.15	-9905.54	574.41	-170.33	14.11
8.17	39	SLE R	10	0.00	28.15	28.15	-11005.50	638.20	-189.25	15.68
8.17	29	SLE Q	10	0.00	28.15	28.15	-10062.50	583.51	-173.03	14.34
9.10	24	SLE R	10	93.33	14.07	28.15	-10884.60	1237.48	-214.88	19.70
9.10	29	SLE Q	10	93.33	14.07	28.15	-9980.12	1134.65	-197.02	18.07
9.10	24	SLE R	11	0.00	14.07	28.15	-10225.30	1162.53	-201.86	18.51
9.10	29	SLE Q	11	0.00	14.07	28.15	-9481.59	1077.97	-187.18	17.16
10.04	24	SLE R	11	93.33	14.07	14.07	-9479.50	1085.29	-217.75	19.34
10.04	29	SLE Q	11	93.33	14.07	14.07	-8822.58	1010.08	-202.66	18.00
10.04	24	SLE R	12	0.00	14.07	14.07	-5465.43	625.73	-125.54	11.15
10.04	29	SLE Q	12	0.00	14.07	14.07	-5251.18	601.20	-120.62	10.71
10.52	24	SLE R	12	48.33	14.07	14.07	-5465.43	625.73	-125.54	11.15
10.52	29	SLE Q	12	48.33	14.07	14.07	-5251.18	601.20	-120.62	10.71

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
35	0.30	29	SLE Q	1	4	30.00	-2896.18	27.00	135.67	0.50	16.00	143.53	14.07	787.50	331.58	0.10	0.02
43	0.30	42	SLE F	1	4	30.00	-3143.45	27.00	135.67	0.50	16.00	143.53	14.07	787.50	359.89	0.10	0.03
80	0.86	29	SLE Q	1	4	85.67	-2896.18	27.00	135.67	0.50	16.00	143.53	14.07	787.50	331.58	0.10	0.02
88	0.86	42	SLE F	1	4	85.67	-3143.45	27.00	135.67	0.50	16.00	143.53	14.07	787.50	359.89	0.10	0.03
159	0.86	29	SLE Q	2	4	0.00	3153.83	27.00	135.67	0.50	16.00	143.53	14.07	787.50	361.08	0.11	0.03
169	0.86	28	SLE F	2	4	0.00	3297.39	27.00	135.67	0.50	16.00	143.53	14.07	787.50	377.51	0.11	0.03
246	1.71	29	SLE Q	2	4	85.67	3844.51	27.00	135.67	0.50	16.00	143.53	14.07	787.50	440.15	0.13	0.03
256	1.71	28	SLE F	2	4	85.67	4010.22	27.00	135.67	0.50	16.00	143.53	14.07	787.50	459.12	0.13	0.03
302	1.71	29	SLE Q	3	4	0.00	13290.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1521.58	0.44	0.11
307	1.71	28	SLE F	3	4	0.00	13722.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1571.08	0.46	0.11
347	2.35	29	SLE Q	3	4	63.17	13290.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1521.58	0.44	0.11
352	2.35	28	SLE F	3	4	63.17	13722.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1571.08	0.46	0.11
392	2.79	29	SLE Q	4	4	22.50	14467.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1656.37	0.49	0.12
397	2.79	28	SLE F	4	4	22.50	14907.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1706.68	0.50	0.12
437	3.50	29	SLE Q	4	4	93.33	14467.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1656.37	0.49	0.12
442	3.50	28	SLE F	4	4	93.33	14907.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1706.68	0.50	0.12
513	3.50	29	SLE Q	5	4	0.00	3685.33	27.00	135.67	0.50	16.00	143.53	14.07	787.50	421.93	0.12	0.03
523	3.50	28	SLE F	5	4	0.00	3828.84	27.00	135.67	0.50	16.00	143.53	14.07	787.50	438.36	0.13	0.03
603	3.81	29	SLE Q	5	4	31.11	3685.33	27.00	135.67	0.50	16.00	143.53	14.07	787.50	421.93	0.12	0.03
613	3.81	28	SLE F	5	4	31.11	3828.84	27.00	135.67	0.50	16.00	143.53	14.07	787.50	438.36	0.13	0.03
689	4.44	29	SLE Q	5	4	93.33	2509.66	27.00	62.62	0.50	16.00	98.76	28.15	787.50	145.53	0.04	0.01
699	4.44	28	SLE F	5	4	93.33	2617.96	27.00	62.62	0.50	16.00	98.76	28.15	787.50	151.81	0.04	0.01
744	4.44	29	SLE Q	6	4	0.00	-4892.72	27.00	62.62	0.50	16.00	98.76	28.15	787.50	283.72	0.08	0.01
752	4.44	42	SLE F	6	4	0.00	-5004.69	27.00	62.62	0.50	16.00	98.76	28.15	787.50	290.22	0.08	0.01
789	4.75	29	SLE Q	6	4	31.11	-5505.92	27.00	135.67	0.50	16.00	143.53	14.07	787.50	625.98	0.18	0.04
797	4.75	42	SLE F	6	4	31.11	-5618.43	27.00	135.67	0.50	16.00	143.53	14.07	787.50	638.76	0.19	0.05
834	5.37	29	SLE Q	6	4	93.33	-5505.92	27.00	135.67	0.50	16.00	143.53	14.07	787.50	630.36	0.18	0.04
842	5.37	42	SLE F	6	4	93.33	-5618.43	27.00	135.67	0.50	16.00	143.53	14.07	787.50	643.24	0.19	0.05
879	5.37	29	SLE Q	7	4	0.00	-7024.41	27.00	135.67	0.50	16.00	143.53	14.07	787.50	804.21	0.23	0.06
884	5.37	28	SLE F	7	4	0.00	-7170.99	27.00	135.67	0.50	16.00	143.53	14.07	787.50	820.99	0.24	0.06
924	5.68	29	SLE Q	7	4	31.11	-7407.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	848.04	0.25	0.06

Relazione di calcolo

929	5.68	28	SLE F	7	4	31.11	-7560.08	27.00	135.67	0.50	16.00	143.53	14.07	787.50	865.54	0.25	0.06
969	6.30	29	SLE Q	7	4	93.33	-7407.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	848.04	0.25	0.06
974	6.30	28	SLE F	7	4	93.33	-7560.08	27.00	135.67	0.50	16.00	143.53	14.07	787.50	865.54	0.25	0.06
1014	6.30	29	SLE Q	8	4	0.00	-8569.34	27.00	135.67	0.50	16.00	143.53	14.07	787.50	981.09	0.29	0.07
1019	6.30	28	SLE F	8	4	0.00	-8743.86	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1001.07	0.29	0.07
1059	6.61	29	SLE Q	8	4	31.11	-8863.22	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1014.73	0.30	0.07
1064	6.61	28	SLE F	8	4	31.11	-9040.41	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1035.02	0.30	0.07
1104	7.24	29	SLE Q	8	4	93.33	-8863.22	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1014.73	0.30	0.07
1109	7.24	28	SLE F	8	4	93.33	-9040.41	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1035.02	0.30	0.07
1149	7.24	29	SLE Q	9	4	0.00	-9718.02	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1112.60	0.32	0.08
1154	7.24	28	SLE F	9	4	0.00	-9907.24	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1134.26	0.33	0.08
1194	7.55	29	SLE Q	9	4	31.11	-9905.54	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1134.07	0.33	0.08
1199	7.55	28	SLE F	9	4	31.11	-10094.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1155.72	0.34	0.08
1239	8.17	29	SLE Q	9	4	93.33	-9905.54	27.00	62.62	0.50	16.00	98.76	28.15	787.50	574.41	0.17	0.03
1244	8.17	28	SLE F	9	4	93.33	-10094.70	27.00	62.62	0.50	16.00	98.76	28.15	787.50	585.38	0.17	0.03
1284	8.17	29	SLE Q	10	4	0.00	-10062.50	27.00	62.62	0.50	16.00	98.76	28.15	787.50	583.51	0.17	0.03
1289	8.17	28	SLE F	10	4	0.00	-10254.30	27.00	62.62	0.50	16.00	98.76	28.15	787.50	594.63	0.17	0.03
1329	9.10	29	SLE Q	10	4	93.33	-9980.12	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1134.65	0.33	0.08
1334	9.10	28	SLE F	10	4	93.33	-10171.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1156.37	0.34	0.08
1374	9.10	29	SLE Q	11	4	0.00	-9481.59	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1077.97	0.31	0.08
1379	9.10	28	SLE F	11	4	0.00	-9656.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1097.84	0.32	0.08
1420	10.04	29	SLE Q	11	4	93.33	-8822.58	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1010.08	0.29	0.07
1425	10.04	28	SLE F	11	4	93.33	-8985.28	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1028.71	0.30	0.07
1481	10.04	29	SLE Q	12	4	0.00	-5251.18	27.00	135.67	0.50	16.00	143.53	14.07	787.50	601.20	0.18	0.04
1486	10.04	28	SLE F	12	4	0.00	-5341.16	27.00	135.67	0.50	16.00	143.53	14.07	787.50	611.50	0.18	0.04
1542	10.52	29	SLE Q	12	4	48.33	-5251.18	27.00	135.67	0.50	16.00	143.53	14.07	787.50	601.20	0.18	0.04
1547	10.52	28	SLE F	12	4	48.33	-5341.16	27.00	135.67	0.50	16.00	143.53	14.07	787.50	611.50	0.18	0.04

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	Afe St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
32 SLU	0.30	0.75	0.45	ø10/20 4 br.	15.71	0.90	6473.03	2.50	91968.40	131041.00	91968.40	14.208
34 SLU	0.75	1.90	1.14	ø10/20 4 br.	15.71	0.90	26766.90	2.50	91968.40	131041.00	91968.40	3.436
34 SLU	1.90	2.35	0.45	ø10/20 4 br.	15.71	0.90	26764.50	2.50	91968.40	131041.00	91968.40	3.312
34 SLU	2.79	3.25	0.45	ø10/20 4 br.	15.71	0.90	26683.10	2.50	91968.40	131041.00	91968.40	3.447
34 SLU	3.25	10.07	6.82	ø10/20 4 br.	15.71	0.90	25819.90	2.50	91968.40	131041.00	91968.40	3.562
32 SLU	10.07	10.52	0.45	ø10/20 4 br.	15.71	0.90	14447.30	2.50	91968.40	131041.00	91968.40	6.366

Travata n. 491

Nodi: -224 -1740 -932 -1742 -813 -814 -815 -816 -817 -818 -819 -37

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
4R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cmq>	Afe I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.23	32	SLU	1	75.17	14.07	14.07	14.07	14.07	6621.38	35450.10	5.354
0.98	32	SLU	1	0.00	14.07	14.07	14.07	14.07	6608.83	35450.10	5.364
0.98	34	SLU	2	97.67	14.07	14.07	14.07	14.07	8580.80	35450.10	4.131
1.95	34	SLU	2	0.00	14.07	14.07	14.07	14.07	10153.60	35450.10	3.491
1.95	34	SLU	3	97.67	14.07	14.07	14.07	14.07	27885.00	35450.10	1.271
2.71	34	SLU	3	22.50	14.07	14.07	14.07	14.07	27978.90	35450.10	1.267
3.15	32	SLU	4	22.50	14.07	14.07	14.07	14.07	24596.30	35450.10	1.441
3.90	32	SLU	4	97.38	28.15	28.15	28.15	28.15	24596.30	70123.70	2.851
3.90	32	SLU	5	0.00	28.15	28.15	28.15	28.15	5490.81	70123.70	12.771
4.23	20	SLU	5	32.46	14.07	14.07	14.07	14.07	-5656.38	-35450.10	6.267
4.88	20	SLU	5	97.37	14.07	28.15	14.07	28.15	-5656.38	-35445.00	6.266
4.88	34	SLU	6	0.00	14.07	28.15	14.07	28.15	-10523.20	-35445.00	3.368
5.20	34	SLU	6	32.46	14.07	28.15	14.07	28.15	-11828.30	-35445.00	2.997
5.85	34	SLU	6	97.37	14.07	28.15	14.07	28.15	-11828.30	-35445.00	2.997
5.85	34	SLU	7	0.00	14.07	28.15	14.07	28.15	-15020.10	-35445.00	2.360
6.18	34	SLU	7	32.46	14.07	28.15	14.07	28.15	-15871.70	-35445.00	2.233
6.83	34	SLU	7	97.38	14.07	14.07	14.07	14.07	-15871.70	-35450.10	2.234
6.83	34	SLU	8	0.00	14.07	14.07	14.07	14.07	-18193.70	-35450.10	1.948
7.15	34	SLU	8	32.46	14.07	14.07	14.07	14.07	-18773.00	-35450.10	1.888
7.80	34	SLU	8	97.38	28.15	14.07	28.15	14.07	-18773.00	-69959.00	3.727
7.80	34	SLU	9	0.00	28.15	14.07	28.15	14.07	-19640.20	-69959.00	3.562
8.12	34	SLU	9	32.46	14.07	14.07	14.07	14.07	-19719.60	-35450.10	1.798
8.77	34	SLU	9	97.37	14.07	14.07	14.07	14.07	-19719.60	-35450.10	1.798
8.77	34	SLU	10	0.00	14.07	14.07	14.07	14.07	-19645.50	-35450.10	1.804
9.75	34	SLU	10	97.37	14.07	28.15	14.07	28.15	-18848.90	-35445.00	1.880
9.75	32	SLU	11	0.00	14.07	28.15	14.07	28.15	-13807.70	-35445.00	2.567
10.27	32	SLU	11	52.38	14.07	14.07	14.07	14.07	-13807.70	-35450.10	2.567

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.23	5	SLV (E)	1	75.17	14.07	14.07	14.07	14.07	11396.40	34082.90	2.991
0.98	5	SLV (E)	1	0.00	14.07	14.07	14.07	14.07	11365.70	34082.90	2.999
0.98	5	SLV (E)	2	97.67	14.07	14.07	14.07	14.07	6164.19	34082.90	5.529
1.95	13	SLV (E)	2	0.00	14.07	14.07	14.07	14.07	7094.07	34082.90	4.804
1.95	13	SLV (E)	3	97.67	14.07	14.07	14.07	14.07	22283.90	34082.90	1.529
2.71	13	SLV (E)	3	22.50	14.07	14.07	14.07	14.07	22361.50	34082.90	1.524
3.15	5	SLV (E)	4	22.50	14.07	14.07	14.07	14.07	25686.40	34082.90	1.327
3.90	5	SLV (E)	4	97.38	28.15	28.15	28.15	28.15	25686.40	67205.10	2.616
3.90	5	SLV (E)	5	0.00	28.15	28.15	28.15	28.15	7430.70	67205.10	9.044
4.23	5	SLV (E)	5	32.46	14.07	14.07	14.07	14.07	7430.70	34082.90	4.587
4.88	13	SLV (E)	5	97.37	14.07	28.15	14.07	28.15	-6068.39	-34362.70	5.663
4.88	9	SLV (E)	6	0.00	14.07	28.15	14.07	28.15	-7950.65	-34362.70	4.322
5.20	9	SLV (E)	6	32.46	14.07	28.15	14.07	28.15	-8770.29	-34362.70	3.918
5.85	9	SLV (E)	6	97.37	14.07	28.15	14.07	28.15	-8770.29	-34362.70	3.918
5.85	5	SLV (E)	7	0.00	14.07	28.15	14.07	28.15	-11620.30	-34362.70	2.957
6.18	5	SLV (E)	7	32.46	14.07	28.15	14.07	28.15	-12503.90	-34362.70	2.748
6.83	5	SLV (E)	7	97.38	14.07	14.07	14.07	14.07	-12503.90	-34082.90	2.726
6.83	5	SLV (E)	8	0.00	14.07	14.07	14.07	14.07	-15147.00	-34082.90	2.250
7.15	5	SLV (E)	8	32.46	14.07	14.07	14.07	14.07	-15860.60	-34082.90	2.149
7.80	5	SLV (E)	8	97.38	28.15	14.07	28.15	14.07	-15860.60	-66258.60	4.178
7.80	5	SLV (E)	9	0.00	28.15	14.07	28.15	14.07	-17765.70	-66258.60	3.730
8.12	5	SLV (E)	9	32.46	14.07	14.07	14.07	14.07	-18203.60	-34082.90	1.872
8.77	5	SLV (E)	9	97.37	14.07	14.07	14.07	14.07	-18203.60	-34082.90	1.872
8.77	5	SLV (E)	10	0.00	14.07	14.07	14.07	14.07	-18356.90	-34082.90	1.857
9.75	5	SLV (E)	10	97.37	14.07	28.15	14.07	28.15	-18266.50	-34362.70	1.881
9.75	5	SLV (E)	11	0.00	14.07	28.15	14.07	28.15	-17363.50	-34362.70	1.979
10.27	5	SLV (E)	11	52.38	14.07	14.07	14.07	14.07	-17363.50	-34082.90	1.963

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.23	37	SLE R	1	75.17	14.07	14.07	4767.81	-109.52	545.86	9.73
0.23	29	SLE Q	1	75.17	14.07	14.07	3831.54	-88.01	438.67	7.82
0.98	37	SLE R	1	0.00	14.07	14.07	4758.95	-109.31	544.84	9.71
0.98	29	SLE Q	1	0.00	14.07	14.07	3825.52	-87.87	437.98	7.81
0.98	39	SLE R	2	97.67	14.07	14.07	6167.57	-141.67	706.11	12.58
0.98	29	SLE Q	2	97.67	14.07	14.07	5206.18	-119.59	596.05	10.62
1.95	39	SLE R	2	0.00	14.07	14.07	7288.08	-167.41	834.40	14.87
1.95	29	SLE Q	2	0.00	14.07	14.07	6143.75	-141.12	703.39	12.54
1.95	39	SLE R	3	97.67	14.07	14.07	20020.20	-459.87	2292.08	40.85
1.95	29	SLE Q	3	97.67	14.07	14.07	16948.60	-389.32	1940.41	34.58
2.71	39	SLE R	3	22.50	14.07	14.07	20087.60	-461.42	2299.79	40.99
2.71	29	SLE Q	3	22.50	14.07	14.07	17005.50	-390.62	1946.93	34.70
3.15	37	SLE R	4	22.50	14.07	14.07	17529.20	-402.65	2006.88	35.77
3.15	29	SLE Q	4	22.50	14.07	14.07	13436.90	-308.65	1538.36	27.42
3.90	37	SLE R	4	97.38	28.15	28.15	17529.20	-301.43	1016.50	24.98
3.90	29	SLE Q	4	97.38	28.15	28.15	13436.90	-231.06	779.19	19.15
3.90	37	SLE R	5	0.00	28.15	28.15	3848.96	-66.19	223.20	5.48
3.90	29	SLE Q	5	0.00	28.15	28.15	2447.79	-42.09	141.94	3.49
4.23	24	SLE R	5	32.46	14.07	14.07	-4106.58	470.15	-94.33	8.38
4.23	29	SLE Q	5	32.46	14.07	14.07	-3703.05	423.95	-85.06	7.56
4.88	24	SLE R	5	97.37	14.07	28.15	-4106.58	466.88	-81.07	7.43
4.88	29	SLE Q	5	97.37	14.07	28.15	-3703.05	421.00	-73.10	6.70
4.88	39	SLE R	6	0.00	14.07	28.15	-7592.78	863.23	-149.89	13.75
4.88	29	SLE Q	6	0.00	14.07	28.15	-6657.58	756.91	-131.43	12.05
5.20	39	SLE R	6	32.46	14.07	28.15	-8533.59	970.19	-168.47	15.45
5.20	29	SLE Q	6	32.46	14.07	28.15	-7443.00	846.20	-146.94	13.47
5.85	39	SLE R	6	97.37	14.07	28.15	-8533.59	970.19	-168.47	15.45
5.85	29	SLE Q	6	97.37	14.07	28.15	-7443.00	846.20	-146.94	13.47
5.85	39	SLE R	7	0.00	14.07	28.15	-10813.10	1229.35	-213.47	19.57
5.85	29	SLE Q	7	0.00	14.07	28.15	-9363.81	1064.58	-184.85	16.95
6.18	39	SLE R	7	32.46	14.07	28.15	-11429.80	1299.46	-225.64	20.69
6.18	29	SLE Q	7	32.46	14.07	28.15	-9898.89	1125.42	-195.42	17.92
6.83	39	SLE R	7	97.38	14.07	14.07	-11429.80	1308.57	-262.55	23.32
6.83	29	SLE Q	7	97.38	14.07	14.07	-9898.89	1133.31	-227.38	20.20
6.83	39	SLE R	8	0.00	14.07	14.07	-13085.80	1498.16	-300.59	26.70
6.83	29	SLE Q	8	0.00	14.07	14.07	-11326.90	1296.79	-260.18	23.11
7.15	39	SLE R	8	32.46	14.07	14.07	-13506.90	1546.38	-310.26	27.56
7.15	29	SLE Q	8	32.46	14.07	14.07	-11701.00	1339.62	-268.78	23.88
7.80	39	SLE R	8	97.38	28.15	14.07	-13506.90	792.15	-263.58	21.48
7.80	29	SLE Q	8	97.38	28.15	14.07	-11701.00	686.24	-228.34	18.61
7.80	39	SLE R	9	0.00	28.15	14.07	-14111.00	827.58	-275.37	22.44
7.80	29	SLE Q	9	0.00	28.15	14.07	-12182.30	714.46	-237.73	19.38
8.12	39	SLE R	9	32.46	14.07	14.07	-14170.90	1622.40	-325.51	28.92
8.12	29	SLE Q	9	32.46	14.07	14.07	-12231.10	1400.31	-280.95	24.96
8.77	39	SLE R	9	97.37	14.07	14.07	-14170.90	1622.40	-325.51	28.92
8.77	29	SLE Q	9	97.37	14.07	14.07	-12231.10	1400.31	-280.95	24.96

Relazione di calcolo

8.77	39	SLE R	10	0.00	14.07	14.07	-14112.50	1615.71	-324.17	28.80
8.77	29	SLE Q	10	0.00	14.07	14.07	-12167.30	1393.02	-279.49	24.83
9.75	39	SLE R	10	97.37	14.07	28.15	-13527.40	1537.94	-267.05	24.49
9.75	29	SLE Q	10	97.37	14.07	28.15	-11609.40	1319.89	-229.19	21.02
9.75	37	SLE R	11	0.00	14.07	28.15	-9886.20	1123.97	-195.17	17.90
9.75	29	SLE Q	11	0.00	14.07	28.15	-8319.71	945.88	-164.24	15.06
10.27	37	SLE R	11	52.38	14.07	14.07	-9886.20	1131.85	-227.09	20.17
10.27	29	SLE Q	11	52.38	14.07	14.07	-8319.71	952.51	-191.11	16.98

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
39	0.23	29	SLE Q	1	4	75.17	3831.54	27.00	135.67	0.50	16.00	143.53	14.07	787.50	438.67	0.13	0.03
47	0.23	42	SLE F	1	4	75.17	3991.45	27.00	135.67	0.50	16.00	143.53	14.07	787.50	456.97	0.13	0.03
88	0.98	29	SLE Q	1	4	0.00	3825.52	27.00	135.67	0.50	16.00	143.53	14.07	787.50	437.98	0.13	0.03
96	0.98	42	SLE F	1	4	0.00	3984.93	27.00	135.67	0.50	16.00	143.53	14.07	787.50	456.23	0.13	0.03
133	0.98	29	SLE Q	2	4	97.67	5206.18	27.00	135.67	0.50	16.00	143.53	14.07	787.50	596.05	0.17	0.04
138	0.98	28	SLE F	2	4	97.67	5340.61	27.00	135.67	0.50	16.00	143.53	14.07	787.50	611.44	0.18	0.04
178	1.95	29	SLE Q	2	4	0.00	6143.75	27.00	135.67	0.50	16.00	143.53	14.07	787.50	703.39	0.20	0.05
183	1.95	28	SLE F	2	4	0.00	6308.03	27.00	135.67	0.50	16.00	143.53	14.07	787.50	722.19	0.21	0.05
223	1.95	29	SLE Q	3	4	97.67	16948.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1940.41	0.63	0.15
228	1.95	28	SLE F	3	4	97.67	17406.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1992.78	0.58	0.14
268	2.71	29	SLE Q	3	4	22.50	17005.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1946.93	0.63	0.15
273	2.71	28	SLE F	3	4	22.50	17464.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1999.48	0.58	0.14
317	3.15	29	SLE Q	4	4	22.50	13436.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1538.36	0.45	0.11
325	3.15	42	SLE F	4	4	22.50	14045.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1608.00	0.47	0.11
366	3.90	29	SLE Q	4	4	97.38	13436.90	27.00	62.62	0.50	16.00	98.76	28.15	787.50	779.19	0.23	0.04
374	3.90	42	SLE F	4	4	97.38	14045.20	27.00	62.62	0.50	16.00	98.76	28.15	787.50	814.47	0.24	0.04
440	3.90	29	SLE Q	5	4	0.00	2447.79	27.00	62.62	0.50	16.00	98.76	28.15	787.50	141.94	0.04	0.01
456	3.90	42	SLE F	5	4	0.00	2680.81	27.00	62.62	0.50	16.00	98.76	28.15	787.50	155.46	0.05	0.01
525	4.23	29	SLE Q	5	4	32.46	-3703.05	27.00	135.67	0.50	16.00	143.53	14.07	787.50	423.95	0.12	0.03
535	4.23	28	SLE F	5	4	32.46	-3774.52	27.00	135.67	0.50	16.00	143.53	14.07	787.50	432.14	0.13	0.03
610	4.88	29	SLE Q	5	4	97.37	-3703.05	27.00	135.67	0.50	16.00	143.53	14.07	787.50	421.00	0.12	0.03
620	4.88	28	SLE F	5	4	97.37	-3774.52	27.00	135.67	0.50	16.00	143.53	14.07	787.50	429.13	0.12	0.03
666	4.88	29	SLE Q	6	4	0.00	-6657.58	27.00	135.67	0.50	16.00	143.53	14.07	787.50	756.91	0.22	0.05
671	4.88	28	SLE F	6	4	0.00	-6796.51	27.00	135.67	0.50	16.00	143.53	14.07	787.50	772.70	0.23	0.05
711	5.20	29	SLE Q	6	4	32.46	-7443.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	846.20	0.25	0.06
716	5.20	28	SLE F	6	4	32.46	-7596.09	27.00	135.67	0.50	16.00	143.53	14.07	787.50	863.61	0.25	0.06
756	5.85	29	SLE Q	6	4	97.37	-7443.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	846.20	0.25	0.06
761	5.85	28	SLE F	6	4	97.37	-7596.09	27.00	135.67	0.50	16.00	143.53	14.07	787.50	863.61	0.25	0.06
801	5.85	29	SLE Q	7	4	0.00	-9363.81	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1064.58	0.31	0.08
806	5.85	28	SLE F	7	4	0.00	-9554.83	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1086.30	0.32	0.08
846	6.18	29	SLE Q	7	4	32.46	-9898.89	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1125.42	0.33	0.08
851	6.18	28	SLE F	7	4	32.46	-10097.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1147.94	0.33	0.08
891	6.83	29	SLE Q	7	4	97.38	-9898.89	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1133.31	0.33	0.08
896	6.83	28	SLE F	7	4	97.38	-10097.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1155.99	0.34	0.08
936	6.83	29	SLE Q	8	4	0.00	-11326.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1296.79	0.38	0.09
941	6.83	28	SLE F	8	4	0.00	-11551.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1322.50	0.39	0.09
981	7.15	29	SLE Q	8	4	32.46	-11701.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1339.62	0.39	0.10
986	7.15	28	SLE F	8	4	32.46	-11929.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1365.76	0.40	0.10
1026	7.80	29	SLE Q	8	4	97.38	-11701.00	27.00	62.62	0.50	16.00	98.76	28.15	787.50	686.24	0.20	0.03
1031	7.80	28	SLE F	8	4	97.38	-11929.30	27.00	62.62	0.50	16.00	98.76	28.15	787.50	699.63	0.20	0.03
1071	7.80	29	SLE Q	9	4	0.00	-12182.30	27.00	62.62	0.50	16.00	98.76	28.15	787.50	714.46	0.21	0.03
1079	7.80	42	SLE F	9	4	0.00	-12439.90	27.00	62.62	0.50	16.00	98.76	28.15	787.50	729.57	0.21	0.04
1116	8.12	29	SLE Q	9	4	32.46	-12231.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1400.31	0.41	0.10
1124	8.12	42	SLE F	9	4	32.46	-12500.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1431.13	0.42	0.10
1161	8.77	29	SLE Q	9	4	97.37	-12231.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1400.31	0.41	0.10
1169	8.77	42	SLE F	9	4	97.37	-12500.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1431.13	0.42	0.10
1206	8.77	29	SLE Q	10	4	0.00	-12167.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1393.02	0.41	0.10
1214	8.77	42	SLE F	10	4	0.00	-12441.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1424.44	0.41	0.10
1251	9.75	29	SLE Q	10	4	97.37	-11609.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1319.89	0.38	0.09
1259	9.75	42	SLE F	10	4	97.37	-11894.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1352.27	0.39	0.10
1300	9.75	29	SLE Q	11	4	0.00	-8319.71	27.00	135.67	0.50	16.00	143.53	14.07	787.50	945.88	0.28	0.07
1308	9.75	42	SLE F	11	4	0.00	-8597.71	27.00	135.67	0.50	16.00	143.53	14.07	787.50	977.48	0.28	0.07
1349	10.27	29	SLE Q	11	4	52.38	-8319.71	27.00	135.67	0.50	16.00	143.53	14.07	787.50	952.51	0.28	0.07
1357	10.27	42	SLE F	11	4	52.38	-8597.71	27.00	135.67	0.50	16.00	143.53	14.07	787.50	984.34	0.29	0.07

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
5 SLV	0.23	0.98	0.75	ø10/20 4 br.	15.71	0.90	8674.47	2.50	91968.40	131041.00	91968.40	10.602
13 SLV	0.98	1.95	0.98	ø10/20 4 br.	15.71	0.90	7637.64	2.50	91968.40	131041.00	91968.40	12.041
34 SLU	1.95	2.71	0.75	ø10/20 4 br.	15.71	0.90	26515.80	2.50	91968.40	131041.00	91968.40	3.468
34 SLU	3.15	3.90	0.75	ø10/20 4 br.	15.71	0.90	27482.10	2.50	91968.40	131041.00	91968.40	3.346
34 SLU	3.90	4.88	0.97	ø10/20 4 br.	15.71	0.90	11094.40	2.50	91968.40	131041.00	91968.40	8.290
34 SLU	4.88	5.85	0.97	ø10/20 4 br.	15.71	0.90	5809.16	2.50	91968.40	131041.00	91968.40	15.832
5 SLV	5.85	6.83	0.97	ø10/20 4 br.	15.71	0.90	3589.36	2.50	91968.40	131041.00	91968.40	25.622
5 SLV	6.83	7.80	0.97	ø10/20 4 br.	15.71	0.90	2905.16	2.50	91968.40	131041.00	91968.40	31.657

5 SLV	7.80	8.77	0.97	ø10/20 4 br.	15.71	0.90	1814.40	2.50	91968.40	131041.00	91968.40	50.688
13 SLV	8.77	9.75	0.97	ø10/20 4 br.	15.71	0.90	5572.85	2.50	91968.40	131041.00	91968.40	16.503
13 SLV	9.75	10.27	0.52	ø10/20 4 br.	15.71	0.90	11602.80	2.50	91968.40	131041.00	91968.40	7.926

Verifiche e armature solette/platee

Simbologia

Δ_{sm}	=Distanza media tra le fessure
Φ_{eq}	=Diametro equivalente delle barre
ϵ_{sm}	=Deformazione unitaria media dell'armatura (*1000)
σ_c	=Tensione nel calcestruzzo
σ_f	=Tensione nel ferro
σ_s	=Tensione nell'acciaio nella sezione fessurata
$A_{c\ eff}$	=Area di calcestruzzo efficace
A_s	=Area complessiva dei ferri nell'area di calcestruzzo efficace
$A_{fE\ I}$	=Area di ferro effettiva totale presente nel punto di verifica, inferiore
$A_{fE\ S}$	=Area di ferro effettiva totale presente nel punto di verifica, superiore
$A_{fE\ St.}$	=Area di ferro effettiva della staffatura
CC	=Numero della combinazione delle condizioni di carico elementari
Cf inf	=Copriferro inferiore
Cf sup	=Copriferro superiore
Cls	=Tipo di calcestruzzo
DV	=Direzione di verifica XX = Verifica per momento Mxx YY = Verifica per momento Myy
Fcd	=Resistenza di calcolo a compressione del calcestruzzo
Fck	=Resistenza caratteristica cilindrica a compressione del calcestruzzo
Fctd	=Resistenza di calcolo a trazione del calcestruzzo
Fctk	=Resistenza caratteristica a trazione del calcestruzzo
Fyd	=Resistenza di calcolo dell'acciaio
Fyk	=Tensione caratteristica di snervamento dell'acciaio
K_2	=Coefficiente per distribuzione deformazioni
M'ydy	=Momento resistente massimo in campo sostanzialmente elastico intorno all'asse Y
MRdy	=Momento resistente allo stato limite ultimo intorno all'asse Y
Mom	=Momento flettente
My	=Momento flettente intorno all'asse Y
Nodo	=Numero del nodo
Sic.	=Sicurezza
Spess.	=Spessore
TCC	=Tipo di combinazione di carico SLU = Stato limite ultimo SLE R = Stato limite d'esercizio, combinazione rara SLE F = Stato limite d'esercizio, combinazione frequente SLE Q = Stato limite d'esercizio, combinazione quasi permanente SLD = Stato limite di danno SLV = Stato limite di salvaguardia della vita SLU I = Stato limite di resistenza al fuoco SND = Stato limite di salvaguardia della vita (non dissipativo)
Tp	=Tipo di acciaio
VRcd	=Taglio ultimo lato calcestruzzo
VRsd	=Taglio ultimo lato armatura
Vrdu	=Taglio ultimo resistente
Vsdu	=Taglio agente nella direzione del momento ultimo
Wk	=Ampiezza caratteristica delle fessure
X	=Coordinata X del nodo
Y	=Coordinata Y del nodo
c	=Ricoprimento dell'armatura
ctgθ	=Cotangente dell'angolo di inclinazione dei puntoni di calcestruzzo
s	=Distanza massima tra le barre

Armatura platea a quota 0.00

Caratteristiche delle sezioni e dei materiali utilizzati

Spess.	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fctd	Tp	Fyk	Fyd
<cm>	<cm>	<cm>		<daN/cm²>	<daN/cm²>	<daN/cm²>	<daN/cm²>		<daN/cm²>	<daN/cm²>
35.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	My	MRdy	Sic.
	<m>	<m>				<cmq>	<cmq>	<daNm>	<daNm>	
-48	20.26	17.48	XX	34	SLU	5.65	5.65	3971.83	6942.28	1.748
-486	2.93	25.27	XX	32	SLU	5.65	5.65	-2708.47	-6942.28	2.563
-873	41.89	23.32	YY	34	SLU	5.65	5.65	-2898.39	-6942.28	2.395
-18	33.49	8.32	YY	34	SLU	5.65	5.65	3149.05	6942.28	2.205

Stato limite elastico - Verifiche a flessione/pressoflessione

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	My	M'ydy	Sic.
	<m>	<m>				<cmq>	<cmq>	<daNm>	<daNm>	

Relazione di calcolo

-48	20.26	17.48	XX	1	SLV(E)	5.65	5.65	3878.61	6458.78	1.665
-486	2.93	25.27	XX	1	SLV(E)	5.65	5.65	-2303.45	-6458.78	2.804
-873	41.89	23.32	YY	5	SLV(E)	5.65	5.65	-2983.06	-6458.78	2.165
-18	33.49	8.32	YY	13	SLV(E)	5.65	5.65	3469.89	6458.78	1.861

Stato limite ultimo - Verifiche a taglio

Nodo	X <m>	Y <m>	DV	CC	TCC	AfE S <cmq>	AfE I <cmq>	AfE St. <cmq/m>	Vsdu <daN>	ctgθ	VRcd <daN>	VRsd <daN>	Vrdu <daN>	Sic.
-31	41.89	17.48	XX	34	SLU	5.65	5.65		5989.22				13250.60	2.212
-38	41.89	25.27	YY	5	SLV(E)	5.65	5.65		6879.66				13250.60	1.926

Stato limite d'esercizio - Verifiche tensionali

Nodo	X <m>	Y <m>	DV	CC	TCC	AfE S <cmq>	AfE I <cmq>	Mom <daNm>	σ _e <daN/cm²>	σ _f <daN/cm²>
-48	20.26	17.48	XX	39	SLE R	5.65	5.65	2861.80	28.20	1728.25
-486	2.93	25.27	XX	37	SLE R	5.65	5.65	-1940.95	19.13	1172.15
-48	20.26	17.48	XX	29	SLE Q	5.65	5.65	2408.98	23.74	1454.79
-854	39.09	25.27	XX	29	SLE Q	5.65	5.65	-1722.28	16.97	1040.09
-872	41.89	22.35	YY	39	SLE R	5.65	5.65	-2129.57	20.98	1286.05
-872	41.89	22.35	YY	29	SLE Q	5.65	5.65	-1873.32	18.46	1131.30
-226	7.81	8.32	YY	39	SLE R	5.65	5.65	2284.35	22.51	1379.52
-18	33.49	8.32	YY	29	SLE Q	5.65	5.65	1961.14	19.32	1184.34

Stato limite d'esercizio - Verifiche a fessurazione

Nodo	X <m>	Y <m>	DV	CC	TCC	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	W _k <mm>
-48	20.26	17.48	XX	29	SLE Q	29.00	200.00	0.50	12.00	216.05	6.79	875.00	1454.79	0.42	0.16
-48	20.26	17.48	XX	28	SLE F	29.00	200.00	0.50	12.00	216.05	6.79	875.00	1489.33	0.43	0.16
-854	39.09	25.27	XX	28	SLE F	29.00	200.00	0.50	12.00	216.05	6.79	875.00	1056.98	0.31	0.11
-854	39.09	25.27	XX	29	SLE Q	29.00	200.00	0.50	12.00	216.05	6.79	875.00	1040.09	0.30	0.11
-872	41.89	22.35	YY	29	SLE Q	29.00	200.00	0.50	12.00	216.05	6.79	875.00	1131.31	0.33	0.12
-872	41.89	22.35	YY	28	SLE F	29.00	200.00	0.50	12.00	216.05	6.79	875.00	1151.82	0.34	0.12
-18	33.49	8.32	YY	29	SLE Q	29.00	200.00	0.50	12.00	216.05	6.79	875.00	1184.34	0.34	0.13
-18	33.49	8.32	YY	28	SLE F	29.00	200.00	0.50	12.00	216.05	6.79	875.00	1210.60	0.35	0.13

Le verifiche degli elementi di fondazione sono state effettuate utilizzando l'approccio 2.

Coefficienti parziali per le azioni, per verifiche in condizioni statiche:

Permanenti strutturali, sicurezza a favore $\gamma_A = 1.00$;
 Permanenti strutturali, sicurezza a sfavore $\gamma_A = 1.30$;
 Permanenti non strutturali, sicurezza a favore $\gamma_A = 0.00$;
 Permanenti non strutturali, sicurezza a sfavore $\gamma_A = 1.50$;
 Variabili, sicurezza a favore $\gamma_A = 0.00$;
 Variabili, sicurezza a sfavore $\gamma_A = 1.50$.

I coefficienti parziali per le azioni sono posti pari all'unità per le verifiche in condizioni sismiche.

Tali coefficienti sono comunque desumibili dalla tabella delle combinazioni delle CCE (Parametri di calcolo).

Coefficienti parziali per i parametri geotecnici:

Tangente dell'angolo di attrito $\gamma_M = 1.00$;
 Coesione efficace $\gamma_M = 1.00$;
 Coesione non drenata $\gamma_M = 1.00$;

Coefficienti parziali per la resistenza delle fondazioni superficiali:

Capacità portante $\gamma_R = 2.30$;
 Scorrimento $\gamma_R = 1.10$;

Fondazioni superficiali

Simbologia

β = Inclinazione del piano di campagna
 γ_z = Peso specifico rappresentativo del terreno di fondazione
 η = Inclinazione del piano di posa della fondazione
 ϕ'_x = Angolo di attrito rappresentativo del terreno di fondazione
 $\sigma_{v0, f}$ = Pressione verticale alla profondità del piano di posa della fondazione
 B = Base della fondazione
 B' = Base della fondazione reagente
 CC = Numero della combinazione delle condizioni di carico elementari
 D = Profondità del piano di posa della fondazione
 L = Lunghezza della fondazione (L>B)
 L' = Lunghezza della fondazione reagente
 M_x = Momento intorno all'asse X
 M_y = Momento intorno all'asse Y
 N = Sforzo normale
 N_c = Coefficiente di capacità portante relativo alla coesione del terreno di fondazione
 N_g = Coefficiente di capacità portante relativo al peso del terreno di fondazione

Relazione di calcolo

N_d =Coefficiente di capacità portante relativo al sovraccarico laterale
 R_d =Resistenza di progetto (Carico limite)
 $Sic.$ =Sicurezza
 c'_r =Coesione efficace rappresentativa del terreno di fondazione
 q_{lim} =Pressione limite
 s_c =Fattore di forma relativo alla coesione
 s_g =Fattore di forma relativo al peso del terreno

Verifiche capacità portante

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Platea n. 405

$B=24.58$ <m> $L=32.84$ <m> $D=0.00$ <m> $\beta=0.00$ <grad> $\eta=0.00$ <grad> $\gamma_r=827.79$ <daN/mc>
 $\sigma_{v0,r}=0.00$ <daN/mq>

Verifiche in condizioni drenate

$\phi'_r=26.00$ <grad> $c'_r=999.98$ <daN/mq>
 $N_q=14.21$ $N_c=27.09$ $N_g=9.73$ $s_c=1.30$ $s_g=0.80$

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q_{lim} <daN/mq>	R_d <daN>	Sic.
17	2425370.00	-287475.00	-202893.00	24.34	32.68	113612.00	39285500.00	16.20
18	2427510.00	-277821.00	-175489.00	24.35	32.70	113638.00	39335100.00	16.20
19	2456390.00	-297161.00	-199104.00	24.33	32.68	113596.00	39278400.00	15.99
20	2574530.00	-305797.00	-237213.00	24.34	32.66	113611.00	39263700.00	15.25
30	2473350.00	-219290.00	-102659.00	24.40	32.76	113805.00	39550300.00	15.99
31	2475480.00	-209636.00	-75254.90	24.41	32.78	113830.00	39599000.00	16.00
32	2505350.00	-180035.00	-32713.00	24.43	32.82	113913.00	39711300.00	15.85
33	2504370.00	-228976.00	-98869.40	24.39	32.76	113787.00	39540100.00	15.79
34	2622500.00	-237612.00	-136979.00	24.40	32.74	113792.00	39513800.00	15.07

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 401

$B=0.90$ <m> $L=10.97$ <m> $D=0.00$ <m> $\beta=0.00$ <grad> $\eta=0.00$ <grad> $\gamma_r=1600.00$ <daN/mc>
 $\sigma_{v0,r}=0.00$ <daN/mq>

Verifiche in condizioni drenate

$\phi'_r=26.00$ <grad> $c'_r=1000.00$ <daN/mq>
 $N_q=14.21$ $N_c=27.09$ $N_g=9.73$ $s_c=1.00$ $s_g=1.00$

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q_{lim} <daN/mq>	R_d <daN>	Sic.
17	40089.90	-219.73	-1417.70	0.89	10.90	34004.10	143259.00	3.57
18	39654.10	-203.53	-1618.37	0.89	10.89	34009.60	143251.00	3.61
19	40044.00	-202.36	-1625.30	0.89	10.89	34010.80	143287.00	3.58
20	41302.40	-195.61	-1685.95	0.89	10.89	34015.70	143404.00	3.47
30	38544.20	-118.98	1410.00	0.89	10.90	34041.40	144156.00	3.74
31	38108.40	-102.79	1209.33	0.89	10.91	34047.50	144436.00	3.79
32	37085.80	-36.01	3093.87	0.90	10.80	34074.30	143732.00	3.88
33	38498.30	-101.61	1202.40	0.89	10.91	34048.40	144472.00	3.75
34	39756.80	-94.86	1141.76	0.90	10.91	34052.30	144637.00	3.64

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 402

$B=0.90$ <m> $L=10.89$ <m> $D=0.00$ <m> $\beta=0.00$ <grad> $\eta=0.00$ <grad> $\gamma_r=1600.00$ <daN/mc>
 $\sigma_{v0,r}=0.00$ <daN/mq>

Verifiche in condizioni drenate

$\phi'_r=26.00$ <grad> $c'_r=1000.00$ <daN/mq>
 $N_q=14.21$ $N_c=27.09$ $N_g=9.73$ $s_c=1.00$ $s_g=1.00$

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q_{lim} <daN/mq>	R_d <daN>	Sic.
----	------------	--------------	--------------	-----------	-----------	-----------------------	----------------	------

Relazione di calcolo

17	40000.10	-216.55	-2148.34	0.89	10.78	34005.20	141751.00	3.54
18	39409.40	-191.90	-1686.48	0.89	10.80	34013.70	142247.00	3.61
19	39869.70	-193.29	-1828.14	0.89	10.80	34014.00	142175.00	3.57
20	41055.50	-183.81	-1715.68	0.89	10.81	34019.80	142425.00	3.47
30	37886.30	-72.47	1578.27	0.90	10.81	34059.70	143416.00	3.79
31	37295.60	-47.82	2040.13	0.90	10.78	34069.50	143312.00	3.84
32	35913.10	46.86	4521.15	0.90	10.64	34069.10	141411.00	3.94
33	37755.90	-49.20	1898.47	0.90	10.79	34069.20	143422.00	3.80
34	38941.70	-39.72	2010.93	0.90	10.79	34073.60	143495.00	3.68

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 403

B=0.90 <m> L=10.89 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0, f}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q_{lim} <daN/mq>	R_d <daN>	Sic.
17	33371.10	-278.25	-4797.42	0.88	10.60	33959.70	138281.00	4.14
18	33456.70	-266.72	-4835.23	0.88	10.60	33965.40	138399.00	4.14
19	33882.80	-270.67	-5016.04	0.88	10.59	33965.10	138301.00	4.08
20	35310.90	-271.72	-5253.93	0.88	10.59	33969.70	138392.00	3.92
30	34387.20	-216.45	-3037.98	0.89	10.71	33991.50	140505.00	4.09
31	34472.80	-204.93	-3075.79	0.89	10.71	33996.90	140615.00	4.08
32	35147.00	-164.37	-1905.06	0.89	10.78	34016.70	142021.00	4.04
33	34899.00	-208.87	-3256.60	0.89	10.70	33996.30	140492.00	4.03
34	36327.00	-209.93	-3494.49	0.89	10.70	33999.50	140495.00	3.87

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 405

B=0.90 <m> L=10.89 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0, f}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q_{lim} <daN/mq>	R_d <daN>	Sic.
17	33271.40	-15.44	-8294.24	0.90	10.39	34082.20	138442.00	4.16
18	33299.60	-14.31	-8303.45	0.90	10.39	34082.80	138453.00	4.16
19	33859.80	-15.34	-8610.30	0.90	10.38	34082.40	138313.00	4.08
20	35465.10	-14.13	-9014.76	0.90	10.38	34083.30	138336.00	3.90
30	34144.50	-34.88	-7733.59	0.90	10.44	34073.60	138842.00	4.07
31	34172.70	-33.75	-7742.80	0.90	10.44	34074.10	138853.00	4.06
32	34755.10	-46.54	-7373.82	0.90	10.47	34068.60	139105.00	4.00
33	34732.90	-34.77	-8049.65	0.90	10.43	34073.90	138710.00	3.99
34	36338.20	-33.57	-8454.11	0.90	10.42	34075.10	138715.00	3.82

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 408

B=0.90 <m> L=41.89 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0, f}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q_{lim} <daN/mq>	R_d <daN>	Sic.
----	------------	--------------	--------------	-----------	-----------	-----------------------	----------------	------

Relazione di calcolo

17	124904.00	428.14	-20362.30	0.89	41.56	34036.10	549352.00	4.40
18	124982.00	429.07	-19687.20	0.89	41.58	34036.00	549489.00	4.40
19	126613.00	449.79	-20577.90	0.89	41.56	34034.20	549180.00	4.34
20	132595.00	473.61	-21317.50	0.89	41.57	34033.90	549198.00	4.14
30	126263.00	459.34	-19694.70	0.89	41.58	34032.80	549227.00	4.35
31	126342.00	460.27	-19019.60	0.89	41.59	34032.80	549363.00	4.35
32	127239.00	481.78	-18647.30	0.89	41.60	34030.50	549256.00	4.32
33	127972.00	480.99	-19910.30	0.89	41.58	34031.00	549058.00	4.29
34	133955.00	504.81	-20649.90	0.89	41.58	34030.80	549081.00	4.10

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 416

B=0.90 <m> L=41.89 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q_{lim} <daN/mq>	R_d <daN>	Sic.
17	214452.00	4675.50	-25600.60	0.86	41.65	33750.10	523420.00	2.44
18	214890.00	4681.97	-22897.60	0.86	41.68	33750.30	523763.00	2.44
19	217427.00	4747.77	-31920.10	0.86	41.60	33749.60	522680.00	2.40
20	224610.00	4863.95	-42694.40	0.86	41.51	33752.40	521857.00	2.32
30	225393.00	5072.04	13553.10	0.85	41.77	33739.20	523880.00	2.32
31	225831.00	5078.52	16256.10	0.86	41.75	33739.40	523605.00	2.32
32	232354.00	5315.85	34536.50	0.85	41.59	33733.40	521112.00	2.24
33	228368.00	5144.31	7233.62	0.85	41.83	33738.80	524559.00	2.30
34	235551.00	5260.50	-3540.72	0.86	41.86	33741.90	525262.00	2.23

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 417

B=0.90 <m> L=25.27 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q_{lim} <daN/mq>	R_d <daN>	Sic.
17	120306.00	2255.19	-10828.20	0.86	25.09	33797.70	317997.00	2.64
18	120744.00	2294.18	-10385.10	0.86	25.10	33793.70	317873.00	2.63
19	122739.00	2345.07	-11918.80	0.86	25.08	33792.10	317499.00	2.59
20	127293.00	2410.93	-11331.80	0.86	25.09	33794.70	317850.00	2.50
30	126670.00	2510.65	-16747.90	0.86	25.01	33781.00	315981.00	2.49
31	127108.00	2549.64	-16304.80	0.86	25.01	33777.20	315870.00	2.49
32	131362.00	2720.01	-20374.90	0.86	24.96	33767.20	314624.00	2.40
33	129103.00	2600.53	-17838.50	0.86	24.99	33775.90	315546.00	2.44
34	133657.00	2666.39	-17251.60	0.86	25.01	33778.90	315946.00	2.36

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 422

B=0.90 <m> L=10.72 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q_{lim} <daN/mq>	R_d <daN>	Sic.
----	------------	--------------	--------------	-----------	-----------	-----------------------	----------------	------

Relazione di calcolo

17	34173.20	-37.50	6570.80	0.90	10.34	34072.40	137463.00	4.02
18	34402.30	-51.02	5668.14	0.90	10.39	34066.40	138052.00	4.01
19	34671.30	-49.29	6697.41	0.90	10.33	34067.30	137320.00	3.96
20	35979.80	-48.31	7275.17	0.90	10.32	34068.60	137109.00	3.81
30	35905.50	-16.67	5114.29	0.90	10.44	34082.20	139025.00	3.87
31	36134.60	-30.19	4211.63	0.90	10.49	34076.50	139575.00	3.86
32	37000.80	-12.60	3631.45	0.90	10.52	34084.20	140251.00	3.79
33	36403.60	-28.45	5240.91	0.90	10.43	34077.30	138866.00	3.81
34	37712.10	-27.48	5818.66	0.90	10.41	34078.10	138611.00	3.68

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 424

B=0.90 <m> L=14.55 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0, f}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	51791.80	-187.56	17558.40	0.89	13.87	34033.10	183250.00	3.54
18	51791.90	-184.22	16647.60	0.89	13.91	34034.10	183747.00	3.55
19	52403.10	-178.66	16607.00	0.89	13.92	34036.40	183940.00	3.51
20	54348.90	-170.54	16395.50	0.89	13.95	34040.60	184477.00	3.39
30	50356.70	-94.29	11469.30	0.90	14.09	34060.30	187069.00	3.71
31	50356.90	-90.95	10558.60	0.90	14.13	34061.30	187582.00	3.73
32	49404.70	-28.83	6531.50	0.90	14.29	34080.40	190263.00	3.85
33	50968.10	-85.38	10517.90	0.90	14.14	34063.40	187736.00	3.68
34	52913.90	-77.26	10306.40	0.90	14.16	34066.70	188153.00	3.56

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 425

B=0.90 <m> L=10.72 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0, f}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	32320.50	12.68	385.21	0.90	10.70	34083.40	142530.00	4.41
18	32640.30	22.58	157.41	0.90	10.71	34078.70	142604.00	4.37
19	33095.50	21.91	734.27	0.90	10.68	34079.20	142154.00	4.30
20	34339.50	22.28	1218.08	0.90	10.65	34079.40	141805.00	4.13
30	32413.30	24.76	-468.44	0.90	10.69	34077.60	142321.00	4.39
31	32733.10	34.67	-696.24	0.90	10.68	34073.00	142027.00	4.34
32	32669.20	41.41	-923.30	0.90	10.66	34069.70	141761.00	4.34
33	33188.40	33.99	-119.37	0.90	10.71	34073.50	142510.00	4.29
34	34432.30	34.36	364.43	0.90	10.70	34073.90	142334.00	4.13

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 427

B=0.90 <m> L=10.72 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0, f}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
----	------------	--------------	--------------	-----------	-----------	------------------------------	-------------------------	------

Relazione di calcolo

17	36692.80	13.75	3701.05	0.90	10.52	34083.60	140166.00	3.82
18	36699.90	13.18	3725.18	0.90	10.52	34083.90	140155.00	3.82
19	37409.80	13.10	4041.48	0.90	10.50	34084.00	139984.00	3.74
20	39174.20	14.08	4473.99	0.90	10.49	34083.90	139816.00	3.57
30	37756.60	24.72	3658.72	0.90	10.53	34079.30	140166.00	3.71
31	37763.80	24.15	3682.85	0.90	10.53	34079.50	140156.00	3.71
32	38479.30	31.36	3651.53	0.90	10.53	34076.80	140160.00	3.64
33	38473.70	24.06	3999.16	0.90	10.51	34079.70	139990.00	3.64
34	40238.10	25.04	4431.67	0.90	10.50	34079.80	139826.00	3.47

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 429

B=0.90 <m> L=10.72 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,f}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	35360.60	-64.84	2750.71	0.90	10.56	34060.90	140231.00	3.97
18	35430.30	-65.26	2851.88	0.90	10.56	34060.80	140156.00	3.96
19	36057.10	-66.03	3070.86	0.90	10.55	34061.00	140036.00	3.88
20	37736.20	-69.64	3497.44	0.90	10.53	34060.70	139831.00	3.71
30	36763.10	-57.27	3147.94	0.90	10.55	34065.20	140127.00	3.81
31	36832.80	-57.69	3249.11	0.90	10.54	34065.10	140055.00	3.80
32	37767.90	-52.62	3514.21	0.90	10.53	34067.80	139991.00	3.71
33	37459.60	-58.46	3468.09	0.90	10.53	34065.20	139941.00	3.74
34	39138.70	-62.07	3894.67	0.90	10.52	34064.80	139747.00	3.57

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 430

B=0.90 <m> L=14.95 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,f}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	54895.40	147.89	23919.90	0.89	14.08	34047.50	186444.00	3.40
18	54895.40	146.73	23264.30	0.89	14.10	34047.90	186771.00	3.40
19	55478.60	136.26	23434.40	0.90	14.11	34051.20	186917.00	3.37
20	57652.50	129.41	23308.60	0.90	14.14	34054.50	187504.00	3.25
30	57756.70	224.21	29897.60	0.89	13.91	34029.00	183686.00	3.18
31	57756.80	223.04	29242.00	0.89	13.94	34029.30	183996.00	3.19
32	59661.30	273.79	33215.20	0.89	13.84	34018.00	182305.00	3.06
33	58339.90	212.58	29412.00	0.89	13.94	34032.70	184160.00	3.16
34	60513.80	205.73	29286.20	0.89	13.98	34036.50	184816.00	3.05

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 439

B=0.90 <m> L=25.67 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,f}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
----	------------	--------------	--------------	-----------	-----------	------------------------------	-------------------------	------

Relazione di calcolo

17	135191.00	2682.50	-15210.00	0.86	25.45	33780.60	321514.00	2.38
18	135573.00	2713.27	-14734.30	0.86	25.45	33778.00	321457.00	2.37
19	137730.00	2770.56	-15939.10	0.86	25.44	33776.40	321188.00	2.33
20	142726.00	2847.51	-15227.70	0.86	25.46	33778.90	321564.00	2.25
30	136322.00	2597.96	-26157.80	0.86	25.29	33792.80	320206.00	2.35
31	136704.00	2628.74	-25682.10	0.86	25.29	33790.20	320155.00	2.34
32	137459.00	2572.47	-32926.70	0.86	25.19	33798.20	319304.00	2.32
33	138860.00	2686.02	-26887.00	0.86	25.28	33788.40	319908.00	2.30
34	143857.00	2762.97	-26175.50	0.86	25.31	33790.50	320325.00	2.23

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 462

B=0.90 <m> L=10.97 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	33286.50	-241.26	3706.88	0.89	10.75	33976.60	140586.00	4.22
18	33371.70	-234.99	3761.41	0.89	10.74	33979.90	140629.00	4.21
19	33814.50	-237.61	3961.46	0.89	10.74	33980.10	140519.00	4.16
20	35275.60	-240.16	4204.50	0.89	10.73	33983.50	140549.00	3.98
30	34263.90	-205.42	5605.52	0.89	10.64	33996.10	139693.00	4.08
31	34349.20	-199.15	5660.05	0.89	10.64	33999.20	139737.00	4.07
32	34999.50	-175.42	6920.64	0.89	10.57	34011.40	139167.00	3.98
33	34792.00	-201.77	5860.10	0.89	10.63	33999.20	139640.00	4.01
34	36253.00	-204.33	6103.13	0.89	10.63	34001.70	139704.00	3.85

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 464

B=0.90 <m> L=10.97 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	33450.80	-6.82	7468.21	0.90	10.52	34086.30	140300.00	4.19
18	33478.50	-8.45	7490.90	0.90	10.52	34085.50	140268.00	4.19
19	34038.10	-8.16	7831.01	0.90	10.51	34085.70	140105.00	4.12
20	35625.90	-10.00	8244.23	0.90	10.51	34085.10	140054.00	3.93
30	34266.70	7.38	7857.84	0.90	10.51	34086.10	140134.00	4.09
31	34294.40	5.75	7880.53	0.90	10.51	34086.80	140139.00	4.09
32	34838.30	15.15	8139.79	0.90	10.50	34082.70	139936.00	4.02
33	34854.00	6.04	8220.65	0.90	10.50	34086.80	139975.00	4.02
34	36441.80	4.21	8633.86	0.90	10.50	34087.70	139969.00	3.84

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 491

B=0.90 <m> L=10.72 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
----	------------	--------------	--------------	-----------	-----------	------------------------------	-------------------------	------

Relazione di calcolo

17	35545.60	65.00	8237.30	0.90	10.26	34061.00	136146.00	3.83
18	35460.70	64.18	8091.48	0.90	10.26	34061.30	136247.00	3.84
19	36069.20	66.31	8907.72	0.90	10.23	34060.80	135738.00	3.76
20	37749.20	67.69	9241.35	0.90	10.23	34061.50	135812.00	3.60
30	36236.10	75.58	8457.53	0.90	10.25	34057.00	136007.00	3.75
31	36151.10	74.76	8311.70	0.90	10.26	34057.30	136106.00	3.76
32	36610.20	81.83	8459.46	0.90	10.26	34054.70	136015.00	3.72
33	36759.60	76.89	9127.95	0.90	10.22	34056.90	135610.00	3.69
34	38439.70	78.27	9461.58	0.90	10.23	34057.80	135688.00	3.53

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Platea n. 405

B=24.58 <m> L=32.84 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =827.79 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =999.98 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.30 s_g =0.80

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	Q _{lim} <daN/mq>	R _d <daN>	Sic.
1	1902180.00	-340955.00	-444587.00	24.22	32.38	113221.00	38597100.00	20.29
3	1901210.00	-228783.00	-415703.00	24.34	32.41	113600.00	38951100.00	20.49
5	1902890.00	-463569.00	-275418.00	24.09	32.55	112806.00	38461600.00	20.21
7	1902530.00	-456496.00	-101531.00	24.10	32.74	112830.00	38697400.00	20.34
9	1901510.00	-342366.00	-423445.00	24.22	32.40	113216.00	38619000.00	20.31
11	1900540.00	-230194.00	-394561.00	24.33	32.43	113595.00	38973400.00	20.51
13	1902220.00	-464981.00	-254276.00	24.09	32.58	112801.00	38483200.00	20.23
15	1901860.00	-457907.00	-80388.80	24.10	32.76	112825.00	38719100.00	20.36

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 401

B=0.90 <m> L=10.97 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	Q _{lim} <daN/mq>	R _d <daN>	Sic.
1	34696.80	-338.19	-12635.70	0.88	10.24	33937.70	133063.00	3.84
3	27305.60	30.78	-12261.80	0.90	10.07	34071.90	133947.00	4.91
5	42569.70	-725.18	-5365.43	0.87	10.72	33824.30	136488.00	3.21
7	41926.70	-687.92	1240.17	0.87	10.91	33834.10	139186.00	3.32
9	37478.50	-477.93	-12377.60	0.87	10.31	33891.00	132847.00	3.54
11	30087.30	-108.96	-12003.70	0.89	10.17	34033.10	134374.00	4.47
13	45351.50	-864.92	-5107.28	0.86	10.74	33792.60	136059.00	3.00
15	44708.40	-827.66	1498.32	0.86	10.90	33801.30	138277.00	3.09

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 402

B=0.90 <m> L=10.89 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	Q _{lim} <daN/mq>	R _d <daN>	Sic.
1	34782.20	-343.38	-12065.00	0.88	10.20	33935.80	132428.00	3.81
3	30601.10	-128.29	-11714.10	0.89	10.12	34024.20	133539.00	4.36

Relazione di calcolo

5	39260.70	-570.92	-4827.37	0.87	10.64	33863.10	136485.00	3.48
7	38918.20	-550.87	1727.18	0.87	10.80	33869.10	138648.00	3.56
9	32489.10	-225.02	-11677.80	0.89	10.17	33981.70	133166.00	4.10
11	28308.00	-9.93	-11326.90	0.90	10.09	34084.00	134464.00	4.75
13	36967.60	-452.56	-4440.16	0.88	10.65	33898.90	137424.00	3.72
15	36625.10	-432.50	2114.40	0.88	10.77	33905.70	139199.00	3.80

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 403

B=0.90 <m> L=10.89 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q_{lim} <daN/mq>	R_d <daN>	Sic.
1	26713.20	-298.38	-10727.10	0.88	10.09	33915.60	130543.00	4.89
3	26191.20	-198.06	-9581.65	0.88	10.16	33971.80	132768.00	5.07
5	27278.50	-405.17	-7864.85	0.87	10.31	33858.30	132131.00	4.84
7	27241.00	-396.38	-4266.10	0.87	10.58	33863.00	135618.00	4.98
9	26978.10	-243.87	-9834.19	0.88	10.16	33948.80	132270.00	4.90
11	26456.10	-143.55	-8688.77	0.89	10.23	34005.00	134524.00	5.08
13	27543.40	-350.65	-6971.97	0.87	10.38	33891.30	133811.00	4.86
15	27505.90	-341.86	-3373.22	0.88	10.64	33896.00	137289.00	4.99

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 405

B=0.90 <m> L=10.89 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q_{lim} <daN/mq>	R_d <daN>	Sic.
1	26010.30	-21.96	-7747.00	0.90	10.29	34076.30	137009.00	5.27
3	25989.70	10.75	-7475.59	0.90	10.31	34083.00	137439.00	5.29
5	26006.40	-57.07	-7222.43	0.90	10.33	34055.30	137047.00	5.27
7	25982.40	-54.45	-6501.40	0.90	10.39	34056.80	137813.00	5.30
9	26032.60	-37.70	-7530.42	0.90	10.31	34066.90	137015.00	5.26
11	26012.00	-4.99	-7259.02	0.90	10.33	34086.50	137750.00	5.30
13	26028.70	-72.81	-7005.86	0.89	10.35	34045.90	137051.00	5.27
15	26004.80	-70.19	-6284.82	0.89	10.41	34047.40	137815.00	5.30

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 408

B=0.90 <m> L=41.89 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q_{lim} <daN/mq>	R_d <daN>	Sic.
1	99542.90	412.60	-19958.40	0.89	41.49	34024.90	547301.00	5.50
3	97230.90	350.71	-6752.07	0.89	41.75	34033.30	551559.00	5.67
5	102035.00	454.90	-30672.60	0.89	41.29	34020.10	544199.00	5.33
7	101860.00	429.26	-26649.90	0.89	41.37	34023.90	545586.00	5.36
9	99604.20	369.67	-32507.10	0.89	41.24	34031.70	544617.00	5.47

Relazione di calcolo

11	97292.20	307.78	-19300.80	0.89	41.49	34040.20	548808.00	5.64
13	102097.00	411.97	-43221.40	0.89	41.04	34026.60	541582.00	5.30
15	101921.00	386.33	-39198.70	0.89	41.12	34030.50	542963.00	5.33

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 416

B=0.90 <m> L=41.89 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q_{lim} <daN/mq>	R_d <daN>	Sic.
1	171900.00	3870.59	-128155.00	0.85	40.40	33739.00	506668.00	2.95
3	162587.00	3386.47	-91929.30	0.86	40.76	33765.30	513604.00	3.16
5	182000.00	4391.56	-124461.00	0.85	40.52	33713.90	505921.00	2.78
7	181345.00	4353.99	-85069.10	0.85	40.95	33715.80	511456.00	2.82
9	172637.00	3879.95	-90453.70	0.86	40.84	33739.60	512286.00	2.97
11	163324.00	3395.82	-54227.90	0.86	41.23	33765.80	519539.00	3.18
13	182738.00	4400.92	-86759.70	0.85	40.94	33714.60	511208.00	2.80
15	182082.00	4363.34	-47367.70	0.85	41.37	33716.50	516742.00	2.84

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 417

B=0.90 <m> L=25.27 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q_{lim} <daN/mq>	R_d <daN>	Sic.
1	105064.00	2537.42	-19960.80	0.85	24.89	33713.60	310733.00	2.96
3	104579.00	2518.79	-8067.17	0.85	25.12	33714.60	313609.00	3.00
5	98536.30	2060.51	-28157.10	0.86	24.70	33764.00	311153.00	3.16
7	92455.80	1633.09	-23288.90	0.86	24.77	33814.50	314838.00	3.41
9	105708.00	2561.63	-17938.60	0.85	24.93	33712.30	311168.00	2.94
11	105223.00	2542.99	-6044.97	0.85	25.16	33713.30	314028.00	2.98
13	99179.90	2084.71	-26134.90	0.86	24.74	33762.30	311619.00	3.14
15	93099.50	1657.30	-21266.70	0.86	24.81	33812.40	315314.00	3.39

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 422

B=0.90 <m> L=10.72 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q_{lim} <daN/mq>	R_d <daN>	Sic.
1	30020.80	-131.94	7655.99	0.89	10.21	34021.10	134593.00	4.48
3	29625.60	-115.23	4692.79	0.89	10.40	34028.90	137328.00	4.64
5	28327.00	-95.31	9475.30	0.89	10.05	34037.10	132867.00	4.69
7	26480.00	-47.21	8071.52	0.90	10.11	34061.70	134222.00	5.07
9	29753.40	-139.87	7187.37	0.89	10.24	34016.30	134837.00	4.53
11	29358.20	-123.17	4224.18	0.89	10.43	34024.20	137598.00	4.69
13	28059.60	-103.24	9006.68	0.89	10.08	34032.20	133111.00	4.74
15	26212.70	-55.15	7602.90	0.90	10.14	34056.70	134498.00	5.13

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 424

B=0.90 <m> L=14.55 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q_{lim} <daN/mq>	R_d <daN>	Sic.
1	47270.90	-385.34	31474.90	0.88	13.22	33962.60	172485.00	3.65
3	46571.90	-361.59	28314.40	0.88	13.33	33968.60	174179.00	3.74
5	44277.70	-273.54	24665.90	0.89	13.44	33993.30	176267.00	3.98
7	41013.10	-153.95	15669.20	0.89	13.79	34031.00	182048.00	4.44
9	46401.90	-355.90	27713.00	0.88	13.36	33970.10	174504.00	3.76
11	45702.90	-332.15	24552.50	0.89	13.48	33976.30	176265.00	3.86
13	43408.70	-244.09	20904.00	0.89	13.59	34001.90	178516.00	4.11
15	40144.10	-124.51	11907.20	0.89	13.96	34041.20	184629.00	4.60

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 425

B=0.90 <m> L=10.72 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q_{lim} <daN/mq>	R_d <daN>	Sic.
1	28265.30	67.73	4778.11	0.90	10.38	34052.20	137600.00	4.87
3	27867.70	61.70	2372.81	0.90	10.55	34055.00	139892.00	5.02
5	26969.10	49.24	5797.63	0.90	10.29	34061.00	136592.00	5.06
7	25460.40	27.37	4266.21	0.90	10.38	34072.70	138129.00	5.43
9	28482.20	64.35	-4081.60	0.90	10.43	34054.30	138333.00	4.86
11	28084.50	58.33	-1676.30	0.90	10.60	34057.10	140619.00	5.01
13	27185.90	45.87	-5101.13	0.90	10.34	34063.20	137369.00	5.05
15	25677.20	24.00	-3569.71	0.90	10.44	34074.90	138940.00	5.41

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 427

B=0.90 <m> L=10.72 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q_{lim} <daN/mq>	R_d <daN>	Sic.
1	28450.50	56.89	2893.45	0.90	10.52	34058.30	139534.00	4.90
3	28436.50	50.07	2628.58	0.90	10.54	34062.00	139869.00	4.92
5	28457.10	35.54	3128.58	0.90	10.50	34070.00	139596.00	4.91
7	28448.90	10.43	3065.25	0.90	10.50	34083.80	139986.00	4.92
9	28448.10	52.25	2875.63	0.90	10.52	34060.90	139611.00	4.91
11	28434.10	45.44	2610.76	0.90	10.54	34064.60	139947.00	4.92
13	28454.70	30.90	3110.76	0.90	10.50	34072.60	139674.00	4.91
15	28446.50	5.79	3047.43	0.90	10.51	34086.30	140063.00	4.92

Verifiche di capacità portante per rottura generale in condizioni sismiche

Relazione di calcolo

Metodo utilizzato: Condizioni statiche

Travata 429

B=0.90 <m> L=10.72 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
1	29014.10	-91.84	3704.88	0.89	10.46	34040.20	138409.00	4.77
3	28834.90	-88.28	3201.53	0.89	10.50	34041.80	138889.00	4.82
5	28336.20	-67.38	3296.77	0.90	10.49	34052.40	139004.00	4.91
7	27576.00	-42.85	2443.61	0.90	10.54	34065.30	140049.00	5.08
9	28929.20	-94.95	3993.23	0.89	10.44	34038.40	138092.00	4.77
11	28750.00	-91.39	3489.88	0.89	10.48	34040.00	138571.00	4.82
13	28251.40	-70.49	3585.11	0.90	10.47	34050.60	138680.00	4.91
15	27491.10	-45.96	2731.95	0.90	10.52	34063.40	139718.00	5.08

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 430

B=0.90 <m> L=14.95 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
1	50021.10	374.90	38106.70	0.89	13.43	33972.80	175514.00	3.51
3	48781.80	336.56	31943.60	0.89	13.64	33982.10	178599.00	3.66
5	46938.30	252.91	32013.90	0.89	13.59	34005.60	178617.00	3.81
7	43056.50	110.01	20628.40	0.89	13.99	34049.70	185365.00	4.31
9	51092.50	411.33	42910.40	0.88	13.27	33964.10	173211.00	3.39
11	49853.20	372.99	36747.30	0.89	13.48	33973.00	176166.00	3.53
13	48009.70	289.34	36817.60	0.89	13.42	33995.70	176081.00	3.67
15	44127.90	146.44	25432.10	0.89	13.80	34037.80	182414.00	4.13

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 439

B=0.90 <m> L=25.67 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
1	118071.00	2905.90	-19999.90	0.85	25.33	33706.40	315832.00	2.67
3	117342.00	2885.74	-6117.87	0.85	25.57	33706.70	318773.00	2.72
5	111026.00	2403.77	-32499.80	0.86	25.08	33752.50	315364.00	2.84
7	104258.00	1953.23	-29332.00	0.86	25.11	33797.90	318226.00	3.05
9	117381.00	2880.11	-20170.60	0.85	25.33	33707.60	315838.00	2.69
11	116652.00	2859.96	-6288.57	0.85	25.56	33707.90	318796.00	2.73
13	110336.00	2377.99	-32670.50	0.86	25.08	33754.00	315366.00	2.86
15	103568.00	1927.44	-29502.70	0.86	25.10	33799.80	318247.00	3.07

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Relazione di calcolo

Travata 462

B=0.90 <m> L=10.97 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
1	27425.20	-255.50	8086.41	0.88	10.38	33944.40	135023.00	4.92
3	26197.60	-107.56	7401.31	0.89	10.40	34025.60	137271.00	5.24
5	28709.40	-411.06	5223.20	0.87	10.61	33866.60	136082.00	4.74
7	28582.60	-396.45	2083.92	0.87	10.82	33873.60	139051.00	4.86
9	26966.90	-311.07	8934.92	0.88	10.31	33909.90	133263.00	4.94
11	25739.30	-163.13	8249.81	0.89	10.33	33990.80	135448.00	5.26
13	28251.10	-466.63	6071.71	0.87	10.54	33832.40	134417.00	4.76
15	28124.30	-452.02	2932.42	0.87	10.76	33839.30	137408.00	4.89

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 464

B=0.90 <m> L=10.97 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
1	26174.50	41.38	6657.30	0.90	10.46	34064.80	138957.00	5.31
3	26089.30	-17.15	6531.92	0.90	10.47	34079.20	139407.00	5.34
5	26262.20	102.35	6143.52	0.89	10.50	34028.80	138631.00	5.28
7	26252.20	96.08	5577.76	0.89	10.55	34032.50	139287.00	5.31
9	26137.20	-58.74	6773.64	0.90	10.45	34054.50	138580.00	5.30
11	26052.10	-0.21	6648.26	0.90	10.46	34089.30	139522.00	5.36
13	26224.90	-119.71	6259.86	0.89	10.49	34018.40	138256.00	5.27
15	26214.90	-113.44	5694.10	0.89	10.54	34022.10	138911.00	5.30

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 491

B=0.90 <m> L=10.72 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
1	29245.00	77.64	7419.91	0.89	10.21	34048.10	135261.00	4.63
3	28701.10	69.98	7110.85	0.90	10.22	34051.50	135498.00	4.72
5	28901.30	70.05	6595.34	0.90	10.26	34051.70	136022.00	4.71
7	28062.80	55.88	5579.50	0.90	10.32	34058.50	136960.00	4.88
9	29104.40	72.60	7179.11	0.90	10.23	34050.60	135506.00	4.66
11	28560.50	64.94	6870.05	0.90	10.24	34054.10	135749.00	4.75
13	28760.60	65.01	6354.54	0.90	10.28	34054.30	136274.00	4.74
15	27922.10	50.84	5338.70	0.90	10.34	34061.10	137225.00	4.91

Cedimenti

Metodo utilizzato: Terzaghi (1955)

Simbologia

B =Base della fondazione

Relazione di calcolo

CC =Numero della combinazione delle condizioni di carico elementari
Ced=Cedimento calcolato
L =Lunghezza della fondazione (L>B)
N =Sforzo normale
k_i =Costante di sottofondo standardizzata
kw =Costante di sottofondo
q_{es} =Pressione di esercizio

Platea n. 405
B=24.58 <m> L=32.84 <m> k_i=3000000.00 <daN/mc> kw=768422.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	1902180.00	2356.62	0.31
1	1730120.00	2143.46	0.28
2	1728930.00	2141.97	0.28
3	1901210.00	2355.42	0.31
3	1728650.00	2141.63	0.28
4	1728270.00	2141.16	0.28
5	1902890.00	2357.50	0.31
5	1731200.00	2144.79	0.28
6	1729410.00	2142.57	0.28
7	1902530.00	2357.05	0.31
7	1730650.00	2144.11	0.28
8	1729160.00	2142.26	0.28
9	1901510.00	2355.79	0.31
9	1729100.00	2142.19	0.28
10	1728470.00	2141.41	0.28
11	1900540.00	2354.58	0.31
11	1727630.00	2140.37	0.28
12	1727810.00	2140.59	0.28
13	1902220.00	2356.67	0.31
13	1730180.00	2143.52	0.28
14	1728950.00	2142.00	0.28
15	1901860.00	2356.22	0.31
15	1729630.00	2142.84	0.28
16	1728710.00	2141.70	0.28
17	2425370.00	3004.80	0.39
18	2427510.00	3007.45	0.39
19	2456390.00	3043.23	0.40
20	2574530.00	3189.59	0.42
21	1782190.00	2207.96	0.29
22	1783610.00	2209.72	0.29
23	1802870.00	2233.58	0.29
24	1881630.00	2331.15	0.30
25	1727940.00	2140.75	0.28
26	1728430.00	2141.36	0.28
27	1736230.00	2151.02	0.28
28	1761100.00	2181.83	0.28
29	1727960.00	2140.78	0.28
30	2473350.00	3064.24	0.40
31	2475480.00	3066.88	0.40
32	2505350.00	3103.89	0.40
33	2504370.00	3102.67	0.40
34	2622500.00	3249.02	0.42
35	1814170.00	2247.58	0.29
36	1815590.00	2249.35	0.29
37	1835510.00	2274.02	0.30
38	1834850.00	2273.20	0.30
39	1913610.00	2370.77	0.31
40	1727940.00	2140.75	0.28
41	1728430.00	2141.36	0.28
42	1738620.00	2153.98	0.28
43	1736230.00	2151.02	0.28
44	1761100.00	2181.83	0.28
45	1727960.00	2140.78	0.28
46	1727960.00	2140.78	0.28

Travata 401
B=0.90 <m> L=10.97 <m> k_i=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	34696.80	3514.31	0.26
1	33588.90	3402.10	0.26
2	30759.10	3115.48	0.23
3	27305.60	2765.68	0.21
3	22390.00	2267.81	0.17
4	25754.80	2608.61	0.20
5	42569.70	4311.73	0.32

Relazione di calcolo

5	45517.60	4610.31	0.35
6	36089.50	3655.37	0.27
7	41926.70	4246.60	0.32
7	44543.30	4511.63	0.34
8	35654.10	3611.28	0.27
9	37478.50	3796.06	0.28
9	37803.60	3828.99	0.29
10	32642.50	3306.24	0.25
11	30087.30	3047.43	0.23
11	26604.80	2694.70	0.20
12	27638.20	2799.37	0.21
13	45351.50	4593.48	0.34
13	49732.30	5037.20	0.38
14	37972.90	3846.13	0.29
15	44708.40	4528.35	0.34
15	48758.00	4938.52	0.37
16	37537.50	3802.04	0.29
17	40089.90	4060.56	0.30
18	39654.10	4016.42	0.30
19	40044.00	4055.91	0.30
20	41302.40	4183.37	0.31
21	29803.80	3018.72	0.23
22	29513.30	2989.29	0.22
23	29773.20	3015.62	0.23
24	30612.20	3100.60	0.23
25	28829.70	2920.05	0.22
26	28471.30	2883.75	0.22
27	28574.90	2894.25	0.22
28	28837.60	2920.85	0.22
29	28473.00	2883.93	0.22
30	38544.20	3904.00	0.29
31	38108.40	3859.86	0.29
32	37085.80	3756.29	0.28
33	38498.30	3899.35	0.29
34	39756.80	4026.82	0.30
35	28773.40	2914.35	0.22
36	28482.80	2884.92	0.22
37	27801.10	2815.87	0.21
38	28742.80	2911.25	0.22
39	29581.70	2996.23	0.22
40	28829.70	2920.05	0.22
41	28471.30	2883.75	0.22
42	28129.50	2849.14	0.21
43	28574.90	2894.25	0.22
44	28837.60	2920.85	0.22
45	28473.00	2883.93	0.22
46	28473.00	2883.93	0.22

Travata 402

B=0.90 <m> L=10.89 <m> k₁=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	34782.20	3548.84	0.27
1	33928.00	3461.68	0.26
2	30736.60	3136.07	0.24
3	30601.10	3122.24	0.23
3	27593.00	2815.32	0.21
4	27905.80	2847.24	0.21
5	39260.70	4005.78	0.30
5	40713.50	4154.01	0.31
6	33768.80	3445.44	0.26
7	38918.20	3970.84	0.30
7	40194.60	4101.08	0.31
8	33537.00	3421.79	0.26
9	32489.10	3314.88	0.25
9	30453.60	3107.19	0.23
10	29184.10	2977.67	0.22
11	28308.00	2888.28	0.22
11	24118.60	2460.83	0.18
12	26353.30	2688.83	0.20
13	36967.60	3771.82	0.28
13	37239.10	3799.52	0.28
14	32216.30	3287.04	0.25
15	36625.10	3736.88	0.28
15	36720.30	3746.58	0.28
16	31984.40	3263.38	0.24
17	40000.10	4081.22	0.31
18	39409.40	4020.95	0.30

Relazione di calcolo

19	39869.70	4067.92	0.31
20	41055.50	4188.91	0.31
21	29741.70	3034.56	0.23
22	29347.90	2994.38	0.22
23	29654.80	3025.69	0.23
24	30445.30	3106.35	0.23
25	28628.60	2920.98	0.22
26	28152.60	2872.42	0.22
27	28274.20	2884.83	0.22
28	28518.40	2909.75	0.22
29	28158.50	2873.03	0.22
30	37886.30	3865.55	0.29
31	37295.60	3805.29	0.29
32	35913.10	3664.23	0.27
33	37755.90	3852.25	0.29
34	38941.70	3973.24	0.30
35	28332.50	2890.78	0.22
36	27938.70	2850.60	0.21
37	27017.00	2756.56	0.21
38	28245.60	2881.91	0.22
39	29036.10	2962.57	0.22
40	28628.60	2920.98	0.22
41	28152.60	2872.42	0.22
42	27688.80	2825.10	0.21
43	28274.20	2884.83	0.22
44	28518.40	2909.75	0.22
45	28158.50	2873.03	0.22
46	28158.50	2873.03	0.22

Travata 403

B=0.90 <m> L=10.89 <m> k₁=3000000.00 <daN/mc> k_w=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	26713.20	2725.56	0.20
1	24400.50	2489.59	0.19
2	24240.40	2473.26	0.19
3	26191.20	2672.30	0.20
3	23609.60	2408.89	0.18
4	23887.00	2437.20	0.18
5	27278.50	2783.24	0.21
5	25257.00	2576.98	0.19
6	24623.20	2512.31	0.19
7	27241.00	2779.41	0.21
7	25200.20	2571.19	0.19
8	24597.80	2509.72	0.19
9	26978.10	2752.58	0.21
9	24801.80	2530.54	0.19
10	24419.80	2491.56	0.19
11	26456.10	2699.32	0.20
11	24010.90	2449.84	0.18
12	24066.30	2455.50	0.18
13	27543.40	2810.26	0.21
13	25658.30	2617.93	0.20
14	24802.50	2530.61	0.19
15	27505.90	2806.44	0.21
15	25601.60	2612.14	0.20
16	24777.10	2528.02	0.19
17	33371.10	3404.87	0.26
18	33456.70	3413.60	0.26
19	33882.80	3457.08	0.26
20	35310.90	3602.78	0.27
21	24673.60	2517.46	0.19
22	24730.70	2523.28	0.19
23	25014.80	2552.27	0.19
24	25966.80	2649.40	0.20
25	24042.50	2453.07	0.18
26	24111.80	2460.14	0.18
27	24225.60	2471.75	0.19
28	24523.90	2502.18	0.19
29	24111.10	2460.06	0.18
30	34387.20	3508.54	0.26
31	34472.80	3517.27	0.26
32	35147.00	3586.06	0.27
33	34899.00	3560.76	0.27
34	36327.00	3706.46	0.28
35	25351.10	2586.58	0.19
36	25408.10	2592.40	0.19
37	25857.60	2638.26	0.20

Relazione di calcolo

38	25692.20	2621.39	0.20
39	26644.20	2718.52	0.20
40	24042.50	2453.07	0.18
41	24111.80	2460.14	0.18
42	24336.90	2483.10	0.19
43	24225.60	2471.75	0.19
44	24523.90	2502.18	0.19
45	24111.10	2460.06	0.18
46	24111.10	2460.06	0.18

Travata 405

B=0.90 <m> L=10.89 <m> k₁=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	26010.30	2653.84	0.20
1	23669.40	2415.00	0.18
2	23636.60	2411.66	0.18
3	25989.70	2651.74	0.20
3	23638.10	2411.81	0.18
4	23622.70	2410.23	0.18
5	26006.40	2653.44	0.20
5	23663.50	2414.40	0.18
6	23634.00	2411.39	0.18
7	25982.40	2651.00	0.20
7	23627.20	2410.69	0.18
8	23617.80	2409.73	0.18
9	26032.60	2656.12	0.20
9	23703.20	2418.45	0.18
10	23651.80	2413.20	0.18
11	26012.00	2654.01	0.20
11	23672.00	2415.26	0.18
12	23637.80	2411.77	0.18
13	26028.70	2655.72	0.20
13	23697.30	2417.85	0.18
14	23649.10	2412.93	0.18
15	26004.80	2653.28	0.20
15	23661.00	2414.14	0.18
16	23632.90	2411.27	0.18
17	33271.40	3394.69	0.25
18	33299.60	3397.57	0.25
19	33859.80	3454.73	0.26
20	35465.10	3618.52	0.27
21	24417.10	2491.29	0.19
22	24435.90	2493.20	0.19
23	24809.40	2531.31	0.19
24	25879.60	2640.51	0.20
25	23586.50	2406.54	0.18
26	23610.10	2408.95	0.18
27	23759.50	2424.19	0.18
28	24091.40	2458.05	0.18
29	23610.20	2408.96	0.18
30	34144.50	3483.78	0.26
31	34172.70	3486.65	0.26
32	34755.10	3546.07	0.27
33	34732.90	3543.81	0.27
34	36338.20	3707.60	0.28
35	24999.20	2550.68	0.19
36	25018.00	2552.59	0.19
37	25406.20	2592.21	0.19
38	25391.50	2590.70	0.19
39	26461.70	2699.90	0.20
40	23586.50	2406.54	0.18
41	23610.10	2408.95	0.18
42	23804.20	2428.75	0.18
43	23759.50	2424.19	0.18
44	24091.40	2458.05	0.18
45	23610.20	2408.96	0.18
46	23610.20	2408.96	0.18

Travata 408

B=0.90 <m> L=41.89 <m> k₁=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	99542.90	2640.33	0.20
1	91353.00	2423.09	0.18
2	90164.50	2391.57	0.18
3	97230.90	2579.00	0.19
3	87849.90	2330.18	0.17

Relazione di calcolo

4	88599.10	2350.05	0.18
5	102035.00	2706.44	0.20
5	95129.40	2523.26	0.19
6	91852.00	2436.33	0.18
7	101860.00	2701.78	0.20
7	94863.20	2516.20	0.19
8	91733.10	2433.17	0.18
9	99604.20	2641.95	0.20
9	91446.00	2425.56	0.18
10	90206.00	2392.67	0.18
11	97292.20	2580.63	0.19
11	87942.90	2332.64	0.17
12	88640.70	2351.15	0.18
13	102097.00	2708.06	0.20
13	95222.40	2525.72	0.19
14	91893.50	2437.43	0.18
15	101921.00	2703.40	0.20
15	94956.20	2518.67	0.19
16	91774.60	2434.28	0.18
17	124904.00	3313.01	0.25
18	124982.00	3315.09	0.25
19	126613.00	3358.34	0.25
20	132595.00	3517.02	0.26
21	91877.10	2436.99	0.18
22	91929.30	2438.38	0.18
23	93016.40	2467.21	0.19
24	97004.60	2573.00	0.19
25	89146.40	2364.56	0.18
26	89206.30	2366.15	0.18
27	89641.50	2377.70	0.18
28	90898.10	2411.03	0.18
29	89204.40	2366.10	0.18
30	126263.00	3349.07	0.25
31	126342.00	3351.15	0.25
32	127239.00	3374.95	0.25
33	127972.00	3394.40	0.25
34	133955.00	3553.08	0.27
35	92783.20	2461.03	0.18
36	92835.50	2462.41	0.18
37	93433.70	2478.28	0.19
38	93922.50	2491.25	0.19
39	97910.80	2597.03	0.19
40	89146.40	2364.56	0.18
41	89206.30	2366.15	0.18
42	89506.40	2374.11	0.18
43	89641.50	2377.70	0.18
44	90898.10	2411.03	0.18
45	89204.40	2366.10	0.18
46	89204.40	2366.10	0.18

Travata 416
 B=0.90 <m> L=41.89 <m> k₁=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	171900.00	4559.55	0.34
1	159533.00	4231.52	0.32
2	155024.00	4111.94	0.31
3	162587.00	4312.53	0.32
3	145422.00	3857.26	0.29
4	148719.00	3944.69	0.30
5	182000.00	4827.46	0.36
5	174836.00	4637.45	0.35
6	161863.00	4293.33	0.32
7	181345.00	4810.08	0.36
7	173844.00	4611.11	0.35
8	161419.00	4281.56	0.32
9	172637.00	4579.12	0.34
9	160650.00	4261.17	0.32
10	155524.00	4125.18	0.31
11	163324.00	4332.10	0.32
11	146540.00	3886.90	0.29
12	149218.00	3957.94	0.30
13	182738.00	4847.02	0.36
13	175954.00	4667.09	0.35
14	162362.00	4306.57	0.32
15	182082.00	4829.65	0.36
15	174961.00	4640.76	0.35
16	161918.00	4294.81	0.32

Relazione di calcolo

17	214452.00	5688.24	0.43
18	214890.00	5699.86	0.43
19	217427.00	5767.15	0.43
20	224610.00	5957.68	0.45
21	156644.00	4154.91	0.31
22	156936.00	4162.66	0.31
23	158628.00	4207.52	0.32
24	163416.00	4334.54	0.33
25	151659.00	4022.68	0.30
26	151553.00	4019.87	0.30
27	152264.00	4038.72	0.30
28	153713.00	4077.16	0.31
29	151382.00	4015.33	0.30
30	225393.00	5978.44	0.45
31	225831.00	5990.06	0.45
32	232354.00	6163.08	0.46
33	228368.00	6057.35	0.45
34	235551.00	6247.88	0.47
35	163938.00	4348.38	0.33
36	164230.00	4356.13	0.33
37	168579.00	4471.47	0.34
38	165922.00	4400.99	0.33
39	170710.00	4528.00	0.34
40	151659.00	4022.68	0.30
41	151553.00	4019.87	0.30
42	153813.00	4079.82	0.31
43	152264.00	4038.72	0.30
44	153713.00	4077.16	0.31
45	151382.00	4015.33	0.30
46	151382.00	4015.33	0.30

Travata 417

B=0.90 <m> L=25.27 <m> k_i=3000000.00 <daN/mc> k_w=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	105064.00	4619.63	0.35
1	101607.00	4467.61	0.34
2	93179.90	4097.08	0.31
3	104579.00	4598.31	0.34
3	100872.00	4435.30	0.33
4	92851.50	4082.64	0.31
5	98536.30	4332.60	0.32
5	91715.80	4032.71	0.30
6	88760.10	3902.74	0.29
7	92455.80	4065.24	0.30
7	82503.00	3627.62	0.27
8	84643.30	3721.73	0.28
9	105708.00	4647.93	0.35
9	102582.00	4510.49	0.34
10	93615.70	4116.24	0.31
11	105223.00	4626.61	0.35
11	101847.00	4478.18	0.34
12	93287.30	4101.80	0.31
13	99179.90	4360.90	0.33
13	92691.10	4075.59	0.31
14	89195.90	3921.91	0.29
15	93099.50	4093.54	0.31
15	83478.30	3670.50	0.28
16	85079.10	3740.89	0.28
17	120306.00	5289.80	0.40
18	120744.00	5309.06	0.40
19	122739.00	5396.79	0.40
20	127293.00	5597.02	0.42
21	88392.70	3886.59	0.29
22	88684.70	3899.43	0.29
23	90014.80	3957.91	0.30
24	93050.70	4091.40	0.31
25	85996.80	3781.24	0.28
26	86369.50	3797.63	0.28
27	86900.90	3821.00	0.29
28	87824.80	3861.62	0.29
29	86372.30	3797.75	0.28
30	126670.00	5569.61	0.42
31	127108.00	5588.86	0.42
32	131362.00	5775.95	0.43
33	129103.00	5676.59	0.43
34	133657.00	5876.82	0.44
35	92635.10	4073.13	0.31

Relazione di calcolo

36	92927.10	4085.96	0.31
37	95763.70	4210.69	0.32
38	94257.20	4144.45	0.31
39	97293.10	4277.93	0.32
40	85996.80	3781.24	0.28
41	86369.50	3797.63	0.28
42	87786.40	3859.93	0.29
43	86900.90	3821.00	0.29
44	87824.80	3861.62	0.29
45	86372.30	3797.75	0.28
46	86372.30	3797.75	0.28

Travata 422

B=0.90 <m> L=10.72 <m> k₁=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	30020.80	3111.60	0.23
1	29358.00	3042.91	0.23
2	26500.50	2746.73	0.21
3	29625.60	3070.65	0.23
3	28759.20	2980.85	0.22
4	26232.90	2719.00	0.20
5	28327.00	2936.05	0.22
5	26791.70	2776.91	0.21
6	25353.70	2627.87	0.20
7	26480.00	2744.61	0.21
7	23993.20	2486.86	0.19
8	24103.20	2498.26	0.19
9	29753.40	3083.89	0.23
9	28952.90	3000.92	0.23
10	26319.50	2727.97	0.20
11	29358.20	3042.94	0.23
11	28354.20	2938.87	0.22
12	26051.90	2700.24	0.20
13	28059.60	2908.34	0.22
13	26386.60	2734.93	0.21
14	25172.70	2609.11	0.20
15	26212.70	2716.90	0.20
15	23588.20	2444.87	0.18
16	23922.20	2479.50	0.19
17	34173.20	3542.00	0.27
18	34402.30	3565.75	0.27
19	34671.30	3593.63	0.27
20	35979.80	3729.25	0.28
21	25142.00	2605.93	0.20
22	25294.70	2621.76	0.20
23	25474.10	2640.35	0.20
24	26346.40	2730.76	0.20
25	24241.70	2512.61	0.19
26	24256.20	2514.11	0.19
27	24340.70	2522.88	0.19
28	24606.70	2550.45	0.19
29	24192.00	2507.46	0.19
30	35905.50	3721.55	0.28
31	36134.60	3745.30	0.28
32	37000.80	3835.07	0.29
33	36403.60	3773.18	0.28
34	37712.10	3908.80	0.29
35	26296.80	2725.63	0.20
36	26449.60	2741.46	0.21
37	27027.00	2801.31	0.21
38	26628.90	2760.05	0.21
39	27501.30	2850.46	0.21
40	24241.70	2512.61	0.19
41	24256.20	2514.11	0.19
42	24577.00	2547.36	0.19
43	24340.70	2522.88	0.19
44	24606.70	2550.45	0.19
45	24192.00	2507.46	0.19
46	24192.00	2507.46	0.19

Travata 424

B=0.90 <m> L=14.55 <m> k₁=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	47270.90	3609.84	0.27
1	46746.30	3569.78	0.27
2	41529.10	3171.37	0.24

Relazione di calcolo

3	46571.90	3556.47	0.27
3	45687.20	3488.91	0.26
4	41055.90	3135.23	0.24
5	44277.70	3381.27	0.25
5	42211.10	3223.45	0.24
6	39502.60	3016.61	0.23
7	41013.10	3131.97	0.23
7	37264.70	2845.72	0.21
8	37292.30	2847.82	0.21
9	46401.90	3543.48	0.27
9	45429.60	3469.23	0.26
10	40940.80	3126.44	0.23
11	45702.90	3490.10	0.26
11	44370.50	3388.36	0.25
12	40467.50	3090.30	0.23
13	43408.70	3314.90	0.25
13	40894.40	3122.90	0.23
14	38914.20	2971.68	0.22
15	40144.10	3065.60	0.23
15	35948.10	2745.17	0.21
16	36703.90	2802.89	0.21
17	51791.80	3955.08	0.30
18	51791.90	3955.09	0.30
19	52403.10	4001.76	0.30
20	54348.90	4150.36	0.31
21	38277.40	2923.06	0.22
22	38277.50	2923.06	0.22
23	38685.00	2954.18	0.22
24	39982.20	3053.24	0.23
25	37310.60	2849.23	0.21
26	37313.50	2849.45	0.21
27	37476.30	2861.88	0.21
28	37881.70	2892.84	0.22
29	37314.50	2849.52	0.21
30	50356.70	3845.49	0.29
31	50356.90	3845.50	0.29
32	49404.70	3772.79	0.28
33	50968.10	3892.18	0.29
34	52913.90	4040.77	0.30
35	37320.70	2850.00	0.21
36	37320.80	2850.01	0.21
37	36686.00	2801.53	0.21
38	37728.30	2881.12	0.22
39	39025.50	2980.18	0.22
40	37310.60	2849.23	0.21
41	37313.50	2849.45	0.21
42	36995.60	2825.17	0.21
43	37476.30	2861.88	0.21
44	37881.70	2892.84	0.22
45	37314.50	2849.52	0.21
46	37314.50	2849.52	0.21

Travata 425

B=0.90 <m> L=10.72 <m> k₁=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	28265.30	2929.66	0.22
1	27274.50	2826.96	0.21
2	25091.30	2600.68	0.20
3	27867.70	2888.44	0.22
3	26672.00	2764.51	0.21
4	24822.10	2572.77	0.19
5	26969.10	2795.30	0.21
5	25310.50	2623.39	0.20
6	24213.70	2509.71	0.19
7	25460.40	2638.93	0.20
7	23024.60	2386.46	0.18
8	23192.20	2403.84	0.18
9	28482.20	2952.13	0.22
9	27603.00	2861.01	0.21
10	25238.10	2615.89	0.20
11	28084.50	2910.92	0.22
11	27000.50	2798.56	0.21
12	24968.90	2587.99	0.19
13	27185.90	2817.78	0.21
13	25639.00	2657.44	0.20
14	24360.50	2524.93	0.19
15	25677.20	2661.40	0.20

Relazione di calcolo

15	23353.10	2420.51	0.18
16	23339.00	2419.05	0.18
17	32320.50	3349.97	0.25
18	32640.30	3383.12	0.25
19	33095.50	3430.30	0.26
20	34339.50	3559.24	0.27
21	23825.40	2469.46	0.19
22	24038.60	2491.56	0.19
23	24342.10	2523.02	0.19
24	25171.40	2608.97	0.20
25	23166.00	2401.12	0.18
26	23355.60	2420.77	0.18
27	23482.60	2433.93	0.18
28	23733.20	2459.91	0.18
29	23327.60	2417.87	0.18
30	32413.30	3359.59	0.25
31	32733.10	3392.74	0.25
32	32669.20	3386.11	0.25
33	33188.40	3439.92	0.26
34	34432.30	3568.86	0.27
35	23887.20	2475.88	0.19
36	24100.40	2497.97	0.19
37	24057.80	2493.55	0.19
38	24403.90	2529.43	0.19
39	25233.20	2615.39	0.20
40	23166.00	2401.12	0.18
41	23355.60	2420.77	0.18
42	23348.30	2420.01	0.18
43	23482.60	2433.93	0.18
44	23733.20	2459.91	0.18
45	23327.60	2417.87	0.18
46	23327.60	2417.87	0.18

Travata 427
 B=0.90 <m> L=10.72 <m> k₁=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	28450.50	2948.85	0.22
1	25877.30	2682.14	0.20
2	25859.00	2680.24	0.20
3	28436.50	2947.40	0.22
3	25856.20	2679.96	0.20
4	25849.60	2679.27	0.20
5	28457.10	2949.54	0.22
5	25887.40	2683.19	0.20
6	25863.50	2680.71	0.20
7	28448.90	2948.68	0.22
7	25874.90	2681.90	0.20
8	25857.90	2680.13	0.20
9	28448.10	2948.60	0.22
9	25873.70	2681.77	0.20
10	25857.40	2680.07	0.20
11	28434.10	2947.15	0.22
11	25852.60	2679.58	0.20
12	25847.90	2679.10	0.20
13	28454.70	2949.29	0.22
13	25883.80	2682.81	0.20
14	25861.90	2680.54	0.20
15	28446.50	2948.43	0.22
15	25871.30	2681.52	0.20
16	25856.30	2679.96	0.20
17	36692.80	3803.15	0.29
18	36699.90	3803.89	0.29
19	37409.80	3877.47	0.29
20	39174.20	4060.34	0.30
21	26837.90	2781.71	0.21
22	26842.70	2782.20	0.21
23	27316.00	2831.26	0.21
24	28492.20	2953.17	0.22
25	25833.00	2677.55	0.20
26	25842.80	2678.56	0.20
27	26031.80	2698.15	0.20
28	26392.60	2735.55	0.21
29	25844.20	2678.71	0.20
30	37756.60	3913.41	0.29
31	37763.80	3914.16	0.29
32	38479.30	3988.32	0.30
33	38473.70	3987.74	0.30

Relazione di calcolo

34	40238.10	4170.61	0.31
35	27547.20	2855.22	0.21
36	27552.00	2855.72	0.21
37	28029.00	2905.16	0.22
38	28025.20	2904.77	0.22
39	29201.50	3026.69	0.23
40	25833.00	2677.55	0.20
41	25842.80	2678.56	0.20
42	26080.60	2703.21	0.20
43	26031.80	2698.15	0.20
44	26392.60	2735.55	0.21
45	25844.20	2678.71	0.20
46	25844.20	2678.71	0.20

Travata 429

B=0.90 <m> L=10.72 <m> k₁=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	29014.10	3007.27	0.23
1	27224.40	2821.77	0.21
2	26051.80	2700.23	0.20
3	28834.90	2988.69	0.22
3	26952.90	2793.62	0.21
4	25930.50	2687.65	0.20
5	28336.20	2937.01	0.22
5	26197.40	2715.31	0.20
6	25592.80	2652.66	0.20
7	27576.00	2858.20	0.21
7	25045.40	2595.92	0.19
8	25078.10	2599.31	0.19
9	28929.20	2998.47	0.22
9	27095.90	2808.44	0.21
10	25994.30	2694.27	0.20
11	28750.00	2979.89	0.22
11	26824.30	2780.30	0.21
12	25873.00	2681.69	0.20
13	28251.40	2928.21	0.22
13	26068.80	2701.99	0.20
14	25535.40	2646.70	0.20
15	27491.10	2849.41	0.21
15	24916.80	2582.59	0.19
16	25020.60	2593.35	0.19
17	35360.60	3665.07	0.27
18	35430.30	3672.30	0.28
19	36057.10	3737.26	0.28
20	37736.20	3911.29	0.29
21	25918.40	2686.40	0.20
22	25964.90	2691.22	0.20
23	26382.70	2734.53	0.21
24	27502.10	2850.55	0.21
25	25046.30	2596.01	0.19
26	25104.50	2602.04	0.20
27	25271.60	2619.36	0.20
28	25616.90	2655.15	0.20
29	25104.50	2602.04	0.20
30	36763.10	3810.44	0.29
31	36832.80	3817.67	0.29
32	37767.90	3914.58	0.29
33	37459.60	3882.63	0.29
34	39138.70	4056.66	0.30
35	26853.40	2783.31	0.21
36	26899.90	2788.13	0.21
37	27523.30	2852.74	0.21
38	27317.70	2831.44	0.21
39	28437.10	2947.46	0.22
40	25046.30	2596.01	0.19
41	25104.50	2602.04	0.20
42	25416.20	2634.35	0.20
43	25271.60	2619.36	0.20
44	25616.90	2655.15	0.20
45	25104.50	2602.04	0.20
46	25104.50	2602.04	0.20

Travata 430

B=0.90 <m> L=14.95 <m> k₁=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	50021.10	3717.66	0.28

Relazione di calcolo

1	49445.60	3674.88	0.28
2	43953.10	3266.67	0.24
3	48781.80	3625.55	0.27
3	47567.80	3535.33	0.27
4	43114.00	3204.31	0.24
5	46938.30	3488.54	0.26
5	44774.60	3327.73	0.25
6	41865.80	3111.55	0.23
7	43056.50	3200.04	0.24
7	38893.20	2890.61	0.22
8	39237.70	2916.22	0.22
9	51092.50	3797.29	0.28
9	51068.90	3795.54	0.28
10	44678.50	3320.59	0.25
11	49853.20	3705.18	0.28
11	49191.20	3655.98	0.27
12	43839.40	3258.23	0.24
13	48009.70	3568.17	0.27
13	46397.90	3448.38	0.26
14	42591.20	3165.46	0.24
15	44127.90	3279.67	0.25
15	40516.50	3011.26	0.23
16	39963.10	2970.13	0.22
17	54895.40	4079.92	0.31
18	54895.40	4079.93	0.31
19	55478.60	4123.27	0.31
20	57652.50	4284.84	0.32
21	40525.80	3011.95	0.23
22	40525.90	3011.96	0.23
23	40914.60	3040.85	0.23
24	42363.90	3148.56	0.24
25	39518.50	2937.09	0.22
26	39516.70	2936.95	0.22
27	39672.30	2948.52	0.22
28	40129.40	2982.49	0.22
29	39516.00	2936.90	0.22
30	57756.70	4292.58	0.32
31	57756.80	4292.59	0.32
32	59661.30	4434.14	0.33
33	58339.90	4335.93	0.33
34	60513.80	4497.50	0.34
35	42433.40	3153.73	0.24
36	42433.40	3153.73	0.24
37	43703.10	3248.10	0.24
38	42822.20	3182.62	0.24
39	44271.50	3290.34	0.25
40	39518.50	2937.09	0.22
41	39516.70	2936.95	0.22
42	40151.90	2984.16	0.22
43	39672.30	2948.52	0.22
44	40129.40	2982.49	0.22
45	39516.00	2936.90	0.22
46	39516.00	2936.90	0.22

Travata 439
 B=0.90 <m> L=25.67 <m> k₁=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	118071.00	5110.64	0.38
1	114604.00	4960.57	0.37
2	104555.00	4525.61	0.34
3	117342.00	5079.06	0.38
3	113499.00	4912.72	0.37
4	104061.00	4504.23	0.34
5	111026.00	4805.70	0.36
5	103930.00	4498.54	0.34
6	99785.40	4319.15	0.32
7	104258.00	4512.74	0.34
7	93674.90	4054.67	0.30
8	95202.90	4120.80	0.31
9	117381.00	5080.78	0.38
9	113559.00	4915.32	0.37
10	104088.00	4505.39	0.34
11	116652.00	5049.20	0.38
11	112453.00	4867.48	0.37
12	103594.00	4484.01	0.34
13	110336.00	4775.84	0.36
13	102884.00	4453.29	0.33

Relazione di calcolo

14	99318.20	4298.93	0.32
15	103568.00	4482.88	0.34
15	92629.60	4009.42	0.30
16	94735.80	4100.58	0.31
17	135191.00	5851.67	0.44
18	135573.00	5868.21	0.44
19	137730.00	5961.56	0.45
20	142726.00	6177.83	0.46
21	98822.90	4277.49	0.32
22	99077.60	4288.52	0.32
23	100515.00	4350.75	0.33
24	103846.00	4494.93	0.34
25	96117.40	4160.39	0.31
26	96436.90	4174.21	0.31
27	97011.90	4199.10	0.31
28	98026.40	4243.02	0.32
29	96437.30	4174.23	0.31
30	136322.00	5900.60	0.44
31	136704.00	5917.14	0.44
32	137459.00	5949.84	0.45
33	138860.00	6010.49	0.45
34	143857.00	6226.76	0.47
35	99576.60	4310.11	0.32
36	99831.30	4321.14	0.32
37	100335.00	4342.94	0.33
38	101269.00	4383.37	0.33
39	104600.00	4527.55	0.34
40	96117.40	4160.39	0.31
41	96436.90	4174.21	0.31
42	96688.50	4185.10	0.31
43	97011.90	4199.10	0.31
44	98026.40	4243.02	0.32
45	96437.30	4174.23	0.31
46	96437.30	4174.23	0.31

Travata 462

B=0.90 <m> L=10.97 <m> k₁=3000000.00 <daN/mc> k_w=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	27425.20	2777.80	0.21
1	25571.00	2589.99	0.19
2	24687.40	2500.49	0.19
3	26197.60	2653.46	0.20
3	23711.00	2401.60	0.18
4	23856.20	2416.31	0.18
5	28709.40	2907.87	0.22
5	27516.80	2787.07	0.21
6	25556.90	2588.56	0.19
7	28582.60	2895.03	0.22
7	27324.70	2767.61	0.21
8	25471.00	2579.87	0.19
9	26966.90	2731.38	0.20
9	24876.50	2519.65	0.19
10	24377.10	2469.06	0.19
11	25739.30	2607.04	0.20
11	23016.60	2331.26	0.17
12	23545.90	2384.88	0.18
13	28251.10	2861.45	0.21
13	26822.40	2716.74	0.20
14	25246.60	2557.13	0.19
15	28124.30	2848.61	0.21
15	26630.30	2697.28	0.20
16	25160.70	2548.44	0.19
17	33286.50	3371.46	0.25
18	33371.70	3380.10	0.25
19	33814.50	3424.95	0.26
20	35275.60	3572.93	0.27
21	24553.50	2486.93	0.19
22	24610.30	2492.69	0.19
23	24905.50	2522.59	0.19
24	25879.50	2621.24	0.20
25	23903.60	2421.11	0.18
26	23973.80	2428.22	0.18
27	24092.00	2440.19	0.18
28	24396.90	2471.07	0.19
29	23973.50	2428.19	0.18
30	34263.90	3470.47	0.26
31	34349.20	3479.10	0.26

Relazione di calcolo

32	34999.50	3544.97	0.27
33	34792.00	3523.95	0.26
34	36253.00	3671.94	0.28
35	25205.10	2552.93	0.19
36	25261.90	2558.69	0.19
37	25695.50	2602.60	0.20
38	25557.20	2588.59	0.19
39	26531.20	2687.25	0.20
40	23903.60	2421.11	0.18
41	23973.80	2428.22	0.18
42	24190.80	2450.19	0.18
43	24092.00	2440.19	0.18
44	24396.90	2471.07	0.19
45	23973.50	2428.19	0.18
46	23973.50	2428.19	0.18

Travata 464

B=0.90 <m> L=10.97 <m> k_i=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	26174.50	2651.12	0.20
1	23842.20	2414.89	0.18
2	23776.90	2408.28	0.18
3	26089.30	2642.49	0.20
3	23713.20	2401.82	0.18
4	23719.30	2402.44	0.18
5	26262.20	2660.00	0.20
5	23975.00	2428.34	0.18
6	23836.30	2414.29	0.18
7	26252.20	2658.98	0.20
7	23959.90	2426.81	0.18
8	23829.50	2413.60	0.18
9	26137.20	2647.34	0.20
9	23785.70	2409.17	0.18
10	23751.70	2405.72	0.18
11	26052.10	2638.72	0.20
11	23656.70	2396.10	0.18
12	23694.00	2399.88	0.18
13	26224.90	2656.22	0.20
13	23918.50	2422.62	0.18
14	23811.00	2411.73	0.18
15	26214.90	2655.21	0.20
15	23903.40	2421.09	0.18
16	23804.30	2411.05	0.18
17	33450.80	3388.10	0.25
18	33478.50	3390.91	0.25
19	34038.10	3447.60	0.26
20	35625.90	3608.42	0.27
21	24528.50	2484.40	0.19
22	24546.90	2486.27	0.19
23	24920.00	2524.06	0.19
24	25978.60	2631.27	0.20
25	23701.10	2400.60	0.18
26	23724.20	2402.94	0.18
27	23873.40	2418.05	0.18
28	24201.40	2451.27	0.18
29	23724.20	2402.94	0.18
30	34266.70	3470.75	0.26
31	34294.40	3473.55	0.26
32	34838.30	3528.64	0.26
33	34854.00	3530.24	0.26
34	36441.80	3691.06	0.28
35	25072.40	2539.49	0.19
36	25090.90	2541.36	0.19
37	25453.50	2578.09	0.19
38	25464.00	2579.15	0.19
39	26522.50	2686.37	0.20
40	23701.10	2400.60	0.18
41	23724.20	2402.94	0.18
42	23905.50	2421.30	0.18
43	23873.40	2418.05	0.18
44	24201.40	2451.27	0.18
45	23724.20	2402.94	0.18
46	23724.20	2402.94	0.18

Travata 491

B=0.90 <m> L=10.72 <m> k_i=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N	q _{es}	Ced
----	---	-----------------	-----

Relazione di calcolo

	<daN>	<daN/mq>	<cm>
1	29245.00	3031.20	0.23
1	27640.80	2864.93	0.21
2	26182.70	2713.79	0.20
3	28701.10	2974.83	0.22
3	26816.70	2779.51	0.21
4	25814.40	2675.63	0.20
5	28901.30	2995.57	0.22
5	27120.00	2810.95	0.21
6	25949.90	2689.67	0.20
7	28062.80	2908.66	0.22
7	25849.50	2679.26	0.20
8	25382.20	2630.83	0.20
9	29104.40	3016.62	0.23
9	27427.70	2842.84	0.21
10	26087.40	2703.92	0.20
11	28560.50	2960.25	0.22
11	26603.60	2757.42	0.21
12	25719.20	2665.75	0.20
13	28760.60	2980.99	0.22
13	26906.90	2788.85	0.21
14	25854.70	2679.80	0.20
15	27922.10	2894.08	0.22
15	25636.40	2657.17	0.20
16	25287.00	2620.96	0.20
17	35545.60	3684.25	0.28
18	35460.70	3675.44	0.28
19	36069.20	3738.52	0.28
20	37749.20	3912.65	0.29
21	26063.80	2701.47	0.20
22	26007.20	2695.60	0.20
23	26412.80	2737.65	0.21
24	27532.90	2853.74	0.21
25	25076.50	2599.14	0.19
26	25005.00	2591.73	0.19
27	25167.30	2608.55	0.20
28	25513.50	2644.44	0.20
29	25004.70	2591.70	0.19
30	36236.10	3755.81	0.28
31	36151.10	3747.00	0.28
32	36610.20	3794.59	0.28
33	36759.60	3810.08	0.29
34	38439.70	3984.21	0.30
35	26524.10	2749.18	0.21
36	26467.40	2743.31	0.21
37	26773.50	2775.03	0.21
38	26873.10	2785.36	0.21
39	27993.20	2901.45	0.22
40	25076.50	2599.14	0.19
41	25005.00	2591.73	0.19
42	25158.10	2607.60	0.20
43	25167.30	2608.55	0.20
44	25513.50	2644.44	0.20
45	25004.70	2591.70	0.19
46	25004.70	2591.70	0.19

ELEVAZIONI CORPO B

Sommario

Verifiche e armature pilastri.....	2
Pilastrata n. 13	3
Pilastrata n. 14	4
Pilastrata n. 15	5
Pilastrata n. 16	7
Pilastrata n. 18	8
Pilastrata n. 19	9
Pilastrata n. 20	11
Pilastrata n. 21	12
Pilastrata n. 22	13
Pilastrata n. 39	14
Pilastrata n. 40	15
Pilastrata n. 41	17
Pilastrata n. 42	18
Pilastrata n. 43	19
Pilastrata n. 44	21
Pilastrata n. 45	22
Pilastrata n. 46	23
Pilastrata n. 47	25
Pilastrata n. 48	26
Pilastrata n. 53	27
Pilastrata n. 66	28
Pilastrata n. 67	30
Pilastrata n. 73	31
Pilastrata n. 74	32
Pilastrata n. 75	34
Pilastrata n. 76	35
Pilastrata n. 77	36
Pilastrata n. 78	37
Pilastrata n. 79	38
Pilastrata n. 92	40
Verifiche e armature solette/platee.....	41
Armatura soletta a quota 1.75	42
Armatura soletta a quota 4.68	42
Armatura soletta a quota 7.50	45
Armatura soletta Rampa 2	45
Armatura soletta Rampa 1	46
Armatura soletta Rampa 2	47
Verifiche aste in acciaio.....	47
Verifiche e armature pareti.....	149
<i>Figura numero 1: Riferimenti sezione</i>	150
Parete n. 113	150
Parete n. 114	151
Parete n. 115	151

Verifiche e armature pilastri

Simbologia

Δ_{sm}	=Distanza media tra le fessure
E_{syrd}	=Deformazione di snervamento dell'acciaio
Φ_{eq}	=Diametro equivalente delle barre
α	=Angolo asse neutro a rottura
α_e	=Coefficiente di efficacia del confinamento
ϵ_T	=Deformazione nell'acciaio (*1000)
ϵ_{am}	=Deformazione unitaria media dell'armatura (*1000)
λ	=Snellezza massima
λ^*	=Snellezza limite
$\mu\Phi_c$	=Capacità della duttilità di curvatura
$\mu\Phi_d$	=Domanda della duttilità di curvatura
σ_c	=Tensione nel calcestruzzo
σ_f	=Tensione nel ferro
σ_s	=Tensione nell'acciaio nella sezione fessurata
ω_{Nd}	=Rapporto meccanico dell'armatura trasversale di confinamento all'interno della zona dissipativa
$A_{c\ eff}$	=Area di calcestruzzo efficace
A_s	=Area complessiva dei ferri nell'area di calcestruzzo efficace
A_{fC}	=Area di ferro compressa
A_{fT}	=Area di ferro tesa
A_{s1}	=Area di ferro superiore delle travi incidenti sulla faccia
A_{s2}	=Area di ferro inferiore delle travi incidenti sulla faccia
A_{sh}	=Area totale della sezione della staffa
B	=Base
B_j	=Larghezza effettiva utile del nodo
Br_y	=Numero bracci in dir. Y locale
Br_z	=Numero bracci in dir. Z locale
$Br.$	=Numero bracci
CC	=Combinazione delle condizioni di carico elementari e = eccentricità aggiuntiva in caso di compressione o pressoflessione α = amplificazione per gerarchia delle resistenze TG = taglio da gerarchia delle resistenze
C_f	=Copriferro
Cl_s	=Tipo di calcestruzzo
$Conf.$	=Nodo confinato S = Sì N = No
El	=Elemento (asta) in cui viene effettuato il progetto/verifica (progressivo sul numero di aste)
F	=Identificativo faccia del nodo Y+ = Faccia sul lato positivo Y locale pilastro Z+ = Faccia sul lato positivo Z locale pilastro Y- = Faccia sul lato negativo Y locale pilastro Z- = Faccia sul lato negativo Z locale pilastro
F_{cd}	=Resistenza di calcolo a compressione del calcestruzzo
$F_{cd} (Inc)$	=Resistenza di calcolo a compressione del calcestruzzo per verifica al fuoco
F_{ck}	=Resistenza caratteristica cilindrica a compressione del calcestruzzo
F_{ctd}	=Resistenza di calcolo a trazione del calcestruzzo
F_{ctk}	=Resistenza caratteristica a trazione del calcestruzzo
F_{yd}	=Resistenza di calcolo dell'acciaio
F_{yk}	=Tensione caratteristica di snervamento dell'acciaio
H	=Altezza
H_{jc}	=Distanza tra armature pilastro
H_{jw}	=Distanza tra armature trave
K_2	=Coefficiente per distribuzione deformazioni
$M'_{ydy,s}$	=Momento resistente massimo in campo sostanzialmente elastico (ridotto per stabilità) intorno all'asse Y
$M'_{ydz,s}$	=Momento resistente massimo in campo sostanzialmente elastico (ridotto per stabilità) intorno all'asse Z
MR_{dy}	=Momento resistente allo stato limite ultimo intorno all'asse Y
$MR_{dy,s}$	=Momento resistente allo stato limite ultimo (ridotto per stabilità) intorno all'asse Y
MR_{dz}	=Momento resistente allo stato limite ultimo intorno all'asse Z
$MR_{dz,s}$	=Momento resistente allo stato limite ultimo (ridotto per stabilità) intorno all'asse Z
$Mod.$	=Modalità di verifica faccia I = Interna E = Esterna
M_y	=Momento flettente intorno all'asse Y
$M_y\ ver.$	=Momento flettente di verifica intorno all'asse Y
M_z	=Momento flettente intorno all'asse Z
$M_z\ ver.$	=Momento flettente di verifica intorno all'asse Z
N	=Sforzo normale
$Nodo$	=Numero del nodo
Nu	=Sforzo normale ultimo
$Sez.$	=Numero della sezione
$Sic.$	=Sicurezza
$Staff.$	=Staffatura adottata
TCC	=Tipo di combinazione di carico SLU = Stato limite ultimo SLE R = Stato limite d'esercizio, combinazione rara SLE F = Stato limite d'esercizio, combinazione frequente SLE Q = Stato limite d'esercizio, combinazione quasi permanente SLD = Stato limite di danno SLV = Stato limite di salvaguardia della vita SLU I = Stato limite di resistenza al fuoco SND = Stato limite di salvaguardia della vita (non dissipativo)
$Tipo$	=Tipologia L = Sezione a L R = Rettangolare Is = I stondata
Tp	=Tipo di acciaio
$VR_{cd,y}$	=Taglio ultimo lato calcestruzzo in dir. Y
$VR_{cd,z}$	=Taglio ultimo lato calcestruzzo in dir. Z
$VR_{sd,y}$	=Taglio ultimo lato armatura in dir. Y
$VR_{sd,z}$	=Taglio ultimo lato armatura in dir. Z
$V_{sdu,y}$	=Taglio agente in dir. Y
$V_{sdu,z}$	=Taglio agente in dir. Z
W_k	=Ampiezza caratteristica delle fessure
X	=Coordinata progressiva rispetto al nodo iniziale
X_0	=Coordinata progressiva (dal nodo iniziale) dell'inizio del tratto
X_1	=Coordinata progressiva (dal nodo iniziale) della fine del tratto
X_g	=Coordinata progressiva (dal primo nodo) in cui viene effettuato il progetto/verifica
b_c/b_0	=Rapporto tra la larghezza minima della sezione trasversale lorda e la larghezza del nucleo confinato
$b_{w,y}$	=Larghezza membratura resistente al taglio in dir. Y

Relazione di calcolo

bw _z	=	Larghezza membratura resistente al taglio in dir. Z
c	=	Ricoprimento dell'armatura
ctgθ _y	=	Cotangente dell'angolo di inclinazione dei puntoni di calcestruzzo in dir. Y
ctgθ _z	=	Cotangente dell'angolo di inclinazione dei puntoni di calcestruzzo in dir. Z
l ₀	=	Lunghezza libera di inflessione
s	=	Distanza massima tra le barre
v _d	=	Forza assiale adimensionalizzata di progetto

Pilastrata n. 13

Nodi: 30 -35 -63

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
16R		45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	5	SLV	1	16	70.00	-12490.20	2213.95	2213.95	4467.60	4467.60	-12490.20	7245.88	15213.10	67.50	6.57	3.380
0.70	5	SLV	1	16	70.00	-12490.20	2213.95	2213.95	4467.60	4467.60	-12490.20	7245.88	15213.10	67.50	6.57	3.380
4.38	5	SLV	1	16	438.00	-10627.20	-896.12	-896.12	-5616.05	-5616.05	-10627.20	-2747.38	-16369.10	262.97	10.07	2.918
4.68	27	SLU	2	16	0.00	-5617.41	-1357.44	-1357.44	5750.23	5750.23	-5617.41	-3715.19	15439.60	99.84	9.67	2.688
4.68	27	SLU	2	16	0.00	-5617.41	-1357.44	-1357.44	5750.23	5750.23	-5617.41	-3715.19	15439.60	99.84	9.67	2.688
9.30	29	SLU	2	16	462.00	-2816.07	3119.19	3119.19	-1707.90	-1707.90	-2816.07	13770.70	-7477.22	336.09	7.16	4.406

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
0.70	34	SLE R	1	16	70.00	-15891.60	1271.05	265.60	0.00	20.61	15.20	197.71
0.70	22	SLE R	1	16	70.00	-15301.80	1253.31	235.40	0.00	20.61	14.69	191.02
0.70	26	SLE Q	1	16	70.00	-13511.20	1276.68	-46.68	0.00	20.61	13.08	169.74
0.70	34	SLE R	1	16	70.00	-15891.60	1271.05	265.60	0.00	20.61	15.20	197.71
0.70	22	SLE R	1	16	70.00	-15301.80	1253.31	235.40	0.00	20.61	14.69	191.02
0.70	26	SLE Q	1	16	70.00	-13511.20	1276.68	-46.68	0.00	20.61	13.08	169.74
4.38	22	SLE R	1	16	438.00	-13438.80	-2838.43	-876.77	10.30	10.30	34.32	398.97
4.38	26	SLE Q	1	16	438.00	-11648.20	-2992.00	-126.06	12.31	8.29	28.98	413.33
4.68	20	SLE R	2	16	0.00	-3680.61	3513.96	-1281.93	12.31	8.29	48.02	1116.21
4.68	31	SLE R	2	16	0.00	-4099.87	3938.91	-914.79	12.31	8.29	47.56	1162.73
4.68	26	SLE Q	2	16	0.00	-2848.69	1782.30	-123.10	12.31	8.29	17.99	432.14
4.68	20	SLE R	2	16	0.00	-3680.61	3513.96	-1281.93	12.31	8.29	48.02	1116.21
4.68	31	SLE R	2	16	0.00	-4099.87	3938.91	-914.79	12.31	8.29	47.56	1162.73
4.68	26	SLE Q	2	16	0.00	-2848.69	1782.30	-123.10	12.31	8.29	17.99	432.14
9.30	33	SLE R	2	16	462.00	-1920.46	-1153.40	2132.66	15.46	5.15	33.68	765.64
9.30	26	SLE Q	2	16	462.00	-509.82	-206.23	677.36	12.31	8.29	8.79	218.30

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cm²>	A _{c eff} <cm²>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
4.38	26	SLE Q	1	16	438.00	-11648.20	-126.06	-2992.00	44.00	171.02	0.50	18.86	166.32	8.29	344.48	413.33	0.12	0.03
4.38	25	SLE F	1	16	438.00	-11869.70	-124.56	-3074.56	44.00	171.02	0.50	18.86	166.88	8.29	346.92	428.05	0.12	0.04
4.68	26	SLE Q	2	16	0.00	-2848.69	-123.10	1782.30	44.00	171.02	0.50	18.86	181.89	8.29	412.97	432.14	0.13	0.04
4.68	23	SLE F	2	16	0.00	-3088.73	-661.49	2599.81	44.00	171.02	0.50	18.86	205.60	5.15	321.32	757.58	0.22	0.08
4.68	26	SLE Q	2	16	0.00	-2848.69	-123.10	1782.30	44.00	171.02	0.50	18.86	181.89	8.29	412.97	432.14	0.13	0.04
4.68	23	SLE F	2	16	0.00	-3088.73	-661.49	2599.81	44.00	171.02	0.50	18.86	205.60	5.15	321.32	757.58	0.22	0.08
9.30	26	SLE Q	2	16	462.00	-509.82	677.36	-206.23	44.00	171.01	0.50	18.86	200.61	5.15	307.68	218.30	0.06	0.02
9.30	23	SLE F	2	16	462.00	-749.85	788.40	-663.76	44.00	171.01	0.50	18.86	195.01	3.14	178.28	334.65	0.10	0.03

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø6/ 5	2	227	SLU	0.45	1199.18	2.50	39431.60	41973.80	0.45	847.14	2.50	39431.60	41973.80	32.882	
0.70	1.31	ø6/ 5	2	219	SLU	0.45	1563.37	2.50	39431.60	41917.40	0.45	451.46	2.50	39431.60	41917.40	25.222	
0.70	1.31	ø6/ 5	2	213 (TG)	SLV	0.45	6614.81	2.50	39431.60	40741.70	0.45	7369.12	2.50	39431.60	40741.70	5.351	
0.70	1.31	ø6/ 5	2	27 (TG)	SLV	0.45	9911.14	2.50	39431.60	40725.60	0.45	2597.95	2.50	39431.60	40725.60	3.979	
1.31	3.77	ø6/15	2	227	SLU	0.45	1199.18	2.50	13143.90	41918.60	0.45	766.67	2.50	13143.90	41918.60	10.961	
1.31	3.77	ø6/15	2	219	SLU	0.45	1563.37	2.50	13143.90	41862.20	0.45	451.46	2.50	13143.90	41862.20	8.407	
1.31	3.77	ø6/15	2	213 (TG)	SLV	0.45	6614.81	2.50	13143.90	40741.70	0.45	7369.12	2.50	13143.90	40741.70	1.784	
1.31	3.77	ø6/15	2	27 (TG)	SLV	0.45	9911.14	2.50	13143.90	40725.60	0.45	2597.95	2.50	13143.90	40725.60	1.326	
3.77	4.38	ø6/10	2	217	SLU	0.45	1238.17	2.50	19715.80	41577.40	0.45	712.27	2.50	19715.80	41577.40	15.923	
3.77	4.38	ø6/10	2	219	SLU	0.45	1563.37	2.50	19715.80	41641.80	0.45	451.46	2.50	19715.80	41641.80	12.611	
3.77	4.38	ø6/10	2	213 (TG)	SLV	0.45	6614.81	2.50	19715.80	40741.70	0.45	7369.12	2.50	19715.80	40741.70	2.675	
3.77	4.38	ø6/10	2	27 (TG)	SLV	0.45	9911.14	2.50	19715.80	40725.60	0.45	2597.95	2.50	19715.80	40725.60	1.989	
4.68	5.45	ø6/10	2	218	SLU	0.45	1189.80	2.50	19715.80	39730.40	0.45	849.16	2.50	19715.80	39730.40	16.571	
4.68	5.45	ø6/10	2	227	SLU	0.45	1715.02	2.50	19715.80	39783.60	0.45	644.51	2.50	19715.80	39783.60	11.496	
4.68	5.45	ø6/10	2	21 (TG)	SLV	0.45	5385.99	2.50	19715.80	39104.10	0.45	5335.63	2.50	19715.80	39104.10	3.661	
4.68	5.45	ø6/10	2	25 (TG)	SLV	0.45	5454.17	2.50	19715.80	39104.10	0.45	5217.03	2.50	19715.80	39104.10	3.615	
5.45	8.53	ø6/15	2	229	SLU	0.45	1419.78	2.50	13143.90	39747.10	0.45	1058.39	2.50	13143.90	39747.10	9.258	
5.45	8.53	ø6/15	2	227	SLU	0.45	1715.02	2.50	13143.90	39714.40	0.45	1048.59	2.50	13143.90	39714.40	7.664	
5.45	8.53	ø6/15	2	21 (TG)	SLV	0.45	5385.99	2.50	13143.90	39104.10	0.45	5335.63	2.50	13143.90	39104.10	2.440	

Relazione di calcolo

5.45	8.53	ø6/15	2	2	5 (TG)	SLV	0.45	5454.17	2.50	13143.90	39104.10	0.45	5217.03	2.50	13143.90	39104.10	2.410
8.53	9.30	ø6/10	2	2	28	SLU	0.45	1537.15	2.50	19715.80	39455.60	0.45	1187.75	2.50	19715.80	39455.60	12.826
8.53	9.30	ø6/10	2	2	27	SLU	0.45	1715.01	2.50	19715.80	39437.70	0.45	1149.61	2.50	19715.80	39437.70	11.496
8.53	9.30	ø6/10	2	2	1 (TG)	SLV	0.45	5385.99	2.50	19715.80	39104.10	0.45	5335.63	2.50	19715.80	39104.10	3.661
8.53	9.30	ø6/10	2	2	5 (TG)	SLV	0.45	5454.17	2.50	19715.80	39104.10	0.45	5217.03	2.50	19715.80	39104.10	3.615

Dettagli costruttivi per la duttilità

- CC=5 $\alpha_e=0.36817$ $\omega_{\text{ad}}=0.14257$ $\mu\Phi_d=13.5551$ $v_d=0.044628$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=28.5912$
0.05249 >= 0.00648 [7.4.29]
- CC=5 $\alpha_e=0.36817$ $\omega_{\text{ad}}=0.14257$ $\mu\Phi_d=8.64393$ $v_d=0.044628$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=28.5912$
0.05249 >= -0.00855 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	Nu	MRdy	MRdz	α	ϵ_y	Sic.	
<m>					<cm>	<daN>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>			
0.70	40 (e)	SLU	I	1	16	70.00	-13511.20	-46.68	1276.68	-13511.20	4416.16	18035.00	78.75	50.82	14.071
0.70	40 (e)	SLU	I	1	16	70.00	-13511.20	-46.68	1276.68	-13511.20	4416.16	18035.00	78.75	50.82	14.071
4.38	40 (e)	SLU	I	1	16	438.00	-11648.20	-126.06	-2992.00	-11648.20	-1845.13	-18317.20	264.38	66.40	6.135
4.68	40	SLU	I	2	16	0.00	-2848.69	-123.10	1782.30	-2848.69	-1190.99	16982.90	92.81	85.33	9.525
4.68	40	SLU	I	2	16	0.00	-2848.69	-123.10	1782.30	-2848.69	-1190.99	16982.90	92.81	85.33	9.525
9.30	40	SLU	I	2	16	462.00	-509.82	677.36	-206.23	-509.82	16056.00	-4795.36	350.16	58.58	23.668

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	b _{w,y}	V _{sdu,y}	ctgθ _{,y}	V _{Rsd,y}	V _{RCd,y}	b _{w,z}	V _{sdu,z}	ctgθ _{,z}	V _{Rsd,z}	V _{RCd,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
0.70	1.31	ø6/ 5	2	2	40	SLU I	0.40	1159.97	2.50	45296.30	62553.40	0.40	21.57	2.50	45296.30	62553.40	39.050
1.31	3.77	ø6/15	2	2	40	SLU I	0.40	1159.97	2.50	15098.80	62505.20	0.40	21.57	2.50	15098.80	62505.20	13.017
3.77	4.38	ø6/10	2	2	40	SLU I	0.40	1159.97	2.50	22648.20	62312.50	0.40	21.57	2.50	22648.20	62312.50	19.525
4.68	5.45	ø6/10	2	2	40	SLU I	0.40	430.42	2.50	22648.20	60898.90	0.40	173.26	2.50	22648.20	60898.90	52.619
5.45	8.53	ø6/15	2	2	40	SLU I	0.40	430.42	2.50	15098.80	60838.40	0.40	173.26	2.50	15098.80	60838.40	35.079
8.53	9.30	ø6/10	2	2	40	SLU I	0.40	430.42	2.50	22648.20	60596.40	0.40	173.26	2.50	22648.20	60596.40	52.619

Pilastrata n. 14

Nodi: -1219 -33 -1210

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	Cf	Cls	Fck	Fctk	Fcd	Fcd (Inc)	Fctd	Tp	Fyk	Fyd
		<cm>	<cm>	<cm>		<daN/cm ² >	<daN/cm ² >	<daN/cm ² >	<daN/cm ² >	<daN/cm ² >		<daN/cm ² >	<daN/cm ² >
16	R	45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	My ver.	Mz	Mz ver.	Nu	MRdy	MRdz	α	ϵ_y	Sic.
<m>					<cm>	<daN>	<daNm>	<daNm>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
0.70	13	SLV	1	16	70.00	-14401.50	-1883.50	-1883.50	-3834.72	-3834.72	-14401.50	-7617.26	-15292.90	246.09	6.30	3.999
0.70	13	SLV	1	16	70.00	-14401.50	-1883.50	-1883.50	-3834.72	-3834.72	-14401.50	-7617.26	-15292.90	246.09	6.30	3.999
4.28	13	SLV	1	16	428.00	-12589.10	-665.08	-665.08	4415.39	4415.39	-12589.10	-2256.83	16724.60	95.62	10.39	3.779
4.68	17	SLU	2	16	0.00	-6284.50	-4911.04	-4911.04	153.90	153.90	-6284.50	-15758.50	756.69	178.59	14.02	3.211
4.68	17	SLU	2	16	0.00	-6284.50	-4911.04	-4911.04	153.90	153.90	-6284.50	-15758.50	756.69	178.59	14.02	3.211
9.30	29	SLU	2	16	462.00	-6929.20	10791.80	10791.80	-2353.84	-2353.84	-6929.20	15716.10	-3244.81	351.56	10.00	1.453

Stato limite d'esercizio - Verifiche tensionali

Xg	CC	TCC	El	Sez.	X	N	Mz	My	AfT	AfC	σ _c	σ _f	
<m>					<cm>	<daN>	<daNm>	<daNm>	<cmq>	<cmq>	<daN/cmq>	<daN/cmq>	
0.70	31	SLE	R	1	16	70.00	-16789.80	-647.29	1043.34	0.00	20.61	16.43	213.09
0.70	26	SLE	Q	1	16	70.00	-15140.60	-487.13	-53.20	0.00	20.61	9.42	130.70
0.70	31	SLE	R	1	16	70.00	-16789.80	-647.29	1043.34	0.00	20.61	16.43	213.09
0.70	26	SLE	Q	1	16	70.00	-15140.60	-487.13	-53.20	0.00	20.61	9.42	130.70
4.28	31	SLE	R	1	16	428.00	-14977.40	2158.40	-2303.93	7.16	13.45	40.66	467.89
4.28	20	SLE	R	1	16	428.00	-14092.00	2042.25	-2356.15	10.30	10.30	40.40	461.96
4.28	26	SLE	Q	1	16	428.00	-13328.20	1555.73	-148.68	8.29	12.31	15.68	197.90
4.68	31	SLE	R	2	16	0.00	-5606.69	590.38	-3228.18	12.31	8.29	36.91	815.78
4.68	26	SLE	Q	2	16	0.00	-3658.23	-1235.80	-533.78	10.30	10.30	17.21	289.82
4.68	31	SLE	R	2	16	0.00	-5606.69	590.38	-3228.18	12.31	8.29	36.91	815.78
4.68	26	SLE	Q	2	16	0.00	-3658.23	-1235.80	-533.78	10.30	10.30	17.21	289.82
9.30	33	SLE	R	2	16	462.00	-4709.91	-1582.22	7309.00	12.31	8.29	86.97	2286.53
9.30	26	SLE	Q	2	16	462.00	-1319.35	-88.59	1869.09	12.31	8.29	18.26	528.61

Stato limite d'esercizio - Verifiche a fessurazione

Xg	CC	TCC	El	Sez .	X	N	My	Mz	c	s	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	Wk
<m>					<cm>	<daN>	<daNm>	<daNm>	<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cmq>		<mm>
4.28	23	SLE F	1	16	428.00	-12970.30	-1114.91	1751.84	44.00	171.01	0.50	18.22	134.46	3.14	80.10	188.74	0.05	0.01
4.68	26	SLE Q	2	16	0.00	-3658.23	-533.78	-1235.80	44.00	171.02	0.50	18.86	201.63	3.14	189.31	289.82	0.08	0.03
4.68	23	SLE F	2	16	0.00	-3477.00	-1737.66	-632.49	44.00	171.01	0.50	18.86	230.20	3.14	236.91	467.60	0.14	0.05
4.68	26	SLE Q	2	16	0.00	-3658.23	-533.78	-1235.80	44.00	171.02	0.50	18.86	201.63	3.14	189.31	289.82	0.08	0.03
4.68	23	SLE F	2	16	0.00	-3477.00	-1737.66	-632.49	44.00	171.01	0.50	18.86	230.20	3.14	236.91	467.60	0.14	0.05
9.30	26	SLE Q	2	16	462.00	-1319.35	1869.09	-88.59	44.00	171.01	0.50	18.86	190.55	8.29	451.03	528.61	0.15	0.05
9.30	23	SLE F	2	16	462.00	-1138.13	2190.85	-492.21	44.00	171.01	0.50	18.86	219.27	5.15	358.66	702.51	0.20	0.08

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	27	SLU	0.45	1141.63	2.50	39431.60	42186.80	0.45	1638.49	2.50	39431.60	42186.80	24.066
0.70	1.31	ø6/ 5	2	2	3 (TG)	SLV	0.45	6426.26	2.50	39431.60	40751.70	0.45	7691.77	2.50	39431.60	40751.70	5.126
0.70	1.31	ø6/ 5	2	2	7 (TG)	SLV	0.45	9793.20	2.50	39431.60	40883.60	0.45	2877.52	2.50	39431.60	40883.60	4.026
1.31	3.77	ø6/15	2	2	27	SLU	0.45	1141.63	2.50	13143.90	42131.60	0.45	1558.03	2.50	13143.90	42131.60	8.436
1.31	3.77	ø6/15	2	2	3 (TG)	SLV	0.45	6426.26	2.50	13143.90	40751.70	0.45	7691.77	2.50	13143.90	40751.70	1.709
1.31	3.77	ø6/15	2	2	7 (TG)	SLV	0.45	9793.20	2.50	13143.90	40883.60	0.45	2877.52	2.50	13143.90	40883.60	1.342
3.77	4.38	ø6/10	2	2	17	SLU	0.45	1099.50	2.50	19715.80	41729.80	0.45	1340.15	2.50	19715.80	41729.80	14.712
3.77	4.38	ø6/10	2	2	27	SLU	0.45	1141.63	2.50	19715.80	41911.20	0.45	1236.17	2.50	19715.80	41911.20	15.949
3.77	4.38	ø6/10	2	2	3 (TG)	SLV	0.45	6426.26	2.50	19715.80	40751.70	0.45	7691.77	2.50	19715.80	40751.70	2.563
3.77	4.38	ø6/10	2	2	7 (TG)	SLV	0.45	9793.20	2.50	19715.80	40883.60	0.45	2877.52	2.50	19715.80	40883.60	2.013
4.68	5.45	ø6/10	2	2	29	SLU	0.45	601.23	2.50	19715.80	40378.00	0.45	2976.24	2.50	19715.80	40378.00	6.624
4.68	5.45	ø6/10	2	2	27	SLU	0.45	742.09	2.50	19715.80	40082.60	0.45	2700.27	2.50	19715.80	40082.60	7.301
4.68	5.45	ø6/10	2	2	1 (TG)	SLV	0.45	2467.53	2.50	19715.80	39187.00	0.45	6646.16	2.50	19715.80	39187.00	2.966
4.68	5.45	ø6/10	2	2	1 (TG)	SLV	0.45	4352.18	2.50	19715.80	39187.00	0.45	4155.41	2.50	19715.80	39187.00	4.530
5.45	8.53	ø6/15	2	2	29	SLU	0.45	601.23	2.50	13143.90	40308.80	0.45	3380.31	2.50	13143.90	40308.80	3.888
5.45	8.53	ø6/15	2	2	27	SLU	0.45	742.09	2.50	13143.90	40013.40	0.45	3104.35	2.50	13143.90	40013.40	4.234
5.45	8.53	ø6/15	2	2	1 (TG)	SLV	0.45	2467.53	2.50	13143.90	39187.00	0.45	6646.16	2.50	13143.90	39187.00	1.978
5.45	8.53	ø6/15	2	2	1 (TG)	SLV	0.45	4352.18	2.50	13143.90	39187.00	0.45	4155.41	2.50	13143.90	39187.00	3.020
8.53	9.30	ø6/10	2	2	29	SLU	0.45	601.23	2.50	19715.80	40032.00	0.45	3481.33	2.50	19715.80	40032.00	5.663
8.53	9.30	ø6/10	2	2	27	SLU	0.45	742.09	2.50	19715.80	39736.60	0.45	3205.36	2.50	19715.80	39736.60	6.151
8.53	9.30	ø6/10	2	2	1 (TG)	SLV	0.45	2467.53	2.50	19715.80	39187.00	0.45	6646.16	2.50	19715.80	39187.00	2.966
8.53	9.30	ø6/10	2	2	1 (TG)	SLV	0.45	4352.18	2.50	19715.80	39187.00	0.45	4155.41	2.50	19715.80	39187.00	4.530

Dettagli costruttivi per la duttilità

- CC=13 α _e =0.36817 ω _{rd} =0.14257 μΦ _d =13.5551 v _d =0.048312 E _{sy, d} =0.0018995 b _c /b ₀ =1.20321 μΦ _c =26.4108 0.05249 >= 0.0099 [7.4.29]
- CC=13 α _e =0.36817 ω _{rd} =0.14257 μΦ _d =8.64393 v _d =0.048312 E _{sy, d} =0.0018995 b _c /b ₀ =1.20321 μΦ _c =26.4108 0.05249 >= -0.00637 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/presoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	40 (e)	SLU I	1	16	70.00	-15140.60	-53.20	-487.13	-190727.00	-10692.90	-15013.50	236.25	35.16	12.597
0.70	40 (e)	SLU I	1	16	70.00	-15140.60	-53.20	-487.13	-190727.00	-10692.90	-15013.50	236.25	35.16	12.597
4.28	40 (e)	SLU I	1	16	428.00	-13328.20	-148.68	1555.73	-13328.20	3833.56	18130.40	80.16	53.78	11.648
4.68	40	SLU I	2	16	0.00	-3658.23	-533.78	-1235.80	-3658.23	-7023.96	-16043.60	253.12	45.75	13.021
4.68	40	SLU I	2	16	0.00	-3658.23	-533.78	-1235.80	-3658.23	-7023.96	-16043.60	253.12	45.75	13.021
9.30	40	SLU I	2	16	462.00	-1319.35	1869.09	-88.59	-1319.35	16755.10	-628.16	358.59	95.76	8.961

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	40	SLU I	0.40	570.63	2.50	45296.30	62806.20	0.40	26.67	2.50	45296.30	62806.20	79.379
1.31	3.77	ø6/15	2	2	40	SLU I	0.40	570.63	2.50	15098.80	62758.00	0.40	26.67	2.50	15098.80	62758.00	26.460
3.77	4.38	ø6/10	2	2	40	SLU I	0.40	570.63	2.50	22648.20	62565.30	0.40	26.67	2.50	22648.20	62565.30	39.690
4.68	5.45	ø6/10	2	2	40	SLU I	0.40	248.31	2.50	22648.20	61024.50	0.40	520.10	2.50	22648.20	61024.50	43.546
5.45	8.53	ø6/15	2	2	40	SLU I	0.40	248.31	2.50	15098.80	60964.00	0.40	520.10	2.50	15098.80	60964.00	29.030
8.53	9.30	ø6/10	2	2	40	SLU I	0.40	248.31	2.50	22648.20	60722.00	0.40	520.10	2.50	22648.20	60722.00	43.546

Pilastrata n. 15

Nodi: 13 -54 -61

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fcd (Inc) <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
16	R	45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/presoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	1	SLV	1	16	70.00	-13254.10	-5565.97	-5565.97	3957.42	3957.42	-13254.10	-14034.10	9726.39	146.25	5.69	2.500
0.70	1	SLV	1	16	70.00	-13254.10	-5565.97	-5565.97	3957.42	3957.42	-13254.10	-14034.10	9726.39	146.25	5.69	2.500
4.28	5	SLV	1	16	428.00	-11413.70	8250.87	8250.87	-4346.57	-4346.57	-11413.70	14903.80	-7586.93	336.09	6.51	1.793
4.68	17 (e)	SLU	2	16	0.00	-6970.85	-8903.37	-8903.37	36.37	161.03	-6970.85	-15817.30	319.92	179.30	14.18	1.777
4.68	17 (e)	SLU	2	16	0.00	-6970.85	-8903.37	-8903.37	36.37	161.03	-6970.85	-15817.30	319.92	179.30	14.18	1.777
9.30	29	SLU	2	16	462.00	-8136.30	11323.30	11323.30	1337.77	1337.77	-8136.30	16027.10	1813.48	4.22	11.74	1.415

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _e <daN/cmq>	σ _f <daN/cmq>
0.70	22	SLE R	1	16	70.00	-17751.10	623.15	-2868.41	8.29	12.31	31.38	374.20
0.70	26	SLE Q	1	16	70.00	-15555.40	491.73	-2855.84	10.30	10.30	30.47	356.25
0.70	22	SLE R	1	16	70.00	-17751.10	623.15	-2868.41	8.29	12.31	31.38	374.20
0.70	26	SLE Q	1	16	70.00	-15555.40	491.73	-2855.84	10.30	10.30	30.47	356.25

Relazione di calcolo

4.28	34	SLE R	1	16	428.00	-17680.70	-1159.04	6803.54	12.31	8.29	76.12	1429.14
4.28	22	SLE R	1	16	428.00	-15938.70	-1143.90	6775.13	12.31	8.29	75.92	1498.87
4.28	26	SLE Q	1	16	428.00	-13743.10	-903.74	6818.94	12.31	8.29	73.84	1580.54
4.68	31	SLE R	2	16	0.00	-6469.67	484.68	-6250.95	12.31	8.29	63.62	1694.58
4.68	20	SLE R	2	16	0.00	-5072.10	30.31	-6241.23	12.31	8.29	57.64	1700.97
4.68	26	SLE Q	2	16	0.00	-3912.84	255.53	-3687.52	12.31	8.29	37.16	990.36
4.68	31	SLE R	2	16	0.00	-6469.67	484.68	-6250.95	12.31	8.29	63.62	1694.58
4.68	20	SLE R	2	16	0.00	-5072.10	30.31	-6241.23	12.31	8.29	57.64	1700.97
4.68	26	SLE Q	2	16	0.00	-3912.84	255.53	-3687.52	12.31	8.29	37.16	990.36
9.30	33	SLE R	2	16	462.00	-5537.21	912.37	7698.81	12.31	8.29	82.17	2256.81
9.30	26	SLE Q	2	16	462.00	-1573.97	274.57	2148.61	12.31	8.29	23.18	631.54

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm ² >	ε _{sm}	Wk <mm>
0.70	26	SLE Q	1	16	70.00	-15555.40	-2855.84	491.73	44.00	171.02	0.50	18.86	197.52	3.14	182.46	282.19	0.08	0.03
0.70	25	SLE F	1	16	70.00	-15786.30	-2950.92	514.10	44.00	171.02	0.50	18.86	199.86	3.14	186.36	301.26	0.09	0.03
0.70	26	SLE Q	1	16	70.00	-15555.40	-2855.84	491.73	44.00	171.02	0.50	18.86	197.52	3.14	182.46	282.19	0.08	0.03
0.70	25	SLE F	1	16	70.00	-15786.30	-2950.92	514.10	44.00	171.02	0.50	18.86	199.86	3.14	186.36	301.26	0.09	0.03
4.28	26	SLE Q	1	16	428.00	-13743.10	6818.94	-903.74	44.00	171.02	0.50	18.86	170.42	8.29	362.52	1580.54	0.52	0.15
4.28	23	SLE F	1	16	428.00	-13617.40	6151.99	-938.80	44.00	171.02	0.50	18.86	213.82	5.15	343.76	1386.47	0.40	0.15
4.68	26	SLE Q	2	16	0.00	-3912.84	-3687.52	255.53	44.00	171.02	0.50	18.86	185.51	8.29	428.90	990.36	0.29	0.09
4.68	23	SLE F	2	16	0.00	-3824.46	-4798.20	181.71	44.00	171.02	0.50	18.86	191.19	8.29	453.89	1328.44	0.39	0.13
4.68	26	SLE Q	2	16	0.00	-3912.84	-3687.52	255.53	44.00	171.02	0.50	18.86	185.51	8.29	428.90	990.36	0.29	0.09
4.68	23	SLE F	2	16	0.00	-3824.46	-4798.20	181.71	44.00	171.02	0.50	18.86	191.19	8.29	453.89	1328.44	0.39	0.13
9.30	26	SLE Q	2	16	462.00	-1573.97	2148.61	274.57	44.00	171.02	0.50	18.86	180.24	8.29	405.70	631.54	0.18	0.06
9.30	24	SLE F	2	16	462.00	-2108.25	2853.61	413.20	44.00	171.02	0.50	18.86	178.06	8.29	396.12	845.58	0.25	0.07

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø6/ 5	2	219	SLU	0.45	709.84	2.50	39431.60	42347.10	0.45	3701.89	2.50	39431.60	42347.10	10.652	
0.70	1.31	ø6/ 5	2	230	SLU	0.45	744.62	2.50	39431.60	42704.00	0.45	3459.11	2.50	39431.60	42704.00	11.399	
0.70	1.31	ø6/ 5	2	211 (TG)	SLV	0.45	2624.24	2.50	39431.60	41028.60	0.45	10002.70	2.50	39431.60	41028.60	3.942	
0.70	1.31	ø6/ 5	2	21 (TG)	SLV	0.45	7583.71	2.50	39431.60	41343.20	0.45	5887.45	2.50	39431.60	41343.20	5.200	
1.31	3.77	ø6/15	2	219	SLU	0.45	709.84	2.50	13143.90	42292.00	0.45	3701.89	2.50	13143.90	42292.00	3.551	
1.31	3.77	ø6/15	2	230	SLU	0.45	744.62	2.50	13143.90	42648.80	0.45	3689.82	2.50	13143.90	42648.80	3.562	
1.31	3.77	ø6/15	2	211 (TG)	SLV	0.45	2624.24	2.50	13143.90	41028.60	0.45	10002.70	2.50	13143.90	41028.60	1.314	
1.31	3.77	ø6/15	2	21 (TG)	SLV	0.45	7583.71	2.50	13143.90	41343.20	0.45	5887.45	2.50	13143.90	41343.20	1.733	
3.77	4.38	ø6/10	2	230	SLU	0.45	744.62	2.50	19715.80	42428.40	0.45	3747.50	2.50	19715.80	42428.40	5.261	
3.77	4.38	ø6/10	2	211 (TG)	SLV	0.45	2624.24	2.50	19715.80	41028.60	0.45	10002.70	2.50	19715.80	41028.60	1.971	
3.77	4.38	ø6/10	2	21 (TG)	SLV	0.45	7583.71	2.50	19715.80	41343.20	0.45	5887.45	2.50	19715.80	41343.20	2.600	
4.68	5.45	ø6/10	2	229	SLU	0.45	144.59	2.50	19715.80	40542.80	0.45	4020.93	2.50	19715.80	40542.80	4.903	
4.68	5.45	ø6/10	2	218	SLU	0.45	324.71	2.50	19715.80	40256.50	0.45	3630.47	2.50	19715.80	40256.50	5.431	
4.68	5.45	ø6/10	2	27 (TG)	SLV	0.45	182.88	2.50	19715.80	39209.00	0.45	7253.24	2.50	19715.80	39209.00	2.718	
4.68	5.45	ø6/10	2	29 (TG)	SLV	0.45	1536.29	2.50	19715.80	39198.70	0.45	7116.72	2.50	19715.80	39198.70	2.770	
5.45	8.53	ø6/15	2	229	SLU	0.45	144.59	2.50	13143.90	40473.60	0.45	4310.58	2.50	13143.90	40473.60	3.049	
5.45	8.53	ø6/15	2	218	SLU	0.45	324.71	2.50	13143.90	40187.30	0.45	3630.47	2.50	13143.90	40187.30	3.620	
5.45	8.53	ø6/15	2	27 (TG)	SLV	0.45	182.88	2.50	13143.90	39209.00	0.45	7253.24	2.50	13143.90	39209.00	1.812	
5.45	8.53	ø6/15	2	29 (TG)	SLV	0.45	1536.29	2.50	13143.90	39198.70	0.45	7116.72	2.50	13143.90	39198.70	1.847	
8.53	9.30	ø6/10	2	229	SLU	0.45	144.59	2.50	19715.80	40196.80	0.45	4382.99	2.50	19715.80	40196.80	4.498	
8.53	9.30	ø6/10	2	218	SLU	0.45	324.71	2.50	19715.80	39910.50	0.45	3630.47	2.50	19715.80	39910.50	5.431	
8.53	9.30	ø6/10	2	27 (TG)	SLV	0.45	182.88	2.50	19715.80	39209.00	0.45	7253.24	2.50	19715.80	39209.00	2.718	
8.53	9.30	ø6/10	2	29 (TG)	SLV	0.45	1536.29	2.50	19715.80	39198.70	0.45	7116.72	2.50	19715.80	39198.70	2.770	

Dettagli costruttivi per la duttilità

- CC=5 α_e=0.36817 ω_{nd}=0.14257 μΦ_d=13.5551 v_d=0.056161 E_{sy,r,d}=0.0018995 b_c/b₀=1.20321 μΦ_c=22.7199 0.05249 >= 0.0172 [7.4.29]
- CC=5 α_e=0.36817 ω_{nd}=0.14257 μΦ_d=8.64393 v_d=0.056161 E_{sy,r,d}=0.0018995 b_c/b₀=1.20321 μΦ_c=22.7199 0.05249 >= -0.00171 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	40	SLU I	1	16	70.00	-15555.40	-2855.84	491.73	-15555.40	-18590.00	3060.30	171.56	56.48	6.500
0.70	40	SLU I	1	16	70.00	-15555.40	-2855.84	491.73	-15555.40	-18590.00	3060.30	171.56	56.48	6.500
4.28	40	SLU I	1	16	428.00	-13743.10	6818.94	-903.74	-13743.10	18567.90	-2297.80	352.97	60.72	2.720
4.68	40	SLU I	2	16	0.00	-3912.84	-3687.52	255.53	-3912.84	-17163.60	988.87	177.19	84.31	4.651
4.68	40	SLU I	2	16	0.00	-3912.84	-3687.52	255.53	-3912.84	-17163.60	988.87	177.19	84.31	4.651
9.30	40	SLU I	2	16	462.00	-1573.97	2148.61	274.57	-1573.97	16716.10	1868.09	4.22	77.61	7.765

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø6/ 5	2	240	SLU I	0.40	389.79	2.50	45296.30	62870.60	0.40	2702.45	2.50	45296.30	62870.60	16.761	
1.31	3.77	ø6/15	2	240	SLU I	0.40	389.79	2.50	15098.80	62822.40	0.40	2702.45	2.50	15098.80	62822.40	5.587	
3.77	4.38	ø6/10	2	240	SLU I	0.40	389.79	2.50	22648.20	62629.70	0.40	2702.45	2.50	22648.20	62629.70	8.381	
4.68	5.45	ø6/10	2	240	SLU I	0.40	4.12	2.50	22648.20	61064.00	0.40	1263.23	2.50	22648.20	61064.00	17.929	
5.45	8.53	ø6/15	2	240	SLU I	0.40	4.12	2.50	15098.80	61003.50	0.40	1263.23	2.50	15098.80	61003.50	11.953	

Relazione di calcolo

8.53	9.30	ø6/10	2	240	SLU I	0.40	4.12	2.50	22648.20	60761.50	0.40	1263.23	2.50	22648.20	60761.50	17.929
------	------	-------	---	-----	-------	------	------	------	----------	----------	------	---------	------	----------	----------	--------

Pilastrata n. 16

Nodi: 35 -950 -62

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
10R		50.00	50.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/prestressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _r	Sic.
0.705	SLV	1	10	70.00	-30520.60	-12981.90	-12981.90	5663.50	5663.50	-30520.60	-33065.80	14571.20	153.28	4.78	2.551	
0.705	SLV	1	10	70.00	-30520.60	-12981.90	-12981.90	5663.50	5663.50	-30520.60	-33065.80	14571.20	153.28	4.78	2.551	
4.3830(e)	SLU	1	10	438.00	-48195.40	30959.70	30959.70	-677.35	-1127.77	-48195.40	40660.60	-1310.99	357.19	6.66	1.313	
4.6817	SLU	2	10	0.00	-6644.24	-11586.30	-11586.30	205.93	205.93	-6644.24	-35550.70	885.76	178.59	10.16	3.069	
4.6817	SLU	2	10	0.00	-6644.24	-11586.30	-11586.30	205.93	205.93	-6644.24	-22714.60	507.63	179.30	10.64	1.961	
9.3029(e)	SLU	2	10	462.00	-4972.91	13.49	114.87	-5748.39	-5748.39	-4972.91	507.60	-23636.00	270.70	16.69	4.112	

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
0.7022	SLE	R	1	10	70.00	-37194.50	526.26	-8533.55	21.99	21.99	51.06	617.29
0.7026	SLE	Q	1	10	70.00	-33498.90	479.87	-7818.29	21.99	21.99	46.73	563.72
0.7022	SLE	R	1	10	70.00	-37194.50	526.26	-8533.55	21.99	21.99	51.06	617.29
0.7026	SLE	Q	1	10	70.00	-33498.90	479.87	-7818.29	21.99	21.99	46.73	563.72
4.3834	SLE	R	1	10	438.00	-34749.50	-523.06	22262.00	21.99	21.99	122.37	2363.20
4.3826	SLE	Q	1	10	438.00	-31198.90	-738.40	19929.00	21.99	21.99	111.40	2135.64
4.6822	SLE	R	2	10	0.00	-4830.91	557.52	-7982.32	28.27	15.71	45.36	1051.70
4.6820	SLE	R	2	10	0.00	-4885.79	213.53	-8238.55	28.27	15.71	44.17	1055.88
4.6826	SLE	Q	2	10	0.00	-3811.43	802.11	-6248.47	25.13	18.85	38.14	855.50
4.6822	SLE	R	2	10	0.00	-4830.91	557.52	-7982.32	18.10	10.05	63.82	1848.44
4.6820	SLE	R	2	10	0.00	-4885.79	213.53	-8238.55	18.10	10.05	62.84	1874.97
4.6826	SLE	Q	2	10	0.00	-3811.43	802.11	-6248.47	20.11	8.04	52.98	1483.75
9.3033	SLE	R	2	10	462.00	-3386.57	-3935.10	9.15	16.09	12.06	23.53	650.75
9.3026	SLE	Q	2	10	462.00	-923.93	-1310.70	2.18	16.09	12.06	7.79	223.64

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
0.7026	SLE	Q	1	10	70.00	-33498.90	-7818.29	479.87	44.00	98.00	0.50	20.00	138.15	12.57	315.12	432.64	0.13	0.03
0.7025	SLE	F	1	10	70.00	-34156.00	-8062.88	493.68	44.00	98.00	0.50	20.00	138.64	12.57	318.19	452.70	0.13	0.03
0.7026	SLE	Q	1	10	70.00	-33498.90	-7818.29	479.87	44.00	98.00	0.50	20.00	138.15	12.57	315.12	432.64	0.13	0.03
0.7025	SLE	F	1	10	70.00	-34156.00	-8062.88	493.68	44.00	98.00	0.50	20.00	138.64	12.57	318.19	452.70	0.13	0.03
4.3826	SLE	Q	1	10	438.00	-31198.90	19929.00	-738.40	44.00	98.00	0.50	20.00	149.07	15.71	479.63	2135.64	0.85	0.22
4.3825	SLE	F	1	10	438.00	-31856.00	20531.30	-744.14	44.00	98.00	0.50	20.00	149.23	15.71	480.91	2205.12	0.79	0.20
4.6826	SLE	Q	2	10	0.00	-3811.43	-6248.47	802.11	44.00	98.00	0.50	20.00	144.86	15.71	446.59	855.50	0.25	0.06
4.6823	SLE	F	2	10	0.00	-3868.70	-7331.46	322.02	44.00	98.00	0.50	20.00	153.86	15.71	517.24	962.31	0.28	0.07
4.6826	SLE	Q	2	10	0.00	-3811.43	-6248.47	802.11	44.00	198.00	0.50	16.00	224.37	6.03	514.13	1483.75	0.43	0.16
4.6823	SLE	F	2	10	0.00	-3868.70	-7331.46	322.02	44.00	198.00	0.50	16.00	237.57	6.03	563.87	1701.65	0.50	0.20
9.3026	SLE	Q	2	10	462.00	-923.93	2.18	-1310.70	44.00	79.20	0.50	16.00	164.38	12.06	575.91	223.64	0.07	0.02
9.3036	SLE	F	2	10	462.00	-1081.01	2.82	-1676.18	44.00	79.20	0.50	16.00	164.69	12.06	578.25	289.46	0.08	0.02

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	219		SLU	0.50	461.05	2.50	44410.40	55940.30	0.50	11389.20	2.50	44410.40	55940.30	3.899
0.70	1.31	ø6/ 5	2	217		SLU	0.50	504.30	2.50	44410.40	55565.30	0.50	10057.90	2.50	44410.40	55565.30	4.415
0.70	1.31	ø6/ 5	2	23 (TG)		SLV	0.50	2895.99	2.50	44410.40	52910.10	0.50	22508.50	2.50	44410.40	52910.10	1.973
0.70	1.31	ø6/ 5	2	211 (TG)		SLV	0.50	3486.41	2.50	44410.40	53377.60	0.50	22565.60	2.50	44410.40	53377.60	1.968
0.70	1.31	ø6/ 5	2	213 (TG)		SLV	0.50	10983.20	2.50	44410.40	52866.20	0.50	16140.40	2.50	44410.40	52866.20	2.752
0.70	1.31	ø6/ 5	2	213 (TG)		SLV	0.50	11085.60	2.50	44410.40	53556.10	0.50	16358.90	2.50	44410.40	53556.10	2.715
1.31	3.77	ø6/15	2	230		SLU	0.50	388.99	2.50	14803.50	55841.30	0.50	11597.40	2.50	14803.50	55841.30	1.276
1.31	3.77	ø6/15	2	217		SLU	0.50	504.30	2.50	14803.50	55496.40	0.50	10058.00	2.50	14803.50	55496.40	1.472
1.31	3.77	ø6/15	2	25 (TG)		SLV	0.50	10019.90	2.50	14803.50	52731.60						1.477
1.31	3.77	ø6/15	2	25 (TG)		SND						0.50	11394.70	2.50	14803.50	53903.90	1.299
1.31	3.77	ø6/15	2	213 (TG)		SLV	0.50	10983.20	2.50	14803.50	52866.20						1.348
1.31	3.77	ø6/15	2	213 (TG)		SND						0.50	10743.60	2.50	14803.50	54128.30	1.378
1.31	3.77	ø6/15	2	213 (TG)		SLV	0.50	11085.60	2.50	14803.50	53556.10						1.335
1.31	3.77	ø6/15	2	213 (TG)		SND						0.50	10743.60	2.50	14803.50	54128.30	1.378
3.77	4.38	ø6/15	2	230		SLU	0.50	388.99	2.50	14803.50	55565.40	0.50	11655.10	2.50	14803.50	55565.40	1.270
3.77	4.38	ø6/15	2	217		SLU	0.50	504.30	2.50	14803.50	55220.50	0.50	10058.00	2.50	14803.50	55220.50	1.472
3.77	4.38	ø6/15	2	25 (TG)		SLV	0.50	10019.90	2.50	14803.50	52731.60						1.477
3.77	4.38	ø6/15	2	25 (TG)		SND						0.50	11394.70	2.50	14803.50	53903.90	1.299
3.77	4.38	ø6/15	2	213 (TG)		SLV	0.50	10983.20	2.50	14803.50	52866.20						1.348
3.77	4.38	ø6/15	2	213 (TG)		SND						0.50	10743.60	2.50	14803.50	54128.30	1.378
3.77	4.38	ø6/15	2	213 (TG)		SLV	0.50	11085.60	2.50	14803.50	53556.10						1.335
3.77	4.38	ø6/15	2	213 (TG)		SND						0.50	10743.60	2.50	14803.50	54128.30	1.378
4.68	5.45	ø6/10	2	217		SLU	0.50	560.96	2.50	22205.20	49745.10	0.50	2509.38	2.50	22205.20	49745.10	8.849
4.68	5.45	ø6/10	2	228		SLU	0.50	1907.33	2.50	22205.20	49898.70	0.50	462.09	2.50	22205.20	49898.70	11.642
4.68	5.45	ø6/10	2	213 (TG)		SLV	0.50	6167.48	2.50	22205.20	48984.20	0.50	5468.68	2.50	22205.20	48984.20	3.600
4.68	5.45	ø6/10	2	29 (TG)		SLV	0.50	6531.13	2.50	22205.20	48984.20	0.50	5381.73	2.50	22205.20	48984.20	3.400
5.45	8.53	ø6/15	2	217		SLU	0.50	560.96	2.50	14803.50	49658.50	0.50	2509.38	2.50	14803.50	49658.50	5.899
5.45	8.53	ø6/15	2	228		SLU	0.50	1907.33	2.50	14803.50	49812.10	0.50	2227.27	2.50	14803.50	49812.10	6.646

Relazione di calcolo

5.45	8.53	ø6/15	2	2	13(TG)	SLV	0.50	6167.48	2.50	14803.50	48984.20	0.50	5468.68	2.50	14803.50	48984.20	2.400
5.45	8.53	ø6/15	2	2	9(TG)	SLV	0.50	6531.13	2.50	14803.50	48984.20	0.50	5381.73	2.50	14803.50	48984.20	2.267
8.53	9.30	ø6/10	2	2	27	SLU	0.50	1251.30	2.50	22205.20	49410.00	0.50	2831.63	2.50	22205.20	49410.00	7.842
8.53	9.30	ø6/10	2	2	28	SLU	0.50	1907.33	2.50	22205.20	49465.70	0.50	2765.14	2.50	22205.20	49465.70	8.030
8.53	9.30	ø6/10	2	2	13(TG)	SLV	0.50	6167.48	2.50	22205.20	48984.20	0.50	5468.68	2.50	22205.20	48984.20	3.600
8.53	9.30	ø6/10	2	2	9(TG)	SLV	0.50	6531.13	2.50	22205.20	48984.20	0.50	5381.73	2.50	22205.20	48984.20	3.400

Dettagli costruttivi per la duttilità

- CC=13 $\alpha_e=0.49541$ $\omega_{nd}=0.15719$ $\mu\Phi_d=13.5551$ $v_d=0.087897$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.17925$ $\mu\Phi_c=19.1097$
0.07788 >= 0.04507 [7.4.29]

- CC=13 $\alpha_e=0.49541$ $\omega_{nd}=0.15719$ $\mu\Phi_d=8.64393$ $v_d=0.087897$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.17925$ $\mu\Phi_c=19.1097$
0.07788 >= 0.01606 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	40(e)	SLU I	1	10	70.00	-33498.90	-7818.29	479.87	-33498.90	-30295.90	2601.35	174.38	36.19	3.869
0.70	40(e)	SLU I	1	10	70.00	-33498.90	-7818.29	479.87	-33498.90	-30295.90	2601.35	174.38	36.19	3.869
4.38	40	SLU I	1	10	438.00	-31198.90	19929.00	-738.40	-31198.90	30743.40	-762.16	357.89	38.60	1.542
4.68	40	SLU I	2	10	0.00	-3811.43	-6248.47	802.11	-3811.43	-26433.00	3346.03	171.56	43.72	4.229
4.68	40	SLU I	2	10	0.00	-3811.43	-6248.47	802.11	-3811.43	-16243.10	2302.05	175.78	51.35	2.604
9.30	40(e)	SLU I	2	10	462.00	-923.93	2.18	-1310.70	-923.93	319.51	-18382.00	271.41	76.71	14.030

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctg θ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctg θ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	40	SLU I	0.40	331.05	2.50	25968.70	67356.10	0.40	7540.02	2.50	25968.70	67356.10	3.444
1.31	3.77	ø6/15	2	2	40	SLU I	0.40	331.05	2.50	8656.23	67296.70	0.40	7540.02	2.50	8656.23	67296.70	1.148
3.77	4.38	ø6/15	2	2	40	SLU I	0.40	331.05	2.50	8656.23	67058.70	0.40	7540.02	2.50	8656.23	67058.70	1.148
4.68	5.45	ø6/10	2	2	40	SLU I	0.40	457.32	2.50	12984.30	62749.50	0.40	1352.95	2.50	12984.30	62749.50	9.597
5.45	8.53	ø6/15	2	2	40	SLU I	0.40	457.32	2.50	8656.23	62674.80	0.40	1352.95	2.50	8656.23	62674.80	6.398
8.53	9.30	ø6/10	2	2	40	SLU I	0.40	457.32	2.50	12984.30	62376.10	0.40	1352.95	2.50	12984.30	62376.10	9.597

Pilastrata n. 18

Nodi: -28 44 61

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fcd (Inc) <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
16R		45.00	45.00	5.30	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
16R		45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	13	SLV	1	16	70.00	-50294.70	13251.40	13251.40	2336.46	2336.46	-50294.70	36917.50	6303.05	14.06	4.21	2.783
0.70	13	SLV	1	16	70.00	-50294.70	13251.40	13251.40	2336.46	2336.46	-50294.70	36917.50	6303.05	14.06	4.21	2.783
4.38	19	SLU	1	16	438.00	-78529.10	-29924.40	-29924.40	-2394.18	-2394.18	-78529.10	-40137.00	-3526.20	188.44	3.62	1.342
4.68	30	SLU	2	16	0.00	-11126.00	20068.10	20068.10	-902.00	-902.00	-11126.00	35033.50	-1692.31	357.19	7.71	1.746
4.68	30	SLU	2	16	0.00	-11126.00	20068.10	20068.10	-902.00	-902.00	-11126.00	21699.30	-1176.51	357.19	11.43	1.082
9.30	29	SLU	2	16	462.00	-11156.60	-6958.33	-6958.33	11910.00	11910.00	-11156.60	-9776.85	17012.40	113.91	5.33	1.423

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cmq>	σ_f <daN/cmq>
0.70	34	SLE R	1	16	70.00	-58871.90	813.58	8398.06	18.85	31.42	65.74	817.13
0.70	32	SLE R	1	16	70.00	-56519.00	868.41	8266.18	18.85	31.42	64.86	803.40
0.70	26	SLE Q	1	16	70.00	-50900.40	191.85	7064.56	18.85	31.42	52.64	659.68
0.70	34	SLE R	1	16	70.00	-58871.90	813.58	8398.06	18.85	31.42	65.74	817.13
0.70	32	SLE R	1	16	70.00	-56519.00	868.41	8266.18	18.85	31.42	64.86	803.40
0.70	26	SLE Q	1	16	70.00	-50900.40	191.85	7064.56	18.85	31.42	52.64	659.68
4.38	22	SLE R	1	16	438.00	-55517.60	-1615.57	-21086.50	25.13	25.13	148.32	1980.41
4.38	26	SLE Q	1	16	438.00	-49037.40	-296.72	-18945.30	25.13	25.13	124.19	1690.00
4.68	22	SLE R	2	16	0.00	-6283.77	-1974.23	13506.90	28.27	21.99	97.56	1932.44
4.68	26	SLE Q	2	16	0.00	-4265.61	-525.04	12868.10	31.42	18.85	80.83	1734.83
4.68	22	SLE R	2	16	0.00	-6283.77	-1974.23	13506.90	16.09	12.06	126.08	3087.72
4.68	26	SLE Q	2	16	0.00	-4265.61	-525.04	12868.10	16.09	12.06	102.75	2791.45
9.30	33	SLE R	2	16	462.00	-7584.05	8080.00	-4773.49	18.10	10.05	124.05	2634.58
9.30	26	SLE Q	2	16	462.00	-1926.74	2078.40	-1883.42	20.11	8.04	38.03	783.52

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cmq>	ϵ_{sm}	Wk <mm>
4.38	26	SLE Q	1	16	438.00	-49037.40	-18945.30	-296.72	44.00	68.40	0.50	20.00	125.38	18.85	352.25	1690.00	0.70	0.15
4.38	23	SLE F	1	16	438.00	-49062.10	-19422.70	-1168.98	44.00	132.94	0.50	20.00	123.20	6.28	110.58	1832.74	0.71	0.15
4.68	26	SLE Q	2	16	0.00	-4265.61	12868.10	-525.04	44.00	68.40	0.50	20.00	131.01	18.85	405.33	1734.83	0.70	0.16
4.68	25	SLE F	2	16	0.00	-4258.18	13178.50	-529.93	44.00	68.40	0.50	20.00	131.08	18.85	405.99	1778.11	0.65	0.15
4.68	26	SLE Q	2	16	0.00	-4265.61	12868.10	-525.04	44.00	69.20	0.50	16.00	146.18	12.06	438.67	2791.45	1.14	0.28

Relazione di calcolo

4.68	25	SLE F	2	16	0.00	-4258.18	13178.50	-529.93	44.00	69.20	0.50	16.00	146.27	12.06	439.33	2861.53	1.07	0.27
9.30	26	SLE Q	2	16	462.00	-1926.74	-1883.42	2078.40	44.00	186.32	0.50	16.00	159.05	4.02	178.56	783.52	0.23	0.06
9.30	24	SLE F	2	16	462.00	-2736.78	-2339.40	2875.02	44.00	186.32	0.50	16.00	236.26	2.01	186.30	1036.23	0.30	0.12

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø8/ 5	2	230	SLU	0.45	971.98	1.96	54963.50	54963.50	0.45	11394.90	1.96	54963.50	54963.50	4.824	
0.70	1.31	ø8/ 5	2	227	SLU	0.45	1348.88	1.96	54963.50	54963.50	0.45	10809.90	1.96	54963.50	54963.50	5.085	
0.70	1.31	ø8/ 5	2	21 (TG)	SLV	0.45	2809.32	1.93	54098.00	54098.00	0.45	23118.00	1.93	54098.00	54098.00	2.340	
0.70	1.31	ø8/ 5	2	25 (TG)	SLV	0.45	9110.71	1.93	54091.30	54091.30	0.45	16203.70	1.93	54091.30	54091.30	3.338	
1.31	3.77	ø8/20	2	230	SLU	0.45	825.53	2.50	17525.20	46819.90	0.45	11394.90	2.50	17525.20	46819.90	1.538	
1.31	3.77	ø8/20	2	217	SLU	0.45	1308.78	2.50	17525.20	46819.90	0.45	10565.10	2.50	17525.20	46819.90	1.659	
1.31	3.77	ø8/20	2	21 (TG)	SLV	0.45	8605.66	2.50	17525.20	45659.10	0.45	17383.00	2.50	17525.20	45659.10	1.008	
1.31	3.77	ø8/20	2	21 (TG)	SLV	0.45	8270.43	2.50	17525.20	45786.50	0.45	17399.30	2.50	17525.20	45786.50	1.007	
1.31	3.77	ø8/20	2	25 (TG)	SLV	0.45	9110.71	2.50	17525.20	45650.20	0.45	16203.70	2.50	17525.20	45650.20	1.082	
1.31	3.77	ø8/20	2	25 (TG)	SLV	0.45	9116.65	2.50	17525.20	45795.40	0.45	16236.30	2.50	17525.20	45795.40	1.079	
3.77	4.38	ø8/15	2	230	SLU	0.45	239.73	2.50	23366.90	46819.90	0.45	11394.90	2.50	23366.90	46819.90	2.051	
3.77	4.38	ø8/15	2	217	SLU	0.45	1308.78	2.50	23366.90	46819.90	0.45	10565.10	2.50	23366.90	46819.90	2.212	
3.77	4.38	ø8/15	2	21 (TG)	SLV	0.45	2809.32	2.50	23366.90	45659.10	0.45	23118.00	2.50	23366.90	45659.10	1.011	
3.77	4.38	ø8/15	2	25 (TG)	SLV	0.45	9110.71	2.50	23366.90	45650.20	0.45	16203.70	2.50	23366.90	45650.20	1.442	
3.77	4.38	ø8/15	2	25 (TG)	SLV	0.45	9116.65	2.50	23366.90	45795.40	0.45	16236.30	2.50	23366.90	45795.40	1.439	
4.68	5.45	ø6/10	2	229	SLU	0.45	1822.92	2.50	19715.80	40955.20	0.45	5705.36	2.50	19715.80	40955.20	3.456	
4.68	5.45	ø6/10	2	218	SLU	0.45	2717.12	2.50	19715.80	40629.20	0.45	5115.53	2.50	19715.80	40629.20	3.854	
4.68	5.45	ø6/10	2	213 (TG)	SLV	0.45	3487.15	2.50	19715.80	39271.50	0.45	8675.32	2.50	19715.80	39271.50	2.273	
4.68	5.45	ø6/10	2	21 (TG)	SLV	0.45	4282.77	2.50	19715.80	39271.50	0.45	7634.93	2.50	19715.80	39271.50	2.582	
5.45	8.53	ø6/15	2	229	SLU	0.45	3865.94	2.50	13143.90	40886.00	0.45	5705.36	2.50	13143.90	40886.00	2.304	
5.45	8.53	ø6/15	2	228	SLU	0.45	3909.17	2.50	13143.90	40688.60	0.45	5570.57	2.50	13143.90	40688.60	2.360	
5.45	8.53	ø6/15	2	213 (TG)	SLV	0.45	3487.15	2.50	13143.90	39271.50	0.45	8675.32	2.50	13143.90	39271.50	1.515	
5.45	8.53	ø6/15	2	21 (TG)	SLV	0.45	4282.77	2.50	13143.90	39271.50	0.45	7634.93	2.50	13143.90	39271.50	1.722	
8.53	9.30	ø6/10	2	229	SLU	0.45	4376.69	2.50	19715.80	40609.20	0.45	5705.36	2.50	19715.80	40609.20	3.456	
8.53	9.30	ø6/10	2	228	SLU	0.45	4760.43	2.50	19715.80	40411.80	0.45	5570.57	2.50	19715.80	40411.80	3.539	
8.53	9.30	ø6/10	2	213 (TG)	SLV	0.45	3487.15	2.50	19715.80	39271.50	0.45	8675.32	2.50	19715.80	39271.50	2.273	
8.53	9.30	ø6/10	2	21 (TG)	SLV	0.45	4282.77	2.50	19715.80	39271.50	0.45	7634.93	2.50	19715.80	39271.50	2.582	

Dettagli costruttivi per la duttilità

- CC=5 α_e=0.49808 ω_{wd}=0.31852 μΦ_d=13.5551 v_d=0.15322 E_{sy,d}=0.0018995 b_c/b₀=1.20968 μΦ_c=18.3337
0.15865 >= 0.10817 [7.4.29]
- CC=5 α_e=0.49808 ω_{wd}=0.31852 μΦ_d=8.64393 v_d=0.15322 E_{sy,d}=0.0018995 b_c/b₀=1.20968 μΦ_c=18.3337
0.15865 >= 0.0563 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	40(e)	SLU I	1	16	70.00	-50900.40	7064.56	191.85	-190727.00	40952.90	7326.90	14.06	29.43	3.747
0.70	40(e)	SLU I	1	16	70.00	-50900.40	7064.56	191.85	-190727.00	40952.90	7326.90	14.06	29.43	3.747
4.38	40(e)	SLU I	1	16	438.00	-49037.40	-18945.30	-296.72	-49037.40	-41498.10	-2273.28	182.81	29.75	2.190
4.68	40	SLU I	2	16	0.00	-4265.61	12868.10	-525.04	-4265.61	38276.80	-1495.59	354.38	43.11	2.974
4.68	40	SLU I	2	16	0.00	-4265.61	12868.10	-525.04	-4265.61	23168.90	-934.42	357.19	83.14	1.800
9.30	40	SLU I	2	16	462.00	-1926.74	-1883.42	2078.40	-1926.74	-14013.60	15614.30	123.75	35.48	7.479

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø8/ 5	2	240	SLU I	0.40	132.76	2.27	73127.30	73127.30	0.40	7067.90	2.27	73127.30	73127.30	10.346	
1.31	3.77	ø8/20	2	240	SLU I	0.40	132.76	2.50	20131.70	68307.00	0.40	7067.90	2.50	20131.70	68307.00	2.848	
3.77	4.38	ø8/15	2	240	SLU I	0.40	132.76	2.50	26842.30	68114.30	0.40	7067.90	2.50	26842.30	68114.30	3.798	
4.68	5.45	ø6/10	2	240	SLU I	0.40	563.51	2.50	22648.20	61118.70	0.40	3192.96	2.50	22648.20	61118.70	7.093	
5.45	8.53	ø6/15	2	240	SLU I	0.40	563.51	2.50	15098.80	61058.20	0.40	3192.96	2.50	15098.80	61058.20	4.729	
8.53	9.30	ø6/10	2	240	SLU I	0.40	563.51	2.50	22648.20	60816.30	0.40	3192.96	2.50	22648.20	60816.30	7.093	

Pilastrata n. 19

Nodi: -10 25 62

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
1R		45.00	45.00	5.30	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
1R		45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	5	SLV	1	1	70.00	-38142.00	-7656.61	-7656.61	-3476.74	-3476.74	-38142.00	-18047.50	-8122.35	205.31	4.79	2.354
0.70	5	SLV	1	1	70.00	-38142.00	-7656.61	-7656.61	-3476.74	-3476.74	-38142.00	-18047.50	-8122.35	205.31	4.79	2.354
4.38	5	SLV	1	1	438.00	-36279.00	7662.70	7662.70	-1496.11	-1496.11	-36279.00	19713.00	-3792.14	348.75	6.30	2.571
4.68	17	SLU	2	1	0.00	-8090.57	-4324.09	-4324.09	-3752.24	-3752.24	-8090.57	-12500.60	-11142.80	222.19	5.67	2.925

Relazione di calcolo

4.68	17	SLU	2	1	0.00	-8090.57	-4324.09	-4324.09	-3752.24	-3752.24	-8090.57	-12500.60	-11142.80	222.19	5.67	2.925
9.30	29	SLU	2	1	462.00	-9710.27	548.15	548.15	12332.60	12332.60	-9710.27	740.05	16332.20	88.59	13.29	1.324

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cmq>	σ_f <daN/cmq>
0.70	34	SLE R	1	1	70.00	-44567.60	1376.50	-709.60	0.00	20.61	30.41	415.38
0.70	20	SLE R	1	1	70.00	-40641.60	872.49	-1243.08	0.00	20.61	28.88	391.97
0.70	26	SLE Q	1	1	70.00	-38282.30	246.62	-1313.78	0.00	20.61	24.86	342.49
0.70	34	SLE R	1	1	70.00	-44567.60	1376.50	-709.60	0.00	20.61	30.41	415.38
0.70	20	SLE R	1	1	70.00	-40641.60	872.49	-1243.08	0.00	20.61	28.88	391.97
0.70	26	SLE Q	1	1	70.00	-38282.30	246.62	-1313.78	0.00	20.61	24.86	342.49
4.38	21	SLE R	1	1	438.00	-40537.80	-2148.97	2796.99	3.14	17.47	45.03	575.06
4.38	20	SLE R	1	1	438.00	-38778.60	-2226.25	2659.85	3.14	17.47	44.11	561.60
4.38	26	SLE Q	1	1	438.00	-36419.30	-516.70	2928.15	0.00	20.61	34.39	448.06
4.68	20	SLE R	2	1	0.00	-5822.26	-2539.31	-3030.24	13.45	7.16	57.11	1121.76
4.68	26	SLE Q	2	1	0.00	-4182.78	-615.00	-2371.94	12.31	8.29	29.21	624.85
4.68	20	SLE R	2	1	0.00	-5822.26	-2539.31	-3030.24	13.45	7.16	57.11	1121.76
4.68	26	SLE Q	2	1	0.00	-4182.78	-615.00	-2371.94	12.31	8.29	29.21	624.85
9.30	33	SLE R	2	1	462.00	-6590.21	8349.69	372.04	12.31	8.29	81.33	2323.33
9.30	26	SLE Q	2	1	462.00	-1843.90	2166.06	143.28	12.31	8.29	21.71	603.14

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cmq>	ϵ_{sm}	W _k <mm>
4.68	26	SLE Q	2	1	0.00	-4182.78	-2371.94	-615.00	44.00	171.01	0.50	18.86	197.30	5.15	298.64	624.85	0.18	0.06
4.68	23	SLE F	2	1	0.00	-4158.57	-2717.00	-1319.16	44.00	171.01	0.50	18.86	217.30	3.14	215.42	855.49	0.25	0.09
4.68	26	SLE Q	2	1	0.00	-4182.78	-2371.94	-615.00	44.00	171.01	0.50	18.86	197.30	5.15	298.64	624.85	0.18	0.06
4.68	23	SLE F	2	1	0.00	-4158.57	-2717.00	-1319.16	44.00	171.01	0.50	18.86	217.30	3.14	215.42	855.49	0.25	0.09
9.30	26	SLE Q	2	1	462.00	-1843.90	143.28	2166.06	44.00	171.01	0.50	18.86	187.27	8.29	436.60	603.14	0.18	0.06
9.30	24	SLE F	2	1	462.00	-2516.84	179.10	2991.17	44.00	171.01	0.50	18.86	188.12	8.29	440.37	831.50	0.24	0.08

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø8/ 5	2	219	SLU	0.45	968.64	1.96	54963.50	54963.50	0.45	1707.45	1.96	54963.50	54963.50	32.190	
0.70	1.31	ø8/ 5	2	228	SLU	0.45	2587.88	1.96	54963.50	54963.50	0.45	830.04	1.96	54963.50	54963.50	21.239	
0.70	1.31	ø8/ 5	2	23 (TG)	SLV	0.45	4121.31	1.88	52833.90	52833.90	0.45	11076.10	1.88	52833.90	52833.90	4.770	
0.70	1.31	ø8/ 5	2	25 (TG)	SLV	0.45	7535.51	1.88	52840.00	52840.00	0.45	8259.01	1.88	52840.00	52840.00	6.398	
1.31	3.77	ø8/15	2	219	SLU	0.45	968.64	2.50	23366.90	46819.90	0.45	1707.45	2.50	23366.90	46819.90	13.685	
1.31	3.77	ø8/15	2	228	SLU	0.45	2072.42	2.50	23366.90	46819.90	0.45	830.04	2.50	23366.90	46819.90	11.275	
1.31	3.77	ø8/15	2	23 (TG)	SLV	0.45	4121.31	2.50	23366.90	43996.80	0.45	11076.10	2.50	23366.90	43996.80	2.110	
1.31	3.77	ø8/15	2	25 (TG)	SLV	0.45	7535.51	2.50	23366.90	44004.70	0.45	8259.01	2.50	23366.90	44004.70	2.829	
3.77	4.38	ø8/10	2	219	SLU	0.45	968.64	2.50	35050.30	46819.90	0.45	1707.45	2.50	35050.30	46819.90	20.528	
3.77	4.38	ø8/10	2	217	SLU	0.45	1242.97	2.50	35050.30	46527.00	0.45	1486.85	2.50	35050.30	46527.00	23.573	
3.77	4.38	ø8/10	2	23 (TG)	SLV	0.45	4121.31	2.50	35050.30	43996.80	0.45	11076.10	2.50	35050.30	43996.80	3.164	
3.77	4.38	ø8/10	2	25 (TG)	SLV	0.45	7535.51	2.50	35050.30	44004.70	0.45	8259.01	2.50	35050.30	44004.70	4.244	
4.68	5.45	ø6/10	2	217	SLU	0.45	2270.59	2.50	19715.80	40121.40	0.45	1148.20	2.50	19715.80	40121.40	8.683	
4.68	5.45	ø6/10	2	218	SLU	0.45	2873.40	2.50	19715.80	40469.90	0.45	1002.71	2.50	19715.80	40469.90	6.861	
4.68	5.45	ø6/10	2	27 (TG)	SLV	0.45	4530.42	2.50	19715.80	39276.00	0.45	4400.56	2.50	19715.80	39276.00	4.352	
4.68	5.45	ø6/10	2	213 (TG)	SLV	0.45	6685.80	2.50	19715.80	39262.00	0.45	3246.63	2.50	19715.80	39262.00	2.949	
5.45	8.53	ø6/15	2	217	SLU	0.45	2270.59	2.50	13143.90	40052.20	0.45	1148.20	2.50	13143.90	40052.20	5.789	
5.45	8.53	ø6/15	2	229	SLU	0.45	4021.49	2.50	13143.90	40688.50	0.45	822.24	2.50	13143.90	40688.50	3.268	
5.45	8.53	ø6/15	2	27 (TG)	SLV	0.45	4530.42	2.50	13143.90	39276.00	0.45	4400.56	2.50	13143.90	39276.00	2.901	
5.45	8.53	ø6/15	2	213 (TG)	SLV	0.45	6685.80	2.50	13143.90	39262.00	0.45	3246.63	2.50	13143.90	39262.00	1.966	
8.53	9.30	ø6/10	2	217	SLU	0.45	2270.59	2.50	19715.80	39775.40	0.45	1148.20	2.50	19715.80	39775.40	8.683	
8.53	9.30	ø6/10	2	228	SLU	0.45	4597.79	2.50	19715.80	40259.00	0.45	703.09	2.50	19715.80	40259.00	4.288	
8.53	9.30	ø6/10	2	27 (TG)	SLV	0.45	4530.42	2.50	19715.80	39276.00	0.45	4400.56	2.50	19715.80	39276.00	4.352	
8.53	9.30	ø6/10	2	213 (TG)	SLV	0.45	6685.80	2.50	19715.80	39262.00	0.45	3246.63	2.50	19715.80	39262.00	2.949	

Dettagli costruttivi per la duttilità

- CC=13 $\alpha_e=0.37407$ $\omega_{rd}=0.25481$ $\mu\Phi_d=13.5551$ $v_d=0.1143$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20968$ $\mu\Phi_c=16.5393$
0.09532 \geq 0.07181 [7.4.29]
- CC=13 $\alpha_e=0.37407$ $\omega_{rd}=0.25481$ $\mu\Phi_d=8.64393$ $v_d=0.1143$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20968$ $\mu\Phi_c=16.5393$
0.09532 \geq 0.03311 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	40(e)	SLU I	1	1	70.00	-38282.30	-1313.78	246.62	-143684.00	-11230.60	7657.45	149.06	29.25	3.753
0.70	40(e)	SLU I	1	1	70.00	-38282.30	-1313.78	246.62	-143684.00	-11230.60	7657.45	149.06	29.25	3.753
4.38	40(e)	SLU I	1	1	438.00	-36419.30	2928.15	-516.70	-143684.00	13438.40	-3695.01	341.02	31.87	3.945
4.68	40	SLU I	2	1	0.00	-4182.78	-2371.94	-615.00	-4182.78	-10147.00	-2625.62	192.66	47.79	4.278
4.68	40	SLU I	2	1	0.00	-4182.78	-2371.94	-615.00	-4182.78	-10147.00	-2625.62	192.66	47.79	4.278
9.30	40	SLU I	2	1	462.00	-1843.90	143.28	2166.06	-1843.90	677.04	10494.70	85.78	61.09	4.843

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw,y <m>	Vsdu,y <daN>	ctgθ,y	VRsd,y <daN>	VRcd,y <daN>	bw,z <m>	Vsdu,z <daN>	ctgθ,z	VRsd,z <daN>	VRcd,z <daN>	Sic.
-----------	-----------	--------	-----------------	-----------------	----	-----	-------------	-----------------	--------	-----------------	-----------------	-------------	-----------------	--------	-----------------	-----------------	------

Relazione di calcolo

0.70	1.31	ø8/ 5	2	240	SLU I	0.35	207.42	2.50	37816.60	53969.80	0.35	1152.70	2.50	37816.60	53969.80	32.807
1.31	3.77	ø8/15	2	240	SLU I	0.35	207.42	2.50	12605.50	53921.60	0.35	1152.70	2.50	12605.50	53921.60	10.936
3.77	4.38	ø8/10	2	240	SLU I	0.35	207.42	2.50	18908.30	53728.90	0.35	1152.70	2.50	18908.30	53728.90	16.404
4.68	5.45	ø6/10	2	240	SLU I	0.35	601.96	2.50	10500.60	48678.50	0.35	544.42	2.50	10500.60	48678.50	17.444
5.45	8.53	ø6/15	2	240	SLU I	0.35	601.96	2.50	7000.38	48618.00	0.35	544.42	2.50	7000.38	48618.00	11.629
8.53	9.30	ø6/10	2	240	SLU I	0.35	601.96	2.50	10500.60	48376.00	0.35	544.42	2.50	10500.60	48376.00	17.444

Pilastrata n. 20

Nodi: -5 21 63

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
1R		45.00	45.00	5.30	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
1R		45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _r	Sic.
0.70	13	SLV	1	1	70.00	-32796.00	8717.96	8717.96	5643.01	5643.01	-32796.00	16135.50	10232.60	33.75	4.63	1.840
0.70	13	SLV	1	1	70.00	-32796.00	8717.96	8717.96	5643.01	5643.01	-32796.00	16135.50	10232.60	33.75	4.63	1.840
4.38	13	SLV	1	1	438.00	-30933.00	-11437.20	-11437.20	-1752.15	-1752.15	-30933.00	-19455.00	-2747.80	188.44	7.21	1.698
4.68	28	SLU	2	1	0.00	-9403.57	6807.99	6807.99	438.15	438.15	-9403.57	16257.40	1278.92	2.81	12.41	2.390
4.68	28	SLU	2	1	0.00	-9403.57	6807.99	6807.99	438.15	438.15	-9403.57	16257.40	1278.92	2.81	12.41	2.390
8.95	29	SLU	2	1	427.00	-7251.82	-886.40	-886.40	3853.33	3853.33	-7251.82	-3687.36	15711.00	99.84	9.46	4.081

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
0.70	32	SLE R	1	1	70.00	-35790.70	1658.64	3251.09	3.14	17.47	43.64	550.79
0.70	26	SLE Q	1	1	70.00	-33993.40	98.18	2289.92	0.00	20.61	27.51	366.10
0.70	32	SLE R	1	1	70.00	-35790.70	1658.64	3251.09	3.14	17.47	43.64	550.79
0.70	26	SLE Q	1	1	70.00	-33993.40	98.18	2289.92	0.00	20.61	27.51	366.10
4.38	22	SLE R	1	1	438.00	-35508.10	-893.98	-6542.39	10.30	10.30	67.78	793.06
4.38	26	SLE Q	1	1	438.00	-32130.40	-214.78	-6480.08	8.29	12.31	61.56	710.10
4.68	20	SLE R	2	1	0.00	-6102.17	-1435.46	3941.96	12.31	8.29	53.48	1150.38
4.68	31	SLE R	2	1	0.00	-6554.77	-651.22	4530.70	12.31	8.29	49.79	1181.98
4.68	26	SLE Q	2	1	0.00	-5716.59	-252.38	2843.63	12.31	8.29	29.36	641.90
4.68	20	SLE R	2	1	0.00	-6102.17	-1435.46	3941.96	12.31	8.29	53.48	1150.38
4.68	31	SLE R	2	1	0.00	-6554.77	-651.22	4530.70	12.31	8.29	49.79	1181.98
4.68	26	SLE Q	2	1	0.00	-5716.59	-252.38	2843.63	12.31	8.29	29.36	641.90
8.95	33	SLE R	2	1	427.00	-5273.75	2632.69	-318.92	12.31	8.29	28.16	607.38
8.95	26	SLE Q	2	1	427.00	-3554.90	856.05	1658.95	10.30	10.30	25.11	480.08

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
4.38	26	SLE Q	1	1	438.00	-32130.40	-6480.08	-214.78	44.00	171.01	0.50	18.86	156.49	8.29	301.23	640.82	0.19	0.05
4.38	23	SLE F	1	1	438.00	-31942.70	-6206.83	-644.06	44.00	171.01	0.50	18.86	177.33	5.15	244.07	623.62	0.18	0.05
4.68	26	SLE Q	2	1	0.00	-5716.59	2843.63	-252.38	44.00	171.02	0.50	18.86	176.26	8.29	388.20	641.90	0.19	0.06
4.68	23	SLE F	2	1	0.00	-5541.63	3246.41	-754.15	44.00	171.02	0.50	18.86	203.66	5.15	316.02	850.20	0.25	0.09
4.68	26	SLE Q	2	1	0.00	-5716.59	2843.63	-252.38	44.00	171.02	0.50	18.86	176.26	8.29	388.20	641.90	0.19	0.06
4.68	23	SLE F	2	1	0.00	-5541.63	3246.41	-754.15	44.00	171.02	0.50	18.86	203.66	5.15	316.02	850.20	0.25	0.09
8.95	26	SLE Q	2	1	427.00	-3554.90	1658.95	856.05	44.00	171.02	0.50	18.86	205.29	3.14	195.41	480.08	0.14	0.05
8.95	25	SLE F	2	1	427.00	-3549.71	1657.84	856.08	44.00	171.02	0.50	18.86	205.28	3.14	195.40	480.02	0.14	0.05

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø8/ 5	2	228	SLU	0.45	1993.83	1.93	54195.20	54195.20	0.45	3808.02	1.93	54195.20	54195.20	14.232	
0.70	1.31	ø8/ 5	2	211(TG)	SLV	0.45	2104.32	1.87	52402.90	52402.90	0.45	11637.40	1.87	52402.90	52402.90	4.503	
0.70	1.31	ø8/ 5	2	25(TG)	SLV	0.45	7205.37	1.87	52502.50	52502.50	0.45	8716.49	1.87	52502.50	52502.50	6.023	
1.31	3.77	ø8/15	2	228	SLU	0.45	1542.45	2.50	23366.90	45733.50	0.45	3808.02	2.50	23366.90	45733.50	6.136	
1.31	3.77	ø8/15	2	211(TG)	SLV	0.45	2104.32	2.50	23366.90	43438.90	0.45	11637.40	2.50	23366.90	43438.90	2.008	
1.31	3.77	ø8/15	2	25(TG)	SLV	0.45	7205.37	2.50	23366.90	43567.50	0.45	8716.49	2.50	23366.90	43567.50	2.681	
3.77	4.38	ø8/10	2	228	SLU	0.45	714.45	2.50	35050.30	45513.00	0.45	3808.02	2.50	35050.30	45513.00	9.204	
3.77	4.38	ø8/10	2	211(TG)	SLV	0.45	2104.32	2.50	35050.30	43438.90	0.45	11637.40	2.50	35050.30	43438.90	3.012	
3.77	4.38	ø8/10	2	25(TG)	SLV	0.45	7205.37	2.50	35050.30	43567.50	0.45	8716.49	2.50	35050.30	43567.50	4.021	
4.68	5.39	ø6/10	2	228	SLU	0.45	306.00	2.50	19715.80	40300.70	0.45	1891.18	2.50	19715.80	40300.70	10.425	
4.68	5.39	ø6/10	2	218	SLU	0.45	1213.34	2.50	19715.80	40297.90	0.45	1241.95	2.50	19715.80	40297.90	15.875	
4.68	5.39	ø6/10	2	23(TG)	SLV	0.45	2220.30	2.50	19715.80	39524.60	0.45	7838.24	2.50	19715.80	39524.60	2.515	
4.68	5.39	ø6/10	2	213(TG)	SLV	0.45	7005.08	2.50	19715.80	39546.90	0.45	3890.34	2.50	19715.80	39546.90	2.814	
5.39	8.24	ø6/15	2	228	SLU	0.45	1268.46	2.50	13143.90	40236.70	0.45	1891.18	2.50	13143.90	40236.70	6.950	
5.39	8.24	ø6/15	2	229	SLU	0.45	1424.28	2.50	13143.90	40326.60	0.45	1741.56	2.50	13143.90	40326.60	7.547	
5.39	8.24	ø6/15	2	23(TG)	SLV	0.45	2220.30	2.50	13143.90	39524.60	0.45	7838.24	2.50	13143.90	39524.60	1.677	
5.39	8.24	ø6/15	2	213(TG)	SLV	0.45	7005.08	2.50	13143.90	39546.90	0.45	3890.34	2.50	13143.90	39546.90	1.876	
8.24	8.95	ø6/10	2	228	SLU	0.45	1583.35	2.50	19715.80	39980.90	0.45	1891.18	2.50	19715.80	39980.90	10.425	
8.24	8.95	ø6/10	2	229	SLU	0.45	1613.22	2.50	19715.80	40070.80	0.45	1741.56	2.50	19715.80	40070.80	11.321	
8.24	8.95	ø6/10	2	23(TG)	SLV	0.45	2220.30	2.50	19715.80	39524.60	0.45	7838.24	2.50	19715.80	39524.60	2.515	
8.24	8.95	ø6/10	2	213(TG)	SLV	0.45	7005.08	2.50	19715.80	39546.90	0.45	3890.34	2.50	19715.80	39546.90	2.814	

Dettagli costruttivi per la duttilità

- CC=5 $\alpha_e=0.37407$ $\omega_{wd}=0.25481$ $\mu\Phi_d=13.5551$ $v_d=0.10469$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20968$ $\mu\Phi_c=18.0582$
0.09532 >= 0.06282 [7.4.29]
- CC=5 $\alpha_e=0.37407$ $\omega_{wd}=0.25481$ $\mu\Phi_d=8.64393$ $v_d=0.10469$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20968$ $\mu\Phi_c=18.0582$
0.09532 >= 0.02738 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_r	Sic.
0.70	40 (e)	SLU I	1	1	70.00	-33993.40	2289.92	98.18	-143684.00	12466.10	4428.27	21.09	32.32	4.227
0.70	40 (e)	SLU I	1	1	70.00	-33993.40	2289.92	98.18	-143684.00	12466.10	4428.27	21.09	32.32	4.227
4.38	40 (e)	SLU I	1	1	438.00	-32130.40	-6480.08	-214.78	-32130.40	-13697.50	1629.41	171.56	39.36	2.114
4.68	40	SLU I	2	1	0.00	-5716.59	2843.63	-252.38	-5716.59	11046.40	-896.51	355.08	56.39	3.882
4.68	40	SLU I	2	1	0.00	-5716.59	2843.63	-252.38	-5716.59	11046.40	-896.51	355.08	56.39	3.882
8.95	40	SLU I	2	1	427.00	-3554.90	1658.95	856.05	-3554.90	9341.51	4905.98	25.31	38.99	5.650

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø8/ 5	2	2	40	SLU I	0.35	85.04	2.50	37816.60	53304.30	0.35	2383.15	2.50	37816.60	53304.30	15.868
1.31	3.77	ø8/15	2	2	40	SLU I	0.35	85.04	2.50	12605.50	53256.10	0.35	2383.15	2.50	12605.50	53256.10	5.289
3.77	4.38	ø8/10	2	2	40	SLU I	0.35	85.04	2.50	18908.30	53063.40	0.35	2383.15	2.50	18908.30	53063.40	7.934
4.68	5.39	ø6/10	2	2	40	SLU I	0.35	259.58	2.50	10500.60	48916.50	0.35	277.44	2.50	10500.60	48916.50	37.847
5.39	8.24	ø6/15	2	2	40	SLU I	0.35	259.58	2.50	7000.38	48860.60	0.35	277.44	2.50	7000.38	48860.60	25.232
8.24	8.95	ø6/10	2	2	40	SLU I	0.35	259.58	2.50	10500.60	48637.00	0.35	277.44	2.50	10500.60	48637.00	37.847

Pilastrata n. 21

Nodi: 7 20

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fcd (Inc) <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
1R		45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_r	Sic.
0.70	5	SLV	1	1	70.00	-20822.90	-7973.01	-7973.01	-6146.69	-6146.69	-20822.90	-14314.20	-10807.80	217.97	5.08	1.782
0.70	5	SLV	1	1	70.00	-20822.90	-7973.01	-7973.01	-6146.69	-6146.69	-20822.90	-14314.20	-10807.80	217.97	5.08	1.782
4.38	5 (e)	SLV	1	1	438.00	-18959.90	8488.59	8488.59	125.22	-443.66	-18959.90	17817.60	-1206.59	357.19	10.79	2.101

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cmq>	σ_f <daN/cmq>
0.70	34	SLE R	1	1	70.00	-23722.90	1042.06	-755.76	0.00	20.61	19.91	263.60
0.70	32	SLE R	1	1	70.00	-21851.30	1781.44	-34.75	0.00	20.61	19.22	252.78
0.70	26	SLE Q	1	1	70.00	-21171.10	-43.56	-1433.45	0.00	20.61	17.08	227.37
0.70	34	SLE R	1	1	70.00	-23722.90	1042.06	-755.76	0.00	20.61	19.91	263.60
0.70	32	SLE R	1	1	70.00	-21851.30	1781.44	-34.75	0.00	20.61	19.22	252.78
0.70	26	SLE Q	1	1	70.00	-21171.10	-43.56	-1433.45	0.00	20.61	17.08	227.37
4.38	22	SLE R	1	1	438.00	-21806.70	42.14	3514.22	8.29	12.31	32.55	392.32
4.38	26	SLE Q	1	1	438.00	-19308.10	98.48	3240.59	8.29	12.31	30.51	364.64

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
4.38	26	SLE Q	1	1	438.00	-19308.10	3240.59	98.48	44.00	171.02	0.50	18.86	180.45	5.15	252.60	224.01	0.07	0.02
4.38	25	SLE F	1	1	438.00	-19943.80	3347.38	98.48	44.00	171.02	0.50	18.86	180.71	5.15	253.29	231.09	0.07	0.02

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	19	SLU	0.45	34.38	2.50	39431.60	43500.10	0.45	1946.06	2.50	39431.60	43500.10	20.262
0.70	1.31	ø6/ 5	2	2	28	SLU	0.45	1937.76	2.50	39431.60	43127.60	0.45	681.49	2.50	39431.60	43127.60	20.349
0.70	1.31	ø6/ 5	2	2	3 (TG)	SLV	0.45	2412.87	2.50	39431.60	41664.30	0.45	10538.60	2.50	39431.60	41664.30	3.742
0.70	1.31	ø6/ 5	2	2	15 (TG)	SLV	0.45	7502.68	2.50	39431.60	41684.40	0.45	7502.66	2.50	39431.60	41684.40	5.256
1.31	3.77	ø6/15	2	2	19	SLU	0.45	34.38	2.50	13143.90	43444.90	0.45	1946.06	2.50	13143.90	43444.90	6.754
1.31	3.77	ø6/15	2	2	28	SLU	0.45	1533.85	2.50	13143.90	43072.50	0.45	681.49	2.50	13143.90	43072.50	8.569
1.31	3.77	ø6/15	2	2	3 (TG)	SLV	0.45	2412.87	2.50	13143.90	41664.30	0.45	10538.60	2.50	13143.90	41664.30	1.247
1.31	3.77	ø6/15	2	2	15 (TG)	SLV	0.45	7502.68	2.50	13143.90	41684.40	0.45	7502.66	2.50	13143.90	41684.40	1.752
3.77	4.38	ø6/10	2	2	19	SLU	0.45	34.38	2.50	19715.80	43224.50	0.45	1946.06	2.50	19715.80	43224.50	10.131
3.77	4.38	ø6/10	2	2	28	SLU	0.45	485.69	2.50	19715.80	42852.00	0.45	681.49	2.50	19715.80	42852.00	28.930
3.77	4.38	ø6/10	2	2	3 (TG)	SLV	0.45	2412.87	2.50	19715.80	41664.30	0.45	10538.60	2.50	19715.80	41664.30	1.871
3.77	4.38	ø6/10	2	2	15 (TG)	SLV	0.45	7502.68	2.50	19715.80	41684.40	0.45	7502.66	2.50	19715.80	41684.40	2.628

Dettagli costruttivi per la duttilità

- CC=13 $\alpha_e=0.36817$ $\omega_{wd}=0.14257$ $\mu\Phi_d=13.5551$ $v_d=0.064017$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=19.9317$
0.05249 >= 0.0245 [7.4.29]

- CC=13 $\alpha_e=0.36817$ $\omega_{nd}=0.14257$ $\mu\Phi_d=8.64393$ $v_d=0.064017$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=19.9317$
0.05249 >= 0.00294 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	Nu	MRdy	MRdz	α	ϵ_y	Sic.	
<m>					<cm>	<daN>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>			
0.70	40 (e)	SLU	I	1	1	70.00	-21171.10	-1433.45	-43.56	-143684.00	-11613.90	-3787.32	199.69	36.16	6.787
0.70	40 (e)	SLU	I	1	1	70.00	-21171.10	-1433.45	-43.56	-143684.00	-11613.90	-3787.32	199.69	36.16	6.787
4.38	40 (e)	SLU	I	1	1	438.00	-19308.10	3240.59	98.48	-19308.10	12482.50	1766.77	7.03	45.66	3.852

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	b _{w,y}	V _{sdu,y}	ctgθ _y	VR _{sd,y}	VR _{cd,y}	b _{w,z}	V _{sdu,z}	ctgθ _z	VR _{sd,z}	VR _{cd,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
0.70	1.31	ø6/ 5	2	2	40	SLU I	0.35	38.60	2.50	21001.10	51314.60	0.35	1270.12	2.50	21001.10	51314.60	16.535
1.31	3.77	ø6/15	2	2	40	SLU I	0.35	38.60	2.50	7000.38	51266.40	0.35	1270.12	2.50	7000.38	51266.40	5.512
3.77	4.38	ø6/10	2	2	40	SLU I	0.35	38.60	2.50	10500.60	51073.70	0.35	1270.12	2.50	10500.60	51073.70	8.267

Pilastrata n. 22

Nodi: 1 10 64

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
1	R	45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	My ver.	Mz	Mz ver.	Nu	MRdy	MRdz	α	ϵ_r	Sic.
<m>					<cm>	<daN>	<daNm>	<daNm>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
0.70	5	SLV	1	1	70.00	-19008.70	6409.57	6409.57	-9665.98	-9665.98	-19008.70	9863.44	-14719.00	303.75	5.34	1.528
0.70	5	SLV	1	1	70.00	-19008.70	6409.57	6409.57	-9665.98	-9665.98	-19008.70	9863.44	-14719.00	303.75	5.34	1.528
4.38	13	SLV	1	1	438.00	-17266.80	-9291.74	-9291.74	4401.56	4401.56	-17266.80	-15831.00	7278.36	157.50	6.24	1.695
4.68	27	SLU	2	1	0.00	-7467.67	10753.00	10753.00	-248.91	-248.91	-7467.67	15901.00	-318.58	359.30	14.06	1.479
4.68	27	SLU	2	1	0.00	-7467.67	10753.00	10753.00	-248.91	-248.91	-7467.67	15901.00	-318.58	359.30	14.06	1.479
8.95	27(e)	SLU	2	1	427.00	-4657.47	-8353.43	-8353.43	20.69	107.59	-4657.47	-15496.40	-0.02	180.00	15.74	1.855

Stato limite d'esercizio - Verifiche tensionali

Xg	CC	TCC	El	Sez.	X	N	Mz	My	AfT	AfC	σ_c	σ_f	
<m>					<cm>	<daN>	<daNm>	<daNm>	<cmq>	<cmq>	<daN/cmq>	<daN/cmq>	
0.70	32	SLE	R	1	1	70.00	-20742.30	1293.20	2543.55	5.15	15.46	33.46	407.92
0.70	26	SLE	Q	1	1	70.00	-19744.10	-717.34	1876.43	5.15	15.46	23.32	295.36
0.70	32	SLE	R	1	1	70.00	-20742.30	1293.20	2543.55	5.15	15.46	33.46	407.92
0.70	26	SLE	Q	1	1	70.00	-19744.10	-717.34	1876.43	5.15	15.46	23.32	295.36
4.38	22	SLE	R	1	1	438.00	-19621.80	1785.17	-5161.34	10.30	10.30	65.79	944.38
4.38	26	SLE	Q	1	1	438.00	-17881.10	1786.91	-5400.57	10.30	10.30	68.83	1090.58
4.68	31	SLE	R	2	1	0.00	-5658.29	-184.12	7595.14	12.31	8.29	71.96	2106.83
4.68	26	SLE	Q	2	1	0.00	-5181.62	-121.81	4743.02	12.31	8.29	45.22	1235.99
4.68	31	SLE	R	2	1	0.00	-5658.29	-184.12	7595.14	12.31	8.29	71.96	2106.83
4.68	26	SLE	Q	2	1	0.00	-5181.62	-121.81	4743.02	12.31	8.29	45.22	1235.99
8.95	31	SLE	R	2	1	427.00	-3496.60	7.62	-5963.49	12.31	8.29	54.58	1691.88
8.95	26	SLE	Q	2	1	427.00	-3019.94	-9.77	-3185.85	12.31	8.29	29.41	847.15

Stato limite d'esercizio - Verifiche a fessurazione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	c	s	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	W _k	
<m>					<cm>	<daN>	<daNm>	<daNm>	<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cmq>		<mm>	
4.38	26	SLE	Q	1	1	438.00	-17881.10	-5400.57	1786.91	44.00	171.01	0.50	18.86	210.54	3.14	204.15	1090.58	0.32	0.11
4.38	25	SLE	F	1	1	438.00	-18239.20	-5593.04	1789.16	44.00	171.01	0.50	18.86	213.93	3.14	209.80	1132.29	0.33	0.12
4.68	26	SLE	Q	2	1	0.00	-5181.62	4743.02	-121.81	44.00	171.02	0.50	18.86	190.92	8.29	452.65	1235.99	0.36	0.12
4.68	23	SLE	F	2	1	0.00	-5348.87	5845.43	-234.59	44.00	171.02	0.50	18.86	190.18	8.29	449.41	1586.41	0.46	0.15
4.68	26	SLE	Q	2	1	0.00	-5181.62	4743.02	-121.81	44.00	171.02	0.50	18.86	190.92	8.29	452.65	1235.99	0.36	0.12
4.68	23	SLE	F	2	1	0.00	-5348.87	5845.43	-234.59	44.00	171.02	0.50	18.86	190.18	8.29	449.41	1586.41	0.46	0.15
8.95	26	SLE	Q	2	1	427.00	-3019.94	-3185.85	-9.77	44.00	171.01	0.50	18.86	194.73	8.29	469.41	847.15	0.25	0.08
8.95	23	SLE	F	2	1	427.00	-3187.18	-4170.27	-69.81	44.00	171.01	0.50	18.86	194.09	8.29	466.60	1148.18	0.33	0.11

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	b _{w,y}	V _{sdu,y}	ctg θ _y	VR _{sd,y}	VR _{cd,y}	b _{w,z}	V _{sdu,z}	ctg θ _z	VR _{sd,z}	VR _{cd,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
0.70	1.31	ø6/ 5	2	2	30	SLU	0.45	127.30	2.50	39431.60	43044.70	0.45	2884.06	2.50	39431.60	43044.70	13.672
0.70	1.31	ø6/ 5	2	2	18	SLU	0.45	916.43	2.50	39431.60	42786.50	0.45	2247.60	2.50	39431.60	42786.50	17.544
0.70	1.31	ø6/ 5	2	2	11(TG)	SLV	0.45	2910.03	2.50	39431.60	41520.80	0.45	10027.60	2.50	39431.60	41520.80	3.932
0.70	1.31	ø6/ 5	2	2	25(TG)	SLV	0.45	8660.03	2.50	39431.60	41542.20	0.45	5365.21	2.50	39431.60	41542.20	4.553
1.31	3.77	ø6/15	2	2	30	SLU	0.45	544.43	2.50	13143.90	42989.60	0.45	2884.06	2.50	13143.90	42989.60	4.557
1.31	3.77	ø6/15	2	2	18	SLU	0.45	916.43	2.50	13143.90	42731.30	0.45	2247.60	2.50	13143.90	42731.30	5.848
1.31	3.77	ø6/15	2	2	11(TG)	SLV	0.45	2910.03	2.50	13143.90	41520.80	0.45	10027.60	2.50	13143.90	41520.80	1.311
1.31	3.77	ø6/15	2	2	25(TG)	SLV	0.45	8660.03	2.50	13143.90	41542.20	0.45	5365.21	2.50	13143.90	41542.20	1.518
3.77	4.38	ø6/10	2	2	30	SLU	0.45	678.78	2.50	19715.80	42769.10	0.45	2884.06	2.50	19715.80	42769.10	6.836
3.77	4.38	ø6/10	2	2	18	SLU	0.45	916.43	2.50	19715.80	42510.90	0.45	2247.60	2.50	19715.80	42510.90	8.772
3.77	4.38	ø6/10	2	2	11(TG)	SLV	0.45	2910.03	2.50	19715.80	41520.80	0.45	10027.60	2.50	19715.80	41520.80	1.966
3.77	4.38	ø6/10	2	2	25(TG)	SLV	0.45	8660.03	2.50	19715.80	41542.20	0.45	5365.21	2.50	19715.80	41542.20	2.277
4.68	5.39	ø6/10	2	2	27	SLU	0.45	63.14	2.50	19715.80	40036.30	0.45	4474.57	2.50	19715.80	40036.30	4.406

Relazione di calcolo

4.68	5.39	ø6/10	2	217	SLU	0.45	72.27	2.50	19715.80	40009.10	0.45	4091.84	2.50	19715.80	40009.10	4.818
4.68	5.39	ø6/10	2	29(TG)	SLV	0.45	577.43	2.50	19715.80	39411.20	0.45	7953.26	2.50	19715.80	39411.20	2.479
4.68	5.39	ø6/10	2	213(TG)	SLV	0.45	1575.36	2.50	19715.80	39411.20	0.45	7843.28	2.50	19715.80	39411.20	2.514
5.39	8.24	ø6/15	2	227	SLU	0.45	63.14	2.50	13143.90	39972.30	0.45	4474.57	2.50	13143.90	39972.30	2.937
5.39	8.24	ø6/15	2	217	SLU	0.45	72.27	2.50	13143.90	39945.20	0.45	4091.84	2.50	13143.90	39945.20	3.212
5.39	8.24	ø6/15	2	29(TG)	SLV	0.45	577.43	2.50	13143.90	39411.20	0.45	7953.26	2.50	13143.90	39411.20	1.653
5.39	8.24	ø6/15	2	213(TG)	SLV	0.45	1575.36	2.50	13143.90	39411.20	0.45	7843.28	2.50	13143.90	39411.20	1.676
8.24	8.95	ø6/10	2	227	SLU	0.45	63.14	2.50	19715.80	39716.50	0.45	4474.57	2.50	19715.80	39716.50	4.406
8.24	8.95	ø6/10	2	217	SLU	0.45	72.27	2.50	19715.80	39689.40	0.45	4091.84	2.50	19715.80	39689.40	4.818
8.24	8.95	ø6/10	2	29(TG)	SLV	0.45	577.43	2.50	19715.80	39411.20	0.45	7953.26	2.50	19715.80	39411.20	2.479
8.24	8.95	ø6/10	2	213(TG)	SLV	0.45	1575.36	2.50	19715.80	39411.20	0.45	7843.28	2.50	19715.80	39411.20	2.514

Dettagli costruttivi per la duttilità

- CC=9 $\alpha_e=0.36817$ $\omega_{nd}=0.14257$ $\mu\Phi_d=13.5551$ $v_d=0.061008$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=20.9147$
0.05249 ≥ 0.0217 [7.4.29]
- CC=9 $\alpha_e=0.36817$ $\omega_{nd}=0.14257$ $\mu\Phi_d=8.64393$ $v_d=0.061008$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=20.9147$
0.05249 ≥ 0.00116 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	Nu	MRdy	MRdz	α	ϵ_y	Sic.
<m>					<cm>	<daN>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
0.70	40	SLU I	1	1	70.00	-19744.10	1876.43	-717.34	-19744.10	11297.80	-4143.30	338.91	35.76	5.999
0.70	40	SLU I	1	1	70.00	-19744.10	1876.43	-717.34	-19744.10	11297.80	-4143.30	338.91	35.76	5.999
4.38	40	SLU I	1	1	438.00	-17881.10	-5400.57	1786.91	-17881.10	-11190.50	3802.26	160.31	37.19	2.077
4.68	40	SLU I	2	1	0.00	-5181.62	4743.02	-121.81	-5181.62	11057.60	-304.05	358.59	65.00	2.331
4.68	40	SLU I	2	1	0.00	-5181.62	4743.02	-121.81	-5181.62	11057.60	-304.05	358.59	65.00	2.331
8.95	40 (e)	SLU I	2	1	427.00	-3019.94	-3185.85	-9.77	-3019.94	-10739.20	216.32	178.59	67.28	3.371

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	$b_{w,y}$ <m>	$V_{sdu,y}$ <daN>	$ctg\theta_{,y}$	$VR_{sd,y}$ <daN>	$VR_{cd,y}$ <daN>	$b_{w,z}$ <m>	$V_{sdu,z}$ <daN>	$ctg\theta_{,z}$	$VR_{sd,z}$ <daN>	$VR_{cd,z}$ <daN>	Sic.
0.70	1.31	ø6/ 5	2	240	SLU	I	0.35	680.50	2.50	21001.10	51093.20	0.35	1977.45	2.50	21001.10	51093.20	10.620
1.31	3.77	ø6/15	2	240	SLU	I	0.35	680.50	2.50	7000.38	51045.00	0.35	1977.45	2.50	7000.38	51045.00	3.540
3.77	4.38	ø6/10	2	240	SLU	I	0.35	680.50	2.50	10500.60	50852.30	0.35	1977.44	2.50	10500.60	50852.30	5.310
4.68	5.39	ø6/10	2	240	SLU	I	0.35	26.24	2.50	10500.60	48833.50	0.35	1856.88	2.50	10500.60	48833.50	5.655
5.39	8.24	ø6/15	2	240	SLU	I	0.35	26.24	2.50	7000.38	48777.60	0.35	1856.88	2.50	7000.38	48777.60	3.770
8.24	8.95	ø6/10	2	240	SLU	I	0.35	26.24	2.50	10500.60	48553.90	0.35	1856.88	2.50	10500.60	48553.90	5.655

Pilastrata n. 39

Nodi: -1131 -46 -2409

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
16	R	45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	9	SLV	1	16	70.00	-12937.00	-2472.55	-2472.55	3340.48	3340.48	-12937.00	-10260.20	13690.20	126.56	5.58	4.117
0.70	9	SLV	1	16	70.00	-12937.00	-2472.55	-2472.55	3340.48	3340.48	-12937.00	-10260.20	13690.20	126.56	5.58	4.117
4.38	5	SLV	1	16	438.00	-11148.80	632.96	632.96	-4946.49	-4946.49	-11148.80	2272.84	-16496.60	275.62	10.58	3.339
4.68	27	SLU	2	16	0.00	-5197.70	1568.35	1568.35	6402.90	6402.90	-5197.70	3722.02	15369.90	80.16	9.72	2.399
4.68	27	SLU	2	16	0.00	-5197.70	1568.35	1568.35	6402.90	6402.90	-5197.70	3722.02	15369.90	80.16	9.72	2.399
8.66	28	SLU	2	16	397.60	-3263.08	-3169.51	-3169.51	-69.51	-69.51	-3263.08	-15192.00	-329.91	180.70	15.03	4.793

Stato limite d'esercizio - Verifiche tensionali

Xg	CC	TCC	El	Sez.	X	N	Mz	My	AfT	AfC	σ _c	σ _f	
<m>					<cm>	<daN>	<daNm>	<daNm>	<cmq>	<cmq>	<daN/cmq>	<daN/cmq>	
0.70	32	SLE	R	1	16	70.00	-16472.30	1529.91	-453.19	3.14	17.47	18.23	232.73
0.70	26	SLE	Q	1	16	70.00	-14040.40	1265.87	-156.30	3.14	17.47	13.85	179.35
0.70	32	SLE	R	1	16	70.00	-16472.30	1529.91	-453.19	3.14	17.47	18.23	232.73
0.70	26	SLE	Q	1	16	70.00	-14040.40	1265.87	-156.30	3.14	17.47	13.85	179.35
4.38	34	SLE	R	1	16	438.00	-14878.00	-2876.35	826.75	10.30	10.30	33.85	390.60
4.38	26	SLE	Q	1	16	438.00	-12177.40	-3068.75	160.14	12.31	8.29	30.01	418.62
4.68	32	SLE	R	2	16	0.00	-4253.88	4318.31	1424.98	12.31	8.29	57.25	1358.98
4.68	26	SLE	Q	2	16	0.00	-2887.25	1885.48	271.07	12.31	8.29	20.71	484.10
4.68	32	SLE	R	2	16	0.00	-4253.88	4318.31	1424.98	12.31	8.29	57.25	1358.98
4.68	26	SLE	Q	2	16	0.00	-2887.25	1885.48	271.07	12.31	8.29	20.71	484.10
8.66	32	SLE	R	2	16	397.60	-2241.02	-47.56	-2155.04	12.31	8.29	20.44	565.96
8.66	26	SLE	Q	2	16	397.60	-874.38	-17.80	-560.53	12.31	8.29	5.41	133.95

Stato limite d'esercizio - Verifiche a fessurazione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	c	s	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	Wk	
<m>					<cm>	<daN>	<daNm>	<daNm>	<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cmq>		<mm>	
4.38	26	SLE	Q	1	16	438.00	-12177.40	160.14	-3068.75	44.00	171.01	0.50	18.86	164.10	8.29	334.72	418.62	0.12	0.03
4.38	36	SLE	F	1	16	438.00	-12489.40	317.50	-3065.61	44.00	171.01	0.50	18.86	196.66	5.15	296.88	424.59	0.12	0.04
4.68	26	SLE	Q	2	16	0.00	-2887.25	271.07	1885.48	44.00	171.01	0.50	18.86	172.66	8.29	372.37	484.10	0.14	0.04

Relazione di calcolo

4.68	23	SLE F	2	16	0.00	-2793.77	295.30	2661.87	44.00	171.01	0.50	18.86	180.28	8.29	405.86	733.23	0.21	0.07
4.68	26	SLE Q	2	16	0.00	-2887.25	271.07	1885.48	44.00	171.01	0.50	18.86	172.66	8.29	372.37	484.10	0.14	0.04
4.68	23	SLE F	2	16	0.00	-2793.77	295.30	2661.87	44.00	171.01	0.50	18.86	180.28	8.29	405.86	733.23	0.21	0.07
8.66	26	SLE Q	2	16	397.60	-874.38	-560.53	-17.80	44.00	171.01	0.50	18.86	187.05	8.29	435.65	133.95	0.04	0.01
8.66	36	SLE F	2	16	397.60	-1064.36	-799.33	-21.25	44.00	171.01	0.50	18.86	189.26	8.29	445.35	199.16	0.06	0.02

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	28	SLU	0.45	1526.98	2.50	39431.60	42120.10	0.45	640.99	2.50	39431.60	42120.10	25.823	
0.70	1.31	ø6/ 5	2	230	SLU	0.45	1636.40	2.50	39431.60	42175.10	0.45	480.51	2.50	39431.60	42175.10	24.096	
0.70	1.31	ø6/ 5	2	27 (TG)	SLV	0.45	6368.73	2.50	39431.60	40611.30	0.45	5457.03	2.50	39431.60	40611.30	6.191	
0.70	1.31	ø6/ 5	2	21 (TG)	SLV	0.45	6849.21	2.50	39431.60	40830.10	0.45	5485.88	2.50	39431.60	40830.10	5.757	
0.70	1.31	ø6/ 5	2	215 (TG)	SLV	0.45	9925.80	2.50	39431.60	40761.40	0.45	2597.72	2.50	39431.60	40761.40	3.973	
1.31	3.77	ø6/15	2	228	SLU	0.45	1526.98	2.50	13143.90	42064.90	0.45	640.99	2.50	13143.90	42064.90	8.608	
1.31	3.77	ø6/15	2	230	SLU	0.45	1636.40	2.50	13143.90	42120.00	0.45	480.51	2.50	13143.90	42120.00	8.032	
1.31	3.77	ø6/15	2	27 (TG)	SLV	0.45	6368.73	2.50	13143.90	40611.30	0.45	5457.03	2.50	13143.90	40611.30	2.064	
1.31	3.77	ø6/15	2	21 (TG)	SLV	0.45	6849.21	2.50	13143.90	40830.10	0.45	5485.88	2.50	13143.90	40830.10	1.919	
1.31	3.77	ø6/15	2	215 (TG)	SLV	0.45	9925.80	2.50	13143.90	40761.40	0.45	2597.72	2.50	13143.90	40761.40	1.324	
3.77	4.38	ø6/10	2	228	SLU	0.45	1526.98	2.50	19715.80	41844.50	0.45	640.99	2.50	19715.80	41844.50	12.912	
3.77	4.38	ø6/10	2	230	SLU	0.45	1636.40	2.50	19715.80	41899.50	0.45	480.51	2.50	19715.80	41899.50	12.048	
3.77	4.38	ø6/10	2	27 (TG)	SLV	0.45	6368.73	2.50	19715.80	40611.30	0.45	5457.03	2.50	19715.80	40611.30	3.096	
3.77	4.38	ø6/10	2	21 (TG)	SLV	0.45	6849.21	2.50	19715.80	40830.10	0.45	5485.88	2.50	19715.80	40830.10	2.879	
3.77	4.38	ø6/10	2	215 (TG)	SLV	0.45	9925.80	2.50	19715.80	40761.40	0.45	2597.72	2.50	19715.80	40761.40	1.986	
4.68	5.34	ø6/10	2	228	SLU	0.45	1591.55	2.50	19715.80	39819.50	0.45	1326.86	2.50	19715.80	39819.50	12.388	
4.68	5.34	ø6/10	2	227	SLU	0.45	1625.80	2.50	19715.80	39726.30	0.45	1011.49	2.50	19715.80	39726.30	12.127	
4.68	5.34	ø6/10	2	29 (TG)	SLV	0.45	4363.58	2.50	19715.80	39169.00	0.45	6424.91	2.50	19715.80	39169.00	3.069	
4.68	5.34	ø6/10	2	21 (TG)	SLV	0.45	7662.10	2.50	19715.80	39093.10	0.45	3846.23	2.50	19715.80	39093.10	2.573	
5.34	7.99	ø6/15	2	228	SLU	0.45	1591.55	2.50	13143.90	39759.90	0.45	1326.86	2.50	13143.90	39759.90	8.259	
5.34	7.99	ø6/15	2	227	SLU	0.45	1625.80	2.50	13143.90	39666.80	0.45	1011.49	2.50	13143.90	39666.80	8.085	
5.34	7.99	ø6/15	2	29 (TG)	SLV	0.45	4363.58	2.50	13143.90	39169.00	0.45	6424.91	2.50	13143.90	39169.00	2.046	
5.34	7.99	ø6/15	2	21 (TG)	SLV	0.45	7662.10	2.50	13143.90	39093.10	0.45	3846.23	2.50	13143.90	39093.10	1.715	
7.99	8.66	ø6/10	2	228	SLU	0.45	1591.55	2.50	19715.80	39521.70	0.45	1326.86	2.50	19715.80	39521.70	12.388	
7.99	8.66	ø6/10	2	227	SLU	0.45	1625.80	2.50	19715.80	39428.60	0.45	1011.49	2.50	19715.80	39428.60	12.127	
7.99	8.66	ø6/10	2	29 (TG)	SLV	0.45	4363.58	2.50	19715.80	39169.00	0.45	6424.91	2.50	19715.80	39169.00	3.069	
7.99	8.66	ø6/10	2	21 (TG)	SLV	0.45	7662.10	2.50	19715.80	39093.10	0.45	3846.23	2.50	19715.80	39093.10	2.573	

Dettagli costruttivi per la duttilità

- CC=5 α_e=0.36817 ω_{nd}=0.14257 μΦ_d=13.5551 v_d=0.045129 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_c=28.2737
0.05249 >= 0.00694 [7.4.29]
- CC=5 α_e=0.36817 ω_{nd}=0.14257 μΦ_d=8.64393 v_d=0.045129 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_c=28.2737
0.05249 >= -0.00825 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	40 (e)	SLU I	1	16	70.00	-14040.40	-156.30	1265.87	-190727.00	-4374.54	18119.40	101.25	50.63	13.584
0.70	40 (e)	SLU I	1	16	70.00	-14040.40	-156.30	1265.87	-190727.00	-4374.54	18119.40	101.25	50.63	13.584
4.38	40 (e)	SLU I	1	16	438.00	-12177.40	160.14	-3068.75	-12177.40	-1828.77	-18403.60	264.38	66.04	6.008
4.68	40	SLU I	2	16	0.00	-2887.25	271.07	1885.48	-2887.25	2450.24	16879.20	84.38	70.59	8.950
4.68	40	SLU I	2	16	0.00	-2887.25	271.07	1885.48	-2887.25	2450.24	16879.20	84.38	70.59	8.950
8.66	40	SLU I	2	16	397.60	-874.38	-560.53	-17.80	-874.38	-16682.70	-681.44	181.41	96.55	29.773

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	240	SLU I	0.40	1177.89	2.50	45296.30	62635.50	0.40	85.99	2.50	45296.30	62635.50	38.456	
1.31	3.77	ø6/15	2	240	SLU I	0.40	1177.89	2.50	15098.80	62587.30	0.40	85.99	2.50	15098.80	62587.30	12.819	
3.77	4.38	ø6/10	2	240	SLU I	0.40	1177.89	2.50	22648.20	62394.60	0.40	85.99	2.50	22648.20	62394.60	19.228	
4.68	5.34	ø6/10	2	240	SLU I	0.40	478.69	2.50	22648.20	60904.80	0.40	209.15	2.50	22648.20	60904.80	47.313	
5.34	7.99	ø6/15	2	240	SLU I	0.40	478.69	2.50	15098.80	60852.80	0.40	209.15	2.50	15098.80	60852.80	31.542	
7.99	8.66	ø6/10	2	240	SLU I	0.40	478.69	2.50	22648.20	60644.60	0.40	209.15	2.50	22648.20	60644.60	47.313	

Pilastrata n. 40

Nodi: -45 38 -2412

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd (Inc) <daN/cmq>	Fcd ver. <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
15R		30.00	30.00	5.50	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
15R		30.00	30.00	5.20	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
4.68	29	SLU	2	15	0.00	-12405.00	4343.01	4343.01	1582.91	1582.91	-12405.00	6250.41	2159.58	19.69	4.75	1.431

Relazione di calcolo

4.68	29	SLU	2	15	0.00	-12405.00	4343.01	4343.01	1582.91	1582.91	-12405.00	7105.67	2571.52	22.50	4.19	1.635
8.66	29(e)	SLU	2	15	397.60	-11242.00	-6109.72	-6109.72	-46.97	-224.84	-11242.00	-7314.49	-285.53	181.41	7.35	1.197

Dati per verifiche di stabilità

Xg <m>	El <m>	l ₀	λ	λ*
---	1	4.68	54.04	43.01
---	1	4.68	54.04	43.01
---	1	4.68	54.04	43.01

Stato limite ultimo - Verifiche a flessione/presoflessione - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy,s <daNm>	MRdz,s <daNm>	α <grad>	ε _y	Sic.
0.70	9	SLV	1	15	70.00	-31575.80	1216.81	1216.81	956.94	956.94	-82543.50	4543.56	3642.53	39.38	2.79	2.614
0.70	9	SLV	1	15	70.00	-31575.80	1216.81	1216.81	956.94	956.94	-82543.50	4543.56	3642.53	39.38	2.79	2.614
4.13	30	SLU	1	15	413.00	-42406.00	-2556.14	-2556.14	-1256.89	-1256.89	-42406.00	-5314.57	-2781.71	209.53	2.35	2.106

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _g <daN/cmq>
0.70	34	SLE R	1	15	70.00	-31160.00	463.56	808.61	0.00	12.57	51.11	645.25
0.70	20	SLE R	1	15	70.00	-26038.90	329.80	721.20	0.00	12.57	42.50	537.15
0.70	26	SLE Q	1	15	70.00	-25368.20	303.59	678.84	0.00	12.57	40.67	516.27
0.70	34	SLE R	1	15	70.00	-31160.00	463.56	808.61	0.00	12.57	51.11	645.25
0.70	20	SLE R	1	15	70.00	-26038.90	329.80	721.20	0.00	12.57	42.50	537.15
0.70	26	SLE Q	1	15	70.00	-25368.20	303.59	678.84	0.00	12.57	40.67	516.27
4.13	34	SLE R	1	15	413.00	-30388.20	-894.02	-1839.92	3.14	9.42	79.13	905.50
4.13	20	SLE R	1	15	413.00	-25267.10	-723.66	-1729.96	3.14	9.42	70.31	793.43
4.13	26	SLE Q	1	15	413.00	-24596.40	-660.49	-1633.61	3.14	9.42	66.15	751.61
4.68	32	SLE R	2	15	0.00	-8226.57	1231.44	3001.14	6.28	6.28	129.87	2107.82
4.68	26	SLE Q	2	15	0.00	-3277.36	607.39	2110.73	6.28	6.28	82.81	1571.48
4.68	32	SLE R	2	15	0.00	-8226.57	1231.44	3001.14	7.60	7.60	119.64	1802.34
4.68	26	SLE Q	2	15	0.00	-3277.36	607.39	2110.73	7.60	7.60	76.08	1334.68
8.66	33	SLE R	2	15	397.60	-7657.48	-32.54	-4175.10	7.60	7.60	112.17	2158.57
8.66	26	SLE Q	2	15	397.60	-2382.76	-15.73	-1481.86	7.60	7.60	39.84	788.65

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _C eff <cmq>	σ _s <daN/cm ² >	ε _{sm}	W _k <mm>
4.68	26	SLE Q	2	15	0.00	-3277.36	2110.73	607.39	44.00	192.00	0.50	20.00	168.20	3.14	125.97	1571.48	0.53	0.15
4.68	24	SLE F	2	15	0.00	-3939.00	2257.15	637.60	44.00	192.00	0.50	20.00	167.89	3.14	125.49	1640.37	0.48	0.14
4.68	26	SLE Q	2	15	0.00	-3277.36	2110.73	607.39	44.00	190.00	0.50	22.00	156.87	3.80	118.99	1334.68	0.46	0.12
4.68	36	SLE F	2	15	0.00	-3941.65	2263.50	708.03	44.00	190.00	0.50	22.00	152.32	3.80	111.13	1424.17	0.42	0.11
8.66	26	SLE Q	2	15	397.60	-2382.76	-1481.86	-15.73	44.00	190.00	0.50	22.00	143.55	7.60	191.96	788.65	0.23	0.06
8.66	24	SLE F	2	15	397.60	-3044.39	-1852.28	-17.82	44.00	190.00	0.50	22.00	143.54	7.60	191.94	981.01	0.29	0.07

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.27	ø10/ 5	2	219	SLU	0.30	465.52	1.03	28101.20	28101.20	0.30	1088.55	1.03	28101.20	28101.20	25.815	
0.70	1.27	ø10/ 5	2	228	SLU	0.30	573.20	1.03	28101.20	28101.20	0.30	938.24	1.03	28101.20	28101.20	29.951	
0.70	1.27	ø10/ 5	2	21(TG)	SLV	0.30	2159.97	1.00	27217.10	26822.40	0.30	3970.80	1.00	27217.10	26822.40	6.755	
0.70	1.27	ø10/ 5	2	211(TG)	SLV	0.30	1943.00	1.00	27271.90	27271.90	0.30	4031.67	1.00	27271.90	27271.90	6.764	
0.70	1.27	ø10/ 5	2	21(TG)	SLV	0.30	2864.53	1.00	27217.10	26822.40	0.30	3295.30	1.00	27217.10	26822.40	8.140	
1.27	3.56	ø10/20	2	219	SLU	0.30	465.52	2.50	17010.70	19390.10	0.30	1088.55	2.50	17010.70	19390.10	15.627	
1.27	3.56	ø10/20	2	228	SLU	0.30	573.20	2.50	17010.70	19390.10	0.30	938.24	2.50	17010.70	19390.10	18.131	
1.27	3.56	ø10/20	2	21(TG)	SLV	0.30	2159.97	2.50	17010.70	18498.20	0.30	3970.80	2.50	17010.70	18498.20	4.284	
1.27	3.56	ø10/20	2	215(TG)	SLV	0.30	1982.33	2.50	17010.70	18995.10	0.30	4048.94	2.50	17010.70	18995.10	4.201	
1.27	3.56	ø10/20	2	21(TG)	SLV	0.30	2864.53	2.50	17010.70	18498.20	0.30	3295.30	2.50	17010.70	18498.20	5.162	
1.27	3.56	ø10/20	2	29(TG)	SLV	0.30	2928.43	2.50	17010.70	19390.10	0.30	3391.62	2.50	17010.70	19390.10	5.016	
3.56	4.13	ø10/15	2	219	SLU	0.30	465.52	2.28	20684.40	20684.30	0.30	1088.55	2.28	20684.40	20684.30	19.002	
3.56	4.13	ø10/15	2	228	SLU	0.30	573.20	2.28	20684.40	20684.30	0.30	938.24	2.28	20684.40	20684.30	22.046	
3.56	4.13	ø10/15	2	211(TG)	SLV	0.30	1943.00	2.24	20311.00	20311.00	0.30	4031.67	2.24	20311.00	20311.00	5.038	
3.56	4.13	ø10/15	2	21(TG)	SLV	0.30	2864.53	2.22	20109.10	20109.10	0.30	3295.30	2.22	20109.10	20109.10	6.102	
4.68	5.34	ø6/15	2	229	SLU	0.30	409.93	2.50	8165.14	17736.80	0.30	2628.94	2.50	8165.14	17736.80	3.106	
4.68	5.34	ø6/15	2	228	SLU	0.30	457.23	2.50	8165.14	17674.70	0.30	2530.28	2.50	8165.14	17674.70	3.227	
4.68	5.34	ø6/15	2	25(TG)	SLV	0.30	289.11	2.50	8165.14	16456.70	0.30	3638.87	2.50	8165.14	16456.70	2.244	
4.68	5.34	ø6/15	2	29(TG)	SLV	0.30	956.97	2.50	8165.14	16456.70	0.30	3528.39	2.50	8165.14	16456.70	2.314	
5.34	7.99	ø6/25	2	229	SLU	0.30	409.93	2.50	4899.08	17712.20	0.30	2628.94	2.50	4899.08	17712.20	1.864	
5.34	7.99	ø6/25	2	228	SLU	0.30	457.23	2.50	4899.08	17650.00	0.30	2530.28	2.50	4899.08	17650.00	1.936	
5.34	7.99	ø6/25	2	25(TG)	SLV	0.30	289.11	2.50	4899.08	16456.70	0.30	3638.87	2.50	4899.08	16456.70	1.346	
5.34	7.99	ø6/25	2	29(TG)	SLV	0.30	956.97	2.50	4899.08	16456.70	0.30	3528.39	2.50	4899.08	16456.70	1.388	
7.99	8.66	ø6/15	2	229	SLU	0.30	409.93	2.50	8165.14	17613.50	0.30	2628.94	2.50	8165.14	17613.50	3.106	
7.99	8.66	ø6/15	2	228	SLU	0.30	457.23	2.50	8165.14	17551.40	0.30	2530.28	2.50	8165.14	17551.40	3.227	
7.99	8.66	ø6/15	2	25(TG)	SLV	0.30	289.11	2.50	8165.14	16456.70	0.30	3638.87	2.50	8165.14	16456.70	2.244	
7.99	8.66	ø6/15	2	29(TG)	SLV	0.30	956.97	2.50	8165.14	16456.70	0.30	3528.39	2.50	8165.14	16456.70	2.314	

Dettagli costruttivi per la duttilità

- CC=9 $\alpha_e=0.39498$ $\omega_{wd}=0.67323$ $\mu\Phi_d=13.5551$ $v_d=0.21135$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.36364$ $\mu\Phi_c=18.322$
0.26592 >= 0.18763 [7.4.29]
- CC=9 $\alpha_e=0.39498$ $\omega_{wd}=0.67323$ $\mu\Phi_d=8.64393$ $v_d=0.21135$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.36364$ $\mu\Phi_c=18.322$
0.26592 >= 0.10697 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
4.6840		SLU I	2	15	0.00	-3277.36	2110.73	607.39	-3277.36	6026.18	1645.84	11.25	39.86	2.844
4.6840		SLU I	2	15	0.00	-3277.36	2110.73	607.39	-3277.36	7044.19	1981.50	14.06	34.61	3.332
8.6640 (e)		SLU I	2	15	397.60	-2382.76	-1481.86	-15.73	-2382.76	-7152.13	-330.94	181.41	60.64	4.829

Stato limite ultimo - Verifiche a flessione/pressoflessione - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy,s <daNm>	M'ydy,s <daNm>	MRdy <daNm>	MRdz,s <daNm>	M'yzd,s <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.7040 (e)	SLU I	1	15	70.00	-25368.20	678.84	678.84	303.59	593.62	-72257.50	2368.63	2368.63	5025.56	1730.20	1730.20	4256.31	39.38	19.24	2.848	
0.7040 (e)	SLU I	1	15	70.00	-25368.20	678.84	678.84	303.59	593.62	-72257.50	2368.63	2368.63	5025.56	1730.20	1730.20	4256.31	39.38	19.24	2.848	
4.1340	SLU I	1	15	413.00	-24596.40	-1633.61	-1633.61	-660.49	-660.49	-24596.40	-3238.09	-3238.09	-6646.38	-923.43	-923.43	-2771.11	205.31	23.11	1.910	

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.27	ø10/ 5	2	240	SLU I	0.23	281.07	1.20	35541.60	35541.60	0.23	674.18	1.20	35541.60	35541.60	52.718	
1.27	3.56	ø10/20	2	240	SLU I	0.23	281.07	2.50	18529.80	24895.50	0.23	674.18	2.50	18529.80	24895.50	27.485	
3.56	4.13	ø10/15	2	240	SLU I	0.23	281.07	2.50	24706.40	24815.70	0.23	674.18	2.50	24706.40	24815.70	36.646	
4.68	5.34	ø6/15	2	240	SLU I	0.25	156.72	2.50	9389.91	23984.30	0.25	903.57	2.50	9389.91	23984.30	10.392	
5.34	7.99	ø6/25	2	240	SLU I	0.25	156.72	2.50	5633.94	23961.20	0.25	903.57	2.50	5633.94	23961.20	6.235	
7.99	8.66	ø6/15	2	240	SLU I	0.25	156.72	2.50	9389.91	23869.10	0.25	903.56	2.50	9389.91	23869.10	10.392	

Pilastrata n. 41

Nodi: -37 43 -2425

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fcd (Inc) <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
16R		45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_z	Sic.
0.705	SLV	1	16		70.00	-24003.10	-6648.17	-6648.17	-3141.47	-3141.47	-24003.10	-16340.40	-8055.61	205.31	5.56	2.478
0.705	SLV	1	16		70.00	-24003.10	-6648.17	-6648.17	-3141.47	-3141.47	-24003.10	-16340.40	-8055.61	205.31	5.56	2.478
4.385	SLV	1	16		438.00	-22140.10	10292.40	10292.40	3452.05	3452.05	-22140.10	17199.80	5662.12	16.88	6.55	1.668
4.6827	SLU	2	16		0.00	-6855.36	-7054.21	-7054.21	1306.29	1306.29	-6855.36	-15745.20	2802.00	172.97	10.59	2.229
4.6827	SLU	2	16		0.00	-6855.36	-7054.21	-7054.21	1306.29	1306.29	-6855.36	-15745.20	2802.00	172.97	10.59	2.229
8.7129	SLU	2	16		402.51	-5382.41	6491.24	6491.24	-6097.76	-6097.76	-5382.41	12005.80	-11323.20	316.41	5.80	1.853

Stato limite d'esercizio - Verifiche tensionali

Xg	CC	TCC	El	Sez.	X	N	Mz	My	AfT	AfC	σ_c	σ_f
<m>					<cm>	<daN>	<daNm>	<daNm>	<cmq>	<cmq>	<daN/cmq>	<daN/cmq>
0.70	22	SLE R	1	16	70.00	-29250.70	-804.04	-2817.68	5.15	15.46	33.08	421.17
0.70	26	SLE Q	1	16	70.00	-26165.40	-723.96	-2555.49	5.15	15.46	29.88	379.91
0.70	22	SLE R	1	16	70.00	-29250.70	-804.04	-2817.68	5.15	15.46	33.08	421.17
0.70	26	SLE Q	1	16	70.00	-26165.40	-723.96	-2555.49	5.15	15.46	29.88	379.91
4.38	22	SLE R	1	16	438.00	-27387.70	2322.89	6865.57	10.30	10.30	86.58	1194.55
4.38	26	SLE Q	1	16	438.00	-24302.40	2094.20	6274.73	10.30	10.30	79.07	1117.64
4.68	32	SLE R	2	16	0.00	-5575.51	1781.65	-4527.53	12.31	8.29	63.26	1418.40
4.68	31	SLE R	2	16	0.00	-4913.54	859.22	-4976.16	12.31	8.29	56.48	1434.26
4.68	26	SLE Q	2	16	0.00	-3157.96	16.19	-3461.17	12.31	8.29	32.01	926.38
4.68	32	SLE R	2	16	0.00	-5575.51	1781.65	-4527.53	12.31	8.29	63.26	1418.40
4.68	31	SLE R	2	16	0.00	-4913.54	859.22	-4976.16	12.31	8.29	56.48	1434.26
4.68	26	SLE Q	2	16	0.00	-3157.96	16.19	-3461.17	12.31	8.29	32.01	926.38
8.71	33	SLE R	2	16	402.51	-3659.88	-4160.83	4429.34	13.45	7.16	90.33	2019.48
8.71	26	SLE Q	2	16	402.51	-1120.26	-1272.06	1354.35	13.45	7.16	27.62	617.38

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm ² >	ε _{sm}	Wk <mm>
4.3826	SLE Q	1	16	438.00	-24302.40	6274.73	2094.20	44.00	171.02	0.50	18.86	198.03	3.14	183.31	1117.64	0.33	0.11	
4.3825	SLE F	1	16	438.00	-24957.20	6490.11	2145.53	44.00	171.02	0.50	18.86	199.15	3.14	185.17	1160.39	0.34	0.11	
4.6826	SLE Q	2	16	0.00	-3157.96	-3461.17	16.19	44.00	171.02	0.50	18.86	194.74	8.29	469.45	926.38	0.27	0.09	
4.6823	SLE F	2	16	0.00	-3152.59	-4070.08	-272.68	44.00	171.02	0.50	18.86	187.64	8.29	438.25	1149.33	0.33	0.11	
4.6826	SLE Q	2	16	0.00	-3157.96	-3461.17	16.19	44.00	171.02	0.50	18.86	194.74	8.29	469.45	926.38	0.27	0.09	
4.6823	SLE F	2	16	0.00	-3152.59	-4070.08	-272.68	44.00	171.02	0.50	18.86	187.64	8.29	438.25	1149.33	0.33	0.11	
8.7126	SLE Q	2	16	402.51	-1120.26	1354.35	-1272.06	44.00	171.02	0.50	18.86	191.85	3.14	173.02	617.38	0.18	0.06	
8.7124	SLE F	2	16	402.51	-1432.16	1741.26	-1635.56	44.00	171.02	0.50	18.86	191.88	3.14	173.06	794.23	0.23	0.08	

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	219	SLU	0.45	1176.49	2.50	39431.60	44541.80	0.45	3662.01	2.50	39431.60	44541.80	10.768	
0.70	1.31	ø6/ 5	2	229	SLU	0.45	1314.83	2.50	39431.60	44547.80	0.45	2729.02	2.50	39431.60	44547.80	14.449	
0.70	1.31	ø6/ 5	2	23 (TG)	SLV	0.45	3765.50	2.50	39431.60	42470.50	0.45	10425.10	2.50	39431.60	42470.50	3.782	
0.70	1.31	ø6/ 5	2	25 (TG)	SLV	0.45	3829.23	2.50	39431.60	42587.00	0.45	10442.10	2.50	39431.60	42587.00	3.776	
0.70	1.31	ø6/ 5	2	21 (TG)	SLV	0.45	6673.96	2.50	39431.60	42031.70	0.45	7932.18	2.50	39431.60	42031.70	4.971	
1.31	3.77	ø6/15	2	219	SLU	0.45	1176.49	2.50	13143.90	44486.70	0.45	3662.01	2.50	13143.90	44486.70	3.589	
1.31	3.77	ø6/15	2	229	SLU	0.45	1314.83	2.50	13143.90	44492.70	0.45	2729.02	2.50	13143.90	44492.70	4.816	
1.31	3.77	ø6/15	2	23 (TG)	SLV	0.45	3765.50	2.50	13143.90	42470.50	0.45	10425.10	2.50	13143.90	42470.50	1.261	
1.31	3.77	ø6/15	2	25 (TG)	SLV	0.45	3829.23	2.50	13143.90	42587.00	0.45	10442.10	2.50	13143.90	42587.00	1.259	
1.31	3.77	ø6/15	2	21 (TG)	SLV	0.45	6673.96	2.50	13143.90	42031.70	0.45	7932.18	2.50	13143.90	42031.70	1.657	
3.77	4.38	ø6/10	2	219	SLU	0.45	1176.49	2.50	19715.80	44266.30	0.45	3662.01	2.50	19715.80	44266.30	5.384	
3.77	4.38	ø6/10	2	229	SLU	0.45	1314.83	2.50	19715.80	44272.20	0.45	2729.02	2.50	19715.80	44272.20	7.225	
3.77	4.38	ø6/10	2	23 (TG)	SLV	0.45	3765.50	2.50	19715.80	42470.50	0.45	10425.10	2.50	19715.80	42470.50	1.891	
3.77	4.38	ø6/10	2	25 (TG)	SLV	0.45	3829.23	2.50	19715.80	42587.00	0.45	10442.10	2.50	19715.80	42587.00	1.888	
3.77	4.38	ø6/10	2	21 (TG)	SLV	0.45	6673.96	2.50	19715.80	42031.70	0.45	7932.18	2.50	19715.80	42031.70	2.486	
4.68	5.35	ø6/10	2	229	SLU	0.45	2072.10	2.50	19715.80	40113.30	0.45	3232.20	2.50	19715.80	40113.30	6.100	
4.68	5.35	ø6/10	2	228	SLU	0.45	2108.90	2.50	19715.80	40088.30	0.45	3118.89	2.50	19715.80	40088.30	6.321	
4.68	5.35	ø6/10	2	21 (TG)	SLV	0.45	3159.64	2.50	19715.80	39164.70	0.45	7684.20	2.50	19715.80	39164.70	2.566	
4.68	5.35	ø6/10	2	21 (TG)	SLV	0.45	3637.99	2.50	19715.80	39174.20	0.45	7009.10	2.50	19715.80	39174.20	2.813	
5.35	8.03	ø6/15	2	229	SLU	0.45	2072.10	2.50	13143.90	40053.00	0.45	3232.20	2.50	13143.90	40053.00	4.067	
5.35	8.03	ø6/15	2	228	SLU	0.45	2108.90	2.50	13143.90	40028.00	0.45	3118.89	2.50	13143.90	40028.00	4.214	
5.35	8.03	ø6/15	2	21 (TG)	SLV	0.45	3159.64	2.50	13143.90	39164.70	0.45	7684.20	2.50	13143.90	39164.70	1.711	
5.35	8.03	ø6/15	2	21 (TG)	SLV	0.45	3637.99	2.50	13143.90	39174.20	0.45	7009.10	2.50	13143.90	39174.20	1.875	
8.03	8.71	ø6/10	2	229	SLU	0.45	2072.10	2.50	19715.80	39811.80	0.45	3232.20	2.50	19715.80	39811.80	6.100	
8.03	8.71	ø6/10	2	228	SLU	0.45	2108.90	2.50	19715.80	39786.80	0.45	3118.89	2.50	19715.80	39786.80	6.321	
8.03	8.71	ø6/10	2	21 (TG)	SLV	0.45	3159.64	2.50	19715.80	39164.70	0.45	7684.20	2.50	19715.80	39164.70	2.566	
8.03	8.71	ø6/10	2	21 (TG)	SLV	0.45	3637.99	2.50	19715.80	39174.20	0.45	7009.10	2.50	19715.80	39174.20	2.813	

Dettagli costruttivi per la duttilità

- CC=9 α_e=0.36817 ω_{nd}=0.14257 μΦ_d=13.5551 v_d=0.084449 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_c=15.1093
0.05249 >= 0.04349 [7.4.29]
- CC=9 α_e=0.36817 ω_{nd}=0.14257 μΦ_d=8.64393 v_d=0.084449 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_c=15.1093
0.05249 >= 0.01505 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.	
0.70	40	SLU	I	1	16	70.00	-26165.40	-2555.49	-723.96	-190727.00	-19222.10	-5712.95	196.88	39.36	7.289
0.70	40	SLU	I	1	16	70.00	-26165.40	-2555.49	-723.96	-190727.00	-19222.10	-5712.95	196.88	39.36	7.289
4.38	40	SLU	I	1	16	438.00	-24302.40	6274.73	2094.20	-24302.40	18764.80	6355.10	18.28	38.35	2.994
4.68	40 (e)	SLU	I	2	16	0.00	-3157.96	-3461.17	16.19	-3157.96	-17068.30	504.65	178.59	93.26	4.933
4.68	40 (e)	SLU	I	2	16	0.00	-3157.96	-3461.17	16.19	-3157.96	-17068.30	504.65	178.59	93.26	4.933
8.71	40	SLU	I	2	16	402.51	-1120.26	1354.35	-1272.06	-1120.26	12006.70	-11445.70	316.41	38.42	8.929

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	240	SLU	I	0.40	765.80	2.50	45296.30	64517.00	0.40	2399.52	2.50	45296.30	64517.00	18.877
1.31	3.77	ø6/15	2	240	SLU	I	0.40	765.80	2.50	15098.80	64468.80	0.40	2399.52	2.50	15098.80	64468.80	6.292
3.77	4.38	ø6/10	2	240	SLU	I	0.40	765.80	2.50	22648.20	64276.10	0.40	2399.52	2.50	22648.20	64276.10	9.439
4.68	5.35	ø6/10	2	240	SLU	I	0.40	320.06	2.50	22648.20	60946.80	0.40	1196.38	2.50	22648.20	60946.80	18.931
5.35	8.03	ø6/15	2	240	SLU	I	0.40	320.06	2.50	15098.80	60894.10	0.40	1196.38	2.50	15098.80	60894.10	12.620
8.03	8.71	ø6/10	2	240	SLU	I	0.40	320.06	2.50	22648.20	60683.40	0.40	1196.38	2.50	22648.20	60683.40	18.931

Pilastrata n. 42

Nodi: -1291 24 -2403

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fcd (Inc) <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
1R		45.00	45.00	5.30	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
1R		45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <m>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	5	SLV	1	1	70.00	-40026.20	-4357.13	-4357.13	-3819.40	-3819.40	-40026.20	-14368.50	-12912.70	222.19	4.25	3.334
0.70	5	SLV	1	1	70.00	-40026.20	-4357.13	-4357.13	-3819.40	-3819.40	-40026.20	-14368.50	-12912.70	222.19	4.25	3.334
4.38	5	SLV	1	1	438.00	-38163.20	4311.18	4311.18	1590.41	1590.41	-38163.20	18616.20	6942.12	21.09	5.09	4.324
4.68	28	SLU	2	1	0.00	-14046.50	-354.46	-354.46	4599.57	4599.57	-14046.50	-1240.75	17026.00	92.81	11.55	3.700
4.68	28	SLU	2	1	0.00	-14046.50	-354.46	-354.46	4599.57	4599.57	-14046.50	-1240.75	17026.00	92.81	11.55	3.700
8.65	28 (e)	SLU	2	1	396.85	-11434.70	24.08	-228.69	-10431.00	-10431.00	-11434.70	-309.62	-16553.30	269.30	13.29	1.587

Stato limite d'esercizio - Verifiche tensionali

Xg	CC	TCC	El	Sez.	X	N	Mz	My	AfT	AfC	σ _c	σ _t
----	----	-----	----	------	---	---	----	----	-----	-----	----------------	----------------

Relazione di calcolo

<m>					<cm>	<daN>	<daNm>	<daNm>	<cmq>	<cmq>	<daN/cm>	<daN/cm>
0.70	21	SLE R	1	1	70.00	-45206.00	-482.82	-688.46	0.00	20.61	25.72	362.92
0.70	26	SLE Q	1	1	70.00	-40363.40	-173.60	-669.83	0.00	20.61	21.87	311.53
0.70	21	SLE R	1	1	70.00	-45206.00	-482.82	-688.46	0.00	20.61	25.72	362.92
0.70	26	SLE Q	1	1	70.00	-40363.40	-173.60	-669.83	0.00	20.61	21.87	311.53
4.38	32	SLE R	1	1	438.00	-44878.60	2777.52	1021.12	0.00	20.61	39.83	523.31
4.38	26	SLE Q	1	1	438.00	-38500.40	580.36	1351.82	0.00	20.61	26.97	366.87
4.68	32	SLE R	2	1	0.00	-9774.57	3090.99	-293.70	12.31	8.29	31.85	539.89
4.68	26	SLE Q	2	1	0.00	-4420.07	497.99	-700.23	10.30	10.30	10.80	125.54
4.68	32	SLE R	2	1	0.00	-9774.57	3090.99	-293.70	12.31	8.29	31.85	539.89
4.68	26	SLE Q	2	1	0.00	-4420.07	497.99	-700.23	10.30	10.30	10.80	125.54
8.65	32	SLE R	2	1	396.85	-7765.53	-7056.28	16.51	12.31	8.29	65.21	1823.89
8.65	26	SLE Q	2	1	396.85	-2411.02	-1747.33	6.84	12.31	8.29	16.24	428.10

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm>	ε _{sm}	W _k <mm>
4.68	26	SLE Q	2	1	0.00	-4420.07	-700.23	497.99	44.00	171.02	0.50	18.86	148.43	3.14	100.68	105.41	0.03	0.01
4.68	23	SLE F	2	1	0.00	-4388.53	-962.05	314.40	44.00	171.02	0.50	18.86	184.57	3.14	160.89	143.90	0.04	0.01
4.68	26	SLE Q	2	1	0.00	-4420.07	-700.23	497.99	44.00	171.02	0.50	18.86	148.43	3.14	100.68	105.41	0.03	0.01
4.68	23	SLE F	2	1	0.00	-4388.53	-962.05	314.40	44.00	171.02	0.50	18.86	184.57	3.14	160.89	143.90	0.04	0.01
8.65	26	SLE Q	2	1	396.85	-2411.02	6.84	-1747.33	44.00	171.01	0.50	18.86	191.90	8.29	456.98	428.10	0.12	0.04
8.65	36	SLE F	2	1	396.85	-3105.50	7.35	-2548.20	44.00	171.01	0.50	18.86	193.07	8.29	462.11	644.07	0.19	0.06

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø8/ 5	2	219	SLU	0.45	466.84	1.96	54963.50	54963.50	0.45	836.71	1.96	54963.50	54963.50	65.690	
0.70	1.31	ø8/ 5	2	228	SLU	0.45	1195.01	1.96	54963.50	54963.50	0.45	342.59	1.96	54963.50	54963.50	45.994	
0.70	1.31	ø8/ 5	2	211(TG)	SLV	0.45	5890.78	1.89	53015.60	53015.60	0.45	10154.60	1.89	53015.60	53015.60	5.221	
0.70	1.31	ø8/ 5	2	215(TG)	SLV	0.45	8663.72	1.89	53015.60	53015.60	0.45	8013.41	1.89	53015.60	53015.60	6.119	
1.31	3.77	ø8/15	2	219	SLU	0.45	466.84	2.50	23366.90	46819.90	0.45	836.71	2.50	23366.90	46819.90	27.927	
1.31	3.77	ø8/15	2	228	SLU	0.45	1195.01	2.50	23366.90	46819.90	0.45	342.59	2.50	23366.90	46819.90	19.554	
1.31	3.77	ø8/15	2	211(TG)	SLV	0.45	5890.78	2.50	23366.90	44233.30	0.45	10154.60	2.50	23366.90	44233.30	2.301	
1.31	3.77	ø8/15	2	215(TG)	SLV	0.45	8663.72	2.50	23366.90	44233.30	0.45	8013.41	2.50	23366.90	44233.30	2.697	
3.77	4.38	ø8/10	2	219	SLU	0.45	466.84	2.50	35050.30	46819.90	0.45	836.71	2.50	35050.30	46819.90	41.891	
3.77	4.38	ø8/10	2	228	SLU	0.45	1195.01	2.50	35050.30	46819.90	0.45	342.59	2.50	35050.30	46819.90	29.331	
3.77	4.38	ø8/10	2	211(TG)	SLV	0.45	5890.78	2.50	35050.30	44233.30	0.45	10154.60	2.50	35050.30	44233.30	3.452	
3.77	4.38	ø8/10	2	215(TG)	SLV	0.45	8663.72	2.50	35050.30	44233.30	0.45	8013.41	2.50	35050.30	44233.30	4.046	
4.68	5.34	ø6/10	2	217	SLU	0.45	1326.77	2.50	19715.80	40218.20	0.45	394.28	2.50	19715.80	40218.20	14.860	
4.68	5.34	ø6/10	2	228	SLU	0.45	3787.49	2.50	19715.80	40934.70	0.45	95.39	2.50	19715.80	40934.70	5.205	
4.68	5.34	ø6/10	2	27(TG)	SLV	0.45	4694.48	2.50	19715.80	39373.90	0.45	4375.11	2.50	19715.80	39373.90	4.200	
4.68	5.34	ø6/10	2	21(TG)	SLV	0.45	8520.66	2.50	19715.80	39304.70	0.45	815.20	2.50	19715.80	39304.70	2.314	
5.34	7.99	ø6/15	2	217	SLU	0.45	1326.77	2.50	13143.90	40158.80	0.45	394.28	2.50	13143.90	40158.80	9.907	
5.34	7.99	ø6/15	2	228	SLU	0.45	3787.50	2.50	13143.90	40875.20	0.45	95.39	2.50	13143.90	40875.20	3.470	
5.34	7.99	ø6/15	2	27(TG)	SLV	0.45	4694.48	2.50	13143.90	39373.90	0.45	4375.11	2.50	13143.90	39373.90	2.800	
5.34	7.99	ø6/15	2	21(TG)	SLV	0.45	8520.66	2.50	13143.90	39304.70	0.45	815.20	2.50	13143.90	39304.70	1.543	
7.99	8.65	ø6/10	2	217	SLU	0.45	1326.77	2.50	19715.80	39921.00	0.45	394.28	2.50	19715.80	39921.00	14.860	
7.99	8.65	ø6/10	2	228	SLU	0.45	3787.50	2.50	19715.80	40637.50	0.45	95.39	2.50	19715.80	40637.50	5.205	
7.99	8.65	ø6/10	2	27(TG)	SLV	0.45	4694.48	2.50	19715.80	39373.90	0.45	4375.11	2.50	19715.80	39373.90	4.200	
7.99	8.65	ø6/10	2	21(TG)	SLV	0.45	8520.66	2.50	19715.80	39304.70	0.45	815.20	2.50	19715.80	39304.70	2.314	

Dettagli costruttivi per la duttilità

- CC=5 α_e=0.37407 ω_{nd}=0.25481 μΦ_d=13.5551 v_d=0.12135 E_{sy,d}=0.0018995 b_c/b₀=1.20968 μΦ_c=15.5786 0.09532 >= 0.07839 [7.4.29]

- CC=5 α_e=0.37407 ω_{nd}=0.25481 μΦ_d=8.64393 v_d=0.12135 E_{sy,d}=0.0018995 b_c/b₀=1.20968 μΦ_c=15.5786 0.09532 >= 0.03731 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	40(e)	SLU I	1	1	70.00	-40363.40	-669.83	-173.60	-143684.00	-9385.62	-9385.71	225.00	28.89	3.560
0.70	40(e)	SLU I	1	1	70.00	-40363.40	-669.83	-173.60	-143684.00	-9385.62	-9385.71	225.00	28.89	3.560
4.38	40(e)	SLU I	1	1	438.00	-38500.40	1351.82	580.36	-143684.00	11246.60	7672.40	30.94	29.21	3.732
4.68	40	SLU I	2	1	0.00	-4420.07	-700.23	497.99	-4420.07	-8460.26	5873.91	146.25	37.63	11.971
4.68	40	SLU I	2	1	0.00	-4420.07	-700.23	497.99	-4420.07	-8460.26	5873.91	146.25	37.63	11.971
8.65	40(e)	SLU I	2	1	396.85	-2411.02	6.84	-1747.33	-2411.02	237.12	-10646.60	271.41	67.79	6.096

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø8/ 5	2	240	SLU I	0.35	204.88	2.50	37816.60	54292.70	0.35	549.36	2.50	37816.60	54292.70	68.837	
1.31	3.77	ø8/15	2	240	SLU I	0.35	204.88	2.50	12605.50	54244.50	0.35	549.36	2.50	12605.50	54244.50	22.946	
3.77	4.38	ø8/10	2	240	SLU I	0.35	204.88	2.50	18908.30	54051.80	0.35	549.36	2.50	18908.30	54051.80	34.419	
4.68	5.34	ø6/10	2	240	SLU I	0.35	565.79	2.50	10500.60	48715.30	0.35	178.17	2.50	10500.60	48715.30	18.559	
5.34	7.99	ø6/15	2	240	SLU I	0.35	565.79	2.50	7000.38	48663.30	0.35	178.17	2.50	7000.38	48663.30	12.373	
7.99	8.65	ø6/10	2	240	SLU I	0.35	565.79	2.50	10500.60	48455.50	0.35	178.17	2.50	10500.60	48455.50	18.559	

Pilastrata n. 43

Nodi: -1292 22 -2398

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
1R		45.00	45.00	5.30	C25/30	249.00	17.91	141.10	249.00	11.94	4500.00	3913.04
1R		45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	13	SLV	1	1	70.00	-32686.30	5351.24	5351.24	5297.46	5297.46	-32686.30	13243.50	13243.60	45.00	4.54	2.487
0.70	13	SLV	1	1	70.00	-32686.30	5351.24	5351.24	5297.46	5297.46	-32686.30	13243.50	13243.60	45.00	4.54	2.487
4.38	13	SLV	1	1	438.00	-30823.30	-7700.37	-7700.37	1061.11	1061.11	-30823.30	-19439.50	2750.59	171.56	7.22	2.526
4.68	28	SLU	2	1	0.00	-6789.35	5934.87	5934.87	3718.01	3718.01	-6789.35	13830.60	8469.58	28.12	6.49	2.316
4.68	28	SLU	2	1	0.00	-6789.35	5934.87	5934.87	3718.01	3718.01	-6789.35	13830.60	8469.58	28.12	6.49	2.316
8.65	28	SLU	2	1	396.85	-4177.59	-425.23	-425.23	-5938.58	-5938.58	-4177.59	-1319.31	-15392.20	267.19	13.31	2.595

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
0.70	32	SLE R	1	1	70.00	-36397.00	324.14	2290.92	0.00	20.61	29.78	395.57
0.70	26	SLE Q	1	1	70.00	-34144.40	-73.96	1543.76	0.00	20.61	23.40	319.44
0.70	32	SLE R	1	1	70.00	-36397.00	324.14	2290.92	0.00	20.61	29.78	395.57
0.70	26	SLE Q	1	1	70.00	-34144.40	-73.96	1543.76	0.00	20.61	23.40	319.44
4.38	32	SLE R	1	1	438.00	-34534.00	2060.29	-4892.35	10.30	10.30	61.34	737.34
4.38	26	SLE Q	1	1	438.00	-32281.40	234.64	-4427.24	8.29	12.31	42.56	526.41
4.68	32	SLE R	2	1	0.00	-4885.07	2498.72	4188.16	15.46	5.15	68.58	1492.00
4.68	26	SLE Q	2	1	0.00	-3288.56	259.24	2982.54	12.31	8.29	30.71	802.83
4.68	32	SLE R	2	1	0.00	-4885.07	2498.72	4188.16	15.46	5.15	68.58	1492.00
4.68	26	SLE Q	2	1	0.00	-3288.56	259.24	2982.54	12.31	8.29	30.71	802.83
8.65	32	SLE R	2	1	396.85	-2876.03	-4014.16	-273.82	12.31	8.29	40.28	1145.89
8.65	26	SLE Q	2	1	396.85	-1279.52	-755.55	103.32	12.31	8.29	8.23	187.24

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	C <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	W _k <mm>
4.68	26	SLE Q	2	1	0.00	-3288.56	2982.54	259.24	44.00	171.02	0.50	18.86	182.99	8.29	417.78	802.83	0.23	0.07
4.68	36	SLE F	2	1	0.00	-3496.96	3100.58	619.80	44.00	171.02	0.50	18.86	217.46	5.15	353.72	885.29	0.26	0.10
4.68	26	SLE Q	2	1	0.00	-3288.56	2982.54	259.24	44.00	171.02	0.50	18.86	182.99	8.29	417.78	802.83	0.23	0.07
4.68	36	SLE F	2	1	0.00	-3496.96	3100.58	619.80	44.00	171.02	0.50	18.86	217.46	5.15	353.72	885.29	0.26	0.10
8.65	26	SLE Q	2	1	396.85	-1279.52	103.32	-755.55	44.00	171.02	0.50	18.86	172.36	8.29	371.04	187.24	0.05	0.02
8.65	36	SLE F	2	1	396.85	-1487.91	65.00	-1271.73	44.00	171.02	0.50	18.86	187.14	8.29	436.05	331.34	0.10	0.03

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø8/ 5	2	228	SLU	0.45	699.53	1.94	54262.60	54262.60	0.45	2734.85	1.94	54262.60	54262.60	19.841	
0.70	1.31	ø8/ 5	2	211 (TG)	SLV	0.45	3101.02	1.87	52323.30	52323.30	0.45	11177.80	1.87	52323.30	52323.30	4.681	
0.70	1.31	ø8/ 5	2	25 (TG)	SLV	0.45	7868.64	1.87	52546.10	52546.10	0.45	8087.35	1.87	52546.10	52546.10	6.497	
1.31	3.77	ø8/15	2	228	SLU	0.45	699.53	2.50	23366.90	45823.30	0.45	2734.85	2.50	23366.90	45823.30	8.544	
1.31	3.77	ø8/15	2	230	SLU	0.45	543.06	2.50	23366.90	46326.70	0.45	2748.03	2.50	23366.90	46326.70	8.503	
1.31	3.77	ø8/15	2	211 (TG)	SLV	0.45	3101.02	2.50	23366.90	43336.50	0.45	11177.80	2.50	23366.90	43336.50	2.090	
1.31	3.77	ø8/15	2	211 (TG)	SLV	0.45	3240.94	2.50	23366.90	43465.60	0.45	11188.80	2.50	23366.90	43465.60	2.088	
1.31	3.77	ø8/15	2	25 (TG)	SLV	0.45	7868.64	2.50	23366.90	43623.80	0.45	8087.35	2.50	23366.90	43623.80	2.889	
3.77	4.38	ø8/10	2	228	SLU	0.45	699.53	2.50	35050.30	45602.80	0.45	2734.85	2.50	35050.30	45602.80	12.816	
3.77	4.38	ø8/10	2	230	SLU	0.45	543.06	2.50	35050.30	46106.20	0.45	2748.03	2.50	35050.30	46106.20	12.755	
3.77	4.38	ø8/10	2	211 (TG)	SLV	0.45	3101.02	2.50	35050.30	43336.50	0.45	11177.80	2.50	35050.30	43336.50	3.136	
3.77	4.38	ø8/10	2	211 (TG)	SLV	0.45	3240.94	2.50	35050.30	43465.60	0.45	11188.80	2.50	35050.30	43465.60	3.133	
3.77	4.38	ø8/10	2	25 (TG)	SLV	0.45	7868.64	2.50	35050.30	43623.80	0.45	8087.35	2.50	35050.30	43623.80	4.334	
4.68	5.34	ø6/10	2	227	SLU	0.45	1854.24	2.50	19715.80	39825.30	0.45	1627.84	2.50	19715.80	39825.30	10.633	
4.68	5.34	ø6/10	2	228	SLU	0.45	2433.32	2.50	19715.80	39943.70	0.45	1602.65	2.50	19715.80	39943.70	8.102	
4.68	5.34	ø6/10	2	215 (TG)	SLV	0.45	2422.29	2.50	19715.80	39252.80	0.45	8247.67	2.50	19715.80	39252.80	2.390	
4.68	5.34	ø6/10	2	25 (TG)	SLV	0.45	6498.18	2.50	19715.80	39331.80	0.45	4407.84	2.50	19715.80	39331.80	3.034	
5.34	7.99	ø6/15	2	227	SLU	0.45	1854.24	2.50	13143.90	39765.90	0.45	1627.84	2.50	13143.90	39765.90	7.089	
5.34	7.99	ø6/15	2	228	SLU	0.45	2433.33	2.50	13143.90	39884.20	0.45	1602.66	2.50	13143.90	39884.20	5.402	
5.34	7.99	ø6/15	2	215 (TG)	SLV	0.45	2422.29	2.50	13143.90	39252.80	0.45	8247.67	2.50	13143.90	39252.80	1.594	
5.34	7.99	ø6/15	2	25 (TG)	SLV	0.45	6498.18	2.50	13143.90	39331.80	0.45	4407.84	2.50	13143.90	39331.80	2.023	
7.99	8.65	ø6/10	2	227	SLU	0.45	1854.24	2.50	19715.80	39528.10	0.45	1627.84	2.50	19715.80	39528.10	10.633	
7.99	8.65	ø6/10	2	228	SLU	0.45	2433.33	2.50	19715.80	39646.50	0.45	1602.66	2.50	19715.80	39646.50	8.102	
7.99	8.65	ø6/10	2	215 (TG)	SLV	0.45	2422.29	2.50	19715.80	39252.80	0.45	8247.67	2.50	19715.80	39252.80	2.390	
7.99	8.65	ø6/10	2	25 (TG)	SLV	0.45	6498.18	2.50	19715.80	39331.80	0.45	4407.84	2.50	19715.80	39331.80	3.034	

Dettagli costruttivi per la duttilità

- CC=5 α_e=0.37407 ω_{wd}=0.25481 μΦ_d=13.5551 v_d=0.10591 E_{sy,d}=0.0018995 b_c/b₀=1.20968 μΦ_c=17.8493
0.09532 >= 0.06397 [7.4.29]

- CC=5 α_e=0.37407 ω_{wd}=0.25481 μΦ_d=8.64393 v_d=0.10591 E_{sy,d}=0.0018995 b_c/b₀=1.20968 μΦ_c=17.8493
0.09532 >= 0.02811 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Relazione di calcolo

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	40 (e)	SLU I	1	1	70.00	-34144.40	1543.76	-73.96	-143684.00	11764.00	-5967.41	333.98	30.62	4.208
0.70	40 (e)	SLU I	1	1	70.00	-34144.40	1543.76	-73.96	-143684.00	11764.00	-5967.41	333.98	30.62	4.208
4.38	40 (e)	SLU I	1	1	438.00	-32281.40	-4427.24	234.64	-32281.40	-13528.20	2217.43	168.75	37.16	3.051
4.68	40	SLU I	2	1	0.00	-3288.56	2982.54	259.24	-3288.56	10673.50	934.38	5.62	56.66	3.579
4.68	40	SLU I	2	1	0.00	-3288.56	2982.54	259.24	-3288.56	10673.50	934.38	5.62	56.66	3.579
8.65	40	SLU I	2	1	396.85	-1279.52	103.32	-755.55	-1279.52	1545.76	-10047.70	276.86	57.81	13.341

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø8/ 5	2	2	40	SLU I	0.35	83.86	2.50	37816.60	53327.70	0.35	1622.56	2.50	37816.60	53327.70	23.307
1.31	3.77	ø8/15	2	2	40	SLU I	0.35	83.86	2.50	12605.50	53279.50	0.35	1622.56	2.50	12605.50	53279.50	7.769
3.77	4.38	ø8/10	2	2	40	SLU I	0.35	83.86	2.50	18908.30	53086.80	0.35	1622.56	2.50	18908.30	53086.80	11.653
4.68	5.34	ø6/10	2	2	40	SLU I	0.35	255.71	2.50	10500.60	48539.70	0.35	725.52	2.50	10500.60	48539.70	14.473
5.34	7.99	ø6/15	2	2	40	SLU I	0.35	255.71	2.50	7000.38	48487.80	0.35	725.52	2.50	7000.38	48487.80	9.649
7.99	8.65	ø6/10	2	2	40	SLU I	0.35	255.71	2.50	10500.60	48279.90	0.35	725.52	2.50	10500.60	48279.90	14.473

Pilastrata n. 44

Nodi: -8 23 -97

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fcd (Inc) <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
1R		45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/prefflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	5	SLV	1	1	70.00	-29662.60	-4978.22	-4978.22	-6960.31	-6960.31	-29662.60	-10888.20	-15203.60	233.44	4.71	2.185
0.70	5	SLV	1	1	70.00	-29662.60	-4978.22	-4978.22	-6960.31	-6960.31	-29662.60	-10888.20	-15203.60	233.44	4.71	2.185
4.38	5	SLV	1	1	438.00	-27799.60	5932.66	5932.66	2189.23	2189.23	-27799.60	17536.00	6511.30	19.69	5.83	2.958
4.68	5	SLV	2	1	0.00	-2373.80	-2423.70	-2423.70	2107.21	2107.21	-2373.80	-12130.80	10471.40	140.62	6.15	4.990
4.68	5	SLV	2	1	0.00	-2373.80	-2423.70	-2423.70	2107.21	2107.21	-2373.80	-12130.80	10471.40	140.62	6.15	4.990
8.65	27 (e)	SLU	2	1	396.85	-1377.00	-1762.10	-1762.10	2.43	27.54	-1377.00	-14936.70	-0.05	180.00	16.56	8.475

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
0.70	34	SLE R	1	1	70.00	-33583.20	799.40	-962.07	0.00	20.61	23.94	324.72
0.70	32	SLE R	1	1	70.00	-31371.80	1341.23	-523.97	0.00	20.61	23.56	316.92
0.70	26	SLE Q	1	1	70.00	-29826.10	-12.14	-1093.59	0.00	20.61	18.77	260.07
0.70	34	SLE R	1	1	70.00	-33583.20	799.40	-962.07	0.00	20.61	23.94	324.72
0.70	32	SLE R	1	1	70.00	-31371.80	1341.23	-523.97	0.00	20.61	23.56	316.92
0.70	26	SLE Q	1	1	70.00	-29826.10	-12.14	-1093.59	0.00	20.61	18.77	260.07
4.38	20	SLE R	1	1	438.00	-28820.70	-215.26	3252.08	8.29	12.31	32.33	410.64
4.38	26	SLE Q	1	1	438.00	-27963.10	16.46	2458.14	0.00	20.61	25.47	334.04
4.68	22	SLE R	2	1	0.00	-2684.42	-33.54	-1396.40	12.31	8.29	13.36	308.37
4.68	26	SLE Q	2	1	0.00	-2496.24	143.96	-2355.40	12.31	8.29	23.49	629.87
4.68	22	SLE R	2	1	0.00	-2684.42	-33.54	-1396.40	12.31	8.29	13.36	308.37
4.68	26	SLE Q	2	1	0.00	-2496.24	143.96	-2355.40	12.31	8.29	23.49	629.87
8.65	31	SLE R	2	1	396.85	-959.51	7.51	-1144.07	12.31	8.29	10.59	310.34
8.65	26	SLE Q	2	1	396.85	-487.20	58.89	353.14	12.31	8.29	3.98	94.55

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
4.68	26	SLE Q	2	1	0.00	-2496.24	-2355.40	143.96	44.00	171.02	0.50	18.86	186.57	8.29	433.54	629.87	0.18	0.06
4.68	25	SLE F	2	1	0.00	-2494.23	-2437.95	147.42	44.00	171.02	0.50	18.86	186.89	8.29	434.95	656.10	0.19	0.06
4.68	26	SLE Q	2	1	0.00	-2496.24	-2355.40	143.96	44.00	171.02	0.50	18.86	186.57	8.29	433.54	629.87	0.18	0.06
4.68	25	SLE F	2	1	0.00	-2494.23	-2437.95	147.42	44.00	171.02	0.50	18.86	186.89	8.29	434.95	656.10	0.19	0.06
8.65	26	SLE Q	2	1	396.85	-487.20	353.14	58.89	44.00	171.02	0.50	18.86	170.82	8.29	364.26	94.55	0.03	0.01
8.65	25	SLE F	2	1	396.85	-485.18	368.16	58.24	44.00	171.02	0.50	18.86	172.37	8.29	371.07	99.20	0.03	0.01

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	17	SLU	0.45	91.66	2.50	39431.60	44775.10	0.45	1786.82	2.50	39431.60	44775.10	22.068
0.70	1.31	ø6/ 5	2	2	19	SLU	0.45	38.55	2.50	39431.60	45295.70	0.45	1790.44	2.50	39431.60	45295.70	22.023
0.70	1.31	ø6/ 5	2	2	28	SLU	0.45	611.22	2.50	39431.60	44916.00	0.45	1102.64	2.50	39431.60	44916.00	35.761
0.70	1.31	ø6/ 5	2	2	3 (TG)	SLV	0.45	5753.39	2.50	39431.60	42852.80	0.45	9409.21	2.50	39431.60	42852.80	4.191
0.70	1.31	ø6/ 5	2	2	5 (TG)	SLV	0.45	9698.59	2.50	39431.60	42862.80	0.45	5449.67	2.50	39431.60	42862.80	4.066
1.31	3.77	ø6/15	2	2	17	SLU	0.45	91.66	2.50	13143.90	44719.90	0.45	1786.82	2.50	13143.90	44719.90	7.356
1.31	3.77	ø6/15	2	2	19	SLU	0.45	38.55	2.50	13143.90	45240.50	0.45	1790.44	2.50	13143.90	45240.50	7.341
1.31	3.77	ø6/15	2	2	28	SLU	0.45	611.22	2.50	13143.90	44860.90	0.45	1102.64	2.50	13143.90	44860.90	11.920
1.31	3.77	ø6/15	2	2	3 (TG)	SLV	0.45	5753.39	2.50	13143.90	42852.80	0.45	9409.21	2.50	13143.90	42852.80	1.397
1.31	3.77	ø6/15	2	2	5 (TG)	SLV	0.45	9698.59	2.50	13143.90	42862.80	0.45	5449.67	2.50	13143.90	42862.80	1.355
3.77	4.38	ø6/10	2	2	17	SLU	0.45	91.66	2.50	19715.80	44499.50	0.45	1786.82	2.50	19715.80	44499.50	11.034

Relazione di calcolo

3.77	4.38	ø6/10	2	2	19	SLU	0.45	38.55	2.50	19715.80	45020.10	0.45	1790.44	2.50	19715.80	45020.10	11.012
3.77	4.38	ø6/10	2	2	28	SLU	0.45	611.22	2.50	19715.80	44640.40	0.45	1102.64	2.50	19715.80	44640.40	17.881
3.77	4.38	ø6/10	2	2	3 (TG)	SLV	0.45	5753.39	2.50	19715.80	42852.80	0.45	9409.21	2.50	19715.80	42852.80	2.095
3.77	4.38	ø6/10	2	2	5 (TG)	SLV	0.45	9698.59	2.50	19715.80	42862.80	0.45	5449.67	2.50	19715.80	42862.80	2.033
4.68	5.34	ø6/10	2	2	27	SLU	0.45	107.87	2.50	19715.80	39561.30	0.45	529.68	2.50	19715.80	39561.30	37.222
4.68	5.34	ø6/10	2	2	3 (TG)	SLV	0.45	744.94	2.50	19715.80	39094.20	0.45	8287.57	2.50	19715.80	39094.20	2.379
4.68	5.34	ø6/10	2	2	5 (TG)	SLV	0.45	6905.26	2.50	19715.80	39103.60	0.45	4744.58	2.50	19715.80	39103.60	2.855
5.34	7.99	ø6/15	2	2	27	SLU	0.45	107.87	2.50	13143.90	39501.80	0.45	529.68	2.50	13143.90	39501.80	24.815
5.34	7.99	ø6/15	2	2	3 (TG)	SLV	0.45	744.94	2.50	13143.90	39094.20	0.45	8287.57	2.50	13143.90	39094.20	1.586
5.34	7.99	ø6/15	2	2	5 (TG)	SLV	0.45	6905.26	2.50	13143.90	39103.60	0.45	4744.58	2.50	13143.90	39103.60	1.903
7.99	8.65	ø6/10	2	2	27	SLU	0.45	107.87	2.50	19715.80	39264.10	0.45	529.68	2.50	19715.80	39264.10	37.222
7.99	8.65	ø6/10	2	2	3 (TG)	SLV	0.45	744.94	2.50	19715.80	39094.20	0.45	8287.57	2.50	19715.80	39094.20	2.379
7.99	8.65	ø6/10	2	2	5 (TG)	SLV	0.45	6905.26	2.50	19715.80	39103.60	0.45	4744.58	2.50	19715.80	39103.60	2.855

Dettagli costruttivi per la duttilità

- CC=1 $\alpha_e=0.36817$ $\omega_{wd}=0.14257$ $\mu\Phi_d=13.5551$ $v_d=0.089334$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=14.2832$
0.05249 >= 0.04803 [7.4.29]

- CC=1 $\alpha_e=0.36817$ $\omega_{wd}=0.14257$ $\mu\Phi_d=8.64393$ $v_d=0.089334$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=14.2832$
0.05249 >= 0.01795 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.	
0.70	40 (e)	SLU	I	1	1	70.00	-29826.10	-1093.59	-12.14	-143684.00	-10822.60	-6755.35	209.53	31.16	4.817
0.70	40 (e)	SLU	I	1	1	70.00	-29826.10	-1093.59	-12.14	-143684.00	-10822.60	-6755.35	209.53	31.16	4.817
4.38	40 (e)	SLU	I	1	1	438.00	-27963.10	2458.14	16.46	-27963.10	12577.50	3420.31	18.28	34.91	5.118
4.68	40	SLU	I	2	1	0.00	-2496.24	-2355.40	143.96	-2496.24	-10591.70	680.53	175.78	60.53	4.498
4.68	40	SLU	I	2	1	0.00	-2496.24	-2355.40	143.96	-2496.24	-10591.70	680.53	175.78	60.53	4.498
8.65	40	SLU	I	2	1	396.85	-487.20	353.14	58.89	-487.20	9783.37	1765.25	8.44	56.43	27.765

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	40	SLU I	0.35	7.77	2.50	21001.10	52657.60	0.35	965.14	2.50	21001.10	52657.60	21.760
1.31	3.77	ø6/15	2	2	40	SLU I	0.35	7.77	2.50	7000.38	52609.40	0.35	965.14	2.50	7000.38	52609.40	7.253
3.77	4.38	ø6/10	2	2	40	SLU I	0.35	7.77	2.50	10500.60	52416.70	0.35	965.14	2.50	10500.60	52416.70	10.880
4.68	5.34	ø6/10	2	2	40	SLU I	0.35	21.44	2.50	10500.60	48416.80	0.35	682.51	2.50	10500.60	48416.80	15.385
5.34	7.99	ø6/15	2	2	40	SLU I	0.35	21.44	2.50	7000.38	48364.80	0.35	682.51	2.50	7000.38	48364.80	10.257
7.99	8.65	ø6/10	2	2	40	SLU I	0.35	21.44	2.50	10500.60	48157.00	0.35	682.51	2.50	10500.60	48157.00	15.385

Pilastrata n. 45

Nodi: -6 14 -1295

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm ² >	Fctk <daN/cm ² >	Fcd <daN/cm ² >	Fcd (Inc) <daN/cm ² >	Fctd <daN/cm ² >	Tp	Fyk <daN/cm ² >	Fyd <daN/cm ² >
1R		45.00	45.00	4.90	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
1R		45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	13	SLV	1	1	70.00	-12791.20	5885.58	5885.58	11987.30	11987.30	-12791.20	9937.12	20924.00	61.88	5.25	1.735
0.70	13	SLV	1	1	70.00	-12791.20	5885.58	5885.58	11987.30	11987.30	-12791.20	9937.12	20924.00	61.88	5.25	1.735
4.38	13	SLV	1	1	438.00	-10928.20	-9095.47	-9095.47	-11601.40	-11601.40	-10928.20	-13534.90	-17804.60	227.81	4.86	1.517
4.68	27	SLU	2	1	0.00	-5114.93	11300.40	11300.40	-1376.84	-1376.84	-5114.93	21647.00	-2582.06	354.38	7.58	1.915
4.68	27	SLU	2	1	0.00	-5114.93	11300.40	11300.40	-1376.84	-1376.84	-5114.93	15521.10	-1848.34	355.78	12.28	1.373
8.70	27	SLU	2	1	401.76	-2470.86	-2963.10	-2963.10	951.89	951.89	-2470.86	-14736.40	4927.59	165.94	8.77	4.993

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
0.70	32	SLE R	1	1	70.00	-20544.40	2845.52	2696.54	14.07	18.10	45.09	534.70
0.70	26	SLE Q	1	1	70.00	-19844.60	408.39	2331.52	10.05	22.12	23.60	297.32
0.70	32	SLE R	1	1	70.00	-20544.40	2845.52	2696.54	14.07	18.10	45.09	534.70
0.70	26	SLE Q	1	1	70.00	-19844.60	408.39	2331.52	10.05	22.12	23.60	297.32
4.38	32	SLE R	1	1	438.00	-18681.40	-3558.10	-5951.34	18.10	14.07	82.53	1241.30
4.38	26	SLE Q	1	1	438.00	-17981.60	-1152.06	-6483.87	18.10	14.07	66.62	1087.45
4.68	31	SLE R	2	1	0.00	-3720.73	-833.00	7894.61	20.11	12.06	75.56	1869.99
4.68	26	SLE Q	2	1	0.00	-2470.60	735.52	4619.19	20.11	12.06	46.68	1114.19
4.68	31	SLE R	2	1	0.00	-3720.73	-833.00	7894.61	12.31	8.29	82.81	2396.82
4.68	26	SLE Q	2	1	0.00	-2470.60	735.52	4619.19	12.31	8.29	51.64	1427.36
8.70	31	SLE R	2	1	401.76	-1686.83	631.56	-2016.47	12.31	8.29	26.36	644.18
8.70	26	SLE Q	2	1	401.76	-436.70	-16.12	-491.77	12.31	8.29	4.72	133.58

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	C <mm>	S <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cm ² >	ϵ_{sm}	Wk <mm>
-----------	----	-----	----	------	-----------	------------	--------------	--------------	-----------	-----------	----------------	-------------	-----------------------	-------------------------	-----------------------------	--------------------------------------	-----------------	------------

Relazione di calcolo

4.38	26	SLE Q	1	1	438.00	-17981.60	-6483.87	-1152.06	44.00	115.34	0.50	16.00	166.46	6.03	295.80	1087.45	0.32	0.09
4.38	36	SLE F	1	1	438.00	-17782.00	-6531.66	-1572.43	44.00	115.34	0.50	16.00	192.55	4.02	262.77	1153.45	0.34	0.11
4.68	26	SLE Q	2	1	0.00	-2470.60	4619.19	735.52	44.00	134.50	0.50	16.00	162.65	8.04	375.25	1114.19	0.32	0.09
4.68	23	SLE F	2	1	0.00	-3003.41	5960.61	7.18	44.00	134.50	0.50	16.00	178.93	8.04	457.05	1331.18	0.39	0.12
4.68	26	SLE Q	2	1	0.00	-2470.60	4619.19	735.52	44.00	171.02	0.50	18.86	177.59	8.29	394.02	1427.36	0.42	0.13
4.68	23	SLE F	2	1	0.00	-3003.41	5960.61	7.18	44.00	171.02	0.50	18.86	197.59	8.29	481.98	1715.45	0.50	0.17
8.70	26	SLE Q	2	1	401.76	-436.70	-491.77	-16.12	44.00	171.02	0.50	18.86	191.29	8.29	454.28	133.58	0.04	0.01
8.70	23	SLE F	2	1	401.76	-969.51	-1026.72	379.39	44.00	171.02	0.50	18.86	185.90	5.15	267.49	332.52	0.10	0.03

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	30	SLU	0.45	1813.55	2.50	39431.60	43176.30	0.45	3435.33	2.50	39431.60	43176.30	11.478
0.70	1.31	ø6/ 5	2	2	28	SLU	0.45	2531.48	2.50	39431.60	42833.00	0.45	3241.41	2.50	39431.60	42833.00	12.165
0.70	1.31	ø6/ 5	2	2	3(TG)	SLV	0.45	7761.88	2.50	39431.60	41918.50	0.45	11253.10	2.50	39431.60	41918.50	3.504
0.70	1.31	ø6/ 5	2	2	13(TG)	SLV	0.45	13294.00	2.50	39431.60	42177.40	0.45	4804.84	2.50	39431.60	42177.40	2.966
1.31	3.77	ø6/15	2	2	30	SLU	0.45	1813.55	2.50	13143.90	43121.20	0.45	3435.33	2.50	13143.90	43121.20	3.826
1.31	3.77	ø6/15	2	2	28	SLU	0.45	2531.48	2.50	13143.90	42777.90	0.45	3241.41	2.50	13143.90	42777.90	4.055
1.31	3.77	ø6/15	2	2	3(TG)	SLV	0.45	7761.88	2.50	13143.90	41918.50	0.45	11253.10	2.50	13143.90	41918.50	1.168
1.31	3.77	ø6/15	2	2	5(TG)	SLV	0.45	12722.20	2.50	13143.90	40766.60	0.45	5707.31	2.50	13143.90	40766.60	1.033
1.31	3.77	ø6/15	2	2	5(TG)	SLV	0.45	13032.20	2.50	13143.90	42435.10	0.45	6386.10	2.50	13143.90	42435.10	1.009
3.77	4.38	ø6/10	2	2	30	SLU	0.45	1813.55	2.50	19715.80	42900.70	0.45	3435.33	2.50	19715.80	42900.70	5.739
3.77	4.38	ø6/10	2	2	28	SLU	0.45	2531.48	2.50	19715.80	42557.40	0.45	3241.41	2.50	19715.80	42557.40	6.082
3.77	4.38	ø6/10	2	2	3(TG)	SLV	0.45	7761.88	2.50	19715.80	41918.50	0.45	11253.10	2.50	19715.80	41918.50	1.752
3.77	4.38	ø6/10	2	2	13(TG)	SLV	0.45	13294.00	2.50	19715.80	42177.40	0.45	4804.84	2.50	19715.80	42177.40	1.483
4.68	5.35	ø6/10	2	2	27	SLU	0.45	579.64	2.50	19715.80	39715.00	0.45	3550.28	2.50	19715.80	39715.00	5.553
4.68	5.35	ø6/10	2	2	17	SLU	0.45	594.28	2.50	19715.80	39701.10	0.45	3332.91	2.50	19715.80	39701.10	5.915
4.68	5.35	ø6/10	2	2	11(TG)	SLV	0.45	2061.36	2.50	19715.80	39102.00	0.45	8092.36	2.50	19715.80	39102.00	2.436
4.68	5.35	ø6/10	2	2	3(TG)	SLV	0.45	1965.37	2.50	19715.80	39136.20	0.45	8093.46	2.50	19715.80	39136.20	2.436
4.68	5.35	ø6/10	2	2	5(TG)	SLV	0.45	5200.53	2.50	19715.80	39203.50	0.45	4901.35	2.50	19715.80	39203.50	3.791
5.35	8.03	ø6/15	2	2	27	SLU	0.45	579.64	2.50	13143.90	39654.90	0.45	3550.28	2.50	13143.90	39654.90	3.702
5.35	8.03	ø6/15	2	2	17	SLU	0.45	594.28	2.50	13143.90	39640.90	0.45	3332.91	2.50	13143.90	39640.90	3.944
5.35	8.03	ø6/15	2	2	11(TG)	SLV	0.45	2061.36	2.50	13143.90	39102.00	0.45	8092.36	2.50	13143.90	39102.00	1.624
5.35	8.03	ø6/15	2	2	3(TG)	SLV	0.45	1965.37	2.50	13143.90	39136.20	0.45	8093.46	2.50	13143.90	39136.20	1.624
5.35	8.03	ø6/15	2	2	5(TG)	SLV	0.45	5200.53	2.50	13143.90	39203.50	0.45	4901.35	2.50	13143.90	39203.50	2.527
8.03	8.70	ø6/10	2	2	27	SLU	0.45	579.64	2.50	19715.80	39414.20	0.45	3550.28	2.50	19715.80	39414.20	5.553
8.03	8.70	ø6/10	2	2	17	SLU	0.45	594.28	2.50	19715.80	39400.20	0.45	3332.91	2.50	19715.80	39400.20	5.915
8.03	8.70	ø6/10	2	2	11(TG)	SLV	0.45	2061.36	2.50	19715.80	39102.00	0.45	8092.36	2.50	19715.80	39102.00	2.436
8.03	8.70	ø6/10	2	2	3(TG)	SLV	0.45	1965.37	2.50	19715.80	39136.20	0.45	8093.46	2.50	19715.80	39136.20	2.436
8.03	8.70	ø6/10	2	2	5(TG)	SLV	0.45	5200.53	2.50	19715.80	39203.50	0.45	4901.35	2.50	19715.80	39203.50	3.791

Dettagli costruttivi per la duttilità

- CC=5 α_e=0.4851 ω_{wd}=0.17821 μΦ_d=13.5551 v_d=0.080018 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_c=22.1361 0.08645 >= 0.03937 [7.4.29]
- CC=5 α_e=0.4851 ω_{wd}=0.17821 μΦ_d=8.64393 v_d=0.080018 E_{sy,d}=0.0018995 b_c/b₀=1.20321 μΦ_c=22.1361 0.08645 >= 0.01243 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	40(e)	SLU I	1	1	70.00	-19844.60	2331.52	408.39	-143684.00	17490.60	3752.69	9.14	34.56	7.240
0.70	40(e)	SLU I	1	1	70.00	-19844.60	2331.52	408.39	-143684.00	17490.60	3752.69	9.14	34.56	7.240
4.38	40	SLU I	1	1	438.00	-17981.60	-6483.87	-1152.06	-17981.60	-17818.30	-3274.38	188.44	35.19	2.751
4.68	40	SLU I	2	1	0.00	-2470.60	4619.19	735.52	-2470.60	16761.50	2633.80	4.22	43.33	3.627
4.68	40	SLU I	2	1	0.00	-2470.60	4619.19	735.52	-2470.60	10121.60	1574.08	7.03	57.06	2.190
8.70	40	SLU I	2	1	401.76	-436.70	-491.77	-16.12	-436.70	-10346.40	-318.59	181.41	70.49	21.038

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	40	SLU I	0.35	424.03	2.50	21001.10	51108.80	0.35	2395.49	2.50	21001.10	51108.80	8.767
1.31	3.77	ø6/15	2	2	40	SLU I	0.35	424.03	2.50	7000.38	51060.60	0.35	2395.49	2.50	7000.38	51060.60	2.922
3.77	4.38	ø6/10	2	2	40	SLU I	0.35	424.03	2.50	10500.60	50867.80	0.35	2395.49	2.50	10500.60	50867.80	4.383
4.68	5.35	ø6/10	2	2	40	SLU I	0.35	187.09	2.50	10500.60	48412.80	0.35	1272.15	2.50	10500.60	48412.80	8.254
5.35	8.03	ø6/15	2	2	40	SLU I	0.35	187.09	2.50	7000.38	48360.20	0.35	1272.15	2.50	7000.38	48360.20	5.503
8.03	8.70	ø6/10	2	2	40	SLU I	0.35	187.09	2.50	10500.60	48149.80	0.35	1272.15	2.50	10500.60	48149.80	8.254

Pilastrata n. 46

Nodi: -12 15 -100

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
1R		45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	5	SLV	1	1	70.00	-3465.29	-2927.04	-2927.04	-12443.10	-12443.10	-3465.29	-6068.34	-24744.40	255.94	6.89	1.993
0.70	5	SLV	1	1	70.00	-3465.29	-2927.04	-2927.04	-12443.10	-12443.10	-3465.29	-6068.34	-24744.40	255.94	6.89	1.993
4.38	5	SLV	1	1	438.00	-1602.29	-2680.33	-2680.33	12619.40	12619.40	-1602.29	-5109.46	24776.10	101.25	7.59	1.961
4.68	27	SLV	2	1	0.00	-3451.75	4764.66	4764.66	-4303.31	-4303.31	-3451.75	17798.50	-15990.60	322.03	4.85	3.727

Relazione di calcolo

4.68	27	SLU	2	1	0.00	-3451.75	4764.66	4764.66	-4303.31	-4303.31	-3451.75	11963.50	-10998.80	317.81	5.97	2.531
8.70	5	SLV	2	1	401.76	309.38	-0.97	-0.97	2131.99	2131.99	309.38	-0.00	14654.00	90.00	16.96	6.873

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cmq>	σ_f <daN/cmq>
0.70	32	SLE R	1	1	70.00	-14823.50	1617.29	403.10	9.17	27.52	16.05	202.93
0.70	26	SLE Q	1	1	70.00	-11735.50	-789.35	69.49	0.00	36.69	8.66	115.16
0.70	32	SLE R	1	1	70.00	-14823.50	1617.29	403.10	9.17	27.52	16.05	202.93
0.70	26	SLE Q	1	1	70.00	-11735.50	-789.35	69.49	0.00	36.69	8.66	115.16
4.38	20	SLE R	1	1	438.00	-9991.24	1753.94	494.25	16.34	20.36	17.09	203.85
4.38	26	SLE Q	1	1	438.00	-9872.49	1974.88	-548.02	16.34	20.36	19.17	225.02
4.68	31	SLE R	2	1	0.00	-2609.70	-3029.69	3198.88	23.50	13.19	50.60	954.85
4.68	26	SLE Q	2	1	0.00	-2501.79	-1836.29	251.23	20.36	16.34	15.34	291.26
4.68	31	SLE R	2	1	0.00	-2609.70	-3029.69	3198.88	13.45	7.16	65.51	1466.68
4.68	26	SLE Q	2	1	0.00	-2501.79	-1836.29	251.23	12.31	8.29	20.03	484.72
8.70	20	SLE R	2	1	401.76	-129.81	1340.18	-3.46	12.31	8.29	12.16	412.99
8.70	26	SLE Q	2	1	401.76	-467.89	509.85	-0.32	12.31	8.29	4.69	136.33

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cmq>	ϵ_{sm}	Wk <mm>
4.38	26	SLE Q	1	1	438.00	-9872.49	-548.02	1974.88	44.00	69.63	0.50	17.54	157.57	3.14	124.62	170.69	0.05	0.01
4.38	25	SLE F	1	1	438.00	-10059.60	-559.75	2034.82	44.00	69.63	0.50	17.54	158.70	3.14	126.64	177.66	0.05	0.01
4.68	26	SLE Q	2	1	0.00	-2501.79	251.23	-1836.29	44.00	69.63	0.50	17.54	139.53	11.18	328.60	291.26	0.08	0.02
4.68	23	SLE F	2	1	0.00	-2196.12	1431.68	-2324.08	44.00	69.63	0.50	17.54	145.80	5.15	169.81	548.55	0.16	0.04
4.68	26	SLE Q	2	1	0.00	-2501.79	251.23	-1836.29	44.00	171.01	0.50	18.86	174.79	8.29	381.72	484.72	0.14	0.04
4.68	23	SLE F	2	1	0.00	-2196.12	1431.68	-2324.08	44.00	171.01	0.50	18.86	209.97	3.14	203.20	865.35	0.25	0.09
8.70	26	SLE Q	2	1	401.76	-467.89	-0.32	509.85	44.00	171.01	0.50	18.86	174.20	5.15	235.53	136.33	0.04	0.01
8.70	23	SLE F	2	1	401.76	-162.22	-1.81	855.82	44.00	171.01	0.50	18.86	199.23	8.29	489.22	259.74	0.08	0.03

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <cm>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <cm>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	17	SLU	0.45	941.28	2.50	39431.60	41195.40	0.45	361.39	2.50	39431.60	41195.40	41.892
0.70	1.31	ø6/ 5	2	2	19	SLU	0.45	1086.59	2.50	39431.60	41343.40	0.45	123.14	2.50	39431.60	41343.40	36.289
0.70	1.31	ø6/ 5	2	2	3(TG)	SLV	0.45	8161.29	2.50	39431.60	39871.00	0.45	9498.83	2.50	39431.60	39871.00	4.151
0.70	1.31	ø6/ 5	2	2	15(TG)	SLV	0.45	16073.70	2.50	39431.60	41139.20	0.45	2697.14	2.50	39431.60	41139.20	2.453
1.31	3.77	ø6/15	2	2	17	SLU	0.45	941.28	2.50	13143.90	41140.30	0.45	361.39	2.50	13143.90	41140.30	13.964
1.31	3.77	ø6/15	2	2	19	SLU	0.45	1086.59	2.50	13143.90	41288.30	0.45	123.14	2.50	13143.90	41288.30	12.096
1.31	3.77	ø6/15	2	2	3(TG)	SLV	0.45	8161.29	2.50	13143.90	39871.00	0.45	9498.83	2.50	13143.90	39871.00	1.384
1.31	3.77	ø6/15	2	2	11(TG)	SLV	0.45	13090.30	2.50	13143.90	40160.20	0.45	7454.72	2.50	13143.90	40160.20	1.004
3.77	4.38	ø6/10	2	2	17	SLU	0.45	941.28	2.50	19715.80	40919.80	0.45	361.39	2.50	19715.80	40919.80	20.946
3.77	4.38	ø6/10	2	2	19	SLU	0.45	1086.59	2.50	19715.80	41067.80	0.45	123.14	2.50	19715.80	41067.80	18.145
3.77	4.38	ø6/10	2	2	3(TG)	SLV	0.45	8161.29	2.50	19715.80	39871.00	0.45	9498.83	2.50	19715.80	39871.00	2.076
3.77	4.38	ø6/10	2	2	15(TG)	SLV	0.45	16073.70	2.50	19715.80	41139.20	0.45	2697.14	2.50	19715.80	41139.20	1.227
4.68	5.35	ø6/10	2	2	27	SLU	0.45	1542.10	2.50	19715.80	39487.90	0.45	1187.49	2.50	19715.80	39487.90	12.785
4.68	5.35	ø6/10	2	2	1(TG)	SLV	0.45	8036.69	2.50	19715.80	39144.80	0.45	1649.28	2.50	19715.80	39144.80	2.453
4.68	5.35	ø6/10	2	2	13(TG)	SLV	0.45	8261.68	2.50	19715.80	39186.60	0.45	211.00	2.50	19715.80	39186.60	2.386
5.35	8.03	ø6/15	2	2	27	SLU	0.45	1542.10	2.50	13143.90	39427.70	0.45	1187.49	2.50	13143.90	39427.70	8.523
5.35	8.03	ø6/15	2	2	1(TG)	SLV	0.45	8036.69	2.50	13143.90	39144.80	0.45	1649.28	2.50	13143.90	39144.80	1.635
5.35	8.03	ø6/15	2	2	13(TG)	SLV	0.45	8261.68	2.50	13143.90	39186.60	0.45	211.00	2.50	13143.90	39186.60	1.591
8.03	8.70	ø6/10	2	2	27	SLU	0.45	1542.10	2.50	19715.80	39187.00	0.45	1187.49	2.50	19715.80	39187.00	12.785
8.03	8.70	ø6/10	2	2	1(TG)	SLV	0.45	8036.69	2.50	19715.80	39144.80	0.45	1649.28	2.50	19715.80	39144.80	2.453
8.03	8.70	ø6/10	2	2	13(TG)	SLV	0.45	8261.68	2.50	19715.80	39186.60	0.45	211.00	2.50	19715.80	39186.60	2.386

Dettagli costruttivi per la duttilità

- CC=13 $\alpha_e=0.49382$ $\omega_{rd}=0.17821$ $\mu\Phi_d=13.5551$ $v_d=0.059514$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=30.1429$
0.088 >= 0.02031 [7.4.29]
- CC=13 $\alpha_e=0.49382$ $\omega_{rd}=0.17821$ $\mu\Phi_d=8.64393$ $v_d=0.059514$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=30.1429$
0.088 >= 0.00027 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_f	Sic.
0.70	40(e)	SLU I	1	1	70.00	-11735.50	69.49	-789.35	-143684.00	6966.29	-18929.50	292.50	33.79	12.243
0.70	40(e)	SLU I	1	1	70.00	-11735.50	69.49	-789.35	-143684.00	6966.29	-18929.50	292.50	33.79	12.243
4.38	40	SLU I	1	1	438.00	-9872.49	-548.02	1974.88	-9872.49	-5326.55	19753.40	108.28	35.86	9.965
4.68	40	SLU I	2	1	0.00	-2501.79	251.23	-1836.29	-2501.79	2790.77	-19766.70	281.25	40.66	10.776
4.68	40	SLU I	2	1	0.00	-2501.79	251.23	-1836.29	-2501.79	1523.63	-10192.70	276.68	57.65	5.564
8.70	40(e)	SLU I	2	1	401.76	-467.89	-0.32	509.85	-467.89	215.16	10349.00	88.59	70.44	20.291

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <cm>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <cm>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	40	SLU I	0.35	751.15	2.50	21001.10	49850.40	0.35	167.80	2.50	21001.10	49850.40	27.959
1.31	3.77	ø6/15	2	2	40	SLU I	0.35	751.15	2.50	7000.38	49802.30	0.35	167.80	2.50	7000.38	49802.30	9.320
3.77	4.38	ø6/10	2	2	40	SLU I	0.35	751.15	2.50	10500.60	49609.50	0.35	167.80	2.50	10500.60	49609.50	13.979

4.68	5.35	ø6/10	2	240	SLU I	0.35	583.97	2.50	10500.60	48417.60	0.35	62.61	2.50	10500.60	48417.60	17.981
5.35	8.03	ø6/15	2	240	SLU I	0.35	583.97	2.50	7000.38	48365.00	0.35	62.61	2.50	7000.38	48365.00	11.988
8.03	8.70	ø6/10	2	240	SLU I	0.35	583.97	2.50	10500.60	48154.60	0.35	62.61	2.50	10500.60	48154.60	17.981

Pilastrata n. 47

Nodi: -108 16 -99

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	TP	Fyk <daN/cm²>	Fyd <daN/cm²>
1R		45.00	45.00	4.90	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
1R		45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	13	SLV	1	1	70.00	-10457.10	-1782.12	-1782.12	11750.30	11750.30	-10457.10	-3526.00	23465.00	98.44	7.88	1.997
0.70	13	SLV	1	1	70.00	-10457.10	-1782.12	-1782.12	11750.30	11750.30	-10457.10	-3526.00	23465.00	98.44	7.88	1.997
4.38	13	SLV	1	1	438.00	-8594.06	281.43	281.43	-10982.40	-10982.40	-8594.06	646.78	-23851.10	271.41	10.44	2.172
4.68	27	SLU	2	1	0.00	-3995.21	1461.33	1461.33	2225.00	2225.00	-3995.21	11744.80	18545.40	53.44	5.26	8.246
4.68	27	SLU	2	1	0.00	-3995.21	1461.33	1461.33	2225.00	2225.00	-3995.21	8971.30	13180.70	59.06	6.49	5.990
8.70	27 (e)	SLU	2	1	401.76	-1351.14	-2.56	-27.14	-1533.09	-1533.09	-1351.14	-334.78	-14869.60	269.30	15.45	9.700

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
0.70	32	SLE R	1	1	70.00	-13753.40	2648.66	-268.19	16.09	16.09	23.47	280.16
0.70	26	SLE Q	1	1	70.00	-13423.40	456.48	-118.64	0.00	32.17	8.24	113.57
0.70	32	SLE R	1	1	70.00	-13753.40	2648.66	-268.19	16.09	16.09	23.47	280.16
0.70	26	SLE Q	1	1	70.00	-13423.40	456.48	-118.64	0.00	32.17	8.24	113.57
4.38	32	SLE R	1	1	438.00	-11890.40	-3044.14	988.86	18.10	14.07	32.91	402.15
4.38	26	SLE Q	1	1	438.00	-11560.40	-1277.62	18.50	12.06	20.11	11.28	145.55
4.68	31	SLE R	2	1	0.00	-2974.69	1553.57	979.75	20.11	12.06	21.78	373.62
4.68	26	SLE Q	2	1	0.00	-2555.97	876.40	70.14	16.09	16.09	7.53	113.46
4.68	31	SLE R	2	1	0.00	-2974.69	1553.57	979.75	13.45	7.16	25.65	503.05
4.68	26	SLE Q	2	1	0.00	-2555.97	876.40	70.14	12.31	8.29	8.91	160.69
8.70	32	SLE R	2	1	401.76	-1312.25	-1041.80	-2.25	12.31	8.29	9.65	261.27
8.70	31	SLE R	2	1	401.76	-940.79	-1035.73	-1.75	12.31	8.29	9.54	277.42
8.70	26	SLE Q	2	1	401.76	-522.08	-196.87	-0.38	12.31	8.29	1.84	36.67

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
4.68	26	SLE Q	2	1	0.00	-2555.97	70.14	876.40	44.00	115.33	0.50	16.00	132.18	4.02	111.04	113.46	0.03	0.01
4.68	23	SLE F	2	1	0.00	-2410.02	241.76	1243.35	44.00	69.20	0.50	16.00	143.62	8.04	279.59	214.64	0.06	0.02
4.68	26	SLE Q	2	1	0.00	-2555.97	70.14	876.40	44.00	171.01	0.50	18.86	170.01	8.29	360.71	160.69	0.05	0.01
4.68	23	SLE F	2	1	0.00	-2410.02	241.76	1243.35	44.00	171.01	0.50	18.86	208.57	5.15	329.44	304.27	0.09	0.03
8.70	26	SLE Q	2	1	401.76	-522.08	-0.38	-196.87	44.00	171.01	0.50	18.86	183.05	8.29	418.06	36.67	0.01	0.00
8.70	23	SLE F	2	1	401.76	-376.12	-0.55	-427.80	44.00	171.01	0.50	18.86	195.37	8.29	472.25	115.19	0.03	0.01

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø6/10	2	228	SLU	0.45	2254.60	2.50	19715.80	41559.60	0.45	508.20	2.50	19715.80	41559.60	8.745	
0.70	1.31	ø6/10	2	211 (TG)	SLV	0.45	12930.10	2.50	19715.80	40668.90	0.45	5027.50	2.50	19715.80	40668.90	1.525	
0.70	1.31	ø6/10	2	213 (TG)	SLV	0.45	14644.70	2.50	19715.80	40892.10	0.45	1121.24	2.50	19715.80	40892.10	1.346	
1.31	3.77	ø6/15	2	228	SLU	0.45	2254.60	2.50	13143.90	41504.50	0.45	508.20	2.50	13143.90	41504.50	5.830	
1.31	3.77	ø6/15	2	211 (TG)	SLV	0.45	12930.10	2.50	13143.90	40668.90	0.45	5027.50	2.50	13143.90	40668.90	1.017	
1.31	3.77	ø6/15	2	211 (TG)	SLV	0.45	13071.20	2.50	13143.90	40413.30	0.45	4583.19	2.50	13143.90	40413.30	1.006	
1.31	3.77	ø6/15	2	211 (TG)	SLV	0.45	13109.20	2.50	13143.90	40668.90	0.45	4459.15	2.50	13143.90	40668.90	1.003	
3.77	4.38	ø6/10	2	228	SLU	0.45	2254.60	2.50	19715.80	41284.00	0.45	508.20	2.50	19715.80	41284.00	8.745	
3.77	4.38	ø6/10	2	211 (TG)	SLV	0.45	12930.10	2.50	19715.80	40668.90	0.45	5027.50	2.50	19715.80	40668.90	1.525	
3.77	4.38	ø6/10	2	213 (TG)	SLV	0.45	14644.70	2.50	19715.80	40892.10	0.45	1121.24	2.50	19715.80	40892.10	1.346	
4.68	5.35	ø6/10	2	228	SLU	0.45	802.51	2.50	19715.80	39638.20	0.45	453.18	2.50	19715.80	39638.20	24.568	
4.68	5.35	ø6/10	2	227	SLU	0.45	935.41	2.50	19715.80	39562.10	0.45	364.37	2.50	19715.80	39562.10	21.077	
4.68	5.35	ø6/10	2	215 (TG)	SLV	0.45	5182.32	2.50	19715.80	39104.00	0.45	4170.84	2.50	19715.80	39104.00	3.804	
4.68	5.35	ø6/10	2	21 (TG)	SLV	0.45	8246.94	2.50	19715.80	39066.10	0.45	728.93	2.50	19715.80	39066.10	2.391	
5.35	8.03	ø6/15	2	228	SLU	0.45	802.51	2.50	13143.90	39578.00	0.45	453.18	2.50	13143.90	39578.00	16.378	
5.35	8.03	ø6/15	2	227	SLU	0.45	935.41	2.50	13143.90	39502.00	0.45	364.37	2.50	13143.90	39502.00	14.052	
5.35	8.03	ø6/15	2	215 (TG)	SLV	0.45	5182.32	2.50	13143.90	39104.00	0.45	4170.84	2.50	13143.90	39104.00	2.536	
5.35	8.03	ø6/15	2	21 (TG)	SLV	0.45	8246.94	2.50	13143.90	39066.10	0.45	728.93	2.50	13143.90	39066.10	1.594	
8.03	8.70	ø6/10	2	228	SLU	0.45	802.51	2.50	19715.80	39337.30	0.45	453.18	2.50	19715.80	39337.30	24.568	
8.03	8.70	ø6/10	2	227	SLU	0.45	935.41	2.50	19715.80	39261.30	0.45	364.37	2.50	19715.80	39261.30	21.077	
8.03	8.70	ø6/10	2	215 (TG)	SLV	0.45	5182.32	2.50	19715.80	39104.00	0.45	4170.84	2.50	19715.80	39104.00	3.804	
8.03	8.70	ø6/10	2	21 (TG)	SLV	0.45	8246.94	2.50	19715.80	39066.10	0.45	728.93	2.50	19715.80	39066.10	2.391	

Dettagli costruttivi per la duttilità

- CC=5 α_e=0.41809 ω_{wd}=0.0891 μΦ_d=13.5551 v_d=0.048757 E_{sy, d}=0.0018995 b_c/b₀=1.20321 μΦ_c=21.6128 0.03725 >= 0.01032 [7.4.29]
- CC=5 α_e=0.41809 ω_{wd}=0.0891 μΦ_d=8.64393 v_d=0.048757 E_{sy, d}=0.0018995 b_c/b₀=1.20321 μΦ_c=21.6128 0.03725 >= -0.0061 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/presoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε_y	Sic.
0.70	40 (e)	SLU I	1	1	70.00	-13423.40	-118.64	456.48	-143684.00	-10072.20	14410.50	129.38	30.25	10.704
0.70	40 (e)	SLU I	1	1	70.00	-13423.40	-118.64	456.48	-143684.00	-10072.20	14410.50	129.38	30.25	10.704
4.38	40 (e)	SLU I	1	1	438.00	-11560.40	18.50	-1277.62	-143684.00	3885.44	-18793.60	284.06	37.66	12.429
4.68	40	SLU I	2	1	0.00	-2555.97	70.14	876.40	-2555.97	1687.44	18609.20	81.56	43.63	21.228
4.68	40	SLU I	2	1	0.00	-2555.97	70.14	876.40	-2555.97	907.56	10569.80	84.38	57.21	12.051
8.70	40 (e)	SLU I	2	1	401.76	-522.08	-0.38	-196.87	-522.08	472.98	-10323.10	272.81	66.09	52.481

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø6/10	2		240	SLU I	0.35	471.23	2.50	10500.60	50112.40	0.35	37.26	2.50	10500.60	50112.40	22.284
1.31	3.77	ø6/15	2		240	SLU I	0.35	471.23	2.50	7000.38	50064.20	0.35	37.26	2.50	7000.38	50064.20	14.856
3.77	4.38	ø6/10	2		240	SLU I	0.35	471.23	2.50	10500.60	49871.50	0.35	37.26	2.50	10500.60	49871.50	22.284
4.68	5.35	ø6/10	2		240	SLU I	0.35	267.14	2.50	10500.60	48426.00	0.35	17.55	2.50	10500.60	48426.00	39.307
5.35	8.03	ø6/15	2		240	SLU I	0.35	267.14	2.50	7000.38	48373.40	0.35	17.55	2.50	7000.38	48373.40	26.205
8.03	8.70	ø6/10	2		240	SLU I	0.35	267.14	2.50	10500.60	48163.00	0.35	17.55	2.50	10500.60	48163.00	39.307

Pilastrata n. 48

Nodi: 2 17 -98

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
1	R	45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/presoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε_y	Sic.
0.70	13	SLV	1	1	70.00	-4269.34	-2386.58	-2386.58	11181.70	11181.70	-4269.34	-3289.39	15271.60	98.44	10.37	1.366
0.70	13	SLV	1	1	70.00	-4269.34	-2386.58	-2386.58	11181.70	11181.70	-4269.34	-3289.39	15271.60	98.44	10.37	1.366
4.38	13	SLV	1	1	438.00	-2406.34	700.35	700.35	-9498.04	-9498.04	-2406.34	1336.09	-15091.20	272.81	13.68	1.591
4.68	17	SLU	2	1	0.00	-3612.15	346.30	346.30	3058.53	3058.53	-3612.15	1865.91	15268.20	85.78	12.54	4.997
4.68	17	SLU	2	1	0.00	-3612.15	346.30	346.30	3058.53	3058.53	-3612.15	1865.91	15268.20	85.78	12.54	4.997
8.70	27	SLU	2	1	401.76	-1399.22	-451.42	-451.42	-1610.10	-1610.10	-1399.22	-4198.43	-14685.40	258.75	9.69	9.134

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cm²>	σ_s <daN/cm²>
0.70	32	SLE R	1	1	70.00	-9043.31	2331.99	-312.60	12.31	8.29	24.72	349.84
0.70	26	SLE Q	1	1	70.00	-7277.83	340.40	-106.48	0.00	20.61	5.54	74.40
0.70	32	SLE R	1	1	70.00	-9043.31	2331.99	-312.60	12.31	8.29	24.72	349.84
0.70	26	SLE Q	1	1	70.00	-7277.83	340.40	-106.48	0.00	20.61	5.54	74.40
4.38	32	SLE R	1	1	438.00	-7180.31	-2217.40	739.30	10.30	10.30	28.37	455.86
4.38	26	SLE Q	1	1	438.00	-5414.83	-974.58	35.06	8.29	12.31	9.24	108.94
4.68	31	SLE R	2	1	0.00	-2990.76	1841.14	588.08	12.31	8.29	23.99	516.03
4.68	20	SLE R	2	1	0.00	-2703.34	2088.32	235.65	12.31	8.29	22.18	550.60
4.68	26	SLE Q	2	1	0.00	-2315.17	633.28	54.21	12.31	8.29	6.43	96.79
4.68	31	SLE R	2	1	0.00	-2990.76	1841.14	588.08	12.31	8.29	23.99	516.03
4.68	20	SLE R	2	1	0.00	-2703.34	2088.32	235.65	12.31	8.29	22.18	550.60
4.68	26	SLE Q	2	1	0.00	-2315.17	633.28	54.21	12.31	8.29	6.43	96.79
8.70	32	SLE R	2	1	401.76	-1038.89	-964.14	-421.42	12.31	8.29	14.00	317.52
8.70	31	SLE R	2	1	401.76	-956.86	-1086.26	-305.25	12.31	8.29	13.77	338.46
8.70	26	SLE Q	2	1	401.76	-281.27	-182.34	-28.66	12.31	8.29	2.03	47.09

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cm²>	ε_{sm}	Wk <mm>
4.38	26	SLE Q	1	1	438.00	-5414.83	35.06	-974.58	44.00	171.01	0.50	18.86	186.59	5.15	269.38	78.71	0.02	0.01
4.38	36	SLE F	1	1	438.00	-5669.51	154.02	-1319.72	44.00	171.01	0.50	18.86	189.73	5.15	277.96	173.76	0.05	0.02
4.68	26	SLE Q	2	1	0.00	-2315.17	54.21	633.28	44.00	171.01	0.50	18.86	162.35	8.29	327.03	96.79	0.03	0.01
4.68	23	SLE F	2	1	0.00	-2452.15	143.87	1345.24	44.00	171.01	0.50	18.86	175.28	8.29	383.90	319.11	0.09	0.03
4.68	26	SLE Q	2	1	0.00	-2315.17	54.21	633.28	44.00	171.01	0.50	18.86	162.35	8.29	327.03	96.79	0.03	0.01
4.68	23	SLE F	2	1	0.00	-2452.15	143.87	1345.24	44.00	171.01	0.50	18.86	175.28	8.29	383.90	319.11	0.09	0.03
8.70	26	SLE Q	2	1	401.76	-281.27	-28.66	-182.34	44.00	171.01	0.50	18.86	170.84	8.29	364.37	47.09	0.01	0.00
8.70	23	SLE F	2	1	401.76	-418.25	-60.46	-500.07	44.00	171.01	0.50	18.86	180.43	8.29	406.53	143.84	0.04	0.01

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø6/ 5	2	228	SLU	0.45	1803.50	2.50	39431.60	40701.50	0.45	423.77	2.50	39431.60	40701.50	21.864	
0.70	1.31	ø6/ 5	2	211 (TG)	SLV	0.45	8409.95	2.50	39431.60	40001.30	0.45	3673.55	2.50	39431.60	40001.30	4.689	
0.70	1.31	ø6/ 5	2	213 (TG)	SLV	0.45	9787.34	2.50	39431.60	40311.50	0.45	1364.63	2.50	39431.60	40311.50	4.029	

Relazione di calcolo

1.31	3.77	ø6/15	2	228	SLU	0.45	1803.50	2.50	13143.90	40646.30	0.45	423.77	2.50	13143.90	40646.30	7.288
1.31	3.77	ø6/15	2	211 (TG)	SLV	0.45	8409.95	2.50	13143.90	40001.30	0.45	3673.55	2.50	13143.90	40001.30	1.563
1.31	3.77	ø6/15	2	213 (TG)	SLV	0.45	9787.34	2.50	13143.90	40311.50	0.45	1364.63	2.50	13143.90	40311.50	1.343
3.77	4.38	ø6/10	2	228	SLU	0.45	1803.50	2.50	19715.80	40425.90	0.45	423.77	2.50	19715.80	40425.90	10.932
3.77	4.38	ø6/10	2	211 (TG)	SLV	0.45	8409.95	2.50	19715.80	40001.30	0.45	3673.55	2.50	19715.80	40001.30	2.344
3.77	4.38	ø6/10	2	213 (TG)	SLV	0.45	9787.34	2.50	19715.80	40311.50	0.45	1364.63	2.50	19715.80	40311.50	2.014
4.68	5.35	ø6/10	2	228	SLU	0.45	749.99	2.50	19715.80	39585.50	0.45	434.45	2.50	19715.80	39585.50	26.288
4.68	5.35	ø6/10	2	217	SLU	0.45	1088.09	2.50	19715.80	39509.80	0.45	119.25	2.50	19715.80	39509.80	18.120
4.68	5.35	ø6/10	2	23 (TG)	SLV	0.45	4806.64	2.50	19715.80	39071.60	0.45	7057.48	2.50	19715.80	39071.60	2.794
4.68	5.35	ø6/10	2	215 (TG)	SLV	0.45	8120.05	2.50	19715.80	39071.60	0.45	1702.54	2.50	19715.80	39071.60	2.428
5.35	8.03	ø6/15	2	228	SLU	0.45	749.99	2.50	13143.90	39525.30	0.45	434.45	2.50	13143.90	39525.30	17.525
5.35	8.03	ø6/15	2	217	SLU	0.45	1088.09	2.50	13143.90	39449.70	0.45	119.25	2.50	13143.90	39449.70	12.080
5.35	8.03	ø6/15	2	23 (TG)	SLV	0.45	4806.64	2.50	13143.90	39071.60	0.45	7057.48	2.50	13143.90	39071.60	1.862
5.35	8.03	ø6/15	2	215 (TG)	SLV	0.45	8120.05	2.50	13143.90	39071.60	0.45	1702.54	2.50	13143.90	39071.60	1.619
8.03	8.70	ø6/10	2	228	SLU	0.45	749.99	2.50	19715.80	39284.60	0.45	434.45	2.50	19715.80	39284.60	26.288
8.03	8.70	ø6/10	2	217	SLU	0.45	1088.09	2.50	19715.80	39209.00	0.45	119.25	2.50	19715.80	39209.00	18.120
8.03	8.70	ø6/10	2	23 (TG)	SLV	0.45	4806.64	2.50	19715.80	39071.60	0.45	7057.48	2.50	19715.80	39071.60	2.794
8.03	8.70	ø6/10	2	215 (TG)	SLV	0.45	8120.05	2.50	19715.80	39071.60	0.45	1702.54	2.50	19715.80	39071.60	2.428

Dettagli costruttivi per la duttilità

- CC=13 $\alpha_e=0.36817$ $\omega_{rd}=0.14257$ $\mu\Phi_d=13.5551$ $\nu_d=0.033752$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=37.8039$
0.05249 ≥ -0.00363 [7.4.29]
- CC=13 $\alpha_e=0.36817$ $\omega_{rd}=0.14257$ $\mu\Phi_d=8.64393$ $\nu_d=0.033752$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=37.8039$
0.05249 ≥ -0.015 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	Nu	MRdy	MRdz	α	ϵ_y	Sic.	
<m>					<cm>	<daN>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>			
0.70	40 (e)	SLU	I	1	1	70.00	-7277.83	-106.48	340.40	-143684.00	-4767.49	9941.95	112.50	38.31	19.743
0.70	40 (e)	SLU	I	1	1	70.00	-7277.83	-106.48	340.40	-143684.00	-4767.49	9941.95	112.50	38.31	19.743
4.38	40 (e)	SLU	I	1	1	438.00	-5414.83	35.06	-974.58	-5414.83	1381.07	-10673.60	275.62	56.66	10.977
4.68	40	SLU	I	2	1	0.00	-2315.17	54.21	633.28	-2315.17	905.69	10533.00	84.38	57.46	16.606
4.68	40	SLU	I	2	1	0.00	-2315.17	54.21	633.28	-2315.17	905.69	10533.00	84.38	57.46	16.606
8.70	40	SLU	I	2	1	401.76	-281.27	-28.66	-182.34	-281.27	-1559.42	-9941.29	262.97	57.98	54.556

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <cm>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <cm>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	240	SLU	I	0.35	357.33	2.50	21001.10	49158.70	0.35	38.46	2.50	21001.10	49158.70	58.772
1.31	3.77	ø6/15	2	240	SLU	I	0.35	357.33	2.50	7000.38	49110.60	0.35	38.46	2.50	7000.38	49110.60	19.591
3.77	4.38	ø6/10	2	240	SLU	I	0.35	357.33	2.50	10500.60	48917.80	0.35	38.46	2.50	10500.60	48917.80	29.386
4.68	5.35	ø6/10	2	240	SLU	I	0.35	203.01	2.50	10500.60	48388.70	0.35	20.63	2.50	10500.60	48388.70	51.723
5.35	8.03	ø6/15	2	240	SLU	I	0.35	203.01	2.50	7000.38	48336.10	0.35	20.63	2.50	7000.38	48336.10	34.482
8.03	8.70	ø6/10	2	240	SLU	I	0.35	203.01	2.50	10500.60	48125.70	0.35	20.63	2.50	10500.60	48125.70	51.723

Pilastrata n. 53

Nodi: -1960 42 -2421

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
16R		45.00	45.00	5.40	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
16R		45.00	45.00	5.20	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <cm>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.45	13	SLV	1	16	45.00	-41761.90	9718.80	9718.80	-3857.33	-3857.33	-41761.90	20442.90	-7708.74	337.50	4.66	2.089
0.45	13	SLV	1	16	45.00	-41761.90	9718.80	9718.80	-3857.33	-3857.33	-41761.90	20442.90	-7708.74	337.50	4.66	2.089
4.13	30	SLU	1	16	413.00	-71972.60	-15980.30	-15980.30	3786.45	3786.45	-71972.60	-24150.60	5462.42	163.12	3.75	1.508
4.68	30	SLU	2	16	0.00	-13560.60	10873.80	10873.80	-2321.61	-2321.61	-13560.60	18423.90	-3880.16	350.16	8.42	1.693
4.68	30	SLU	2	16	0.00	-13560.60	10873.80	10873.80	-2321.61	-2321.61	-13560.60	16731.20	-3589.74	350.16	8.74	1.539
8.78	29 (e)	SLU	2	16	410.14	-14239.20	0.00	292.00	0.00	292.00	-366371.00	12186.30	12186.40	45.00	5.35	25.730

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
0.45	34	SLE R	1	16	45.00	-53493.50	-1026.30	6203.11	9.61	13.63	63.80	800.53
0.45	26	SLE Q	1	16	45.00	-44431.00	-1250.85	4908.41	5.81	17.44	53.80	674.67
0.45	34	SLE R	1	16	45.00	-53493.50	-1026.30	6203.11	9.61	13.63	63.80	800.53
0.45	26	SLE Q	1	16	45.00	-44431.00	-1250.85	4908.41	5.81	17.44	53.80	674.67
4.13	34	SLE R	1	16	413.00	-51630.50	2749.41	-11453.80	11.62	11.62	125.50	1439.32
4.13	26	SLE Q	1	16	413.00	-42568.00	2564.81	-9642.22	11.62	11.62	108.07	1272.85
4.68	22	SLE R	2	16	0.00	-7082.54	-2568.95	7334.58	13.63	9.61	92.45	2078.29
4.68	26	SLE Q	2	16	0.00	-4946.25	-1583.59	7293.74	13.63	9.61	81.05	2009.08
4.68	22	SLE R	2	16	0.00	-7082.54	-2568.95	7334.58	12.31	8.29	99.05	2341.92
4.68	26	SLE Q	2	16	0.00	-4946.25	-1583.59	7293.74	12.31	8.29	86.84	2269.88
8.78	33	SLE R	2	16	410.14	-9702.78	0.00	0.00	0.00	20.61	4.16	62.35

Relazione di calcolo

8.78	20	SLE R	2	16	410.14	-4949.85	0.00	0.00	0.00	20.61	2.12	31.81
8.78	26	SLE Q	2	16	410.14	-2869.93	0.00	0.00	0.00	20.61	1.23	18.44

Stato limite d'esercizio - Verifiche a fessurazione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	c	s	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	Wk
<m>					<cm>	<daN>	<daNm>	<daNm>	<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cmq>		<mm>
4.13	26	SLE Q	1	16	413.00	-42568.00	-9642.22	2564.81	44.00	170.03	0.50	20.40	182.35	3.80	175.81	1272.85	0.37	0.11
4.13	23	SLE F	1	16	413.00	-43006.00	-9852.47	2433.66	44.00	170.03	0.50	20.40	187.46	3.80	185.32	1293.39	0.38	0.12
4.68	26	SLE Q	2	16	0.00	-4946.25	7293.74	-1583.59	44.00	170.03	0.50	20.40	210.10	5.81	347.86	2009.08	0.65	0.23
4.68	25	SLE F	2	16	0.00	-4943.55	7515.86	-1640.03	44.00	170.03	0.50	20.40	210.10	5.81	347.88	2078.40	0.61	0.22
4.68	26	SLE Q	2	16	0.00	-4946.25	7293.74	-1583.59	44.00	171.02	0.50	18.86	219.06	5.15	358.08	2269.88	0.72	0.27
4.68	25	SLE F	2	16	0.00	-4943.55	7515.86	-1640.03	44.00	171.02	0.50	18.86	219.06	5.15	358.09	2348.26	0.68	0.25

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _{,y}	Vsdu _{,y}	ctgθ _{,y}	VRsd _{,y}	VRcd _{,y}	bw _{,z}	Vsdu _{,z}	ctgθ _{,z}	VRsd _{,z}	VRcd _{,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
0.45	1.06	ø8/ 5	2	230	SLU	0.45	1402.38	1.96	54963.50	54963.50	0.45	6704.14	1.96	54963.50	54963.50	8.198	
0.45	1.06	ø8/ 5	2	219	SLU	0.45	1567.25	1.96	54963.50	54963.50	0.45	6310.12	1.96	54963.50	54963.50	8.710	
0.45	1.06	ø8/ 5	2	215 (TG)	SLV	0.45	3535.14	1.91	53619.30	53619.30	0.45	12895.40	1.91	53619.30	53619.30	4.158	
0.45	1.06	ø8/ 5	2	25 (TG)	SLV	0.45	7174.91	1.90	53210.20	53210.20	0.45	9814.28	1.90	53210.20	53210.20	5.422	
1.06	3.52	ø8/15	2	230	SLU	0.45	1402.38	2.50	23366.90	46819.90	0.45	6704.14	2.50	23366.90	46819.90	3.485	
1.06	3.52	ø8/15	2	219	SLU	0.45	1567.25	2.50	23366.90	46819.90	0.45	6310.12	2.50	23366.90	46819.90	3.703	
1.06	3.52	ø8/15	2	213 (TG)	SLV	0.45	3195.48	2.50	23366.90	44464.80	0.45	12736.80	2.50	23366.90	44464.80	1.835	
1.06	3.52	ø8/15	2	213 (TG)	SLV	0.45	3601.40	2.50	23366.90	45168.20	0.45	12902.40	2.50	23366.90	45168.20	1.811	
1.06	3.52	ø8/15	2	25 (TG)	SLV	0.45	7174.91	2.50	23366.90	44487.50	0.45	9814.28	2.50	23366.90	44487.50	2.381	
3.52	4.13	ø8/10	2	230	SLU	0.45	1402.38	2.50	35050.30	46819.90	0.45	6704.14	2.50	35050.30	46819.90	5.228	
3.52	4.13	ø8/10	2	219	SLU	0.45	1567.25	2.50	35050.30	46819.90	0.45	6310.12	2.50	35050.30	46819.90	5.555	
3.52	4.13	ø8/10	2	213 (TG)	SLV	0.45	3195.48	2.50	35050.30	44464.80	0.45	12736.80	2.50	35050.30	44464.80	2.752	
3.52	4.13	ø8/10	2	213 (TG)	SLV	0.45	3601.40	2.50	35050.30	45168.20	0.45	12902.40	2.50	35050.30	45168.20	2.717	
3.52	4.13	ø8/10	2	25 (TG)	SLV	0.45	7174.91	2.50	35050.30	44487.50	0.45	9814.28	2.50	35050.30	44487.50	3.571	
4.68	5.36	ø6/10	2	230	SLU	0.45	566.06	2.50	19715.80	40868.30	0.45	2651.27	2.50	19715.80	40868.30	7.436	
4.68	5.36	ø6/10	2	217	SLU	0.45	1046.31	2.50	19715.80	40356.00	0.45	1976.83	2.50	19715.80	40356.00	9.973	
4.68	5.36	ø6/10	2	21 (TG)	SLV	0.45	3888.01	2.50	19715.80	39401.10	0.45	7371.31	2.50	19715.80	39401.10	2.675	
4.68	5.36	ø6/10	2	29 (TG)	SLV	0.45	4294.10	2.50	19715.80	39401.10	0.45	7280.54	2.50	19715.80	39401.10	2.708	
5.36	8.10	ø6/15	2	230	SLU	0.45	566.06	2.50	13143.90	40806.90	0.45	2651.27	2.50	13143.90	40806.90	4.958	
5.36	8.10	ø6/15	2	217	SLU	0.45	1046.31	2.50	13143.90	40294.60	0.45	1976.83	2.50	13143.90	40294.60	6.649	
5.36	8.10	ø6/15	2	21 (TG)	SLV	0.45	3888.01	2.50	13143.90	39401.10	0.45	7371.31	2.50	13143.90	39401.10	1.783	
5.36	8.10	ø6/15	2	29 (TG)	SLV	0.45	4294.10	2.50	13143.90	39401.10	0.45	7280.54	2.50	13143.90	39401.10	1.805	
8.10	8.78	ø6/10	2	230	SLU	0.45	566.06	2.50	19715.80	40561.20	0.45	2651.27	2.50	19715.80	40561.20	7.436	
8.10	8.78	ø6/10	2	217	SLU	0.45	1046.31	2.50	19715.80	40048.90	0.45	1976.84	2.50	19715.80	40048.90	9.973	
8.10	8.78	ø6/10	2	21 (TG)	SLV	0.45	3888.01	2.50	19715.80	39401.10	0.45	7371.31	2.50	19715.80	39401.10	2.675	
8.10	8.78	ø6/10	2	29 (TG)	SLV	0.45	4294.10	2.50	19715.80	39401.10	0.45	7280.54	2.50	19715.80	39401.10	2.708	

Dettagli costruttivi per la duttilità

- CC=5 α_e=0.37982 ω_{wd}=0.25481 μΦ_d=13.5551 v_d=0.14012 E_{sy, d}=0.0018995 b_c/b₀=1.20968 μΦ_e=13.6438
0.09678 >= 0.09593 [7.4.29]
- CC=5 α_e=0.37982 ω_{wd}=0.25481 μΦ_d=8.64393 v_d=0.14012 E_{sy, d}=0.0018995 b_c/b₀=1.20968 μΦ_e=13.6438
0.09678 >= 0.04849 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	Nu	MRdy	MRdz	α	ε _y	Sic.
<m>					<cm>	<daN>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
0.45	40	SLU I	1	16	45.00	-44431.00	4908.41	-1250.85	-190727.00	23211.60	-5826.88	340.31	32.10	4.293
0.45	40	SLU I	1	16	45.00	-44431.00	4908.41	-1250.85	-190727.00	23211.60	-5826.88	340.31	32.10	4.293
4.13	40	SLU I	1	16	413.00	-42568.00	-9642.22	2564.81	-42568.00	-22966.40	5942.84	160.31	32.43	2.377
4.68	40	SLU I	2	16	0.00	-4946.25	7293.74	-1583.59	-4946.25	18776.60	-4310.91	350.86	56.88	2.581
4.68	40	SLU I	2	16	0.00	-4946.25	7293.74	-1583.59	-4946.25	17041.70	-3675.04	351.56	60.32	2.336
8.78	40 (e)	SLU I	2	16	410.14	-2869.93	0.00	0.00	-190727.00	11886.20	11885.90	45.00	38.08	66.457

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _{,y}	Vsdu _{,y}	ctgθ _{,y}	VRsd _{,y}	VRcd _{,y}	bw _{,z}	Vsdu _{,z}	ctgθ _{,z}	VRsd _{,z}	VRcd _{,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
0.45	1.06	ø8/ 5	2	240	SLU I	0.40	1036.86	2.25	72483.30	72483.30	0.40	3953.98	2.25	72483.30	72483.30	18.332	
1.06	3.52	ø8/15	2	240	SLU I	0.40	1036.86	2.50	26842.30	67303.10	0.40	3953.98	2.50	26842.30	67303.10	6.789	
3.52	4.13	ø8/10	2	240	SLU I	0.40	1036.86	2.50	40263.40	67110.40	0.40	3953.98	2.50	40263.40	67110.40	10.183	
4.68	5.36	ø6/10	2	240	SLU I	0.40	386.11	2.50	22648.20	61224.30	0.40	1778.37	2.50	22648.20	61224.30	12.735	
5.36	8.10	ø6/15	2	240	SLU I	0.40	386.11	2.50	15098.80	61170.60	0.40	1778.37	2.50	15098.80	61170.60	8.490	
8.10	8.78	ø6/10	2	240	SLU I	0.40	386.11	2.50	22648.20	60955.80	0.40	1778.37	2.50	22648.20	60955.80	12.735	

Pilastrata n. 66

Nodi: 31 41 75

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	Cf	Cls	Fck	Fctk	Fcd	Fcd (Inc)	Fctd	Tp	Fyk	Fyd
		<cm>	<cm>	<cm>		<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>		<daN/cmq>	<daN/cmq>
15	R	30.00	30.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/presoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε_y	Sic.
0.70	13	SLV	1	15	70.00	-3792.58	-498.47	-498.47	794.41	794.41	-3792.58	-3242.38	5164.20	123.75	4.59	6.502
0.70	13	SLV	1	15	70.00	-3792.58	-498.47	-498.47	794.41	794.41	-3792.58	-3242.38	5164.20	123.75	4.59	6.502
4.38	13	SLV	1	15	438.00	-2964.58	248.46	248.46	-1035.22	-1035.22	-2964.58	1316.93	-5540.59	279.84	7.30	5.349
4.68	27	SLU	2	15	0.00	-2482.49	551.94	551.94	2387.07	2387.07	-2482.49	1175.21	5509.06	81.56	7.69	2.299
4.68	27	SLU	2	15	0.00	-2482.49	551.94	551.94	2387.07	2387.07	-2482.49	1175.21	5509.06	81.56	7.69	2.299
8.46	27	SLU	2	15	378.00	-1376.84	-417.20	-417.20	-1729.05	-1729.05	-1376.84	-1335.26	-5385.18	260.16	7.55	3.119

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cmq>	σ_s <daN/cmq>
0.70	32	SLE R	1	15	70.00	-5749.57	288.22	-66.77	0.00	12.57	11.58	139.66
0.70	26	SLE Q	1	15	70.00	-4309.65	178.94	-55.89	0.00	12.57	8.11	99.23
0.70	32	SLE R	1	15	70.00	-5749.57	288.22	-66.77	0.00	12.57	11.58	139.66
0.70	26	SLE Q	1	15	70.00	-4309.65	178.94	-55.89	0.00	12.57	8.11	99.23
4.38	32	SLE R	1	15	438.00	-4921.57	-414.05	602.84	6.28	6.28	29.63	288.31
4.38	26	SLE Q	1	15	438.00	-3481.65	-420.57	95.35	6.28	6.28	14.96	151.51
4.68	31	SLE R	2	15	0.00	-1780.36	1624.99	364.32	6.28	6.28	60.02	1226.55
4.68	26	SLE Q	2	15	0.00	-979.91	434.66	-58.28	6.28	6.28	14.65	272.56
4.68	31	SLE R	2	15	0.00	-1780.36	1624.99	364.32	6.28	6.28	60.02	1226.55
4.68	26	SLE Q	2	15	0.00	-979.91	434.66	-58.28	6.28	6.28	14.65	272.56
8.46	31	SLE R	2	15	378.00	-929.86	-1166.09	-277.12	6.28	6.28	43.64	915.09
8.46	26	SLE Q	2	15	378.00	-129.41	-178.59	19.16	6.28	6.28	5.81	131.67

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cmq>	ε_{sm}	Wk <mm>
4.68	26	SLE Q	2	15	0.00	-979.91	-58.28	434.66	44.00	192.00	0.50	20.00	189.36	3.14	159.21	272.56	0.08	0.03
4.68	23	SLE F	2	15	0.00	-1210.43	51.74	822.86	44.00	192.00	0.50	20.00	146.77	6.28	184.62	543.98	0.16	0.04
4.68	26	SLE Q	2	15	0.00	-979.91	-58.28	434.66	44.00	192.00	0.50	20.00	189.36	3.14	159.21	272.56	0.08	0.03
4.68	23	SLE F	2	15	0.00	-1210.43	51.74	822.86	44.00	192.00	0.50	20.00	146.77	6.28	184.62	543.98	0.16	0.04
8.46	26	SLE Q	2	15	378.00	-129.41	19.16	-178.59	44.00	192.00	0.50	20.00	202.11	3.14	179.25	131.67	0.04	0.01
8.46	23	SLE F	2	15	378.00	-359.93	-81.53	-493.44	44.00	192.00	0.50	20.00	192.73	3.14	164.50	375.11	0.11	0.04

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø6/10	2	218	SLU		0.30	165.66	2.50	12247.70	17027.30	0.30	133.73	2.50	12247.70	17027.30	73.930
0.70	1.31	ø6/10	2	228	SLU		0.30	266.75	2.50	12247.70	17172.70	0.30	133.80	2.50	12247.70	17172.70	45.914
0.70	1.31	ø6/10	2	27 (TG)	SLV		0.30	2442.99	2.50	12247.70	16559.50	0.30	2254.23	2.50	12247.70	16559.50	5.013
0.70	1.31	ø6/10	2	25 (TG)	SLV		0.30	3223.65	2.50	12247.70	16535.10	0.30	1406.04	2.50	12247.70	16535.10	3.799
1.31	3.77	ø6/20	2	228	SLU		0.30	266.75	2.50	6123.85	17149.80	0.30	536.74	2.50	6123.85	17149.80	11.409
1.31	3.77	ø6/20	2	27 (TG)	SLV		0.30	2442.99	2.50	6123.85	16559.50	0.30	2254.23	2.50	6123.85	16559.50	2.507
1.31	3.77	ø6/20	2	25 (TG)	SLV		0.30	3223.65	2.50	6123.85	16535.10	0.30	1406.04	2.50	6123.85	16535.10	1.900
3.77	4.38	ø6/15	2	228	SLU		0.30	266.75	2.50	8165.14	17058.50	0.30	670.85	2.50	8165.14	17058.50	12.171
3.77	4.38	ø6/15	2	27 (TG)	SLV		0.30	2442.99	2.50	8165.14	16559.50	0.30	2254.23	2.50	8165.14	16559.50	3.342
3.77	4.38	ø6/15	2	25 (TG)	SLV		0.30	3223.65	2.50	8165.14	16535.10	0.30	1406.04	2.50	8165.14	16535.10	2.533
4.68	5.31	ø6/15	2	228	SLU		0.30	1036.23	2.50	8165.14	16476.00	0.30	685.12	2.50	8165.14	16476.00	7.880
4.68	5.31	ø6/15	2	227	SLU		0.30	1088.92	2.50	8165.14	16474.30	0.30	504.34	2.50	8165.14	16474.30	7.498
4.68	5.31	ø6/15	2	25 (TG)	SLV		0.30	2808.52	2.50	8165.14	16158.40	0.30	1889.14	2.50	8165.14	16158.40	2.907
4.68	5.31	ø6/15	2	25 (TG)	SLV		0.30	2826.20	2.50	8165.14	16196.70	0.30	1893.07	2.50	8165.14	16196.70	2.889
4.68	5.31	ø6/15	2	215 (TG)	SLV		0.30	3089.16	2.50	8165.14	16194.00	0.30	827.00	2.50	8165.14	16194.00	2.643
5.31	7.83	ø6/20	2	228	SLU		0.30	1036.24	2.50	6123.85	16452.50	0.30	547.37	2.50	6123.85	16452.50	5.910
5.31	7.83	ø6/20	2	227	SLU		0.30	1088.92	2.50	6123.85	16450.80	0.30	421.69	2.50	6123.85	16450.80	5.624
5.31	7.83	ø6/20	2	25 (TG)	SLV		0.30	2808.52	2.50	6123.85	16158.40	0.30	1889.14	2.50	6123.85	16158.40	2.180
5.31	7.83	ø6/20	2	25 (TG)	SLV		0.30	2826.20	2.50	6123.85	16196.70	0.30	1893.07	2.50	6123.85	16196.70	2.167
5.31	7.83	ø6/20	2	215 (TG)	SLV		0.30	3089.16	2.50	6123.85	16194.00	0.30	827.00	2.50	6123.85	16194.00	1.982
7.83	8.46	ø6/15	2	228	SLU		0.30	1036.24	2.50	8165.14	16358.70	0.30	141.40	2.50	8165.14	16358.70	7.880
7.83	8.46	ø6/15	2	227	SLU		0.30	1088.92	2.50	8165.14	16357.00	0.30	91.08	2.50	8165.14	16357.00	7.498
7.83	8.46	ø6/15	2	25 (TG)	SLV		0.30	2808.52	2.50	8165.14	16158.40	0.30	1889.14	2.50	8165.14	16158.40	2.907
7.83	8.46	ø6/15	2	25 (TG)	SLV		0.30	2826.20	2.50	8165.14	16196.70	0.30	1893.07	2.50	8165.14	16196.70	2.889
7.83	8.46	ø6/15	2	215 (TG)	SLV		0.30	3089.16	2.50	8165.14	16194.00	0.30	827.00	2.50	8165.14	16194.00	2.643

Dettagli costruttivi per la duttilità

- CC=13 $\alpha_e=0.2891$ $\omega_{md}=0.11902$ $\mu\Phi_d=13.5551$ $v_d=0.032336$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.33929$ $\mu\Phi_c=28.1241$
0.03441 ≥ -0.00155 [7.4.29]
- CC=13 $\alpha_e=0.2891$ $\omega_{md}=0.11902$ $\mu\Phi_d=8.64393$ $v_d=0.032336$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.33929$ $\mu\Phi_c=28.1241$
0.03441 ≥ -0.01367 [7.4.29]

Verifiche di resistenza al fuoco**Stato limite ultimo - Verifiche a flessione/presoflessione**

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε_y	Sic.
0.70	40(e)	SLU I	1	15	70.00	-4309.65	-55.89	178.94	-72257.50	-3103.55	5299.85	110.39	31.06	16.766
0.70	40(e)	SLU I	1	15	70.00	-4309.65	-55.89	178.94	-72257.50	-3103.55	5299.85	110.39	31.06	16.766

Relazione di calcolo

4.38	40	SLU I	1	15	438.00	-3481.65	95.35	-420.57	-3481.65	1306.67	-6101.27	278.44	44.26	14.446
4.68	40	SLU I	2	15	0.00	-979.91	-58.28	434.66	-979.91	-716.66	5917.33	92.81	59.26	13.598
4.68	40	SLU I	2	15	0.00	-979.91	-58.28	434.66	-979.91	-716.66	5917.33	92.81	59.26	13.598
8.46	40	SLU I	2	15	378.00	-129.41	19.16	-178.59	-129.41	648.85	-5846.47	272.11	62.10	32.744

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/10	2	240	SLU I	0.25	162.91	2.50	14084.90	24143.80	0.25	41.10	2.50	14084.90	24143.80	86.458	
1.31	3.77	ø6/20	2	240	SLU I	0.25	162.91	2.50	7042.43	24122.50	0.25	41.10	2.50	7042.43	24122.50	43.229	
3.77	4.38	ø6/15	2	240	SLU I	0.25	162.91	2.50	9389.91	24037.20	0.25	41.10	2.50	9389.91	24037.20	57.639	
4.68	5.31	ø6/15	2	240	SLU I	0.25	162.24	2.50	9389.91	23629.20	0.25	20.49	2.50	9389.91	23629.20	57.878	
5.31	7.83	ø6/20	2	240	SLU I	0.25	162.24	2.50	7042.43	23607.30	0.25	20.49	2.50	7042.43	23607.30	43.408	
7.83	8.46	ø6/15	2	240	SLU I	0.25	162.24	2.50	9389.91	23519.70	0.25	20.49	2.50	9389.91	23519.70	57.878	

Pilastrata n. 67

Nodi: 3 32 80

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
9R		30.00	30.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	5	SLV	1	9	70.00	442.94	429.61	429.61	-2388.89	-2388.89	442.94	865.15	-5243.52	275.62	8.94	2.190
0.70	5	SLV	1	9	70.00	442.94	429.61	429.61	-2388.89	-2388.89	442.94	865.15	-5243.52	275.62	8.94	2.190
4.38	13	SLV	1	9	438.00	185.93	-89.01	-89.01	-2768.50	-2768.50	185.93	-82.47	-5255.28	269.30	10.53	1.897
4.68	27	SLU	2	9	0.00	-2423.30	101.21	101.21	1374.81	1374.81	-2423.30	436.22	5528.98	87.19	9.23	4.023
4.68	27	SLU	2	9	0.00	-2423.30	101.21	101.21	1374.81	1374.81	-2423.30	436.22	5528.98	87.19	9.23	4.023
8.46	27 (e)	SLU	2	9	378.00	-1317.65	-9.76	26.35	-1332.34	-1332.34	-1317.65	80.52	-5401.57	270.70	10.20	4.054

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
0.70	32	SLE R	1	9	70.00	-5171.66	477.49	-102.49	6.28	6.28	16.71	181.21
0.70	26	SLE Q	1	9	70.00	-3619.93	10.73	-22.90	0.00	12.57	3.92	55.59
0.70	32	SLE R	1	9	70.00	-5171.66	477.49	-102.49	6.28	6.28	16.71	181.21
0.70	26	SLE Q	1	9	70.00	-3619.93	10.73	-22.90	0.00	12.57	3.92	55.59
4.38	32	SLE R	1	9	438.00	-4343.66	-531.32	248.73	6.28	6.28	22.59	223.90
4.38	26	SLE Q	1	9	438.00	-2791.93	-36.58	11.44	0.00	12.57	3.41	46.62
4.68	32	SLE R	2	9	0.00	-1721.51	863.30	212.03	6.28	6.28	32.53	596.96
4.68	26	SLE Q	2	9	0.00	-1206.61	150.16	-12.42	6.28	6.28	4.75	48.20
4.68	32	SLE R	2	9	0.00	-1721.51	863.30	212.03	6.28	6.28	32.53	596.96
4.68	26	SLE Q	2	9	0.00	-1206.61	150.16	-12.42	6.28	6.28	4.75	48.20
8.46	32	SLE R	2	9	378.00	-871.01	-862.25	-91.97	6.28	6.28	28.06	615.84
8.46	26	SLE Q	2	9	378.00	-356.11	-185.27	34.06	6.28	6.28	6.57	124.56

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
4.68	23	SLE F	2	9	0.00	-1374.78	-56.53	418.28	44.00	192.00	0.50	20.00	182.81	3.14	148.93	229.62	0.07	0.02
4.68	23	SLE F	2	9	0.00	-1374.78	-56.53	418.28	44.00	192.00	0.50	20.00	182.81	3.14	148.93	229.62	0.07	0.02
8.46	26	SLE Q	2	9	378.00	-356.11	34.06	-185.27	44.00	192.00	0.50	20.00	183.05	3.14	149.30	124.56	0.04	0.01
8.46	23	SLE F	2	9	378.00	-524.28	64.76	-421.06	44.00	192.00	0.50	20.00	191.82	3.14	163.08	300.68	0.09	0.03

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/10	2	228	SLU	0.30	408.61	2.50	12247.70	17072.80	0.30	142.14	2.50	12247.70	17072.80	29.974	
0.70	1.31	ø6/10	2	211 (TG)	SLV	0.30	3233.80	2.50	12247.70	16750.70	0.30	1175.56	2.50	12247.70	16750.70	3.787	
0.70	1.31	ø6/10	2	213 (TG)	SLV	0.30	3582.16	2.50	12247.70	17030.60	0.30	364.53	2.50	12247.70	17030.60	3.419	
1.31	3.77	ø6/20	2	228	SLU	0.30	408.61	2.50	6123.85	17049.90	0.30	142.14	2.50	6123.85	17049.90	14.987	
1.31	3.77	ø6/20	2	211 (TG)	SLV	0.30	3233.80	2.50	6123.85	16750.70	0.30	1175.56	2.50	6123.85	16750.70	1.894	
1.31	3.77	ø6/20	2	213 (TG)	SLV	0.30	3582.16	2.50	6123.85	17030.60	0.30	364.53	2.50	6123.85	17030.60	1.710	
3.77	4.38	ø6/15	2	228	SLU	0.30	408.61	2.50	8165.14	16958.60	0.30	142.14	2.50	8165.14	16958.60	19.983	
3.77	4.38	ø6/15	2	211 (TG)	SLV	0.30	3233.80	2.50	8165.14	16750.70	0.30	1175.56	2.50	8165.14	16750.70	2.525	
3.77	4.38	ø6/15	2	213 (TG)	SLV	0.30	3582.16	2.50	8165.14	17030.60	0.30	364.53	2.50	8165.14	17030.60	2.279	
4.68	5.31	ø6/15	2	228	SLU	0.30	674.90	2.50	8165.14	16459.70	0.30	470.92	2.50	8165.14	16459.70	12.098	
4.68	5.31	ø6/15	2	227	SLU	0.30	716.18	2.50	8165.14	16466.70	0.30	238.18	2.50	8165.14	16466.70	11.401	
4.68	5.31	ø6/15	2	211 (TG)	SLV	0.30	2683.05	2.50	8165.14	16180.40	0.30	1938.58	2.50	8165.14	16180.40	3.043	
4.68	5.31	ø6/15	2	211 (TG)	SLV	0.30	2704.95	2.50	8165.14	16256.10	0.30	1942.59	2.50	8165.14	16256.10	3.019	
4.68	5.31	ø6/15	2	213 (TG)	SLV	0.30	3162.26	2.50	8165.14	16299.00	0.30	473.17	2.50	8165.14	16299.00	2.582	
5.31	7.83	ø6/20	2	228	SLU	0.30	674.90	2.50	6123.85	16436.20	0.30	354.91	2.50	6123.85	16436.20	9.074	
5.31	7.83	ø6/20	2	227	SLU	0.30	716.18	2.50	6123.85	16443.30	0.30	168.57	2.50	6123.85	16443.30	8.551	
5.31	7.83	ø6/20	2	211 (TG)	SLV	0.30	2683.05	2.50	6123.85	16180.40	0.30	1938.58	2.50	6123.85	16180.40	2.282	

Relazione di calcolo

5.31	7.83	ø6/20	2	2	11(TG)	SLV	0.30	2704.95	2.50	6123.85	16256.10	0.30	1942.59	2.50	6123.85	16256.10	2.264
5.31	7.83	ø6/20	2	2	13(TG)	SLV	0.30	3162.26	2.50	6123.85	16299.00	0.30	473.17	2.50	6123.85	16299.00	1.937
7.83	8.46	ø6/15	2	2	28	SLU	0.30	674.90	2.50	8165.14	16342.40	0.30	225.15	2.50	8165.14	16342.40	12.098
7.83	8.46	ø6/15	2	2	27	SLU	0.30	716.18	2.50	8165.14	16349.50	0.30	179.47	2.50	8165.14	16349.50	11.401
7.83	8.46	ø6/15	2	2	11(TG)	SLV	0.30	2683.05	2.50	8165.14	16180.40	0.30	1938.58	2.50	8165.14	16180.40	3.043
7.83	8.46	ø6/15	2	2	11(TG)	SLV	0.30	2704.95	2.50	8165.14	16256.10	0.30	1942.59	2.50	8165.14	16256.10	3.019
7.83	8.46	ø6/15	2	2	13(TG)	SLV	0.30	3162.26	2.50	8165.14	16299.00	0.30	473.17	2.50	8165.14	16299.00	2.582

Dettagli costruttivi per la duttilità

- CC=13 $\alpha_e=0.2891$ $\omega_{wd}=0.11902$ $\mu\Phi_d=13.5551$ $v_d=0.051424$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.33929$ $\mu\Phi_c=17.6846$
0.03441 ≥ 0.0182 [7.4.29]
- CC=13 $\alpha_e=0.2891$ $\omega_{wd}=0.11902$ $\mu\Phi_d=8.64393$ $v_d=0.051424$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.33929$ $\mu\Phi_c=17.6846$
0.03441 ≥ -0.00107 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/presoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.	
0.70	40 (e)	SLU	I	1	9	70.00	-3619.93	-22.90	10.73	-47028.60	-1897.49	1897.47	135.00	28.42	12.992
0.70	40 (e)	SLU	I	1	9	70.00	-3619.93	-22.90	10.73	-47028.60	-1897.49	1897.47	135.00	28.42	12.992
4.38	40 (e)	SLU	I	1	9	438.00	-2791.93	11.44	-36.58	-47028.60	1856.29	-1856.27	315.00	29.23	16.845
4.68	40 (e)	SLU	I	2	9	0.00	-1206.61	-12.42	150.16	-1206.61	390.11	2535.09	81.56	48.50	16.898
4.68	40 (e)	SLU	I	2	9	0.00	-1206.61	-12.42	150.16	-1206.61	390.11	2535.09	81.56	48.50	16.898
8.46	40	SLU	I	2	9	378.00	-356.11	34.06	-185.27	-356.11	438.92	-2453.70	278.44	49.41	13.226

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	V _{sdu,y} <daN>	ctgθ _{,y}	V _{Rsd,y} <daN>	V _{Rcd,y} <daN>	b _{w,z} <m>	V _{sdu,z} <daN>	ctgθ _{,z}	V _{Rsd,z} <daN>	V _{Rcd,z} <daN>	Sic.
0.70	1.31	ø6/10	2	2	40	SLU I	0.20	12.86	2.50	6821.90	16004.70	0.20	9.33	2.50	6821.90	16004.70	>100
1.31	3.77	ø6/20	2	2	40	SLU I	0.20	12.86	2.50	3410.95	15983.30	0.20	9.33	2.50	3410.95	15983.30	>100
3.77	4.38	ø6/15	2	2	40	SLU I	0.20	12.86	2.50	4547.93	15897.70	0.20	9.33	2.50	4547.93	15897.70	>100
4.68	5.31	ø6/15	2	2	40	SLU I	0.20	88.74	2.50	4547.93	15630.30	0.20	12.30	2.50	4547.93	15630.30	51.251
5.31	7.83	ø6/20	2	2	40	SLU I	0.20	88.74	2.50	3410.95	15608.30	0.20	12.30	2.50	3410.95	15608.30	38.438
7.83	8.46	ø6/15	2	2	40	SLU I	0.20	88.74	2.50	4547.93	15520.30	0.20	12.30	2.50	4547.93	15520.30	51.251

Pilastrata n. 73

Nodi: -1218 40 -78

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cl _s	F _{ck} <daN/cm ² >	F _{ctk} <daN/cm ² >	F _{cd} <daN/cm ² >	F _{cd} (Inc) <daN/cm ² >	F _{ctd} <daN/cm ² >	Tp	F _{yk} <daN/cm ² >	F _{yd} <daN/cm ² >
15	R	30.00	30.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/presoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	9	SLV	1	15	70.00	-8801.93	-576.42	-576.42	660.91	660.91	-8801.93	-4136.09	4652.03	132.19	4.13	7.084
0.70	9	SLV	1	15	70.00	-8801.93	-576.42	-576.42	660.91	660.91	-8801.93	-4136.09	4652.03	132.19	4.13	7.084
4.38	28(e)	SLU	1	15	438.00	-13918.60	1774.81	1774.81	-226.76	-325.69	-13918.60	6566.62	-1207.32	350.16	5.76	3.700
4.68	28	SLU	2	15	0.00	-5123.59	2556.76	2556.76	2137.81	2137.81	-5123.59	4667.81	3893.84	40.78	4.38	1.824
4.68	28	SLU	2	15	0.00	-5123.59	2556.76	2556.76	2137.81	2137.81	-5123.59	6643.71	5600.48	40.78	3.57	2.607
8.46	29	SLU	2	15	378.00	-4241.34	-4961.37	-4961.37	-2025.15	-2025.15	-4241.34	-8439.51	-3485.74	205.31	3.84	1.704

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
0.70	33	SLE R	1	15	70.00	-10975.10	112.35	-180.68	0.00	12.57	15.26	200.96
0.70	21	SLE R	1	15	70.00	-10319.20	6.03	-234.38	0.00	12.57	13.73	182.99
0.70	26	SLE Q	1	15	70.00	-9231.71	30.21	-152.49	0.00	12.57	11.71	158.22
0.70	33	SLE R	1	15	70.00	-10975.10	112.35	-180.68	0.00	12.57	15.26	200.96
0.70	21	SLE R	1	15	70.00	-10319.20	6.03	-234.38	0.00	12.57	13.73	182.99
0.70	26	SLE Q	1	15	70.00	-9231.71	30.21	-152.49	0.00	12.57	11.71	158.22
4.38	32	SLE R	1	15	438.00	-9976.20	-153.44	1206.00	6.28	6.28	39.60	403.84
4.38	26	SLE Q	1	15	438.00	-8403.71	-37.83	335.68	0.00	12.57	14.32	179.18
4.68	32	SLE R	2	15	0.00	-3607.70	1439.73	1718.79	9.42	3.14	100.07	1678.37
4.68	26	SLE Q	2	15	0.00	-1905.16	195.89	265.90	6.28	6.28	13.67	140.94
4.68	32	SLE R	2	15	0.00	-3607.70	1439.73	1718.79	16.09	8.04	80.02	1136.24
4.68	26	SLE Q	2	15	0.00	-1905.16	195.89	265.90	12.06	12.06	11.49	113.73
8.46	32	SLE R	2	15	378.00	-2757.20	-1552.48	-3219.87	14.07	10.05	119.34	1894.68
8.46	33	SLE R	2	15	378.00	-2906.13	-1374.06	-3364.94	14.07	10.05	117.86	1894.69
8.46	26	SLE Q	2	15	378.00	-1054.66	-299.05	-958.95	14.07	10.05	31.05	499.35

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	W _k <mm>
4.68	36	SLE F	2	15	0.00	-2148.89	530.87	347.89	44.00	192.00	0.50	20.00	132.82	3.14	70.40	379.81	0.11	0.02
4.68	36	SLE F	2	15	0.00	-2148.89	530.87	347.89	44.00	104.00	0.50	16.00	137.29	2.01	61.94	267.59	0.08	0.02
8.46	26	SLE Q	2	15	378.00	-1054.66	-958.95	-299.05	44.00	104.00	0.50	16.00	170.62	2.01	103.82	499.35	0.15	0.04

8.46	24	SLE F	2	15	378.00	-1309.22	-1276.53	-350.67	44.00	104.00	0.50	16.00	177.98	2.01	113.07	653.92	0.19	0.06
------	----	-------	---	----	--------	----------	----------	---------	-------	--------	------	-------	--------	------	--------	--------	------	------

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	28	SLU	0.30	136.90	2.08	20429.00	20429.00	0.30	337.60	2.08	20429.00	20429.00	60.513
0.70	1.31	ø6/ 5	2	2	11(TG)	SLV	0.30	2591.08	2.03	19854.70	19854.70	0.30	2669.34	2.03	19854.70	19854.70	7.438
0.70	1.31	ø6/ 5	2	2	5(TG)	SLV	0.30	3393.43	2.02	19803.00	19803.00	0.30	1784.64	2.02	19803.00	19803.00	5.836
1.31	3.77	ø6/20	2	2	28	SLU	0.30	136.90	2.50	6123.85	18043.50	0.30	1080.63	2.50	6123.85	18043.50	5.667
1.31	3.77	ø6/20	2	2	11(TG)	SLV	0.30	2591.08	2.50	6123.85	17252.10	0.30	2669.34	2.50	6123.85	17252.10	2.294
1.31	3.77	ø6/20	2	2	5(TG)	SLV	0.30	3393.43	2.50	6123.85	17180.00	0.30	1784.64	2.50	6123.85	17180.00	1.805
3.77	4.38	ø6/15	2	2	28	SLU	0.30	136.90	2.50	8165.14	17952.20	0.30	1364.27	2.50	8165.14	17952.20	5.985
3.77	4.38	ø6/15	2	2	11(TG)	SLV	0.30	2591.08	2.50	8165.14	17252.10	0.30	2669.34	2.50	8165.14	17252.10	3.059
3.77	4.38	ø6/15	2	2	5(TG)	SLV	0.30	3393.43	2.50	8165.14	17180.00	0.30	1784.64	2.50	8165.14	17180.00	2.406
4.68	5.31	ø6/10	2	2	28	SLU	0.30	1172.11	2.50	12247.70	16810.30	0.30	2805.42	2.50	12247.70	16810.30	4.366
4.68	5.31	ø6/10	2	2	3(TG)	SLV	0.30	1493.19	2.50	12247.70	16286.50	0.30	5055.85	2.50	12247.70	16286.50	2.422
4.68	5.31	ø6/10	2	2	3(TG)	SLV	0.30	1492.69	2.50	12247.70	16308.90	0.30	5062.77	2.50	12247.70	16308.90	2.419
4.68	5.31	ø6/10	2	2	5(TG)	SLV	0.30	3411.69	2.50	12247.70	16279.40	0.30	3606.05	2.50	12247.70	16279.40	3.396
4.68	5.31	ø6/10	2	2	5(TG)	SLV	0.30	3414.07	2.50	12247.70	16308.90	0.30	3609.89	2.50	12247.70	16308.90	3.393
5.31	7.83	ø6/15	2	2	28	SLU	0.30	1172.11	2.50	8165.14	16786.90	0.30	2514.06	2.50	8165.14	16786.90	3.248
5.31	7.83	ø6/15	2	2	3(TG)	SLV	0.30	1493.19	2.50	8165.14	16286.50	0.30	5055.85	2.50	8165.14	16286.50	1.615
5.31	7.83	ø6/15	2	2	3(TG)	SLV	0.30	1492.69	2.50	8165.14	16308.90	0.30	5062.77	2.50	8165.14	16308.90	1.613
5.31	7.83	ø6/15	2	2	5(TG)	SLV	0.30	3411.69	2.50	8165.14	16279.40	0.30	3606.05	2.50	8165.14	16279.40	2.264
5.31	7.83	ø6/15	2	2	5(TG)	SLV	0.30	3414.07	2.50	8165.14	16308.90	0.30	3609.89	2.50	8165.14	16308.90	2.262
7.83	8.46	ø6/10	2	2	29	SLU	0.30	1018.51	2.50	12247.70	16721.50	0.30	1564.30	2.50	12247.70	16721.50	7.830
7.83	8.46	ø6/10	2	2	28	SLU	0.30	1172.11	2.50	12247.70	16693.10	0.30	1348.65	2.50	12247.70	16693.10	9.081
7.83	8.46	ø6/10	2	2	3(TG)	SLV	0.30	1493.19	2.50	12247.70	16286.50	0.30	5055.85	2.50	12247.70	16286.50	2.422
7.83	8.46	ø6/10	2	2	3(TG)	SLV	0.30	1492.69	2.50	12247.70	16308.90	0.30	5062.77	2.50	12247.70	16308.90	2.419
7.83	8.46	ø6/10	2	2	5(TG)	SLV	0.30	3411.69	2.50	12247.70	16279.40	0.30	3606.05	2.50	12247.70	16279.40	3.396
7.83	8.46	ø6/10	2	2	5(TG)	SLV	0.30	3414.07	2.50	12247.70	16308.90	0.30	3609.89	2.50	12247.70	16308.90	3.393

Dettagli costruttivi per la duttilità

- CC=1 α_e=0.37814 ω_{wd}=0.23804 μΦ_d=13.5551 v_d=0.064669 E_{sy,r,d}=0.0018995 b_c/b₀=1.33929 μΦ_c=25.3284
0.09001 >= 0.0319 [7.4.29]

- CC=1 α_e=0.37814 ω_{wd}=0.23804 μΦ_d=8.64393 v_d=0.064669 E_{sy,r,d}=0.0018995 b_c/b₀=1.33929 μΦ_c=25.3284
0.09001 >= 0.00766 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	40 (e)	SLU I	1	15	70.00	-9231.71	-152.49	30.21	-72257.50	-4625.61	4625.61	135.00	23.82	7.827
0.70	40 (e)	SLU I	1	15	70.00	-9231.71	-152.49	30.21	-72257.50	-4625.61	4625.61	135.00	23.82	7.827
4.38	40 (e)	SLU I	1	15	438.00	-8403.71	335.68	-37.83	-72257.50	5495.20	-3165.20	337.50	28.66	8.598
4.68	40	SLU I	2	15	0.00	-1905.16	265.90	195.89	-1905.16	4819.86	3636.76	28.12	29.70	18.295
4.68	40	SLU I	2	15	0.00	-1905.16	265.90	195.89	-1905.16	7414.28	5435.82	37.97	22.39	27.852
8.46	40	SLU I	2	15	378.00	-1054.66	-958.95	-299.05	-1054.66	-9698.85	-2875.39	196.88	29.78	10.070

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	40	SLU I	0.25	18.49	2.33	26207.50	26207.50	0.25	132.66	2.33	26207.50	26207.50	>100
1.31	3.77	ø6/20	2	2	40	SLU I	0.25	18.49	2.50	7042.43	24883.10	0.25	132.66	2.50	7042.43	24883.10	53.088
3.77	4.38	ø6/15	2	2	40	SLU I	0.25	18.49	2.50	9389.91	24797.80	0.25	132.66	2.50	9389.91	24797.80	70.784
4.68	5.31	ø6/10	2	2	40	SLU I	0.25	130.94	2.50	14084.90	23772.20	0.25	324.03	2.50	14084.90	23772.20	43.467
5.31	7.83	ø6/15	2	2	40	SLU I	0.25	130.94	2.50	9389.91	23750.30	0.25	324.03	2.50	9389.91	23750.30	28.978
7.83	8.46	ø6/10	2	2	40	SLU I	0.25	130.94	2.50	14084.90	23662.70	0.25	324.03	2.50	14084.90	23662.70	43.467

Pilastrata n. 74

Nodi: 94 26 87

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
9R		30.00	30.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	5	SLV	1	9	70.00	-10516.90	-1023.24	-1023.24	-777.59	-777.59	-10516.90	-5099.12	-3788.35	217.97	4.05	4.943
0.70	5	SLV	1	9	70.00	-10516.90	-1023.24	-1023.24	-777.59	-777.59	-10516.90	-5099.12	-3788.35	217.97	4.05	4.943
4.38	28	SLU	1	9	438.00	-17009.10	910.65	910.65	1508.23	1508.23	-17009.10	3515.45	5703.39	56.25	3.69	3.803
4.68	28	SLU	2	9	0.00	-4112.79	-265.65	-265.65	1830.76	1830.76	-4112.79	-828.80	5689.59	95.62	8.11	3.108
4.68	28	SLU	2	9	0.00	-4112.79	-265.65	-265.65	1830.76	1830.76	-4112.79	-828.80	5689.59	95.62	8.11	3.108
8.46	28	SLU	2	9	378.00	-3007.14	-603.59	-603.59	-676.45	-676.45	-3007.14	-3957.98	-4472.08	227.81	4.51	6.587

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cmq>	σ_t <daN/cmq>
0.70	32	SLE R	1	9	70.00	-13042.90	322.25	-194.36	0.00	12.57	21.11	267.39
0.70	26	SLE Q	1	9	70.00	-11279.10	-32.90	-329.84	0.00	12.57	16.77	216.98
0.70	32	SLE R	1	9	70.00	-13042.90	322.25	-194.36	0.00	12.57	21.11	267.39
0.70	26	SLE Q	1	9	70.00	-11279.10	-32.90	-329.84	0.00	12.57	16.77	216.98
4.38	32	SLE R	1	9	438.00	-12214.90	1013.60	668.10	3.14	9.42	47.26	500.40
4.38	26	SLE Q	1	9	438.00	-10451.10	109.52	777.12	3.14	9.42	26.36	302.25
4.68	32	SLE R	2	9	0.00	-2917.01	1216.37	-228.38	6.28	6.28	43.31	774.30
4.68	26	SLE Q	2	9	0.00	-1536.54	-47.25	-644.62	6.28	6.28	20.33	383.25
4.68	32	SLE R	2	9	0.00	-2917.01	1216.37	-228.38	6.28	6.28	43.31	774.30
4.68	26	SLE Q	2	9	0.00	-1536.54	-47.25	-644.62	6.28	6.28	20.33	383.25
8.46	32	SLE R	2	9	378.00	-2066.51	-453.92	-394.98	9.42	3.14	26.18	359.73
8.46	26	SLE Q	2	9	378.00	-686.04	-32.27	99.33	6.28	6.28	3.86	37.13

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cmq>	ϵ_{sm}	Wk <mm>
4.68	26	SLE Q	2	9	0.00	-1536.54	-644.62	-47.25	44.00	192.00	0.50	20.00	198.81	3.14	174.06	383.25	0.11	0.04
4.68	25	SLE F	2	9	0.00	-1538.61	-663.97	-49.18	44.00	192.00	0.50	20.00	199.06	3.14	174.45	398.30	0.12	0.04
4.68	26	SLE Q	2	9	0.00	-1536.54	-644.62	-47.25	44.00	192.00	0.50	20.00	198.81	3.14	174.06	383.25	0.11	0.04
4.68	25	SLE F	2	9	0.00	-1538.61	-663.97	-49.18	44.00	192.00	0.50	20.00	199.06	3.14	174.45	398.30	0.12	0.04
8.46	23	SLE F	2	9	378.00	-686.91	205.24	-33.06	44.00	192.00	0.50	20.00	177.98	3.14	141.34	113.71	0.03	0.01

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	219	SLU	0.30	81.79	2.10	20607.60	20607.50	0.30	449.46	2.10	20607.60	20607.50	45.849	
0.70	1.31	ø6/ 5	2	228	SLU	0.30	1007.66	2.11	20700.70	20700.70	0.30	316.19	2.11	20700.70	20700.70	20.543	
0.70	1.31	ø6/ 5	2	23 (TG)	SLV	0.30	1563.43	2.04	19993.80	19993.80	0.30	3554.58	2.04	19993.80	19993.80	5.625	
0.70	1.31	ø6/ 5	2	213 (TG)	SLV	0.30	2691.35	2.04	19968.70	19968.70	0.30	2610.75	2.04	19968.70	19968.70	7.420	
1.31	3.77	ø6/20	2	219	SLU	0.30	81.79	2.50	6123.85	18301.30	0.30	449.46	2.50	6123.85	18301.30	13.625	
1.31	3.77	ø6/20	2	228	SLU	0.30	1134.51	2.50	6123.85	18436.80	0.30	316.19	2.50	6123.85	18436.80	5.398	
1.31	3.77	ø6/20	2	23 (TG)	SLV	0.30	1563.43	2.50	6123.85	17447.10	0.30	3554.58	2.50	6123.85	17447.10	1.723	
1.31	3.77	ø6/20	2	213 (TG)	SLV	0.30	2691.35	2.50	6123.85	17411.80	0.30	2610.75	2.50	6123.85	17411.80	2.275	
3.77	4.38	ø6/15	2	219	SLU	0.30	81.79	2.50	8165.14	18210.00	0.30	449.46	2.50	8165.14	18210.00	18.166	
3.77	4.38	ø6/15	2	228	SLU	0.30	1562.95	2.50	8165.14	18345.50	0.30	316.18	2.50	8165.14	18345.50	5.224	
3.77	4.38	ø6/15	2	23 (TG)	SLV	0.30	1563.43	2.50	8165.14	17447.10	0.30	3554.58	2.50	8165.14	17447.10	2.297	
3.77	4.38	ø6/15	2	213 (TG)	SLV	0.30	2691.35	2.50	8165.14	17411.80	0.30	2610.75	2.50	8165.14	17411.80	3.034	
4.68	5.31	ø6/15	2	217	SLU	0.30	24.52	2.50	8165.14	16471.20	0.30	388.24	2.50	8165.14	16471.20	21.031	
4.68	5.31	ø6/15	2	228	SLU	0.30	1983.51	2.50	8165.14	16681.70	0.30	89.40	2.50	8165.14	16681.70	4.117	
4.68	5.31	ø6/15	2	211 (TG)	SLV	0.30	757.69	2.50	8165.14	16272.90	0.30	3107.38	2.50	8165.14	16272.90	2.628	
4.68	5.31	ø6/15	2	213 (TG)	SLV	0.30	1930.14	2.50	8165.14	16300.50	0.30	2467.60	2.50	8165.14	16300.50	3.309	
5.31	7.83	ø6/20	2	217	SLU	0.30	24.52	2.50	6123.85	16447.80	0.30	388.24	2.50	6123.85	16447.80	15.773	
5.31	7.83	ø6/20	2	228	SLU	0.30	1543.44	2.50	6123.85	16658.30	0.30	89.40	2.50	6123.85	16658.30	3.968	
5.31	7.83	ø6/20	2	211 (TG)	SLV	0.30	757.69	2.50	6123.85	16272.90	0.30	3107.38	2.50	6123.85	16272.90	1.971	
5.31	7.83	ø6/20	2	213 (TG)	SLV	0.30	1930.14	2.50	6123.85	16300.50	0.30	2467.60	2.50	6123.85	16300.50	2.482	
7.83	8.46	ø6/15	2	217	SLU	0.30	24.52	2.50	8165.14	16354.00	0.30	388.24	2.50	8165.14	16354.00	21.031	
7.83	8.46	ø6/15	2	228	SLU	0.30	656.95	2.50	8165.14	16564.50	0.30	89.40	2.50	8165.14	16564.50	12.429	
7.83	8.46	ø6/15	2	211 (TG)	SLV	0.30	757.69	2.50	8165.14	16272.90	0.30	3107.38	2.50	8165.14	16272.90	2.628	
7.83	8.46	ø6/15	2	213 (TG)	SLV	0.30	1930.14	2.50	8165.14	16300.50	0.30	2467.60	2.50	8165.14	16300.50	3.309	

Dettagli costruttivi per la duttilità

- CC=13 $\alpha_e=0.37814$ $\omega_{nd}=0.23804$ $\mu\Phi_d=13.5551$ $v_d=0.080597$ $E_{sy,r,d}=0.0018995$ $b_c/b_0=1.33929$ $\mu\Phi_c=20.3227$
0.09001 >= 0.04838 [7.4.29]
- CC=13 $\alpha_e=0.37814$ $\omega_{nd}=0.23804$ $\mu\Phi_d=8.64393$ $v_d=0.080597$ $E_{sy,r,d}=0.0018995$ $b_c/b_0=1.33929$ $\mu\Phi_c=20.3227$
0.09001 >= 0.01817 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	40 (e)	SLU I	1	9	70.00	-11279.10	-329.84	-32.90	-47028.60	-2453.86	-1967.93	216.56	23.49	4.170
0.70	40 (e)	SLU I	1	9	70.00	-11279.10	-329.84	-32.90	-47028.60	-2453.86	-1967.93	216.56	23.49	4.170
4.38	40 (e)	SLU I	1	9	438.00	-10451.10	777.12	109.52	-10451.10	2874.11	-951.25	340.31	30.22	3.713
4.68	40	SLU I	2	9	0.00	-1536.54	-644.62	-47.25	-1536.54	-2589.85	-180.50	184.22	57.07	4.016
4.68	40	SLU I	2	9	0.00	-1536.54	-644.62	-47.25	-1536.54	-2589.85	-180.50	184.22	57.07	4.016
8.46	40	SLU I	2	9	378.00	-686.04	99.33	-32.27	-686.04	2428.23	-795.69	344.53	38.98	24.453

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	240	SLU I	0.20	38.70	2.50	13643.80	17193.20	0.20	300.80	2.50	13643.80	17193.20	45.358	
1.31	3.77	ø6/20	2	240	SLU I	0.20	38.70	2.50	3410.95	17171.80	0.20	300.80	2.50	3410.95	17171.80	11.339	
3.77	4.38	ø6/15	2	240	SLU I	0.20	38.70	2.50	4547.93	17086.20	0.20	300.80	2.50	4547.93	17086.20	15.119	
4.68	5.31	ø6/15	2	240	SLU I	0.20	3.96	2.50	4547.93	15681.50	0.20	196.81	2.50	4547.93	15681.50	23.108	
5.31	7.83	ø6/20	2	240	SLU I	0.20	3.96	2.50	3410.95	15659.50	0.20	196.81	2.50	3410.95	15659.50	17.331	

7.83	8.46	ø6/15	2	240	SLU I	0.20	3.96	2.50	4547.93	15571.50	0.20	196.81	2.50	4547.93	15571.50	23.108
------	------	-------	---	-----	-------	------	------	------	---------	----------	------	--------	------	---------	----------	--------

Pilastrata n. 75

Nodi: 97 27 86

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
9R		30.00	30.00	5.30	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
9R		30.00	30.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	5	SLV	1	9	70.00	-15020.40	-810.18	-810.18	-1249.00	-1249.00	-15020.40	-3630.27	-5511.11	234.84	3.79	4.432
0.70	5	SLV	1	9	70.00	-15020.40	-810.18	-810.18	-1249.00	-1249.00	-15020.40	-3630.27	-5511.11	234.84	3.79	4.432
4.38	5	SLV	1	9	438.00	-14192.40	968.61	968.61	693.04	693.04	-14192.40	5347.30	3753.36	36.56	3.83	5.485
4.68	28	SLU	2	9	0.00	-4124.46	752.58	752.58	2610.51	2610.51	-4124.46	1610.41	5613.50	77.34	6.61	2.150
4.68	28	SLU	2	9	0.00	-4124.46	752.58	752.58	2610.51	2610.51	-4124.46	1610.41	5613.50	77.34	6.61	2.150
8.46	13	SLV	2	9	378.00	324.21	367.68	367.68	-1185.27	-1185.27	324.21	1663.29	-5179.88	282.66	7.25	4.384

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _ε <daN/cm²>
0.70	32	SLE R	1	9	70.00	-16913.00	314.83	63.98	0.00	12.57	22.23	297.34
0.70	26	SLE Q	1	9	70.00	-15378.80	28.30	-75.66	0.00	12.57	15.97	229.56
0.70	32	SLE R	1	9	70.00	-16913.00	314.83	63.98	0.00	12.57	22.23	297.34
0.70	26	SLE Q	1	9	70.00	-15378.80	28.30	-75.66	0.00	12.57	15.97	229.56
4.38	32	SLE R	1	9	438.00	-16085.00	645.66	3.31	0.00	12.57	26.25	331.77
4.38	26	SLE Q	1	9	438.00	-14550.80	-64.69	123.04	0.00	12.57	16.69	232.37
4.68	32	SLE R	2	9	0.00	-2910.57	1747.61	490.22	6.28	6.28	68.09	1279.81
4.68	26	SLE Q	2	9	0.00	-1385.33	75.13	-158.98	6.28	6.28	6.74	67.76
4.68	32	SLE R	2	9	0.00	-2910.57	1747.61	490.22	6.28	6.28	68.09	1279.81
4.68	26	SLE Q	2	9	0.00	-1385.33	75.13	-158.98	6.28	6.28	6.74	67.76
8.46	32	SLE R	2	9	378.00	-2060.07	-667.37	-388.40	6.28	6.28	32.69	503.92
8.46	26	SLE Q	2	9	378.00	-534.83	-19.66	119.23	6.28	6.28	4.13	56.32

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
4.68	36	SLE F	2	9	0.00	-1623.61	-65.79	375.96	44.00	192.00	0.50	20.00	168.84	3.14	126.99	183.44	0.05	0.02
4.68	36	SLE F	2	9	0.00	-1623.61	-65.79	375.96	44.00	192.00	0.50	20.00	168.84	3.14	126.99	183.44	0.05	0.02
8.46	26	SLE Q	2	9	378.00	-534.83	119.23	-19.66	44.00	192.00	0.50	20.00	169.40	3.14	127.86	56.32	0.02	0.00
8.46	23	SLE F	2	9	378.00	-595.64	14.39	-150.29	44.00	192.00	0.50	20.00	185.18	3.14	152.65	72.95	0.02	0.01

Stato limite ultimo - Verifiche a taglio

X0 [m]	X1 [m]	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} [m]	V _{sdu,y} [daN]	ctgθ _y	V _{Rsd,y} [daN]	V _{Rcd,y} [daN]	b _{w,z} [m]	V _{sdu,z} [daN]	ctgθ _z	V _{Rsd,z} [daN]	V _{Rcd,z} [daN]	Sic.
0.70	1.31	ø8/ 5	2	219	SLU	0.30	15.30	1.48	25772.70	25772.70	0.30	124.12	1.48	25772.70	25772.70	>100	
0.70	1.31	ø8/ 5	2	228	SLU	0.30	675.94	1.48	25756.20	25756.20	0.30	29.63	1.48	25756.20	25756.20	38.104	
0.70	1.31	ø8/ 5	2	23 (TG)	SLV	0.30	2357.67	1.41	24599.10	24599.10	0.30	3093.52	1.41	24599.10	24599.10	7.952	
0.70	1.31	ø8/ 5	2	215 (TG)	SLV	0.30	3214.55	1.42	24649.10	24649.10	0.30	2256.32	1.42	24649.10	24649.10	7.668	
1.31	3.77	ø8/20	2	219	SLU	0.30	15.30	2.50	10886.80	19133.00	0.30	124.12	2.50	10886.80	19133.00	87.714	
1.31	3.77	ø8/20	2	228	SLU	0.30	680.97	2.50	10886.80	19116.10	0.30	29.63	2.50	10886.80	19116.10	15.987	
1.31	3.77	ø8/20	2	23 (TG)	SLV	0.30	2357.67	2.50	10886.80	17985.50	0.30	3093.52	2.50	10886.80	17985.50	3.519	
1.31	3.77	ø8/20	2	215 (TG)	SLV	0.30	3208.73	2.50	10886.80	17996.00	0.30	2251.87	2.50	10886.80	17996.00	3.393	
1.31	3.77	ø8/20	2	215 (TG)	SLV	0.30	3214.55	2.50	10886.80	18034.20	0.30	2256.32	2.50	10886.80	18034.20	3.387	
3.77	4.38	ø8/15	2	219	SLU	0.30	15.30	2.50	14515.80	19041.60	0.30	124.12	2.50	14515.80	19041.60	>100	
3.77	4.38	ø8/15	2	228	SLU	0.30	952.35	2.50	14515.80	19024.80	0.30	29.63	2.50	14515.80	19024.80	15.242	
3.77	4.38	ø8/15	2	23 (TG)	SLV	0.30	2357.67	2.50	14515.80	17985.50	0.30	3093.52	2.50	14515.80	17985.50	4.692	
3.77	4.38	ø8/15	2	215 (TG)	SLV	0.30	3208.73	2.50	14515.80	17996.00	0.30	2251.87	2.50	14515.80	17996.00	4.524	
3.77	4.38	ø8/15	2	215 (TG)	SLV	0.30	3214.55	2.50	14515.80	18034.20	0.30	2256.32	2.50	14515.80	18034.20	4.516	
4.68	5.31	ø6/15	2	228	SLU	0.30	2643.69	2.50	8165.14	16683.20	0.30	357.10	2.50	8165.14	16683.20	3.089	
4.68	5.31	ø6/15	2	211 (TG)	SLV	0.30	2729.10	2.50	8165.14	16288.40	0.30	1879.47	2.50	8165.14	16288.40	2.992	
4.68	5.31	ø6/15	2	27 (TG)	SLV	0.30	3129.28	2.50	8165.14	16288.40	0.30	752.53	2.50	8165.14	16288.40	2.609	
4.68	5.31	ø6/15	2	25 (TG)	SLV	0.30	3136.07	2.50	8165.14	16335.70	0.30	947.66	2.50	8165.14	16335.70	2.604	
5.31	7.83	ø6/20	2	228	SLU	0.30	2080.49	2.50	6123.85	16659.70	0.30	357.10	2.50	6123.85	16659.70	2.943	
5.31	7.83	ø6/20	2	211 (TG)	SLV	0.30	2729.10	2.50	6123.85	16288.40	0.30	1879.47	2.50	6123.85	16288.40	2.244	
5.31	7.83	ø6/20	2	27 (TG)	SLV	0.30	3129.28	2.50	6123.85	16288.40	0.30	752.53	2.50	6123.85	16288.40	1.957	
5.31	7.83	ø6/20	2	25 (TG)	SLV	0.30	3136.07	2.50	6123.85	16335.70	0.30	947.66	2.50	6123.85	16335.70	1.953	
7.83	8.46	ø6/15	2	228	SLU	0.30	735.52	2.50	8165.14	16565.90	0.30	357.10	2.50	8165.14	16565.90	11.101	
7.83	8.46	ø6/15	2	211 (TG)	SLV	0.30	2729.10	2.50	8165.14	16288.40	0.30	1879.47	2.50	8165.14	16288.40	2.992	
7.83	8.46	ø6/15	2	27 (TG)	SLV	0.30	3129.28	2.50	8165.14	16288.40	0.30	752.53	2.50	8165.14	16288.40	2.609	
7.83	8.46	ø6/15	2	25 (TG)	SLV	0.30	3136.07	2.50	8165.14	16335.70	0.30	947.66	2.50	8165.14	16335.70	2.604	

Dettagli costruttivi per la duttilità

- CC=13 α_e=0.38656 ω_{nd}=0.42699 μΦ_d=13.5551 ν_d=0.10534 E_{sy,d}=0.0018995 b_c/b₀=1.35135 μΦ_c=24.6627
0.16506 >= 0.07495 [7.4.29]

Relazione di calcolo

- CC=13 $\alpha_e=0.38656$ $\omega_{nd}=0.42699$ $\mu\Phi_d=8.64393$ $v_d=0.10534$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.35135$ $\mu\Phi_c=24.6627$
 0.16506 >= 0.03512 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε_y	Sic.
0.70	40(e)	SLU I	1	9	70.00	-15378.80	-75.66	28.30	-47028.60	-2369.68	2369.69	135.00	21.02	3.058
0.70	40(e)	SLU I	1	9	70.00	-15378.80	-75.66	28.30	-47028.60	-2369.68	2369.69	135.00	21.02	3.058
4.38	40(e)	SLU I	1	9	438.00	-14550.80	123.04	-64.69	-47028.60	2342.00	-2341.99	315.00	21.43	3.232
4.68	40	SLU I	2	9	0.00	-1385.33	-158.98	75.13	-1385.33	-2366.04	1160.35	157.50	33.08	14.999
4.68	40	SLU I	2	9	0.00	-1385.33	-158.98	75.13	-1385.33	-2366.04	1160.35	157.50	33.08	14.999
8.46	40	SLU I	2	9	378.00	-534.83	119.23	-19.66	-534.83	2471.13	-426.56	351.56	49.22	20.748

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø8/ 5	2		240	SLU I	0.20	25.27	2.06	20336.90	20336.90	0.20	54.00	2.06	20336.90	20336.90	>100
1.31	3.77	ø8/20	2		240	SLU I	0.20	25.27	2.50	6181.97	17808.00	0.20	54.00	2.50	6181.97	17808.00	>100
3.77	4.38	ø8/15	2		240	SLU I	0.20	25.27	2.50	8242.62	17722.30	0.20	54.00	2.50	8242.62	17722.30	>100
4.68	5.31	ø6/15	2		240	SLU I	0.20	25.08	2.50	4547.93	15658.00	0.20	73.60	2.50	4547.93	15658.00	61.791
5.31	7.83	ø6/20	2		240	SLU I	0.20	25.08	2.50	3410.95	15636.00	0.20	73.60	2.50	3410.95	15636.00	46.343
7.83	8.46	ø6/15	2		240	SLU I	0.20	25.08	2.50	4547.93	15548.00	0.20	73.60	2.50	4547.93	15548.00	61.791

Pilastrata n. 76

Nodi: 186 286

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
1R		45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε_y	Sic.
0.70	13	SLV	1	1	70.00	-11783.50	-6779.79	-6779.79	5211.25	5211.25	-11783.50	-13552.50	10229.90	143.44	5.65	1.986
0.70	13	SLV	1	1	70.00	-11783.50	-6779.79	-6779.79	5211.25	5211.25	-11783.50	-13552.50	10229.90	143.44	5.65	1.986
4.48	13	SLV	1	1	448.00	-9869.85	7033.67	7033.67	-2367.25	-2367.25	-9869.85	15798.50	-5167.24	344.53	7.71	2.240

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cm²>	σ_f <daN/cm²>
0.70	32	SLE R	1	1	70.00	-13484.70	1256.46	-2613.68	10.30	10.30	35.55	406.83
0.70	26	SLE Q	1	1	70.00	-12966.30	-108.15	-1803.57	8.29	12.31	17.42	214.86
0.70	32	SLE R	1	1	70.00	-13484.70	1256.46	-2613.68	10.30	10.30	35.55	406.83
0.70	26	SLE Q	1	1	70.00	-12966.30	-108.15	-1803.57	8.29	12.31	17.42	214.86
4.48	32	SLE R	1	1	448.00	-11571.00	-666.98	5082.45	12.31	8.29	54.85	1114.70
4.48	26	SLE Q	1	1	448.00	-11052.60	56.82	4626.74	12.31	8.29	43.70	916.18

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cm²>	A _{c eff} <cm²>	σ_s <daN/cm²>	ε_{sm}	Wk <mm>
0.70	36	SLE F	1	1	70.00	-13014.50	-1965.56	167.72	44.00	171.01	0.50	18.86	195.38	3.14	178.90	114.38	0.03	0.01
0.70	36	SLE F	1	1	70.00	-13014.50	-1965.56	167.72	44.00	171.01	0.50	18.86	195.38	3.14	178.90	114.38	0.03	0.01
4.48	26	SLE Q	1	1	448.00	-11052.60	4626.74	56.82	44.00	171.01	0.50	18.86	183.67	8.29	420.77	916.18	0.27	0.08
4.48	25	SLE F	1	1	448.00	-11404.80	4769.58	60.31	44.00	171.01	0.50	18.86	183.60	8.29	420.48	943.97	0.27	0.09

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.33	ø6/ 5	2	230	SLU	0.45	421.20	2.50	39431.60	41749.10	0.45	2905.58	2.50	39431.60	41749.10	13.571	
0.70	1.33	ø6/ 5	2	228	SLU	0.45	766.94	2.50	39431.60	41552.50	0.45	2857.44	2.50	39431.60	41552.50	13.800	
0.70	1.33	ø6/ 5	2	211 (TG)	SLV	0.45	2541.29	2.50	39431.60	40641.90	0.45	9580.82	2.50	39431.60	40641.90	4.116	
0.70	1.33	ø6/ 5	2	25 (TG)	SLV	0.45	6706.69	2.50	39431.60	40687.40	0.45	7337.22	2.50	39431.60	40687.40	5.374	
1.33	3.85	ø6/15	2	230	SLU	0.45	421.20	2.50	13143.90	41692.50	0.45	2905.58	2.50	13143.90	41692.50	4.524	
1.33	3.85	ø6/15	2	228	SLU	0.45	766.94	2.50	13143.90	41495.90	0.45	2857.44	2.50	13143.90	41495.90	4.600	
1.33	3.85	ø6/15	2	211 (TG)	SLV	0.45	2541.29	2.50	13143.90	40641.90	0.45	9580.82	2.50	13143.90	40641.90	1.372	
1.33	3.85	ø6/15	2	25 (TG)	SLV	0.45	6706.69	2.50	13143.90	40687.40	0.45	7337.22	2.50	13143.90	40687.40	1.791	
3.85	4.48	ø6/10	2	230	SLU	0.45	421.20	2.50	19715.80	41466.10	0.45	2905.58	2.50	19715.80	41466.10	6.785	
3.85	4.48	ø6/10	2	228	SLU	0.45	766.94	2.50	19715.80	41269.40	0.45	2857.44	2.50	19715.80	41269.40	6.900	
3.85	4.48	ø6/10	2	211 (TG)	SLV	0.45	2541.29	2.50	19715.80	40641.90	0.45	9580.82	2.50	19715.80	40641.90	2.058	
3.85	4.48	ø6/10	2	25 (TG)	SLV	0.45	6706.69	2.50	19715.80	40687.40	0.45	7337.22	2.50	19715.80	40687.40	2.687	

Dettagli costruttivi per la duttilità

- CC=13 $\alpha_e=0.36817$ $\omega_{nd}=0.14257$ $\mu\Phi_d=11.3679$ $v_d=0.04333$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=29.4479$
 0.05249 >= -0.00123 [7.4.29]
 - CC=13 $\alpha_e=0.36817$ $\omega_{nd}=0.14257$ $\mu\Phi_d=11.3679$ $v_d=0.04333$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=29.4479$

0.05249 >= -0.00123 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/presoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	40 (e)	SLU I	1	1	70.00	-12966.30	-1803.57	-108.15	-12966.30	-11582.40	1921.59	171.56	47.71	6.416
0.70	40 (e)	SLU I	1	1	70.00	-12966.30	-1803.57	-108.15	-12966.30	-11582.40	1921.59	171.56	47.71	6.416
4.48	40 (e)	SLU I	1	1	448.00	-11052.60	4626.74	56.82	-11052.60	11874.60	515.46	2.81	56.04	2.565

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.33	ø6/ 5	2	2	40	SLU I	0.35	43.64	2.50	21001.10	50041.40	0.35	1701.14	2.50	21001.10	50041.40	12.345
1.33	3.85	ø6/15	2	2	40	SLU I	0.35	43.64	2.50	7000.38	49991.90	0.35	1701.14	2.50	7000.38	49991.90	4.115
3.85	4.48	ø6/10	2	2	40	SLU I	0.35	43.64	2.50	10500.60	49794.00	0.35	1701.14	2.50	10500.60	49794.00	6.173

Pilastrata n. 77

Nodi: 98 -26 -67

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
1	R	45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/presoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	13	SLV	1	1	70.00	-14895.40	-2011.99	-2011.99	11053.60	11053.60	-14895.40	-3124.99	17011.00	98.44	9.02	1.539
0.70	13	SLV	1	1	70.00	-14895.40	-2011.99	-2011.99	11053.60	11053.60	-14895.40	-3124.99	17011.00	98.44	9.02	1.539
4.38	13	SLV	1	1	438.00	-13032.40	675.54	675.54	-11228.50	-11228.50	-13032.40	1249.32	-16858.10	272.81	11.74	1.503
4.68	27	SLU	2	1	0.00	-3604.90	1051.32	1051.32	6436.93	6436.93	-3604.90	2372.57	15238.10	84.38	11.74	2.364
4.68	27	SLU	2	1	0.00	-3604.90	1051.32	1051.32	6436.93	6436.93	-3604.90	2372.57	15238.10	84.38	11.74	2.364
8.46	28 (e)	SLU	2	1	378.00	-1651.17	-2.03	-33.02	-3313.12	-3313.12	-1651.17	0.05	-14986.50	270.00	16.48	4.523

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
0.70	32	SLE R	1	1	70.00	-17809.30	2990.96	-417.92	8.29	12.31	30.86	367.05
0.70	26	SLE Q	1	1	70.00	-17277.80	1097.80	-191.55	0.00	20.61	14.39	190.75
0.70	32	SLE R	1	1	70.00	-17809.30	2990.96	-417.92	8.29	12.31	30.86	367.05
0.70	26	SLE Q	1	1	70.00	-17277.80	1097.80	-191.55	0.00	20.61	14.39	190.75
4.38	32	SLE R	1	1	438.00	-15946.30	-4217.17	1276.59	10.30	10.30	51.93	747.69
4.38	26	SLE Q	1	1	438.00	-15414.80	-2895.35	220.29	8.29	12.31	28.50	332.98
4.68	32	SLE R	2	1	0.00	-3047.12	4341.30	1480.82	12.31	8.29	58.30	1438.85
4.68	26	SLE Q	2	1	0.00	-2336.53	2990.59	-92.32	12.31	8.29	28.60	827.18
4.68	32	SLE R	2	1	0.00	-3047.12	4341.30	1480.82	12.31	8.29	58.30	1438.85
4.68	26	SLE Q	2	1	0.00	-2336.53	2990.59	-92.32	12.31	8.29	28.60	827.18
8.46	32	SLE R	2	1	378.00	-1133.49	-2267.29	-1.25	12.31	8.29	20.69	652.97
8.46	26	SLE Q	2	1	378.00	-422.90	-773.53	0.84	12.31	8.29	7.07	220.98

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
4.38	26	SLE Q	1	1	438.00	-15414.80	220.29	-2895.35	44.00	171.02	0.50	18.86	180.84	5.15	253.66	265.94	0.08	0.02
4.38	36	SLE F	1	1	438.00	-15454.40	456.84	-3207.13	44.00	171.02	0.50	18.86	174.10	5.15	235.26	371.70	0.11	0.03
4.68	26	SLE Q	2	1	0.00	-2336.53	-92.32	2990.59	44.00	171.02	0.50	18.86	192.19	8.29	458.23	827.18	0.24	0.08
4.68	23	SLE F	2	1	0.00	-2173.47	-216.74	3501.06	44.00	171.02	0.50	18.86	189.23	8.29	445.25	1012.73	0.29	0.09
4.68	26	SLE Q	2	1	0.00	-2336.53	-92.32	2990.59	44.00	171.02	0.50	18.86	192.19	8.29	458.23	827.18	0.24	0.08
4.68	23	SLE F	2	1	0.00	-2173.47	-216.74	3501.06	44.00	171.02	0.50	18.86	189.23	8.29	445.25	1012.73	0.29	0.09
8.46	26	SLE Q	2	1	378.00	-422.90	0.84	-773.53	44.00	171.02	0.50	18.86	223.05	8.29	594.00	220.98	0.06	0.02
8.46	23	SLE F	2	1	378.00	-259.85	1.18	-1049.33	44.00	171.02	0.50	18.86	199.03	8.29	488.36	315.42	0.09	0.03

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <cm>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <cm>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	28	SLU	0.45	2809.71	2.50	39431.60	42347.30	0.45	677.32	2.50	39431.60	42347.30	14.034
0.70	1.31	ø6/ 5	2	2	11 (TG)	SLV	0.45	7570.14	2.50	39431.60	41186.80	0.45	5015.79	2.50	39431.60	41186.80	5.209
0.70	1.31	ø6/ 5	2	2	5 (TG)	SLV	0.45	10577.20	2.50	39431.60	41446.80	0.45	1277.98	2.50	39431.60	41446.80	3.728
1.31	3.77	ø6/15	2	2	28	SLU	0.45	2809.71	2.50	13143.90	42292.20	0.45	677.32	2.50	13143.90	42292.20	4.678
1.31	3.77	ø6/15	2	2	11 (TG)	SLV	0.45	7570.14	2.50	13143.90	41186.80	0.45	5015.79	2.50	13143.90	41186.80	1.736
1.31	3.77	ø6/15	2	2	5 (TG)	SLV	0.45	10577.20	2.50	13143.90	41446.80	0.45	1277.98	2.50	13143.90	41446.80	1.243
3.77	4.38	ø6/10	2	2	28	SLU	0.45	2809.70	2.50	19715.80	42071.70	0.45	677.32	2.50	19715.80	42071.70	7.017
3.77	4.38	ø6/10	2	2	11 (TG)	SLV	0.45	7570.14	2.50	19715.80	41186.80	0.45	5015.79	2.50	19715.80	41186.80	2.604
3.77	4.38	ø6/10	2	2	5 (TG)	SLV	0.45	10577.20	2.50	19715.80	41446.80	0.45	1277.98	2.50	19715.80	41446.80	1.864
4.68	5.31	ø6/10	2	2	28	SLU	0.45	2509.57	2.50	19715.80	39581.80	0.45	1799.27	2.50	19715.80	39581.80	7.856
4.68	5.31	ø6/10	2	2	27	SLU	0.45	2513.23	2.50	19715.80	39508.80	0.45	1003.01	2.50	19715.80	39508.80	7.845
4.68	5.31	ø6/10	2	2	9 (TG)	SLV	0.45	8684.25	2.50	19715.80	39121.80	0.45	1199.18	2.50	19715.80	39121.80	2.270
4.68	5.31	ø6/10	2	2	1 (TG)	SLV	0.45	8761.34	2.50	19715.80	39031.70	0.45	0.03	2.50	19715.80	39031.70	2.250
5.31	7.83	ø6/15	2	2	28	SLU	0.45	2509.57	2.50	13143.90	39525.10	0.45	1396.58	2.50	13143.90	39525.10	5.238

Relazione di calcolo

5.31	7.83	ø6/15	2	2	27	SLU	0.45	2513.23	2.50	13143.90	39452.20	0.45	761.39	2.50	13143.90	39452.20	5.230
5.31	7.83	ø6/15	2	2	9(TG)	SLV	0.45	8684.25	2.50	13143.90	39121.80	0.45	1199.18	2.50	13143.90	39121.80	1.514
5.31	7.83	ø6/15	2	2	1(TG)	SLV	0.45	8761.34	2.50	13143.90	39031.70	0.45	0.03	2.50	13143.90	39031.70	1.500
7.83	8.46	ø6/10	2	2	28	SLU	0.45	2509.57	2.50	19715.80	39298.70	0.45	616.88	2.50	19715.80	39298.70	7.856
7.83	8.46	ø6/10	2	2	27	SLU	0.45	2513.23	2.50	19715.80	39225.80	0.45	446.69	2.50	19715.80	39225.80	7.845
7.83	8.46	ø6/10	2	2	9(TG)	SLV	0.45	8684.25	2.50	19715.80	39121.80	0.45	1199.18	2.50	19715.80	39121.80	2.270
7.83	8.46	ø6/10	2	2	1(TG)	SLV	0.45	8761.34	2.50	19715.80	39031.70	0.45	0.03	2.50	19715.80	39031.70	2.250

Dettagli costruttivi per la duttilità

- CC=5 $\alpha_e=0.36817$ $\omega_{wd}=0.14257$ $\mu\Phi_d=13.5551$ $v_d=0.058486$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=21.8165$ $0.05249 \geq 0.01936$ [7.4.29]
- CC=5 $\alpha_e=0.36817$ $\omega_{wd}=0.14257$ $\mu\Phi_d=8.64393$ $v_d=0.058486$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=21.8165$ $0.05249 \geq -0.00034$ [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	40 (e)	SLU I	1	1	70.00	-17277.80	-191.55	1097.80	-143684.00	-4144.28	10988.30	111.09	36.47	8.316
0.70	40 (e)	SLU I	1	1	70.00	-17277.80	-191.55	1097.80	-143684.00	-4144.28	10988.30	111.09	36.47	8.316
4.38	40 (e)	SLU I	1	1	438.00	-15414.80	220.29	-2895.35	-15414.80	1459.24	-12030.50	275.62	49.81	4.161
4.68	40	SLU I	2	1	0.00	-2336.53	-92.32	2990.59	-2336.53	-326.30	10640.00	91.41	67.92	3.557
4.68	40	SLU I	2	1	0.00	-2336.53	-92.32	2990.59	-2336.53	-326.30	10640.00	91.41	67.92	3.557
8.46	40 (e)	SLU I	2	1	378.00	-422.90	0.84	-773.53	-422.90	-13.99	-10353.80	270.00	75.74	13.388

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	V _{sdu,y} <daN>	ctgθ _{,y}	V _{Rsd,y} <daN>	V _{Rcd,y} <daN>	b _{w,z} <m>	V _{sdu,z} <daN>	ctgθ _{,z}	V _{Rsd,z} <daN>	V _{Rcd,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	40	SLU I	0.35	1085.10	2.50	21001.10	50710.50	0.35	111.91	2.50	21001.10	50710.50	19.354
1.31	3.77	ø6/15	2	2	40	SLU I	0.35	1085.10	2.50	7000.38	50662.30	0.35	111.91	2.50	7000.38	50662.30	6.451
3.77	4.38	ø6/10	2	2	40	SLU I	0.35	1085.10	2.50	10500.60	50469.60	0.35	111.91	2.50	10500.60	50469.60	9.677
4.68	5.31	ø6/10	2	2	40	SLU I	0.35	995.80	2.50	10500.60	48392.00	0.35	24.64	2.50	10500.60	48392.00	10.545
5.31	7.83	ø6/15	2	2	40	SLU I	0.35	995.80	2.50	7000.38	48342.50	0.35	24.64	2.50	7000.38	48342.50	7.030
7.83	8.46	ø6/10	2	2	40	SLU I	0.35	995.80	2.50	10500.60	48144.50	0.35	24.64	2.50	10500.60	48144.50	10.545

Pilastrata n. 78

Nodi: -85 39 -79 -2426

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
15R		30.00	30.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04
9R		30.00	30.00	3.50	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	9	SLV	1	15	70.00	-12026.60	-746.21	-746.21	722.36	722.36	-12026.60	-4620.75	4361.23	136.41	3.93	6.118
0.70	9	SLV	1	15	70.00	-12026.60	-746.21	-746.21	722.36	722.36	-12026.60	-4620.75	4361.23	136.41	3.93	6.118
4.38	28(e)	SLU	1	15	438.00	-17768.50	1409.68	1409.68	-193.03	415.78	-17768.50	6712.38	2104.03	19.69	4.23	4.786
4.68	28	SLU	2	15	0.00	-2245.90	-45.91	-45.91	2115.22	2115.22	-2245.90	-79.29	5491.64	90.70	9.99	2.596
4.68	28	SLU	2	15	0.00	-2245.90	-45.91	-45.91	2115.22	2115.22	-2245.90	-79.29	5491.64	90.70	9.99	2.596
8.46	28	SLU	2	15	378.00	-1140.25	783.56	783.56	-882.26	-882.26	-1140.25	3899.86	-4413.16	312.19	4.64	4.991
8.46	28	SLU	3	9	0.00	-1140.25	783.56	783.56	-882.26	-882.26	-1140.25	3899.86	-4413.16	312.19	4.64	4.991
8.56	28	SLU	3	9	9.86	-1111.42	878.75	878.75	-934.00	-934.00	-1111.42	4026.92	-4283.16	313.59	4.64	4.584

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
0.70	34	SLE R	1	15	70.00	-14304.30	211.71	-131.12	0.00	12.57	19.20	255.29
0.70	21	SLE R	1	15	70.00	-13296.20	66.41	-234.95	0.00	12.57	17.54	234.36
0.70	26	SLE Q	1	15	70.00	-12669.00	70.85	-240.76	0.00	12.57	17.15	227.46
0.70	34	SLE R	1	15	70.00	-14304.30	211.71	-131.12	0.00	12.57	19.20	255.29
0.70	21	SLE R	1	15	70.00	-13296.20	66.41	-234.95	0.00	12.57	17.54	234.36
0.70	26	SLE Q	1	15	70.00	-12669.00	70.85	-240.76	0.00	12.57	17.15	227.46
4.38	32	SLE R	1	15	438.00	-12841.60	-144.38	980.88	3.14	9.42	33.27	379.07
4.38	26	SLE Q	1	15	438.00	-11841.00	-141.56	550.34	0.00	12.57	23.12	280.70
4.68	31	SLE R	2	15	0.00	-1466.50	1140.24	-470.14	6.28	6.28	49.88	936.86
4.68	32	SLE R	2	15	0.00	-1621.51	1429.12	-63.87	6.28	6.28	43.20	972.60
4.68	26	SLE Q	2	15	0.00	-1098.91	224.42	-439.84	6.28	6.28	20.59	337.75
4.68	31	SLE R	2	15	0.00	-1466.50	1140.24	-470.14	6.28	6.28	49.88	936.86
4.68	32	SLE R	2	15	0.00	-1621.51	1429.12	-63.87	6.28	6.28	43.20	972.60
4.68	26	SLE Q	2	15	0.00	-1098.91	224.42	-439.84	6.28	6.28	20.59	337.75
8.46	32	SLE R	2	15	378.00	-771.01	-597.04	530.34	9.42	3.14	36.03	643.12
8.46	26	SLE Q	2	15	378.00	-248.41	-126.72	113.59	9.42	3.14	7.64	129.72
8.46	32	SLE R	3	9	0.00	-771.01	-597.04	530.34	9.42	3.14	36.03	643.12
8.46	26	SLE Q	3	9	0.00	-248.41	-126.72	113.59	9.42	3.14	7.64	129.72
8.56	32	SLE R	3	9	9.86	-748.83	-632.26	594.88	9.42	3.14	39.29	707.46

Relazione di calcolo

8.56	26	SLE Q	3	9	9.86	-226.23	-135.88	128.02	9.42	3.14	8.42	146.41
------	----	-------	---	---	------	---------	---------	--------	------	------	------	--------

Stato limite d'esercizio - Verifiche a fessurazione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	c	s	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	Wk
<cm>					<cm>	<daN>	<daNm>	<daNm>	<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cmq>		<mm>
4.68	26	SLE Q	2	15	0.00	-1098.91	-439.84	224.42	44.00	192.00	0.50	20.00	142.42	3.14	85.48	337.75	0.10	0.02
4.68	23	SLE F	2	15	0.00	-1096.34	-626.94	354.78	44.00	192.00	0.50	20.00	142.88	3.14	86.20	537.31	0.16	0.04
4.68	26	SLE Q	2	15	0.00	-1098.91	-439.84	224.42	44.00	192.00	0.50	20.00	142.42	3.14	85.48	337.75	0.10	0.02
4.68	23	SLE F	2	15	0.00	-1096.34	-626.94	354.78	44.00	192.00	0.50	20.00	142.88	3.14	86.20	537.31	0.16	0.04
8.46	26	SLE Q	2	15	378.00	-248.41	113.59	-126.72	44.00	192.00	0.50	20.00	136.45	3.14	76.11	129.72	0.04	0.01
8.46	23	SLE F	2	15	378.00	-245.84	215.69	-237.04	44.00	192.00	0.50	20.00	138.61	3.14	79.49	263.80	0.08	0.02
8.46	26	SLE Q	3	9	0.00	-248.41	113.59	-126.72	44.00	192.00	0.50	20.00	136.45	3.14	76.11	129.72	0.04	0.01
8.46	23	SLE F	3	9	0.00	-245.84	215.69	-237.04	44.00	192.00	0.50	20.00	138.61	3.14	79.49	263.80	0.08	0.02
8.56	26	SLE Q	3	9	9.86	-226.23	128.02	-135.88	44.00	192.00	0.50	20.00	137.06	3.14	77.07	146.41	0.04	0.01
8.56	23	SLE F	3	9	9.86	-223.66	237.67	-252.47	44.00	192.00	0.50	20.00	138.87	3.14	79.90	289.26	0.08	0.02

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _y	Vsdu _y	ctgθ _y	VRsd _y	VRcd _y	bw _z	Vsdu _z	ctgθ _z	VRsd _z	VRcd _z	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
0.70	1.31	ø6/ 5	2	228	SLU	0.30	430.48	2.12	20766.90	20766.90	0.30	339.50	2.12	20766.90	20766.90	48.241	
0.70	1.31	ø6/ 5	2	23 (TG)	SLV	0.30	2114.71	2.06	20181.90	20181.90	0.30	3097.67	2.06	20181.90	20181.90	6.515	
0.70	1.31	ø6/ 5	2	213 (TG)	SLV	0.30	3156.59	2.05	20090.90	20090.90	0.30	2153.27	2.05	20090.90	20090.90	6.365	
1.31	3.77	ø6/20	2	228	SLU	0.30	343.45	2.50	6123.85	18533.40	0.30	871.04	2.50	6123.85	18533.40	7.030	
1.31	3.77	ø6/20	2	23 (TG)	SLV	0.30	2114.71	2.50	6123.85	17713.10	0.30	3097.67	2.50	6123.85	17713.10	1.977	
1.31	3.77	ø6/20	2	213 (TG)	SLV	0.30	3156.59	2.50	6123.85	17584.10	0.30	2153.27	2.50	6123.85	17584.10	1.940	
3.77	4.38	ø6/15	2	228	SLU	0.30	91.71	2.50	8165.14	18442.10	0.30	1113.15	2.50	8165.14	18442.10	7.335	
3.77	4.38	ø6/15	2	23 (TG)	SLV	0.30	2114.71	2.50	8165.14	17713.10	0.30	3097.67	2.50	8165.14	17713.10	2.636	
3.77	4.38	ø6/15	2	213 (TG)	SLV	0.30	3156.59	2.50	8165.14	17584.10	0.30	2153.27	2.50	8165.14	17584.10	2.587	
4.68	5.33	ø6/15	2	228	SLU	0.30	1061.17	2.50	8165.14	16444.20	0.30	526.62	2.50	8165.14	16444.20	7.694	
4.68	5.33	ø6/15	2	211 (TG)	SLV	0.30	1579.20	2.50	8165.14	16184.80	0.30	2738.90	2.50	8165.14	16184.80	2.981	
4.68	5.33	ø6/15	2	213 (TG)	SLV	0.30	2300.73	2.50	8165.14	16184.80	0.30	2519.63	2.50	8165.14	16184.80	3.241	
5.33	7.91	ø6/20	2	228	SLU	0.30	969.45	2.50	6123.85	16420.10	0.30	749.24	2.50	6123.85	16420.10	6.317	
5.33	7.91	ø6/20	2	211 (TG)	SLV	0.30	1579.20	2.50	6123.85	16184.80	0.30	2738.90	2.50	6123.85	16184.80	2.236	
5.33	7.91	ø6/20	2	213 (TG)	SLV	0.30	2300.73	2.50	6123.85	16184.80	0.30	2519.63	2.50	6123.85	16184.80	2.430	
7.91	8.56	ø6/15	2	228	SLU	0.30	602.53	2.50	8165.14	16323.90	0.30	965.53	2.50	8165.14	16323.90	8.457	
7.91	8.56	ø6/15	2	211 (TG)	SLV	0.30	1579.20	2.50	8165.14	16184.80	0.30	2738.90	2.50	8165.14	16184.80	2.981	
7.91	8.56	ø6/15	2	213 (TG)	SLV	0.30	2300.73	2.50	8165.14	16184.80	0.30	2519.63	2.50	8165.14	16184.80	3.241	

Dettagli costruttivi per la duttilità

- CC=9 α_e=0.37814 ω_{wd}=0.23804 μΦ_d=13.5551 v_d=0.089531 E_{sy,d}=0.0018995 b_c/b₀=1.33929 μΦ_c=18.2948
0.09001 >= 0.05762 [7.4.29]
- CC=9 α_e=0.37814 ω_{wd}=0.23804 μΦ_d=8.64393 v_d=0.089531 E_{sy,d}=0.0018995 b_c/b₀=1.33929 μΦ_c=18.2948
0.09001 >= 0.02406 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	Nu	MRdy	MRdz	α	ε _y	Sic.
<cm>					<cm>	<daN>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
0.70	40(e)	SLU I	1	15	70.00	-12669.00	-240.76	70.85	-72257.50	-4752.63	4752.66	135.00	22.20	5.703
0.70	40(e)	SLU I	1	15	70.00	-12669.00	-240.76	70.85	-72257.50	-4752.63	4752.66	135.00	22.20	5.703
4.38	40(e)	SLU I	1	15	438.00	-11841.00	550.34	-141.56	-72257.50	5779.45	-3013.69	337.50	27.79	6.102
4.68	40	SLU I	2	15	0.00	-1098.91	-439.84	224.42	-1098.91	-5460.21	2878.03	158.91	31.44	12.502
4.68	40	SLU I	2	15	0.00	-1098.91	-439.84	224.42	-1098.91	-5460.21	2878.03	158.91	31.44	12.502
8.46	40	SLU I	2	15	378.00	-248.41	113.59	-126.72	-248.41	4043.51	-4394.37	309.38	28.79	35.083
8.46	40	SLU I	3	9	0.00	-248.41	113.59	-126.72	-248.41	1641.62	-1797.70	309.38	32.11	14.302
8.56	40	SLU I	3	9	9.86	-226.23	128.02	-135.88	-226.23	1640.61	-1796.38	309.38	32.13	13.028

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _y	Vsdu _y	ctgθ _y	VRsd _y	VRcd _y	bw _z	Vsdu _z	ctgθ _z	VRsd _z	VRcd _z	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
0.70	1.31	ø6/ 5	2	240	SLU I	0.25	57.72	2.36	26536.60	26536.60	0.25	214.97	2.36	26536.60	26536.60	>100	
1.31	3.77	ø6/20	2	240	SLU I	0.25	57.72	2.50	7042.43	25414.30	0.25	214.97	2.50	7042.43	25414.30	32.760	
3.77	4.38	ø6/15	2	240	SLU I	0.25	57.72	2.50	9389.91	25329.00	0.25	214.97	2.50	9389.91	25329.00	43.680	
4.68	5.33	ø6/15	2	240	SLU I	0.25	92.90	2.50	9389.91	23647.60	0.25	146.41	2.50	9389.91	23647.60	64.135	
5.33	7.91	ø6/20	2	240	SLU I	0.25	92.90	2.50	7042.43	23625.10	0.25	146.41	2.50	7042.43	23625.10	48.101	
7.91	8.56	ø6/15	2	240	SLU I	0.25	92.90	2.50	9389.91	23535.20	0.25	146.41	2.50	9389.91	23535.20	64.132	

Pilastrata n. 79

Nodi: 96 29 85

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	Cf	Cls	Fck	Fctk	Fcd	Fcd (Inc)	Fctd	Tp	Fyk	Fyd
		<cm>	<cm>	<cm>		<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>		<daN/cmq>	<daN/cmq>
15	R	30.00	30.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	My ver.	Mz	Mz ver.	Nu	MRdy	MRdz	α	ε _y	Sic.
----	----	-----	----	------	---	---	----	---------	----	---------	----	------	------	---	----------------	------

<m>					<cm>	<daN>	<daNm>	<daNm>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
0.705	SLV	1	15	70.00	-6944.63	-762.47	-762.47	-831.01	-831.01	-6944.63	-4080.04	-4595.12	227.81	4.25	5.443	
0.705	SLV	1	15	70.00	-6944.63	-762.47	-762.47	-831.01	-831.01	-6944.63	-4080.04	-4595.12	227.81	4.25	5.443	
4.3828	SLU	1	15	438.00	-9706.68	381.96	381.96	1496.19	1496.19	-9706.68	1547.61	6144.75	77.34	5.87	4.101	
4.6828	SLU	2	15	0.00	-2666.31	738.93	738.93	1102.23	1102.23	-2666.31	3421.55	4989.89	53.44	4.57	4.559	
4.6828	SLU	2	15	0.00	-2666.31	738.93	738.93	1102.23	1102.23	-2666.31	3421.55	4989.89	53.44	4.57	4.559	
8.461	SLV	2	15	378.00	-411.69	-125.78	-125.78	128.00	128.00	-411.69	-4133.21	4133.27	135.00	4.68	32.572	

Stato limite d'esercizio - Verifiche tensionali

Xg	CC	TCC	El	Sez.	X	N	Mz	My	AfT	AfC	σ_c	σ_f
<m>					<cm>	<daN>	<daNm>	<daNm>	<cmq>	<cmq>	<daN/cmq>	<daN/cmq>
0.7022	SLE R	1	15	70.00	-8104.08	-199.26	-91.02	0.00	12.57	12.57	12.58	160.93
0.7020	SLE R	1	15	70.00	-7700.08	-185.15	-73.63	0.00	12.57	11.65	150.02	
0.7026	SLE Q	1	15	70.00	-7446.37	-181.01	-84.62	0.00	12.57	11.54	147.68	
0.7022	SLE R	1	15	70.00	-8104.08	-199.26	-91.02	0.00	12.57	12.58	160.93	
0.7020	SLE R	1	15	70.00	-7700.08	-185.15	-73.63	0.00	12.57	11.65	150.02	
0.7026	SLE Q	1	15	70.00	-7446.37	-181.01	-84.62	0.00	12.57	11.54	147.68	
4.3832	SLE R	1	15	438.00	-7034.55	1035.96	264.73	6.28	6.28	38.15	366.83	
4.3826	SLE Q	1	15	438.00	-6618.37	500.33	146.08	3.14	9.42	18.64	209.35	
4.6832	SLE R	2	15	0.00	-1911.71	709.88	495.52	9.42	3.14	37.73	601.31	
4.6826	SLE Q	2	15	0.00	-1229.01	-310.63	29.42	6.28	6.28	10.05	150.83	
4.6832	SLE R	2	15	0.00	-1911.71	709.88	495.52	9.42	3.14	37.73	601.31	
4.6826	SLE Q	2	15	0.00	-1229.01	-310.63	29.42	6.28	6.28	10.05	150.83	
8.4631	SLE R	2	15	378.00	-876.94	-97.29	65.07	6.28	6.28	4.68	46.55	
8.4620	SLE R	2	15	378.00	-590.51	-82.46	66.61	6.28	6.28	4.43	46.70	
8.4626	SLE Q	2	15	378.00	-378.51	30.48	-35.26	3.14	9.42	1.87	18.97	

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez .	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
4.6826	SLE	Q	2	15	0.00	-1229.01	29.42	-310.63	44.00	192.00	0.50	20.00	185.40	3.14	153.00	150.83	0.04	0.01
4.6825	SLE	F	2	15	0.00	-1230.79	28.43	-318.62	44.00	192.00	0.50	20.00	186.99	3.14	155.49	156.25	0.05	0.01
4.6826	SLE	Q	2	15	0.00	-1229.01	29.42	-310.63	44.00	192.00	0.50	20.00	185.40	3.14	153.00	150.83	0.04	0.01
4.6825	SLE	F	2	15	0.00	-1230.79	28.43	-318.62	44.00	192.00	0.50	20.00	186.99	3.14	155.49	156.25	0.05	0.01

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _y <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	bw _z <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.70	1.31	ø6/10	2	28		SLU	0.30	351.95	2.50	12247.70	17530.40	0.30	208.98	2.50	12247.70	17530.40	34.799
0.70	1.31	ø6/10	2	21 (TG)		SLV	0.30	1838.15	2.50	12247.70	16943.20	0.30	3100.18	2.50	12247.70	16943.20	3.951
0.70	1.31	ø6/10	2	27 (TG)		SLV	0.30	3102.35	2.50	12247.70	16965.30	0.30	2000.90	2.50	12247.70	16965.30	3.948
0.70	1.31	ø6/10	2	27 (TG)		SLV	0.30	3105.51	2.50	12247.70	17050.70	0.30	2064.80	2.50	12247.70	17050.70	3.944
1.31	3.77	ø6/20	2	28		SLU	0.30	868.47	2.50	6123.85	17507.60	0.30	253.87	2.50	6123.85	17507.60	7.051
1.31	3.77	ø6/20	2	21 (TG)		SLV	0.30	1838.15	2.50	6123.85	16943.20	0.30	3100.18	2.50	6123.85	16943.20	1.975
1.31	3.77	ø6/20	2	27 (TG)		SLV	0.30	3102.35	2.50	6123.85	16965.30	0.30	2000.90	2.50	6123.85	16965.30	1.974
1.31	3.77	ø6/20	2	27 (TG)		SLV	0.30	3105.51	2.50	6123.85	17050.70	0.30	2064.80	2.50	6123.85	17050.70	1.972
3.77	4.38	ø6/15	2	28		SLU	0.30	1112.56	2.50	8165.14	17416.30	0.30	346.44	2.50	8165.14	17416.30	7.339
3.77	4.38	ø6/15	2	21 (TG)		SLV	0.30	1838.15	2.50	8165.14	16943.20	0.30	3100.18	2.50	8165.14	16943.20	2.634
3.77	4.38	ø6/15	2	27 (TG)		SLV	0.30	3102.35	2.50	8165.14	16965.30	0.30	2000.90	2.50	8165.14	16965.30	2.632
3.77	4.38	ø6/15	2	27 (TG)		SLV	0.30	3105.51	2.50	8165.14	17050.70	0.30	2064.80	2.50	8165.14	17050.70	2.629
4.68	5.31	ø6/15	2	28		SLU	0.30	1067.99	2.50	8165.14	16497.70	0.30	471.45	2.50	8165.14	16497.70	7.645
4.68	5.31	ø6/15	2	21 (TG)		SLV	0.30	2752.87	2.50	8165.14	16203.10	0.30	2052.00	2.50	8165.14	16203.10	2.966
4.68	5.31	ø6/15	2	27 (TG)		SLV	0.30	3104.40	2.50	8165.14	16210.80	0.30	675.82	2.50	8165.14	16210.80	2.630
5.31	7.83	ø6/20	2	28		SLU	0.30	817.27	2.50	6123.85	16474.20	0.30	376.37	2.50	6123.85	16474.20	7.493
5.31	7.83	ø6/20	2	21 (TG)		SLV	0.30	2752.87	2.50	6123.85	16203.10	0.30	2052.00	2.50	6123.85	16203.10	2.225
5.31	7.83	ø6/20	2	27 (TG)		SLV	0.30	3104.40	2.50	6123.85	16210.80	0.30	675.82	2.50	6123.85	16210.80	1.973
7.83	8.46	ø6/15	2	27		SLU	0.30	258.87	2.50	8165.14	16345.20	0.30	146.69	2.50	8165.14	16345.20	31.541
7.83	8.46	ø6/15	2	28		SLU	0.30	436.32	2.50	8165.14	16380.40	0.30	99.06	2.50	8165.14	16380.40	18.714
7.83	8.46	ø6/15	2	21 (TG)		SLV	0.30	2752.87	2.50	8165.14	16203.10	0.30	2052.00	2.50	8165.14	16203.10	2.966
7.83	8.46	ø6/15	2	27 (TG)		SLV	0.30	3104.40	2.50	8165.14	16210.80	0.30	675.82	2.50	8165.14	16210.80	2.630

Dettagli costruttivi per la duttilità

- CC=5 $\alpha_e=0.2891$ $\omega_{wd}=0.11902$ $\mu\Phi_d=13.5551$ $v_d=0.053992$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.33929$ $\mu\Phi_c=16.8436$
0.03441 >= 0.02086 [7.4.29]

- CC=5 $\alpha_e=0.2891$ $\omega_{wd}=0.11902$ $\mu\Phi_d=8.64393$ $v_d=0.053992$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.33929$ $\mu\Phi_c=16.8436$
0.03441 >= 0.00062 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	Nu	MRdy	MRdz	α	ϵ_y	Sic.
<m>					<cm>	<daN>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
0.7040 (e)	SLU	I	1	15	70.00	-7446.37	-84.62	-181.01	-72257.50	-4436.56	-4664.88	227.81	24.67	9.704
0.7040 (e)	SLU	I	1	15	70.00	-7446.37	-84.62	-181.01	-72257.50	-4436.56	-4664.88	227.81	24.67	9.704
4.3840 (e)	SLU	I	1	15	438.00	-6618.37	146.08	500.33	-72257.50	1945.70	6240.45	74.53	33.75	10.918
4.6840	SLU	I	2	15	0.00	-1229.01	29.42	-310.63	-1229.01	579.97	-5949.04	272.11	61.43	19.141
4.6840	SLU	I	2	15	0.00	-1229.01	29.42	-310.63	-1229.01	579.97	-5949.04	272.11	61.43	19.141
8.4640	SLU	I	2	15	378.00	-378.51	-35.26	30.48	-378.51	-4559.30	3839.72	146.25	29.45	>100

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	b _{w,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.70	1.31	ø6/10	2	240	SLU	I	0.25	185.15	2.50	14084.90	24628.60	0.25	62.69	2.50	14084.90	24628.60	76.073
1.31	3.77	ø6/20	2	240	SLU	I	0.25	185.15	2.50	7042.43	24607.20	0.25	62.69	2.50	7042.43	24607.20	38.037
3.77	4.38	ø6/15	2	240	SLU	I	0.25	185.15	2.50	9389.91	24521.90	0.25	62.69	2.50	9389.91	24521.90	50.716
4.68	5.31	ø6/15	2	240	SLU	I	0.25	90.24	2.50	9389.91	23667.70	0.25	17.11	2.50	9389.91	23667.70	>100
5.31	7.83	ø6/20	2	240	SLU	I	0.25	90.24	2.50	7042.43	23645.80	0.25	17.11	2.50	7042.43	23645.80	78.041
7.83	8.46	ø6/15	2	240	SLU	I	0.25	90.24	2.50	9389.91	23558.20	0.25	17.11	2.50	9389.91	23558.20	>100

Pilastrata n. 92

Nodi: -16 -27 -72

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Typo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
1	R	45.00	45.00	5.10	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.70	5	SLV	1	1	70.00	-24364.30	3507.21	3507.21	-11200.80	-11200.80	-24364.30	5664.95	-17483.50	286.88	6.38	1.566
0.70	5	SLV	1	1	70.00	-24364.30	3507.21	3507.21	-11200.80	-11200.80	-24364.30	5664.95	-17483.50	286.88	6.38	1.566
4.38	5	SLV	1	1	438.00	-22501.30	-4792.15	-4792.15	11520.30	11520.30	-22501.30	-6919.19	16687.20	111.09	6.03	1.448
4.68	27	SLU	2	1	0.00	-5433.12	8939.84	8939.84	-6752.91	-6752.91	-5433.12	13074.50	-9533.95	326.25	6.21	1.444
4.68	27	SLU	2	1	0.00	-5433.12	8939.84	8939.84	-6752.91	-6752.91	-5433.12	13074.50	-9533.95	326.25	6.21	1.444
8.46	27	SLU	2	1	378.00	-2945.41	-2998.79	-2998.79	2384.60	2384.60	-2945.41	-12484.20	9989.76	143.44	6.24	4.173

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
0.70	22	SLE	R	1	1	70.00	-29243.20	-1894.85	675.15	0.00	20.61	26.48
0.70	26	SLE	Q	1	1	70.00	-26707.80	-1755.63	812.92	0.00	20.61	25.43
0.70	22	SLE	R	1	1	70.00	-29243.20	-1894.85	675.15	0.00	20.61	26.48
0.70	26	SLE	Q	1	1	70.00	-26707.80	-1755.63	812.92	0.00	20.61	25.43
4.38	22	SLE	R	1	1	438.00	-27380.20	4760.42	-2194.18	10.30	10.30	62.89
4.38	26	SLE	Q	1	1	438.00	-24844.80	4511.92	-2474.77	10.30	10.30	63.77
4.68	31	SLE	R	2	1	0.00	-3948.41	-4798.38	6121.98	13.45	7.16	114.59
4.68	26	SLE	Q	2	1	0.00	-2802.44	-3831.42	2212.37	15.46	5.15	62.34
4.68	31	SLE	R	2	1	0.00	-3948.41	-4798.38	6121.98	13.45	7.16	114.59
4.68	26	SLE	Q	2	1	0.00	-2802.44	-3831.42	2212.37	15.46	5.15	62.34
8.46	31	SLE	R	2	1	378.00	-2034.79	1636.36	-2036.08	13.45	7.16	38.33
8.46	26	SLE	Q	2	1	378.00	-888.81	621.42	-486.32	13.45	7.16	11.45

Stato limite d'esercizio - Verifiche a fessurazione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	c	s	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	Wk	
<m>					<cm>	<daN>	<daNm>	<daNm>	<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cmq>		<mm>	
4.38	26	SLE	Q	1	1	438.00	-24844.80	-2474.77	4511.92	44.00	171.01	0.50	18.86	156.92	3.14	114.83	674.75	0.20	0.05
4.38	25	SLE	F	1	1	438.00	-25460.70	-2543.47	4648.62	44.00	171.01	0.50	18.86	157.32	3.14	115.49	698.90	0.20	0.05
4.68	26	SLE	Q	2	1	0.00	-2802.44	2212.37	-3831.42	44.00	171.01	0.50	18.86	216.10	3.14	213.42	1439.64	0.42	0.15
4.68	23	SLE	F	2	1	0.00	-2765.65	3554.40	-4288.51	44.00	171.01	0.50	18.86	197.66	3.14	182.69	1880.56	0.55	0.18
4.68	26	SLE	Q	2	1	0.00	-2802.44	2212.37	-3831.42	44.00	171.01	0.50	18.86	216.10	3.14	213.42	1439.64	0.42	0.15
4.68	23	SLE	F	2	1	0.00	-2765.65	3554.40	-4288.51	44.00	171.01	0.50	18.86	197.66	3.14	182.69	1880.56	0.55	0.18
8.46	26	SLE	Q	2	1	378.00	-888.81	-486.32	621.42	44.00	171.01	0.50	18.86	194.41	3.14	177.29	238.36	0.07	0.02
8.46	23	SLE	F	2	1	378.00	-852.03	-995.62	940.73	44.00	171.02	0.50	18.86	191.49	3.14	172.42	453.67	0.13	0.04

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	b _{w,y}	Vsdu _{,y}	ctgθ _{,y}	VRsd _{,y}	VRcd _{,y}	b _{w,z}	Vsdu _{,z}	ctgθ _{,z}	VRsd _{,z}	VRcd _{,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
0.70	1.31	ø6/ 5	2	230	SLU	0.45	1807.98	2.50	39431.60	44538.60	0.45	1160.14	2.50	39431.60	44538.60	21.810	
0.70	1.31	ø6/ 5	2	219	SLU	0.45	2520.44	2.50	39431.60	44534.30	0.45	1069.30	2.50	39431.60	44534.30	15.645	
0.70	1.31	ø6/ 5	2	215 (TG)	SLV	0.45	6957.76	2.50	39431.60	42122.90	0.45	7237.14	2.50	39431.60	42122.90	5.449	
0.70	1.31	ø6/ 5	2	215 (TG)	SLV	0.45	7330.63	2.50	39431.60	42593.90	0.45	7262.40	2.50	39431.60	42593.90	5.379	
0.70	1.31	ø6/ 5	2	213 (TG)	SLV	0.45	10724.70	2.50	39431.60	42729.20	0.45	2867.14	2.50	39431.60	42729.20	3.677	
1.31	3.77	ø6/15	2	230	SLU	0.45	1807.98	2.50	13143.90	44483.50	0.45	1160.14	2.50	13143.90	44483.50	7.270	
1.31	3.77	ø6/15	2	219	SLU	0.45	2520.44	2.50	13143.90	44479.10	0.45	1069.30	2.50	13143.90	44479.10	5.215	
1.31	3.77	ø6/15	2	215 (TG)	SLV	0.45	6957.76	2.50	13143.90	42122.90	0.45	7237.14	2.50	13143.90	42122.90	1.816	
1.31	3.77	ø6/15	2	215 (TG)	SLV	0.45	7330.63	2.50	13143.90	42593.90	0.45	7262.40	2.50	13143.90	42593.90	1.793	
1.31	3.77	ø6/15	2	213 (TG)	SLV	0.45	10724.70	2.50	13143.90	42729.20	0.45	2867.14	2.50	13143.90	42729.20	1.226	
3.77	4.38	ø6/10	2	230	SLU	0.45	1807.98	2.50	19715.80	44263.00	0.45	1160.14	2.50	19715.80	44263.00	10.905	
3.77	4.38	ø6/10	2	219	SLU	0.45	2520.44	2.50	19715.80	44258.70	0.45	1069.30	2.50	19715.80	44258.70	7.822	
3.77	4.38	ø6/10	2	215 (TG)	SLV	0.45	6957.76	2.50	19715.80	42122.90	0.45	7237.14	2.50	19715.80	42122.90	2.724	
3.77	4.38	ø6/10	2	215 (TG)	SLV	0.45	7330.63	2.50	19715.80	42593.90	0.45	7262.40	2.50	19715.80	42593.90	2.690	
3.77	4.38	ø6/10	2	213 (TG)	SLV	0.45	10724.70	2.50	19715.80	42729.20	0.45	2867.14	2.50	19715.80	42729.20	1.838	
4.68	5.31	ø6/10	2	228	SLU	0.45	1617.84	2.50	19715.80	39859.70	0.45	3775.09	2.50	19715.80	39859.70	5.223	
4.68	5.31	ø6/10	2	217	SLU	0.45	2393.52	2.50	19715.80	39615.70	0.45	2641.76	2.50	19715.80	39615.70	7.463	
4.68	5.31	ø6/10	2	213 (TG)	SLV	0.45	4605.74	2.50	19715.80	39153.50	0.45	6075.02	2.50	19715.80	39153.50	3.245	
4.68	5.31	ø6/10	2	211 (TG)	SLV	0.45	7931.53	2.50	19715.80	39148.10	0.45	4352.61	2.50	19715.80	39148.10	2.486	
5.31	7.83	ø6/15	2	227	SLU	0.45	2758.66	2.50	13143.90	39701.90	0.45	3502.38	2.50	13143.90	39701.90	3.753	
5.31	7.83	ø6/15	2	213 (TG)	SLV	0.45	4605.74	2.50	13143.90	39153.50	0.45	6075.02	2.50	13143.90	39153.50	2.164	
5.31	7.83	ø6/15	2	211 (TG)	SLV	0.45	7931.53	2.50	13143.90	39148.10	0.45	4352.61	2.50	13143.90	39148.10	1.657	

Relazione di calcolo

7.83	8.46	ø6/10	2	2	27	SLU	0.45	2929.33	2.50	19715.80	39475.40	0.45	2814.35	2.50	19715.80	39475.40	6.730
7.83	8.46	ø6/10	2	2	28	SLU	0.45	3040.07	2.50	19715.80	39576.60	0.45	2341.69	2.50	19715.80	39576.60	6.485
7.83	8.46	ø6/10	2	2	13 (TG)	SLV	0.45	4605.74	2.50	19715.80	39153.50	0.45	6075.02	2.50	19715.80	39153.50	3.245
7.83	8.46	ø6/10	2	2	11 (TG)	SLV	0.45	7931.53	2.50	19715.80	39148.10	0.45	4352.61	2.50	19715.80	39148.10	2.486

Dettagli costruttivi per la duttilità

- CC=5 $\alpha_e=0.36817$ $\omega_{nd}=0.14257$ $\mu\Phi_d=13.5551$ $v_d=0.088636$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=14.3955$
0.05249 ≥ 0.04738 [7.4.29]
- CC=5 $\alpha_e=0.36817$ $\omega_{nd}=0.14257$ $\mu\Phi_d=8.64393$ $v_d=0.088636$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.20321$ $\mu\Phi_c=14.3955$
0.05249 ≥ 0.01753 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.70	40	SLU I	1	1	70.00	-26707.80	812.92	-1755.63	-143684.00	5155.47	-11313.10	293.91	32.95	5.380
0.70	40	SLU I	1	1	70.00	-26707.80	812.92	-1755.63	-143684.00	5155.47	-11313.10	293.91	32.95	5.380
4.38	40	SLU I	1	1	438.00	-24844.80	-2474.77	4511.92	-24844.80	-5783.06	10794.40	116.72	32.40	2.377
4.68	40	SLU I	2	1	0.00	-2802.44	2212.37	-3831.42	-2802.44	5119.98	-9111.48	298.12	38.59	2.363
4.68	40	SLU I	2	1	0.00	-2802.44	2212.37	-3831.42	-2802.44	5119.98	-9111.48	298.12	38.59	2.363
8.46	40	SLU I	2	1	378.00	-888.81	-486.32	621.42	-888.81	-6019.73	7701.71	129.38	38.93	12.383

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	V _{sdu,y} <daN>	ctg $\theta_{,y}$	V _{Rsd,y} <daN>	V _{Rcd,y} <daN>	b _{w,z} <m>	V _{sdu,z} <daN>	ctg $\theta_{,z}$	V _{Rsd,z} <daN>	V _{Rcd,z} <daN>	Sic.
0.70	1.31	ø6/ 5	2	2	40	SLU I	0.35	1703.14	2.50	21001.10	52173.70	0.35	893.40	2.50	21001.10	52173.70	12.331
1.31	3.77	ø6/15	2	2	40	SLU I	0.35	1703.14	2.50	7000.38	52125.60	0.35	893.40	2.50	7000.38	52125.60	4.110
3.77	4.38	ø6/10	2	2	40	SLU I	0.35	1703.14	2.50	10500.60	51932.80	0.35	893.40	2.50	10500.60	51932.80	6.165
4.68	5.31	ø6/10	2	2	40	SLU I	0.35	1178.00	2.50	10500.60	48464.30	0.35	713.94	2.50	10500.60	48464.30	8.914
5.31	7.83	ø6/15	2	2	40	SLU I	0.35	1178.00	2.50	7000.38	48414.80	0.35	713.94	2.50	7000.38	48414.80	5.943
7.83	8.46	ø6/10	2	2	40	SLU I	0.35	1178.00	2.50	10500.60	48216.80	0.35	713.94	2.50	10500.60	48216.80	8.914

Verifiche e armature solette/platee

Simbologia

- Δ_{sm} = Distanza media tra le fessure
- Φ_{eq} = Diametro equivalente delle barre
- β = Coeff. amplificativo dello sforzo di punzonamento
- ϵ_{sm} = Deformazione unitaria media dell'armatura (*1000)
- v = Coeff. di riduzione della resistenza per il calcestruzzo fessurato a taglio
- ρ_l = Rapporto d'armatura longitudinale (*1000)
- σ_c = Tensione nel calcestruzzo
- σ_f = Tensione nel ferro
- σ_s = Tensione nell'acciaio nella sezione fessurata
- $A_{c\ eff}$ = Area di calcestruzzo efficace
- A_s = Area complessiva dei ferri nell'area di calcestruzzo efficace
- A_{sw} = Area di armatura a taglio a punzonamento
- AfE I = Area di ferro effettiva totale presente nel punto di verifica, inferiore
- AfE S = Area di ferro effettiva totale presente nel punto di verifica, superiore
- AfE St. = Area di ferro effettiva della staffatura
- CC = Numero della combinazione delle condizioni di carico elementari
- Cf inf = Copriferro inferiore
- Cf sup = Copriferro superiore
- Cl_s = Tipo di calcestruzzo
- DV = Direzione di verifica
XX = Verifica per momento M_{xx}
YY = Verifica per momento M_{yy}
- Fcd = Resistenza di calcolo a compressione del calcestruzzo
- Fck = Resistenza caratteristica cilindrica a compressione del calcestruzzo
- Fctd = Resistenza di calcolo a trazione del calcestruzzo
- Fctk = Resistenza caratteristica a trazione del calcestruzzo
- Fyd = Resistenza di calcolo dell'acciaio
- Fyk = Tensione caratteristica di snervamento dell'acciaio
- K_z = Coefficiente per distribuzione deformazioni
- MRdy = Momento resistente allo stato limite ultimo intorno all'asse Y
- Mom = Momento flettente
- My = Momento flettente intorno all'asse Y
- Mz = Momento intorno all'asse Z
- Nodo = Numero del nodo
- Pil = Numero del pilastro
- Sic. = Sicurezza
- Spess. = Spessore
- TCC = Tipo di combinazione di carico
SLU = Stato limite ultimo
SLE R = Stato limite d'esercizio, combinazione rara
SLE F = Stato limite d'esercizio, combinazione frequente
SLE Q = Stato limite d'esercizio, combinazione quasi permanente

SLD = Stato limite di danno
SLV = Stato limite di salvaguardia della vita
SLU I = Stato limite di resistenza al fuoco
SND = Stato limite di salvaguardia della vita (non dissipativo)
Tp =Tipo di acciaio
V_{Ed} =Valore di progetto del taglio agente
V_{Ed,c} =Resistenza di progetto a punzonamento
V_{Ed,cs} =Resistenza a taglio punzonamento
V_{Ed,max} =Valore di progetto del max taglio punzonamento resistente lungo la sez. di verifica
VR_{cd} =Taglio ultimo lato calcestruzzo
VR_{sd} =Taglio ultimo lato armatura
VR_{du} =Taglio ultimo resistente
Vs_{du} =Taglio agente nella direzione del momento ultimo
W_k =Ampiezza caratteristica delle fessure
X =Coordinata X del nodo
Y =Coordinata Y del nodo
a =Distanza dal contorno del pilastro al perimetro di verifica considerato
c =Ricoprimento dell'armatura
ctgθ =Cotangente dell'angolo di inclinazione dei puntoni di calcestruzzo
d =Media delle altezze utili nelle due direzioni ortogonali
s =Distanza massima tra le barre
u₀ =Perimetro del pilastro
u_i =Perimetro di verifica di base
u_{out,ef} =Perimetro u_{out} efficace oltre il quale non sono più richieste armature
V_{Ed} (u₀) =Tensione max di taglio sul perimetro u₀
V_{Ed} (u_i) =Tensione max di taglio sul perimetro u_i

Armatura soletta a quota 1.75

Caratteristiche delle sezioni e dei materiali utilizzati

Spess.	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fctd	Tp	Fyk	Fyd
<cm>	<cm>	<cm>		<daN/cm²>	<daN/cm²>	<daN/cm²>	<daN/cm²>		<daN/cm²>	<daN/cm²>
20.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	My	MRdy	Sic.
	<m>	<m>				<cmq>	<cmq>	<daNm>	<daNm>	
-2323	31.14	15.65	XX	30	SLU	10.05	10.05	-3266.48	-5927.93	1.815
-2309	33.70	14.00	YY	17	SLU	10.05	10.05	1158.84	5927.93	5.115
-2315	30.61	16.40	YY	19	SLU	10.05	10.05	-449.72	-5927.93	13.181

Stato limite ultimo - Verifiche a taglio

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	AfE St.	Vsdu	ctgθ	VR _{cd}	VR _{sd}	VR _{du}	Sic.
	<m>	<m>				<cmq>	<cmq>	<cmq/m>	<daN>		<daN>	<daN>	<daN>	
-2316	31.68	14.91	XX	30	SLU	10.05	10.05		3235.68				9803.09	3.030
-2310	31.75	14.00	YY	19	SLU	10.05	10.05		6770.69				9803.09	1.448

Stato limite d'esercizio - Verifiche tensionali

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	Mom	σ _c	σ _s
	<m>	<m>				<cmq>	<cmq>	<daNm>	<daN/cm²>	<daN/cm²>
-2323	31.14	15.65	XX	34	SLE R	10.05	10.05	-2339.31	51.03	1610.62
-2323	31.14	15.65	XX	26	SLE Q	10.05	10.05	-1996.90	43.56	1374.87
-2309	33.70	14.00	YY	20	SLE R	10.05	10.05	823.82	17.97	567.20
-2309	33.70	14.00	YY	26	SLE Q	10.05	10.05	601.18	13.11	413.91
-2315	30.61	16.40	YY	22	SLE R	10.05	10.05	-318.73	6.95	219.44
-2315	30.61	16.40	YY	26	SLE Q	10.05	10.05	-230.09	5.02	158.42

Stato limite d'esercizio - Verifiche a fessurazione

Nodo	X	Y	DV	CC	TCC	c	s	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	W _k
	<m>	<m>				<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cm²>		<mm>
-2323	31.14	15.65	XX	26	SLE Q	27.00	200.00	0.50	16.00	118.92	12.06	489.48	1374.87	0.43	0.09
-2323	31.14	15.65	XX	25	SLE F	27.00	200.00	0.50	16.00	118.92	12.06	489.48	1439.38	0.42	0.08
-2309	33.70	14.00	YY	26	SLE Q	27.00	200.00	0.50	16.00	118.92	12.06	489.48	413.91	0.12	0.02
-2309	33.70	14.00	YY	23	SLE F	27.00	200.00	0.50	16.00	118.92	12.06	489.48	483.23	0.14	0.03
-2315	30.61	16.40	YY	26	SLE Q	27.00	200.00	0.50	16.00	118.92	12.06	489.48	158.42	0.05	0.01
-2315	30.61	16.40	YY	23	SLE F	27.00	200.00	0.50	16.00	118.92	12.06	489.48	184.95	0.05	0.01

Armatura soletta a quota 4.68

Caratteristiche delle sezioni e dei materiali utilizzati

Spess.	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fctd	Tp	Fyk	Fyd
<cm>	<cm>	<cm>		<daN/cm²>	<daN/cm²>	<daN/cm²>	<daN/cm²>		<daN/cm²>	<daN/cm²>
20.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04
30.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	My	MRdy	Sic.
	<m>	<m>				<cmq>	<cmq>	<daNm>	<daNm>	

Relazione di calcolo

-2515	29.50	8.40	XX	30	SLU	10.05	13.35	12556.10	12851.30	1.024
42	25.72	8.40	XX	30	SLU	10.05	7.70	-9019.17	-9861.44	1.093
-2365	25.79	12.61	XX	30	SLU	22.78	7.70	-18899.20	-21209.90	1.122
305	27.10	10.83	XX	19	SLU	22.78	7.70	2081.26	7730.28	3.714
-54	34.21	10.83	XX	19	SLU	15.71	7.70	-12440.20	-14974.30	1.204
-27	3.21	10.83	XX	30	SLU	7.70	7.70	-3048.19	-4702.85	1.543
-2451	6.21	10.83	XX	19	SLU	7.70	7.70	1892.31	4702.85	2.485
-2137	21.95	11.80	XX	30	SLU	7.70	7.70	337.74	4702.85	13.924
39	23.24	13.17	XX	17	SLU	7.70	7.70	-177.61	-4702.85	26.478
-2370	26.11	12.48	XX	30	SLU	17.75	7.70	-5767.22	-9854.37	1.709
38	25.80	13.17	XX	19	SLU	17.75	7.70	2755.41	4715.60	1.711
-2370	26.11	12.48	XX	30	SLU	22.78	7.70	-5767.22	-12297.30	2.132
305	27.10	10.83	XX	19	SLU	22.78	7.70	2081.26	4718.44	2.267
-2262	25.91	12.47	XX	30	SLU	17.75	7.70	-9968.50	-16800.00	1.685
55	25.80	14.86	XX	19	SLU	7.70	7.70	1378.77	4702.85	3.411
54	27.96	14.86	XX	1	SLV	7.70	7.70	-138.39	-4702.85	33.983
-2369	26.11	10.83	XX	19	SLU	17.75	7.70	445.31	7727.43	17.353
-2257	25.77	11.22	YY	30	SLU	7.70	7.70	2986.51	7714.68	2.583
-2364	25.91	12.70	YY	30	SLU	7.70	7.70	-5377.17	-7714.68	1.435
-26	3.21	17.89	YY	30	SLU	7.70	7.70	-3320.25	-4702.85	1.416
-2466	3.21	14.36	YY	30	SLU	7.70	7.70	2339.46	4702.85	2.010
-2137	21.95	11.80	YY	28	SLU	7.70	7.70	765.95	4702.85	6.140
39	23.24	13.17	YY	5	SLV	7.70	7.70	-324.10	-4702.85	14.511
-2372	26.11	11.27	YY	30	SLU	7.70	7.70	1919.55	4702.85	2.450
-2370	26.11	12.48	YY	30	SLU	7.70	7.70	-2741.66	-4702.85	1.715
-2367	26.11	12.85	YY	30	SLU	7.70	7.70	-3332.62	-4702.85	1.411
-2375	26.43	10.83	YY	30	SLU	7.70	7.70	1333.36	4702.85	3.527
-2262	25.91	12.47	YY	30	SLU	7.70	7.70	-2805.28	-7714.68	2.750
-2260	26.03	11.27	YY	30	SLU	7.70	7.70	2946.60	7714.68	2.618

Stato limite ultimo - Verifiche a taglio

Nodo	X <m>	Y <m>	DV	CC	TCC	AfE S <cmq>	AfE I <cmq>	AfE St. <cmq/m>	Vsdu <daN>	ctgθ	VRcd <daN>	VRsd <daN>	Vrdu <daN>	Sic.
-2518	32.32	8.40	XX	19	SLU	10.05	13.35	19.64	15198.70	2.50	58021.30	45811.30	45811.30	3.014
-2504	32.43	10.83	XX	19	SLU	10.05	13.35		7114.52				13808.20	1.941
-2513	27.61	8.40	XX	30	SLU	10.05	13.35	19.64	14231.60	2.50	58021.30	45811.30	45811.30	3.219
-2512	26.67	8.40	XX	19	SLU	10.05	7.70	19.64	13866.60	2.50	58021.30	45811.30	45811.30	3.304
-950	34.21	8.40	XX	19	SLU	10.05	7.70		11059.60				12562.00	1.136
-2529	27.06	10.20	XX	19	SLU	22.78	7.70		3019.36				11823.30	3.916
-54	34.21	10.83	XX	30	SLU	15.71	7.70	19.64	16148.80	2.50	58021.30	45811.30	45811.30	2.837
-2519	33.27	8.40	XX	13	SLV	10.05	7.70	19.64	4503.94	2.50	58021.30	45811.30	45811.30	10.171
-27	3.21	10.83	XX	19	SLU	7.70	7.70	19.64	10139.50	2.50	36126.50	28524.00	28524.00	2.813
39	23.24	13.17	XX	30	SLU	7.70	7.70	19.64	1306.22	2.50	36126.50	28524.00	28524.00	21.837
-2300	26.18	12.42	XX	30	SLU	17.75	7.70	19.64	16996.60	2.50	36126.50	28524.00	28524.00	1.678
-2375	26.43	10.83	XX	13	SLV	17.75	7.70		1304.85				8968.13	6.873
-2367	26.11	12.85	XX	30	SLU	22.78	7.70	19.64	18107.30	2.50	36126.50	28524.00	28524.00	1.575
295	27.46	11.58	XX	28	SLU	22.78	7.70		3065.59				8968.13	2.925
-2370	26.11	12.48	XX	30	SLU	17.75	7.70	19.64	25300.00	2.50	58021.30	45811.30	45811.30	1.811
-2365	25.79	12.61	XX	30	SLU	22.78	7.70	19.64	43209.80	2.50	58021.30	45811.30	45811.30	1.060
55	25.80	14.86	XX	19	SLU	7.70	7.70		4741.18				8968.13	1.892
-2369	26.11	10.83	XX	13	SLV	17.75	7.70		970.88				11823.30	12.178
-2519	33.27	8.40	YY	19	SLU	7.70	7.70	19.64	6757.40	2.50	58021.30	45811.30	45811.30	6.779
-950	34.21	8.40	YY	30	SLU	7.70	7.70		7529.29				11823.30	1.570
42	25.72	8.40	YY	30	SLU	7.70	7.70	19.64	11258.50	2.50	58021.30	45811.30	45811.30	4.069
-54	34.21	10.83	YY	30	SLU	7.70	7.70	19.64	6197.90	2.50	58021.30	45811.30	45811.30	7.391
286	6.71	14.36	YY	30	SLU	7.70	7.70	19.64	8503.53	2.50	36126.50	28524.00	28524.00	3.354
-2248	23.24	16.00	YY	30	SLU	7.70	7.70	19.64	2409.67	2.50	36126.50	28524.00	28524.00	11.837
-2371	26.11	12.19	YY	30	SLU	7.70	7.70	19.64	3628.56	2.50	36126.50	28524.00	28524.00	7.861
-1108	27.24	14.86	YY	19	SLU	7.70	7.70		3269.71				8968.13	2.743
294	26.39	13.07	YY	30	SLU	7.70	7.70	19.64	9639.23	2.50	36126.50	28524.00	28524.00	2.959
305	27.10	10.83	YY	5	SLV	7.70	7.70		2118.52				8968.13	4.233
-2262	25.91	12.47	YY	30	SLU	7.70	7.70	19.64	11308.20	2.50	58021.30	45811.30	45811.30	4.051
-2365	25.79	12.61	YY	30	SLU	7.70	7.70	19.64	16224.40	2.50	58021.30	45811.30	45811.30	2.824
-2369	26.11	10.83	YY	5	SLV	7.70	7.70		946.12				11823.30	12.497

Stato limite d'esercizio - Verifiche tensionali

Nodo	X <m>	Y <m>	DV	CC	TCC	AfE S <cmq>	AfE I <cmq>	Mom <daNm>	σ _c <daN/cmq>	σ _f <daN/cmq>
-2515	29.50	8.40	XX	34	SLE R	10.05	13.35	9037.09	80.02	2852.43
-2515	29.50	8.40	XX	26	SLE Q	10.05	13.35	8022.71	71.04	2532.26
42	25.72	8.40	XX	34	SLE R	10.05	7.70	-6488.13	65.54	2691.80
42	25.72	8.40	XX	26	SLE Q	10.05	7.70	-5736.46	57.95	2379.95
-2365	25.79	12.61	XX	34	SLE R	22.78	7.70	-13519.70	102.23	2562.14
-2365	25.79	12.61	XX	26	SLE Q	22.78	7.70	-11206.30	84.74	2123.71
305	27.10	10.83	XX	22	SLE R	22.78	7.70	1474.90	14.61	795.53
305	27.10	10.83	XX	26	SLE Q	22.78	7.70	1101.80	10.92	594.29
-54	34.21	10.83	XX	22	SLE R	15.71	7.70	-8929.93	76.52	2412.70
-54	34.21	10.83	XX	26	SLE Q	15.71	7.70	-7602.13	65.14	2053.96

Relazione di calcolo

-27	3.21	10.83	XX	34	SLE R	7.70	7.70	-2175.44	53.81	1928.42
-27	3.21	10.83	XX	26	SLE Q	7.70	7.70	-1857.96	45.95	1647.00
-2451	6.21	10.83	XX	22	SLE R	7.70	7.70	1355.94	33.54	1201.98
-2451	6.21	10.83	XX	26	SLE Q	7.70	7.70	1230.82	30.44	1091.07
-2137	21.95	11.80	XX	34	SLE R	7.70	7.70	242.23	5.99	214.73
-2137	21.95	11.80	XX	26	SLE Q	7.70	7.70	217.70	5.38	192.98
39	23.24	13.17	XX	20	SLE R	7.70	7.70	-125.45	3.10	111.21
39	23.24	13.17	XX	26	SLE Q	7.70	7.70	-93.48	2.31	82.86
-2370	26.11	12.48	XX	34	SLE R	17.75	7.70	-4106.19	74.75	1641.96
38	25.80	13.17	XX	26	SLE R	17.75	7.70	1691.53	39.30	1512.62
-2370	26.11	12.48	XX	26	SLE Q	17.75	7.70	-3224.37	58.70	1289.34
38	25.80	13.17	XX	22	SLE R	17.75	7.70	1977.96	45.96	1768.76
-2370	26.11	12.48	XX	34	SLE R	22.78	7.70	-4106.19	69.15	1296.40
305	27.10	10.83	XX	22	SLE R	22.78	7.70	1474.90	33.43	1323.38
305	27.10	10.83	XX	26	SLE Q	22.78	7.70	1101.80	24.98	988.61
-2370	26.11	12.48	XX	26	SLE Q	22.78	7.70	-3224.37	54.30	1018.00
-2262	25.91	12.47	XX	34	SLE R	17.75	7.70	-7117.93	58.46	1710.94
-2262	25.91	12.47	XX	26	SLE Q	17.75	7.70	-5777.57	47.45	1388.76
55	25.80	14.86	XX	22	SLE R	7.70	7.70	992.01	24.54	879.37
55	25.80	14.86	XX	26	SLE Q	7.70	7.70	872.54	21.58	773.46
54	27.96	14.86	XX	34	SLE R	7.70	7.70	-79.21	1.96	70.21
54	27.96	14.86	XX	26	SLE Q	7.70	7.70	-53.54	1.32	47.46
-2369	26.11	10.83	XX	22	SLE R	17.75	7.70	311.75	3.21	167.91
-2369	26.11	10.83	XX	26	SLE Q	17.75	7.70	183.38	1.89	98.77
-2257	25.77	11.22	YY	34	SLE R	7.70	7.70	2146.44	24.11	1152.57
-2257	25.77	11.22	YY	26	SLE Q	7.70	7.70	1766.33	19.84	948.46
-2364	25.91	12.70	YY	34	SLE R	7.70	7.70	-3890.32	43.69	2088.97
-2364	25.91	12.70	YY	26	SLE Q	7.70	7.70	-3669.96	41.22	1970.65
-26	3.21	17.89	YY	34	SLE R	7.70	7.70	-2362.00	58.42	2093.80
-2466	3.21	14.36	YY	34	SLE R	7.70	7.70	1673.66	41.40	1483.62
-26	3.21	17.89	YY	26	SLE Q	7.70	7.70	-1935.03	47.86	1715.31
-2466	3.21	14.36	YY	26	SLE Q	7.70	7.70	1490.15	36.86	1320.95
-2137	21.95	11.80	YY	32	SLE R	7.70	7.70	546.87	13.53	484.77
-2137	21.95	11.80	YY	26	SLE Q	7.70	7.70	432.88	10.71	383.73
39	23.24	13.17	YY	22	SLE R	7.70	7.70	-174.33	4.31	154.53
39	23.24	13.17	YY	26	SLE Q	7.70	7.70	-150.31	3.72	133.24
-2372	26.11	11.27	YY	34	SLE R	7.70	7.70	1380.21	34.14	1223.49
-2372	26.11	11.27	YY	26	SLE Q	7.70	7.70	1137.20	28.13	1008.08
-2370	26.11	12.48	YY	34	SLE R	7.70	7.70	-1986.01	49.12	1760.50
-2370	26.11	12.48	YY	26	SLE Q	7.70	7.70	-1905.19	47.12	1688.86
-2367	26.11	12.85	YY	34	SLE R	7.70	7.70	-2411.88	59.65	2138.02
-2367	26.11	12.85	YY	26	SLE Q	7.70	7.70	-2288.86	56.61	2028.97
-2375	26.43	10.83	YY	34	SLE R	7.70	7.70	967.55	23.93	857.69
-2375	26.43	10.83	YY	26	SLE Q	7.70	7.70	859.45	21.26	761.86
-2262	25.91	12.47	YY	34	SLE R	7.70	7.70	-2035.15	22.86	1092.81
-2262	25.91	12.47	YY	26	SLE Q	7.70	7.70	-1987.35	22.32	1067.14
-2260	26.03	11.27	YY	34	SLE R	7.70	7.70	2116.70	23.77	1136.60
-2260	26.03	11.27	YY	26	SLE Q	7.70	7.70	1731.71	19.45	929.87

Stato limite d'esercizio - Verifiche a fessurazione

Nodo	X <m>	Y <m>	DV	CC	TCC	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
-2515	29.50	8.40	XX	26	SLE Q	28.46	100.00	0.50	13.08	122.63	14.69	738.39	2532.26	0.95	0.20
-2515	29.50	8.40	XX	25	SLE F	28.46	100.00	0.50	13.08	122.63	14.69	738.39	2610.97	0.84	0.18
42	25.72	8.40	XX	26	SLE Q	27.00	200.00	0.50	16.00	171.83	12.06	763.70	2379.95	0.81	0.24
42	25.72	8.40	XX	25	SLE F	27.00	200.00	0.50	16.00	171.83	12.06	763.70	2450.87	0.71	0.21
-2365	25.79	12.61	XX	26	SLE Q	26.47	100.00	0.50	17.06	98.50	25.06	669.26	2123.71	0.87	0.14
-2365	25.79	12.61	XX	25	SLE F	26.47	100.00	0.50	17.06	98.50	25.06	669.26	2210.09	0.83	0.14
305	27.10	10.83	XX	26	SLE Q	28.00	200.00	0.50	14.00	182.06	9.24	809.18	594.29	0.17	0.05
305	27.10	10.83	XX	23	SLE F	28.00	200.00	0.50	14.00	182.06	9.24	809.18	657.65	0.19	0.06
-54	34.21	10.83	XX	26	SLE Q	27.86	100.00	0.50	14.29	114.74	17.31	715.24	2053.96	0.76	0.15
-54	34.21	10.83	XX	23	SLE F	27.86	100.00	0.50	14.29	114.74	17.31	715.24	2125.32	0.68	0.13
-27	3.21	10.83	XX	26	SLE Q	28.00	200.00	0.50	14.00	132.45	9.24	504.39	1647.00	0.50	0.11
-27	3.21	10.83	XX	23	SLE F	28.00	200.00	0.50	14.00	132.45	9.24	504.39	1699.26	0.49	0.11
-2451	6.21	10.83	XX	26	SLE Q	28.00	200.00	0.50	14.00	132.45	9.24	504.39	1091.07	0.32	0.07
-2451	6.21	10.83	XX	25	SLE F	28.00	200.00	0.50	14.00	132.45	9.24	504.39	1122.46	0.33	0.07
-2137	21.95	11.80	XX	26	SLE Q	28.00	200.00	0.50	14.00	132.45	9.24	504.39	192.98	0.06	0.01
-2137	21.95	11.80	XX	25	SLE F	28.00	200.00	0.50	14.00	132.45	9.24	504.39	197.74	0.06	0.01
39	23.24	13.17	XX	26	SLE Q	28.00	200.00	0.50	14.00	132.45	9.24	504.39	82.86	0.02	0.01
39	23.24	13.17	XX	23	SLE F	28.00	200.00	0.50	14.00	132.45	9.24	504.39	95.43	0.03	0.01
38	25.80	13.17	XX	26	SLE Q	28.00	200.00	0.50	14.00	133.67	9.24	512.42	1512.62	0.44	0.10
38	25.80	13.17	XX	25	SLE F	28.00	200.00	0.50	14.00	133.67	9.24	512.42	1575.33	0.46	0.10
-2370	26.11	12.48	XX	26	SLE Q	27.47	100.00	0.50	15.07	89.14	19.53	443.48	1289.34	0.48	0.07
-2370	26.11	12.48	XX	25	SLE F	27.47	100.00	0.50	15.07	89.14	19.53	443.48	1347.65	0.44	0.07
305	27.10	10.83	XX	26	SLE Q	28.00	200.00	0.50	14.00	134.14	9.24	515.52	988.61	0.29	0.07
305	27.10	10.83	XX	23	SLE F	28.00	200.00	0.50	14.00	134.14	9.24	515.52	1094.01	0.32	0.07
-2370	26.11	12.48	XX	26	SLE Q	26.47	100.00	0.50	17.06	81.68	25.06	422.21	1018.00	0.38	0.05
-2370	26.11	12.48	XX	25	SLE F	26.47	100.00	0.50	17.06	81.68	25.06	422.21	1064.03	0.34	0.05
-2262	25.91	12.47	XX	26	SLE Q	27.47	100.00	0.50	15.07	108.98	19.53	700.67	1388.76	0.46	0.09

Relazione di calcolo

-2262	25.91	12.47	XX	25	SLE F	27.47	100.00	0.50	15.07	108.98	19.53	700.67	1447.30	0.42	0.08
55	25.80	14.86	XX	26	SLE Q	28.00	200.00	0.50	14.00	132.45	9.24	504.39	773.46	0.23	0.05
55	25.80	14.86	XX	25	SLE F	28.00	200.00	0.50	14.00	132.45	9.24	504.39	805.92	0.23	0.05
54	27.96	14.86	XX	26	SLE Q	28.00	200.00	0.50	14.00	132.45	9.24	504.39	47.46	0.01	0.00
54	27.96	14.86	XX	23	SLE F	28.00	200.00	0.50	14.00	132.45	9.24	504.39	54.01	0.02	0.00
-2369	26.11	10.83	XX	26	SLE Q	28.00	200.00	0.50	14.00	180.76	9.24	803.37	98.77	0.03	0.01
-2369	26.11	10.83	XX	23	SLE F	28.00	200.00	0.50	14.00	180.76	9.24	803.37	121.90	0.04	0.01
-2257	25.77	11.22	YY	26	SLE Q	28.00	200.00	0.50	14.00	177.54	9.24	789.06	948.46	0.28	0.08
-2257	25.77	11.22	YY	23	SLE F	28.00	200.00	0.50	14.00	177.54	9.24	789.06	985.76	0.29	0.09
-2364	25.91	12.70	YY	26	SLE Q	28.00	200.00	0.50	14.00	177.54	9.24	789.06	1970.65	0.57	0.17
-2364	25.91	12.70	YY	25	SLE F	28.00	200.00	0.50	14.00	177.54	9.24	789.06	2051.18	0.60	0.18
-26	3.21	17.89	YY	26	SLE Q	28.00	200.00	0.50	14.00	132.45	9.24	504.39	1715.31	0.53	0.12
-26	3.21	17.89	YY	36	SLE F	28.00	200.00	0.50	14.00	132.45	9.24	504.39	1770.59	0.52	0.12
-2466	3.21	14.36	YY	26	SLE Q	28.00	200.00	0.50	14.00	132.45	9.24	504.39	1320.95	0.38	0.09
-2466	3.21	14.36	YY	25	SLE F	28.00	200.00	0.50	14.00	132.45	9.24	504.39	1359.36	0.40	0.09
-2137	21.95	11.80	YY	26	SLE Q	28.00	200.00	0.50	14.00	132.45	9.24	504.39	383.73	0.11	0.03
-2137	21.95	11.80	YY	36	SLE F	28.00	200.00	0.50	14.00	132.45	9.24	504.39	403.78	0.12	0.03
39	23.24	13.17	YY	26	SLE Q	28.00	200.00	0.50	14.00	132.45	9.24	504.39	133.24	0.04	0.01
39	23.24	13.17	YY	23	SLE F	28.00	200.00	0.50	14.00	132.45	9.24	504.39	138.37	0.04	0.01
-2372	26.11	11.27	YY	26	SLE Q	28.00	200.00	0.50	14.00	132.45	9.24	504.39	1008.08	0.29	0.07
-2372	26.11	11.27	YY	23	SLE F	28.00	200.00	0.50	14.00	132.45	9.24	504.39	1052.11	0.31	0.07
-2370	26.11	12.48	YY	26	SLE Q	28.00	200.00	0.50	14.00	132.45	9.24	504.39	1688.86	0.52	0.12
-2370	26.11	12.48	YY	25	SLE F	28.00	200.00	0.50	14.00	132.45	9.24	504.39	1757.37	0.51	0.12
-2367	26.11	12.85	YY	26	SLE Q	28.00	200.00	0.50	14.00	132.45	9.24	504.39	2028.97	0.68	0.15
-2367	26.11	12.85	YY	25	SLE F	28.00	200.00	0.50	14.00	132.45	9.24	504.39	2111.41	0.61	0.14
-2375	26.43	10.83	YY	26	SLE Q	28.00	200.00	0.50	14.00	132.45	9.24	504.39	761.86	0.22	0.05
-2375	26.43	10.83	YY	36	SLE F	28.00	200.00	0.50	14.00	132.45	9.24	504.39	777.70	0.23	0.05
-2262	25.91	12.47	YY	26	SLE Q	28.00	200.00	0.50	14.00	177.54	9.24	789.06	1067.14	0.31	0.09
-2262	25.91	12.47	YY	25	SLE F	28.00	200.00	0.50	14.00	177.54	9.24	789.06	1111.17	0.32	0.10
-2260	26.03	11.27	YY	26	SLE Q	28.00	200.00	0.50	14.00	177.54	9.24	789.06	929.87	0.27	0.08
-2260	26.03	11.27	YY	23	SLE F	28.00	200.00	0.50	14.00	177.54	9.24	789.06	975.35	0.28	0.09

Stato limite ultimo - Verifiche a punzonamento

Pil	CC	TCC	d	V _{ed}	My	Mz	u ₀	β	v	V _{ed} (u ₀)	V _{Rd,max}	a	u ₁	ρ ₁	V _{ed} (u ₁)	V _{Rd,c}	A _{sw}	V _{Rd,cs}	u _{out,ef}
			<m>	<daN>	<daNm>	<daNm>	<m>			<daN/mq>	<daN/mq>	<m>	<m>		<daN/mq>	<daN/mq>	<cmq>	<daN/mq>	<m>
76	30	SLV	0.17	17293.10	8516.15	709.27	0.90	1.80	0.54	209771.00	381139.00	0.33	1.68	4.66	112691.00	54352.80	13.57	343251.00	3.47

Armatura soletta a quota 7.50

Caratteristiche delle sezioni e dei materiali utilizzati

Spess.	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fctd	TP	Fyk	Fyd
<cm>	<cm>	<cm>		<daN/cm²>	<daN/cm²>	<daN/cm²>	<daN/cm²>		<daN/cm²>	<daN/cm²>
30.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	My	MRdy	Sic.
	<m>	<m>				<cmq>	<cmq>	<daNm>	<daNm>	
99	25.80	14.86	XX	27	SLU	3.93	3.93	231.14	4224.76	18.278
-1103	25.80	15.55	YY	9	SLV	3.93	3.93	568.16	4224.76	7.436

Stato limite ultimo - Verifiche a taglio

Nodo	X	Y	DV	CC	AfE S	AfE I	AfE St.	Vsdu	ctgθ	VRcd	VRsd	Vrdu	Sic.
	<m>	<m>			<cmq>	<cmq>	<cmq/m>	<daN>		<daN>	<daN>	<daN>	
-1075	27.96	16.23	XX	1	SLV	3.93	3.93		628.48			11823.30	18.813
101	25.80	16.92	YY	13	SLV	3.93	3.93		1562.28			11823.30	7.568

Stato limite d'esercizio - Verifiche tensionali

Nodo	X <m>	Y <m>	DV	CC	TCC	AfE S <cmq>	AfE I <cmq>	Mom <daNm>	σ _c <daN/cmq>	σ _f <daN/cmq>
99	25.80	14.86	XX	31	SLE R	3.93	3.93	157.59	2.44	162.12
-1106	26.52	16.23	XX	26	SLE Q	3.93	3.93	43.97	0.68	45.23
-1075	27.96	16.23	XX	26	SLE Q	3.93	3.93	-36.08	0.56	37.12
-1102	25.80	16.23	YY	22	SLE R	3.93	3.93	281.56	4.36	289.65
-1102	25.80	16.23	YY	26	SLE Q	3.93	3.93	296.72	4.60	305.25

Stato limite d'esercizio - Verifiche a fessurazione

Nodo	X [mm]	Y [mm]	DV	CC	TCC	c [mm]	s [mm]	K ₂	Φ _{eq}	Δ _{sm} [mm]	A _s [cmq]	A _{c eff} [cmq]	σ _s [daN/cmq]	ε _{sm}	W _k [mm]
-1106	26.52	16.23	XX	26	SLE Q	30.00	200.00	0.50	10.00	237.67	4.71	837.25	45.23	0.01	0.01
101	25.80	16.92	XX	23	SLE F	30.00	200.00	0.50	10.00	237.67	4.71	837.25	96.93	0.03	0.01
-1075	27.96	16.23	XX	26	SLE Q	30.00	200.00	0.50	10.00	237.67	4.71	837.25	37.12	0.01	0.00
-1075	27.96	16.23	XX	25	SLE F	30.00	200.00	0.50	10.00	237.67	4.71	837.25	38.23	0.01	0.00
-1102	25.80	16.23	YY	26	SLE Q	30.00	200.00	0.50	10.00	237.67	4.71	837.25	305.25	0.09	0.04
-1102	25.80	16.23	YY	25	SLE F	30.00	200.00	0.50	10.00	237.67	4.71	837.25	310.96	0.09	0.04

Armatura soletta Rampa 2

Caratteristiche delle sezioni e dei materiali utilizzati

Relazione di calcolo

Spess.	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fctd	Tp	Fyk	Fyd
<cm>	<cm>	<cm>		<daN/cm²>	<daN/cm²>	<daN/cm²>	<daN/cm²>		<daN/cm²>	<daN/cm²>
20.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	My	MRdy	Sic.
	<m>	<m>				<cmq>	<cmq>	<daNm>	<daNm>	
-2316	31.68	14.91	XX	1	SLV	7.70	7.70	-465.38	-4702.85	10.105
-2256	26.67	12.68	XX	27	SLU	7.70	7.70	548.09	4702.85	8.580
-2316	31.68	14.91	YY	19	SLU	12.72	12.72	-6434.62	-7303.57	1.135
-2440	29.27	13.01	YY	19	SLU	12.72	12.72	2354.00	7303.57	3.103

Stato limite ultimo - Verifiche a taglio

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	AfE St.	Vsdu	ctgθ	VRcd	VRsd	Vrdu	Sic.
	<m>	<m>				<cmq>	<cmq>	<cmq/m>	<daN>		<daN>	<daN>	<daN>	
-2316	31.68	14.91	XX	30	SLU	7.70	7.70		3326.32				8968.13	2.696
-2316	31.68	14.91	YY	30	SLU	12.72	12.72		9661.27				10603.90	1.098

Stato limite d'esercizio - Verifiche tensionali

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	Mom	σ _c	σ _f
	<m>	<m>				<cmq>	<cmq>	<daNm>	<daN/cm²>	<daN/cm²>
-2316	31.68	14.91	XX	34	SLE R	7.70	7.70	-253.58	6.27	224.78
-2316	31.68	14.91	XX	26	SLE Q	7.70	7.70	-251.72	6.23	223.14
-2256	26.67	12.68	XX	31	SLE R	7.70	7.70	383.56	9.49	340.01
-2256	26.67	12.68	XX	26	SLE Q	7.70	7.70	212.79	5.26	188.63
-2316	31.68	14.91	YY	22	SLE R	12.72	12.72	-4602.23	89.63	2535.45
-2316	31.68	14.91	YY	26	SLE Q	12.72	12.72	-3861.88	75.21	2127.57
-2440	29.27	13.01	YY	22	SLE R	12.72	12.72	1686.75	32.85	929.26
-2440	29.27	13.01	YY	26	SLE Q	12.72	12.72	1425.35	27.76	785.25

Stato limite d'esercizio - Verifiche a fessurazione

Nodo	X	Y	DV	CC	TCC	c	s	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	W _k
	<m>	<m>				<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cm²>		<mm>
-2316	31.68	14.91	XX	26	SLE Q	28.00	200.00	0.50	14.00	132.45	9.24	504.39	223.14	0.06	0.01
-2316	31.68	14.91	XX	25	SLE F	28.00	200.00	0.50	14.00	132.45	9.24	504.39	233.68	0.07	0.02
-2256	26.67	12.68	XX	23	SLE F	28.00	200.00	0.50	14.00	132.45	9.24	504.39	257.05	0.07	0.02
-2256	26.67	12.68	XX	26	SLE Q	28.00	200.00	0.50	14.00	132.45	9.24	504.39	188.63	0.05	0.01
-2316	31.68	14.91	YY	26	SLE Q	26.00	200.00	0.50	18.00	108.13	15.27	476.08	2127.57	0.85	0.16
-2316	31.68	14.91	YY	25	SLE F	26.00	200.00	0.50	18.00	108.13	15.27	476.08	2226.06	0.80	0.15
-2440	29.27	13.01	YY	26	SLE Q	26.00	200.00	0.50	18.00	108.13	15.27	476.08	785.25	0.23	0.04
-2440	29.27	13.01	YY	25	SLE F	26.00	200.00	0.50	18.00	108.13	15.27	476.08	822.41	0.24	0.04

Armatura soletta Rampa 1

Caratteristiche delle sezioni e dei materiali utilizzati

Spess.	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fctd	Tp	Fyk	Fyd
<cm>	<cm>	<cm>		<daN/cm²>	<daN/cm²>	<daN/cm²>	<daN/cm²>		<daN/cm²>	<daN/cm²>
20.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	My	MRdy	Sic.
	<m>	<m>				<cmq>	<cmq>	<daNm>	<daNm>	
187	33.70	10.83	XX	19	SLU	10.05	10.05	-540.08	-5927.93	10.976
-2350	31.75	13.21	XX	5	SLV	10.05	10.05	31.11	5927.93	>100
187	33.70	10.83	YY	19	SLU	12.72	10.05	-6903.92	-7304.92	1.058
-2309	33.70	14.00	YY	19	SLU	12.72	10.05	993.76	5928.18	5.965

Stato limite ultimo - Verifiche a taglio

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	AfE St.	Vsdu	ctgθ	VRcd	VRsd	Vrdu	Sic.
	<m>	<m>				<cmq>	<cmq>	<cmq/m>	<daN>		<daN>	<daN>	<daN>	
-2309	33.70	14.00	XX	19	SLU	10.05	10.05		2599.54				9803.09	3.771
187	33.70	10.83	YY	19	SLU	12.72	10.05		8947.40				10603.90	1.185

Stato limite d'esercizio - Verifiche tensionali

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	Mom	σ _c	σ _f
	<m>	<m>				<cmq>	<cmq>	<daNm>	<daN/cm²>	<daN/cm²>
187	33.70	10.83	XX	22	SLE R	10.05	10.05	-385.48	8.41	265.40
187	33.70	10.83	XX	26	SLE Q	10.05	10.05	-313.71	6.84	215.99
-2350	31.75	13.21	XX	32	SLE R	10.05	10.05	9.79	0.21	6.74
-2350	31.75	13.21	XX	26	SLE Q	10.05	10.05	12.11	0.26	8.34
187	33.70	10.83	YY	22	SLE R	12.72	10.05	-4927.73	98.28	2709.39
187	33.70	10.83	YY	26	SLE Q	12.72	10.05	-4012.16	80.02	2205.98
-2309	33.70	14.00	YY	22	SLE R	12.72	10.05	710.02	15.17	489.97
-2309	33.70	14.00	YY	26	SLE Q	12.72	10.05	561.89	12.00	387.75

Stato limite d'esercizio - Verifiche a fessurazione

Nodo	X <m>	Y <m>	DV	CC	TCC	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	W _k <mm>
187	33.70	10.83	XX	26	SLE Q	27.00	200.00	0.50	16.00	118.92	12.06	489.48	215.99	0.06	0.01
187	33.70	10.83	XX	25	SLE F	27.00	200.00	0.50	16.00	118.92	12.06	489.48	225.57	0.07	0.01
-2350	31.75	13.21	XX	26	SLE Q	27.00	200.00	0.50	16.00	118.92	12.06	489.48	8.34	0.00	0.00
-2350	31.75	13.21	XX	36	SLE F	27.00	200.00	0.50	16.00	118.92	12.06	489.48	8.99	0.00	0.00
187	33.70	10.83	YY	26	SLE Q	26.00	200.00	0.50	18.00	107.75	15.27	472.85	2205.98	0.88	0.16
187	33.70	10.83	YY	25	SLE F	26.00	200.00	0.50	18.00	107.75	15.27	472.85	2304.24	0.84	0.15
-2309	33.70	14.00	YY	23	SLE F	27.00	200.00	0.50	16.00	119.29	12.06	492.27	424.19	0.12	0.03
-2309	33.70	14.00	YY	26	SLE Q	27.00	200.00	0.50	16.00	119.29	12.06	492.27	387.75	0.11	0.02

Armatura soletta Rampa 2

Caratteristiche delle sezioni e dei materiali utilizzati

Spess.	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fctd	Tp	Fyk	Fyd
<cm>	<cm>	<cm>		<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>		<daN/cmq>	<daN/cmq>
20.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Nodo	X <m>	Y <m>	DV	CC	TCC	AfE S <cmq>	AfE I <cmq>	My <daNm>	MRdy <daNm>	Sic.
187	33.70	10.83	XX	19	SLU	7.70	7.70	-540.08	-4702.85	8.708
-2350	31.75	13.21	XX	5	SLV	7.70	7.70	31.11	4702.85	>100
187	33.70	10.83	YY	19	SLU	12.72	12.72	-6903.92	-7303.57	1.058
-2309	33.70	14.00	YY	19	SLU	12.72	12.72	993.76	7303.57	7.349

Stato limite ultimo - Verifiche a taglio

Nodo	X <m>	Y <m>	DV	CC	TCC	AfE S <cmq>	AfE I <cmq>	AfE St. <cmq/m>	Vsdu <daN>	ctgθ	VRcd <daN>	VRsd <daN>	Vrdu <daN>	Sic.
-2309	33.70	14.00	XX	19	SLU	7.70	7.70		2599.54				8968.13	3.450
187	33.70	10.83	YY	19	SLU	12.72	12.72		8947.40				10603.90	1.185

Stato limite d'esercizio - Verifiche tensionali

Nodo	X <m>	Y <m>	DV	CC	TCC	AfE S <cmq>	AfE I <cmq>	Mom <daNm>	σ _c <daN/cmq>	σ _f <daN/cmq>
187	33.70	10.83	XX	22	SLE R	7.70	7.70	-385.48	9.53	341.71
187	33.70	10.83	XX	26	SLE Q	7.70	7.70	-313.71	7.76	278.09
-2350	31.75	13.21	XX	32	SLE R	7.70	7.70	9.79	0.24	8.68
-2350	31.75	13.21	XX	26	SLE Q	7.70	7.70	12.11	0.30	10.73
187	33.70	10.83	YY	22	SLE R	12.72	12.72	-4927.73	95.97	2714.77
187	33.70	10.83	YY	26	SLE Q	12.72	12.72	-4012.16	78.14	2210.36
-2309	33.70	14.00	YY	22	SLE R	12.72	12.72	710.02	13.83	391.16
-2309	33.70	14.00	YY	26	SLE Q	12.72	12.72	561.89	10.94	309.56

Stato limite d'esercizio - Verifiche a fessurazione

Nodo	X <m>	Y <m>	DV	CC	TCC	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	W _k <mm>
187	33.70	10.83	XX	26	SLE Q	28.00	200.00	0.50	14.00	132.45	9.24	504.39	278.09	0.08	0.02
187	33.70	10.83	XX	25	SLE F	28.00	200.00	0.50	14.00	132.45	9.24	504.39	290.43	0.08	0.02
-2350	31.75	13.21	XX	26	SLE Q	28.00	200.00	0.50	14.00	132.45	9.24	504.39	10.73	0.00	0.00
-2350	31.75	13.21	XX	36	SLE F	28.00	200.00	0.50	14.00	132.45	9.24	504.39	11.58	0.00	0.00
187	33.70	10.83	YY	26	SLE Q	26.00	200.00	0.50	18.00	108.13	15.27	476.08	2210.36	0.89	0.16
187	33.70	10.83	YY	25	SLE F	26.00	200.00	0.50	18.00	108.13	15.27	476.08	2308.82	0.84	0.15
-2309	33.70	14.00	YY	23	SLE F	26.00	200.00	0.50	18.00	108.13	15.27	476.08	338.65	0.10	0.02
-2309	33.70	14.00	YY	26	SLE Q	26.00	200.00	0.50	18.00	108.13	15.27	476.08	309.56	0.09	0.02

Verifiche aste in acciaio

Simbologia

Φ _{L,T}	=	Coefficiente Φ per stabilità laterale membrature inflesse
Φ _y	=	Coefficiente Φ per inflessione intorno all'asse y(c)
Φ _z	=	Coefficiente Φ per inflessione intorno all'asse z(e)
α	=	Esponente sfruttamento per flessione retta intorno all'asse y
α _{imp}	=	Coefficiente di imperfezione
α _{my} , α _{mz} , α _{LT}	=	Coefficienti correttivi per il momento flettente
β	=	Esponente sfruttamento per flessione retta intorno all'asse z
β _{L,T}	=	Coefficiente per calcolo Φ _{L,T}
χ _{L,T}	=	Coefficiente di riduzione per stabilità laterale membrature inflesse
χ _y	=	Coefficiente χ di riduzione per instabilità intorno all'asse y(c)
χ _z	=	Coefficiente χ di riduzione per instabilità intorno all'asse z(e)
δ	=	Spostamento relativo asta
λ* _y	=	Snellezza adimensionale per inflessione intorno all'asse y(c)
λ* _z	=	Snellezza adimensionale per inflessione intorno all'asse z(e)
λ _{L,T}	=	Coefficiente di imperfezione per stabilità laterale membrature inflesse
λ _{L,T,0}	=	Coefficiente di imperfezione di confronto per stabilità laterale membrature inflesse
λ _y	=	Snellezza per inflessione intorno all'asse y(c)
λ _z	=	Snellezza per inflessione intorno all'asse z(e)
σ _{TD,max}	<daN/cmq>	Tensione ideale massima
σ _K	<daN/cmq>	Tensione normale per momento flettente
σ _N	<daN/cmq>	Tensione normale per sforzo normale
τ	<daN/cmq>	Tensione tangenziale per taglio e/o torsione

Relazione di calcolo

ψ		= Coeff. di correzione momento critico per stabilità laterale membrature inflesse
Aeff	<cmq>	= Area effettiva per trazione
Anet	<cmq>	= Area netta per compressione
Area	<cmq>	= Area
Atag,y	<cmq>	= Area resistente a taglio in dir. Y
Atag,z	<cmq>	= Area resistente a taglio in dir. Z
CC		= Numero della combinazione delle condizioni di carico elementari
Cod.		= Codice
Curva		= Curva di instabilità adottata
D	<cm>	= Distanza
Fyk	<daN/cmq>	= Tensione caratteristica di snervamento dell'acciaio
Fyt	<daN/cmq>	= Tensione caratteristica di rottura
Iy	<cm>	= Raggio giratorio d'inerzia rispetto all'asse Y
Iz	<cm>	= Raggio giratorio d'inerzia rispetto all'asse Z
Jω	<cm6>	= Costante di ingobbamento
Jy	<cm4>	= Momento d'inerzia rispetto all'asse Y
Jz	<cm4>	= Momento d'inerzia rispetto all'asse Z
K _E φ		= Fattore di riduzione del modulo di elasticità dell'acciaio in funzione della temperatura
K _y φ		= Fattore di riduzione della resistenza a snervamento dell'acciaio in funzione della temperatura
K _{yy} , K _{yz} , K _{zy} , K _{zz}		= Coefficienti di interazione
L	<m>	= Lunghezza dell'asta
L _{cr}	<m>	= Lunghezza di libera inflessione laterale fra ritegni torsionali
M, C _r	<daNm>	= Momento critico per instabilità flessione torsionale
M _{Ny,c,Rd}	<daNm>	= Resistenza di calcolo a pressoflessione intorno all'asse Y
M _{Nz,c,Rd}	<daNm>	= Resistenza di calcolo a pressoflessione intorno all'asse Z
M _x	<daNm>	= Momento torcente intorno all'asse X
M _y	<daNm>	= Momento flettente intorno all'asse Y
M _{y,Ed}	<daNm>	= Momento flettente di calcolo intorno all'asse Y
M _{y,c,Rd}	<daNm>	= Resistenza di calcolo a flessione intorno all'asse Y
M _z	<daNm>	= Momento flettente intorno all'asse Z
M _{z,Ed}	<daNm>	= Momento flettente di calcolo intorno all'asse Z
M _{z,V,c,Rd}	<daNm>	= Resistenza di calcolo a flessione ridotta per taglio intorno all'asse Z
N	<daN>	= Sforzo normale
N,Ed	<daN>	= Forza assiale di calcolo
N _{c,Rd}	<daN>	= Resistenza a compressione
N _{cr,y}	<daN>	= Sforzo normale critico euleriano per inflessione intorno all'asse y(c)
N _{cr,z}	<daN>	= Sforzo normale critico euleriano per inflessione intorno all'asse z(e)
Sez.		= Numero della sezione
Temp.	<°C>	= Temperatura
Tipo		= Tipologia L = Sezione a L R = Rettangolare Is = I stondata
Tp		= Tipo di acciaio
Ty	<daN>	= Taglio in dir. Y
Tz	<daN>	= Taglio in dir. Z
V,Ed	<daN>	= Forza di taglio di calcolo
V _{c,Rd}	<daN>	= Resistenza a taglio
V _{c,Rd,Red}	<daN>	= Resistenza a taglio ridotta
Wy,plas	<cmc>	= Modulo di resistenza plastico intorno all'asse Y
Wymin	<cmc>	= Modulo di resistenza minimo rispetto all'asse Y
Wz,plas	<cmc>	= Modulo di resistenza plastico intorno all'asse Z
Wzmin	<cmc>	= Modulo di resistenza minimo rispetto all'asse Z
X1	<m>	= Coordinata progressiva (dal nodo iniziale dell'asta) in cui viene effettuato il progetto/verifica
f		= Fattore di modifica per il coefficiente di riduzione
f _{z,G}	<cm>	= Freccia in direzione Z globale
f _{z,L}	<cm>	= Freccia in direzione Z locale
K _c		= Coeff. di correzione momento flettente per stabilità laterale membrature inflesse

Caratteristiche profilati utilizzati

Sez.	Cod.	Tipo	D <cm>	Area <cmq>	Anet <cmq>	Aeff <cmq>	Jy <cm4>	Jz <cm4>	Iy <cm>	Iz <cm>	Wymin <cmc>	Wzmin <cmc>	TP	Fyk <daN/cmq>	Fyt <daN/cmq>
7	IPE300	Is	--	53.81	53.81	53.81	8356.33	603.78	12.46	3.35	557.09	80.50	S275 UNI EN 10025-2	2750.00	4300.00
8	IPE200	Is	--	28.48	28.48	28.48	1943.23	142.37	8.26	2.24	194.32	28.47	S275 UNI EN 10025-2	2750.00	4300.00
12	HEB300	Is	--	149.08	149.08	149.08	25166.30	8562.84	12.99	7.58	1677.75	570.86	S275 UNI EN 10025-2	2750.00	4300.00

Caratteristiche profilati utilizzati

Sez.	Cod.	Wy,plas <cmc>	Wz,plas <cmc>	Atag,y <cmq>	Atag,z <cmq>	Jω <cm6>	Temp. <°C>	K _y φ	K _z φ
7	IPE300	630.77	125.38	36.16	25.68	125934.00			
8	IPE200	221.64	44.70	19.58	14.00	12988.10			
12	HEB300	1875.75	871.04	126.20	47.43	1687790.00			

Asta n. 17 (-2040 -948) - Sez. 12 (HEB300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 19 SLU X1=0.35 - Classe 1
Sollecitazioni: T_y=206.59
V,Ed=206.59 V_{c,Rd}=190836.00 V,Ed/V_{c,Rd}=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 19 SLU X1=0.35 - Classe 1
Sollecitazioni: T_z=12775.50
V,Ed=12775.50 V_{c,Rd}=71723.80 V,Ed/V_{c,Rd}=0.18

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 19 SLU X1=4.38 - Classe 1
Sollecitazioni: N=-51870.10 T_z=12775.50 M_y=-34724.10 T_y=206.59 M_z=575.85
N,Ed=-51870.10 N_{c,Rd}=390452.00 n=N,Ed/N_{c,Rd}=0.13
Pressoflessione retta YY [4.2.33]:
M_{y,Ed}=-34724.10 M_{y,V,c,Rd}=49126.70 M_{Ny,c,Rd}=48281.10 M_{y,Ed/MNy,c,Rd}=0.72
Pressoflessione retta ZZ [4.2.34]:
M_{z,Ed}=575.85 M_{z,V,c,Rd}=22813.00 M_{Nz,c,Rd}=22813.00 M_{z,Ed/MNz,c,Rd}=0.03
α=2.00 β=1.00 (M_{y,Ed/MNy,c,Rd})²+ (M_{z,Ed/MNz,c,Rd})¹=0.72

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 30 SLU - Classe 1
Sollecitazioni: N,Ed=-54324.60 M_{y,Ed}=-34411.80 M_{z,Ed}=682.09 L=4.68
α_{my}, α_{mz}, α_{LT}=0.95, 0.95, 0.95

$L_{cr}=4.68$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.31$ $M_{cr}=357109.00$ $\lambda_{LT}=0.38$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.55$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=36.02$ $N_{cr,y}=2381470.00$ $\lambda^*_y=0.41$ Curva b: $\Phi_y=0.62$ $\chi_y=0.92$
 $\lambda_z=61.75$ $N_{cr,z}=810299.00$ $\lambda^*_z=0.71$ Curva c: $\Phi_z=0.88$ $\chi_z=0.72$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.66, 0.59, 1.10$
 Verifica YY: $0.15+0.69+0.02=0.86$
 Verifica ZZ: $0.19+0.41+0.03=0.64$

- Verifica Spostamento relativo massimo per singola asta - CC 22
 $\delta=0.39$ (L/1026)

Asta n. 17 (-948 -73) - Sez. 12 (HEB300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU $X_l=4.62$ - Classe 1
 Sollecitazioni: $T_y=4203.83$
 $V, Ed=4203.83$ $V_c, Rd=190836.00$ $V, Ed/V_c, Rd=0.02$

- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU $X_l=4.62$ - Classe 1
 Sollecitazioni: $T_z=10895.30$
 $V, Ed=10895.30$ $V_c, Rd=71723.80$ $V, Ed/V_c, Rd=0.15$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 30 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-8594.00$ $T_z=8959.67$ $M_y=30509.30$ $T_y=1387.50$ $M_z=-3328.68$
 $N, Ed=-8594.00$ $N_c, Rd=390452.00$ $n=N, Ed/N_c, Rd=0.02$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=30509.30$ $M_y, V, c, Rd=49126.70$ $MN_y, c, Rd=49126.70$ $M_y, Ed/MN_y, c, Rd=0.62$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-3328.68$ $M_z, V, c, Rd=22813.00$ $MN_z, c, Rd=22813.00$ $M_z, Ed/MN_z, c, Rd=0.15$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.62$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $N, Ed=-10926.00$ $M_y, Ed=29437.00$ $M_z, Ed=9250.36$ $L=4.62$
 $\alpha_y, \alpha_z, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.62$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.47$ $M_{cr}=389268.00$ $\lambda_{LT}=0.36$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.54$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=35.56$ $N_{cr,y}=2443730.00$ $\lambda^*_y=0.41$ Curva b: $\Phi_y=0.62$ $\chi_y=0.92$
 $\lambda_z=60.96$ $N_{cr,z}=831482.00$ $\lambda^*_z=0.70$ Curva c: $\Phi_z=0.87$ $\chi_z=0.72$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.59, 0.57, 0.98$
 Verifica YY: $0.03+0.57+0.24=0.84$
 Verifica ZZ: $0.03+0.34+0.40=0.77$

- Verifica Spostamento relativo massimo per singola asta - CC 20
 $\delta=0.62$ (L/748)

Asta n. 201 (63 -1942) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 29 SLU $X_l=1.68$ - Classe 2
 Sollecitazioni: $T_y=10.87$ $M_x=-4.38$
 $V, Ed=10.87$ $V_c, Rd, Red=54306.10$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 29 SLU $X_l=1.68$ - Classe 2
 Sollecitazioni: $T_z=1064.28$ $M_x=-4.38$
 $V, Ed=1064.28$ $V_c, Rd, Red=38568.50$ $V, Ed/V_c, Rd, Red=0.03$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=0.23$ - Classe 3
 Sollecitazioni: $N=-5412.60$ $T_z=1565.74$ $M_y=2140.05$ $T_y=10.87$ $M_z=-15.70$ $M_x=-4.38$
 Tensioni: $\sigma_N=-100.58$ $\sigma_{m,d}=-403.65$ $\tau=25.99$ $\sigma_{max}=-504.23$ (sfrut=0.19)
 Tensioni: $\sigma_N=-100.58$ $\sigma_{m,d}=-0.92$ $\tau=91.21$ $\tau_{max}=91.21$ (sfrut=0.06)
 Tensioni: $\sigma_N=-100.58$ $\sigma_{m,d}=-403.65$ $\tau=25.99$ $\sigma_{ID,max}=506.23$ (sfrut=0.19)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N, Ed=-5412.60$ $M_y, Ed=2140.05$ $M_z, Ed=19.14$ $L=3.43$
 $\alpha_y, \alpha_z, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.43$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.38$ $M_{cr}=46963.50$ $\lambda_{LT}=0.57$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.65$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=27.53$ $N_{cr,y}=1472130.00$ $\lambda^*_y=0.32$ Curva a: $\Phi_y=0.56$ $\chi_y=0.97$
 $\lambda_z=102.40$ $N_{cr,z}=106368.00$ $\lambda^*_z=1.18$ Curva b: $\Phi_z=1.36$ $\chi_z=0.49$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.99, 0.77, 0.99$
 Verifica YY: $0.04+0.15+0.01=0.20$
 Verifica ZZ: $0.08+0.12+0.01=0.21$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.01$ (L/25459)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.03$ (L/11091)

Asta n. 201 (-1942 62) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 18 SLU $X_l=1.75$ - Classe 2
Sollecitazioni: $T_y=8.98$ $M_x=3.13$
 $V, Ed=8.98$ $V_c, Rd, Red=54414.10$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.24] - CC 18 SLU $X_l=1.75$ - Classe 2
Sollecitazioni: $T_z=-786.15$ $M_x=3.13$
 $V, Ed=-786.15$ $V_c, Rd, Red=38645.20$ $V, Ed/V_c, Rd, Red=0.02$
 - Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=3.21$ - Classe 3
Sollecitazioni: $N=-5371.70$ $T_z=-1436.35$ $M_y=1722.53$ $T_y=12.13$ $M_z=18.73$ $M_x=3.99$
Tensioni: $\sigma_N=-99.82$ $\sigma_{m,d}=-332.46$ $\tau=23.69$ $\sigma_{max}=-432.28$ (sfrut=0.17)
Tensioni: $\sigma_N=-99.82$ $\sigma_{m,d}=-1.10$ $\tau=83.64$ $\tau_{max}=83.64$ (sfrut=0.06)
Tensioni: $\sigma_N=-99.82$ $\sigma_{m,d}=-332.46$ $\tau=23.69$ $\sigma_{ID,max}=434.23$ (sfrut=0.17)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N, Ed=-5371.70$ $M_y, Ed=1722.53$ $M_z, Ed=-20.14$ $L=3.43$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.43$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.55$ $M_{cr}=50487.70$ $\lambda_{LT}=0.55$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.64$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=27.53$ $N_{cr,y}=1472130.00$ $\lambda^*_y=0.32$ Curva a: $\Phi_y=0.56$ $\chi_y=0.97$
 $\lambda_z=102.40$ $N_{cr,z}=106368.00$ $\lambda^*_z=1.18$ Curva b: $\Phi_z=1.36$ $\chi_z=0.49$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.99, 0.77, 0.99$
Verifica YY: $0.04+0.12+0.01=0.17$
Verifica ZZ: $0.08+0.09+0.01=0.18$
 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.01$ (L/24177)
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.02$ (L/18068)

Asta n. 201 (62 -2035) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 1 SLV $X_l=0.23$ - Classe 2
Sollecitazioni: $T_y=2.65$
 $V, Ed=2.65$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.23$ - Classe 2
Sollecitazioni: $T_z=388.52$
 $V, Ed=388.52$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_l=0.23$ - Classe 3
Sollecitazioni: $N=-4724.98$ $T_z=1119.76$ $M_y=1188.78$ $T_y=103.01$ $M_z=-130.87$ $M_x=-1.89$
Tensioni: $\sigma_N=-87.80$ $\sigma_{m,d}=-375.95$ $\tau=11.24$ $\sigma_{max}=-463.76$ (sfrut=0.18)
Tensioni: $\sigma_N=-87.80$ $\sigma_{m,d}=-7.69$ $\tau=63.59$ $\tau_{max}=63.59$ (sfrut=0.04)
Tensioni: $\sigma_N=-87.80$ $\sigma_{m,d}=-375.95$ $\tau=11.24$ $\sigma_{ID,max}=464.17$ (sfrut=0.18)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
Sollecitazioni: $N, Ed=-4724.98$ $M_y, Ed=1188.78$ $M_z, Ed=147.08$ $L=2.92$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.92$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.53$ $M_{cr}=65026.30$ $\lambda_{LT}=0.49$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.60$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.99$
 $\lambda_y=23.46$ $N_{cr,y}=2026630.00$ $\lambda^*_y=0.27$ Curva a: $\Phi_y=0.54$ $\chi_y=0.98$
 $\lambda_z=87.27$ $N_{cr,z}=146432.00$ $\lambda^*_z=1.01$ Curva b: $\Phi_z=1.14$ $\chi_z=0.59$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.98, 0.76, 0.98$
Verifica YY: $0.03+0.08+0.07=0.18$
Verifica ZZ: $0.03+0.06+0.07=0.16$
 - Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.01$ (L/29783)
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.01$ (L/24183)

Asta n. 201 (-2035 61) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=1.72$ - Classe 2
Sollecitazioni: $T_y=-30.61$
 $V, Ed=-30.61$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=1.72$ - Classe 2
Sollecitazioni: $T_z=-388.07$
 $V, Ed=-388.07$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=3.15$ - Classe 3
Sollecitazioni: $N=-4332.63$ $T_z=-1110.27$ $M_y=954.93$ $T_y=-76.26$ $M_z=-125.55$ $M_x=1.76$
Tensioni: $\sigma_N=-80.51$ $\sigma_{m,d}=-327.37$ $\tau=10.45$ $\sigma_{max}=-407.88$ (sfrut=0.16)
Tensioni: $\sigma_N=-80.51$ $\sigma_{m,d}=-7.38$ $\tau=62.91$ $\tau_{max}=62.91$ (sfrut=0.04)

Tensioni: $\sigma_N = -80.51$ $\sigma_{m,d} = -327.37$ $\tau = 10.45$ $\sigma_{ID,max} = 408.28$ (sfrut=0.16)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: N, Ed=-4332.63 My, Ed=954.93 Mz, Ed=-125.55 L=3.25
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 3.25$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 2.90$ M, cr=62593.60 $\lambda_{LT} = 0.49$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.61$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 0.99$
 $\lambda_y = 26.05$ Ncr, y=1643090.00 $\lambda^*_y = 0.30$ Curva a: $\Phi_y = 0.56$ $\chi_y = 0.98$
 $\lambda_z = 96.93$ Ncr, z=118720.00 $\lambda^*_z = 1.12$ Curva b: $\Phi_z = 1.28$ $\chi_z = 0.53$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.98, 0.76, 0.98
 Verifica YY: 0.03+0.06+0.06=0.15
 Verifica ZZ: 0.03+0.05+0.06=0.14

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L} = 0.02$ (L/20784)

- Verifica freccia massima carichi totali - CC 34
 $f_{z,G} = 0.02$ (L/13488)

Asta n. 201 (61 -1932) - Sez. 7 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 29 SLU Xl=0.35 - Classe 3
 Sollecitazioni: N=-9889.19 Tz=3436.03 My=6762.55 Ty=129.53 Mz=-228.75 Mx=-1.92
 Tensioni: $\sigma_N = -183.77$ $\sigma_{m,d} = -1498.05$ $\tau = 11.41$ $\sigma_{max} = -1681.82$ (sfrut=0.64)
 Tensioni: $\sigma_N = -183.77$ $\sigma_{m,d} = -13.45$ $\tau = 192.22$ $\tau_{max} = 192.22$ (sfrut=0.13)
 Tensioni: $\sigma_N = -183.77$ $\sigma_{m,d} = -1498.05$ $\tau = 11.41$ $\sigma_{ID,max} = 1681.94$ (sfrut=0.64)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: N, Ed=-9889.19 My, Ed=6762.55 Mz, Ed=-228.75 L=3.69
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 3.69$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 2.23$ M, cr=39277.50 $\lambda_{LT} = 0.62$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.68$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.93$
 $\lambda_y = 29.64$ Ncr, y=1269310.00 $\lambda^*_y = 0.34$ Curva a: $\Phi_y = 0.57$ $\chi_y = 0.97$
 $\lambda_z = 110.28$ Ncr, z=91713.30 $\lambda^*_z = 1.27$ Curva b: $\Phi_z = 1.49$ $\chi_z = 0.44$
 Kyy, Kyz, Kzy, Kzz=0.96, 1.04, 0.77, 1.04
 Verifica YY: 0.07+0.48+0.11=0.66
 Verifica ZZ: 0.16+0.38+0.11=0.66

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L} = 0.11$ (L/3023)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L} = 0.16$ (L/2034)

Asta n. 201 (-1932 -1934) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV Xl=2.11 - Classe 2
 Sollecitazioni: Ty=-11.05
 V, Ed=-11.05 Vc, Rd=54683.30 V, Ed/Vc, Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 5 SLV Xl=2.11 - Classe 2
 Sollecitazioni: Tz=-83.67
 V, Ed=-83.67 Vc, Rd=38836.40 V, Ed/Vc, Rd=0.00

- Verifica in termini tensionali [4.2.4] - CC 29 SLU Xl=2.32 - Classe 3
 Sollecitazioni: N=-9817.25 Tz=-124.19 My=-3435.20 Ty=-63.85 Mz=-35.46
 Tensioni: $\sigma_N = -182.43$ $\sigma_{m,d} = -660.69$ $\tau = 0.00$ $\sigma_{max} = -843.12$ (sfrut=0.32)
 Tensioni: $\sigma_N = -182.43$ $\sigma_{m,d} = -2.09$ $\tau = 6.94$ $\tau_{max} = 6.94$ (sfrut=0.00)
 Tensioni: $\sigma_N = -182.43$ $\sigma_{m,d} = -660.69$ $\tau = 0.00$ $\sigma_{ID,max} = 843.12$ (sfrut=0.32)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: N, Ed=-9817.25 My, Ed=-3435.20 Mz, Ed=112.57 L=2.32
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 2.32$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.09$ M, cr=41925.30 $\lambda_{LT} = 0.60$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.67$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.94$
 $\lambda_y = 18.61$ Ncr, y=3221700.00 $\lambda^*_y = 0.21$ Curva a: $\Phi_y = 0.52$ $\chi_y = 1.00$
 $\lambda_z = 69.22$ Ncr, z=232781.00 $\lambda^*_z = 0.80$ Curva b: $\Phi_z = 0.92$ $\chi_z = 0.73$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.99, 0.77, 0.99
 Verifica YY: 0.07+0.24+0.05=0.36
 Verifica ZZ: 0.10+0.19+0.05=0.34

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,G} = 0.07$ (L/3463)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L} = 0.09$ (L/2704)

Asta n. 201 (-1934 -73) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=1.27$ - Classe 2
Sollecitazioni: $T_y=-5.76$
 $V, Ed=-5.76$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=1.27$ - Classe 2
Sollecitazioni: $T_z=-1441.31$
 $V, Ed=-1441.31$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.04$
 - Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=4.66$ - Classe 3
Sollecitazioni: $N=-9862.61$ $T_x=-2305.25$ $M_y=4740.94$ $T_y=-5.76$ $M_z=-18.52$
Tensioni: $\sigma_N=-183.28$ $\sigma_{m,d}=-874.03$ $\tau=0.00$ $\sigma_{max}=-1057.30$ (sfrut=0.40)
Tensioni: $\sigma_N=-183.28$ $\sigma_{m,d}=-1.09$ $\tau=128.71$ $\tau_{max}=128.71$ (sfrut=0.09)
Tensioni: $\sigma_N=-183.28$ $\sigma_{m,d}=-874.03$ $\tau=0.00$ $\sigma_{ID,max}=1057.30$ (sfrut=0.40)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N, Ed=-9862.61$ $M_y, Ed=4740.94$ $M_z, Ed=-18.52$ $L=4.96$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=4.96$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.67$ $M_{cr}=30202.60$ $\lambda_{LT}=0.71$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.74$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.89$
 $\lambda_y=39.78$ $N_{cr,y}=704700.00$ $\lambda^*_y=0.46$ Curva a: $\Phi_y=0.63$ $\chi_y=0.94$
 $\lambda_z=148.00$ $N_{cr,z}=50917.50$ $\lambda^*_z=1.70$ Curva b: $\Phi_z=2.21$ $\chi_z=0.28$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 1.09, 0.78, 1.09$
Verifica YY: $0.07+0.35+0.01=0.44$
Verifica ZZ: $0.25+0.28+0.01=0.55$
 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.07$ (L/6564)
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.13$ (L/3541)
- Asta n. 202 (-2393 -1937) - Sez. 8 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=17.48$
 $V, Ed=17.48$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=1279.45$
 $V, Ed=1279.45$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.06$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=2.25$ - Classe 1
Sollecitazioni: $N=-374.99$ $M_y=-1432.25$ $T_y=17.48$ $M_z=11.02$
 $N, Ed=-374.99$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-1432.25$ $M_{y,c}, Rd=5804.95$ $M_{Ny,c}, Rd=5804.95$ $M_y, Ed/M_{Ny,c}, Rd=0.25$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=11.02$ $M_z, V, c, Rd=1170.59$ $M_{Nz,c}, Rd=1170.59$ $M_z, Ed/M_{Nz,c}, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny,c}, Rd)^2 + (M_z, Ed/M_{Nz,c}, Rd)^3 = 0.25$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $N, Ed=-374.99$ $M_y, Ed=-1432.25$ $M_z, Ed=11.02$ $L=3.43$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.43$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.76$ $M_{cr}=7486.93$ $\lambda_{LT}=0.90$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.89$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.78$
 $\lambda_y=41.53$ $N_{cr,y}=342337.00$ $\lambda^*_y=0.48$ Curva a: $\Phi_y=0.64$ $\chi_y=0.93$
 $\lambda_z=153.42$ $N_{cr,z}=25081.10$ $\lambda^*_z=1.77$ Curva b: $\Phi_z=2.33$ $\chi_z=0.26$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.59, 0.57, 0.98$
Verifica YY: $0.01+0.30+0.02=0.32$
Verifica ZZ: $0.01+0.18+0.03=0.21$
 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.23$ (L/1479)
 - Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.29$ (L/1165)
- Asta n. 202 (-1937 -1209) - Sez. 8 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=3.43$ - Classe 1
Sollecitazioni: $T_y=8.95$
 $V, Ed=8.95$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=3.43$ - Classe 1
Sollecitazioni: $T_z=-1866.45$
 $V, Ed=-1866.45$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.09$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=3.43$ - Classe 1
 Sollecitazioni: $N=-395.62$ $T_z=-1866.45$ $M_y=2014.55$ $T_y=8.95$ $M_z=17.55$
 $N, Ed=-395.62$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=2014.55$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.35$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=17.55$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.35$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $N, Ed=-395.62$ $M_y, Ed=2014.55$ $M_z, Ed=17.55$ $L=3.43$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.43$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.37$ $M, cr=10111.10$ $\lambda_{LT}=0.78$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.79$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.86$
 $\lambda_y=41.53$ $N_{cr,y}=342337.00$ $\lambda_y^*=0.48$ Curva a: $\Phi_y=0.64$ $\chi_y=0.93$
 $\lambda_z=153.42$ $N_{cr,z}=25081.00$ $\lambda_z^*=1.77$ Curva b: $\Phi_z=2.33$ $\chi_z=0.26$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.59, 0.57, 0.98$
 Verifica YY: $0.01+0.39+0.01=0.40$
 Verifica ZZ: $0.01+0.23+0.01=0.25$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.07$ (L/4988)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.08$ (L/4073)

- Asta n. 202 (-1209 -2039) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=31.82$
 $V, Ed=31.82$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=1759.68$
 $V, Ed=1759.68$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.08$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-602.77$ $T_z=1759.68$ $M_y=2008.57$ $T_y=31.82$ $M_z=-50.35$
 $N, Ed=-602.77$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=2008.57$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.35$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-50.35$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.04$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.35$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $N, Ed=-602.77$ $M_y, Ed=2008.57$ $M_z, Ed=-50.35$ $L=2.92$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.92$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.15$ $M, cr=11402.00$ $\lambda_{LT}=0.73$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.76$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.88$
 $\lambda_y=35.39$ $N_{cr,y}=471283.00$ $\lambda_y^*=0.41$ Curva a: $\Phi_y=0.60$ $\chi_y=0.95$
 $\lambda_z=130.76$ $N_{cr,z}=34528.20$ $\lambda_z^*=1.51$ Curva b: $\Phi_z=1.86$ $\chi_z=0.34$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.59, 0.57, 0.98$
 Verifica YY: $0.01+0.37+0.03=0.41$
 Verifica ZZ: $0.01+0.22+0.04=0.27$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.04$ (L/6592)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.06$ (L/5195)

- Asta n. 202 (-2039 -1245) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=3.25$ - Classe 1
 Sollecitazioni: $T_y=-12.15$
 $V, Ed=-12.15$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=3.25$ - Classe 1
 Sollecitazioni: $T_z=-1737.01$
 $V, Ed=-1737.01$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.08$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=3.25$ - Classe 1
 Sollecitazioni: $N=-611.53$ $T_z=-1737.01$ $M_y=1934.21$ $T_y=-12.15$ $M_z=-19.06$
 $N, Ed=-611.53$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1934.21$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.33$
 Pressoflessione retta ZZ [4.2.34]:

Relazione di calcolo

- Mz,Ed=-19.06 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.02
 $\alpha=2.00 \beta=1.00 (M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.33$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: N,Ed=-611.53 My,Ed=1934.21 Mz,Ed=20.39 L=3.25
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.25$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=2.17 M_{cr}=9965.46 \lambda_{LT}=0.78$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.79 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.85$
 $\lambda_y=39.31 N_{cr,y}=382094.00 \lambda_y^*=0.45$ Curva a: $\Phi_y=0.63 \chi_y=0.94$
 $\lambda_z=145.22 N_{cr,z}=27993.80 \lambda_z^*=1.67$ Curva b: $\Phi_z=2.15 \chi_z=0.29$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.59, 0.57, 0.99
 Verifica YY: $0.01+0.37+0.01=0.39$
 Verifica ZZ: $0.01+0.22+0.02=0.25$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.03$ (L/9456)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,G}=0.04$ (L/7633)
- Asta n. 202 (-1245 -1929) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_y=33.90$
 $V,Ed=33.90 V_c,Rd=29609.30 V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_z=1666.44$
 $V,Ed=1666.44 V_c,Rd=21171.50 V,Ed/V_c,Rd=0.08$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU X1=0.00 - Classe 1
 Sollecitazioni: N=-768.51 $T_z=1666.44 M_y=1932.12 T_y=33.90 M_z=-64.99$
 $N,Ed=-768.51 N_c,Rd=74603.30 n=N,Ed/N_c,Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=1932.12 M_y,V,c,Rd=5804.95 MN_y,c,Rd=5804.95 M_y,Ed/MN_y,c,Rd=0.33$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-64.99 M_z,V,c,Rd=1170.59 MN_z,c,Rd=1170.59 M_z,Ed/MN_z,c,Rd=0.06$
 $\alpha=2.00 \beta=1.00 (M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.33$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: N,Ed=-768.51 My,Ed=1932.12 Mz,Ed=-64.99 L=3.69
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.69$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=1.94 M_{cr}=7527.60 \lambda_{LT}=0.90$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.89 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.78$
 $\lambda_y=44.72 N_{cr,y}=295173.00 \lambda_y^*=0.52$ Curva a: $\Phi_y=0.67 \chi_y=0.92$
 $\lambda_z=165.23 N_{cr,z}=21625.60 \lambda_z^*=1.90$ Curva b: $\Phi_z=2.60 \chi_z=0.23$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.61, 0.57, 1.01
 Verifica YY: $0.01+0.41+0.03=0.45$
 Verifica ZZ: $0.01+0.24+0.06=0.31$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.04$ (L/9611)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.05$ (L/6991)
- Asta n. 202 (-1929 -1933) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_y=-4.41$
 $V,Ed=-4.41 V_c,Rd=29609.30 V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_z=679.39$
 $V,Ed=679.39 V_c,Rd=21171.50 V,Ed/V_c,Rd=0.03$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU X1=1.19 - Classe 1
 Sollecitazioni: N=-812.37 $M_y=-748.24 T_y=-4.41 M_z=2.28$
 $N,Ed=-812.37 N_c,Rd=74603.30 n=N,Ed/N_c,Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-748.24 M_y,c,Rd=5804.95 MN_y,c,Rd=5804.95 M_y,Ed/MN_y,c,Rd=0.13$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=2.28 M_z,V,c,Rd=1170.59 MN_z,c,Rd=1170.59 M_z,Ed/MN_z,c,Rd=0.00$
 $\alpha=2.00 \beta=1.00 (M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.13$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: N,Ed=-812.37 My,Ed=-748.24 Mz,Ed=7.54 L=2.32

$\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.32$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.06$ $M_{cr}=7811.62$ $\lambda_{LT}=0.88$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.87$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.79$
 $\lambda_y=28.07$ $N_{cr,y}=749192.00$ $\lambda^*_y=0.32$ Curva a: $\Phi_y=0.57$ $\chi_y=0.97$
 $\lambda_z=103.71$ $N_{cr,z}=54888.90$ $\lambda^*_z=1.19$ Curva b: $\Phi_z=1.38$ $\chi_z=0.48$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.59, 0.57, 0.98$
Verifica YY: $0.01+0.15+0.00=0.17$
Verifica ZZ: $0.01+0.09+0.01=0.11$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.06$ (L/3877)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.08$ (L/3035)

Asta n. 202 (-1933 -2016) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_y=-11.78$
 $V, Ed=-11.78$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=527.18$
 $V, Ed=527.18$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.02$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_1=1.03$ - Classe 1
Sollecitazioni: $N=-758.91$ $M_y=-647.90$ $T_y=-11.78$ $M_z=2.32$
 $N, Ed=-758.91$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-647.90$ $M_y, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.11$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=2.32$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^1 = 0.11$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $N, Ed=-758.91$ $M_y, Ed=-647.90$ $M_z, Ed=14.42$ $L=2.30$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.30$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.10$ $M_{cr}=8200.36$ $\lambda_{LT}=0.86$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.86$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.81$
 $\lambda_y=27.89$ $N_{cr,y}=759145.00$ $\lambda^*_y=0.32$ Curva a: $\Phi_y=0.56$ $\chi_y=0.97$
 $\lambda_z=103.03$ $N_{cr,z}=55618.10$ $\lambda^*_z=1.19$ Curva b: $\Phi_z=1.37$ $\chi_z=0.49$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.59, 0.57, 0.98$
Verifica YY: $0.01+0.13+0.01=0.15$
Verifica ZZ: $0.01+0.08+0.01=0.10$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.05$ (L/4282)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.07$ (L/3490)

Asta n. 203 (-2394 -1938) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_y=7.35$
 $V, Ed=7.35$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=1219.12$
 $V, Ed=1219.12$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.06$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_1=2.62$ - Classe 1
Sollecitazioni: $N=144.39$ $M_y=-1599.02$ $T_y=7.35$ $M_z=13.06$
 $N, Ed=144.39$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-1599.02$ $M_y, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.28$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=13.06$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^1 = 0.28$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $M_y, Ed=-1599.02$ $M_z, Ed=18.98$ $L=3.43$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.43$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=7467.62$ $\lambda_{LT}=0.90$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.89$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.78$
 $\lambda_y=41.53$ $N_{cr,y}=342337.00$ $\lambda^*_y=0.48$ Curva a: $\Phi_y=0.64$ $\chi_y=0.93$
 $\lambda_z=153.42$ $N_{cr,z}=25081.10$ $\lambda^*_z=1.77$ Curva b: $\Phi_z=2.33$ $\chi_z=0.26$

Relazione di calcolo

- Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
Verifica YY: 0.00+0.34+0.01=0.34
Verifica ZZ: 0.00+0.20+0.02=0.22
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.24$ (L/1416)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,G}=0.32$ (L/1088)
- Asta n. 203 (-1938 -1944) - Sez. 8 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_1=3.43$ - Classe 1
Sollecitazioni: $T_y=3.01$
 $V, Ed=3.01$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_1=3.43$ - Classe 1
Sollecitazioni: $T_z=-1747.46$
 $V, Ed=-1747.46$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.08$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_1=3.43$ - Classe 1
Sollecitazioni: $N=137.71$ $T_z=-1747.46$ $M_y=1811.65$ $T_y=3.01$ $M_z=7.11$
 $N, Ed=137.71$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1811.65$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.31$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=7.11$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^1 = 0.31$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $M_y, Ed=1811.65$ $M_z, Ed=7.11$ $L=3.43$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.43$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.78$ $M, cr=11869.00$ $\lambda_{LT}=0.72$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.75$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.89$
 $\lambda_y=41.53$ $N_{cr,y}=342337.00$ $\lambda^*_y=0.48$ Curva a: $\Phi_y=0.64$ $\chi_y=0.93$
 $\lambda_z=153.42$ $N_{cr,z}=25081.00$ $\lambda^*_z=1.77$ Curva b: $\Phi_z=2.33$ $\chi_z=0.26$
Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
Verifica YY: 0.00+0.33+0.00=0.34
Verifica ZZ: 0.00+0.20+0.01=0.21
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.10$ (L/3536)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.13$ (L/2726)
- Asta n. 203 (-1944 -2038) - Sez. 8 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_y=23.75$
 $V, Ed=23.75$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=1405.16$
 $V, Ed=1405.16$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.07$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $N=230.17$ $T_z=1405.16$ $M_y=1807.64$ $T_y=23.75$ $M_z=-36.78$
 $N, Ed=230.17$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1807.64$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.31$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-36.78$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.03$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^1 = 0.31$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $M_y, Ed=1807.64$ $M_z, Ed=-36.78$ $L=2.92$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.92$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.94$ $M, cr=10282.60$ $\lambda_{LT}=0.77$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.79$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.86$
 $\lambda_y=35.39$ $N_{cr,y}=471283.00$ $\lambda^*_y=0.41$ Curva a: $\Phi_y=0.60$ $\chi_y=0.95$
 $\lambda_z=130.76$ $N_{cr,z}=34528.20$ $\lambda^*_z=1.51$ Curva b: $\Phi_z=1.86$ $\chi_z=0.34$
Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
Verifica YY: 0.00+0.34+0.02=0.36
Verifica ZZ: 0.00+0.21+0.03=0.24
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.06$ (L/5041)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.08$ (L/3846)

Asta n. 203 (-2038 -1246) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_1=3.25$ - Classe 1
 Sollecitazioni: $T_y=-13.62$
 $V, Ed=-13.62$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_1=3.25$ - Classe 1
 Sollecitazioni: $T_z=-1267.53$
 $V, Ed=-1267.53$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.06$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_1=3.25$ - Classe 1
 Sollecitazioni: $N=235.40$ $T_z=-1267.53$ $M_y=1350.87$ $T_y=-13.62$ $M_z=-23.21$
 $N, Ed=235.40$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1350.87$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.23$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-23.21$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^3 = 0.23$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $M_y, Ed=1350.87$ $M_z, Ed=-23.21$ $L=3.25$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.25$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.01$ $M_{cr}=9233.47$ $\lambda_{LT}=0.81$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.82$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.84$
 $\lambda_y=39.31$ $N_{cr,y}=382094.00$ $\lambda_y^*=0.45$ Curva a: $\Phi_y=0.63$ $\chi_y=0.94$
 $\lambda_z=145.22$ $N_{cr,z}=27993.80$ $\lambda_z^*=1.67$ Curva b: $\Phi_z=2.15$ $\chi_z=0.29$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.26+0.01=0.28$
 Verifica ZZ: $0.00+0.16+0.02=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.02$ (L/14009)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.03$ (L/10807)

Asta n. 203 (-1246 -1928) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_y=29.08$
 $V, Ed=29.08$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=1243.68$
 $V, Ed=1243.68$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.06$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $N=288.46$ $T_z=1243.68$ $M_y=1348.69$ $T_y=29.08$ $M_z=-54.41$
 $N, Ed=288.46$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1348.69$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.23$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-54.41$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.05$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^3 = 0.23$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $M_y, Ed=1348.69$ $M_z, Ed=-54.41$ $L=3.69$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.69$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.81$ $M_{cr}=7013.84$ $\lambda_{LT}=0.93$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.92$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.76$
 $\lambda_y=44.72$ $N_{cr,y}=295173.00$ $\lambda_y^*=0.52$ Curva a: $\Phi_y=0.67$ $\chi_y=0.92$
 $\lambda_z=165.23$ $N_{cr,z}=21625.60$ $\lambda_z^*=1.90$ Curva b: $\Phi_z=2.60$ $\chi_z=0.23$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.29+0.03=0.32$
 Verifica ZZ: $0.00+0.17+0.04=0.22$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,G}=0.02$ (L/15618)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.03$ (L/11392)

Asta n. 203 (-1928 -2015) - Sez. 8 (IPE200) - Crit. 1

Relazione di calcolo

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=585.34$
 $V, Ed=585.34$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.03$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=1.44$ - Classe 1
Sollecitazioni: $N=302.93$ $M_y=-482.22$ $M_z=3.31$
 $N, Ed=302.93$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-482.22$ $M_y, c, Rd=5804.95$ $MN_y, c, Rd=0.08$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=3.31$ $M_z, c, Rd=1170.59$ $MN_z, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.08$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $M_y, Ed=-482.22$ $M_z, Ed=3.50$ $L=2.32$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.32$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.53$ $M_{cr}=11285.80$ $\lambda_{LT}=0.73$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.76$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.88$
 $\lambda_y=28.07$ $N_{cr,y}=749192.00$ $\lambda_y^*=0.32$ Curva a: $\Phi_y=0.57$ $\chi_y=0.97$
 $\lambda_z=103.71$ $N_{cr,z}=54888.90$ $\lambda_z^*=1.19$ Curva b: $\Phi_z=1.38$ $\chi_z=0.48$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.09+0.00=0.09$
Verifica ZZ: $0.00+0.05+0.00=0.06$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.04$ (L/6282)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.05$ (L/4843)
- Asta n. 204 (-2415 -1281) - Sez. 7 (IPE300) - Crit. 1
- Verifica a taglio Dir. Y [4.2.16] - CC 18 SLU $X_l=0.56$ - Classe 1
Sollecitazioni: $T_y=45.96$
 $V, Ed=45.96$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 18 SLU $X_l=0.56$ - Classe 1
Sollecitazioni: $T_z=933.55$
 $V, Ed=933.55$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.02$
- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=0.79$ - Classe 3
Sollecitazioni: $N=60.15$ $T_z=1230.52$ $M_y=-991.77$ $T_y=51.77$ $M_z=16.03$
Tensioni: $\sigma_N=1.12$ $\sigma_{m,d}=197.94$ $\tau=0.00$ $\sigma_{max}=199.06$ (sfrut=0.08)
Tensioni: $\sigma_N=1.12$ $\sigma_{m,d}=0.94$ $\tau=68.71$ $\tau_{max}=68.71$ (sfrut=0.05)
Tensioni: $\sigma_N=1.12$ $\sigma_{m,d}=197.94$ $\tau=0.00$ $\sigma_{ID,max}=199.06$ (sfrut=0.08)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $M_y, Ed=-991.77$ $M_z, Ed=-24.72$ $L=0.79$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.79$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.74$ $M_{cr}=517262.00$ $\lambda_{LT}=0.17$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.47$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=6.32$ $N_{cr,y}=27953100.00$ $\lambda_y^*=0.07$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=23.50$ $N_{cr,z}=2019730.00$ $\lambda_z^*=0.27$ Curva b: $\Phi_z=0.55$ $\chi_z=0.97$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.06+0.01=0.08$
Verifica ZZ: $0.00+0.05+0.01=0.06$
- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.00$ (L/68781) $f_{z,L}=0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.00$ (L/58955)
- Asta n. 204 (-1281 -1270) - Sez. 7 (IPE300) - Crit. 1
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 19 SLU $X_l=1.75$ - Classe 2
Sollecitazioni: $T_z=-303.82$ $M_x=1.30$
 $V, Ed=-303.82$ $V_c, Rd, Red=38756.90$ $V, Ed/V_c, Rd, Red=0.01$
- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=149.92$ $T_z=-521.68$ $M_y=-992.27$ $T_y=-4.62$ $M_z=-26.42$ $M_x=1.95$
Tensioni: $\sigma_N=2.79$ $\sigma_{m,d}=210.94$ $\tau=11.56$ $\sigma_{max}=213.73$ (sfrut=0.08)
Tensioni: $\sigma_N=2.79$ $\sigma_{m,d}=-1.55$ $\tau=31.35$ $\tau_{max}=31.35$ (sfrut=0.02)
Tensioni: $\sigma_N=2.79$ $\sigma_{m,d}=210.94$ $\tau=11.56$ $\sigma_{ID,max}=214.66$ (sfrut=0.08)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $M_y, Ed=-992.27$ $M_z, Ed=-34.48$ $L=1.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$

$L_{cr}=1.75$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=112433.00$ $\lambda_{LT}=0.37$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.55$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=14.00$ $N_{cr,y}=5687190.00$ $\lambda^*_y=0.16$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=52.10$ $N_{cr,z}=410924.00$ $\lambda^*_z=0.60$ Curva b: $\Phi_z=0.75$ $\chi_z=0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.06+0.02=0.08$
Verifica ZZ: $0.00+0.05+0.02=0.07$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.01$ (L/26713)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.01$ (L/20560)

Asta n. 205 (-2395 -1939) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_y=-3.68$
 $V_{Ed}=-3.68$ $V_{c,Rd}=29609.30$ $V_{Ed/Vc,Rd}=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=1142.91$
 $V_{Ed}=1142.91$ $V_{c,Rd}=21171.50$ $V_{Ed/Vc,Rd}=0.05$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_1=2.87$ - Classe 1
Sollecitazioni: $N=-209.23$ $M_y=-1640.80$ $T_y=-3.68$ $M_z=3.29$
 $N_{Ed}=-209.23$ $N_{c,Rd}=74603.30$ $n=N_{Ed}/N_{c,Rd}=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_{y,Ed}=-1640.80$ $M_{y,c,Rd}=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_{y,Ed/MNy,c,Rd}=0.28$
Pressoflessione retta ZZ [4.2.34]:
 $M_{z,Ed}=3.29$ $M_{z,V,c,Rd}=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_{z,Ed/MNz,c,Rd}=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_{y,Ed}/M_{Ny,c,Rd})^2 + (M_{z,Ed}/M_{Nz,c,Rd})^1 = 0.28$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $N_{Ed}=-209.23$ $M_{y,Ed}=-1640.80$ $M_{z,Ed}=13.88$ $L=3.43$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.43$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=7468.52$ $\lambda_{LT}=0.90$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.89$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.78$
 $\lambda_y=41.53$ $N_{cr,y}=342337.00$ $\lambda^*_y=0.48$ Curva a: $\Phi_y=0.64$ $\chi_y=0.93$
 $\lambda_z=153.42$ $N_{cr,z}=25081.10$ $\lambda^*_z=1.77$ Curva b: $\Phi_z=2.33$ $\chi_z=0.26$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.96$
Verifica YY: $0.00+0.34+0.01=0.35$
Verifica ZZ: $0.00+0.21+0.01=0.22$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.23$ (L/1473)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,G}=0.31$ (L/1099)

Asta n. 205 (-1939 -1207) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_1=3.43$ - Classe 1
Sollecitazioni: $T_y=-7.63$
 $V_{Ed}=-7.63$ $V_{c,Rd}=29609.30$ $V_{Ed/Vc,Rd}=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_1=3.43$ - Classe 1
Sollecitazioni: $T_z=-1634.39$
 $V_{Ed}=-1634.39$ $V_{c,Rd}=21171.50$ $V_{Ed/Vc,Rd}=0.08$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_1=3.43$ - Classe 1
Sollecitazioni: $N=-256.76$ $T_z=-1634.39$ $M_y=1688.44$ $T_y=-7.63$ $M_z=-12.04$
 $N_{Ed}=-256.76$ $N_{c,Rd}=74603.30$ $n=N_{Ed}/N_{c,Rd}=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_{y,Ed}=1688.44$ $M_{y,V,c,Rd}=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_{y,Ed/MNy,c,Rd}=0.29$
Pressoflessione retta ZZ [4.2.34]:
 $M_{z,Ed}=-12.04$ $M_{z,V,c,Rd}=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_{z,Ed/MNz,c,Rd}=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_{y,Ed}/M_{Ny,c,Rd})^2 + (M_{z,Ed}/M_{Nz,c,Rd})^1 = 0.29$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $N_{Ed}=-256.76$ $M_{y,Ed}=1688.44$ $M_{z,Ed}=14.13$ $L=3.43$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.43$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.99$ $M_{cr}=12768.00$ $\lambda_{LT}=0.69$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.73$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.90$
 $\lambda_y=41.53$ $N_{cr,y}=342337.00$ $\lambda^*_y=0.48$ Curva a: $\Phi_y=0.64$ $\chi_y=0.93$
 $\lambda_z=153.42$ $N_{cr,z}=25081.00$ $\lambda^*_z=1.77$ Curva b: $\Phi_z=2.33$ $\chi_z=0.26$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.97$

Relazione di calcolo

- Verifica YY: $0.00+0.31+0.01=0.32$
Verifica ZZ: $0.00+0.18+0.01=0.20$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.10$ (L/3364)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.14$ (L/2525)
- Asta n. 205 (-1207 -2037) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=5.08$
 $V, Ed=5.08$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=1188.90$
 $V, Ed=1188.90$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.06$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-467.50$ $T_z=1188.90$ $M_y=1688.36$ $T_y=5.08$ $M_z=-9.54$
 $N, Ed=-467.50$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1688.36$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.29$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-9.54$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.29$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $N, Ed=-467.50$ $M_y, Ed=1688.36$ $M_z, Ed=-9.54$ $L=2.92$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.92$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.81$ $M_{cr}=9557.23$ $\lambda_{LT}=0.80$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.81$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.84$
 $\lambda_y=35.39$ $N_{cr,y}=471283.00$ $\lambda_y^*=0.41$ Curva a: $\Phi_y=0.60$ $\chi_y=0.95$
 $\lambda_z=130.76$ $N_{cr,z}=34528.20$ $\lambda_z^*=1.51$ Curva b: $\Phi_z=1.86$ $\chi_z=0.34$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.97$
Verifica YY: $0.01+0.33+0.00=0.34$
Verifica ZZ: $0.01+0.20+0.01=0.21$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.07$ (L/4360)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.09$ (L/3240)
- Asta n. 205 (-2037 -1247) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=3.25$ - Classe 1
Sollecitazioni: $T_y=-21.31$
 $V, Ed=-21.31$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=3.25$ - Classe 1
Sollecitazioni: $T_z=-951.92$
 $V, Ed=-951.92$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.04$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=3.25$ - Classe 1
Sollecitazioni: $N=-553.62$ $T_z=-951.92$ $M_y=909.00$ $T_y=-21.31$ $M_z=-33.43$
 $N, Ed=-553.62$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=909.00$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.16$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-33.43$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.03$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.16$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $N, Ed=-553.62$ $M_y, Ed=909.00$ $M_z, Ed=35.76$ $L=3.25$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.25$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.85$ $M_{cr}=8494.06$ $\lambda_{LT}=0.85$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.85$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.82$
 $\lambda_y=39.31$ $N_{cr,y}=382094.00$ $\lambda_y^*=0.45$ Curva a: $\Phi_y=0.63$ $\chi_y=0.94$
 $\lambda_z=145.22$ $N_{cr,z}=27993.80$ $\lambda_z^*=1.67$ Curva b: $\Phi_z=2.15$ $\chi_z=0.29$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.59, 0.57, 0.98$
Verifica YY: $0.01+0.18+0.02=0.21$
Verifica ZZ: $0.01+0.11+0.03=0.15$
- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,G}=0.01$ (L/22106)

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.02$ (L/17639)

Asta n. 205 (-1247 -2013) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=24.14$
 $V,Ed=24.14$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=863.74$
 $V,Ed=863.74$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.04$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-486.34$ $T_z=863.74$ $M_y=908.25$ $T_y=24.14$ $M_z=-45.02$
 $N,Ed=-486.34$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=908.25$ $M_y,V,c,Rd=5804.95$ $MNy,c,Rd=5804.95$ $M_y,Ed/MNy,c,Rd=0.16$
Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-45.02$ $M_z,V,c,Rd=1170.59$ $MNz,c,Rd=1170.59$ $M_z,Ed/MNz,c,Rd=0.04$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MNy,c,Rd)^2 + (M_z,Ed/MNz,c,Rd)^2 = 0.16$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $N,Ed=-486.34$ $M_y,Ed=908.25$ $M_z,Ed=-45.02$ $L=3.69$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.69$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.47$ $M_{cr}=5687.67$ $\lambda_{LT}=1.04$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=1.01$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.70$
 $\lambda_y=44.72$ $N_{cr,y}=295173.00$ $\lambda_y^*=0.52$ Curva a: $\Phi_y=0.67$ $\chi_y=0.92$
 $\lambda_z=165.23$ $N_{cr,z}=21625.60$ $\lambda_z^*=1.90$ Curva b: $\Phi_z=2.60$ $\chi_z=0.23$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.59, 0.57, 0.99$
Verifica YY: $0.01+0.21+0.02=0.24$
Verifica ZZ: $0.01+0.13+0.04=0.17$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.03$ (L/14727)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.04$ (L/10356)

Asta n. 206 (-2396 -1940) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-4.89$
 $V,Ed=-4.89$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=1186.94$
 $V,Ed=1186.94$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.06$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 29 SLU $X_l=2.99$ - Classe 1
Sollecitazioni: $N=409.14$ $M_y=-1774.68$ $T_y=-4.89$
 $M_y,Ed=-1774.68$ $M_y,c,Rd=5804.95$
 $N,Ed=409.14$ $N_c,Rd=74603.30$ YY $n=N,Ed/N_c,Rd=0.01$ $MNy,c,Rd=5804.95$ $M_y,Ed/MNy,c,Rd=0.31$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $M_y,Ed=-1774.68$ $M_z,Ed=14.27$ $L=3.43$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.43$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=7469.44$ $\lambda_{LT}=0.90$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.89$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.78$
 $\lambda_y=41.53$ $N_{cr,y}=342337.00$ $\lambda_y^*=0.48$ Curva a: $\Phi_y=0.64$ $\chi_y=0.93$
 $\lambda_z=153.42$ $N_{cr,z}=25081.10$ $\lambda_z^*=1.77$ Curva b: $\Phi_z=2.33$ $\chi_z=0.26$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.37+0.01=0.38$
Verifica ZZ: $0.00+0.22+0.01=0.23$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.24$ (L/1409)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.33$ (L/1036)

Asta n. 206 (-1940 -1206) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=3.43$ - Classe 1
Sollecitazioni: $T_y=-11.42$
 $V,Ed=-11.42$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=3.43$ - Classe 1
Sollecitazioni: $T_z=-1773.96$

- V,Ed=-1773.96 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.08
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU Xl=3.43 - Classe 1
Sollecitazioni: N=433.97 Tz=-1773.96 My=2017.20 Ty=-11.42 Mz=-18.19
N,Ed=433.97 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.01
Pressoflessione retta YY [4.2.33]:
My,Ed=2017.20 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.35
Pressoflessione retta ZZ [4.2.34]:
Mz,Ed=-18.19 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.02
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.35$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: My,Ed=2017.20 Mz,Ed=21.00 L=3.43
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
L_{cr}=3.43 Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=2.88 M_{cr}=12263.60 \lambda_{LT}=0.70$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.74 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.89$
 $\lambda_y=41.53 N_{cr,y}=342337.00 \lambda_y^*=0.48$ Curva a: $\Phi_y=0.64 \chi_y=0.93$
 $\lambda_z=153.42 N_{cr,z}=25081.00 \lambda_z^*=1.77$ Curva b: $\Phi_z=2.33 \chi_z=0.26$
Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
Verifica YY: 0.00+0.37+0.01=0.38
Verifica ZZ: 0.00+0.22+0.02=0.24
 - Verifica freccia massima per soli carichi accidentali - CC 33
f_{z,L}=0.09 (L/3723)
 - Verifica freccia massima carichi totali - CC 33
f_{z,L}=0.12 (L/2756)
- Asta n. 206 (-1206 -2036) - Sez. 8 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU Xl=0.00 - Classe 1
Sollecitazioni: Ty=8.96
V,Ed=8.96 Vc,Rd=29609.30 V,Ed/Vc,Rd=0.00
 - Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU Xl=0.00 - Classe 1
Sollecitazioni: Tz=1367.63
V,Ed=1367.63 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.06
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU Xl=0.00 - Classe 1
Sollecitazioni: N=652.47 Tz=1367.63 My=2017.42 Ty=8.96 Mz=-12.51
N,Ed=652.47 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.01
Pressoflessione retta YY [4.2.33]:
My,Ed=2017.42 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.35
Pressoflessione retta ZZ [4.2.34]:
Mz,Ed=-12.51 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.01
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.35$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: My,Ed=2017.42 Mz,Ed=13.69 L=2.92
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
L_{cr}=2.92 Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=1.91 M_{cr}=10085.00 \lambda_{LT}=0.78$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.79 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.86$
 $\lambda_y=35.39 N_{cr,y}=471283.00 \lambda_y^*=0.41$ Curva a: $\Phi_y=0.60 \chi_y=0.95$
 $\lambda_z=130.76 N_{cr,z}=34528.20 \lambda_z^*=1.51$ Curva b: $\Phi_z=1.86 \chi_z=0.34$
Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
Verifica YY: 0.00+0.39+0.01=0.39
Verifica ZZ: 0.00+0.23+0.01=0.24
 - Verifica freccia massima per soli carichi accidentali - CC 33
f_{z,L}=0.08 (L/3770)
 - Verifica freccia massima carichi totali - CC 33
f_{z,G}=0.11 (L/2756)
- Asta n. 206 (-2036 -1249) - Sez. 8 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU Xl=3.25 - Classe 1
Sollecitazioni: Ty=-42.24
V,Ed=-42.24 Vc,Rd=29609.30 V,Ed/Vc,Rd=0.00
 - Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU Xl=3.25 - Classe 1
Sollecitazioni: Tz=-987.35
V,Ed=-987.35 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.05
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU Xl=3.25 - Classe 1
Sollecitazioni: N=758.95 Tz=-987.35 My=933.45 Ty=-42.24 Mz=-82.69
N,Ed=758.95 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.01
Pressoflessione retta YY [4.2.33]:

- My,Ed=933.45 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.16
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=-82.69 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.07
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.16$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: My,Ed=933.45 Mz,Ed=-82.69 L=3.25
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.25$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=2.10 M_{cr}=9616.15 \lambda_{LT}=0.80$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.81 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.84$
 $\lambda_y=39.31 N_{cr,y}=382094.00 \lambda_y^*=0.45$ Curva a: $\Phi_y=0.63 \chi_y=0.94$
 $\lambda_z=145.22 N_{cr,z}=27993.80 \lambda_z^*=1.67$ Curva b: $\Phi_z=2.15 \chi_z=0.29$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.18+0.04=0.22$
 Verifica ZZ: $0.00+0.11+0.07=0.18$
- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.03 (L/11618)$
- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.04 (L/9054)$
- Asta n. 206 (-1249 -2014) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 29 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_y=-9.34 M_x=1.28$
 $V,Ed=-9.34 V_c,Rd,Red=29470.10 V,Ed/V_c,Rd,Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 29 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_z=1804.35 M_x=1.28$
 $V,Ed=1804.35 V_c,Rd,Red=21071.90 V,Ed/V_c,Rd,Red=0.09$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU X1=1.38 - Classe 1
 Sollecitazioni: $N=-584.04 T_z=1435.69 M_y=-1270.12 T_y=-9.34 M_z=-2.40 M_x=1.28$
 $N,Ed=-584.04 N_c,Rd=74603.30 n=N,Ed/N_c,Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $My,Ed=-1270.12 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.22$
 Pressoflessione retta ZZ [4.2.34]:
 $Mz,Ed=-2.40 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.00$
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.22$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $N,Ed=-584.04 My,Ed=-1270.12 Mz,Ed=10.45 L=1.38$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.38$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=2.69 M_{cr}=46592.10 \lambda_{LT}=0.36$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.54 \beta_{LT}=0.75 f=0.98 \chi_{LT}=1.00$
 $\lambda_y=16.65 N_{cr,y}=2129400.00 \lambda_y^*=0.19$ Curva a: $\Phi_y=0.52 \chi_y=1.00$
 $\lambda_z=61.52 N_{cr,z}=156009.00 \lambda_z^*=0.71$ Curva b: $\Phi_z=0.84 \chi_z=0.78$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.96$
 Verifica YY: $0.01+0.21+0.01=0.22$
 Verifica ZZ: $0.01+0.12+0.01=0.14$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.01 (L/17586)$
- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.01 (L/11724)$
- Asta n. 207 (-2414 -1288) - Sez. 7 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 29 SLU X1=0.00 - Classe 3
 Sollecitazioni: $N=-2157.43 T_z=1361.99 M_y=-2695.71 T_y=-1478.72 M_z=264.77 M_x=-2.04$
 Tensioni: $\sigma_N=-40.09 \sigma_{m,d}=-812.78 \tau=12.08 \sigma_{max}=-852.87 (sfrut=0.33)$
 Tensioni: $\sigma_N=-40.09 \sigma_{m,d}=-15.57 \tau=77.95 \tau_{max}=77.95 (sfrut=0.05)$
 Tensioni: $\sigma_N=-40.09 \sigma_{m,d}=-812.78 \tau=12.08 \sigma_{TD,max}=853.13 (sfrut=0.33)$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N,Ed=-2157.43 My,Ed=-2857.81 Mz,Ed=264.77 L=0.12$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.12$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=1.03 M_{cr}=13039900.00 \lambda_{LT}=0.03$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.44 \beta_{LT}=0.75 f=1.01 \chi_{LT}=1.00$
 $\lambda_y=0.96 N_{cr,y}=1216890000.00 \lambda_y^*=0.01$ Curva a: $\Phi_y=0.00 \chi_y=1.00$
 $\lambda_z=3.56 N_{cr,z}=87925700.00 \lambda_z^*=0.04$ Curva b: $\Phi_z=0.00 \chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.02+0.19+0.12=0.32$
 Verifica ZZ: $0.02+0.15+0.12=0.28$

Relazione di calcolo

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.00$

Asta n. 207 (-1288 -1275) - Sez. 7 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=1.52$ - Classe 3
Sollecitazioni: $N=-2095.44$ $T_z=958.10$ $M_y=-4382.15$ $T_y=17.68$ $M_z=72.25$
Tensioni: $\sigma_N=-38.94$ $\sigma_{m,d}=-876.36$ $\tau=0.00$ $\sigma_{max}=-915.30$ (sfrut=0.35)
Tensioni: $\sigma_N=-38.94$ $\sigma_{m,d}=4.25$ $\tau=53.50$ $\tau_{max}=53.50$ (sfrut=0.04)
Tensioni: $\sigma_N=-38.94$ $\sigma_{m,d}=-876.36$ $\tau=0.00$ $\sigma_{ID,max}=915.30$ (sfrut=0.35)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N,Ed=-2101.83$ $M_y,Ed=-4382.15$ $M_z,Ed=72.25$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.19$ $M_{cr}=98593.30$ $\lambda_{LT}=0.39$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.56$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.23$ $N_{cr,y}=7452620.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.51$ $N_{cr,z}=538483.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.01+0.29+0.03=0.33$
Verifica ZZ: $0.01+0.23+0.03=0.28$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.03$ (L/5373)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.04$ (L/3810)

Asta n. 207 (-1275 -1276) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU $X_1=0.55$ - Classe 1
Sollecitazioni: $T_y=-212.19$
 $V,Ed=-212.19$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU $X_1=0.55$ - Classe 1
Sollecitazioni: $T_z=-370.84$
 $V,Ed=-370.84$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=0.00$ - Classe 3
Sollecitazioni: $N=-1983.51$ $T_z=-326.86$ $M_y=-4382.29$ $T_y=-194.31$ $M_z=110.05$
Tensioni: $\sigma_N=-36.86$ $\sigma_{m,d}=-923.35$ $\tau=0.00$ $\sigma_{max}=-960.21$ (sfrut=0.37)
Tensioni: $\sigma_N=-36.86$ $\sigma_{m,d}=6.47$ $\tau=18.26$ $\tau_{max}=18.26$ (sfrut=0.01)
Tensioni: $\sigma_N=-36.86$ $\sigma_{m,d}=-923.35$ $\tau=0.00$ $\sigma_{ID,max}=960.21$ (sfrut=0.37)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N,Ed=-1983.51$ $M_y,Ed=-4382.29$ $M_z,Ed=-184.22$ $L=1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.06$ $M_{cr}=88891.50$ $\lambda_{LT}=0.42$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.57$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.15$ $N_{cr,y}=7551630.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.21$ $N_{cr,z}=545637.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.29+0.08=0.38$
Verifica ZZ: $0.01+0.23+0.08=0.33$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.03$ (L/4511)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.05$ (L/3277)

Asta n. 207 (-1276 -1271) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 18 SLU $X_1=0.48$ - Classe 1
Sollecitazioni: $T_y=318.43$
 $V,Ed=318.43$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.01$

- Verifica a taglio Dir. Z [4.2.16] - CC 18 SLU $X_1=0.48$ - Classe 1
Sollecitazioni: $T_z=-1684.71$
 $V,Ed=-1684.71$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.04$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=0.00$ - Classe 3
Sollecitazioni: $N=-1834.54$ $T_z=-2152.04$ $M_y=-3824.96$ $T_y=359.42$ $M_z=-170.05$
Tensioni: $\sigma_N=-34.09$ $\sigma_{m,d}=-897.83$ $\tau=0.00$ $\sigma_{max}=-931.92$ (sfrut=0.36)
Tensioni: $\sigma_N=-34.09$ $\sigma_{m,d}=-10.00$ $\tau=120.17$ $\tau_{max}=120.17$ (sfrut=0.08)
Tensioni: $\sigma_N=-34.09$ $\sigma_{m,d}=-897.83$ $\tau=0.00$ $\sigma_{ID,max}=931.92$ (sfrut=0.36)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N, Ed = -1834.54$ My, $Ed = -3824.96$ Mz, $Ed = 457.17$ L=1.75
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.75$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 1.75$ M, $cr = 112577.00$ $\lambda_{LT} = 0.37$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.55$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 14.00$ Ncr, $y = 5687190.00$ $\lambda'_y = 0.16$ Curva a: $\Phi_y = 0.51$ $\chi_y = 1.00$
 $\lambda_z = 52.10$ Ncr, $z = 410924.00$ $\lambda'_z = 0.60$ Curva b: $\Phi_z = 0.75$ $\chi_z = 0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.01 + 0.25 + 0.21 = 0.47$
 Verifica ZZ: $0.01 + 0.20 + 0.21 = 0.42$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L} = 0.02$ (L/7304)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L} = 0.03$ (L/5389)

Asta n. 208 (-2397 -1943) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_1 = 0.00$ - Classe 1
 Sollecitazioni: $T_y = -19.09$
 $V, Ed = -19.09$ Vc, $Rd = 29609.30$ V, $Ed/Vc, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_1 = 0.00$ - Classe 1
 Sollecitazioni: $T_z = 1196.04$
 $V, Ed = 1196.04$ Vc, $Rd = 21171.50$ V, $Ed/Vc, Rd = 0.06$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_1 = 3.02$ - Classe 1
 Sollecitazioni: $N = -3473.52$ My, $Ed = -1767.84$ Ty, $Ed = -19.09$ Mz, $Ed = -5.72$
 $N, Ed = -3473.52$ Nc, $Rd = 74603.30$ n=N, $Ed/Nc, Rd = 0.05$
 Pressoflessione retta YY [4.2.33]:
 My, $Ed = -1767.84$ My, c, $Rd = 5804.95$ MNy, c, $Rd = 5804.95$ My, $Ed/MNy, c, Rd = 0.30$
 Pressoflessione retta ZZ [4.2.34]:
 Mz, $Ed = -5.72$ Mz, V, c, $Rd = 1170.59$ MNz, c, $Rd = 1170.59$ Mz, $Ed/MNz, c, Rd = 0.00$
 $\alpha = 2.00$ $\beta = 1.00$ (My, $Ed/MNy, c, Rd$)² + (Mz, $Ed/MNz, c, Rd$)¹ = 0.30

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $N, Ed = -3473.52$ My, $Ed = -1767.84$ Mz, $Ed = 51.87$ L=3.43
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 3.43$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 1.77$ M, $cr = 7558.33$ $\lambda_{LT} = 0.90$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.89$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.78$
 $\lambda_y = 41.53$ Ncr, $y = 342337.00$ $\lambda'_y = 0.48$ Curva a: $\Phi_y = 0.64$ $\chi_y = 0.93$
 $\lambda_z = 153.42$ Ncr, $z = 25081.10$ $\lambda'_z = 1.77$ Curva b: $\Phi_z = 2.33$ $\chi_z = 0.26$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.96, 0.71, 0.58, 1.19$
 Verifica YY: $0.05 + 0.37 + 0.03 = 0.46$
 Verifica ZZ: $0.18 + 0.22 + 0.05 = 0.46$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L} = 0.24$ (L/1443)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L} = 0.33$ (L/1049)

Asta n. 208 (-1943 -1193) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_1 = 3.43$ - Classe 1
 Sollecitazioni: $T_y = -3.61$
 $V, Ed = -3.61$ Vc, $Rd = 29609.30$ V, $Ed/Vc, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_1 = 3.43$ - Classe 1
 Sollecitazioni: $T_z = -1846.31$
 $V, Ed = -1846.31$ Vc, $Rd = 21171.50$ V, $Ed/Vc, Rd = 0.09$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_1 = 3.43$ - Classe 1
 Sollecitazioni: $N = -3468.36$ Ty, $Ed = -1846.31$ My, $Ed = 2267.57$ Ty, $Ed = -3.61$ Mz, $Ed = -6.42$
 $N, Ed = -3468.36$ Nc, $Rd = 74603.30$ n=N, $Ed/Nc, Rd = 0.05$
 Pressoflessione retta YY [4.2.33]:
 My, $Ed = 2267.57$ My, V, c, $Rd = 5804.95$ MNy, c, $Rd = 5804.95$ My, $Ed/MNy, c, Rd = 0.39$
 Pressoflessione retta ZZ [4.2.34]:
 Mz, $Ed = -6.42$ Mz, V, c, $Rd = 1170.59$ MNz, c, $Rd = 1170.59$ Mz, $Ed/MNz, c, Rd = 0.01$
 $\alpha = 2.00$ $\beta = 1.00$ (My, $Ed/MNy, c, Rd$)² + (Mz, $Ed/MNz, c, Rd$)¹ = 0.39

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $N, Ed = -3468.36$ My, $Ed = 2267.57$ Mz, $Ed = -6.42$ L=3.43
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 3.43$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 2.73$ M, $cr = 11634.50$ $\lambda_{LT} = 0.72$

$\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.75$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.88$
 $\lambda_y=41.53$ $N_{cr,y}=342337.00$ $\lambda^*_y=0.48$ Curva a: $\Phi_y=0.64$ $\chi_y=0.93$
 $\lambda_z=153.42$ $N_{cr,z}=25081.00$ $\lambda^*_z=1.77$ Curva b: $\Phi_z=2.33$ $\chi_z=0.26$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.71, 0.58, 1.19$
 Verifica YY: $0.05+0.43+0.00=0.48$
 Verifica ZZ: $0.18+0.26+0.01=0.44$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.08$ (L/4535)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.10$ (L/3317)

Asta n. 208 (-1193 -2034) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_y=4.18$
 $V, Ed=4.18$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=1589.59$
 $V, Ed=1589.59$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.08$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $N=-3727.65$ $T_z=1589.59$ $M_y=2259.57$ $T_y=4.18$ $M_z=-11.77$
 $N, Ed=-3727.65$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.05$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=2259.57$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.39$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-11.77$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.39$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $N, Ed=-3727.65$ $M_y, Ed=2259.57$ $M_z, Ed=-11.77$ $L=2.92$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.92$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.10$ $M_{cr}=11118.40$ $\lambda_{LT}=0.74$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.76$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.88$
 $\lambda_y=35.39$ $N_{cr,y}=471283.00$ $\lambda^*_y=0.41$ Curva a: $\Phi_y=0.60$ $\chi_y=0.95$
 $\lambda_z=130.76$ $N_{cr,z}=34528.20$ $\lambda^*_z=1.51$ Curva b: $\Phi_z=1.86$ $\chi_z=0.34$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.69, 0.58, 1.15$
 Verifica YY: $0.05+0.43+0.01=0.49$
 Verifica ZZ: $0.15+0.26+0.01=0.41$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.07$ (L/4049)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.10$ (L/2919)

Asta n. 208 (-2034 -1250) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_1=2.32$ - Classe 1
 Sollecitazioni: $T_y=47.81$
 $V, Ed=47.81$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_1=2.32$ - Classe 1
 Sollecitazioni: $T_z=-625.03$
 $V, Ed=-625.03$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.03$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_1=0.21$ - Classe 1
 Sollecitazioni: $N=-3778.15$ $M_y=-703.24$ $T_y=47.81$ $M_z=-22.05$
 $N, Ed=-3778.15$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.05$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-703.24$ $M_y, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.12$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-22.05$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.12$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $N, Ed=-3778.15$ $M_y, Ed=-703.24$ $M_z, Ed=78.91$ $L=2.32$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.32$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.78$ $M_{cr}=13159.60$ $\lambda_{LT}=0.68$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.72$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.91$
 $\lambda_y=28.07$ $N_{cr,y}=749190.00$ $\lambda^*_y=0.32$ Curva a: $\Phi_y=0.57$ $\chi_y=0.97$
 $\lambda_z=103.71$ $N_{cr,z}=54888.80$ $\lambda^*_z=1.19$ Curva b: $\Phi_z=1.38$ $\chi_z=0.48$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.65, 0.57, 1.09$
 Verifica YY: $0.05+0.13+0.04=0.22$

Relazione di calcolo

Verifica ZZ: $0.11+0.08+0.07=0.26$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.04$ (L/5576)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.06$ (L/3940)

Asta n. 209 (-103 -1295) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 28 SLU $X_1=0.30$ - Classe 1
Sollecitazioni: $T_y=115.69$ $M_x=-4.86$
 $V, Ed=115.69$ $V_c, Rd, Red=54264.80$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 28 SLU $X_1=0.30$ - Classe 1
Sollecitazioni: $T_z=-1650.34$ $M_x=-4.86$
 $V, Ed=-1650.34$ $V_c, Rd, Red=38539.20$ $V, Ed/V_c, Rd, Red=0.04$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_1=0.30$ - Classe 3
Sollecitazioni: $N=-3284.24$ $T_z=-1799.44$ $M_y=2148.29$ $T_y=232.44$ $M_z=33.62$ $M_x=-6.75$
Tensioni: $\sigma_N=-61.03$ $\sigma_{m,d}=-427.39$ $\tau=40.06$ $\sigma_{max}=-488.42$ (sfrut=0.19)
Tensioni: $\sigma_N=-61.03$ $\sigma_{m,d}=1.98$ $\tau=108.46$ $\tau_{max}=108.46$ (sfrut=0.07)
Tensioni: $\sigma_N=-61.03$ $\sigma_{m,d}=-427.39$ $\tau=40.06$ $\sigma_{ID,max}=493.32$ (sfrut=0.19)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-3285.32$ $M_y, Ed=2148.29$ $M_z, Ed=-36.38$ $L=0.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.75$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.13$ $M_{cr}=369153.00$ $\lambda_{LT}=0.20$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.48$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=6.02$ $N_{cr,y}=30774200.00$ $\lambda^*_y=0.07$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=22.40$ $N_{cr,z}=2223560.00$ $\lambda^*_z=0.26$ Curva b: $\Phi_z=0.54$ $\chi_z=0.98$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.02+0.14+0.02=0.18$
Verifica ZZ: $0.02+0.11+0.02=0.15$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.00$ (L/7894)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.00$ (L/6315)

Asta n. 209 (-103 -1175) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU $X_1=1.07$ - Classe 2
Sollecitazioni: $T_y=-33.53$
 $V, Ed=-33.53$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU $X_1=1.07$ - Classe 2
Sollecitazioni: $T_z=722.96$
 $V, Ed=722.96$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.02$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_1=0.00$ - Classe 3
Sollecitazioni: $N=-3164.15$ $T_z=885.32$ $M_y=1602.30$ $T_y=-36.32$ $M_z=42.08$
Tensioni: $\sigma_N=-58.80$ $\sigma_{m,d}=-339.89$ $\tau=0.00$ $\sigma_{max}=-398.69$ (sfrut=0.15)
Tensioni: $\sigma_N=-58.80$ $\sigma_{m,d}=2.47$ $\tau=49.43$ $\tau_{max}=49.43$ (sfrut=0.03)
Tensioni: $\sigma_N=-58.80$ $\sigma_{m,d}=-339.89$ $\tau=0.00$ $\sigma_{ID,max}=398.69$ (sfrut=0.15)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-3164.15$ $M_y, Ed=1602.30$ $M_z, Ed=42.08$ $L=1.96$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.96$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.70$ $M_{cr}=87771.20$ $\lambda_{LT}=0.42$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.57$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=15.74$ $N_{cr,y}=4501900.00$ $\lambda^*_y=0.18$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=58.56$ $N_{cr,z}=325281.00$ $\lambda^*_z=0.67$ Curva b: $\Phi_z=0.81$ $\chi_z=0.80$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.10+0.02=0.15$
Verifica ZZ: $0.02+0.08+0.02=0.13$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.01$ (L/13711)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.02$ (L/12098)

Asta n. 209 (-1175 -1173) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 19 SLU $X_1=0.55$ - Classe 2
Sollecitazioni: $T_y=35.12$
 $V, Ed=35.12$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 19 SLU $X_l=0.55$ - Classe 2
Sollecitazioni: $T_z=200.16$
 $V, Ed=200.16$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$
- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=1.50$ - Classe 3
Sollecitazioni: $N=-3174.42$ $T_z=160.50$ $M_y=-464.53$ $T_y=63.17$ $M_z=72.06$
Tensioni: $\sigma_N=-58.99$ $\sigma_{m,d}=-172.89$ $\tau=0.00$ $\sigma_{max}=-231.88$ (sfrut=0.09)
Tensioni: $\sigma_N=-58.99$ $\sigma_{m,d}=4.24$ $\tau=8.96$ $\tau_{max}=8.96$ (sfrut=0.01)
Tensioni: $\sigma_N=-58.99$ $\sigma_{m,d}=-172.89$ $\tau=0.00$ $\sigma_{ID,max}=231.88$ (sfrut=0.09)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-3174.42$ $M_y, Ed=-464.53$ $M_z, Ed=72.06$ $L=1.50$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.50$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.95$ $M_{cr}=166489.00$ $\lambda_{LT}=0.30$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.52$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.04$ $N_{cr,y}=7697540.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=44.78$ $N_{cr,z}=556179.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.88$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.03+0.03=0.09$
Verifica ZZ: $0.02+0.02+0.03=0.08$
- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.00$ (L/50737)
- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.00$ (L/50737)

Asta n. 209 (-1173 -97) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 1 SLV $X_l=0.33$ - Classe 2
Sollecitazioni: $T_y=256.09$
 $V, Ed=256.09$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.33$ - Classe 2
Sollecitazioni: $T_z=-77.24$
 $V, Ed=-77.24$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.00$
- Verifica in termini tensionali [4.2.4] - CC 5 SLV $X_l=1.23$ - Classe 3
Sollecitazioni: $N=-1379.21$ $T_z=-348.78$ $M_y=570.58$ $T_y=289.50$ $M_z=234.54$
Tensioni: $\sigma_N=-25.63$ $\sigma_{m,d}=-393.77$ $\tau=0.00$ $\sigma_{max}=-419.40$ (sfrut=0.16)
Tensioni: $\sigma_N=-25.63$ $\sigma_{m,d}=13.79$ $\tau=19.50$ $\tau_{max}=19.50$ (sfrut=0.01)
Tensioni: $\sigma_N=-25.63$ $\sigma_{m,d}=-393.77$ $\tau=0.00$ $\sigma_{ID,max}=419.40$ (sfrut=0.16)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
Sollecitazioni: $N, Ed=-1379.21$ $M_y, Ed=570.58$ $M_z, Ed=234.54$ $L=1.45$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.45$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.41$ $M_{cr}=128426.00$ $\lambda_{LT}=0.35$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.54$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=11.64$ $N_{cr,y}=8237560.00$ $\lambda^*_y=0.13$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=43.29$ $N_{cr,z}=595198.00$ $\lambda^*_z=0.50$ Curva b: $\Phi_z=0.68$ $\chi_z=0.88$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.04+0.11=0.15$
Verifica ZZ: $0.01+0.03+0.11=0.15$
- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.01$ (L/17840)
- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/27329)

Asta n. 209 (-1184 -97) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU $X_l=0.24$ - Classe 2
Sollecitazioni: $T_y=-82.60$
 $V, Ed=-82.60$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU $X_l=0.24$ - Classe 2
Sollecitazioni: $T_z=-775.67$
 $V, Ed=-775.67$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.02$
- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_l=1.32$ - Classe 3
Sollecitazioni: $N=-3160.01$ $T_z=-1143.60$ $M_y=1172.66$ $T_y=-82.60$ $M_z=-89.34$
Tensioni: $\sigma_N=-58.72$ $\sigma_{m,d}=-321.48$ $\tau=0.00$ $\sigma_{max}=-380.20$ (sfrut=0.15)
Tensioni: $\sigma_N=-58.72$ $\sigma_{m,d}=-5.25$ $\tau=63.85$ $\tau_{max}=63.85$ (sfrut=0.04)
Tensioni: $\sigma_N=-58.72$ $\sigma_{m,d}=-321.48$ $\tau=0.00$ $\sigma_{ID,max}=380.20$ (sfrut=0.15)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
Sollecitazioni: $N, Ed=-3160.01$ $M_y, Ed=1172.66$ $M_z, Ed=-89.34$ $L=1.55$

α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95, 0.95
 $L_{cr}=1.55$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.79$ $M_{cr}=143430.00$ $\lambda_{LT}=0.33$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.44$ $N_{cr,y}=7208930.00$ $\lambda^*_{y}=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=46.27$ $N_{cr,z}=520876.00$ $\lambda^*_{z}=0.53$ Curva b: $\Phi_z=0.70$ $\chi_z=0.87$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.95$, 0.96, 0.76, 0.96
 Verifica YY: $0.02+0.08+0.04=0.14$
 Verifica ZZ: $0.02+0.06+0.04=0.12$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.01$ (L/16739)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.01$ (L/19296)

Asta n. 209 (-1183 -1184) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_1=1.50$ - Classe 2
 Sollecitazioni: $T_y=-15.31$
 $V, Ed=-15.31$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=1.50$ - Classe 2
 Sollecitazioni: $T_z=-614.70$
 $V, Ed=-614.70$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.02$

- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-3177.30$ $T_z=-144.07$ $M_y=-640.88$ $T_y=-17.49$ $M_z=24.57$
 Tensioni: $\sigma_N=-59.04$ $\sigma_{m,d}=-145.56$ $\tau=0.00$ $\sigma_{max}=-204.61$ (sfrut=0.08)
 Tensioni: $\sigma_N=-59.04$ $\sigma_{m,d}=1.44$ $\tau=8.04$ $\tau_{max}=8.04$ (sfrut=0.01)
 Tensioni: $\sigma_N=-59.04$ $\sigma_{m,d}=-145.56$ $\tau=0.00$ $\sigma_{TD,max}=204.61$ (sfrut=0.08)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3177.30$ $M_y, Ed=-640.88$ $M_z, Ed=24.57$ $L=1.50$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95, 0.95
 $L_{cr}=1.50$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.68$ $M_{cr}=143247.00$ $\lambda_{LT}=0.33$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.04$ $N_{cr,y}=7697540.00$ $\lambda^*_{y}=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=44.78$ $N_{cr,z}=556180.00$ $\lambda^*_{z}=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.88$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.95$, 0.96, 0.76, 0.96
 Verifica YY: $0.02+0.04+0.01=0.08$
 Verifica ZZ: $0.02+0.03+0.01=0.07$

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,G}=0.00$ (L/54236)

- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.01$ (L/28086)

Asta n. 209 (-2398 -1183) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 1 SLV $X_1=1.04$ - Classe 1
 Sollecitazioni: $T_y=16.90$
 $V, Ed=16.90$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_1=1.04$ - Classe 1
 Sollecitazioni: $T_z=291.52$
 $V, Ed=291.52$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_1=0.23$ - Classe 3
 Sollecitazioni: $N=-3749.44$ $T_z=183.51$ $M_y=-568.64$ $T_y=-77.82$ $M_z=113.63$
 Tensioni: $\sigma_N=-69.68$ $\sigma_{m,d}=-243.22$ $\tau=0.00$ $\sigma_{max}=-312.90$ (sfrut=0.12)
 Tensioni: $\sigma_N=-69.68$ $\sigma_{m,d}=6.68$ $\tau=10.25$ $\tau_{max}=10.25$ (sfrut=0.01)
 Tensioni: $\sigma_N=-69.68$ $\sigma_{m,d}=-243.22$ $\tau=0.00$ $\sigma_{TD,max}=312.90$ (sfrut=0.12)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3749.44$ $M_y, Ed=-629.49$ $M_z, Ed=113.63$ $L=1.50$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95, 0.95
 $L_{cr}=1.50$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.01$ $M_{cr}=85824.90$ $\lambda_{LT}=0.42$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.57$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.04$ $N_{cr,y}=7697540.00$ $\lambda^*_{y}=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=44.78$ $N_{cr,z}=556180.00$ $\lambda^*_{z}=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.88$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.95$, 0.96, 0.76, 0.96
 Verifica YY: $0.03+0.04+0.05=0.12$
 Verifica ZZ: $0.03+0.03+0.05=0.11$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.01$ (L/21221)

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.01$ (L/20256)

Asta n. 210 (-2399 -1936) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=9.79$
 $V,Ed=9.79$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=924.62$
 $V,Ed=924.62$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.04$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=2.33$ - Classe 1
Sollecitazioni: $N=-1705.50$ $M_y=-1061.25$ $T_y=9.79$ $M_z=1.59$
 $N,Ed=-1705.50$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.02$
Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-1061.25$ $M_y,c,Rd=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_y,Ed/M_{Ny,c,Rd}=0.18$
Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=1.59$ $M_z,V,c,Rd=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_z,Ed/M_{Nz,c,Rd}=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/M_{Ny,c,Rd})^2 + (M_z,Ed/M_{Nz,c,Rd})^1 = 0.18$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $N,Ed=-1705.50$ $M_y,Ed=-1061.25$ $M_z,Ed=-21.24$ $L=3.43$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.43$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.77$ $M_{cr}=7556.83$ $\lambda_{LT}=0.90$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.89$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.78$
 $\lambda_y=41.53$ $N_{cr,y}=342337.00$ $\lambda^*_y=0.48$ Curva a: $\Phi_y=0.64$ $\chi_y=0.93$
 $\lambda_z=153.42$ $N_{cr,z}=25081.10$ $\lambda^*_z=1.77$ Curva b: $\Phi_z=2.33$ $\chi_z=0.26$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.64, 0.57, 1.07$
Verifica YY: $0.02+0.22+0.01=0.26$
Verifica ZZ: $0.09+0.13+0.02=0.24$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.16$ (L/2193)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,G}=0.22$ (L/1582)

Asta n. 210 (-1936 -1189) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=3.43$ - Classe 1
Sollecitazioni: $T_y=-2.56$
 $V,Ed=-2.56$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=3.43$ - Classe 1
Sollecitazioni: $T_z=-1329.08$
 $V,Ed=-1329.08$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.06$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=3.43$ - Classe 1
Sollecitazioni: $N=-1700.64$ $T_z=-1329.08$ $M_y=1403.42$ $T_y=-2.56$ $M_z=-2.95$
 $N,Ed=-1700.64$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.02$
Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=1403.42$ $M_y,V,c,Rd=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_y,Ed/M_{Ny,c,Rd}=0.24$
Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-2.95$ $M_z,V,c,Rd=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_z,Ed/M_{Nz,c,Rd}=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/M_{Ny,c,Rd})^2 + (M_z,Ed/M_{Nz,c,Rd})^1 = 0.24$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $N,Ed=-1700.64$ $M_y,Ed=1403.42$ $M_z,Ed=5.83$ $L=3.43$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.43$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.47$ $M_{cr}=10530.50$ $\lambda_{LT}=0.76$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.78$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.86$
 $\lambda_y=41.53$ $N_{cr,y}=342337.00$ $\lambda^*_y=0.48$ Curva a: $\Phi_y=0.64$ $\chi_y=0.93$
 $\lambda_z=153.42$ $N_{cr,z}=25081.10$ $\lambda^*_z=1.77$ Curva b: $\Phi_z=2.33$ $\chi_z=0.26$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.64, 0.57, 1.07$
Verifica YY: $0.02+0.27+0.00=0.30$
Verifica ZZ: $0.09+0.16+0.01=0.25$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.05$ (L/6563)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.07$ (L/4847)

Asta n. 210 (-1189 -1251) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1

Relazione di calcolo

- Sollecitazioni: $T_y=10.59$
 $V, Ed=10.59$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=1254.78$
 $V, Ed=1254.78$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.06$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-1160.71$ $T_z=1254.78$ $M_y=1396.88$ $T_y=10.59$ $M_z=-14.73$
 $N, Ed=-1160.71$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.02$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1396.88$ $M_y, V, c, Rd=5804.95$ $M_Ny, c, Rd=5804.95$ $M_y, Ed/M_Ny, c, Rd=0.24$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-14.73$ $M_z, V, c, Rd=1170.59$ $M_Nz, c, Rd=1170.59$ $M_z, Ed/M_Nz, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_Ny, c, Rd)^2 + (M_z, Ed/M_Nz, c, Rd)^2 = 0.24$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $N, Ed=-1160.71$ $M_y, Ed=1396.88$ $M_z, Ed=16.23$ $L=2.92$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.92$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.39$ $M_{cr}=12648.70$ $\lambda_{LT}=0.69$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.73$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.90$
 $\lambda_y=35.39$ $N_{cr,y}=471283.00$ $\lambda_y^*=0.41$ Curva a: $\Phi_y=0.60$ $\chi_y=0.95$
 $\lambda_z=130.76$ $N_{cr,z}=34528.20$ $\lambda_z^*=1.51$ Curva b: $\Phi_z=1.86$ $\chi_z=0.34$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.61, 0.57, 1.01$
Verifica YY: $0.02+0.26+0.01=0.28$
Verifica ZZ: $0.02+0.15+0.01=0.18$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.02$ (L/12360)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.03$ (L/8733)
- Asta n. 211 (-1165 -2428) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 11 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=26.53$
 $V, Ed=26.53$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.00$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 27 SLU $X_l=2.36$ - Classe 1
Sollecitazioni: $N=-530.10$ $T_z=-29.55$ $M_y=-6.80$ $T_y=9.41$ $M_z=17.48$
 $N, Ed=-530.10$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-6.80$ $M_y, V, c, Rd=5804.95$ $M_Ny, c, Rd=5804.95$ $M_y, Ed/M_Ny, c, Rd=0.00$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=17.48$ $M_z, V, c, Rd=1170.59$ $M_Nz, c, Rd=1170.59$ $M_z, Ed/M_Nz, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_Ny, c, Rd)^2 + (M_z, Ed/M_Nz, c, Rd)^2 = 0.01$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 1
Sollecitazioni: $N, Ed=-530.10$ $M_y, Ed=-21.85$ $M_z, Ed=17.48$ $L=2.36$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.36$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.48$ $M_{cr}=17901.50$ $\lambda_{LT}=0.58$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.66$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.95$
 $\lambda_y=28.52$ $N_{cr,y}=726038.00$ $\lambda_y^*=0.33$ Curva a: $\Phi_y=0.57$ $\chi_y=0.97$
 $\lambda_z=105.35$ $N_{cr,z}=53192.60$ $\lambda_z^*=1.21$ Curva b: $\Phi_z=1.41$ $\chi_z=0.47$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.97$
Verifica YY: $0.01+0.00+0.01=0.02$
Verifica ZZ: $0.01+0.00+0.01=0.02$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.00$ (L/94987) $f_{z,L}=0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.00$ (L/61742) $f_{z,L}=0.00$ (L/98787)
- Asta n. 212 (-1172 -72) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=0.50$ - Classe 1
Sollecitazioni: $T_y=358.83$
 $V, Ed=358.83$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.01$
- Verifica a taglio Dir. Z [4.2.16] - CC 5 SLV $X_l=0.50$ - Classe 1
Sollecitazioni: $T_z=-104.20$
 $V, Ed=-104.20$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.00$
- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=0.90$ - Classe 3
Sollecitazioni: $N=-4274.05$ $T_z=-1262.71$ $M_y=2074.19$ $T_y=-246.69$ $M_z=-177.96$
Tensioni: $\sigma_N=-79.42$ $\sigma_{m,d}=-593.39$ $\tau=0.00$ $\sigma_{max}=-672.81$ (sfrut=0.26)

Tensioni: $\sigma_N = -79.42$ $\sigma_{m,d} = -10.46$ $\tau = 70.51$ $\tau_{max} = 70.51$ (sfrut=0.05)
Tensioni: $\sigma_N = -79.42$ $\sigma_{m,d} = -593.39$ $\tau = 0.00$ $\sigma_{ID,max} = 672.81$ (sfrut=0.26)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: N,Ed=-4274.05 My,Ed=2074.19 Mz,Ed=-177.96 L=1.00
 α_{my} , α_{mz} , $\alpha_{LT} = 0.95$, 0.95, 0.95
 $L_{cr} = 1.00$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.30$ M,cr=240561.00 $\lambda_{LT} = 0.25$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.50$ $\beta_{LT} = 0.75$ f=0.99 $\chi_{LT} = 1.00$
 $\lambda_y = 8.02$ Ncr,y=17319500.00 $\lambda^*_y = 0.09$ Curva a: $\Phi_y = 0.49$ $\chi_y = 1.00$
 $\lambda_z = 29.85$ Ncr,z=1251400.00 $\lambda^*_z = 0.34$ Curva b: $\Phi_z = 0.58$ $\chi_z = 0.95$
Kyy, Kyz, Kzy, Kzz=0.95, 0.96, 0.76, 0.96
Verifica YY: 0.03+0.14+0.08=0.25
Verifica ZZ: 0.03+0.11+0.08=0.22

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L} = 0.01$ (L/15470)

- Verifica freccia massima carichi totali - CC 32
 $f_{z,L} = 0.01$ (L/11650)

Asta n. 212 (-74 -1172) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU Xl=0.26 - Classe 2
Sollecitazioni: $T_y = 18.53$
V,Ed=18.53 Vc,Rd=54683.30 V,Ed/Vc,Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU Xl=0.26 - Classe 2
Sollecitazioni: $T_z = -704.21$
V,Ed=-704.21 Vc,Rd=38836.40 V,Ed/Vc,Rd=0.02

- Verifica in termini tensionali [4.2.4] - CC 27 SLU Xl=1.45 - Classe 3
Sollecitazioni: N=-4256.86 $T_z = -957.68$ $M_y = 1051.46$ $T_y = 12.72$ $M_z = 22.64$
Tensioni: $\sigma_N = -79.10$ $\sigma_{m,d} = -216.87$ $\tau = 0.00$ $\sigma_{max} = -295.97$ (sfrut=0.11)
Tensioni: $\sigma_N = -79.10$ $\sigma_{m,d} = 1.33$ $\tau = 53.47$ $\tau_{max} = 53.47$ (sfrut=0.04)
Tensioni: $\sigma_N = -79.10$ $\sigma_{m,d} = -216.87$ $\tau = 0.00$ $\sigma_{ID,max} = 295.97$ (sfrut=0.11)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: N,Ed=-4256.86 My,Ed=1051.46 Mz,Ed=22.64 L=1.45
 α_{my} , α_{mz} , $\alpha_{LT} = 0.95$, 0.95, 0.95
 $L_{cr} = 1.45$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.80$ M,cr=163260.00 $\lambda_{LT} = 0.31$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.52$ $\beta_{LT} = 0.75$ f=0.98 $\chi_{LT} = 1.00$
 $\lambda_y = 11.64$ Ncr,y=8237560.00 $\lambda^*_y = 0.13$ Curva a: $\Phi_y = 0.50$ $\chi_y = 1.00$
 $\lambda_z = 43.29$ Ncr,z=595198.00 $\lambda^*_z = 0.50$ Curva b: $\Phi_z = 0.68$ $\chi_z = 0.88$
Kyy, Kyz, Kzy, Kzz=0.95, 0.96, 0.76, 0.96
Verifica YY: 0.03+0.07+0.01=0.11
Verifica ZZ: 0.03+0.05+0.01=0.10

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L} = 0.00$ (L/35358)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L} = 0.00$ (L/35358)

Asta n. 212 (-1182 -74) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU Xl=1.55 - Classe 2
Sollecitazioni: $T_y = 2.91$
V,Ed=2.91 Vc,Rd=54683.30 V,Ed/Vc,Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU Xl=1.55 - Classe 2
Sollecitazioni: $T_z = -373.42$
V,Ed=-373.42 Vc,Rd=38836.40 V,Ed/Vc,Rd=0.01

- Verifica in termini tensionali [4.2.4] - CC 28 SLU Xl=0.00 - Classe 3
Sollecitazioni: N=-3298.42 $T_z = -44.01$ $M_y = -684.06$ $T_y = 4.62$ $M_z = -15.02$
Tensioni: $\sigma_N = -61.29$ $\sigma_{m,d} = -141.45$ $\tau = 0.00$ $\sigma_{max} = -202.74$ (sfrut=0.08)
Tensioni: $\sigma_N = -61.29$ $\sigma_{m,d} = -0.88$ $\tau = 2.46$ $\tau_{max} = 2.46$ (sfrut=0.00)
Tensioni: $\sigma_N = -61.29$ $\sigma_{m,d} = -141.45$ $\tau = 0.00$ $\sigma_{ID,max} = 202.74$ (sfrut=0.08)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
Sollecitazioni: N,Ed=-3298.42 My,Ed=-684.06 Mz,Ed=-15.02 L=1.55
 α_{my} , α_{mz} , $\alpha_{LT} = 0.95$, 0.95, 0.95
 $L_{cr} = 1.55$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.46$ M,cr=116820.00 $\lambda_{LT} = 0.36$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.54$ $\beta_{LT} = 0.75$ f=0.98 $\chi_{LT} = 1.00$
 $\lambda_y = 12.44$ Ncr,y=7208930.00 $\lambda^*_y = 0.14$ Curva a: $\Phi_y = 0.50$ $\chi_y = 1.00$
 $\lambda_z = 46.27$ Ncr,z=520876.00 $\lambda^*_z = 0.53$ Curva b: $\Phi_z = 0.70$ $\chi_z = 0.87$
Kyy, Kyz, Kzy, Kzz=0.95, 0.96, 0.76, 0.96
Verifica YY: 0.02+0.04+0.01=0.07

Relazione di calcolo

Verifica ZZ: $0.02+0.04+0.01=0.07$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,G}=0.00$ (L/37797)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.01$ (L/22573)

Asta n. 212 (-1181 -1182) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_1=0.95$ - Classe 2
Sollecitazioni: $T_y=-48.65$
 $V, Ed=-48.65$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_1=0.95$ - Classe 2
Sollecitazioni: $T_z=194.95$
 $V, Ed=194.95$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_1=1.50$ - Classe 3
Sollecitazioni: $N=-3281.14$ $T_z=-13.91$ $M_y=-682.53$ $T_y=-60.49$ $M_z=-35.25$
Tensioni: $\sigma_N=-60.97$ $\sigma_{m,d}=-166.31$ $\tau=0.00$ $\sigma_{max}=-227.28$ (sfrut=0.09)
Tensioni: $\sigma_N=-60.97$ $\sigma_{m,d}=102.95$ $\tau=2.65$ $\tau_{max}=2.65$ (sfrut=0.00)
Tensioni: $\sigma_N=-60.97$ $\sigma_{m,d}=-166.31$ $\tau=0.00$ $\sigma_{ID,max}=227.28$ (sfrut=0.09)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
Sollecitazioni: $N, Ed=-3281.14$ $M_y, Ed=-682.53$ $M_z, Ed=55.49$ $L=1.50$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.50$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.32$ $M_{cr}=112646.00$ $\lambda_{LT}=0.37$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.55$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.04$ $N_{cr,y}=7697560.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=44.78$ $N_{cr,z}=556181.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.88$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.04+0.03=0.09$
Verifica ZZ: $0.02+0.04+0.03=0.08$

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.00$ (L/34952)

- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.01$ (L/24575)

Asta n. 212 (86 -1181) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 3 SLV $X_1=0.41$ - Classe 2
Sollecitazioni: $T_z=299.95$
 $V, Ed=299.95$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=0.00$ - Classe 3
Sollecitazioni: $N=-3367.97$ $T_z=1092.77$ $M_y=958.05$ $T_y=4.46$ $M_z=36.41$
Tensioni: $\sigma_N=-62.59$ $\sigma_{m,d}=-217.20$ $\tau=0.00$ $\sigma_{max}=-279.78$ (sfrut=0.11)
Tensioni: $\sigma_N=-62.59$ $\sigma_{m,d}=2.14$ $\tau=61.01$ $\tau_{max}=61.01$ (sfrut=0.04)
Tensioni: $\sigma_N=-62.59$ $\sigma_{m,d}=-217.20$ $\tau=0.00$ $\sigma_{ID,max}=279.78$ (sfrut=0.11)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N, Ed=-3367.97$ $M_y, Ed=958.05$ $M_z, Ed=43.09$ $L=1.50$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.50$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.09$ $M_{cr}=178316.00$ $\lambda_{LT}=0.29$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.51$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=12.04$ $N_{cr,y}=7697520.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=44.78$ $N_{cr,z}=556178.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.88$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.06+0.02=0.11$
Verifica ZZ: $0.02+0.05+0.02=0.09$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.00$ (L/87381)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.00$ (L/33465)

Asta n. 212 (86 -1941) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 28 SLU $X_1=2.49$ - Classe 2
Sollecitazioni: $T_y=-16.51$ $M_x=2.96$
 $V, Ed=-16.51$ $V_c, Rd, Red=54428.60$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 28 SLU $X_1=2.49$ - Classe 2
Sollecitazioni: $T_z=414.33$ $M_x=2.96$
 $V, Ed=414.33$ $V_c, Rd, Red=38655.50$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_l=0.30$ - Classe 3
 Sollecitazioni: $N=-3310.97$ $T_z=921.96$ $M_y=1180.57$ $T_y=-16.51$ $M_z=36.32$ $M_x=2.96$
 Tensioni: $\sigma_N=-61.53$ $\sigma_{m,d}=-257.04$ $\tau=17.57$ $\sigma_{max}=-318.56$ (sfrut=0.12)
 Tensioni: $\sigma_N=-61.53$ $\sigma_{m,d}=2.14$ $\tau=54.41$ $\tau_{max}=54.41$ (sfrut=0.04)
 Tensioni: $\sigma_N=-61.53$ $\sigma_{m,d}=-257.04$ $\tau=17.57$ $\sigma_{ID,max}=320.01$ (sfrut=0.12)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
 Sollecitazioni: $N,Ed=-3310.97$ $M_y,Ed=1180.57$ $M_z,Ed=36.32$ $L=3.43$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.43$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.33$ $M_{cr}=46008.50$ $\lambda_{LT}=0.58$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.65$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.95$
 $\lambda_y=27.53$ $N_{cr,y}=1472130.00$ $\lambda^*_y=0.32$ Curva a: $\Phi_y=0.56$ $\chi_y=0.97$
 $\lambda_z=102.40$ $N_{cr,z}=106368.00$ $\lambda^*_z=1.18$ Curva b: $\Phi_z=1.36$ $\chi_z=0.49$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.98, 0.76, 0.98$
 Verifica YY: $0.02+0.08+0.02=0.12$
 Verifica ZZ: $0.02+0.06+0.02=0.11$
- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.01$ (L/22175)
- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.02$ (L/20385)
- Asta n. 212 (-1941 87) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 7 SLV $X_l=1.79$ - Classe 2
 Sollecitazioni: $T_z=-222.52$
 $V,Ed=-222.52$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$
- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=3.28$ - Classe 3
 Sollecitazioni: $N=-4145.94$ $T_z=-801.79$ $M_y=1155.97$ $T_y=-6.80$ $M_z=-35.37$ $M_x=-2.32$
 Tensioni: $\sigma_N=-77.04$ $\sigma_{m,d}=-251.44$ $\tau=13.77$ $\sigma_{max}=-328.48$ (sfrut=0.13)
 Tensioni: $\sigma_N=-77.04$ $\sigma_{m,d}=2.08$ $\tau=46.84$ $\tau_{max}=46.84$ (sfrut=0.03)
 Tensioni: $\sigma_N=-77.04$ $\sigma_{m,d}=-251.44$ $\tau=13.77$ $\sigma_{ID,max}=329.35$ (sfrut=0.13)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4145.94$ $M_y,Ed=1155.97$ $M_z,Ed=-35.37$ $L=3.43$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.43$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.19$ $M_{cr}=43296.60$ $\lambda_{LT}=0.59$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.67$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.95$
 $\lambda_y=27.53$ $N_{cr,y}=1472130.00$ $\lambda^*_y=0.32$ Curva a: $\Phi_y=0.56$ $\chi_y=0.97$
 $\lambda_z=102.40$ $N_{cr,z}=106368.00$ $\lambda^*_z=1.18$ Curva b: $\Phi_z=1.36$ $\chi_z=0.49$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.98, 0.76, 0.98$
 Verifica YY: $0.03+0.08+0.02=0.13$
 Verifica ZZ: $0.03+0.06+0.02=0.11$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.01$ (L/45254)
- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.02$ (L/19880)
- Asta n. 212 (-2011 87) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 3 SLV $X_l=0.23$ - Classe 1
 Sollecitazioni: $T_y=87.81$ $M_x=-1.72$
 $V,Ed=87.81$ $V_c,Rd,Red=54535.20$ $V,Ed/V_c,Rd,Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 3 SLV $X_l=0.23$ - Classe 1
 Sollecitazioni: $T_z=-395.65$ $M_x=-1.72$
 $V,Ed=-395.65$ $V_c,Rd,Red=38731.20$ $V,Ed/V_c,Rd,Red=0.01$
- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_l=0.47$ - Classe 3
 Sollecitazioni: $N=-3719.81$ $T_z=-1464.22$ $M_y=1715.57$ $T_y=1276.85$ $M_z=385.05$ $M_x=-6.91$
 Tensioni: $\sigma_N=-69.12$ $\sigma_{m,d}=-786.25$ $\tau=41.01$ $\sigma_{max}=-855.37$ (sfrut=0.33)
 Tensioni: $\sigma_N=-69.12$ $\sigma_{m,d}=-232.55$ $\tau=95.28$ $\tau_{max}=95.28$ (sfrut=0.06)
 Tensioni: $\sigma_N=-69.12$ $\sigma_{m,d}=-786.25$ $\tau=41.01$ $\sigma_{ID,max}=858.32$ (sfrut=0.33)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
 Sollecitazioni: $N,Ed=-3719.81$ $M_y,Ed=1715.57$ $M_z,Ed=385.05$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.62$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.22$ $M_{cr}=579024.00$ $\lambda_{LT}=0.16$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.47$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=4.98$ $N_{cr,y}=45055700.00$ $\lambda^*_y=0.06$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=18.51$ $N_{cr,z}=3255470.00$ $\lambda^*_z=0.21$ Curva b: $\Phi_z=0.52$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.03+0.11+0.17=0.31$

Relazione di calcolo

Verifica ZZ: $0.03+0.09+0.17=0.29$

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.00$ (L/25938)

- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.00$ (L/16994)

Asta n. 213 (-1161 -1158) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 3 SLV $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=35.78$
 $V, Ed=35.78$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.00$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 27 SLU $X_1=3.22$ - Classe 1
 Sollecitazioni: $N=-940.00$ $T_z=-44.94$ $M_y=-2.11$ $T_y=-9.10$ $M_z=-21.57$
 $N, Ed=-940.00$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-2.11$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.00$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-21.57$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^3 = 0.02$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 1
 Sollecitazioni: $N, Ed=-940.00$ $M_y, Ed=-36.95$ $M_z, Ed=-21.57$ $L=3.22$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.22$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=2.52$ $M_{cr}=11691.20$ $\lambda_{LT}=0.72$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.75$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.88$
 $\lambda_y=38.97$ $N_{cr,y}=388740.00$ $\lambda_y^*=0.45$ Curva a: $\Phi_y=0.63$ $\chi_y=0.94$
 $\lambda_z=143.98$ $N_{cr,z}=28480.70$ $\lambda_z^*=1.66$ Curva b: $\Phi_z=2.12$ $\chi_z=0.29$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.60, 0.57, 1.01$
 Verifica YY: $0.01+0.01+0.01=0.03$
 Verifica ZZ: $0.01+0.00+0.02=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.00$ (L/96432) $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/34092) $f_{z,L}=0.01$ (L/41668)

Asta n. 214 (-1162 -1159) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 15 SLV $X_1=3.22$ - Classe 1
 Sollecitazioni: $T_z=-35.89$
 $V, Ed=-35.89$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.00$

- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 27 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $N=104.26$ $T_z=46.66$ $T_y=-19.02$ $M_z=32.16$
 $M_z, Ed=32.16$ $M_z, V, c, Rd=1170.59$
 $N, Ed=104.26$ $N_c, Rd=74603.30$ ZZ $n=N, Ed/N_c, Rd=0.00$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 1
 Sollecitazioni: $M_y, Ed=-37.54$ $M_z, Ed=32.16$ $L=3.22$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.22$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=2.38$ $M_{cr}=11047.40$ $\lambda_{LT}=0.74$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.77$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.87$
 $\lambda_y=38.97$ $N_{cr,y}=388740.00$ $\lambda_y^*=0.45$ Curva a: $\Phi_y=0.63$ $\chi_y=0.94$
 $\lambda_z=143.98$ $N_{cr,z}=28480.70$ $\lambda_z^*=1.66$ Curva b: $\Phi_z=2.12$ $\chi_z=0.29$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.01+0.02=0.02$
 Verifica ZZ: $0.00+0.00+0.03=0.03$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.00$ (L/84378) $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/33089) $f_{z,L}=0.01$ (L/41160)

Asta n. 215 (-2411 -2412) - Sez. 7 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=2037.38$ $T_z=-3771.16$ $M_y=-17.77$ $T_y=1563.93$ $M_z=-530.79$ $M_x=-8.36$
 Tensioni: $\sigma_N=37.86$ $\sigma_{m,d}=662.52$ $\tau=49.62$ $\sigma_{max}=700.38$ (sfrut=0.27)
 Tensioni: $\sigma_N=37.86$ $\sigma_{m,d}=-31.21$ $\tau=217.62$ $\tau_{max}=217.62$ (sfrut=0.14)
 Tensioni: $\sigma_N=37.86$ $\sigma_{m,d}=662.52$ $\tau=49.62$ $\sigma_{ID,max}=705.63$ (sfrut=0.27)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $M_y, Ed=971.54$ $M_z, Ed=-530.79$ $L=0.41$

$\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.41$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.77$ $M_{cr}=1898200.00$ $\lambda_{LT}=0.09$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.45$ $\beta_{LT}=0.75$ $f=1.00$ $\chi_{LT}=1.00$
 $\lambda_y=3.30$ $N_{cr,y}=102330000.00$ $\lambda^*_y=0.04$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=12.28$ $N_{cr,z}=7393790.00$ $\lambda^*_z=0.14$ Curva b: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.06+0.24=0.30$
Verifica ZZ: $0.00+0.05+0.24=0.29$

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,g}=0.00$ (L/19611)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.00$ (L/14450)

Asta n. 215 (-2412 -1256) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 15 SLV $X_1=0.27$ - Classe 1
Sollecitazioni: $T_y=368.40$ $M_x=1.59$
 $V, Ed=368.40$ $V_c, Rd, Red=54547.00$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 15 SLV $X_1=0.27$ - Classe 1
Sollecitazioni: $T_z=1620.29$ $M_x=1.59$
 $V, Ed=1620.29$ $V_c, Rd, Red=38739.60$ $V, Ed/V_c, Rd, Red=0.04$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=0.15$ - Classe 3
Sollecitazioni: $N=-1439.89$ $T_z=7206.62$ $M_y=6569.61$ $T_y=1154.00$ $M_z=-178.25$ $M_x=3.26$
Tensioni: $\sigma_N=-26.76$ $\sigma_{m,d}=-1400.69$ $\tau=19.34$ $\sigma_{max}=-1427.45$ (sfrut=0.55)
Tensioni: $\sigma_N=-26.76$ $\sigma_{m,d}=10.48$ $\tau=403.05$ $\tau_{max}=403.05$ (sfrut=0.27)
Tensioni: $\sigma_N=-26.76$ $\sigma_{m,d}=-1400.69$ $\tau=19.34$ $\sigma_{ID,max}=1427.84$ (sfrut=0.55)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N, Ed=-1439.89$ $M_y, Ed=6569.61$ $M_z, Ed=355.16$ $L=0.61$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.61$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.30$ $M_{cr}=636508.00$ $\lambda_{LT}=0.16$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.47$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=4.91$ $N_{cr,y}=46273800.00$ $\lambda^*_y=0.06$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=18.26$ $N_{cr,z}=3343480.00$ $\lambda^*_z=0.21$ Curva b: $\Phi_z=0.52$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.43+0.16=0.60$
Verifica ZZ: $0.01+0.34+0.16=0.51$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.01$ (L/4895)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.01$ (L/3274)

Asta n. 215 (-1256 -1257) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_1=0.83$ - Classe 1
Sollecitazioni: $T_y=-126.66$
 $V, Ed=-126.66$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_1=0.83$ - Classe 1
Sollecitazioni: $T_z=791.24$
 $V, Ed=791.24$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.02$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=0.00$ - Classe 3
Sollecitazioni: $N=-1452.80$ $T_z=3626.78$ $M_y=3244.18$ $T_y=-270.89$ $M_z=233.21$
Tensioni: $\sigma_N=-27.00$ $\sigma_{m,d}=-872.03$ $\tau=0.00$ $\sigma_{max}=-899.03$ (sfrut=0.34)
Tensioni: $\sigma_N=-27.00$ $\sigma_{m,d}=13.71$ $\tau=202.50$ $\tau_{max}=202.50$ (sfrut=0.13)
Tensioni: $\sigma_N=-27.00$ $\sigma_{m,d}=-872.03$ $\tau=0.00$ $\sigma_{ID,max}=899.03$ (sfrut=0.34)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N, Ed=-1452.80$ $M_y, Ed=3244.18$ $M_z, Ed=233.21$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.61$ $M_{cr}=215688.00$ $\lambda_{LT}=0.27$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.50$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=12.23$ $N_{cr,y}=7452600.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.51$ $N_{cr,z}=538482.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.21+0.11=0.33$
Verifica ZZ: $0.01+0.17+0.11=0.28$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.01$ (L/18373)

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.01$ (L/11667)

Asta n. 215 (-1257 -1258) - Sez. 7 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=1.51$ - Classe 3
Sollecitazioni: $N=-1216.63$ $T_z=1277.94$ $M_y=-4218.47$ $T_y=186.78$ $M_z=149.10$
Tensioni: $\sigma_N=-22.61$ $\sigma_{m,d}=-942.45$ $\tau=0.00$ $\sigma_{max}=-965.05$ (sfrut=0.37)
Tensioni: $\sigma_N=-22.61$ $\sigma_{m,d}=8.77$ $\tau=71.36$ $\tau_{max}=71.36$ (sfrut=0.05)
Tensioni: $\sigma_N=-22.61$ $\sigma_{m,d}=-942.45$ $\tau=0.00$ $\sigma_{ID,max}=965.05$ (sfrut=0.37)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N,Ed=-1222.97$ $M_y,Ed=-4218.47$ $M_z,Ed=149.10$ $L=1.51$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.28$ $M_{cr}=107163.00$ $\lambda_{LT}=0.38$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.55$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.15$ $N_{cr,y}=7551650.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.21$ $N_{cr,z}=545638.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.95$, 0.95 , 0.76 , 0.95
Verifica YY: $0.01+0.27+0.07=0.35$
Verifica ZZ: $0.01+0.22+0.07=0.30$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.03$ (L/6037)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.03$ (L/4344)

Asta n. 215 (-1258 -1259) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 1 SLV $X_l=1.25$ - Classe 1
Sollecitazioni: $T_y=-57.58$
 $V,Ed=-57.58$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=1.25$ - Classe 1
Sollecitazioni: $T_z=-92.48$
 $V,Ed=-92.48$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-1032.29$ $T_z=-154.04$ $M_y=-4217.61$ $T_y=-126.03$ $M_z=168.68$
Tensioni: $\sigma_N=-19.18$ $\sigma_{m,d}=-966.61$ $\tau=0.00$ $\sigma_{max}=-985.79$ (sfrut=0.38)
Tensioni: $\sigma_N=-19.18$ $\sigma_{m,d}=9.92$ $\tau=8.61$ $\tau_{max}=8.61$ (sfrut=0.01)
Tensioni: $\sigma_N=-19.18$ $\sigma_{m,d}=-966.61$ $\tau=0.00$ $\sigma_{ID,max}=985.79$ (sfrut=0.38)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N,Ed=-1032.29$ $M_y,Ed=-4217.61$ $M_z,Ed=168.68$ $L=1.52$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.03$ $M_{cr}=85412.30$ $\lambda_{LT}=0.42$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.57$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.23$ $N_{cr,y}=7452620.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.51$ $N_{cr,z}=538483.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.95$, 0.95 , 0.76 , 0.95
Verifica YY: $0.01+0.27+0.08=0.36$
Verifica ZZ: $0.01+0.22+0.08=0.30$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.03$ (L/4593)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.05$ (L/3309)

Asta n. 215 (-1259 -1260) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 30 SLU $X_l=0.83$ - Classe 1
Sollecitazioni: $T_y=-125.11$
 $V,Ed=-125.11$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 30 SLU $X_l=0.83$ - Classe 1
Sollecitazioni: $T_z=-780.13$
 $V,Ed=-780.13$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.02$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-768.25$ $T_z=-947.16$ $M_y=-3918.35$ $T_y=-125.88$ $M_z=110.72$
Tensioni: $\sigma_N=-14.28$ $\sigma_{m,d}=-840.89$ $\tau=0.00$ $\sigma_{max}=-855.17$ (sfrut=0.33)
Tensioni: $\sigma_N=-14.28$ $\sigma_{m,d}=6.51$ $\tau=52.89$ $\tau_{max}=52.89$ (sfrut=0.03)
Tensioni: $\sigma_N=-14.28$ $\sigma_{m,d}=-840.89$ $\tau=0.00$ $\sigma_{ID,max}=855.17$ (sfrut=0.33)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N,Ed=-768.25$ $M_y,Ed=-3918.35$ $M_z,Ed=110.72$ $L=1.51$

$\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.22$ $M_{cr}=101747.00$ $\lambda_{LT}=0.39$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.55$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.15$ $N_{cr,y}=7551630.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.21$ $N_{cr,z}=545637.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.26+0.05=0.31$
Verifica ZZ: $0.01+0.20+0.05=0.26$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.03$ (L/5671)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.04$ (L/4162)

Asta n. 215 (-1260 -83) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_1=1.75$ - Classe 1
Sollecitazioni: $T_y=-53.56$
 $V, Ed=-53.56$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_1=1.75$ - Classe 1
Sollecitazioni: $T_z=-278.77$
 $V, Ed=-278.77$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=0.00$ - Classe 3
Sollecitazioni: $N=-461.24$ $T_z=-1342.10$ $M_y=-2420.88$ $T_y=-187.60$ $M_z=67.66$ $M_x=1.17$
Tensioni: $\sigma_N=-8.57$ $\sigma_{m,d}=-518.60$ $\tau=6.97$ $\sigma_{max}=-527.17$ (sfrut=0.20)
Tensioni: $\sigma_N=-8.57$ $\sigma_{m,d}=3.98$ $\tau=75.32$ $\tau_{max}=75.32$ (sfrut=0.05)
Tensioni: $\sigma_N=-8.57$ $\sigma_{m,d}=-518.60$ $\tau=6.97$ $\sigma_{ID,max}=527.31$ (sfrut=0.20)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N, Ed=-461.24$ $M_y, Ed=-2420.88$ $M_z, Ed=-259.73$ $L=1.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.75$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=112459.00$ $\lambda_{LT}=0.37$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.55$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=14.00$ $N_{cr,y}=5687190.00$ $\lambda^*_y=0.16$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=52.10$ $N_{cr,z}=410924.00$ $\lambda^*_z=0.60$ Curva b: $\Phi_z=0.75$ $\chi_z=0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.16+0.12=0.28$
Verifica ZZ: $0.00+0.13+0.12=0.25$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.02$ (L/11401)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.02$ (L/8471)

Asta n. 216 (-1163 -1160) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_y=-13.84$
 $V, Ed=-13.84$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=46.72$
 $V, Ed=46.72$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.00$

- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 27 SLU $X_1=3.22$ - Classe 1
Sollecitazioni: $N=-17.22$ $T_z=-46.61$ $T_y=-19.16$ $M_z=-31.34$
 $M_z, Ed=-31.34$ $M_z, V, c, Rd=1170.59$
 $N, Ed=-17.22$ $N_c, Rd=-74603.30$ ZZ $n=N, Ed/N_c, Rd=0.00$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 1
Sollecitazioni: $N, Ed=-17.22$ $M_y, Ed=-37.54$ $M_z, Ed=-31.34$ $L=3.22$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.22$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=3.01$ $M_{cr}=13993.30$ $\lambda_{LT}=0.66$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.71$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.92$
 $\lambda_y=38.97$ $N_{cr,y}=388740.00$ $\lambda^*_y=0.45$ Curva a: $\Phi_y=0.63$ $\chi_y=0.94$
 $\lambda_z=143.98$ $N_{cr,z}=28480.70$ $\lambda^*_z=1.66$ Curva b: $\Phi_z=2.12$ $\chi_z=0.29$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.01+0.02=0.02$
Verifica ZZ: $0.00+0.00+0.03=0.03$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.00$ (L/91219) $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/33751) $f_{z,L}=0.01$ (L/41668)

Asta n. 217 (-1146 -1149) - Sez. 8 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU $X_l=3.22$ - Classe 1
 Sollecitazioni: $T_y=-7.92$
 $V, Ed=-7.92$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU $X_l=3.22$ - Classe 1
 Sollecitazioni: $T_z=-47.16$
 $V, Ed=-47.16$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.00$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 27 SLU $X_l=3.22$ - Classe 1
 Sollecitazioni: $N=-52.16$ $T_z=-47.04$ $M_y=1.14$ $T_y=-11.49$ $M_z=-19.23$
 $N, Ed=-52.16$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1.14$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.00$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-19.23$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.02$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 1
 Sollecitazioni: $N, Ed=-59.07$ $M_y, Ed=-37.02$ $M_z, Ed=-19.23$ $L=3.22$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.22$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.83$ $M, cr=8493.70$ $\lambda_{LT}=0.85$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.85$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.82$
 $\lambda_y=38.97$ $N_{cr,y}=388740.00$ $\lambda^*_y=0.45$ Curva a: $\Phi_y=0.63$ $\chi_y=0.94$
 $\lambda_z=143.98$ $N_{cr,z}=28480.70$ $\lambda^*_z=1.66$ Curva b: $\Phi_z=2.12$ $\chi_z=0.29$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.01+0.01=0.02$
 Verifica ZZ: $0.00+0.00+0.02=0.02$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.00$ (L/91219) $f_{z,L}=0.00$
- Verifica freccia massima carichi totali - CC 21
 $f_{z,L}=0.01$ (L/43270) $f_{z,g}=0.01$ (L/51138)

Asta n. 218 (-78 -1229) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 30 SLU $X_l=1.54$ - Classe 2
 Sollecitazioni: $T_y=189.04$
 $V, Ed=189.04$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 30 SLU $X_l=1.54$ - Classe 2
 Sollecitazioni: $T_z=1989.73$
 $V, Ed=1989.73$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.05$
- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_l=0.30$ - Classe 3
 Sollecitazioni: $N=-3556.62$ $T_z=2565.02$ $M_y=3991.60$ $T_y=213.44$ $M_z=-266.88$
 Tensioni: $\sigma_N=-66.09$ $\sigma_{m,d}=-1048.02$ $\tau=0.00$ $\sigma_{max}=-1114.11$ (sfrut=0.43)
 Tensioni: $\sigma_N=-66.09$ $\sigma_{m,d}=-15.69$ $\tau=143.22$ $\tau_{max}=143.22$ (sfrut=0.09)
 Tensioni: $\sigma_N=-66.09$ $\sigma_{m,d}=-1048.02$ $\tau=0.00$ $\sigma_{ID,max}=1114.11$ (sfrut=0.43)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3556.62$ $M_y, Ed=3991.60$ $M_z, Ed=-266.88$ $L=1.66$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.66$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.61$ $M, cr=113052.00$ $\lambda_{LT}=0.37$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.55$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=13.36$ $N_{cr,y}=6248550.00$ $\lambda^*_y=0.15$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=49.70$ $N_{cr,z}=451484.00$ $\lambda^*_z=0.57$ Curva b: $\Phi_z=0.73$ $\chi_z=0.85$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.03+0.26+0.12=0.41$
 Verifica ZZ: $0.03+0.21+0.12=0.36$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.03$ (L/4757)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.04$ (L/3426)

Asta n. 218 (-1229 -1230) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.14$ - Classe 2
 Sollecitazioni: $T_y=42.84$
 $V, Ed=42.84$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.14$ - Classe 2
 Sollecitazioni: $T_z=1157.42$

V,Ed=1157.42 Vc,Rd=38836.40 V,Ed/Vc,Rd=0.03

- Verifica in termini tensionali [4.2.4] - CC 29 SLU Xl=1.51 - Classe 3
 Sollecitazioni: N=-3568.66 T_z=1459.82 M_y=-1659.22 T_y=102.48 M_z=87.90
 Tensioni: $\sigma_N=-66.32$ $\sigma_{m,d}=-407.03$ $\tau=0.00$ $\sigma_{max}=-473.34$ (sfrut=0.18)
 Tensioni: $\sigma_N=-66.32$ $\sigma_{m,d}=5.17$ $\tau=81.51$ $\tau_{max}=81.51$ (sfrut=0.05)
 Tensioni: $\sigma_N=-66.32$ $\sigma_{m,d}=-407.03$ $\tau=0.00$ $\sigma_{ID,max}=473.34$ (sfrut=0.18)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: N,Ed=-3575.01 My,Ed=-1659.22 Mz,Ed=87.90 L=1.51
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 L_{cr}=1.51 Curva b: $\alpha_{imp}=0.34$ k_c=0.94 $\psi=2.18$ M_{cr}=182440.00 $\lambda_{LT}=0.29$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.51$ $\beta_{LT}=0.75$ f=0.99 $\chi_{LT}=1.00$
 $\lambda_y=12.15$ Ncr,y=7551650.00 $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.21$ Ncr,z=545638.00 $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.96, 0.76, 0.96
 Verifica YY: 0.03+0.11+0.04=0.17
 Verifica ZZ: 0.03+0.09+0.04=0.15

- Verifica freccia massima per soli carichi accidentali - CC 32
 f_{z,L}=0.00 (L/35288)

- Verifica freccia massima carichi totali - CC 32
 f_{z,L}=0.01 (L/25206)

Asta n. 218 (-1230 -1228) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 28 SLU Xl=0.28 - Classe 1
 Sollecitazioni: T_y=-56.55 M_x=1.10
 V,Ed=-56.55 Vc,Rd,Red=54589.00 V,Ed/Vc,Rd,Red=0.00

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 28 SLU Xl=0.28 - Classe 1
 Sollecitazioni: T_z=1046.66 M_x=1.10
 V,Ed=1046.66 Vc,Rd,Red=38769.40 V,Ed/Vc,Rd,Red=0.03

- Verifica in termini tensionali [4.2.4] - CC 29 SLU Xl=1.52 - Classe 3
 Sollecitazioni: N=-3459.27 T_z=1046.15 M_y=-3317.22 T_y=-64.43 M_z=-67.44 M_x=1.16
 Tensioni: $\sigma_N=-64.28$ $\sigma_{m,d}=-679.23$ $\tau=6.90$ $\sigma_{max}=-743.52$ (sfrut=0.28)
 Tensioni: $\sigma_N=-64.28$ $\sigma_{m,d}=-3.97$ $\tau=58.84$ $\tau_{max}=58.84$ (sfrut=0.04)
 Tensioni: $\sigma_N=-64.28$ $\sigma_{m,d}=-679.23$ $\tau=6.90$ $\sigma_{ID,max}=743.61$ (sfrut=0.28)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: N,Ed=-3465.66 My,Ed=-3317.22 Mz,Ed=-67.44 L=1.52
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 L_{cr}=1.52 Curva b: $\alpha_{imp}=0.34$ k_c=0.94 $\psi=1.30$ M_{cr}=107449.00 $\lambda_{LT}=0.38$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.55$ $\beta_{LT}=0.75$ f=0.98 $\chi_{LT}=1.00$
 $\lambda_y=12.23$ Ncr,y=7452600.00 $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.51$ Ncr,z=538482.00 $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.96, 0.76, 0.96
 Verifica YY: 0.02+0.22+0.03=0.27
 Verifica ZZ: 0.02+0.17+0.03=0.23

- Verifica freccia massima per soli carichi accidentali - CC 33
 f_{z,L}=0.02 (L/7874)

- Verifica freccia massima carichi totali - CC 33
 f_{z,L}=0.03 (L/5608)

Asta n. 218 (-1228 -1224) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU Xl=0.69 - Classe 1
 Sollecitazioni: T_y=228.38
 V,Ed=228.38 Vc,Rd=54683.30 V,Ed/Vc,Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU Xl=0.69 - Classe 1
 Sollecitazioni: T_z=348.22
 V,Ed=348.22 Vc,Rd=38836.40 V,Ed/Vc,Rd=0.01

- Verifica in termini tensionali [4.2.4] - CC 29 SLU Xl=1.51 - Classe 3
 Sollecitazioni: N=-3338.92 T_z=365.65 M_y=-3934.05 T_y=207.69 M_z=169.87
 Tensioni: $\sigma_N=-62.05$ $\sigma_{m,d}=-917.19$ $\tau=0.00$ $\sigma_{max}=-979.24$ (sfrut=0.37)
 Tensioni: $\sigma_N=-62.05$ $\sigma_{m,d}=9.99$ $\tau=20.43$ $\tau_{max}=20.43$ (sfrut=0.01)
 Tensioni: $\sigma_N=-62.05$ $\sigma_{m,d}=-917.19$ $\tau=0.00$ $\sigma_{ID,max}=979.24$ (sfrut=0.37)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: N,Ed=-3345.27 My,Ed=-3934.05 Mz,Ed=169.87 L=1.51
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 L_{cr}=1.51 Curva b: $\alpha_{imp}=0.34$ k_c=0.94 $\psi=1.08$ M_{cr}=90210.10 $\lambda_{LT}=0.41$

$\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.57$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.15$ Ncr,y=7551650.00 $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.21$ Ncr,z=545638.00 $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.96, 0.76, 0.96
 Verifica YY: 0.02+0.26+0.08=0.36
 Verifica ZZ: 0.02+0.21+0.08=0.31

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.03$ (L/5275)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.04$ (L/3789)

Asta n. 218 (-1224 -1223) - Sez. 7 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 29 SLU Xl=0.00 - Classe 3
 Sollecitazioni: N=-3232.66 Tz=-662.58 My=-3934.72 Ty=-43.24 Mz=108.38
 Tensioni: $\sigma_N=-60.07$ $\sigma_{m,d}=-840.93$ $\tau=0.00$ $\sigma_{max}=-901.00$ (sfrut=0.34)
 Tensioni: $\sigma_N=-60.07$ $\sigma_{m,d}=6.37$ $\tau=37.00$ $\tau_{max}=37.00$ (sfrut=0.02)
 Tensioni: $\sigma_N=-60.07$ $\sigma_{m,d}=-840.93$ $\tau=0.00$ $\sigma_{ID,max}=901.00$ (sfrut=0.34)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: N,Ed=-3232.66 My,Ed=-3934.72 Mz,Ed=108.38 L=1.52
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95, 0.95
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.15$ M,cr=94652.30 $\lambda_{LT}=0.40$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.56$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.23$ Ncr,y=7452620.00 $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.51$ Ncr,z=538483.00 $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.96, 0.76, 0.96
 Verifica YY: 0.02+0.26+0.05=0.33
 Verifica ZZ: 0.02+0.21+0.05=0.28

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.03$ (L/5373)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.04$ (L/3884)

Asta n. 218 (-1223 -1220) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU Xl=0.69 - Classe 2
 Sollecitazioni: Ty=-103.16
 V,Ed=-103.16 Vc,Rd=54683.30 V,Ed/Vc,Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU Xl=0.69 - Classe 2
 Sollecitazioni: Tz=-2490.15
 V,Ed=-2490.15 Vc,Rd=38836.40 V,Ed/Vc,Rd=0.06

- Verifica in termini tensionali [4.2.4] - CC 29 SLU Xl=0.00 - Classe 3
 Sollecitazioni: N=-3114.25 Tz=-2608.64 My=-2861.86 Ty=-100.87 Mz=73.29
 Tensioni: $\sigma_N=-57.87$ $\sigma_{m,d}=-604.76$ $\tau=0.00$ $\sigma_{max}=-662.63$ (sfrut=0.25)
 Tensioni: $\sigma_N=-57.87$ $\sigma_{m,d}=4.31$ $\tau=145.65$ $\tau_{max}=145.65$ (sfrut=0.10)
 Tensioni: $\sigma_N=-57.87$ $\sigma_{m,d}=-604.76$ $\tau=0.00$ $\sigma_{ID,max}=662.63$ (sfrut=0.25)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: N,Ed=-3114.25 My,Ed=-2861.86 Mz,Ed=-79.46 L=1.51
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95, 0.95
 $L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.22$ M,cr=185882.00 $\lambda_{LT}=0.29$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.51$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=12.15$ Ncr,y=7551630.00 $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.21$ Ncr,z=545637.00 $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.96, 0.76, 0.96
 Verifica YY: 0.02+0.19+0.04=0.24
 Verifica ZZ: 0.02+0.15+0.04=0.21

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.01$ (L/14306)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.01$ (L/10586)

Asta n. 218 (-1220 -1210) - Sez. 7 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 29 SLU Xl=1.30 - Classe 3
 Sollecitazioni: N=-2963.75 Tz=-5546.99 My=8296.00 Ty=23.69 Mz=-17.00 Mx=-2.03
 Tensioni: $\sigma_N=-55.07$ $\sigma_{m,d}=-1510.28$ $\tau=12.07$ $\sigma_{max}=-1565.36$ (sfrut=0.60)
 Tensioni: $\sigma_N=-55.07$ $\sigma_{m,d}=-1.00$ $\tau=309.95$ $\tau_{max}=309.95$ (sfrut=0.20)
 Tensioni: $\sigma_N=-55.07$ $\sigma_{m,d}=-1510.28$ $\tau=12.07$ $\sigma_{ID,max}=1565.50$ (sfrut=0.60)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: N,Ed=-2969.18 My,Ed=8296.00 Mz,Ed=-47.70 L=1.75
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.75$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=1.61 M, cr=103352.00 \lambda_{LT}=0.39$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.55 \beta_{LT}=0.75 f=0.98 \chi_{LT}=1.00$
 $\lambda_y=14.00 Ncr,y=5687190.00 \lambda^*_y=0.16$ Curva a: $\Phi_y=0.51 \chi_y=1.00$
 $\lambda_z=52.10 Ncr,z=410924.00 \lambda^*_z=0.60$ Curva b: $\Phi_z=0.75 \chi_z=0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.02+0.54+0.02=0.58$
 Verifica ZZ: $0.02+0.43+0.02=0.48$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.06$ (L/2192)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.08$ (L/1635)

Asta n. 219 (-1147 -1150) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU Xl=3.22 - Classe 1
 Sollecitazioni: $T_y=-3.22$
 $V, Ed=-3.22 Vc, Rd=29609.30 V, Ed/Vc, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU Xl=3.22 - Classe 1
 Sollecitazioni: $T_z=-47.60$
 $V, Ed=-47.60 Vc, Rd=21171.50 V, Ed/Vc, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 28 SLU Xl=1.58 - Classe 1
 Sollecitazioni: N=-429.76 My,Ed=-37.43 $T_y=-3.22$
 $My, Ed=-37.43 My, c, Rd=5804.95$
 $N, Ed=-429.76 Nc, Rd=-74603.30 YY n=N, Ed/Nc, Rd=0.01 MNy, c, Rd=5804.95 My, Ed/MNy, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 1
 Sollecitazioni: N,Ed=-433.15 My,Ed=-37.43 Mz,Ed=5.85 L=3.22
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.22$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=2.84 M, cr=13204.50 \lambda_{LT}=0.68$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.72 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.91$
 $\lambda_y=38.97 Ncr,y=388740.00 \lambda^*_y=0.45$ Curva a: $\Phi_y=0.63 \chi_y=0.94$
 $\lambda_z=143.98 Ncr,z=28480.70 \lambda^*_z=1.66$ Curva b: $\Phi_z=2.12 \chi_z=0.29$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.59, 0.57, 0.98$
 Verifica YY: $0.01+0.01+0.00=0.02$
 Verifica ZZ: $0.01+0.00+0.00=0.01$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.00$ (L/86541) $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.01$ (L/45001) $f_{z,g}=0.01$ (L/60270)

Asta n. 220 (-1151 -1148) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU Xl=0.00 - Classe 1
 Sollecitazioni: $T_y=-21.62$
 $V, Ed=-21.62 Vc, Rd=29609.30 V, Ed/Vc, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU Xl=0.00 - Classe 1
 Sollecitazioni: $T_z=46.91$
 $V, Ed=46.91 Vc, Rd=21171.50 V, Ed/Vc, Rd=0.00$

- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 28 SLU Xl=3.22 - Classe 1
 Sollecitazioni: N=-106.77 $T_z=-46.40 T_y=-21.62 M_z=-34.94$
 $Mz, Ed=-34.94 Mz, V, c, Rd=1170.59$
 $N, Ed=-106.77 Nc, Rd=-74603.30 ZZ n=N, Ed/Nc, Rd=0.00 MNz, c, Rd=1170.59 Mz, Ed/MNz, c, Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 1
 Sollecitazioni: N,Ed=-106.77 My,Ed=-37.49 Mz,Ed=-34.94 L=3.22
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.22$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=2.72 M, cr=12644.50 \lambda_{LT}=0.69$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.73 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.90$
 $\lambda_y=38.97 Ncr,y=388740.00 \lambda^*_y=0.45$ Curva a: $\Phi_y=0.63 \chi_y=0.94$
 $\lambda_z=143.98 Ncr,z=28480.70 \lambda^*_z=1.66$ Curva b: $\Phi_z=2.12 \chi_z=0.29$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.96$
 Verifica YY: $0.00+0.01+0.02=0.03$
 Verifica ZZ: $0.00+0.00+0.03=0.03$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.00$ (L/86541) $f_{z,L}=0.00$

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/33751) $f_{z,L}=0.01$ (L/42189)

Asta n. 222 (80 -98) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=0.30$ - Classe 1
 Sollecitazioni: $T_z=344.01$
 $V,Ed=344.01$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_l=2.77$ - Classe 3
 Sollecitazioni: $N=-272.86$ $T_z=-302.63$ $M_y=483.97$ $T_y=-61.05$ $M_z=-75.64$
 Tensioni: $\sigma_N=-5.07$ $\sigma_{m,d}=-180.83$ $\tau=0.00$ $\sigma_{max}=-185.90$ (sfrut=0.07)
 Tensioni: $\sigma_N=-5.07$ $\sigma_{m,d}=-4.45$ $\tau=16.90$ $\tau_{max}=16.90$ (sfrut=0.01)
 Tensioni: $\sigma_N=-5.07$ $\sigma_{m,d}=-180.83$ $\tau=0.00$ $\sigma_{ID,max}=185.90$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
 Sollecitazioni: $N,Ed=-282.88$ $M_y,Ed=483.97$ $M_z,Ed=-75.64$ $L=3.22$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $L_{cr}=3.22$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.97$ $M_{cr}=43202.00$ $\lambda_{LT}=0.60$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.67$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.95$
 $\lambda_y=25.83$ $N_{cr,y}=1671670.00$ $\lambda^*_y=0.30$ Curva a: $\Phi_y=0.55$ $\chi_y=0.98$
 $\lambda_z=96.09$ $N_{cr,z}=120786.00$ $\lambda^*_z=1.11$ Curva b: $\Phi_z=1.27$ $\chi_z=0.53$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.95$, 0.95 , 0.76 , 0.95
 Verifica YY: $0.00+0.03+0.03=0.07$
 Verifica ZZ: $0.00+0.03+0.03=0.06$

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,G}=0.01$ (L/21956) $f_{z,L}=0.01$ (L/24441)

- Verifica freccia massima carichi totali - CC 32
 $f_{z,G}=0.01$ (L/23340) $f_{z,L}=0.01$ (L/26437)

Asta n. 223 (-1165 -1295) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=1.23$ - Classe 1
 Sollecitazioni: $T_y=2.69$
 $V,Ed=2.69$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 5 SLV $X_l=1.23$ - Classe 1
 Sollecitazioni: $T_z=-1020.45$
 $V,Ed=-1020.45$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.03$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=1.35$ - Classe 3
 Sollecitazioni: $N=-363.83$ $T_z=-998.68$ $M_y=927.27$ $T_y=-119.71$ $M_z=-75.16$ $M_x=1.18$
 Tensioni: $\sigma_N=-6.76$ $\sigma_{m,d}=-259.81$ $\tau=7.03$ $\sigma_{max}=-266.57$ (sfrut=0.10)
 Tensioni: $\sigma_N=-6.76$ $\sigma_{m,d}=-4.42$ $\tau=56.25$ $\tau_{max}=56.25$ (sfrut=0.04)
 Tensioni: $\sigma_N=-6.76$ $\sigma_{m,d}=-259.81$ $\tau=7.03$ $\sigma_{ID,max}=266.85$ (sfrut=0.10)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-363.83$ $M_y,Ed=927.27$ $M_z,Ed=87.04$ $L=1.58$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $L_{cr}=1.58$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.13$ $M_{cr}=164563.00$ $\lambda_{LT}=0.31$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.52$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.68$ $N_{cr,y}=6937780.00$ $\lambda^*_y=0.15$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=47.17$ $N_{cr,z}=501284.00$ $\lambda^*_z=0.54$ Curva b: $\Phi_z=0.71$ $\chi_z=0.86$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.95$, 0.95 , 0.76 , 0.95
 Verifica YY: $0.00+0.06+0.04=0.10$
 Verifica ZZ: $0.00+0.05+0.04=0.09$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.01$ (L/22916)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.00$ (L/27323)

Asta n. 223 (-100 -1165) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l=0.43$ - Classe 1
 Sollecitazioni: $T_y=-37.61$
 $V,Ed=-37.61$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 13 SLV $X_l=0.43$ - Classe 1
 Sollecitazioni: $T_z=1005.59$
 $V,Ed=1005.59$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.03$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.23$ - Classe 3
 Sollecitazioni: $N=-356.14$ $T_z=-677.77$ $M_y=-769.33$ $T_y=323.80$ $M_z=-118.90$ $M_x=-2.31$
 Tensioni: $\sigma_N=-6.62$ $\sigma_{m,d}=-285.79$ $\tau=13.72$ $\sigma_{max}=-292.41$ (sfrut=0.11)
 Tensioni: $\sigma_N=-6.62$ $\sigma_{m,d}=-6.99$ $\tau=40.65$ $\tau_{max}=40.65$ (sfrut=0.03)

Tensioni: $\sigma_N = -6.62$ $\sigma_{m,d} = -285.79$ $\tau = 13.72$ $\sigma_{ID,max} = 293.38$ (sfrut=0.11)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed = -356.14$ $M_y, Ed = -769.33$ $M_z, Ed = -118.90$ $L = 0.85$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 0.85$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 1.38$ $M_{cr} = 351894.00$ $\lambda_{LT} = 0.21$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.48$ $\beta_{LT} = 0.75$ $f = 0.99$ $\chi_{LT} = 1.00$
 $\lambda_y = 6.82$ $N_{cr,y} = 23971500.00$ $\lambda^*_y = 0.08$ Curva a: $\Phi_y = 0.49$ $\chi_y = 1.00$
 $\lambda_z = 25.38$ $N_{cr,z} = 1732040.00$ $\lambda^*_z = 0.29$ Curva b: $\Phi_z = 0.56$ $\chi_z = 0.97$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00 + 0.05 + 0.05 = 0.11$
 Verifica ZZ: $0.00 + 0.04 + 0.05 = 0.10$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L} = 0.00$ (L/25206)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L} = 0.00$ (L/23405)

Asta n. 223 (-1161 -100) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_l = 0.32$ - Classe 1
 Sollecitazioni: $T_y = 7.93$
 $V, Ed = 7.93$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l = 0.32$ - Classe 1
 Sollecitazioni: $T_z = -442.12$
 $V, Ed = -442.12$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l = 0.42$ - Classe 3
 Sollecitazioni: $N = -1879.89$ $T_z = -1022.24$ $M_y = 1071.18$ $T_y = -816.27$ $M_z = -203.37$ $M_x = 3.45$
 Tensioni: $\sigma_N = -34.93$ $\sigma_{m,d} = -444.90$ $\tau = 20.45$ $\sigma_{max} = -479.84$ (sfrut=0.18)
 Tensioni: $\sigma_N = -34.93$ $\sigma_{m,d} = -11.96$ $\tau = 61.63$ $\tau_{max} = 61.63$ (sfrut=0.04)
 Tensioni: $\sigma_N = -34.93$ $\sigma_{m,d} = -444.90$ $\tau = 20.45$ $\sigma_{ID,max} = 481.14$ (sfrut=0.18)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed = -1879.89$ $M_y, Ed = 1071.18$ $M_z, Ed = -203.37$ $L = 0.65$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 0.65$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 1.21$ $M_{cr} = 524430.00$ $\lambda_{LT} = 0.17$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.47$ $\beta_{LT} = 0.75$ $f = 0.99$ $\chi_{LT} = 1.00$
 $\lambda_y = 5.22$ $N_{cr,y} = 40992900.00$ $\lambda^*_y = 0.06$ Curva a: $\Phi_y = 0.49$ $\chi_y = 1.00$
 $\lambda_z = 19.41$ $N_{cr,z} = 2961910.00$ $\lambda^*_z = 0.22$ Curva b: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01 + 0.07 + 0.09 = 0.17$
 Verifica ZZ: $0.01 + 0.06 + 0.09 = 0.16$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L} = 0.00$ (L/29709)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L} = 0.00$ (L/17140)

Asta n. 223 (-1162 -1161) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_y = -11.02$
 $V, Ed = -11.02$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 5 SLV $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_z = -309.05$
 $V, Ed = -309.05$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l = 1.50$ - Classe 3
 Sollecitazioni: $N = -1888.99$ $T_z = -895.04$ $M_y = 668.71$ $T_y = 117.85$ $M_z = 151.24$
 Tensioni: $\sigma_N = -35.10$ $\sigma_{m,d} = -307.90$ $\tau = 0.00$ $\sigma_{max} = -343.00$ (sfrut=0.13)
 Tensioni: $\sigma_N = -35.10$ $\sigma_{m,d} = 8.89$ $\tau = 49.98$ $\tau_{max} = 49.98$ (sfrut=0.03)
 Tensioni: $\sigma_N = -35.10$ $\sigma_{m,d} = -307.90$ $\tau = 0.00$ $\sigma_{ID,max} = 343.00$ (sfrut=0.13)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed = -1888.99$ $M_y, Ed = 668.71$ $M_z, Ed = 151.24$ $L = 1.50$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.50$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 2.25$ $M_{cr} = 191490.00$ $\lambda_{LT} = 0.28$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.51$ $\beta_{LT} = 0.75$ $f = 0.99$ $\chi_{LT} = 1.00$
 $\lambda_y = 12.04$ $N_{cr,y} = 7697540.00$ $\lambda^*_y = 0.14$ Curva a: $\Phi_y = 0.50$ $\chi_y = 1.00$
 $\lambda_z = 44.78$ $N_{cr,z} = 556180.00$ $\lambda^*_z = 0.52$ Curva b: $\Phi_z = 0.69$ $\chi_z = 0.88$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01 + 0.04 + 0.07 = 0.13$
 Verifica ZZ: $0.01 + 0.03 + 0.07 = 0.12$

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,G}=0.00$ (L/112347)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/74898)

Asta n. 223 (-1163 -1162) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU $X_1=1.36$ - Classe 2
 Sollecitazioni: $T_y=9.83$
 $V,Ed=9.83$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU $X_1=1.36$ - Classe 2
 Sollecitazioni: $T_z=-304.83$
 $V,Ed=-304.83$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=0.41$ - Classe 3
 Sollecitazioni: $N=-1503.74$ $T_z=88.14$ $M_y=-587.54$ $T_y=11.67$ $M_z=-8.66$
 Tensioni: $\sigma_N=-27.94$ $\sigma_{m,d}=-116.23$ $\tau=0.00$ $\sigma_{max}=-144.17$ (sfrut=0.06)
 Tensioni: $\sigma_N=-27.94$ $\sigma_{m,d}=-0.51$ $\tau=4.92$ $\tau_{max}=4.92$ (sfrut=0.00)
 Tensioni: $\sigma_N=-27.94$ $\sigma_{m,d}=-116.23$ $\tau=0.00$ $\sigma_{ID,max}=144.17$ (sfrut=0.06)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N,Ed=-1503.74$ $M_y,Ed=-596.29$ $M_z,Ed=-13.44$ $L=1.50$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.50$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.09$ $M_{cr}=93164.80$ $\lambda_{LT}=0.41$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.56$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.04$ $N_{cr,y}=7697540.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=44.78$ $N_{cr,z}=556180.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.88$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.04+0.01=0.06$
 Verifica ZZ: $0.01+0.03+0.01=0.05$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.00$ (L/34952)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.01$ (L/23475)

Asta n. 223 (-1149 -1163) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU $X_1=1.09$ - Classe 2
 Sollecitazioni: $T_y=19.38$
 $V,Ed=19.38$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU $X_1=1.09$ - Classe 2
 Sollecitazioni: $T_z=504.80$
 $V,Ed=504.80$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-1927.17$ $T_z=770.40$ $M_y=399.19$ $T_y=31.05$ $M_z=-35.74$
 Tensioni: $\sigma_N=-35.81$ $\sigma_{m,d}=-116.05$ $\tau=0.00$ $\sigma_{max}=-151.86$ (sfrut=0.06)
 Tensioni: $\sigma_N=-35.81$ $\sigma_{m,d}=-2.10$ $\tau=43.02$ $\tau_{max}=43.02$ (sfrut=0.03)
 Tensioni: $\sigma_N=-35.81$ $\sigma_{m,d}=-116.05$ $\tau=0.00$ $\sigma_{ID,max}=151.86$ (sfrut=0.06)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-1927.17$ $M_y,Ed=399.19$ $M_z,Ed=-35.74$ $L=1.50$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.50$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.96$ $M_{cr}=252339.00$ $\lambda_{LT}=0.25$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.50$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=12.04$ $N_{cr,y}=7697540.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=44.78$ $N_{cr,z}=556180.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.88$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.03+0.02=0.06$
 Verifica ZZ: $0.01+0.02+0.02=0.05$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.00$ (L/82782)

Asta n. 223 (-99 -1149) - Sez. 7 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_1=0.23$ - Classe 3
 Sollecitazioni: $N=-1466.61$ $T_z=1305.21$ $M_y=1268.53$ $T_y=61.53$ $M_z=-49.04$ $M_x=-1.54$
 Tensioni: $\sigma_N=-27.25$ $\sigma_{m,d}=-288.62$ $\tau=9.14$ $\sigma_{max}=-315.87$ (sfrut=0.12)
 Tensioni: $\sigma_N=-27.25$ $\sigma_{m,d}=-2.88$ $\tau=73.47$ $\tau_{max}=73.47$ (sfrut=0.05)

- Tensioni: $\sigma_N = -27.25$ $\sigma_{m,d} = -288.62$ $\tau = 9.14$ $\sigma_{ID,max} = 316.27$ (sfrut=0.12)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
Sollecitazioni: $N, Ed = -1466.61$ My, $Ed = 1268.53$ Mz, $Ed = -49.04$ L=0.89
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 0.89$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 1.39$ M, $cr = 323018.00$ $\lambda_{LT} = 0.22$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.49$ $\beta_{LT} = 0.75$ $f = 0.99$ $\chi_{LT} = 1.00$
 $\lambda_y = 7.14$ Ncr, $y = 21865200.00$ $\lambda^*_y = 0.08$ Curva a: $\Phi_y = 0.49$ $\chi_y = 1.00$
 $\lambda_z = 26.57$ Ncr, $z = 1579850.00$ $\lambda^*_z = 0.31$ Curva b: $\Phi_z = 0.56$ $\chi_z = 0.96$
Kyy, Kyz, Kzy, Kzz = 0.95, 0.95, 0.76, 0.95
Verifica YY: $0.01 + 0.08 + 0.02 = 0.12$
Verifica ZZ: $0.01 + 0.07 + 0.02 = 0.10$
- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L} = 0.00$ (L/21130)
- Verifica freccia massima carichi totali - CC 32
 $f_{z,L} = 0.00$ (L/14836)
- Asta n. 223 (-1150 -99) - Sez. 7 (IPE300) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 5 SLV $X_l = 0.00$ - Classe 1
Sollecitazioni: $T_y = 36.22$ $M_x = 1.12$
V, $Ed = 36.22$ Vc, Rd, $Red = 54586.80$ V, $Ed/Vc, Rd, Red = 0.00$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 5 SLV $X_l = 0.00$ - Classe 1
Sollecitazioni: $T_z = -572.08$ $M_x = 1.12$
V, $Ed = -572.08$ Vc, Rd, $Red = 38767.90$ V, $Ed/Vc, Rd, Red = 0.01$
- Verifica in termini tensionali [4.2.4] - CC 5 SLV $X_l = 0.42$ - Classe 3
Sollecitazioni: $N = -537.41$ $T_z = -610.55$ $M_y = 776.62$ $T_y = -84.04$ $M_z = -33.48$ $M_x = 1.12$
Tensioni: $\sigma_N = -9.99$ $\sigma_{m,d} = -180.99$ $\tau = 6.67$ $\sigma_{max} = -190.98$ (sfrut=0.07)
Tensioni: $\sigma_N = -9.99$ $\sigma_{m,d} = -1.97$ $\tau = 34.79$ $\tau_{max} = 34.79$ (sfrut=0.02)
Tensioni: $\sigma_N = -9.99$ $\sigma_{m,d} = -180.99$ $\tau = 6.67$ $\sigma_{ID,max} = 191.33$ (sfrut=0.07)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
Sollecitazioni: $N, Ed = -537.41$ My, $Ed = 776.62$ Mz, $Ed = -33.48$ L=0.65
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 0.65$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 1.18$ M, $cr = 509387.00$ $\lambda_{LT} = 0.17$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.47$ $\beta_{LT} = 0.75$ $f = 0.99$ $\chi_{LT} = 1.00$
 $\lambda_y = 5.22$ Ncr, $y = 40992900.00$ $\lambda^*_y = 0.06$ Curva a: $\Phi_y = 0.49$ $\chi_y = 1.00$
 $\lambda_z = 19.41$ Ncr, $z = 2961910.00$ $\lambda^*_z = 0.22$ Curva b: $\Phi_z = 0.53$ $\chi_z = 0.99$
Kyy, Kyz, Kzy, Kzz = 0.95, 0.95, 0.76, 0.95
Verifica YY: $0.00 + 0.05 + 0.02 = 0.07$
Verifica ZZ: $0.00 + 0.04 + 0.02 = 0.06$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L} = 0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,L} = 0.00$
- Asta n. 223 (-1151 -1150) - Sez. 7 (IPE300) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l = 1.50$ - Classe 1
Sollecitazioni: $T_y = 2.45$
V, $Ed = 2.45$ Vc, Rd, $Red = 54683.30$ V, $Ed/Vc, Rd = 0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 5 SLV $X_l = 1.50$ - Classe 1
Sollecitazioni: $T_z = -541.12$
V, $Ed = -541.12$ Vc, Rd, $Red = 38836.40$ V, $Ed/Vc, Rd = 0.01$
- Verifica in termini tensionali [4.2.4] - CC 27 SLV $X_l = 1.50$ - Classe 3
Sollecitazioni: $N = -1006.81$ $T_z = 22.87$ $M_y = -345.10$ $T_y = 23.19$ $M_z = 53.30$
Tensioni: $\sigma_N = -18.71$ $\sigma_{m,d} = -128.16$ $\tau = 0.00$ $\sigma_{max} = -146.87$ (sfrut=0.06)
Tensioni: $\sigma_N = -18.71$ $\sigma_{m,d} = 3.13$ $\tau = 1.28$ $\tau_{max} = 1.28$ (sfrut=0.00)
Tensioni: $\sigma_N = -18.71$ $\sigma_{m,d} = -128.16$ $\tau = 0.00$ $\sigma_{ID,max} = 146.87$ (sfrut=0.06)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
Sollecitazioni: $N, Ed = -667.32$ My, $Ed = -258.14$ Mz, $Ed = 77.73$ L=1.50
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.50$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 1.57$ M, $cr = 133672.00$ $\lambda_{LT} = 0.34$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.53$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 12.04$ Ncr, $y = 7697540.00$ $\lambda^*_y = 0.14$ Curva a: $\Phi_y = 0.50$ $\chi_y = 1.00$
 $\lambda_z = 44.78$ Ncr, $z = 556180.00$ $\lambda^*_z = 0.52$ Curva b: $\Phi_z = 0.69$ $\chi_z = 0.88$
Kyy, Kyz, Kzy, Kzz = 0.95, 0.95, 0.76, 0.95
Verifica YY: $0.00 + 0.02 + 0.04 = 0.06$
Verifica ZZ: $0.00 + 0.01 + 0.04 = 0.05$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$ (L/87381)

- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.00$ (L/62914)

Asta n. 223 (-98 -1151) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 15 SLV $X_1=1.26$ - Classe 1
 Sollecitazioni: $T_y=-13.59$
 $V,Ed=-13.59$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 15 SLV $X_1=1.26$ - Classe 1
 Sollecitazioni: $T_z=395.29$
 $V,Ed=395.29$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_1=0.45$ - Classe 3
 Sollecitazioni: $N=-1022.47$ $T_z=1027.25$ $M_y=1106.50$ $T_y=106.52$ $M_z=-91.47$
 Tensioni: $\sigma_N=-19.00$ $\sigma_{m,d}=-312.24$ $\tau=0.00$ $\sigma_{max}=-331.24$ (sfrut=0.13)
 Tensioni: $\sigma_N=-19.00$ $\sigma_{m,d}=-5.38$ $\tau=57.36$ $\tau_{max}=57.36$ (sfrut=0.04)
 Tensioni: $\sigma_N=-19.00$ $\sigma_{m,d}=-312.24$ $\tau=0.00$ $\sigma_{ID,max}=331.24$ (sfrut=0.13)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-1022.47$ $M_y,Ed=1106.50$ $M_z,Ed=-91.47$ $L=1.72$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.72$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.67$ $M_{cr}=110345.00$ $\lambda_{LT}=0.37$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.55$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=13.80$ $N_{cr,y}=5854330.00$ $\lambda^*_y=0.16$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=51.35$ $N_{cr,z}=423000.00$ $\lambda^*_z=0.59$ Curva b: $\Phi_z=0.74$ $\chi_z=0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.07+0.04=0.12$
 Verifica ZZ: $0.01+0.06+0.04=0.11$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.01$ (L/13185)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.01$ (L/12106)

Asta n. 224 (-2429 -1175) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_1=1.94$ - Classe 1
 Sollecitazioni: $T_y=9.64$
 $V,Ed=9.64$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=1.94$ - Classe 1
 Sollecitazioni: $T_z=-32.87$
 $V,Ed=-32.87$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.00$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 27 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $N=97.92$ $T_z=24.10$ $M_y=-8.19$ $T_y=10.27$ $M_z=-13.44$
 $N,Ed=97.92$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-8.19$ $M_y,V,c,Rd=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_y,Ed/M_{Ny,c,Rd}=0.00$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-13.44$ $M_z,V,c,Rd=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_z,Ed/M_{Nz,c,Rd}=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/M_{Ny,c,Rd})^2 + (M_z,Ed/M_{Nz,c,Rd})^1 = 0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 1
 Sollecitazioni: $M_y,Ed=-18.21$ $M_z,Ed=-13.44$ $L=1.94$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.94$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.71$ $M_{cr}=16622.40$ $\lambda_{LT}=0.61$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.67$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.94$
 $\lambda_y=23.51$ $N_{cr,y}=1067720.00$ $\lambda^*_y=0.27$ Curva a: $\Phi_y=0.54$ $\chi_y=0.98$
 $\lambda_z=86.87$ $N_{cr,z}=78225.30$ $\lambda^*_z=1.00$ Curva b: $\Phi_z=1.14$ $\chi_z=0.60$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.00+0.01=0.01$
 Verifica ZZ: $0.00+0.00+0.01=0.01$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.00$ (L/84855) $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.00$ (L/84855) $f_{z,L}=0.00$ (L/145467)

Asta n. 225 (-1158 -72) - Sez. 7 (IPE300) - Crit. 1

Relazione di calcolo

- Verifica a taglio Dir. Y [4.2.16] - CC 7 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=9.27$
 $V, Ed=9.27$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 7 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=-434.36$
 $V, Ed=-434.36$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=0.42$ - Classe 3
Sollecitazioni: $N=-3354.70$ $T_z=-1268.88$ $M_y=1330.33$ $T_y=884.63$ $M_z=302.43$ $M_x=2.16$
Tensioni: $\sigma_N=-62.34$ $\sigma_{m,d}=-614.47$ $\tau=12.80$ $\sigma_{max}=-676.81$ (sfrut=0.26)
Tensioni: $\sigma_N=-62.34$ $\sigma_{m,d}=-17.78$ $\tau=72.59$ $\tau_{max}=72.59$ (sfrut=0.05)
Tensioni: $\sigma_N=-62.34$ $\sigma_{m,d}=-614.47$ $\tau=12.80$ $\sigma_{ID,max}=677.18$ (sfrut=0.26)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-3354.70$ $M_y, Ed=1330.33$ $M_z, Ed=302.43$ $L=0.65$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.65$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.22$ $M_{cr}=526042.00$ $\lambda_{LT}=0.17$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.47$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=5.22$ $N_{cr,y}=40992900.00$ $\lambda^*_y=0.06$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=19.41$ $N_{cr,z}=2961910.00$ $\lambda^*_z=0.22$ Curva b: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.02+0.09+0.14=0.25$
Verifica ZZ: $0.02+0.07+0.14=0.23$
 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.00$ (L/23454)
 - Verifica freccia massima carichi totali - CC 33
 $f_{z,G}=0.00$ (L/13926)
- Asta n. 225 (-1159 -1158) - Sez. 7 (IPE300) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.41$ - Classe 2
Sollecitazioni: $T_y=-38.37$
 $V, Ed=-38.37$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.41$ - Classe 2
Sollecitazioni: $T_z=-798.68$
 $V, Ed=-798.68$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.02$
 - Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=1.50$ - Classe 3
Sollecitazioni: $N=-3031.03$ $T_z=-1283.22$ $M_y=988.55$ $T_y=-38.37$ $M_z=-42.15$
Tensioni: $\sigma_N=-56.33$ $\sigma_{m,d}=-229.80$ $\tau=0.00$ $\sigma_{max}=-286.13$ (sfrut=0.11)
Tensioni: $\sigma_N=-56.33$ $\sigma_{m,d}=-2.48$ $\tau=71.65$ $\tau_{max}=71.65$ (sfrut=0.05)
Tensioni: $\sigma_N=-56.33$ $\sigma_{m,d}=-229.80$ $\tau=0.00$ $\sigma_{ID,max}=286.13$ (sfrut=0.11)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N, Ed=-3031.03$ $M_y, Ed=988.55$ $M_z, Ed=-42.15$ $L=1.50$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.50$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.27$ $M_{cr}=193633.00$ $\lambda_{LT}=0.28$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.51$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=12.04$ $N_{cr,y}=7697550.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=44.78$ $N_{cr,z}=556180.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.88$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.06+0.02=0.11$
Verifica ZZ: $0.02+0.05+0.02=0.09$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$ (L/112347)
 - Verifica freccia massima carichi totali - CC 21
 $f_{z,L}=0.00$ (L/54236)
- Asta n. 225 (-1160 -1159) - Sez. 7 (IPE300) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=0.55$ - Classe 2
Sollecitazioni: $T_y=11.47$
 $V, Ed=11.47$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 5 SLV $X_l=0.55$ - Classe 2
Sollecitazioni: $T_z=-177.19$
 $V, Ed=-177.19$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.00$
 - Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-3016.70$ $T_z=90.52$ $M_y=-798.85$ $T_y=36.33$ $M_z=-17.24$
Tensioni: $\sigma_N=-56.06$ $\sigma_{m,d}=-164.81$ $\tau=0.00$ $\sigma_{max}=-220.87$ (sfrut=0.08)
Tensioni: $\sigma_N=-56.06$ $\sigma_{m,d}=-1.01$ $\tau=5.06$ $\tau_{max}=5.06$ (sfrut=0.00)
Tensioni: $\sigma_N=-56.06$ $\sigma_{m,d}=-164.81$ $\tau=0.00$ $\sigma_{ID,max}=220.87$ (sfrut=0.08)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
 Sollecitazioni: N,Ed=-3291.48 My,Ed=-782.49 Mz,Ed=37.01 L=1.50
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.50$ Curva b: $\alpha_{imp}=0.34 k_e=0.94 \psi=1.23 M, cr=104692.00 \lambda_{LT}=0.38$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.55 \beta_{LT}=0.75 f=0.98 \chi_{LT}=1.00$
 $\lambda_y=12.04 N_{cr,y}=7697550.00 \lambda^*_y=0.14$ Curva a: $\Phi_y=0.50 \chi_y=1.00$
 $\lambda_z=44.78 N_{cr,z}=556180.00 \lambda^*_z=0.52$ Curva b: $\Phi_z=0.69 \chi_z=0.88$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.02+0.05+0.02=0.09$
 Verifica ZZ: $0.02+0.04+0.02=0.08$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.01$ (L/26214)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.01$ (L/18504)

Asta n. 225 (-1146 -1160) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV Xl=1.23 - Classe 2
 Sollecitazioni: $T_y=-10.88$
 $V, Ed=-10.88 V_c, Rd=54683.30 V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 13 SLV Xl=1.23 - Classe 2
 Sollecitazioni: $T_z=179.86$
 $V, Ed=179.86 V_c, Rd=38836.40 V, Ed/V_c, Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU Xl=1.50 - Classe 3
 Sollecitazioni: N=-3002.85 $T_z=138.01 M_y=-797.17 T_y=25.93 M_z=5.35$
 Tensioni: $\sigma_N=-55.80 \sigma_{m,d}=-149.74 \tau=0.00 \sigma_{max}=-205.54$ (sfrut=0.08)
 Tensioni: $\sigma_N=-55.80 \sigma_{m,d}=0.31 \tau=7.71 \tau_{max}=7.71$ (sfrut=0.01)
 Tensioni: $\sigma_N=-55.80 \sigma_{m,d}=-149.74 \tau=0.00 \sigma_{TD,max}=205.54$ (sfrut=0.08)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
 Sollecitazioni: N,Ed=-3278.29 My,Ed=-764.64 Mz,Ed=-34.35 L=1.50
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.50$ Curva b: $\alpha_{imp}=0.34 k_e=0.94 \psi=1.71 M, cr=145478.00 \lambda_{LT}=0.32$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.53 \beta_{LT}=0.75 f=0.98 \chi_{LT}=1.00$
 $\lambda_y=12.04 N_{cr,y}=7697510.00 \lambda^*_y=0.14$ Curva a: $\Phi_y=0.50 \chi_y=1.00$
 $\lambda_z=44.78 N_{cr,z}=556177.00 \lambda^*_z=0.52$ Curva b: $\Phi_z=0.69 \chi_z=0.88$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.02+0.05+0.02=0.09$
 Verifica ZZ: $0.02+0.04+0.02=0.08$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.00$ (L/39321)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.01$ (L/26658)

Asta n. 225 (-1147 -1146) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 15 SLV Xl=0.00 - Classe 1
 Sollecitazioni: $T_y=-1.04$
 $V, Ed=-1.04 V_c, Rd=54683.30 V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 15 SLV Xl=0.00 - Classe 1
 Sollecitazioni: $T_z=427.73$
 $V, Ed=427.73 V_c, Rd=38836.40 V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 28 SLU Xl=0.00 - Classe 3
 Sollecitazioni: N=-3270.36 $T_z=1524.38 M_y=1806.12 T_y=-15.94 M_z=2.26$
 Tensioni: $\sigma_N=-60.77 \sigma_{m,d}=-327.01 \tau=0.00 \sigma_{max}=-387.79$ (sfrut=0.15)
 Tensioni: $\sigma_N=-60.77 \sigma_{m,d}=0.13 \tau=85.11 \tau_{max}=85.11$ (sfrut=0.06)
 Tensioni: $\sigma_N=-60.77 \sigma_{m,d}=-327.01 \tau=0.00 \sigma_{TD,max}=387.79$ (sfrut=0.15)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
 Sollecitazioni: N,Ed=-3270.36 My,Ed=1806.12 Mz,Ed=-22.29 L=1.54
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.54$ Curva b: $\alpha_{imp}=0.34 k_e=0.94 \psi=1.77 M, cr=143363.00 \lambda_{LT}=0.33$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.53 \beta_{LT}=0.75 f=0.98 \chi_{LT}=1.00$
 $\lambda_y=12.36 N_{cr,y}=7302860.00 \lambda^*_y=0.14$ Curva a: $\Phi_y=0.50 \chi_y=1.00$
 $\lambda_z=45.98 N_{cr,z}=527662.00 \lambda^*_z=0.53$ Curva b: $\Phi_z=0.70 \chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.02+0.12+0.01=0.15$
 Verifica ZZ: $0.02+0.09+0.01=0.13$

Relazione di calcolo

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.01$ (L/20440)

- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.01$ (L/13920)

Asta n. 225 (-67 -1147) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 11 SLV $X_1=0.23$ - Classe 1
Sollecitazioni: $T_y=17.04$ $M_x=2.48$
 $V, Ed=17.04$ $V_c, Rd, Red=54469.90$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 11 SLV $X_1=0.23$ - Classe 1
Sollecitazioni: $T_z=448.19$ $M_x=2.48$
 $V, Ed=448.19$ $V_c, Rd, Red=38684.80$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_1=0.23$ - Classe 3
Sollecitazioni: $N=-3267.14$ $T_z=1662.23$ $M_y=2035.05$ $T_y=-444.53$ $M_z=70.33$ $M_x=-1.57$
Tensioni: $\sigma_N=-60.71$ $\sigma_{m,d}=-452.66$ $\tau=9.33$ $\sigma_{max}=-513.37$ (sfrut=0.20)
Tensioni: $\sigma_N=-60.71$ $\sigma_{m,d}=-4.13$ $\tau=93.44$ $\tau_{max}=93.44$ (sfrut=0.06)
Tensioni: $\sigma_N=-60.71$ $\sigma_{m,d}=-452.66$ $\tau=9.33$ $\sigma_{ID,max}=513.63$ (sfrut=0.20)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
Sollecitazioni: $N, Ed=-3267.14$ $M_y, Ed=2035.05$ $M_z, Ed=70.33$ $L=0.36$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.36$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.05$ $M_{cr}=1435550.00$ $\lambda_{LT}=0.10$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.45$ $\beta_{LT}=0.75$ $f=1.00$ $\chi_{LT}=1.00$
 $\lambda_y=2.93$ Ncr, $y=130002000.00$ $\lambda^*_y=0.03$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=10.90$ Ncr, $z=9393180.00$ $\lambda^*_z=0.13$ Curva b: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.02+0.13+0.03=0.19$
Verifica ZZ: $0.02+0.11+0.03=0.16$

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.00$ (L/9786)

Asta n. 225 (-1148 -67) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 15 SLV $X_1=0.20$ - Classe 1
Sollecitazioni: $T_y=-18.65$
 $V, Ed=-18.65$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 15 SLV $X_1=0.20$ - Classe 1
Sollecitazioni: $T_z=505.46$
 $V, Ed=505.46$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_1=0.91$ - Classe 3
Sollecitazioni: $N=-757.58$ $T_z=204.87$ $M_y=-857.97$ $T_y=172.35$ $M_z=136.07$
Tensioni: $\sigma_N=-14.08$ $\sigma_{m,d}=-323.03$ $\tau=0.00$ $\sigma_{max}=-337.11$ (sfrut=0.13)
Tensioni: $\sigma_N=-14.08$ $\sigma_{m,d}=8.00$ $\tau=11.45$ $\tau_{max}=11.45$ (sfrut=0.01)
Tensioni: $\sigma_N=-14.08$ $\sigma_{m,d}=-323.03$ $\tau=0.00$ $\sigma_{ID,max}=337.11$ (sfrut=0.13)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
Sollecitazioni: $N, Ed=-757.58$ $M_y, Ed=-857.97$ $M_z, Ed=136.07$ $L=1.14$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.14$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.25$ $M_{cr}=180910.00$ $\lambda_{LT}=0.29$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.51$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=9.11$ Ncr, $y=13444400.00$ $\lambda^*_y=0.10$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=33.88$ Ncr, $z=971417.00$ $\lambda^*_z=0.39$ Curva b: $\Phi_z=0.61$ $\chi_z=0.93$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.06+0.06=0.12$
Verifica ZZ: $0.01+0.04+0.06=0.11$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$ (L/25110)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/18350)

Asta n. 225 (80 -1148) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_1=1.59$ - Classe 1
Sollecitazioni: $T_y=44.15$
 $V, Ed=44.15$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=1.59$ - Classe 1

Relazione di calcolo

- Sollecitazioni: $T_z=802.89$
 $V, Ed=802.89$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.02$
- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_l=0.30$ - Classe 3
Sollecitazioni: $N=-735.96$ $T_z=1262.51$ $M_y=867.92$ $T_y=69.30$ $M_z=-84.33$
Tensioni: $\sigma_N=-13.68$ $\sigma_{m,d}=-260.55$ $\tau=0.00$ $\sigma_{max}=-274.23$ (sfrut=0.10)
Tensioni: $\sigma_N=-13.68$ $\sigma_{m,d}=-4.96$ $\tau=70.49$ $\tau_{max}=70.49$ (sfrut=0.05)
Tensioni: $\sigma_N=-13.68$ $\sigma_{m,d}=-260.55$ $\tau=0.00$ $\sigma_{ID,max}=274.23$ (sfrut=0.10)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
Sollecitazioni: $N, Ed=-735.96$ $M_y, Ed=867.92$ $M_z, Ed=-84.33$ $L=1.72$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.72$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.44$ $M_{cr}=160853.00$ $\lambda_{LT}=0.31$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.52$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=13.80$ $N_{cr,y}=5854330.00$ $\lambda^*_y=0.16$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=51.35$ $N_{cr,z}=423000.00$ $\lambda^*_z=0.59$ Curva b: $\Phi_z=0.74$ $\chi_z=0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.06+0.04=0.10$
Verifica ZZ: $0.01+0.05+0.04=0.09$
- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.01$ (L/23265)
- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.01$ (L/22907)
- Asta n. 226 (-1172 -1173) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-55.11$
 $V, Ed=-55.11$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=27.37$
 $V, Ed=27.37$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.00$
- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=279.35$ $T_z=27.37$ $T_y=-55.11$ $M_z=68.09$
 $M_z, Ed=68.09$ $M_z, V, c, Rd=1170.59$
 $N, Ed=279.35$ $N_c, Rd=74603.30$ ZZ $n=N, Ed/N_c, Rd=0.00$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.06$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 1
Sollecitazioni: $N, Ed=-205.46$ $M_y, Ed=-16.84$ $M_z, Ed=68.09$ $L=2.44$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.44$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.25$ $M_{cr}=15429.60$ $\lambda_{LT}=0.63$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.69$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.93$
 $\lambda_y=29.51$ $N_{cr,y}=677992.00$ $\lambda^*_y=0.34$ Curva a: $\Phi_y=0.57$ $\chi_y=0.97$
 $\lambda_z=109.02$ $N_{cr,z}=49672.50$ $\lambda^*_z=1.26$ Curva b: $\Phi_z=1.47$ $\chi_z=0.45$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.96$
Verifica YY: $0.00+0.00+0.03=0.04$
Verifica ZZ: $0.00+0.00+0.06=0.06$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.00$ (L/94655) $f_{z,L}=0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/82441) $f_{z,G}=0.00$ (L/98295)
- Asta n. 227 (-74 -97) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=2.21$ - Classe 1
Sollecitazioni: $T_y=10.71$
 $V, Ed=10.71$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 5 SLV $X_l=2.21$ - Classe 1
Sollecitazioni: $T_z=-204.03$
 $V, Ed=-204.03$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.01$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 5 SLV $X_l=2.21$ - Classe 1
Sollecitazioni: $N=134.78$ $T_z=-204.03$ $M_y=396.08$ $T_y=10.71$ $M_z=9.86$
 $N, Ed=134.78$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=396.08$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.07$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=9.86$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.07$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 1

Sollecitazioni: N,Ed=-81.80 My,Ed=396.08 Mz,Ed=29.17 L=2.44
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.44$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=1.75 M, cr=12035.50 \lambda_{LT}=0.71$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.74 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.89$
 $\lambda_y=29.51 N_{cr,y}=677991.00 \lambda^*_y=0.34$ Curva a: $\Phi_y=0.57 \chi_y=0.97$
 $\lambda_z=109.02 N_{cr,z}=49672.40 \lambda^*_z=1.26$ Curva b: $\Phi_z=1.47 \chi_z=0.45$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.07+0.01=0.09$
 Verifica ZZ: $0.00+0.04+0.02=0.07$

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.01$ (L/31787)

- Verifica freccia massima carichi totali - CC 21
 $f_{z,G}=0.01$ (L/33149) $f_{z,L}=0.01$ (L/39330)

Asta n. 228 (-1182 -1184) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU X1=2.44 - Classe 1
 Sollecitazioni: $T_y=12.44$
 $V, Ed=12.44 V_c, Rd=29609.30 V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU X1=2.44 - Classe 1
 Sollecitazioni: $T_z=-35.61$
 $V, Ed=-35.61 V_c, Rd=21171.50 V, Ed/V_c, Rd=0.00$

- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 27 SLU X1=2.44 - Classe 1
 Sollecitazioni: N=68.08 $T_z=-35.56 T_y=17.65 M_z=22.14$
 $M_z, Ed=22.14 M_z, V, c, Rd=1170.59$
 $N, Ed=68.08 N_c, Rd=74603.30 ZZ n=N, Ed/N_c, Rd=0.00 MN_z, c, Rd=1170.59 M_z, Ed/MN_z, c, Rd=0.02$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 1
 Sollecitazioni: My,Ed=-21.51 Mz,Ed=22.14 L=2.44
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.44$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=2.97 M, cr=20431.30 \lambda_{LT}=0.55$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.64 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.97$
 $\lambda_y=29.51 N_{cr,y}=677991.00 \lambda^*_y=0.34$ Curva a: $\Phi_y=0.57 \chi_y=0.97$
 $\lambda_z=109.02 N_{cr,z}=49672.40 \lambda^*_z=1.26$ Curva b: $\Phi_z=1.47 \chi_z=0.45$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.00+0.01=0.01$
 Verifica ZZ: $0.00+0.00+0.02=0.02$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.00$ (L/88127) $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/85189) $f_{z,G}=0.00$ (L/91274)

Asta n. 229 (-1181 -1183) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_y=7.67$
 $V, Ed=7.67 V_c, Rd=29609.30 V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_z=35.57$
 $V, Ed=35.57 V_c, Rd=21171.50 V, Ed/V_c, Rd=0.00$

- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 13 SLV X1=2.44 - Classe 1
 Sollecitazioni: N=7.08 $T_z=-27.29 T_y=-15.59 M_z=-19.25$
 $M_z, Ed=-19.25 M_z, V, c, Rd=1170.59$
 $N, Ed=7.08 N_c, Rd=74603.30 ZZ n=N, Ed/N_c, Rd=0.00 MN_z, c, Rd=1170.59 M_z, Ed/MN_z, c, Rd=0.02$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 1
 Sollecitazioni: N,Ed=-21.69 My,Ed=-16.58 Mz,Ed=-19.25 L=2.44
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.44$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=2.84 M, cr=19529.80 \lambda_{LT}=0.56$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.64 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.96$
 $\lambda_y=29.51 N_{cr,y}=677991.00 \lambda^*_y=0.34$ Curva a: $\Phi_y=0.57 \chi_y=0.97$
 $\lambda_z=109.02 N_{cr,z}=49672.40 \lambda^*_z=1.26$ Curva b: $\Phi_z=1.47 \chi_z=0.45$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.00+0.01=0.01$
 Verifica ZZ: $0.00+0.00+0.02=0.02$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.00$ (L/88127) $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/91274) $f_{z,G}=0.00$ (L/91274)

Asta n. 230 (-2393 63) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=1.30$ - Classe 3
 Sollecitazioni: $N=-1535.36$ $T_z=-2748.01$ $M_y=3390.17$ $T_y=-298.22$ $M_z=-252.16$ $M_x=8.94$
 Tensioni: $\sigma_N=-28.53$ $\sigma_{m,d}=-921.78$ $\tau=53.07$ $\sigma_{max}=-950.31$ (sfrut=0.36)
 Tensioni: $\sigma_N=-28.53$ $\sigma_{m,d}=-14.83$ $\tau=162.69$ $\tau_{max}=162.69$ (sfrut=0.11)
 Tensioni: $\sigma_N=-28.53$ $\sigma_{m,d}=-921.78$ $\tau=53.07$ $\sigma_{ID,max}=954.75$ (sfrut=0.36)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N,Ed=-1540.87$ $M_y,Ed=3390.17$ $M_z,Ed=-252.16$ $L=1.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.75$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.79$ $M_{cr}=114863.00$ $\lambda_{LT}=0.37$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.54$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=14.01$ $N_{cr,y}=5686330.00$ $\lambda^*_y=0.16$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=52.10$ $N_{cr,z}=410861.00$ $\lambda^*_z=0.60$ Curva b: $\Phi_z=0.75$ $\chi_z=0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.22+0.11=0.35$
 Verifica ZZ: $0.01+0.18+0.11=0.30$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,G}=0.02$ (L/5989)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,G}=0.03$ (L/4209)

Asta n. 230 (-2394 -2393) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-1628.81$ $T_z=-1317.12$ $M_y=-2185.23$ $T_y=76.77$ $M_z=-9.56$ $M_x=1.64$
 Tensioni: $\sigma_N=-30.27$ $\sigma_{m,d}=-404.13$ $\tau=9.71$ $\sigma_{max}=-434.40$ (sfrut=0.17)
 Tensioni: $\sigma_N=-30.27$ $\sigma_{m,d}=0.56$ $\tau=74.21$ $\tau_{max}=74.21$ (sfrut=0.05)
 Tensioni: $\sigma_N=-30.27$ $\sigma_{m,d}=-404.13$ $\tau=9.71$ $\sigma_{ID,max}=434.72$ (sfrut=0.17)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N,Ed=-1628.81$ $M_y,Ed=-2185.23$ $M_z,Ed=106.71$ $L=1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.69$ $M_{cr}=141393.00$ $\lambda_{LT}=0.33$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.53$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.15$ $N_{cr,y}=7550490.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.22$ $N_{cr,z}=545555.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.14+0.05=0.20$
 Verifica ZZ: $0.01+0.11+0.05=0.17$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.01$ (L/13690)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.02$ (L/9864)

Asta n. 230 (-2395 -2394) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_1=1.52$ - Classe 1
 Sollecitazioni: $T_y=-25.11$
 $V,Ed=-25.11$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 5 SLV $X_1=1.52$ - Classe 1
 Sollecitazioni: $T_z=-199.09$
 $V,Ed=-199.09$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$
- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-1722.23$ $T_z=-17.60$ $M_y=-2275.95$ $T_y=-67.63$ $M_z=87.39$
 Tensioni: $\sigma_N=-32.00$ $\sigma_{m,d}=-517.10$ $\tau=0.00$ $\sigma_{max}=-549.10$ (sfrut=0.21)
 Tensioni: $\sigma_N=-32.00$ $\sigma_{m,d}=406.25$ $\tau=2.96$ $\tau_{max}=2.96$ (sfrut=0.00)
 Tensioni: $\sigma_N=-32.00$ $\sigma_{m,d}=-517.10$ $\tau=0.00$ $\sigma_{ID,max}=549.10$ (sfrut=0.21)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N,Ed=-1722.23$ $M_y,Ed=-2275.95$ $M_z,Ed=87.39$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.02$ $M_{cr}=84161.50$ $\lambda_{LT}=0.43$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.57$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.23$ $N_{cr,y}=7451480.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.51$ $N_{cr,z}=538401.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.15+0.04=0.20$
 Verifica ZZ: $0.01+0.12+0.04=0.17$

Relazione di calcolo

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.02$ (L/8458)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.03$ (L/5920)

Asta n. 230 (-2396 -2395) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_1=0.83$ - Classe 1
Sollecitazioni: $T_y=75.43$
 $V,Ed=75.43$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 13 SLV $X_1=0.83$ - Classe 1
Sollecitazioni: $T_z=341.77$
 $V,Ed=341.77$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=1.52$ - Classe 3
Sollecitazioni: $N=-1814.28$ $T_z=1121.59$ $M_y=-2275.92$ $T_y=141.60$ $M_z=101.33$
Tensioni: $\sigma_N=-33.71$ $\sigma_{m,d}=-534.41$ $\tau=0.00$ $\sigma_{max}=-568.12$ (sfrut=0.22)
Tensioni: $\sigma_N=-33.71$ $\sigma_{m,d}=5.96$ $\tau=62.63$ $\tau_{max}=62.63$ (sfrut=0.04)
Tensioni: $\sigma_N=-33.71$ $\sigma_{m,d}=-534.41$ $\tau=0.00$ $\sigma_{ID,max}=568.12$ (sfrut=0.22)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N,Ed=-1820.76$ $M_y,Ed=-2275.92$ $M_z,Ed=-114.56$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.53$ $M_{cr}=126681.00$ $\lambda_{LT}=0.35$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.54$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.23$ $N_{cr,y}=7451470.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.51$ $N_{cr,z}=538400.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.15+0.05=0.21$
Verifica ZZ: $0.01+0.12+0.05=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.01$ (L/15520)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.01$ (L/10380)

Asta n. 230 (-2397 -2396) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 15 SLV $X_1=0.91$ - Classe 1
Sollecitazioni: $T_y=-106.56$
 $V,Ed=-106.56$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 15 SLV $X_1=0.91$ - Classe 1
Sollecitazioni: $T_z=428.85$
 $V,Ed=428.85$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_1=0.00$ - Classe 3
Sollecitazioni: $N=-1943.31$ $T_z=2409.03$ $M_y=3231.32$ $T_y=-266.01$ $M_z=298.27$
Tensioni: $\sigma_N=-36.11$ $\sigma_{m,d}=-950.54$ $\tau=0.00$ $\sigma_{max}=-986.65$ (sfrut=0.38)
Tensioni: $\sigma_N=-36.11$ $\sigma_{m,d}=17.54$ $\tau=134.51$ $\tau_{max}=134.51$ (sfrut=0.09)
Tensioni: $\sigma_N=-36.11$ $\sigma_{m,d}=-950.54$ $\tau=0.00$ $\sigma_{ID,max}=986.65$ (sfrut=0.38)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
Sollecitazioni: $N,Ed=-1943.31$ $M_y,Ed=3231.32$ $M_z,Ed=298.27$ $L=1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.87$ $M_{cr}=156379.00$ $\lambda_{LT}=0.31$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.52$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.15$ $N_{cr,y}=7550500.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.22$ $N_{cr,z}=545555.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.21+0.14=0.36$
Verifica ZZ: $0.01+0.17+0.14=0.32$

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,G}=0.02$ (L/9988)

- Verifica freccia massima carichi totali - CC 32
 $f_{z,G}=0.02$ (L/7635)

Asta n. 230 (-2398 -2397) - Sez. 7 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_1=0.22$ - Classe 3
Sollecitazioni: $N=-2054.08$ $T_z=3579.96$ $M_y=4579.24$ $T_y=3297.73$ $M_z=-890.49$ $M_x=-31.85$
Tensioni: $\sigma_N=-38.17$ $\sigma_{m,d}=-1928.14$ $\tau=189.02$ $\sigma_{max}=-1966.31$ (sfrut=0.75)
Tensioni: $\sigma_N=-38.17$ $\sigma_{m,d}=-733.52$ $\tau=304.60$ $\tau_{max}=304.60$ (sfrut=0.20)
Tensioni: $\sigma_N=-38.17$ $\sigma_{m,d}=-1928.14$ $\tau=189.02$ $\sigma_{ID,max}=1993.38$ (sfrut=0.76)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
Sollecitazioni: N,Ed=-2054.08 My,Ed=4579.24 Mz,Ed=-890.49 L=0.60
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.60$ Curva b: $\alpha_{imp}=0.34 k_e=0.94 \psi=1.16 M, cr=583880.00 \lambda_{LT}=0.16$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.47 \beta_{LT}=0.75 f=0.99 \chi_{LT}=1.00$
 $\lambda_y=4.83 N_{cr,y}=47822400.00 \lambda^*_y=0.06$ Curva a: $\Phi_y=0.49 \chi_y=1.00$
 $\lambda_z=17.97 N_{cr,z}=3455370.00 \lambda^*_z=0.21$ Curva b: $\Phi_z=0.52 \chi_z=1.00$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.01+0.30+0.40=0.71
Verifica ZZ: 0.01+0.24+0.40=0.66
 - Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.01$ (L/5907)
 - Verifica freccia massima carichi totali - CC 33
 $f_{z,G}=0.01$ (L/4166)
- Asta n. 230 (-2399 -2398) - Sez. 7 (IPE300) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 18 SLU Xl=0.23 - Classe 1
Sollecitazioni: T_y=-1168.85 M_x=8.50
V,Ed=-1168.85 V_c,Rd,Red=53948.60 V,Ed/V_c,Rd,Red=0.02
 - Verifica a taglio e torsione Dir. Z [4.2.24] - CC 18 SLU Xl=0.23 - Classe 1
Sollecitazioni: T_z=-638.56 M_x=8.50
V,Ed=-638.56 V_c,Rd,Red=38314.60 V,Ed/V_c,Rd,Red=0.02
 - Verifica in termini tensionali [4.2.4] - CC 27 SLU Xl=0.70 - Classe 3
Sollecitazioni: N=306.57 T_z=-23.96 M_y=-301.17 T_y=-1669.62 M_z=-771.46 M_x=9.26
Tensioni: $\sigma_N=5.70 \sigma_{m,d}=1012.35 \tau=54.95 \sigma_{max}=1018.05$ (sfrut=0.39)
Tensioni: $\sigma_N=5.70 \sigma_{m,d}=-0.56 \tau=88.30 \tau_{max}=88.30$ (sfrut=0.06)
Tensioni: $\sigma_N=5.70 \sigma_{m,d}=1012.35 \tau=54.95 \sigma_{ID,max}=1022.48$ (sfrut=0.39)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: My,Ed=-304.55 Mz,Ed=-771.46 L=0.92
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.92$ Curva b: $\alpha_{imp}=0.34 k_e=0.94 \psi=1.01 M, cr=218325.00 \lambda_{LT}=0.26$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.50 \beta_{LT}=0.75 f=0.99 \chi_{LT}=1.00$
 $\lambda_y=7.41 N_{cr,y}=20340100.00 \lambda^*_y=0.09$ Curva a: $\Phi_y=0.49 \chi_y=1.00$
 $\lambda_z=27.55 N_{cr,z}=1469650.00 \lambda^*_z=0.32$ Curva b: $\Phi_z=0.57 \chi_z=0.96$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.00+0.02+0.35=0.37
Verifica ZZ: 0.00+0.02+0.35=0.36
 - Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.00$ (L/24412)
 - Verifica freccia massima carichi totali - CC 21
 $f_{z,G}=0.00$ (L/29294)
- Asta n. 230 (86 -2399) - Sez. 7 (IPE300) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 5 SLV Xl=0.52 - Classe 1
Sollecitazioni: T_y=44.68 M_x=-1.25
V,Ed=44.68 V_c,Rd,Red=54575.70 V,Ed/V_c,Rd,Red=0.00
 - Verifica a taglio e torsione Dir. Z [4.2.24] - CC 5 SLV Xl=0.52 - Classe 1
Sollecitazioni: T_z=-1075.28 M_x=-1.25
V,Ed=-1075.28 V_c,Rd,Red=38760.00 V,Ed/V_c,Rd,Red=0.03
 - Verifica in termini tensionali [4.2.4] - CC 27 SLU Xl=1.51 - Classe 3
Sollecitazioni: N=260.93 T_z=725.77 M_y=-303.91 T_y=378.95 M_z=367.40 M_x=-5.08
Tensioni: $\sigma_N=4.85 \sigma_{m,d}=510.92 \tau=30.14 \sigma_{max}=515.77$ (sfrut=0.20)
Tensioni: $\sigma_N=4.85 \sigma_{m,d}=21.60 \tau=51.29 \tau_{max}=51.29$ (sfrut=0.03)
Tensioni: $\sigma_N=4.85 \sigma_{m,d}=510.92 \tau=30.14 \sigma_{ID,max}=518.41$ (sfrut=0.20)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: My,Ed=618.66 Mz,Ed=367.40 L=1.51
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34 k_e=0.94 \psi=2.34 M, cr=195659.00 \lambda_{LT}=0.28$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.51 \beta_{LT}=0.75 f=0.99 \chi_{LT}=1.00$
 $\lambda_y=12.15 N_{cr,y}=7550500.00 \lambda^*_y=0.14$ Curva a: $\Phi_y=0.50 \chi_y=1.00$
 $\lambda_z=45.22 N_{cr,z}=545555.00 \lambda^*_z=0.52$ Curva b: $\Phi_z=0.69 \chi_z=0.87$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.00+0.04+0.17=0.21
Verifica ZZ: 0.00+0.03+0.17=0.20

Relazione di calcolo

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.00$ (L/30344)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.00$ (L/27705)

Asta n. 231 (-1937 -1942) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=1.75$ - Classe 1
 Sollecitazioni: $T_y=-40.90$
 $V, Ed=-40.90$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=1.75$ - Classe 1
 Sollecitazioni: $T_z=-793.15$
 $V, Ed=-793.15$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.04$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=58.86$ $T_z=-742.57$ $M_y=-1331.72$ $T_y=-40.90$ $M_z=32.00$
 $N, Ed=58.86$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-1331.72$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.23$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=32.00$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.03$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.23$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $M_y, Ed=-1331.72$ $M_z, Ed=-39.38$ $L=1.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.75$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.76$ $M, cr=20314.20$ $\lambda_{LT}=0.55$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.64$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.97$
 $\lambda_y=21.13$ $N_{cr,y}=1322330.00$ $\lambda^*_y=0.24$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=78.06$ $N_{cr,z}=96879.30$ $\lambda^*_z=0.90$ Curva b: $\Phi_z=1.02$ $\chi_z=0.66$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.23+0.02=0.24$
 Verifica ZZ: $0.00+0.14+0.03=0.17$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.04$ (L/4893)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.05$ (L/3836)

Asta n. 231 (-1938 -1937) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 18 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-22.03$
 $V, Ed=-22.03$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 18 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=71.27$
 $V, Ed=71.27$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.00$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=1.51$ - Classe 1
 Sollecitazioni: $N=-8.45$ $T_z=14.94$ $M_y=-1330.57$ $T_y=-20.27$ $M_z=-13.03$
 $N, Ed=-8.45$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-1330.57$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.23$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-13.03$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.23$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $N, Ed=-11.86$ $M_y, Ed=-1330.57$ $M_z, Ed=17.67$ $L=1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.02$ $M, cr=14942.50$ $\lambda_{LT}=0.64$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.69$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.93$
 $\lambda_y=18.34$ $N_{cr,y}=1755830.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=67.75$ $N_{cr,z}=128640.00$ $\lambda^*_z=0.78$ Curva b: $\Phi_z=0.90$ $\chi_z=0.74$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.24+0.01=0.24$
 Verifica ZZ: $0.00+0.14+0.01=0.16$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.05$ (L/3163)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.06$ (L/2443)

Relazione di calcolo

Asta n. 231 (-1939 -1938) - Sez. 8 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-13.58$
 $V, Ed=-13.58$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=321.63$
 $V, Ed=321.63$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.02$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=1.52$ - Classe 1
Sollecitazioni: $N=-33.17$ $T_z=277.45$ $M_y=-1274.46$ $T_y=-13.58$ $M_z=-4.58$
 $N, Ed=-33.17$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-1274.46$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.22$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-4.58$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^1 = 0.22$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $N, Ed=-36.60$ $M_y, Ed=-1274.46$ $M_z, Ed=16.12$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.20$ $M_{cr}=17389.60$ $\lambda_{LT}=0.59$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.66$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.95$
 $\lambda_y=18.46$ $N_{cr,y}=1732810.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.19$ $N_{cr,z}=126953.00$ $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.22+0.01=0.23$
Verifica ZZ: $0.00+0.13+0.01=0.15$
 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.04$ (L/4184)
 - Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.05$ (L/3050)

Asta n. 231 (-1940 -1939) - Sez. 8 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=33.94$
 $V, Ed=33.94$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=316.73$
 $V, Ed=316.73$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.01$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=1.52$ - Classe 1
Sollecitazioni: $N=-36.75$ $T_z=272.54$ $M_y=-817.70$ $T_y=33.94$ $M_z=29.07$
 $N, Ed=-36.75$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-817.70$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.14$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=29.07$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^1 = 0.14$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $N, Ed=-40.18$ $M_y, Ed=-817.70$ $M_z, Ed=29.07$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.34$ $M_{cr}=19389.30$ $\lambda_{LT}=0.56$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.65$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=18.46$ $N_{cr,y}=1732810.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.19$ $N_{cr,z}=126953.00$ $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.14+0.01=0.15$
Verifica ZZ: $0.00+0.08+0.02=0.11$
 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.02$ (L/7874)
 - Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.03$ (L/5328)

Asta n. 231 (-1943 -1940) - Sez. 8 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=9.11$
 $V, Ed=9.11$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

Relazione di calcolo

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=119.99$
 $V, Ed=119.99$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.01$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 28 SLU $X_l=1.51$ - Classe 1
Sollecitazioni: $N=-21.18$ $T_z=67.94$ $M_y=-381.48$ $T_y=14.82$ $M_z=3.69$
 $N, Ed=-21.18$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-381.48$ $M_y, V, c, Rd=5804.95$ $MNy, c, Rd=5804.95$ $M_y, Ed/MNy, c, Rd=0.07$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=3.69$ $M_z, V, c, Rd=1170.59$ $MNz, c, Rd=1170.59$ $M_z, Ed/MNz, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MNy, c, Rd)^2 + (M_z, Ed/MNz, c, Rd)^1 = 0.07$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 1
Sollecitazioni: $N, Ed=-24.59$ $M_y, Ed=-381.48$ $M_z, Ed=-18.76$ $L=1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.20$ $M, cr=17571.70$ $\lambda_{LT}=0.59$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.66$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.95$
 $\lambda_y=18.34$ $N_{cr,y}=1755830.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=67.75$ $N_{cr,z}=128640.00$ $\lambda^*_z=0.78$ Curva b: $\Phi_z=0.90$ $\chi_z=0.74$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.07+0.01=0.08$
Verifica ZZ: $0.00+0.04+0.02=0.06$
- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.01$ (L/14842)
- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.02$ (L/9803)
- Asta n. 231 (-1936 -1943) - Sez. 8 (IPE200) - Crit. 1
- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=1.52$ - Classe 1
Sollecitazioni: $T_y=3.95$
 $V, Ed=3.95$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=1.52$ - Classe 1
Sollecitazioni: $T_z=-200.15$
 $V, Ed=-200.15$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.01$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 28 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=12.50$ $T_z=-146.99$ $M_y=-503.82$ $T_y=-2.67$ $M_z=5.12$
 $N, Ed=12.50$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-503.82$ $M_y, V, c, Rd=5804.95$ $MNy, c, Rd=5804.95$ $M_y, Ed/MNy, c, Rd=0.09$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=5.12$ $M_z, V, c, Rd=1170.59$ $MNz, c, Rd=1170.59$ $M_z, Ed/MNz, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MNy, c, Rd)^2 + (M_z, Ed/MNz, c, Rd)^1 = 0.09$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 1
Sollecitazioni: $M_y, Ed=-503.82$ $M_z, Ed=5.12$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.31$ $M, cr=18969.50$ $\lambda_{LT}=0.57$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.65$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=18.46$ $N_{cr,y}=1732810.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.19$ $N_{cr,z}=126953.00$ $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.09+0.00=0.09$
Verifica ZZ: $0.00+0.05+0.00=0.06$
- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.01$ (L/11337)
- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.02$ (L/8114)
- Asta n. 231 (-1941 -1936) - Sez. 8 (IPE200) - Crit. 1
- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-4.81$
 $V, Ed=-4.81$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=359.48$
 $V, Ed=359.48$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.02$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 28 SLU $X_l=1.51$ - Classe 1
Sollecitazioni: $N=-34.79$ $T_z=315.59$ $M_y=-505.39$ $T_y=-4.81$ $M_z=-8.55$

$N, Ed = -34.79$ $N_c, Rd = 74603.30$ $n = N, Ed / N_c, Rd = 0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed = -505.39$ $M_y, V, c, Rd = 5804.95$ $MN_y, c, Rd = 5804.95$ $M_y, Ed / MN_y, c, Rd = 0.09$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed = -8.55$ $M_z, V, c, Rd = 1170.59$ $MN_z, c, Rd = 1170.59$ $M_z, Ed / MN_z, c, Rd = 0.01$
 $\alpha = 2.00$ $\beta = 1.00$ $(M_y, Ed / MN_y, c, Rd)^2 + (M_z, Ed / MN_z, c, Rd)^1 = 0.09$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 1
 Sollecitazioni: $N, Ed = -38.20$ $M_y, Ed = -505.39$ $M_z, Ed = -8.55$ $L = 1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.51$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.76$ $M, cr = 25829.00$ $\lambda_{LT} = 0.49$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.60$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 0.99$
 $\lambda_y = 18.34$ $N_{cr,y} = 1755830.00$ $\lambda^*_y = 0.21$ Curva a: $\Phi_y = 0.52$ $\chi_y = 1.00$
 $\lambda_z = 67.75$ $N_{cr,z} = 128640.00$ $\lambda^*_z = 0.78$ Curva b: $\Phi_z = 0.90$ $\chi_z = 0.74$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00 + 0.08 + 0.00 = 0.09$
 Verifica ZZ: $0.00 + 0.05 + 0.01 = 0.06$

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L} = 0.01$ (L/17451)

- Verifica freccia massima carichi totali - CC 32
 $f_{z,L} = 0.01$ (L/12604)

Asta n. 232 (-1209 62) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 18 SLU $X_1 = 0.47$ - Classe 1
 Sollecitazioni: $T_y = -170.17$ $M_x = -1.40$
 $V, Ed = -170.17$ $V_c, Rd, Red = 54562.90$ $V, Ed / V_c, Rd, Red = 0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 18 SLU $X_1 = 0.47$ - Classe 1
 Sollecitazioni: $T_z = -5494.33$ $M_x = -1.40$
 $V, Ed = -5494.33$ $V_c, Rd, Red = 38750.90$ $V, Ed / V_c, Rd, Red = 0.14$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1 = 1.30$ - Classe 3
 Sollecitazioni: $N = -3785.31$ $T_z = -7188.66$ $M_y = 9095.75$ $T_y = -198.22$ $M_z = -158.70$ $M_x = -1.59$
 Tensioni: $\sigma_N = -70.34$ $\sigma_{m,d} = -1829.86$ $\tau = 9.45$ $\sigma_{max} = -1900.20$ (sfrut=0.73)
 Tensioni: $\sigma_N = -70.34$ $\sigma_{m,d} = 9.33$ $\tau = 401.50$ $\tau_{max} = 401.50$ (sfrut=0.27)
 Tensioni: $\sigma_N = -70.34$ $\sigma_{m,d} = -1829.86$ $\tau = 9.45$ $\sigma_{ID,max} = 1900.27$ (sfrut=0.73)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N, Ed = -3790.81$ $M_y, Ed = 9095.75$ $M_z, Ed = -158.70$ $L = 1.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.75$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.77$ $M, cr = 113648.00$ $\lambda_{LT} = 0.37$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.54$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 14.01$ $N_{cr,y} = 5686320.00$ $\lambda^*_y = 0.16$ Curva a: $\Phi_y = 0.51$ $\chi_y = 1.00$
 $\lambda_z = 52.10$ $N_{cr,z} = 410861.00$ $\lambda^*_z = 0.60$ Curva b: $\Phi_z = 0.75$ $\chi_z = 0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.03 + 0.59 + 0.07 = 0.69$
 Verifica ZZ: $0.03 + 0.48 + 0.07 = 0.57$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g} = 0.06$ (L/2137)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,g} = 0.08$ (L/1584)

Asta n. 232 (-1944 -1209) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_1 = 1.51$ - Classe 2
 Sollecitazioni: $T_y = 1.62$
 $V, Ed = 1.62$ $V_c, Rd = 54683.30$ $V, Ed / V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 13 SLV $X_1 = 1.51$ - Classe 2
 Sollecitazioni: $T_z = -712.50$
 $V, Ed = -712.50$ $V_c, Rd = 38836.40$ $V, Ed / V_c, Rd = 0.02$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1 = 0.00$ - Classe 3
 Sollecitazioni: $N = -4054.87$ $T_z = -3417.71$ $M_y = -5418.08$ $T_y = 8.93$ $M_z = 16.64$
 Tensioni: $\sigma_N = -75.35$ $\sigma_{m,d} = -993.24$ $\tau = 0.00$ $\sigma_{max} = -1068.59$ (sfrut=0.41)
 Tensioni: $\sigma_N = -75.35$ $\sigma_{m,d} = 0.98$ $\tau = 190.83$ $\tau_{max} = 190.83$ (sfrut=0.13)
 Tensioni: $\sigma_N = -75.35$ $\sigma_{m,d} = -993.24$ $\tau = 0.00$ $\sigma_{ID,max} = 1068.59$ (sfrut=0.41)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N, Ed = -4054.87$ $M_y, Ed = -5418.08$ $M_z, Ed = 30.16$ $L = 1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.51$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.72$ $M, cr = 143563.00$ $\lambda_{LT} = 0.33$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.53$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$

$\lambda_y=12.15$ Ncr,y=7550490.00 $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.22$ Ncr,z=545555.00 $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.96, 0.76, 0.96
 Verifica YY: 0.03+0.35+0.01=0.40
 Verifica ZZ: 0.03+0.28+0.01=0.33

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.03$ (L/5591)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.04$ (L/4190)

Asta n. 232 (-1207 -1944) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU $X_l=1.25$ - Classe 1
 Sollecitazioni: $T_y=-92.37$
 $V,Ed=-92.37$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU $X_l=1.25$ - Classe 1
 Sollecitazioni: $T_z=-298.55$
 $V,Ed=-298.55$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-4284.46$ $T_z=-189.43$ $M_y=-5770.31$ $T_y=-83.54$ $M_z=99.93$
 Tensioni: $\sigma_N=-79.62$ $\sigma_{m,d}=-1159.93$ $\tau=0.00$ $\sigma_{max}=-1239.54$ (sfrut=0.47)
 Tensioni: $\sigma_N=-79.62$ $\sigma_{m,d}=5.88$ $\tau=10.58$ $\tau_{max}=10.58$ (sfrut=0.01)
 Tensioni: $\sigma_N=-79.62$ $\sigma_{m,d}=-1159.93$ $\tau=0.00$ $\sigma_{ID,max}=1239.54$ (sfrut=0.47)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4284.46$ $M_y,Ed=-5770.31$ $M_z,Ed=99.93$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.03$ $M_{cr}=85008.10$ $\lambda_{LT}=0.42$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.57$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.23$ Ncr,y=7451490.00 $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.51$ Ncr,z=538401.00 $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.96, 0.76, 0.96
 Verifica YY: 0.03+0.38+0.05=0.45
 Verifica ZZ: 0.03+0.30+0.05=0.38

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.05$ (L/3309)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.06$ (L/2422)

Asta n. 232 (-1206 -1207) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.61$ - Classe 1
 Sollecitazioni: $T_y=135.94$
 $V,Ed=135.94$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.61$ - Classe 1
 Sollecitazioni: $T_z=1975.83$
 $V,Ed=1975.83$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.05$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=1.52$ - Classe 3
 Sollecitazioni: $N=-4490.12$ $T_z=2626.36$ $M_y=-5770.51$ $T_y=127.21$ $M_z=102.41$
 Tensioni: $\sigma_N=-83.44$ $\sigma_{m,d}=-1163.04$ $\tau=0.00$ $\sigma_{max}=-1246.48$ (sfrut=0.48)
 Tensioni: $\sigma_N=-83.44$ $\sigma_{m,d}=6.02$ $\tau=146.64$ $\tau_{max}=146.64$ (sfrut=0.10)
 Tensioni: $\sigma_N=-83.44$ $\sigma_{m,d}=-1163.04$ $\tau=0.00$ $\sigma_{ID,max}=1246.48$ (sfrut=0.48)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4496.60$ $M_y,Ed=-5770.51$ $M_z,Ed=102.41$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.47$ $M_{cr}=121179.00$ $\lambda_{LT}=0.36$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.54$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.23$ Ncr,y=7451470.00 $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.51$ Ncr,z=538400.00 $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.96, 0.76, 0.96
 Verifica YY: 0.03+0.38+0.05=0.46
 Verifica ZZ: 0.03+0.30+0.05=0.38

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.03$ (L/5364)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.04$ (L/3806)

Asta n. 232 (-1193 -1206) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-37.96$
 $V, Ed=-37.96$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=4504.44$
 $V, Ed=4504.44$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.12$
 - Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-4725.63$ $T_z=5926.54$ $M_y=7209.87$ $T_y=-91.29$ $M_z=52.41$
Tensioni: $\sigma_N=-87.82$ $\sigma_{m,d}=-1359.30$ $\tau=0.00$ $\sigma_{max}=-1447.12$ (sfrut=0.55)
Tensioni: $\sigma_N=-87.82$ $\sigma_{m,d}=3.08$ $\tau=330.91$ $\tau_{max}=330.91$ (sfrut=0.22)
Tensioni: $\sigma_N=-87.82$ $\sigma_{m,d}=-1359.30$ $\tau=0.00$ $\sigma_{ID,max}=1447.12$ (sfrut=0.55)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N, Ed=-4725.63$ $M_y, Ed=7209.87$ $M_z, Ed=-85.85$ $L=1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.01$ $M_{cr}=168597.00$ $\lambda_{LT}=0.30$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.52$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.15$ $N_{cr,y}=7550490.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.22$ $N_{cr,z}=545555.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.03+0.47+0.04=0.54$
Verifica ZZ: $0.03+0.38+0.04=0.45$
 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.03$ (L/5041)
 - Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.04$ (L/3781)

Asta n. 232 (-2403 -1193) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 30 SLU $X_l=0.35$ - Classe 1
Sollecitazioni: $T_y=78.62$ $M_x=6.15$
 $V, Ed=78.62$ $V_c, Rd, Red=54153.10$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.24] - CC 30 SLU $X_l=0.35$ - Classe 1
Sollecitazioni: $T_z=7212.45$ $M_x=6.15$
 $V, Ed=7212.45$ $V_c, Rd, Red=38459.90$ $V, Ed/V_c, Rd, Red=0.19$
 - Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=0.22$ - Classe 3
Sollecitazioni: $N=-4985.02$ $T_z=9373.50$ $M_y=10744.70$ $T_y=168.00$ $M_z=-16.96$ $M_x=7.76$
Tensioni: $\sigma_N=-92.64$ $\sigma_{m,d}=-1949.79$ $\tau=46.09$ $\sigma_{max}=-2042.42$ (sfrut=0.78)
Tensioni: $\sigma_N=-92.64$ $\sigma_{m,d}=1.00$ $\tau=525.44$ $\tau_{max}=525.44$ (sfrut=0.35)
Tensioni: $\sigma_N=-92.64$ $\sigma_{m,d}=-1949.79$ $\tau=46.09$ $\sigma_{ID,max}=2043.98$ (sfrut=0.78)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N, Ed=-4985.02$ $M_y, Ed=10744.70$ $M_z, Ed=46.46$ $L=0.60$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.60$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.18$ $M_{cr}=595017.00$ $\lambda_{LT}=0.16$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.47$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=4.83$ $N_{cr,y}=47822400.00$ $\lambda^*_y=0.06$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=17.97$ $N_{cr,z}=3455370.00$ $\lambda^*_z=0.21$ Curva b: $\Phi_z=0.52$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.04+0.70+0.02=0.76$
Verifica ZZ: $0.04+0.56+0.02=0.62$
 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.02$ (L/2505)
 - Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.02$ (L/1815)

Asta n. 232 (-1189 -2403) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 28 SLU $X_l=0.47$ - Classe 1
Sollecitazioni: $T_y=252.75$ $M_x=-3.01$
 $V, Ed=252.75$ $V_c, Rd, Red=54424.60$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.24] - CC 28 SLU $X_l=0.47$ - Classe 1
Sollecitazioni: $T_z=-2080.07$ $M_x=-3.01$
 $V, Ed=-2080.07$ $V_c, Rd, Red=38652.70$ $V, Ed/V_c, Rd, Red=0.05$
 - Verifica in termini tensionali [4.2.4] - CC 18 SLU $X_l=0.70$ - Classe 3
Sollecitazioni: $N=-359.11$ $T_z=-2167.03$ $M_y=1945.10$ $T_y=323.87$ $M_z=121.98$ $M_x=-2.49$
Tensioni: $\sigma_N=-6.67$ $\sigma_{m,d}=-500.68$ $\tau=14.76$ $\sigma_{max}=-507.35$ (sfrut=0.19)
Tensioni: $\sigma_N=-6.67$ $\sigma_{m,d}=7.17$ $\tau=122.03$ $\tau_{max}=122.03$ (sfrut=0.08)

- Tensioni: $\sigma_N = -6.67$ $\sigma_{m,d} = -500.68$ $\tau = 14.76$ $\sigma_{ID,max} = 508.00$ (sfrut=0.19)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N, Ed = -417.03$ $M_y, Ed = 1999.72$ $M_z, Ed = -116.02$ $L = 0.92$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 0.92$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.62$ $M_{cr} = 352242.00$ $\lambda_{LT} = 0.21$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.48$ $\beta_{LT} = 0.75$ $f = 0.99$ $\chi_{LT} = 1.00$
 $\lambda_y = 7.41$ $N_{cr,y} = 20340100.00$ $\lambda^*_y = 0.09$ Curva a: $\Phi_y = 0.49$ $\chi_y = 1.00$
 $\lambda_z = 27.55$ $N_{cr,z} = 1469650.00$ $\lambda^*_z = 0.32$ Curva b: $\Phi_z = 0.57$ $\chi_z = 0.96$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00 + 0.13 + 0.05 = 0.19$
Verifica ZZ: $0.00 + 0.10 + 0.05 = 0.16$
 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g} = 0.00$ (L/14946)
 - Verifica freccia massima carichi totali - CC 33
 $f_{z,g} = 0.01$ (L/9896)
- Asta n. 232 (87 -1189) - Sez. 7 (IPE300) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l = 1.18$ - Classe 1
Sollecitazioni: $T_y = 3.59$
 $V, Ed = 3.59$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 13 SLV $X_l = 1.18$ - Classe 1
Sollecitazioni: $T_z = -431.22$
 $V, Ed = -431.22$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.01$
 - Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_l = 0.30$ - Classe 3
Sollecitazioni: $N = -665.43$ $T_z = 482.44$ $M_y = 533.75$ $T_y = -314.63$ $M_z = 237.69$ $M_x = 2.29$
Tensioni: $\sigma_N = -12.37$ $\sigma_{m,d} = -391.07$ $\tau = 13.61$ $\sigma_{max} = -403.44$ (sfrut=0.15)
Tensioni: $\sigma_N = -12.37$ $\sigma_{m,d} = 13.98$ $\tau = 30.68$ $\tau_{max} = 30.68$ (sfrut=0.02)
Tensioni: $\sigma_N = -12.37$ $\sigma_{m,d} = -391.07$ $\tau = 13.61$ $\sigma_{ID,max} = 404.12$ (sfrut=0.15)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
Sollecitazioni: $N, Ed = -665.43$ $M_y, Ed = 533.75$ $M_z, Ed = 237.69$ $L = 1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.51$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.77$ $M_{cr} = 148457.00$ $\lambda_{LT} = 0.32$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.53$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 12.15$ $N_{cr,y} = 7550500.00$ $\lambda^*_y = 0.14$ Curva a: $\Phi_y = 0.50$ $\chi_y = 1.00$
 $\lambda_z = 45.22$ $N_{cr,z} = 545555.00$ $\lambda^*_z = 0.52$ Curva b: $\Phi_z = 0.69$ $\chi_z = 0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00 + 0.03 + 0.11 = 0.15$
Verifica ZZ: $0.00 + 0.03 + 0.11 = 0.14$
 - Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,g} = 0.00$ (L/32678)
 - Verifica freccia massima carichi totali - CC 32
 $f_{z,g} = 0.00$ (L/28321)
- Asta n. 233 (-2039 -2035) - Sez. 8 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l = 1.75$ - Classe 1
Sollecitazioni: $T_y = -18.61$
 $V, Ed = -18.61$ $V_c, Rd = 29609.30$ $V, Ed/V_c, Rd = 0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l = 1.75$ - Classe 1
Sollecitazioni: $T_z = -328.63$
 $V, Ed = -328.63$ $V_c, Rd = 21171.50$ $V, Ed/V_c, Rd = 0.02$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l = 0.00$ - Classe 1
Sollecitazioni: $N = -147.22$ $T_z = -278.05$ $M_y = -525.49$ $T_y = -18.61$ $M_z = 15.14$
 $N, Ed = -147.22$ $N_c, Rd = 74603.30$ $n = N, Ed/N_c, Rd = 0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed = -525.49$ $M_y, V, c, Rd = 5804.95$ $M_{Ny, c, Rd} = 5804.95$ $M_y, Ed/M_{Ny, c, Rd} = 0.09$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed = 15.14$ $M_z, V, c, Rd = 1170.59$ $M_{Nz, c, Rd} = 1170.59$ $M_z, Ed/M_{Nz, c, Rd} = 0.01$
 $\alpha = 2.00$ $\beta = 1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.09$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $N, Ed = -147.22$ $M_y, Ed = -525.49$ $M_z, Ed = -17.34$ $L = 1.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.75$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.76$ $M_{cr} = 20328.10$ $\lambda_{LT} = 0.55$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.64$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.97$
 $\lambda_y = 21.13$ $N_{cr,y} = 1322330.00$ $\lambda^*_y = 0.24$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 78.06$ $N_{cr,z} = 96879.30$ $\lambda^*_z = 0.90$ Curva b: $\Phi_z = 1.02$ $\chi_z = 0.66$

Relazione di calcolo

- Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
Verifica YY: 0.00+0.09+0.01=0.10
Verifica ZZ: 0.00+0.05+0.01=0.07
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.02$ (L/11509)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.02$ (L/9734)
- Asta n. 233 (-2038 -2039) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU $X_1=1.51$ - Classe 1
Sollecitazioni: $T_y=-14.23$
 $V, Ed=-14.23$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU $X_1=1.51$ - Classe 1
Sollecitazioni: $T_z=-272.59$
 $V, Ed=-272.59$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.01$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $N=-195.75$ $T_z=-220.88$ $M_y=-893.59$ $T_y=-9.84$ $M_z=7.72$
 $N, Ed=-195.75$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-893.59$ $M_y, V, c, Rd=5804.95$ $MNy, c, Rd=5804.95$ $M_y, Ed/MNy, c, Rd=0.15$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=7.72$ $M_z, V, c, Rd=1170.59$ $MNz, c, Rd=1170.59$ $M_z, Ed/MNz, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MNy, c, Rd)^2 + (M_z, Ed/MNz, c, Rd)^1 = 0.15$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $N, Ed=-195.75$ $M_y, Ed=-893.59$ $M_z, Ed=7.72$ $L=1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.24$ $M, cr=18117.40$ $\lambda_{LT}=0.58$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.66$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.95$
 $\lambda_y=18.34$ $N_{cr,y}=1755830.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=67.75$ $N_{cr,z}=128640.00$ $\lambda^*_z=0.78$ Curva b: $\Phi_z=0.90$ $\chi_z=0.74$
Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
Verifica YY: 0.00+0.15+0.00=0.16
Verifica ZZ: 0.00+0.09+0.01=0.10
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.03$ (L/5495)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.03$ (L/4387)
- Asta n. 233 (-2037 -2038) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_1=1.52$ - Classe 1
Sollecitazioni: $T_y=-25.38$
 $V, Ed=-25.38$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=1.52$ - Classe 1
Sollecitazioni: $T_z=-59.61$
 $V, Ed=-59.61$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.00$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_1=0.44$ - Classe 1
Sollecitazioni: $N=-250.37$ $M_y=-911.01$ $T_y=-15.07$ $M_z=12.35$
 $N, Ed=-250.37$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-911.01$ $M_y, c, Rd=5804.95$ $MNy, c, Rd=5804.95$ $M_y, Ed/MNy, c, Rd=0.16$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=12.35$ $M_z, V, c, Rd=1170.59$ $MNz, c, Rd=1170.59$ $M_z, Ed/MNz, c, Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MNy, c, Rd)^2 + (M_z, Ed/MNz, c, Rd)^1 = 0.16$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $N, Ed=-251.37$ $M_y, Ed=-908.17$ $M_z, Ed=19.02$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.01$ $M, cr=14596.50$ $\lambda_{LT}=0.65$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.70$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.92$
 $\lambda_y=18.46$ $N_{cr,y}=1732810.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.19$ $N_{cr,z}=126953.00$ $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
Verifica YY: 0.00+0.16+0.01=0.17
Verifica ZZ: 0.00+0.10+0.02=0.12
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.03$ (L/4701)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.04$ (L/3475)

Asta n. 233 (-2036 -2037) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=71.05$
 $V,Ed=71.05$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=367.15$
 $V,Ed=367.15$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.02$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=1.52$ - Classe 1
 Sollecitazioni: $N=-301.89$ $T_z=322.97$ $M_y=-908.22$ $T_y=71.05$ $M_z=49.56$
 $N,Ed=-301.89$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-908.22$ $M_y,V,c,Rd=5804.95$ $MNy,c,Rd=5804.95$ $M_y,Ed/MNy,c,Rd=0.16$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=49.56$ $M_z,V,c,Rd=1170.59$ $MNz,c,Rd=1170.59$ $Mz,Ed/MNz,c,Rd=0.04$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MNy,c,Rd)^2 + (M_z,Ed/MNz,c,Rd)^3 = 0.16$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $N,Ed=-305.32$ $M_y,Ed=-908.22$ $M_z,Ed=-58.77$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.36$ $M_{cr}=19730.90$ $\lambda_{LT}=0.56$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.64$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=18.46$ $N_{cr,y}=1732810.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.19$ $N_{cr,z}=126953.00$ $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.96$
 Verifica YY: $0.00+0.15+0.03=0.19$
 Verifica ZZ: $0.00+0.09+0.05=0.14$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.02$ (L/6890)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.03$ (L/4918)

Asta n. 233 (-2034 -2036) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-35.43$
 $V,Ed=-35.43$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=464.14$
 $V,Ed=464.14$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.02$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=1.51$ - Classe 1
 Sollecitazioni: $N=-360.80$ $T_z=420.24$ $M_y=-381.82$ $T_y=-35.43$ $M_z=-17.86$
 $N,Ed=-360.80$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-381.82$ $M_y,V,c,Rd=5804.95$ $MNy,c,Rd=5804.95$ $M_y,Ed/MNy,c,Rd=0.07$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-17.86$ $M_z,V,c,Rd=1170.59$ $MNz,c,Rd=1170.59$ $Mz,Ed/MNz,c,Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MNy,c,Rd)^2 + (M_z,Ed/MNz,c,Rd)^3 = 0.07$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $N,Ed=-364.21$ $M_y,Ed=-381.82$ $M_z,Ed=35.80$ $L=1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.71$ $M_{cr}=39755.80$ $\lambda_{LT}=0.39$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.56$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=18.34$ $N_{cr,y}=1755830.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=67.75$ $N_{cr,z}=128640.00$ $\lambda^*_z=0.78$ Curva b: $\Phi_z=0.90$ $\chi_z=0.74$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.96$
 Verifica YY: $0.00+0.06+0.02=0.08$
 Verifica ZZ: $0.00+0.04+0.03=0.07$

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.00$ (L/52936)

- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.00$ (L/36093)

Asta n. 233 (-1251 -2034) - Sez. 8 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=15.08$
 $V, Ed=15.08$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=162.89$
 $V, Ed=162.89$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.01$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-297.08$ $T_z=162.89$ $M_y=503.16$ $T_y=15.08$ $M_z=-19.64$
 $N, Ed=-297.08$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=503.16$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=0.09$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-19.64$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^3 = 0.09$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $N, Ed=-297.08$ $M_y, Ed=503.16$ $M_z, Ed=-19.64$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.25$ $M, cr=18068.20$ $\lambda_{LT}=0.58$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.66$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.95$
 $\lambda_y=18.46$ $N_{cr,y}=1732810.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=68.19$ $N_{cr,z}=126953.00$ $\lambda^*_z=0.79$ Curva b: $\Phi_z=0.91$ $\chi_z=0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.96$
Verifica YY: $0.00+0.09+0.01=0.10$
Verifica ZZ: $0.00+0.05+0.02=0.07$
 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.01$ (L/10729)
 - Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.02$ (L/7836)
- Asta n. 234 (-1245 61) - Sez. 7 (IPE300) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l=0.48$ - Classe 1
Sollecitazioni: $T_y=-92.81$
 $V, Ed=-92.81$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 13 SLV $X_l=0.48$ - Classe 1
Sollecitazioni: $T_z=-1152.91$
 $V, Ed=-1152.91$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.03$
 - Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=1.32$ - Classe 3
Sollecitazioni: $N=-3661.02$ $T_z=-6735.40$ $M_y=9047.38$ $T_y=-148.81$ $M_z=-127.15$ $M_x=1.61$
Tensioni: $\sigma_N=-68.03$ $\sigma_{m,d}=-1781.99$ $\tau=9.53$ $\sigma_{max}=-1850.02$ (sfrut=0.71)
Tensioni: $\sigma_N=-68.03$ $\sigma_{m,d}=-7.48$ $\tau=376.20$ $\tau_{max}=376.20$ (sfrut=0.25)
Tensioni: $\sigma_N=-68.03$ $\sigma_{m,d}=-1781.99$ $\tau=9.53$ $\sigma_{ID,max}=1850.09$ (sfrut=0.71)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N, Ed=-3666.63$ $M_y, Ed=9047.38$ $M_z, Ed=-127.15$ $L=1.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.75$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.73$ $M, cr=110877.00$ $\lambda_{LT}=0.37$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.55$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=14.01$ $N_{cr,y}=5686330.00$ $\lambda^*_y=0.16$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=52.10$ $N_{cr,z}=410861.00$ $\lambda^*_z=0.60$ Curva b: $\Phi_z=0.75$ $\chi_z=0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.03+0.59+0.06=0.67$
Verifica ZZ: $0.03+0.47+0.06=0.56$
 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.06$ (L/2182)
 - Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.08$ (L/1611)
- Asta n. 234 (-1246 -1245) - Sez. 7 (IPE300) - Crit. 1
-
- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-3890.34$ $T_z=-3183.27$ $M_y=-4689.31$ $T_y=8.18$ $M_z=11.15$
Tensioni: $\sigma_N=-72.29$ $\sigma_{m,d}=-855.60$ $\tau=0.00$ $\sigma_{max}=-927.89$ (sfrut=0.35)
Tensioni: $\sigma_N=-72.29$ $\sigma_{m,d}=0.66$ $\tau=177.74$ $\tau_{max}=177.74$ (sfrut=0.12)
Tensioni: $\sigma_N=-72.29$ $\sigma_{m,d}=-855.60$ $\tau=0.00$ $\sigma_{ID,max}=927.89$ (sfrut=0.35)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N, Ed=-3890.34$ $M_y, Ed=-4689.31$ $M_z, Ed=23.54$ $L=1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$

$L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.79$ $M_{cr}=150129.00$ $\lambda_{LT}=0.32$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.52$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.15$ $N_{cr,y}=7550480.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.22$ $N_{cr,z}=545554.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.03+0.31+0.01=0.34$
 Verifica ZZ: $0.03+0.24+0.01=0.28$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.02$ (L/6700)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.03$ (L/5073)

Asta n. 234 (-1247 -1246) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 18 SLU $X_l=1.11$ - Classe 1
 Sollecitazioni: $T_y=-56.52$
 $V, Ed=-56.52$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 18 SLU $X_l=1.11$ - Classe 1
 Sollecitazioni: $T_z=-482.99$
 $V, Ed=-482.99$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-4048.43$ $T_z=-592.78$ $M_y=-5656.18$ $T_y=-44.88$ $M_z=48.30$
 Tensioni: $\sigma_N=-75.23$ $\sigma_{m,d}=-1075.31$ $\tau=0.00$ $\sigma_{max}=-1150.54$ (sfrut=0.44)
 Tensioni: $\sigma_N=-75.23$ $\sigma_{m,d}=2.84$ $\tau=33.10$ $\tau_{max}=33.10$ (sfrut=0.02)
 Tensioni: $\sigma_N=-75.23$ $\sigma_{m,d}=-1075.31$ $\tau=0.00$ $\sigma_{ID,max}=1150.54$ (sfrut=0.44)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N, Ed=-4048.43$ $M_y, Ed=-5656.18$ $M_z, Ed=48.30$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.09$ $M_{cr}=89729.80$ $\lambda_{LT}=0.41$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.57$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.23$ $N_{cr,y}=7451480.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.51$ $N_{cr,z}=538401.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.03+0.37+0.02=0.42$
 Verifica ZZ: $0.03+0.30+0.02=0.35$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.04$ (L/3560)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.06$ (L/2590)

Asta n. 234 (-1249 -1247) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 1 SLV $X_l=0.42$ - Classe 1
 Sollecitazioni: $T_y=54.06$
 $V, Ed=54.06$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.42$ - Classe 1
 Sollecitazioni: $T_z=239.74$
 $V, Ed=239.74$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=1.52$ - Classe 3
 Sollecitazioni: $N=-4143.53$ $T_z=1220.95$ $M_y=-5656.15$ $T_y=-112.17$ $M_z=36.69$
 Tensioni: $\sigma_N=-77.00$ $\sigma_{m,d}=-1060.88$ $\tau=0.00$ $\sigma_{max}=-1137.88$ (sfrut=0.43)
 Tensioni: $\sigma_N=-77.00$ $\sigma_{m,d}=2.16$ $\tau=68.17$ $\tau_{max}=68.17$ (sfrut=0.05)
 Tensioni: $\sigma_N=-77.00$ $\sigma_{m,d}=-1060.88$ $\tau=0.00$ $\sigma_{ID,max}=1137.88$ (sfrut=0.43)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N, Ed=-4150.00$ $M_y, Ed=-5656.15$ $M_z, Ed=207.69$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.19$ $M_{cr}=98173.40$ $\lambda_{LT}=0.40$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.56$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.23$ $N_{cr,y}=7451480.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.51$ $N_{cr,z}=538401.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.03+0.37+0.09=0.49$
 Verifica ZZ: $0.03+0.30+0.09=0.42$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.04$ (L/4152)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.05$ (L/2965)

Asta n. 234 (-2400 -1249) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-4651.99$ $T_z=3886.36$ $M_y=-8.07$ $T_y=1333.29$ $M_z=-878.60$
 Tensioni: $\sigma_N=-86.45$ $\sigma_{m,d}=-1092.83$ $\tau=0.00$ $\sigma_{max}=-1179.27$ (sfrut=0.45)
 Tensioni: $\sigma_N=-86.45$ $\sigma_{m,d}=-51.66$ $\tau=217.04$ $\tau_{max}=217.04$ (sfrut=0.14)
 Tensioni: $\sigma_N=-86.45$ $\sigma_{m,d}=-1092.83$ $\tau=0.00$ $\sigma_{ID,max}=1179.27$ (sfrut=0.45)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4651.99$ $M_y,Ed=-3500.12$ $M_z,Ed=-878.60$ $L=0.90$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.90$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=394938.00$ $\lambda_{LT}=0.20$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.48$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=7.26$ $N_{cr,y}=21179200.00$ $\lambda^*_y=0.08$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=27.00$ $N_{cr,z}=1530290.00$ $\lambda^*_z=0.31$ Curva b: $\Phi_z=0.57$ $\chi_z=0.96$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.03+0.23+0.40=0.66$
 Verifica ZZ: $0.03+0.18+0.40=0.61$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.00$ (L/21550)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.01$ (L/15051)

Asta n. 235 (-1229 -1255) - Sez. 8 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_1=3.05$ - Classe 1
 Sollecitazioni: $T_y=-44.71$
 $V,Ed=-44.71$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_1=3.05$ - Classe 1
 Sollecitazioni: $T_z=-571.38$
 $V,Ed=-571.38$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.03$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_1=1.09$ - Classe 1
 Sollecitazioni: $N=-1302.59$ $M_y=-562.26$ $T_y=5.23$ $M_z=25.58$
 $N,Ed=-1302.59$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.02$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-562.26$ $M_y,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.10$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=25.58$ $M_z,V,c,Rd=1170.59$ $MN_z,c,Rd=1170.59$ $M_z,Ed/MN_z,c,Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^2 = 0.10$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $N,Ed=-1302.59$ $M_y,Ed=-562.26$ $M_z,Ed=26.01$ $L=3.05$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.05$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.92$ $M_{cr}=9574.64$ $\lambda_{LT}=0.80$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.81$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.84$
 $\lambda_y=36.91$ $N_{cr,y}=433339.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.61$ $\chi_y=0.95$
 $\lambda_z=136.37$ $N_{cr,z}=31748.20$ $\lambda^*_z=1.57$ Curva b: $\Phi_z=1.97$ $\chi_z=0.32$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.61, 0.57, 1.02$
 Verifica YY: $0.02+0.11+0.01=0.14$
 Verifica ZZ: $0.06+0.07+0.02=0.14$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,G}=0.07$ (L/4452) $f_{z,L}=0.07$ (L/4636)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,G}=0.09$ (L/3212) $f_{z,L}=0.09$ (L/3359)

Asta n. 235 (-2410 -1229) - Sez. 8 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_y=38.13$
 $V,Ed=38.13$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=799.52$
 $V,Ed=799.52$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.04$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_1=1.94$ - Classe 1
 Sollecitazioni: $N=-1373.40$ $M_y=-762.06$ $T_y=-31.82$ $M_z=13.94$
 $N,Ed=-1373.40$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.02$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-762.06$ $M_y,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.13$
 Pressoflessione retta ZZ [4.2.34]:

- Mz,Ed=13.94 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.01
 $\alpha=2.00 \beta=1.00 (M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.13$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: N,Ed=-1373.40 My,Ed=-762.06 Mz,Ed=-69.99 L=3.39
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.39$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=1.79 M_{cr}=7774.81 \lambda_{LT}=0.89$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.88 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.79$
 $\lambda_y=41.04 N_{cr,y}=350464.00 \lambda^*_y=0.47$ Curva a: $\Phi_y=0.64 \chi_y=0.93$
 $\lambda_z=151.63 N_{cr,z}=25676.40 \lambda^*_z=1.75$ Curva b: $\Phi_z=2.29 \chi_z=0.27$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.63, 0.57, 1.04
 Verifica YY: $0.02+0.16+0.04=0.22$
 Verifica ZZ: $0.07+0.09+0.06=0.23$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.12 (L/2937) f_{z,L}=0.11 (L/2987)$
- Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.16 (L/2156) f_{z,L}=0.15 (L/2196)$
- Asta n. 236 (-1256 -1982) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU Xl=0.00 - Classe 1
 Sollecitazioni: $T_y=-66.99$
 $V,Ed=-66.99 V_c,Rd=29609.30 V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU Xl=0.00 - Classe 1
 Sollecitazioni: $T_z=2034.41$
 $V,Ed=2034.41 V_c,Rd=21171.50 V,Ed/V_c,Rd=0.10$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU Xl=0.00 - Classe 1
 Sollecitazioni: N=1281.41 $T_z=2034.41 M_y=2039.97 T_y=-66.99 M_z=25.02$
 $N,Ed=1281.41 N_c,Rd=74603.30 n=N,Ed/N_c,Rd=0.02$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=2039.97 M_y,V,c,Rd=5804.95 MN_y,c,Rd=5804.95 M_y,Ed/MN_y,c,Rd=0.35$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=25.02 M_z,V,c,Rd=1170.59 MN_z,c,Rd=1170.59 M_z,Ed/MN_z,c,Rd=0.02$
 $\alpha=2.00 \beta=1.00 (M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.35$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $M_y,Ed=2039.97 M_z,Ed=-106.95 L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=2.16 M_{cr}=31295.30 \lambda_{LT}=0.44$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.58 \beta_{LT}=0.75 f=0.98 \chi_{LT}=1.00$
 $\lambda_y=18.44 N_{cr,y}=1735630.00 \lambda^*_y=0.21$ Curva a: $\Phi_y=0.52 \chi_y=1.00$
 $\lambda_z=68.14 N_{cr,z}=127159.00 \lambda^*_z=0.78$ Curva b: $\Phi_z=0.91 \chi_z=0.73$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
 Verifica YY: $0.00+0.33+0.05=0.39$
 Verifica ZZ: $0.00+0.20+0.09=0.29$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.03 (L/5433)$
- Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.04 (L/4023) f_{z,L}=0.04 (L/4186)$
- Asta n. 236 (-1230 -1256) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU Xl=3.78 - Classe 1
 Sollecitazioni: $T_y=-90.68$
 $V,Ed=-90.68 V_c,Rd=29609.30 V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU Xl=3.78 - Classe 1
 Sollecitazioni: $T_z=-1520.06$
 $V,Ed=-1520.06 V_c,Rd=21171.50 V,Ed/V_c,Rd=0.07$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU Xl=3.78 - Classe 1
 Sollecitazioni: N=-143.48 $T_z=-1520.06 M_y=2034.51 T_y=-90.68 M_z=-96.88$
 $N,Ed=-143.48 N_c,Rd=74603.30 n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=2034.51 M_y,V,c,Rd=5804.95 MN_y,c,Rd=5804.95 M_y,Ed/MN_y,c,Rd=0.35$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-96.88 M_z,V,c,Rd=1170.59 MN_z,c,Rd=1170.59 M_z,Ed/MN_z,c,Rd=0.08$
 $\alpha=2.00 \beta=1.00 (M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.35$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: N,Ed=-143.48 $M_y,Ed=2034.51 M_z,Ed=-96.88 L=3.78$

$\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.78$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.32$ $M_{cr}=8711.41$ $\lambda_{LT}=0.84$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.84$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.82$
 $\lambda_y=45.77$ $N_{cr,y}=281876.00$ $\lambda_y^*=0.53$ Curva a: $\Phi_y=0.67$ $\chi_y=0.92$
 $\lambda_z=169.08$ $N_{cr,z}=20651.40$ $\lambda_z^*=1.95$ Curva b: $\Phi_z=2.69$ $\chi_z=0.22$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.96$
Verifica YY: $0.00+0.41+0.05=0.46$
Verifica ZZ: $0.00+0.24+0.08=0.32$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.05$ (L/7206) $f_{z,L}=0.05$ (L/7535)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.07$ (L/5662) $f_{z,L}=0.06$ (L/5902)

Asta n. 236 (-2408 -1230) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=48.62$
 $V, Ed=48.62$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=961.39$
 $V, Ed=961.39$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.05$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=2.43$ - Classe 1
Sollecitazioni: $N=-310.40$ $M_y=-1146.08$ $T_y=-35.49$ $M_z=-1.71$
 $N, Ed=-310.40$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-1146.08$ $M_y, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.20$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-1.71$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.20$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $N, Ed=-310.40$ $M_y, Ed=-1146.08$ $M_z, Ed=-51.44$ $L=3.39$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.39$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.78$ $M_{cr}=7694.32$ $\lambda_{LT}=0.89$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.88$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.79$
 $\lambda_y=41.04$ $N_{cr,y}=350464.00$ $\lambda_y^*=0.47$ Curva a: $\Phi_y=0.64$ $\chi_y=0.93$
 $\lambda_z=151.63$ $N_{cr,z}=25676.40$ $\lambda_z^*=1.75$ Curva b: $\Phi_z=2.29$ $\chi_z=0.27$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.97$
Verifica YY: $0.00+0.24+0.03=0.27$
Verifica ZZ: $0.00+0.14+0.04=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.16$ (L/2083)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.23$ (L/1493)

Asta n. 237 (-1929 -1932) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.48$ - Classe 1
Sollecitazioni: $T_y=-71.93$
 $V, Ed=-71.93$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.48$ - Classe 1
Sollecitazioni: $T_z=-1553.42$
 $V, Ed=-1553.42$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.04$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-75.48$ $T_z=-1527.35$ $M_y=-2746.79$ $T_y=-71.93$ $M_z=34.14$
Tensioni: $\sigma_N=-1.40$ $\sigma_{m,d}=-535.48$ $\tau=0.00$ $\sigma_{max}=-536.88$ (sfrut=0.20)
Tensioni: $\sigma_N=-1.40$ $\sigma_{m,d}=2.01$ $\tau=85.28$ $\tau_{max}=85.28$ (sfrut=0.06)
Tensioni: $\sigma_N=-1.40$ $\sigma_{m,d}=-535.48$ $\tau=0.00$ $\sigma_{ID,max}=536.88$ (sfrut=0.20)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N, Ed=-75.48$ $M_y, Ed=-2746.79$ $M_z, Ed=-91.40$ $L=1.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.75$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=112369.00$ $\lambda_{LT}=0.37$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.55$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=14.01$ $N_{cr,y}=5686330.00$ $\lambda_y^*=0.16$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=52.10$ $N_{cr,z}=410861.00$ $\lambda_z^*=0.60$ Curva b: $\Phi_z=0.75$ $\chi_z=0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.18+0.04=0.22$
Verifica ZZ: $0.00+0.14+0.04=0.18$

Relazione di calcolo

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.02$ (L/10338)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.02$ (L/7408)

Asta n. 237 (-1928 -1929) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU $X_1=0.96$ - Classe 1
Sollecitazioni: $T_y=-37.77$
 $V,Ed=-37.77$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU $X_1=0.96$ - Classe 1
Sollecitazioni: $T_z=-393.67$
 $V,Ed=-393.67$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=0.00$ - Classe 3
Sollecitazioni: $N=-206.44$ $T_z=-334.34$ $M_y=-3316.11$ $T_y=-28.08$ $M_z=23.78$
Tensioni: $\sigma_N=-3.84$ $\sigma_{m,d}=-624.80$ $\tau=0.00$ $\sigma_{max}=-628.63$ (sfrut=0.24)
Tensioni: $\sigma_N=-3.84$ $\sigma_{m,d}=1.40$ $\tau=18.67$ $\tau_{max}=18.67$ (sfrut=0.01)
Tensioni: $\sigma_N=-3.84$ $\sigma_{m,d}=-624.80$ $\tau=0.00$ $\sigma_{ID,max}=628.63$ (sfrut=0.24)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N,Ed=-206.44$ $M_y,Ed=-3316.11$ $M_z,Ed=23.78$ $L=1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.09$ $M_{cr}=90881.60$ $\lambda_{LT}=0.41$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.57$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.15$ $N_{cr,y}=7550480.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.22$ $N_{cr,z}=545554.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.22+0.01=0.23$
Verifica ZZ: $0.00+0.17+0.01=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.02$ (L/6179)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.03$ (L/4411)

Asta n. 237 (-2013 -1928) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 30 SLU $X_1=1.11$ - Classe 1
Sollecitazioni: $T_y=-51.40$
 $V,Ed=-51.40$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 30 SLU $X_1=1.11$ - Classe 1
Sollecitazioni: $T_z=523.82$
 $V,Ed=523.82$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=1.52$ - Classe 3
Sollecitazioni: $N=-317.33$ $T_z=717.57$ $M_y=-3316.70$ $T_y=-42.55$ $M_z=-25.95$
Tensioni: $\sigma_N=-5.90$ $\sigma_{m,d}=-627.60$ $\tau=0.00$ $\sigma_{max}=-633.49$ (sfrut=0.24)
Tensioni: $\sigma_N=-5.90$ $\sigma_{m,d}=-1.53$ $\tau=40.07$ $\tau_{max}=40.07$ (sfrut=0.03)
Tensioni: $\sigma_N=-5.90$ $\sigma_{m,d}=-627.60$ $\tau=0.00$ $\sigma_{ID,max}=633.49$ (sfrut=0.24)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N,Ed=-323.81$ $M_y,Ed=-3316.70$ $M_z,Ed=38.92$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.19$ $M_{cr}=98644.60$ $\lambda_{LT}=0.39$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.56$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.23$ $N_{cr,y}=7451480.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.51$ $N_{cr,z}=538401.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.22+0.02=0.24$
Verifica ZZ: $0.00+0.17+0.02=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.02$ (L/7266)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.03$ (L/5058)

Asta n. 238 (-1264 -1977) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 29 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_y=-52.58$ $M_x=-1.76$
 $V,Ed=-52.58$ $V_c,Rd=29417.90$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 29 SLU $X_1=0.00$ - Classe 1

- Sollecitazioni: $T_z=2052.30$ $M_x=-1.76$
 $V, Ed=2052.30$ $V_c, Rd, Red=21034.60$ $V, Ed/V_c, Rd, Red=0.10$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=1.45$ - Classe 1
 Sollecitazioni: $N=-2736.44$ $T_z=1659.79$ $M_y=-2183.93$ $T_y=-86.92$ $M_z=-47.89$ $M_x=-1.76$
 $N, Ed=-2736.44$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.04$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-2183.93$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.38$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-47.89$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.04$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^2 = 0.38$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $N, Ed=-2736.44$ $M_y, Ed=-2183.93$ $M_z, Ed=55.27$ $L=1.45$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.45$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.00$ $M, cr=31503.30$ $\lambda_{LT}=0.44$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.58$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=17.59$ $N_{cr,y}=1907870.00$ $\lambda^*_y=0.20$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=64.99$ $N_{cr,z}=139779.00$ $\lambda^*_z=0.75$ Curva b: $\Phi_z=0.87$ $\chi_z=0.76$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.59, 0.57, 0.99$
 Verifica YY: $0.04+0.36+0.03=0.42$
 Verifica ZZ: $0.04+0.21+0.05=0.30$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.03$ (L/5480)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.04$ (L/3593)
- Asta n. 238 (-1257 -1264) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=155.78$
 $V, Ed=155.78$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.01$
- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=849.92$
 $V, Ed=849.92$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.04$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-900.45$ $T_z=849.92$ $M_y=1405.95$ $T_y=155.78$ $M_z=-136.39$
 $N, Ed=-900.45$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1405.95$ $M_y, V, c, Rd=5804.95$ $M_{Ny}, c, Rd=5804.95$ $M_y, Ed/M_{Ny}, c, Rd=0.24$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-136.39$ $M_z, V, c, Rd=1170.59$ $M_{Nz}, c, Rd=1170.59$ $M_z, Ed/M_{Nz}, c, Rd=0.12$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny}, c, Rd)^2 + (M_z, Ed/M_{Nz}, c, Rd)^2 = 0.24$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $N, Ed=-900.45$ $M_y, Ed=1405.95$ $M_z, Ed=-136.39$ $L=2.34$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.34$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.42$ $M, cr=10361.00$ $\lambda_{LT}=0.77$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.78$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.86$
 $\lambda_y=28.33$ $N_{cr,y}=735547.00$ $\lambda^*_y=0.33$ Curva a: $\Phi_y=0.57$ $\chi_y=0.97$
 $\lambda_z=104.67$ $N_{cr,z}=53889.30$ $\lambda^*_z=1.21$ Curva b: $\Phi_z=1.40$ $\chi_z=0.48$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.59, 0.57, 0.98$
 Verifica YY: $0.01+0.27+0.07=0.35$
 Verifica ZZ: $0.01+0.16+0.11=0.29$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.06$ (L/3932) $f_{z,G}=0.06$ (L/4015)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.09$ (L/2747) $f_{z,G}=0.08$ (L/2817)
- Asta n. 238 (-1228 -1257) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=3.78$ - Classe 1
 Sollecitazioni: $T_y=-91.28$
 $V, Ed=-91.28$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=3.78$ - Classe 1
 Sollecitazioni: $T_z=-1329.99$
 $V, Ed=-1329.99$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.06$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=3.78$ - Classe 1
 Sollecitazioni: $N=-442.77$ $T_z=-1329.99$ $M_y=1407.13$ $T_y=-91.28$ $M_z=-90.41$
 $N, Ed=-442.77$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$

Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1407.13$ $M_y, V, c, Rd=5804.95$ $MNy, c, Rd=5804.95$ $M_y, Ed/MNy, c, Rd=0.24$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-90.41$ $M_z, V, c, Rd=1170.59$ $MNz, c, Rd=1170.59$ $M_z, Ed/MNz, c, Rd=0.08$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MNy, c, Rd)^2 + (M_z, Ed/MNz, c, Rd)^2 = 0.24$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $N, Ed=-442.77$ $M_y, Ed=1407.13$ $M_z, Ed=-90.41$ $L=3.78$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.78$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.44$ $M, cr=9185.80$ $\lambda_{LT}=0.81$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.82$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.83$
 $\lambda_y=45.77$ $N_{cr,y}=281876.00$ $\lambda^*_y=0.53$ Curva a: $\Phi_y=0.67$ $\chi_y=0.92$
 $\lambda_z=169.08$ $N_{cr,z}=20651.40$ $\lambda^*_z=1.95$ Curva b: $\Phi_z=2.69$ $\chi_z=0.22$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.59, 0.57, 0.99$
 Verifica YY: $0.01+0.28+0.05=0.33$
 Verifica ZZ: $0.01+0.17+0.08=0.25$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.08$ (L/4473) $f_{z,L}=0.08$ (L/4641)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.11$ (L/3399) $f_{z,L}=0.11$ (L/3529)

Asta n. 238 (-2407 -1228) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=36.03$
 $V, Ed=36.03$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=905.79$
 $V, Ed=905.79$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.04$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=2.29$ - Classe 1
 Sollecitazioni: $N=-170.65$ $M_y=-1037.02$ $T_y=-43.22$ $M_z=-1.28$
 $N, Ed=-170.65$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-1037.02$ $M_y, c, Rd=5804.95$ $MNy, c, Rd=5804.95$ $M_y, Ed/MNy, c, Rd=0.18$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-1.28$ $M_z, V, c, Rd=1170.59$ $MNz, c, Rd=1170.59$ $M_z, Ed/MNz, c, Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MNy, c, Rd)^2 + (M_z, Ed/MNz, c, Rd)^2 = 0.18$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $N, Ed=-170.65$ $M_y, Ed=-1037.02$ $M_z, Ed=-69.47$ $L=3.39$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.39$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M, cr=7589.71$ $\lambda_{LT}=0.90$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.89$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.79$
 $\lambda_y=41.04$ $N_{cr,y}=350464.00$ $\lambda^*_y=0.47$ Curva a: $\Phi_y=0.64$ $\chi_y=0.93$
 $\lambda_z=151.63$ $N_{cr,z}=25676.40$ $\lambda^*_z=1.75$ Curva b: $\Phi_z=2.29$ $\chi_z=0.27$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.96$
 Verifica YY: $0.00+0.22+0.03=0.25$
 Verifica ZZ: $0.00+0.13+0.06=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.15$ (L/2238) $f_{z,L}=0.15$ (L/2256)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.21$ (L/1615) $f_{z,L}=0.21$ (L/1628)

Asta n. 239 (-1933 -1934) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=1.75$ - Classe 2
 Sollecitazioni: $T_y=45.36$
 $V, Ed=45.36$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=1.75$ - Classe 2
 Sollecitazioni: $T_z=-872.75$
 $V, Ed=-872.75$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.02$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=118.54$ $T_z=-777.20$ $M_y=-1439.79$ $T_y=45.36$ $M_z=-35.27$
 Tensioni: $\sigma_N=2.20$ $\sigma_{m,d}=302.26$ $\tau=0.00$ $\sigma_{max}=304.47$ (sfrut=0.12)
 Tensioni: $\sigma_N=2.20$ $\sigma_{m,d}=-2.07$ $\tau=43.40$ $\tau_{max}=43.40$ (sfrut=0.03)
 Tensioni: $\sigma_N=2.20$ $\sigma_{m,d}=302.26$ $\tau=0.00$ $\sigma_{ID,max}=304.47$ (sfrut=0.12)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $M_y, Ed=-1439.79$ $M_z, Ed=43.89$ $L=1.75$

$\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.75$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=112315.00$ $\lambda_{LT}=0.37$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.55$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=14.01$ $N_{cr,y}=5686330.00$ $\lambda^*_y=0.16$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=52.10$ $N_{cr,z}=410861.00$ $\lambda^*_z=0.60$ Curva b: $\Phi_z=0.75$ $\chi_z=0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.09+0.02=0.11$
Verifica ZZ: $0.00+0.07+0.02=0.09$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.01$ (L/19891)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.01$ (L/13969)

Asta n. 239 (-2015 -1933) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-13.38$
 $V, Ed=-13.38$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=401.60$
 $V, Ed=401.60$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=1.51$ - Classe 3
Sollecitazioni: $N=20.86$ $T_z=386.82$ $M_y=-1439.83$ $T_y=-8.10$ $M_z=-18.19$ $M_x=1.11$
Tensioni: $\sigma_N=0.39$ $\sigma_{m,d}=281.05$ $\tau=6.57$ $\sigma_{max}=281.43$ (sfrut=0.11)
Tensioni: $\sigma_N=0.39$ $\sigma_{m,d}=-1.07$ $\tau=22.58$ $\tau_{max}=22.58$ (sfrut=0.01)
Tensioni: $\sigma_N=0.39$ $\sigma_{m,d}=281.05$ $\tau=6.57$ $\sigma_{ID,max}=281.66$ (sfrut=0.11)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $M_y, Ed=-1439.83$ $M_z, Ed=-18.19$ $L=1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.26$ $M_{cr}=105738.00$ $\lambda_{LT}=0.38$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.55$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.15$ $N_{cr,y}=7550480.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.22$ $N_{cr,z}=545554.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.09+0.01=0.10$
Verifica ZZ: $0.00+0.07+0.01=0.08$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.01$ (L/18254)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.01$ (L/12504)

Asta n. 240 (-1263 -1288) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=48.19$
 $V, Ed=48.19$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=906.59$
 $V, Ed=906.59$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.04$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=1496.40$ $T_z=906.59$ $M_y=862.00$ $T_y=48.19$ $M_z=-8.40$
 $N, Ed=1496.40$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.02$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=862.00$ $M_y, V, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.15$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-8.40$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.15$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $M_y, Ed=862.00$ $M_z, Ed=-43.02$ $L=3.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=7179.42$ $\lambda_{LT}=0.92$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.91$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.77$
 $\lambda_y=42.74$ $N_{cr,y}=323216.00$ $\lambda^*_y=0.49$ Curva a: $\Phi_y=0.65$ $\chi_y=0.93$
 $\lambda_z=157.90$ $N_{cr,z}=23680.20$ $\lambda^*_z=1.82$ Curva b: $\Phi_z=2.43$ $\chi_z=0.25$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.18+0.02=0.20$
Verifica ZZ: $0.00+0.11+0.03=0.14$

Relazione di calcolo

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,G}=0.01$ (L/23727) $f_{z,L}=0.01$ (L/27317)
- Verifica freccia massima carichi totali - CC 32
 $f_{z,G}=0.02$ (L/16378) $f_{z,L}=0.02$ (L/19328)
- Asta n. 240 (-1258 -1263) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_1=2.34$ - Classe 1
 Sollecitazioni: $T_y=30.80$
 $V_{Ed}=30.80$ $V_{c,Rd}=29609.30$ $V_{Ed}/V_{c,Rd}=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_1=2.34$ - Classe 1
 Sollecitazioni: $T_z=-524.56$
 $V_{Ed}=-524.56$ $V_{c,Rd}=21171.50$ $V_{Ed}/V_{c,Rd}=0.02$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_1=2.34$ - Classe 1
 Sollecitazioni: $N=764.00$ $T_z=-524.56$ $M_y=862.72$ $T_y=30.80$ $M_z=62.18$
 $N_{Ed}=764.00$ $N_{c,Rd}=74603.30$ $n=N_{Ed}/N_{c,Rd}=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_{y,Ed}=862.72$ $M_{y,V,c,Rd}=5804.95$ $M_{N_y,c,Rd}=5804.95$ $M_{y,Ed}/M_{N_y,c,Rd}=0.15$
 Pressoflessione retta ZZ [4.2.34]:
 $M_{z,Ed}=62.18$ $M_{z,V,c,Rd}=1170.59$ $M_{N_z,c,Rd}=1170.59$ $M_{z,Ed}/M_{N_z,c,Rd}=0.05$
 $\alpha=2.00$ $\beta=1.00$ $(M_{y,Ed}/M_{N_y,c,Rd})^2 + (M_{z,Ed}/M_{N_z,c,Rd})^1 = 0.15$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $M_{y,Ed}=862.72$ $M_{z,Ed}=-104.51$ $L=2.34$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.34$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.08$ $M_{cr}=7916.36$ $\lambda_{LT}=0.88$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.87$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.80$
 $\lambda_y=28.33$ $N_{cr,y}=735547.00$ $\lambda^*_y=0.33$ Curva a: $\Phi_y=0.57$ $\chi_y=0.97$
 $\lambda_z=104.67$ $N_{cr,z}=53889.30$ $\lambda^*_z=1.21$ Curva b: $\Phi_z=1.40$ $\chi_z=0.48$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.18+0.05=0.23$
 Verifica ZZ: $0.00+0.11+0.08=0.19$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.05$ (L/5106)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.06$ (L/3645)
- Asta n. 240 (-1224 -1258) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_1=3.78$ - Classe 1
 Sollecitazioni: $T_y=-88.19$
 $V_{Ed}=-88.19$ $V_{c,Rd}=29609.30$ $V_{Ed}/V_{c,Rd}=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_1=3.78$ - Classe 1
 Sollecitazioni: $T_z=-1030.16$
 $V_{Ed}=-1030.16$ $V_{c,Rd}=21171.50$ $V_{Ed}/V_{c,Rd}=0.05$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_1=3.78$ - Classe 1
 Sollecitazioni: $N=451.18$ $T_z=-1030.16$ $M_y=716.68$ $T_y=-88.19$ $M_z=-84.93$
 $N_{Ed}=451.18$ $N_{c,Rd}=74603.30$ $n=N_{Ed}/N_{c,Rd}=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_{y,Ed}=716.68$ $M_{y,V,c,Rd}=5804.95$ $M_{N_y,c,Rd}=5804.95$ $M_{y,Ed}/M_{N_y,c,Rd}=0.12$
 Pressoflessione retta ZZ [4.2.34]:
 $M_{z,Ed}=-84.93$ $M_{z,V,c,Rd}=1170.59$ $M_{N_z,c,Rd}=1170.59$ $M_{z,Ed}/M_{N_z,c,Rd}=0.07$
 $\alpha=2.00$ $\beta=1.00$ $(M_{y,Ed}/M_{N_y,c,Rd})^2 + (M_{z,Ed}/M_{N_z,c,Rd})^1 = 0.12$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $M_{y,Ed}=716.68$ $M_{z,Ed}=-84.93$ $L=3.78$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.78$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=2.34$ $M_{cr}=8818.11$ $\lambda_{LT}=0.83$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.83$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.82$
 $\lambda_y=45.77$ $N_{cr,y}=281876.00$ $\lambda^*_y=0.53$ Curva a: $\Phi_y=0.67$ $\chi_y=0.92$
 $\lambda_z=169.08$ $N_{cr,z}=20651.40$ $\lambda^*_z=1.95$ Curva b: $\Phi_z=2.69$ $\chi_z=0.22$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.14+0.04=0.18$
 Verifica ZZ: $0.00+0.09+0.07=0.15$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,G}=0.10$ (L/3825) $f_{z,L}=0.10$ (L/3930)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,G}=0.13$ (L/2918) $f_{z,L}=0.13$ (L/3003)

Relazione di calcolo

Asta n. 240 (-2406 -1224) - Sez. 8 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_y=42.18$
 $V, Ed=42.18$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=774.95$
 $V, Ed=774.95$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.04$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_1=1.96$ - Classe 1
Sollecitazioni: $N=200.25$ $M_y=-759.29$ $T_y=-25.62$ $M_z=11.86$
 $N, Ed=200.25$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-759.29$ $M_y, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.13$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=11.86$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.13$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $M_y, Ed=-759.29$ $M_z, Ed=-59.96$ $L=3.39$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.39$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.75$ $M_{cr}=7592.33$ $\lambda_{LT}=0.90$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.89$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.79$
 $\lambda_y=41.04$ $N_{cr,y}=350464.00$ $\lambda_y^*=0.47$ Curva a: $\Phi_y=0.64$ $\chi_y=0.93$
 $\lambda_z=151.63$ $N_{cr,z}=25676.40$ $\lambda_z^*=1.75$ Curva b: $\Phi_z=2.29$ $\chi_z=0.27$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.16+0.03=0.19$
Verifica ZZ: $0.00+0.09+0.05=0.14$
 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.11$ (L/2957) $f_{z,L}=0.11$ (L/2995)
 - Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.16$ (L/2160) $f_{z,L}=0.15$ (L/2189)

Asta n. 241 (-1275 -1980) - Sez. 8 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_y=71.63$
 $V, Ed=71.63$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=849.63$
 $V, Ed=849.63$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.04$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_1=2.18$ - Classe 1
Sollecitazioni: $N=210.46$ $M_y=-810.30$ $T_y=-2.65$ $M_z=21.48$
 $N, Ed=210.46$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-810.30$ $M_y, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.14$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=21.48$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.14$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $M_y, Ed=-810.30$ $M_z, Ed=-47.72$ $L=2.45$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.45$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.81$ $M_{cr}=12385.70$ $\lambda_{LT}=0.70$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.74$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.90$
 $\lambda_y=29.63$ $N_{cr,y}=672506.00$ $\lambda_y^*=0.34$ Curva a: $\Phi_y=0.57$ $\chi_y=0.97$
 $\lambda_z=109.46$ $N_{cr,z}=49270.60$ $\lambda_z^*=1.26$ Curva b: $\Phi_z=1.48$ $\chi_z=0.45$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.15+0.02=0.17$
Verifica ZZ: $0.00+0.09+0.04=0.13$
 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.05$ (L/4682)
 - Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.08$ (L/3148)

Asta n. 241 (-1262 -1275) - Sez. 8 (IPE200) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_y=88.67$
 $V, Ed=88.67$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

Relazione di calcolo

-
- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=1199.23$
 $V, Ed=1199.23$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.06$

 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-1.53$ $T_z=1199.23$ $M_y=1398.95$ $T_y=88.67$ $M_z=-70.71$
 $N, Ed=-1.53$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1398.95$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.24$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-70.71$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.06$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.24$

 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $N, Ed=-1.53$ $M_y, Ed=1398.95$ $M_z, Ed=-70.71$ $L=3.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.53$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.71$ $M, cr=7041.22$ $\lambda_{LT}=0.93$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.91$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.76$
 $\lambda_y=42.74$ $N_{cr,y}=323216.00$ $\lambda_y^*=0.49$ Curva a: $\Phi_y=0.65$ $\chi_y=0.93$
 $\lambda_z=157.90$ $N_{cr,z}=23680.20$ $\lambda_z^*=1.82$ Curva b: $\Phi_z=2.43$ $\chi_z=0.25$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.30+0.03=0.33$
Verifica ZZ: $0.00+0.18+0.06=0.24$

 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.04$ (L/9173) $f_{z,G}=0.04$ (L/9490)

 - Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.05$ (L/6522) $f_{z,G}=0.05$ (L/6705)

 - Asta n. 241 (-1259 -1262) - Sez. 8 (IPE200) - Crit. 1

 - Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=2.34$ - Classe 1
Sollecitazioni: $T_y=93.65$
 $V, Ed=93.65$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

 - Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=2.34$ - Classe 1
Sollecitazioni: $T_z=-1151.21$
 $V, Ed=-1151.21$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.05$

 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=2.34$ - Classe 1
Sollecitazioni: $N=120.91$ $T_z=-1151.21$ $M_y=1401.33$ $T_y=93.65$ $M_z=146.01$
 $N, Ed=120.91$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1401.33$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.24$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=146.01$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.12$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^1 = 0.24$

 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $M_y, Ed=1401.33$ $M_z, Ed=-183.95$ $L=2.34$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.34$ Curva b: $\alpha_{imp}=0.34$ $k_e=0.94$ $\psi=1.77$ $M, cr=12912.40$ $\lambda_{LT}=0.69$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.73$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.90$
 $\lambda_y=28.33$ $N_{cr,y}=735547.00$ $\lambda_y^*=0.33$ Curva a: $\Phi_y=0.57$ $\chi_y=0.97$
 $\lambda_z=104.67$ $N_{cr,z}=53889.30$ $\lambda_z^*=1.21$ Curva b: $\Phi_z=1.40$ $\chi_z=0.48$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.25+0.09=0.34$
Verifica ZZ: $0.00+0.15+0.15=0.30$

 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.04$ (L/6332) $f_{z,G}=0.04$ (L/6631)

 - Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.05$ (L/4594) $f_{z,G}=0.05$ (L/4830)

 - Asta n. 241 (-1223 -1259) - Sez. 8 (IPE200) - Crit. 1

 - Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=76.06$
 $V, Ed=76.06$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$

 - Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=973.62$
 $V, Ed=973.62$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.05$

 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=2.10$ - Classe 1
Sollecitazioni: $N=121.06$ $M_y=-673.89$ $T_y=-9.12$ $M_z=22.33$

N,Ed=121.06 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.00
 Pressoflessione retta YY [4.2.33]:
 My,Ed=-673.89 My,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.12
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=22.33 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.02
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.12$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: My,Ed=-673.89 Mz,Ed=-49.79 L=3.78
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.78$ Curva b: $\alpha_{imp}=0.34 k_e=0.94 \psi=1.82 M_{cr}=6860.83 \lambda_{LT}=0.94$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.93 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.76$
 $\lambda_y=45.77 N_{cr,y}=281876.00 \lambda^*_y=0.53$ Curva a: $\Phi_y=0.67 \chi_y=0.92$
 $\lambda_z=169.08 N_{cr,z}=20651.40 \lambda^*_z=1.95$ Curva b: $\Phi_z=2.69 \chi_z=0.22$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
 Verifica YY: 0.00+0.15+0.02=0.17
 Verifica ZZ: 0.00+0.09+0.04=0.13

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.12 (L/3123) f_{z,L}=0.12 (L/3193)$

- Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.16 (L/2387) f_{z,L}=0.15 (L/2440)$

Asta n. 241 (-2405 -1223) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU Xl=3.39 - Classe 1
 Sollecitazioni: Ty=-56.16
 V,Ed=-56.16 Vc,Rd=29609.30 V,Ed/Vc,Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU Xl=3.39 - Classe 1
 Sollecitazioni: Tz=-887.65
 V,Ed=-887.65 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.04

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU Xl=1.47 - Classe 1
 Sollecitazioni: N=63.43 My=-501.21 Ty=21.50 Mz=15.99
 N,Ed=63.43 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.00
 Pressoflessione retta YY [4.2.33]:
 My,Ed=-501.21 My,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.09
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=15.99 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.01
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.09$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: My,Ed=-501.21 Mz,Ed=-59.48 L=3.39
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.39$ Curva b: $\alpha_{imp}=0.34 k_e=0.94 \psi=1.75 M_{cr}=7584.35 \lambda_{LT}=0.90$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.89 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.79$
 $\lambda_y=41.04 N_{cr,y}=350464.00 \lambda^*_y=0.47$ Curva a: $\Phi_y=0.64 \chi_y=0.93$
 $\lambda_z=151.63 N_{cr,z}=25676.40 \lambda^*_z=1.75$ Curva b: $\Phi_z=2.29 \chi_z=0.27$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
 Verifica YY: 0.00+0.10+0.03=0.13
 Verifica ZZ: 0.00+0.06+0.05=0.11

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.07 (L/4733) f_{z,L}=0.07 (L/4859)$

- Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.09 (L/3634) f_{z,L}=0.09 (L/3729)$

Asta n. 242 (-1281 -1979) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU Xl=0.00 - Classe 1
 Sollecitazioni: Ty=26.37
 V,Ed=26.37 Vc,Rd=29609.30 V,Ed/Vc,Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU Xl=0.00 - Classe 1
 Sollecitazioni: Tz=983.91
 V,Ed=983.91 Vc,Rd=21171.50 V,Ed/Vc,Rd=0.05

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU Xl=1.17 - Classe 1
 Sollecitazioni: N=-508.74 Tz=536.06 My=-1253.50 Ty=-12.81 Mz=3.42
 N,Ed=-508.74 Nc,Rd=74603.30 n=N,Ed/Nc,Rd=0.01
 Pressoflessione retta YY [4.2.33]:
 My,Ed=-1253.50 My,V,c,Rd=5804.95 MNy,c,Rd=5804.95 My,Ed/MNy,c,Rd=0.22
 Pressoflessione retta ZZ [4.2.34]:
 Mz,Ed=3.42 Mz,V,c,Rd=1170.59 MNz,c,Rd=1170.59 Mz,Ed/MNz,c,Rd=0.00
 $\alpha=2.00 \beta=1.00 (My,Ed/MNy,c,Rd)^2 + (Mz,Ed/MNz,c,Rd)^1 = 0.22$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: N,Ed=-508.74 My,Ed=-1253.50 Mz,Ed=6.23 L=1.17
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.17$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=1.46 M_{cr}=33562.40 \lambda_{LT}=0.43$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.57 \beta_{LT}=0.75 f=0.98 \chi_{LT}=1.00$
 $\lambda_y=14.19 N_{cr,y}=2932660.00 \lambda^*_y=0.16$ Curva a: $\Phi_y=0.51 \chi_y=1.00$
 $\lambda_z=52.42 N_{cr,z}=214859.00 \lambda^*_z=0.60$ Curva b: $\Phi_z=0.75 \chi_z=0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.01+0.21+0.00=0.21$
 Verifica ZZ: $0.01+0.12+0.01=0.13$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.02$ (L/7447)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.02$ (L/4837)

Asta n. 242 (-1276 -1281) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_y=87.11$
 $V, Ed=87.11 V_c, Rd=29609.30 V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_z=1170.20$
 $V, Ed=1170.20 V_c, Rd=21171.50 V, Ed/V_c, Rd=0.06$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU X1=2.06 - Classe 1
 Sollecitazioni: N=-565.12 $M_y=-962.62 T_y=-15.27 M_z=28.05$
 $N, Ed=-565.12 N_c, Rd=74603.30 n=N, Ed/N_c, Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-962.62 M_y, c, Rd=5804.95 M_{Ny, c, Rd}=5804.95 M_y, Ed/M_{Ny, c, Rd}=0.17$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=28.05 M_z, V, c, Rd=1170.59 M_{Nz, c, Rd}=1170.59 M_z, Ed/M_{Nz, c, Rd}=0.02$
 $\alpha=2.00 \beta=1.00 (M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.17$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: N,Ed=-565.12 My,Ed=-962.62 Mz,Ed=-46.05 L=3.53
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.53$ Curva b: $\alpha_{imp}=0.34 k_c=0.94 \psi=2.56 M_{cr}=10517.10 \lambda_{LT}=0.76$
 $\lambda_{LT,0}=0.40 \Phi_{LT}=0.78 \beta_{LT}=0.75 f=0.97 \chi_{LT}=0.86$
 $\lambda_y=42.74 N_{cr,y}=323216.00 \lambda^*_y=0.49$ Curva a: $\Phi_y=0.65 \chi_y=0.93$
 $\lambda_z=157.90 N_{cr,z}=23680.10 \lambda^*_z=1.82$ Curva b: $\Phi_z=2.43 \chi_z=0.25$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.59, 0.57, 0.99$
 Verifica YY: $0.01+0.18+0.02=0.21$
 Verifica ZZ: $0.01+0.11+0.04=0.16$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.15$ (L/2388) $f_{z,L}=0.14$ (L/2441)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.21$ (L/1682) $f_{z,L}=0.21$ (L/1720)

Asta n. 242 (-1261 -1276) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_y=100.81$
 $V, Ed=100.81 V_c, Rd=29609.30 V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_z=1432.05$
 $V, Ed=1432.05 V_c, Rd=21171.50 V, Ed/V_c, Rd=0.07$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU X1=0.00 - Classe 1
 Sollecitazioni: N=-11.39 $T_z=1432.05 M_y=1764.17 T_y=100.81 M_z=-78.52$
 $N, Ed=-11.39 N_c, Rd=74603.30 n=N, Ed/N_c, Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=1764.17 M_y, V, c, Rd=5804.95 M_{Ny, c, Rd}=5804.95 M_y, Ed/M_{Ny, c, Rd}=0.30$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-78.52 M_z, V, c, Rd=1170.59 M_{Nz, c, Rd}=1170.59 M_z, Ed/M_{Nz, c, Rd}=0.07$
 $\alpha=2.00 \beta=1.00 (M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.30$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: N,Ed=-11.39 My,Ed=1764.17 Mz,Ed=-78.52 L=3.53
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$

$L_{cr}=3.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.61$ $M_{cr}=6617.44$ $\lambda_{LT}=0.96$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.94$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.75$
 $\lambda_y=42.74$ $N_{cr,y}=323216.00$ $\lambda^*_y=0.49$ Curva a: $\Phi_y=0.65$ $\chi_y=0.93$
 $\lambda_z=157.90$ $N_{cr,z}=23680.20$ $\lambda^*_z=1.82$ Curva b: $\Phi_z=2.43$ $\chi_z=0.25$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
 Verifica YY: $0.00+0.39+0.04=0.43$
 Verifica ZZ: $0.00+0.23+0.06=0.30$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.06$ (L/6028) $f_{z,G}=0.06$ (L/6179)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.09$ (L/4010) $f_{z,G}=0.09$ (L/4076)

Asta n. 242 (-1260 -1261) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=2.34$ - Classe 1
 Sollecitazioni: $T_y=95.55$
 $V_{Ed}=95.55$ $V_{c,Rd}=29609.30$ $V_{Ed/Vc,Rd}=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=2.34$ - Classe 1
 Sollecitazioni: $T_z=-1658.66$
 $V_{Ed}=-1658.66$ $V_{c,Rd}=21171.50$ $V_{Ed/Vc,Rd}=0.08$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=2.34$ - Classe 1
 Sollecitazioni: $N=-204.70$ $T_z=-1658.66$ $M_y=1767.27$ $T_y=95.55$ $M_z=156.59$
 $N_{Ed}=-204.70$ $N_{c,Rd}=74603.30$ $n=N_{Ed}/N_{c,Rd}=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_{y,Ed}=1767.27$ $M_{y,V,c,Rd}=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_{y,Ed/MNy,c,Rd}=0.30$
 Pressoflessione retta ZZ [4.2.34]:
 $M_{z,Ed}=156.59$ $M_{z,V,c,Rd}=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_{z,Ed/MNz,c,Rd}=0.13$
 $\alpha=2.00$ $\beta=1.00$ $(M_{y,Ed/MNy,c,Rd})^2 + (M_{z,Ed/MNz,c,Rd})^2 = 0.30$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $N_{Ed}=-204.70$ $M_{y,Ed}=1767.27$ $M_{z,Ed}=-202.87$ $L=2.34$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.34$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.11$ $M_{cr}=15423.50$ $\lambda_{LT}=0.63$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.69$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.93$
 $\lambda_y=28.33$ $N_{cr,y}=735547.00$ $\lambda^*_y=0.33$ Curva a: $\Phi_y=0.57$ $\chi_y=0.97$
 $\lambda_z=104.67$ $N_{cr,z}=53889.30$ $\lambda^*_z=1.21$ Curva b: $\Phi_z=1.40$ $\chi_z=0.48$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.96$
 Verifica YY: $0.00+0.31+0.10=0.41$
 Verifica ZZ: $0.00+0.19+0.17=0.36$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.03$ (L/7561) $f_{z,G}=0.03$ (L/8097)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.04$ (L/5551) $f_{z,G}=0.04$ (L/6073)

Asta n. 242 (-1220 -1260) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=95.26$
 $V_{Ed}=95.26$ $V_{c,Rd}=29609.30$ $V_{Ed/Vc,Rd}=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=1504.28$
 $V_{Ed}=1504.28$ $V_{c,Rd}=21171.50$ $V_{Ed/Vc,Rd}=0.07$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-266.42$ $T_z=1504.28$ $M_y=1075.75$ $T_y=95.26$ $M_z=-60.82$
 $N_{Ed}=-266.42$ $N_{c,Rd}=74603.30$ $n=N_{Ed}/N_{c,Rd}=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_{y,Ed}=1075.75$ $M_{y,V,c,Rd}=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_{y,Ed/MNy,c,Rd}=0.19$
 Pressoflessione retta ZZ [4.2.34]:
 $M_{z,Ed}=-60.82$ $M_{z,V,c,Rd}=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_{z,Ed/MNz,c,Rd}=0.05$
 $\alpha=2.00$ $\beta=1.00$ $(M_{y,Ed/MNy,c,Rd})^2 + (M_{z,Ed/MNz,c,Rd})^2 = 0.19$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $N_{Ed}=-266.42$ $M_{y,Ed}=1075.75$ $M_{z,Ed}=-60.82$ $L=3.78$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.78$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.38$ $M_{cr}=8933.15$ $\lambda_{LT}=0.83$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.83$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.83$
 $\lambda_y=45.77$ $N_{cr,y}=281876.00$ $\lambda^*_y=0.53$ Curva a: $\Phi_y=0.67$ $\chi_y=0.92$
 $\lambda_z=169.08$ $N_{cr,z}=20651.40$ $\lambda^*_z=1.95$ Curva b: $\Phi_z=2.69$ $\chi_z=0.22$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.97$

Relazione di calcolo

- Verifica YY: $0.00+0.21+0.03=0.25$
Verifica ZZ: $0.00+0.13+0.05=0.18$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.14$ (L/2705) $f_{z,L}=0.14$ (L/2780)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.18$ (L/2065) $f_{z,L}=0.18$ (L/2117)
- Asta n. 242 (-2404 -1220) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=3.39$ - Classe 1
Sollecitazioni: $T_y=-73.62$
 $V,Ed=-73.62$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=3.39$ - Classe 1
Sollecitazioni: $T_z=-1278.47$
 $V,Ed=-1278.47$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.06$
- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=3.39$ - Classe 1
Sollecitazioni: $N=-141.87$ $T_z=-1278.47$ $M_y=1074.18$ $T_y=-73.62$ $M_z=-29.04$
 $N,Ed=-141.87$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=1074.18$ $M_y,V,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.19$
Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-29.04$ $M_z,V,c,Rd=1170.59$ $MN_z,c,Rd=1170.59$ $M_z,Ed/MN_z,c,Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^2 = 0.19$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $N,Ed=-141.87$ $M_y,Ed=1074.18$ $M_z,Ed=-64.65$ $L=3.39$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.39$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=7582.16$ $\lambda_{LT}=0.90$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.89$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.79$
 $\lambda_y=41.04$ $N_{cr,y}=350464.00$ $\lambda^*_y=0.47$ Curva a: $\Phi_y=0.64$ $\chi_y=0.93$
 $\lambda_z=151.63$ $N_{cr,z}=25676.40$ $\lambda^*_z=1.75$ Curva b: $\Phi_z=2.29$ $\chi_z=0.27$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.96$
Verifica YY: $0.00+0.22+0.03=0.26$
Verifica ZZ: $0.00+0.13+0.05=0.19$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.04$ (L/8976) $f_{z,L}=0.04$ (L/9555)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.04$ (L/7952) $f_{z,L}=0.04$ (L/8423)
- Asta n. 243 (-1270 -73) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l=1.84$ - Classe 1
Sollecitazioni: $T_y=-11.80$
 $V,Ed=-11.80$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 13 SLV $X_l=1.84$ - Classe 1
Sollecitazioni: $T_z=-42.28$
 $V,Ed=-42.28$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.00$
- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-3877.21$ $T_z=187.41$ $M_y=-3179.45$ $T_y=-26.11$ $M_z=39.42$ $M_x=-2.55$
Tensioni: $\sigma_N=-72.05$ $\sigma_{m,d}=-619.69$ $\tau=15.15$ $\sigma_{max}=-691.74$ (sfrut=0.26)
Tensioni: $\sigma_N=-72.05$ $\sigma_{m,d}=-2.32$ $\tau=18.48$ $\tau_{max}=18.48$ (sfrut=0.01)
Tensioni: $\sigma_N=-72.05$ $\sigma_{m,d}=-619.69$ $\tau=15.15$ $\sigma_{ID,max}=692.24$ (sfrut=0.26)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N,Ed=-3877.21$ $M_y,Ed=-3230.47$ $M_z,Ed=-49.88$ $L=3.77$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.77$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.20$ $M_{cr}=20506.10$ $\lambda_{LT}=0.86$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.86$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.80$
 $\lambda_y=30.25$ $N_{cr,y}=1218570.00$ $\lambda^*_y=0.35$ Curva a: $\Phi_y=0.58$ $\chi_y=0.97$
 $\lambda_z=112.55$ $N_{cr,z}=88047.00$ $\lambda^*_z=1.30$ Curva b: $\Phi_z=1.53$ $\chi_z=0.43$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.99, 0.76, 0.99$
Verifica YY: $0.03+0.26+0.02=0.31$
Verifica ZZ: $0.06+0.21+0.02=0.30$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.12$ (L/2764)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.20$ (L/1723)

Relazione di calcolo

Asta n. 243 (-1271 -1270) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=3.53$ - Classe 3
Sollecitazioni: $N=-3872.59$ $T_z=814.85$ $M_y=-3184.03$ $T_y=83.54$ $M_z=73.65$ $M_x=-1.05$
Tensioni: $\sigma_N=-71.96$ $\sigma_{m,d}=-663.03$ $\tau=6.26$ $\sigma_{max}=-735.00$ (sfrut=0.28)
Tensioni: $\sigma_N=-71.96$ $\sigma_{m,d}=4.33$ $\tau=45.96$ $\tau_{max}=45.96$ (sfrut=0.03)
Tensioni: $\sigma_N=-71.96$ $\sigma_{m,d}=-663.03$ $\tau=6.26$ $\sigma_{TD,max}=735.08$ (sfrut=0.28)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N,Ed=-3872.59$ $M_y,Ed=-3184.03$ $M_z,Ed=-221.24$ $L=3.53$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.53$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.46$ $M_{cr}=46371.30$ $\lambda_{LT}=0.57$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.65$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.95$
 $\lambda_y=28.33$ $N_{cr,y}=1389900.00$ $\lambda^*_y=0.33$ Curva a: $\Phi_y=0.57$ $\chi_y=0.97$
 $\lambda_z=105.39$ $N_{cr,z}=100426.00$ $\lambda^*_z=1.21$ Curva b: $\Phi_z=1.41$ $\chi_z=0.47$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.98, 0.76, 0.98$
Verifica YY: $0.03+0.22+0.10=0.35$
Verifica ZZ: $0.03+0.17+0.10=0.31$
 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.05$ (L/6754)
 - Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.07$ (L/4813)

Asta n. 243 (-62 -1271) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_1=0.15$ - Classe 3
Sollecitazioni: $N=-4703.69$ $T_z=3865.35$ $M_y=5235.04$ $T_y=-2135.54$ $M_z=1264.51$ $M_x=11.30$
Tensioni: $\sigma_N=-87.41$ $\sigma_{m,d}=-2510.45$ $\tau=67.09$ $\sigma_{max}=-2597.86$ (sfrut=0.99)
Tensioni: $\sigma_N=-87.41$ $\sigma_{m,d}=74.35$ $\tau=228.28$ $\tau_{max}=228.28$ (sfrut=0.15)
Tensioni: $\sigma_N=-87.41$ $\sigma_{m,d}=-2510.45$ $\tau=67.09$ $\sigma_{TD,max}=2600.46$ (sfrut=0.99)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
Sollecitazioni: $N,Ed=-4703.69$ $M_y,Ed=5235.04$ $M_z,Ed=1264.51$ $L=1.10$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.10$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.44$ $M_{cr}=222394.00$ $\lambda_{LT}=0.26$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.50$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=8.83$ $N_{cr,y}=14313600.00$ $\lambda^*_y=0.10$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=32.84$ $N_{cr,z}=1034220.00$ $\lambda^*_z=0.38$ Curva b: $\Phi_z=0.60$ $\chi_z=0.93$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.03+0.34+0.57=0.95$
Verifica ZZ: $0.03+0.27+0.57=0.88$
 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.02$ (L/4789)
 - Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.03$ (L/3276)

Asta n. 243 (-61 -62) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 18 SLU $X_1=1.07$ - Classe 2
Sollecitazioni: $T_y=428.92$
 $V,Ed=428.92$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.01$
 - Verifica a taglio Dir. Z [4.2.16] - CC 18 SLU $X_1=1.07$ - Classe 2
Sollecitazioni: $T_z=-320.56$
 $V,Ed=-320.56$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_1=2.08$ - Classe 3
Sollecitazioni: $N=-2785.53$ $T_z=-293.67$ $M_y=622.52$ $T_y=633.93$ $M_z=632.26$
Tensioni: $\sigma_N=-51.76$ $\sigma_{m,d}=-897.12$ $\tau=0.00$ $\sigma_{max}=-948.89$ (sfrut=0.36)
Tensioni: $\sigma_N=-51.76$ $\sigma_{m,d}=90.48$ $\tau=27.81$ $\tau_{max}=27.81$ (sfrut=0.02)
Tensioni: $\sigma_N=-51.76$ $\sigma_{m,d}=-897.12$ $\tau=0.00$ $\sigma_{TD,max}=948.89$ (sfrut=0.36)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
Sollecitazioni: $N,Ed=-2796.35$ $M_y,Ed=888.54$ $M_z,Ed=629.02$ $L=2.43$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.43$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.38$ $M_{cr}=48814.40$ $\lambda_{LT}=0.56$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.64$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=19.50$ $N_{cr,y}=2933070.00$ $\lambda^*_y=0.22$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=72.55$ $N_{cr,z}=211926.00$ $\lambda^*_z=0.84$ Curva b: $\Phi_z=0.96$ $\chi_z=0.70$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.06+0.29=0.37$
Verifica ZZ: $0.02+0.05+0.29=0.36$
 - Verifica freccia massima per soli carichi accidentali - CC 33

$f_{z,L}=0.01$ (L/15560)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.02$ (L/11114)

Asta n. 243 (-83 -61) - Sez. 7 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=2.12$ - Classe 3
 Sollecitazioni: $N=-2170.61$ $T_z=-1832.63$ $M_y=1652.74$ $T_y=459.97$ $M_z=497.01$ $M_x=-2.77$
 Tensioni: $\sigma_N=-40.34$ $\sigma_{m,d}=-914.05$ $\tau=16.43$ $\sigma_{max}=-954.39$ (sfrut=0.36)
 Tensioni: $\sigma_N=-40.34$ $\sigma_{m,d}=29.22$ $\tau=103.90$ $\tau_{max}=103.90$ (sfrut=0.07)
 Tensioni: $\sigma_N=-40.34$ $\sigma_{m,d}=-914.05$ $\tau=16.43$ $\sigma_{ID,max}=954.82$ (sfrut=0.36)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N_{Ed}=-2170.61$ $M_{y,Ed}=1652.74$ $M_{z,Ed}=497.01$ $L=2.34$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $L_{cr}=2.34$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.91$ $M_{cr}=109566.00$ $\lambda_{LT}=0.37$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.55$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=18.78$ $N_{cr,y}=3163030.00$ $\lambda^*_y=0.22$ Curva a: $\Phi_y=0.53$ $\chi_y=1.00$
 $\lambda_z=69.86$ $N_{cr,z}=228542.00$ $\lambda^*_z=0.80$ Curva b: $\Phi_z=0.93$ $\chi_z=0.72$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.95$, 0.96 , 0.76 , 0.96
 Verifica YY: $0.02+0.11+0.23=0.35$
 Verifica ZZ: $0.02+0.09+0.23=0.33$

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.01$ (L/36962)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.01$ (L/24370)

Asta n. 243 (-1210 -83) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 17 SLU $X_l=1.52$ - Classe 2
 Sollecitazioni: $T_y=-53.11$ $M_x=1.09$
 $V_{Ed}=-53.11$ $V_{c,Rd,Red}=54589.50$ $V_{Ed/Vc,Rd,Red}=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 17 SLU $X_l=1.52$ - Classe 2
 Sollecitazioni: $T_z=528.78$ $M_x=1.09$
 $V_{Ed}=528.78$ $V_{c,Rd,Red}=38769.80$ $V_{Ed/Vc,Rd,Red}=0.01$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=3.78$ - Classe 3
 Sollecitazioni: $N=-1983.01$ $T_z=294.19$ $M_y=-1474.39$ $T_y=-102.40$ $M_z=-216.93$ $M_x=1.81$
 Tensioni: $\sigma_N=-36.85$ $\sigma_{m,d}=-534.13$ $\tau=10.76$ $\sigma_{max}=-570.98$ (sfrut=0.22)
 Tensioni: $\sigma_N=-36.85$ $\sigma_{m,d}=-12.75$ $\tau=19.83$ $\tau_{max}=19.83$ (sfrut=0.01)
 Tensioni: $\sigma_N=-36.85$ $\sigma_{m,d}=-534.13$ $\tau=10.76$ $\sigma_{ID,max}=571.28$ (sfrut=0.22)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N_{Ed}=-1983.01$ $M_{y,Ed}=1746.58$ $M_{z,Ed}=-216.93$ $L=3.78$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $L_{cr}=3.78$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.85$ $M_{cr}=48327.60$ $\lambda_{LT}=0.56$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.65$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=30.33$ $N_{cr,y}=1212130.00$ $\lambda^*_y=0.35$ Curva a: $\Phi_y=0.58$ $\chi_y=0.97$
 $\lambda_z=112.85$ $N_{cr,z}=87581.80$ $\lambda^*_z=1.30$ Curva b: $\Phi_z=1.53$ $\chi_z=0.43$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.95$, 0.97 , 0.76 , 0.97
 Verifica YY: $0.01+0.12+0.10=0.23$
 Verifica ZZ: $0.01+0.10+0.10=0.21$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.01$ (L/24851)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.02$ (L/14227)

Asta n. 243 (-63 -1210) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 18 SLU $X_l=1.93$ - Classe 2
 Sollecitazioni: $T_y=-17.84$
 $V_{Ed}=-17.84$ $V_{c,Rd}=54683.30$ $V_{Ed/Vc,Rd}=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 18 SLU $X_l=1.93$ - Classe 2
 Sollecitazioni: $T_z=329.53$
 $V_{Ed}=329.53$ $V_{c,Rd}=38836.40$ $V_{Ed/Vc,Rd}=0.01$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=0.45$ - Classe 3
 Sollecitazioni: $N=-1638.94$ $T_z=1197.81$ $M_y=1602.33$ $T_y=-55.18$ $M_z=77.61$
 Tensioni: $\sigma_N=-30.46$ $\sigma_{m,d}=-384.04$ $\tau=0.00$ $\sigma_{max}=-414.49$ (sfrut=0.16)
 Tensioni: $\sigma_N=-30.46$ $\sigma_{m,d}=4.56$ $\tau=66.88$ $\tau_{max}=66.88$ (sfrut=0.04)
 Tensioni: $\sigma_N=-30.46$ $\sigma_{m,d}=-384.04$ $\tau=0.00$ $\sigma_{ID,max}=414.49$ (sfrut=0.16)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: N,Ed=-1638.94 My,Ed=1602.33 Mz,Ed=77.61 L=3.39
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.39$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.28$ M,cr=45944.20 $\lambda_{LT}=0.58$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.66$ $\beta_{LT}=0.75$ f=0.97 $\chi_{LT}=0.95$
 $\lambda_y=27.20$ Ncr,y=1507080.00 $\lambda^*_y=0.31$ Curva a: $\Phi_y=0.56$ $\chi_y=0.97$
 $\lambda_z=101.21$ Ncr,z=108893.00 $\lambda^*_z=1.17$ Curva b: $\Phi_z=1.34$ $\chi_z=0.50$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.96, 0.76, 0.96
 Verifica YY: 0.01+0.11+0.04=0.16
 Verifica ZZ: 0.01+0.09+0.04=0.13

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.02$ (L/13492)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.03$ (L/10095)

Asta n. 245 (-2417 -2016) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU Xl=0.63 - Classe 1
 Sollecitazioni: $T_y=65.59$
 $V,Ed=65.59$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU Xl=0.63 - Classe 1
 Sollecitazioni: $T_z=-549.98$
 $V,Ed=-549.98$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.03$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU Xl=0.00 - Classe 1
 Sollecitazioni: N=-364.36 $T_z=-96.33$ $M_y=-397.59$ $T_y=65.59$ $M_z=-19.31$
 $N,Ed=-364.36$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-397.59$ $M_y,V,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.07$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-19.31$ $M_z,V,c,Rd=1170.59$ $MN_z,c,Rd=1170.59$ $M_z,Ed/MN_z,c,Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.07$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: N,Ed=-364.98 My,Ed=-397.59 Mz,Ed=22.07 L=0.63
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.63$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.34$ M,cr=98277.70 $\lambda_{LT}=0.25$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.50$ $\beta_{LT}=0.75$ f=0.99 $\chi_{LT}=1.00$
 $\lambda_y=7.64$ Ncr,y=10117400.00 $\lambda^*_y=0.09$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=28.22$ Ncr,z=741240.00 $\lambda^*_z=0.33$ Curva b: $\Phi_z=0.57$ $\chi_z=0.95$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
 Verifica YY: 0.00+0.07+0.01=0.08
 Verifica ZZ: 0.00+0.04+0.02=0.06

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,G}=0.00$ (L/27566)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.00$ (L/20048)

Asta n. 245 (-1979 -2417) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU Xl=0.62 - Classe 1
 Sollecitazioni: $T_y=45.96$
 $V,Ed=45.96$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU Xl=0.62 - Classe 1
 Sollecitazioni: $T_z=-750.41$
 $V,Ed=-750.41$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.04$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU Xl=0.00 - Classe 1
 Sollecitazioni: N=-324.96 $T_z=-295.39$ $M_y=-709.60$ $T_y=45.96$ $M_z=-23.59$
 $N,Ed=-324.96$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-709.60$ $M_y,V,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.12$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-23.59$ $M_z,V,c,Rd=1170.59$ $MN_z,c,Rd=1170.59$ $M_z,Ed/MN_z,c,Rd=0.02$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.12$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: N,Ed=-325.58 My,Ed=-709.60 Mz,Ed=-23.59 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.62$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.25$ M,cr=94281.80 $\lambda_{LT}=0.25$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.50$ $\beta_{LT}=0.75$ f=0.99 $\chi_{LT}=1.00$

$\lambda_y=7.54$ Ncr,y=10380700.00 $\lambda'_y=0.09$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=27.86$ Ncr,z=760531.00 $\lambda'_z=0.32$ Curva b: $\Phi_z=0.57$ $\chi_z=0.96$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
 Verifica YY: 0.00+0.12+0.01=0.13
 Verifica ZZ: 0.00+0.07+0.02=0.09

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.00$ (L/16747)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.01$ (L/12095)

Asta n. 246 (-2418 -2015) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=1.18$ - Classe 1
 Sollecitazioni: $T_y=15.03$
 $V,Ed=15.03$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=1.18$ - Classe 1
 Sollecitazioni: $T_z=-527.28$
 $V,Ed=-527.28$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.02$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=0.37$ - Classe 1
 Sollecitazioni: $N=194.04$ $M_y=-1118.90$ $T_y=15.03$ $M_z=-6.71$
 $N,Ed=194.04$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-1118.90$ $M_y,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.19$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-6.71$ $M_z,V,c,Rd=1170.59$ $MN_z,c,Rd=1170.59$ $M_z,Ed/MN_z,c,Rd=0.01$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.19$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $M_y,Ed=-1118.90$ $M_z,Ed=-12.29$ $L=1.18$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.18$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.09$ $M_{cr}=24724.30$ $\lambda_{LT}=0.50$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.61$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.99$
 $\lambda_y=14.27$ Ncr,y=2900000.00 $\lambda'_y=0.16$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=52.71$ Ncr,z=212466.00 $\lambda'_z=0.61$ Curva b: $\Phi_z=0.75$ $\chi_z=0.83$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
 Verifica YY: 0.00+0.19+0.01=0.19
 Verifica ZZ: 0.00+0.11+0.01=0.12

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.02$ (L/5419)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.03$ (L/3733)

Asta n. 246 (-1980 -2418) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=19.58$
 $V,Ed=19.58$ $V_c,Rd=29609.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=901.80$
 $V,Ed=901.80$ $V_c,Rd=21171.50$ $V,Ed/V_c,Rd=0.04$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=1.16$ - Classe 1
 Sollecitazioni: $N=166.67$ $T_z=70.53$ $M_y=-1064.15$ $T_y=19.58$ $M_z=2.20$
 $N,Ed=166.67$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.00$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-1064.15$ $M_y,V,c,Rd=5804.95$ $MN_y,c,Rd=5804.95$ $M_y,Ed/MN_y,c,Rd=0.18$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=2.20$ $M_z,V,c,Rd=1170.59$ $MN_z,c,Rd=1170.59$ $M_z,Ed/MN_z,c,Rd=0.00$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/MN_y,c,Rd)^2 + (M_z,Ed/MN_z,c,Rd)^1 = 0.18$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $M_y,Ed=-1064.15$ $M_z,Ed=-20.57$ $L=1.16$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.16$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.36$ $M_{cr}=31584.10$ $\lambda_{LT}=0.44$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.58$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=14.09$ Ncr,y=2975490.00 $\lambda'_y=0.16$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=52.04$ Ncr,z=217996.00 $\lambda'_z=0.60$ Curva b: $\Phi_z=0.75$ $\chi_z=0.84$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.57, 0.57, 0.95
 Verifica YY: 0.00+0.17+0.01=0.18
 Verifica ZZ: 0.00+0.10+0.02=0.12

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.02$ (L/7176)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.02$ (L/4919)

Asta n. 248 (-2011 -2402) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 15 SLV $X_1=2.48$ - Classe 1
 Sollecitazioni: $T_z=-104.35$
 $V,Ed=-104.35$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-1726.09$ $T_z=92.96$ $M_y=756.80$ $T_y=-33.23$ $M_z=112.37$ $M_x=1.30$
 Tensioni: $\sigma_N=-32.08$ $\sigma_{m,d}=-275.43$ $\tau=7.72$ $\sigma_{max}=-307.51$ (sfrut=0.12)
 Tensioni: $\sigma_N=-32.08$ $\sigma_{m,d}=-105.97$ $\tau=9.43$ $\tau_{max}=9.43$ (sfrut=0.01)
 Tensioni: $\sigma_N=-32.08$ $\sigma_{m,d}=-275.43$ $\tau=7.72$ $\sigma_{ID,max}=307.80$ (sfrut=0.12)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
 Sollecitazioni: $N,Ed=-1726.09$ $M_y,Ed=1072.02$ $M_z,Ed=112.37$ $L=2.48$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.48$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.16$ $M_{cr}=39431.00$ $\lambda_{LT}=0.62$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.68$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.93$
 $\lambda_y=19.91$ $N_{cr,y}=2814890.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=74.05$ $N_{cr,z}=203388.00$ $\lambda^*_z=0.85$ Curva b: $\Phi_z=0.97$ $\chi_z=0.69$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.01+0.07+0.05=0.14$
 Verifica ZZ: $0.01+0.06+0.05=0.12$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,G}=0.02$ (L/12749)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,G}=0.03$ (L/9741)

Asta n. 248 (-2402 -1251) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 11 SLV $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_y=-73.09$ $M_x=2.28$
 $V,Ed=-73.09$ $V_c,Rd,Red=54487.00$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 11 SLV $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=-126.75$ $M_x=2.28$
 $V,Ed=-126.75$ $V_c,Rd,Red=38697.00$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_1=0.28$ - Classe 3
 Sollecitazioni: $N=-1431.61$ $T_z=-682.45$ $M_y=1254.78$ $T_y=-751.26$ $M_z=-278.57$ $M_x=15.43$
 Tensioni: $\sigma_N=-26.60$ $\sigma_{m,d}=-571.27$ $\tau=91.59$ $\sigma_{max}=-597.87$ (sfrut=0.23)
 Tensioni: $\sigma_N=-26.60$ $\sigma_{m,d}=-203.03$ $\tau=111.24$ $\tau_{max}=111.24$ (sfrut=0.07)
 Tensioni: $\sigma_N=-26.60$ $\sigma_{m,d}=-571.27$ $\tau=91.59$ $\sigma_{ID,max}=618.56$ (sfrut=0.24)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
 Sollecitazioni: $N,Ed=-1432.38$ $M_y,Ed=1254.78$ $M_z,Ed=-278.57$ $L=0.28$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.28$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.07$ $M_{cr}=2548480.00$ $\lambda_{LT}=0.08$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.45$ $\beta_{LT}=0.75$ $f=1.00$ $\chi_{LT}=1.00$
 $\lambda_y=2.22$ $N_{cr,y}=227059000.00$ $\lambda^*_y=0.03$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=8.25$ $N_{cr,z}=16406000.00$ $\lambda^*_z=0.09$ Curva b: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.08+0.13=0.22$
 Verifica ZZ: $0.01+0.07+0.13=0.20$

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 32
 $f_{z,G}=0.00$

Asta n. 248 (-1251 -1250) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_1=1.01$ - Classe 1
 Sollecitazioni: $T_y=37.26$
 $V,Ed=37.26$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 5 SLV $X_1=1.01$ - Classe 1
 Sollecitazioni: $T_z=-202.61$
 $V,Ed=-202.61$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=2.77$ - Classe 3
 Sollecitazioni: $N=-2416.27$ $T_z=-1146.11$ $M_y=3046.49$ $T_y=184.75$ $M_z=303.17$ $M_x=2.48$
 Tensioni: $\sigma_N=-44.90$ $\sigma_{m,d}=-923.45$ $\tau=14.73$ $\sigma_{max}=-968.35$ (sfrut=0.37)
 Tensioni: $\sigma_N=-44.90$ $\sigma_{m,d}=-17.83$ $\tau=65.81$ $\tau_{max}=65.81$ (sfrut=0.04)
 Tensioni: $\sigma_N=-44.90$ $\sigma_{m,d}=-923.45$ $\tau=14.73$ $\sigma_{ID,max}=968.69$ (sfrut=0.37)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N,Ed=-2436.59$ $M_y,Ed=3046.49$ $M_z,Ed=303.17$ $L=2.77$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.77$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.59$ $M_{cr}=44733.70$ $\lambda_{LT}=0.59$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.66$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.95$
 $\lambda_y=22.27$ $N_{cr,y}=2249230.00$ $\lambda^*_y=0.26$ Curva a: $\Phi_y=0.54$ $\chi_y=0.99$
 $\lambda_z=82.84$ $N_{cr,z}=162516.00$ $\lambda^*_z=0.95$ Curva b: $\Phi_z=1.08$ $\chi_z=0.63$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.97, 0.76, 0.97$
 Verifica YY: $0.02+0.21+0.14=0.37$
 Verifica ZZ: $0.02+0.17+0.14=0.32$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,G}=0.04$ (L/6244)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,G}=0.06$ (L/4611)
- Asta n. 248 (-1250 -2401) - Sez. 7 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=0.20$ - Classe 3
 Sollecitazioni: $N=-5518.17$ $T_z=-1960.45$ $M_y=3455.94$ $T_y=2295.63$ $M_z=849.67$ $M_x=-3.47$
 Tensioni: $\sigma_N=-102.54$ $\sigma_{m,d}=-1675.79$ $\tau=20.61$ $\sigma_{max}=-1778.34$ (sfrut=0.68)
 Tensioni: $\sigma_N=-102.54$ $\sigma_{m,d}=49.96$ $\tau=113.10$ $\tau_{max}=113.10$ (sfrut=0.07)
 Tensioni: $\sigma_N=-102.54$ $\sigma_{m,d}=-1675.79$ $\tau=20.61$ $\sigma_{ID,max}=1778.69$ (sfrut=0.68)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N,Ed=-5520.58$ $M_y,Ed=3455.94$ $M_z,Ed=849.67$ $L=0.20$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.20$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.06$ $M_{cr}=4608090.00$ $\lambda_{LT}=0.06$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.44$ $\beta_{LT}=0.75$ $f=1.00$ $\chi_{LT}=1.00$
 $\lambda_y=1.63$ $N_{cr,y}=418054000.00$ $\lambda^*_y=0.02$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=6.08$ $N_{cr,z}=30206200.00$ $\lambda^*_z=0.07$ Curva b: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.04+0.23+0.38=0.65$
 Verifica ZZ: $0.04+0.18+0.38=0.60$
- Verifica freccia massima per soli carichi accidentali - CC 21
 $f_{z,L}=0.00$
- Verifica freccia massima carichi totali - CC 32
 $f_{z,G}=0.00$
- Asta n. 248 (-2401 -2400) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 5 SLV $X_1=0.91$ - Classe 1
 Sollecitazioni: $T_y=-222.38$ $M_x=-1.43$
 $V,Ed=-222.38$ $V_c,Rd,Red=54560.10$ $V,Ed/V_c,Rd,Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 5 SLV $X_1=0.91$ - Classe 1
 Sollecitazioni: $T_z=720.47$ $M_x=-1.43$
 $V,Ed=720.47$ $V_c,Rd,Red=38748.90$ $V,Ed/V_c,Rd,Red=0.02$
- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_1=0.91$ - Classe 3
 Sollecitazioni: $N=-4149.78$ $T_z=3472.68$ $M_y=6.52$ $T_y=-2438.49$ $M_z=-1398.64$ $M_x=-4.68$
 Tensioni: $\sigma_N=-77.11$ $\sigma_{m,d}=-1738.53$ $\tau=27.79$ $\sigma_{max}=-1815.64$ (sfrut=0.69)
 Tensioni: $\sigma_N=-77.11$ $\sigma_{m,d}=82.23$ $\tau=197.23$ $\tau_{max}=197.23$ (sfrut=0.13)
 Tensioni: $\sigma_N=-77.11$ $\sigma_{m,d}=-1738.53$ $\tau=27.79$ $\sigma_{ID,max}=1816.28$ (sfrut=0.69)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4156.63$ $M_y,Ed=3228.09$ $M_z,Ed=-1398.64$ $L=0.91$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.91$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M_{cr}=392564.00$ $\lambda_{LT}=0.20$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.48$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=7.28$ $N_{cr,y}=21045400.00$ $\lambda^*_y=0.08$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=27.08$ $N_{cr,z}=1520620.00$ $\lambda^*_z=0.31$ Curva b: $\Phi_z=0.57$ $\chi_z=0.96$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.03+0.21+0.63=0.87$
 Verifica ZZ: $0.03+0.17+0.63=0.83$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,G}=0.01$ (L/12353)

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.01$ (L/8647)

Asta n. 248 (-2400 -2014) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_1=1.35$ - Classe 1
Sollecitazioni: $T_y=35.29$
 $V,Ed=35.29$ $V_c,Rd=54683.30$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_1=1.35$ - Classe 1
Sollecitazioni: $T_z=-200.72$
 $V,Ed=-200.72$ $V_c,Rd=38836.40$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_1=0.00$ - Classe 3
Sollecitazioni: $N=-479.91$ $T_z=-609.56$ $M_y=67.79$ $T_y=458.03$ $M_z=-522.19$ $M_x=2.02$
Tensioni: $\sigma_N=-8.92$ $\sigma_{m,d}=-660.82$ $\tau=12.00$ $\sigma_{max}=-669.74$ (sfrut=0.26)
Tensioni: $\sigma_N=-8.92$ $\sigma_{m,d}=30.70$ $\tau=36.64$ $\tau_{max}=36.64$ (sfrut=0.02)
Tensioni: $\sigma_N=-8.92$ $\sigma_{m,d}=-660.82$ $\tau=12.00$ $\sigma_{ID,max}=670.06$ (sfrut=0.26)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
Sollecitazioni: $N,Ed=-479.91$ $M_y,Ed=1270.58$ $M_z,Ed=-522.19$ $L=1.65$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $L_{cr}=1.65$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.69$ $M_{cr}=121306.00$ $\lambda_{LT}=0.36$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.54$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=13.21$ $N_{cr,y}=6392910.00$ $\lambda^*_y=0.15$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=49.14$ $N_{cr,z}=461915.00$ $\lambda^*_z=0.57$ Curva b: $\Phi_z=0.72$ $\chi_z=0.85$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.95$, 0.95 , 0.76 , 0.95
Verifica YY: $0.00+0.08+0.24=0.32$
Verifica ZZ: $0.00+0.07+0.24=0.31$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,G}=0.01$ (L/21573)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,G}=0.01$ (L/16282)

Asta n. 248 (-2014 -2013) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 19 SLU $X_1=0.50$ - Classe 2
Sollecitazioni: $T_y=46.40$ $M_x=-2.23$
 $V,Ed=46.40$ $V_c,Rd,Red=54491.30$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 19 SLU $X_1=0.50$ - Classe 2
Sollecitazioni: $T_z=837.05$ $M_x=-2.23$
 $V,Ed=837.05$ $V_c,Rd,Red=38700.00$ $V,Ed/V_c,Rd,Red=0.02$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=2.77$ - Classe 3
Sollecitazioni: $N=-1087.76$ $T_z=1233.63$ $M_y=-3407.27$ $T_y=-6.77$ $M_z=62.68$ $M_x=-4.35$
Tensioni: $\sigma_N=-20.21$ $\sigma_{m,d}=-689.48$ $\tau=25.79$ $\sigma_{max}=-709.70$ (sfrut=0.27)
Tensioni: $\sigma_N=-20.21$ $\sigma_{m,d}=-3.69$ $\tau=73.56$ $\tau_{max}=73.56$ (sfrut=0.05)
Tensioni: $\sigma_N=-20.21$ $\sigma_{m,d}=-689.48$ $\tau=25.79$ $\sigma_{ID,max}=711.10$ (sfrut=0.27)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N,Ed=-1107.23$ $M_y,Ed=-3407.27$ $M_z,Ed=81.46$ $L=2.77$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $L_{cr}=2.77$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.94$ $M_{cr}=54512.90$ $\lambda_{LT}=0.53$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.63$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.97$
 $\lambda_y=22.27$ $N_{cr,y}=2249230.00$ $\lambda^*_y=0.26$ Curva a: $\Phi_y=0.54$ $\chi_y=0.99$
 $\lambda_z=82.84$ $N_{cr,z}=162516.00$ $\lambda^*_z=0.95$ Curva b: $\Phi_z=1.08$ $\chi_z=0.63$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.95$, 0.96 , 0.76 , 0.96
Verifica YY: $0.01+0.23+0.04=0.27$
Verifica ZZ: $0.01+0.18+0.04=0.23$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.04$ (L/7256)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.06$ (L/4793)

Asta n. 248 (-2013 -2015) - Sez. 7 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=2.77$ - Classe 3
Sollecitazioni: $N=-1213.01$ $T_z=685.12$ $M_y=-4192.15$ $T_y=-4.26$ $M_z=16.07$ $M_x=-1.01$
Tensioni: $\sigma_N=-22.54$ $\sigma_{m,d}=-772.47$ $\tau=5.99$ $\sigma_{max}=-795.01$ (sfrut=0.30)
Tensioni: $\sigma_N=-22.54$ $\sigma_{m,d}=-0.94$ $\tau=38.72$ $\tau_{max}=38.72$ (sfrut=0.03)
Tensioni: $\sigma_N=-22.54$ $\sigma_{m,d}=-772.47$ $\tau=5.99$ $\sigma_{ID,max}=795.08$ (sfrut=0.30)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N,Ed=-1232.54$ $M_y,Ed=-4192.15$ $M_z,Ed=27.89$ $L=2.77$

$\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.77$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.37$ $M_{cr}=38493.70$ $\lambda_{LT}=0.63$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.69$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.93$
 $\lambda_y=22.27$ $N_{cr,y}=2249230.00$ $\lambda^*_{y}=0.26$ Curva a: $\Phi_y=0.54$ $\chi_y=0.99$
 $\lambda_z=82.84$ $N_{cr,z}=162516.00$ $\lambda^*_{z}=0.95$ Curva b: $\Phi_z=1.08$ $\chi_z=0.63$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.01+0.29+0.01=0.32$
 Verifica ZZ: $0.01+0.24+0.01=0.26$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.08$ (L/3447)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.11$ (L/2428)

Asta n. 248 (-2015 -2016) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU $X_1=1.25$ - Classe 1
 Sollecitazioni: $T_y=-23.96$
 $V, Ed=-23.96$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU $X_1=1.25$ - Classe 1
 Sollecitazioni: $T_z=-831.06$
 $V, Ed=-831.06$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.02$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-1000.54$ $T_z=-579.09$ $M_y=-3848.34$ $T_y=-23.31$ $M_z=30.43$
 Tensioni: $\sigma_N=-18.59$ $\sigma_{m,d}=-728.60$ $\tau=0.00$ $\sigma_{max}=-747.19$ (sfrut=0.29)
 Tensioni: $\sigma_N=-18.59$ $\sigma_{m,d}=1.79$ $\tau=32.33$ $\tau_{max}=32.33$ (sfrut=0.02)
 Tensioni: $\sigma_N=-18.59$ $\sigma_{m,d}=-728.60$ $\tau=0.00$ $\sigma_{ID,max}=747.19$ (sfrut=0.29)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N, Ed=-1000.54$ $M_y, Ed=-3848.34$ $M_z, Ed=-33.82$ $L=2.76$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.76$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.41$ $M_{cr}=39962.90$ $\lambda_{LT}=0.62$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.68$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.93$
 $\lambda_y=22.12$ $N_{cr,y}=2279110.00$ $\lambda^*_{y}=0.25$ Curva a: $\Phi_y=0.54$ $\chi_y=0.99$
 $\lambda_z=82.30$ $N_{cr,z}=164675.00$ $\lambda^*_{z}=0.95$ Curva b: $\Phi_z=1.08$ $\chi_z=0.63$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.01+0.27+0.02=0.29$
 Verifica ZZ: $0.01+0.21+0.02=0.24$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.08$ (L/3428)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.11$ (L/2620)

Asta n. 248 (-2016 -73) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_1=1.74$ - Classe 1
 Sollecitazioni: $T_y=13.46$
 $V, Ed=13.46$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_1=1.74$ - Classe 1
 Sollecitazioni: $T_z=-2665.40$
 $V, Ed=-2665.40$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.07$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=2.73$ - Classe 3
 Sollecitazioni: $N=-1523.41$ $T_z=-2864.01$ $M_y=5399.23$ $T_y=13.46$ $M_z=12.40$
 Tensioni: $\sigma_N=-28.31$ $\sigma_{m,d}=-984.60$ $\tau=0.00$ $\sigma_{max}=-1012.91$ (sfrut=0.39)
 Tensioni: $\sigma_N=-28.31$ $\sigma_{m,d}=0.73$ $\tau=159.91$ $\tau_{max}=159.91$ (sfrut=0.11)
 Tensioni: $\sigma_N=-28.31$ $\sigma_{m,d}=-984.60$ $\tau=0.00$ $\sigma_{ID,max}=1012.91$ (sfrut=0.39)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N, Ed=-1551.00$ $M_y, Ed=5399.23$ $M_z, Ed=-24.39$ $L=3.18$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.18$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.09$ $M_{cr}=46833.40$ $\lambda_{LT}=0.57$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.65$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=25.49$ $N_{cr,y}=1716410.00$ $\lambda^*_{y}=0.29$ Curva a: $\Phi_y=0.55$ $\chi_y=0.98$
 $\lambda_z=94.83$ $N_{cr,z}=124018.00$ $\lambda^*_{z}=1.09$ Curva b: $\Phi_z=1.25$ $\chi_z=0.54$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.01+0.37+0.01=0.39$
 Verifica ZZ: $0.01+0.29+0.01=0.32$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,G}=0.06$ (L/4458)

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.12$ (L/2369)

Asta n. 249 (-2419 -2013) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-43.37$ $M_x=1.07$
 $V,Ed=-43.37$ $V_c,Rd,Red=29493.70$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=2215.90$ $M_x=1.07$
 $V,Ed=2215.90$ $V_c,Rd,Red=21088.80$ $V,Ed/V_c,Rd,Red=0.11$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=1.73$ - Classe 1
 Sollecitazioni: $N=-543.24$ $T_z=1131.54$ $M_y=-1682.04$ $T_y=-43.37$ $M_z=-39.91$ $M_x=1.07$
 $N,Ed=-543.24$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-1682.04$ $M_y,V,c,Rd=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_y,Ed/M_{Ny,c,Rd}=0.29$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=-39.91$ $M_z,V,c,Rd=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_z,Ed/M_{Nz,c,Rd}=0.03$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/M_{Ny,c,Rd})^2 + (M_z,Ed/M_{Nz,c,Rd})^1 = 0.29$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $N,Ed=-544.60$ $M_y,Ed=-1682.04$ $M_z,Ed=-39.91$ $L=1.73$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.73$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.61$ $M_{cr}=30643.50$ $\lambda_{LT}=0.45$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.58$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=20.93$ $N_{cr,y}=1347310.00$ $\lambda^*_y=0.24$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=77.34$ $N_{cr,z}=98709.70$ $\lambda^*_z=0.89$ Curva b: $\Phi_z=1.01$ $\chi_z=0.67$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.96$
 Verifica YY: $0.01+0.28+0.02=0.30$
 Verifica ZZ: $0.01+0.17+0.03=0.21$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.02$ (L/7617)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.03$ (L/5165)

Asta n. 249 (-2414 -2419) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 29 SLU $X_l=1.75$ - Classe 1
 Sollecitazioni: $T_y=-49.33$ $M_x=-1.24$
 $V,Ed=-49.33$ $V_c,Rd,Red=29474.40$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 29 SLU $X_l=1.75$ - Classe 1
 Sollecitazioni: $T_z=-2553.26$ $M_x=-1.24$
 $V,Ed=-2553.26$ $V_c,Rd,Red=21075.00$ $V,Ed/V_c,Rd,Red=0.12$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-554.55$ $T_z=-1465.01$ $M_y=-2292.83$ $T_y=-49.33$ $M_z=44.02$ $M_x=-1.24$
 $N,Ed=-554.55$ $N_c,Rd=74603.30$ $n=N,Ed/N_c,Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y,Ed=-2292.83$ $M_y,V,c,Rd=5804.95$ $M_{Ny,c,Rd}=5804.95$ $M_y,Ed/M_{Ny,c,Rd}=0.39$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z,Ed=44.02$ $M_z,V,c,Rd=1170.59$ $M_{Nz,c,Rd}=1170.59$ $M_z,Ed/M_{Nz,c,Rd}=0.04$
 $\alpha=2.00$ $\beta=1.00$ $(M_y,Ed/M_{Ny,c,Rd})^2 + (M_z,Ed/M_{Nz,c,Rd})^1 = 0.39$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $N,Ed=-554.55$ $M_y,Ed=-2292.83$ $M_z,Ed=44.02$ $L=1.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.75$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.36$ $M_{cr}=27127.20$ $\lambda_{LT}=0.47$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.60$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.99$
 $\lambda_y=21.18$ $N_{cr,y}=1315920.00$ $\lambda^*_y=0.24$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=78.25$ $N_{cr,z}=96410.10$ $\lambda^*_z=0.90$ Curva b: $\Phi_z=1.03$ $\chi_z=0.66$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.96$
 Verifica YY: $0.01+0.38+0.02=0.41$
 Verifica ZZ: $0.01+0.23+0.04=0.27$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.04$ (L/4150)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.06$ (L/2861)

Asta n. 250 (-1976 -2424) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=0.84$ - Classe 1

Sollecitazioni: $T_y = -8.84$
 $V, Ed = -8.84$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 5 SLV $X_l = 0.84$ - Classe 1
 Sollecitazioni: $T_z = -81.22$
 $V, Ed = -81.22$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.00$

- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_l = 2.32$ - Classe 3
 Sollecitazioni: $N = -84.09$ $T_z = -206.70$ $M_y = 327.51$ $T_y = -47.13$ $M_z = -77.96$
 Tensioni: $\sigma_N = -1.56$ $\sigma_{m,d} = -155.62$ $\tau = 0.00$ $\sigma_{max} = -157.19$ (sfrut=0.06)
 Tensioni: $\sigma_N = -1.56$ $\sigma_{m,d} = -4.58$ $\tau = 11.54$ $\tau_{max} = 11.54$ (sfrut=0.01)
 Tensioni: $\sigma_N = -1.56$ $\sigma_{m,d} = -155.62$ $\tau = 0.00$ $\sigma_{ID,max} = 157.19$ (sfrut=0.06)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
 Sollecitazioni: $N, Ed = -89.76$ $M_y, Ed = 327.51$ $M_z, Ed = -77.96$ $L = 2.32$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 2.32$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.75$ $M_{cr} = 66983.10$ $\lambda_{LT} = 0.48$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.60$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 0.99$
 $\lambda_y = 18.64$ $N_{cr,y} = 3210350.00$ $\lambda^*_y = 0.21$ Curva a: $\Phi_y = 0.52$ $\chi_y = 1.00$
 $\lambda_z = 69.34$ $N_{cr,z} = 231961.00$ $\lambda^*_z = 0.80$ Curva b: $\Phi_z = 0.92$ $\chi_z = 0.73$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00 + 0.02 + 0.04 = 0.06$
 Verifica ZZ: $0.00 + 0.02 + 0.04 = 0.05$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g} = 0.00$ (L/93673)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g} = 0.01$ (L/45953)

Asta n. 250 (-2424 -2423) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_l = 1.16$ - Classe 1
 Sollecitazioni: $T_y = 28.25$
 $V, Ed = 28.25$ $V_c, Rd = 54683.30$ $V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l = 1.16$ - Classe 1
 Sollecitazioni: $T_z = -155.07$
 $V, Ed = -155.07$ $V_c, Rd = 38836.40$ $V, Ed/V_c, Rd = 0.00$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l = 3.18$ - Classe 3
 Sollecitazioni: $N = 262.98$ $T_z = -1033.24$ $M_y = 3279.22$ $T_y = 88.11$ $M_z = 192.88$ $M_x = -2.83$
 Tensioni: $\sigma_N = 4.89$ $\sigma_{m,d} = 828.23$ $\tau = 16.79$ $\sigma_{max} = 833.12$ (sfrut=0.32)
 Tensioni: $\sigma_N = 4.89$ $\sigma_{m,d} = 11.34$ $\tau = 60.17$ $\tau_{max} = 60.17$ (sfrut=0.04)
 Tensioni: $\sigma_N = 4.89$ $\sigma_{m,d} = 828.23$ $\tau = 16.79$ $\sigma_{ID,max} = 833.62$ (sfrut=0.32)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $M_y, Ed = 3279.22$ $M_z, Ed = 192.88$ $L = 3.18$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 3.18$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.66$ $M_{cr} = 37115.30$ $\lambda_{LT} = 0.64$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.70$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.92$
 $\lambda_y = 25.54$ $N_{cr,y} = 1709730.00$ $\lambda^*_y = 0.29$ Curva a: $\Phi_y = 0.55$ $\chi_y = 0.98$
 $\lambda_z = 95.02$ $N_{cr,z} = 123535.00$ $\lambda^*_z = 1.09$ Curva b: $\Phi_z = 1.25$ $\chi_z = 0.54$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00 + 0.23 + 0.09 = 0.32$
 Verifica ZZ: $0.00 + 0.18 + 0.09 = 0.27$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g} = 0.06$ (L/5382)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,g} = 0.09$ (L/3699)

Asta n. 250 (-2423 -2422) - Sez. 7 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l = 0.20$ - Classe 3
 Sollecitazioni: $N = 411.48$ $T_z = -2255.04$ $M_y = 3720.63$ $T_y = -1379.32$ $M_z = -107.00$ $M_x = 81.77$
 Tensioni: $\sigma_N = 7.65$ $\sigma_{m,d} = 800.78$ $\tau = 485.33$ $\sigma_{max} = 808.43$ (sfrut=0.31)
 Tensioni: $\sigma_N = 7.65$ $\sigma_{m,d} = -559.73$ $\tau = 523.53$ $\tau_{max} = 523.53$ (sfrut=0.35)
 Tensioni: $\sigma_N = 7.65$ $\sigma_{m,d} = 800.78$ $\tau = 485.33$ $\sigma_{ID,max} = 1166.28$ (sfrut=0.45)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $M_y, Ed = 3720.63$ $M_z, Ed = 166.11$ $L = 0.20$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 0.20$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.06$ $M_{cr} = 4883160.00$ $\lambda_{LT} = 0.06$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.44$ $\beta_{LT} = 0.75$ $f = 1.00$ $\chi_{LT} = 1.00$
 $\lambda_y = 1.59$ $N_{cr,y} = 441747000.00$ $\lambda^*_y = 0.02$ Curva a: $\Phi_y = 0.00$ $\chi_y = 1.00$
 $\lambda_z = 5.91$ $N_{cr,z} = 31918100.00$ $\lambda^*_z = 0.07$ Curva b: $\Phi_z = 0.00$ $\chi_z = 1.00$

Relazione di calcolo

- Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.00+0.24+0.07=0.32
 Verifica ZZ: 0.00+0.19+0.07=0.27
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,G}=0.00$
- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.00$
- Asta n. 250 (-2422 -2421) - Sez. 7 (IPE300) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 5 SLV $X_l=0.50$ - Classe 1
 Sollecitazioni: $T_y=-308.10$ $M_x=4.07$
 $V, Ed=-308.10$ $V_c, Rd, Red=54332.90$ $V, Ed/V_c, Rd, Red=0.01$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 5 SLV $X_l=0.50$ - Classe 1
 Sollecitazioni: $T_z=-888.81$ $M_x=4.07$
 $V, Ed=-888.81$ $V_c, Rd, Red=38587.60$ $V, Ed/V_c, Rd, Red=0.02$
- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=1.38$ - Classe 3
 Sollecitazioni: $N=754.98$ $T_z=-4522.15$ $M_y=9931.18$ $T_y=-366.45$ $M_z=-386.58$ $M_x=2.86$
 Tensioni: $\sigma_N=14.03$ $\sigma_{m,d}=2262.89$ $\tau=16.96$ $\sigma_{max}=2276.92$ (sfrut=0.87)
 Tensioni: $\sigma_N=14.03$ $\sigma_{m,d}=-22.73$ $\tau=253.15$ $\tau_{max}=253.15$ (sfrut=0.17)
 Tensioni: $\sigma_N=14.03$ $\sigma_{m,d}=2262.89$ $\tau=16.96$ $\sigma_{ID,max}=2277.11$ (sfrut=0.87)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $M_y, Ed=9931.18$ $M_z, Ed=-386.58$ $L=1.70$
 $\alpha_y, \alpha_z, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.70$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.40$ $M_{cr}=93985.50$ $\lambda_{LT}=0.40$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.56$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=13.66$ $N_{cr,y}=5975490.00$ $\lambda'_y=0.16$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=50.83$ $N_{cr,z}=431754.00$ $\lambda'_z=0.59$ Curva b: $\Phi_z=0.74$ $\chi_z=0.84$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.00+0.65+0.17=0.82
 Verifica ZZ: 0.00+0.52+0.17=0.69
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,G}=0.07$ (L/1951)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,G}=0.10$ (L/1387)
- Asta n. 250 (-2421 -2420) - Sez. 7 (IPE300) - Crit. 1
-
- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=0.32$ - Classe 3
 Sollecitazioni: $N=-1292.55$ $T_z=9605.61$ $M_y=8315.39$ $T_y=1686.69$ $M_z=-551.42$ $M_x=-23.32$
 Tensioni: $\sigma_N=-24.02$ $\sigma_{m,d}=-2177.61$ $\tau=138.44$ $\sigma_{max}=-2201.63$ (sfrut=0.84)
 Tensioni: $\sigma_N=-24.02$ $\sigma_{m,d}=-32.42$ $\tau=555.38$ $\tau_{max}=555.38$ (sfrut=0.37)
 Tensioni: $\sigma_N=-24.02$ $\sigma_{m,d}=-2177.61$ $\tau=138.44$ $\sigma_{ID,max}=2214.64$ (sfrut=0.85)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N, Ed=-1292.55$ $M_y, Ed=8315.39$ $M_z, Ed=-551.42$ $L=0.79$
 $\alpha_y, \alpha_z, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.79$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.33$ $M_{cr}=392883.00$ $\lambda_{LT}=0.20$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.48$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=6.34$ $N_{cr,y}=27740900.00$ $\lambda'_y=0.07$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=23.59$ $N_{cr,z}=2004390.00$ $\lambda'_z=0.27$ Curva b: $\Phi_z=0.55$ $\chi_z=0.97$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.01+0.54+0.25=0.80
 Verifica ZZ: 0.01+0.43+0.25=0.69
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,G}=0.02$ (L/2565)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,G}=0.03$ (L/1827)
- Asta n. 250 (-2420 -2419) - Sez. 7 (IPE300) - Crit. 1
-
- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=2.59$ - Classe 3
 Sollecitazioni: $N=-1083.12$ $T_z=3989.15$ $M_y=-6716.94$ $T_y=14.45$ $M_z=95.11$
 Tensioni: $\sigma_N=-20.13$ $\sigma_{m,d}=-1323.86$ $\tau=0.00$ $\sigma_{max}=-1343.99$ (sfrut=0.51)
 Tensioni: $\sigma_N=-20.13$ $\sigma_{m,d}=5.59$ $\tau=222.73$ $\tau_{max}=222.73$ (sfrut=0.15)
 Tensioni: $\sigma_N=-20.13$ $\sigma_{m,d}=-1323.86$ $\tau=0.00$ $\sigma_{ID,max}=1343.99$ (sfrut=0.51)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N, Ed=-1089.45$ $M_y, Ed=-6716.94$ $M_z, Ed=95.11$ $L=2.59$
 $\alpha_y, \alpha_z, \alpha_{LT}=0.95, 0.95, 0.95$

$L_{cr}=2.59$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.44$ $M_{cr}=77201.90$ $\lambda_{LT}=0.45$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.58$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=20.75$ Ncr,y=2590870.00 $\lambda^*_y=0.24$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=77.19$ Ncr,z=187201.00 $\lambda^*_z=0.89$ Curva b: $\Phi_z=1.01$ $\chi_z=0.67$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.01+0.44+0.04=0.49$
 Verifica ZZ: $0.01+0.35+0.04=0.40$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.04$ (L/6677)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.06$ (L/4459)

Asta n. 250 (-2419 -2418) - Sez. 7 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-870.54$ $T_z=-775.25$ $M_y=-6714.57$ $M_z=17.67$
 Tensioni: $\sigma_N=-16.18$ $\sigma_{m,d}=-1227.25$ $\tau=0.00$ $\sigma_{max}=-1243.42$ (sfrut=0.47)
 Tensioni: $\sigma_N=-16.18$ $\sigma_{m,d}=1.04$ $\tau=43.29$ $\tau_{max}=43.29$ (sfrut=0.03)
 Tensioni: $\sigma_N=-16.18$ $\sigma_{m,d}=-1227.25$ $\tau=0.00$ $\sigma_{ID,max}=1243.42$ (sfrut=0.47)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N, Ed=-870.54$ $M_y, Ed=-6714.57$ $M_z, Ed=17.67$ $L=2.80$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.80$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.20$ $M_{cr}=33042.90$ $\lambda_{LT}=0.68$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.72$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.91$
 $\lambda_y=22.51$ Ncr,y=2202110.00 $\lambda^*_y=0.26$ Curva a: $\Phi_y=0.54$ $\chi_y=0.99$
 $\lambda_z=83.72$ Ncr,z=159112.00 $\lambda^*_z=0.96$ Curva b: $\Phi_z=1.09$ $\chi_z=0.62$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.01+0.48+0.01=0.50$
 Verifica ZZ: $0.01+0.39+0.01=0.40$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.15$ (L/1857)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.22$ (L/1303)

Asta n. 250 (-2418 -2417) - Sez. 7 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-857.27$ $T_z=-1162.18$ $M_y=-4318.25$ $T_y=-27.90$ $M_z=31.39$
 Tensioni: $\sigma_N=-15.93$ $\sigma_{m,d}=-814.14$ $\tau=0.00$ $\sigma_{max}=-830.07$ (sfrut=0.32)
 Tensioni: $\sigma_N=-15.93$ $\sigma_{m,d}=1.85$ $\tau=64.89$ $\tau_{max}=64.89$ (sfrut=0.04)
 Tensioni: $\sigma_N=-15.93$ $\sigma_{m,d}=-814.14$ $\tau=0.00$ $\sigma_{ID,max}=830.07$ (sfrut=0.32)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N, Ed=-857.27$ $M_y, Ed=-4318.25$ $M_z, Ed=-43.42$ $L=2.68$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.68$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.52$ $M_{cr}=45325.60$ $\lambda_{LT}=0.58$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.66$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.95$
 $\lambda_y=21.52$ Ncr,y=2408340.00 $\lambda^*_y=0.25$ Curva a: $\Phi_y=0.54$ $\chi_y=0.99$
 $\lambda_z=80.06$ Ncr,z=174013.00 $\lambda^*_z=0.92$ Curva b: $\Phi_z=1.05$ $\chi_z=0.65$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.30+0.02=0.32$
 Verifica ZZ: $0.01+0.24+0.02=0.26$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.07$ (L/3647)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.10$ (L/2754)

Asta n. 250 (-2417 -73) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 17 SLU $X_1=1.67$ - Classe 1
 Sollecitazioni: $T_y=14.18$ $M_x=-1.09$
 $V, Ed=14.18$ $V_c, Rd, Red=54589.70$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 17 SLU $X_1=1.67$ - Classe 1
 Sollecitazioni: $T_z=-1243.87$ $M_x=-1.09$
 $V, Ed=-1243.87$ $V_c, Rd, Red=38770.00$ $V, Ed/V_c, Rd, Red=0.03$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=2.63$ - Classe 3
 Sollecitazioni: $N=-797.54$ $T_z=-2118.66$ $M_y=4378.91$ $T_y=12.44$ $M_z=13.74$ $M_x=-1.30$
 Tensioni: $\sigma_N=-14.82$ $\sigma_{m,d}=-803.10$ $\tau=7.74$ $\sigma_{max}=-817.92$ (sfrut=0.31)
 Tensioni: $\sigma_N=-14.82$ $\sigma_{m,d}=0.81$ $\tau=118.55$ $\tau_{max}=118.55$ (sfrut=0.08)

- Tensioni: $\sigma_N = -14.82$ $\sigma_{m,d} = -803.10$ $\tau = 7.74$ $\sigma_{ID,max} = 818.03$ (sfrut=0.31)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N, Ed = -804.09$ $My, Ed = 4378.91$ $Mz, Ed = -19.01$ $L = 3.09$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 3.09$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 2.00$ $M, cr = 46971.00$ $\lambda_{LT} = 0.57$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.65$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.96$
 $\lambda_y = 24.80$ $N_{cr,y} = 1813740.00$ $\lambda^*_y = 0.29$ Curva a: $\Phi_y = 0.55$ $\chi_y = 0.98$
 $\lambda_z = 92.25$ $N_{cr,z} = 131050.00$ $\lambda^*_z = 1.06$ Curva b: $\Phi_z = 1.21$ $\chi_z = 0.56$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.01 + 0.30 + 0.01 = 0.31$
Verifica ZZ: $0.01 + 0.24 + 0.01 = 0.25$
 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g} = 0.06$ (L/4773)
 - Verifica freccia massima carichi totali - CC 33
 $f_{z,g} = 0.10$ (L/2673)
- Asta n. 251 (-2420 -2014) - Sez. 8 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l = 0.00$ - Classe 1
Sollecitazioni: $T_y = -116.91$
 $V, Ed = -116.91$ $V_c, Rd = 29609.30$ $V, Ed/V_c, Rd = 0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l = 0.00$ - Classe 1
Sollecitazioni: $T_z = 2582.06$
 $V, Ed = 2582.06$ $V_c, Rd = 21171.50$ $V, Ed/V_c, Rd = 0.12$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l = 0.00$ - Classe 1
Sollecitazioni: $N = -789.34$ $T_z = 2582.06$ $M_y = 3504.07$ $T_y = -116.91$ $M_z = 136.12$
 $N, Ed = -789.34$ $N_c, Rd = 74603.30$ $n = N, Ed/N_c, Rd = 0.01$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed = 3504.07$ $M_y, V, c, Rd = 5804.95$ $M_{Ny, c, Rd} = 5804.95$ $M_y, Ed/M_{Ny, c, Rd} = 0.60$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed = 136.12$ $M_z, V, c, Rd = 1170.59$ $M_{Nz, c, Rd} = 1170.59$ $M_z, Ed/M_{Nz, c, Rd} = 0.12$
 $\alpha = 2.00$ $\beta = 1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.60$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $N, Ed = -791.49$ $My, Ed = 3504.07$ $Mz, Ed = 136.12$ $L = 2.28$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 2.28$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.98$ $M, cr = 14999.20$ $\lambda_{LT} = 0.64$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.69$ $\beta_{LT} = 0.75$ $f = 0.97$ $\chi_{LT} = 0.93$
 $\lambda_y = 27.62$ $N_{cr,y} = 773988.00$ $\lambda^*_y = 0.32$ Curva a: $\Phi_y = 0.56$ $\chi_y = 0.97$
 $\lambda_z = 102.04$ $N_{cr,z} = 56705.60$ $\lambda^*_z = 1.18$ Curva b: $\Phi_z = 1.36$ $\chi_z = 0.49$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.59, 0.57, 0.98$
Verifica YY: $0.01 + 0.62 + 0.07 = 0.70$
Verifica ZZ: $0.01 + 0.37 + 0.11 = 0.50$
 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L} = 0.09$ (L/2476)
 - Verifica freccia massima carichi totali - CC 33
 $f_{z,L} = 0.13$ (L/1725)
- Asta n. 251 (-1977 -2420) - Sez. 8 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l = 2.25$ - Classe 1
Sollecitazioni: $T_y = -14.69$
 $V, Ed = -14.69$ $V_c, Rd = 29609.30$ $V, Ed/V_c, Rd = 0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l = 2.25$ - Classe 1
Sollecitazioni: $T_z = -2862.91$
 $V, Ed = -2862.91$ $V_c, Rd = 21171.50$ $V, Ed/V_c, Rd = 0.14$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l = 2.25$ - Classe 1
Sollecitazioni: $N = -2467.15$ $T_z = -2862.91$ $M_y = 3535.38$ $T_y = -14.69$ $M_z = -50.03$
 $N, Ed = -2467.15$ $N_c, Rd = 74603.30$ $n = N, Ed/N_c, Rd = 0.03$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed = 3535.38$ $M_y, V, c, Rd = 5804.95$ $M_{Ny, c, Rd} = 5804.95$ $M_y, Ed/M_{Ny, c, Rd} = 0.61$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed = -50.03$ $M_z, V, c, Rd = 1170.59$ $M_{Nz, c, Rd} = 1170.59$ $M_z, Ed/M_{Nz, c, Rd} = 0.04$
 $\alpha = 2.00$ $\beta = 1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^1 = 0.61$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
Sollecitazioni: $N, Ed = -2467.15$ $My, Ed = 3535.38$ $Mz, Ed = -50.03$ $L = 2.25$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$

Relazione di calcolo

$L_{cr}=2.25$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.16$ $M_{cr}=16714.90$ $\lambda_{LT}=0.60$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.67$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.94$
 $\lambda_y=27.22$ $N_{cr,y}=796659.00$ $\lambda^*_y=0.31$ Curva a: $\Phi_y=0.56$ $\chi_y=0.97$
 $\lambda_z=100.57$ $N_{cr,z}=58366.60$ $\lambda^*_z=1.16$ Curva b: $\Phi_z=1.33$ $\chi_z=0.50$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.62, 0.57, 1.04$
 Verifica YY: $0.03+0.62+0.03=0.68$
 Verifica ZZ: $0.07+0.37+0.04=0.48$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.07$ (L/3229)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.10$ (L/2273)

Asta n. 252 (-1979 -73) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 29 SLU $X_1=1.70$ - Classe 1
 Sollecitazioni: $T_y=28.60$ $M_x=-1.96$
 $V, Ed=28.60$ $V_c, Rd, Red=54515.10$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 29 SLU $X_1=1.70$ - Classe 1
 Sollecitazioni: $T_z=-1847.62$ $M_x=-1.96$
 $V, Ed=-1847.62$ $V_c, Rd, Red=38716.90$ $V, Ed/V_c, Rd, Red=0.05$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=2.67$ - Classe 3
 Sollecitazioni: $N=1935.53$ $T_z=-2038.69$ $M_y=3369.17$ $T_y=28.60$ $M_z=28.40$ $M_x=-1.96$
 Tensioni: $\sigma_N=35.97$ $\sigma_{m,d}=640.06$ $\tau=11.61$ $\sigma_{max}=676.03$ (sfrut=0.26)
 Tensioni: $\sigma_N=35.97$ $\sigma_{m,d}=1.67$ $\tau=114.43$ $\tau_{max}=114.43$ (sfrut=0.08)
 Tensioni: $\sigma_N=35.97$ $\sigma_{m,d}=640.06$ $\tau=11.61$ $\sigma_{ID,max}=676.33$ (sfrut=0.26)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $M_y, Ed=3369.17$ $M_z, Ed=-48.04$ $L=3.13$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.13$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.20$ $M_{cr}=50578.10$ $\lambda_{LT}=0.55$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.64$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=25.12$ $N_{cr,y}=1768110.00$ $\lambda^*_y=0.29$ Curva a: $\Phi_y=0.55$ $\chi_y=0.98$
 $\lambda_z=93.44$ $N_{cr,z}=127753.00$ $\lambda^*_z=1.08$ Curva b: $\Phi_z=1.23$ $\chi_z=0.55$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.23+0.02=0.25$
 Verifica ZZ: $0.00+0.18+0.02=0.20$

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,G}=0.04$ (L/6988)

- Verifica freccia massima carichi totali - CC 32
 $f_{z,G}=0.07$ (L/4078)

Asta n. 252 (-2415 -1979) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 18 SLU $X_1=0.77$ - Classe 1
 Sollecitazioni: $T_y=32.42$ $M_x=-2.21$
 $V, Ed=32.42$ $V_c, Rd, Red=54493.40$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 18 SLU $X_1=0.77$ - Classe 1
 Sollecitazioni: $T_z=-1625.56$ $M_x=-2.21$
 $V, Ed=-1625.56$ $V_c, Rd, Red=38701.60$ $V, Ed/V_c, Rd, Red=0.04$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=2224.79$ $T_z=-1982.85$ $M_y=-3372.54$ $T_y=48.32$ $M_z=-33.89$ $M_x=-2.88$
 Tensioni: $\sigma_N=41.34$ $\sigma_{m,d}=647.48$ $\tau=17.08$ $\sigma_{max}=688.83$ (sfrut=0.26)
 Tensioni: $\sigma_N=41.34$ $\sigma_{m,d}=-1.99$ $\tau=112.05$ $\tau_{max}=112.05$ (sfrut=0.07)
 Tensioni: $\sigma_N=41.34$ $\sigma_{m,d}=647.48$ $\tau=17.08$ $\sigma_{ID,max}=689.46$ (sfrut=0.26)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $M_y, Ed=-3372.54$ $M_z, Ed=34.33$ $L=1.41$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.41$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.63$ $M_{cr}=156048.00$ $\lambda_{LT}=0.31$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.52$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=11.33$ $N_{cr,y}=8690430.00$ $\lambda^*_y=0.13$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=42.15$ $N_{cr,z}=627920.00$ $\lambda^*_z=0.49$ Curva b: $\Phi_z=0.67$ $\chi_z=0.89$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.22+0.02=0.24$
 Verifica ZZ: $0.00+0.18+0.02=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.02$ (L/8656)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.02$ (L/6608)

Asta n. 252 (-1980 -2415) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 28 SLU $X_1=0.24$ - Classe 1
Sollecitazioni: $T_y=-58.62$ $M_x=1.46$
 $V, Ed=-58.62$ $V_c, Rd, Red=54557.80$ $V, Ed/V_c, Rd, Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 28 SLU $X_1=0.24$ - Classe 1
Sollecitazioni: $T_z=-489.04$ $M_y=1.46$
 $V, Ed=-489.04$ $V_c, Rd, Red=38747.30$ $V, Ed/V_c, Rd, Red=0.01$
- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=0.00$ - Classe 3
Sollecitazioni: $N=2286.48$ $T_z=-407.98$ $M_y=-4114.35$ $T_y=-50.64$ $M_z=7.24$ $M_x=1.72$
Tensioni: $\sigma_N=42.49$ $\sigma_{m,d}=747.54$ $\tau=10.19$ $\sigma_{max}=790.03$ (sfrut=0.30)
Tensioni: $\sigma_N=42.49$ $\sigma_{m,d}=0.43$ $\tau=25.03$ $\tau_{max}=25.03$ (sfrut=0.02)
Tensioni: $\sigma_N=42.49$ $\sigma_{m,d}=747.54$ $\tau=10.19$ $\sigma_{ID,max}=790.23$ (sfrut=0.30)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $M_y, Ed=-4114.35$ $M_z, Ed=-58.81$ $L=1.30$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.30$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.09$ $M_{cr}=121219.00$ $\lambda_{LT}=0.36$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.54$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=10.47$ $N_{cr,y}=10179800.00$ $\lambda^*_y=0.12$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=38.94$ $N_{cr,z}=735535.00$ $\lambda^*_z=0.45$ Curva b: $\Phi_z=0.64$ $\chi_z=0.91$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.27+0.03=0.29$
Verifica ZZ: $0.00+0.21+0.03=0.24$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.02$ (L/5651)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.03$ (L/4144)

Asta n. 252 (-2414 -1980) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=2.95$ - Classe 3
Sollecitazioni: $N=2076.45$ $T_z=562.09$ $M_y=-3524.60$ $T_y=1.98$ $M_z=36.70$
Tensioni: $\sigma_N=38.59$ $\sigma_{m,d}=678.27$ $\tau=0.00$ $\sigma_{max}=716.85$ (sfrut=0.27)
Tensioni: $\sigma_N=38.59$ $\sigma_{m,d}=2.16$ $\tau=31.38$ $\tau_{max}=31.38$ (sfrut=0.02)
Tensioni: $\sigma_N=38.59$ $\sigma_{m,d}=678.27$ $\tau=0.00$ $\sigma_{ID,max}=716.85$ (sfrut=0.27)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $M_y, Ed=-3524.60$ $M_z, Ed=36.70$ $L=2.95$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.95$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.43$ $M_{cr}=36198.00$ $\lambda_{LT}=0.65$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.70$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.92$
 $\lambda_y=23.66$ $N_{cr,y}=1992850.00$ $\lambda^*_y=0.27$ Curva a: $\Phi_y=0.54$ $\chi_y=0.98$
 $\lambda_z=88.01$ $N_{cr,z}=143992.00$ $\lambda^*_z=1.01$ Curva b: $\Phi_z=1.15$ $\chi_z=0.59$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.25+0.02=0.27$
Verifica ZZ: $0.00+0.20+0.02=0.22$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.07$ (L/3942)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.10$ (L/2810)

Asta n. 252 (-1977 -2414) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=2.50$ - Classe 3
Sollecitazioni: $N=-388.77$ $T_z=1020.55$ $M_y=-3222.30$ $T_y=326.64$ $M_z=338.79$ $M_x=5.14$
Tensioni: $\sigma_N=-7.22$ $\sigma_{m,d}=-999.25$ $\tau=30.49$ $\sigma_{max}=-1006.48$ (sfrut=0.38)
Tensioni: $\sigma_N=-7.22$ $\sigma_{m,d}=-19.92$ $\tau=65.16$ $\tau_{max}=65.16$ (sfrut=0.04)
Tensioni: $\sigma_N=-7.22$ $\sigma_{m,d}=-999.25$ $\tau=30.49$ $\sigma_{ID,max}=1007.86$ (sfrut=0.38)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N, Ed=-406.44$ $M_y, Ed=-3222.30$ $M_z, Ed=-478.50$ $L=2.50$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.50$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.69$ $M_{cr}=56612.90$ $\lambda_{LT}=0.52$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.62$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.98$
 $\lambda_y=20.08$ $N_{cr,y}=2766450.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=74.70$ $N_{cr,z}=199887.00$ $\lambda^*_z=0.86$ Curva b: $\Phi_z=0.98$ $\chi_z=0.69$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.21+0.22=0.43$
Verifica ZZ: $0.00+0.17+0.22=0.39$

Relazione di calcolo

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.04$ (L/6868)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.05$ (L/4554)

Asta n. 252 (-2413 -1977) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 3 SLV $X_1=0.95$ - Classe 1
 Sollecitazioni: $T_y=-152.13$
 $V, Ed=-152.13$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 3 SLV $X_1=0.95$ - Classe 1
 Sollecitazioni: $T_z=-312.92$
 $V, Ed=-312.92$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=1372.75$ $T_z=-1231.08$ $M_y=-1167.17$ $T_y=-402.08$ $M_z=433.63$ $M_x=-3.91$
 Tensioni: $\sigma_N=25.51$ $\sigma_{m,d}=748.16$ $\tau=23.23$ $\sigma_{max}=773.67$ (sfrut=0.30)
 Tensioni: $\sigma_N=25.51$ $\sigma_{m,d}=-25.50$ $\tau=73.01$ $\tau_{max}=73.01$ (sfrut=0.05)
 Tensioni: $\sigma_N=25.51$ $\sigma_{m,d}=748.16$ $\tau=23.23$ $\sigma_{ID,max}=774.71$ (sfrut=0.30)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $M_y, Ed=1413.22$ $M_z, Ed=429.59$ $L=1.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.75$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.81$ $M_{cr}=179653.00$ $\lambda_{LT}=0.29$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.51$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=14.05$ $N_{cr,y}=5653650.00$ $\lambda'_y=0.16$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=52.25$ $N_{cr,z}=408500.00$ $\lambda'_z=0.60$ Curva b: $\Phi_z=0.75$ $\chi_z=0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.09+0.19=0.29$
 Verifica ZZ: $0.00+0.07+0.19=0.27$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,G}=0.00$ (L/53978)

- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.00$ (L/41710)

Asta n. 252 (-1982 -2413) - Sez. 7 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_1=0.98$ - Classe 3
 Sollecitazioni: $N=-1898.79$ $T_z=1891.70$ $M_y=-1219.18$ $T_y=1820.23$ $M_z=1205.62$ $M_x=1.60$
 Tensioni: $\sigma_N=-35.28$ $\sigma_{m,d}=-1716.44$ $\tau=9.48$ $\sigma_{max}=-1751.72$ (sfrut=0.67)
 Tensioni: $\sigma_N=-35.28$ $\sigma_{m,d}=-70.89$ $\tau=106.78$ $\tau_{max}=106.78$ (sfrut=0.07)
 Tensioni: $\sigma_N=-35.28$ $\sigma_{m,d}=-1716.44$ $\tau=9.48$ $\sigma_{ID,max}=1751.80$ (sfrut=0.67)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
 Sollecitazioni: $N, Ed=-1906.63$ $M_y, Ed=-1219.18$ $M_z, Ed=1205.62$ $L=0.98$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.98$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.49$ $M_{cr}=476588.00$ $\lambda_{LT}=0.18$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.47$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=7.89$ $N_{cr,y}=17894700.00$ $\lambda'_y=0.09$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=29.37$ $N_{cr,z}=1292960.00$ $\lambda'_z=0.34$ Curva b: $\Phi_z=0.58$ $\chi_z=0.95$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.08+0.54=0.64$
 Verifica ZZ: $0.01+0.06+0.54=0.62$

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.00$ (L/85965) $f_{z,G}=0.00$

- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.00$ (L/57310)

Asta n. 252 (-2411 -1982) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 30 SLU $X_1=0.17$ - Classe 1
 Sollecitazioni: $T_y=-178.86$
 $V, Ed=-178.86$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 30 SLU $X_1=0.17$ - Classe 1
 Sollecitazioni: $T_z=1220.79$
 $V, Ed=1220.79$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.03$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-3157.35$ $T_z=1627.69$ $M_y=4062.52$ $T_y=-172.22$ $M_z=14.76$
 Tensioni: $\sigma_N=-58.67$ $\sigma_{m,d}=-747.58$ $\tau=0.00$ $\sigma_{max}=-806.25$ (sfrut=0.31)
 Tensioni: $\sigma_N=-58.67$ $\sigma_{m,d}=0.87$ $\tau=90.88$ $\tau_{max}=90.88$ (sfrut=0.06)
 Tensioni: $\sigma_N=-58.67$ $\sigma_{m,d}=-747.58$ $\tau=0.00$ $\sigma_{ID,max}=806.25$ (sfrut=0.31)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N, Ed = -3157.35$ My, $Ed = 4062.52$ Mz, $Ed = -301.27$ L=1.84
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.84$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 1.43$ M, $cr = 83664.20$ $\lambda_{LT} = 0.43$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.57$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 14.73$ Ncr, $y = 5143220.00$ $\lambda'_y = 0.17$ Curva a: $\Phi_y = 0.51$ $\chi_y = 1.00$
 $\lambda_z = 54.78$ Ncr, $z = 371619.00$ $\lambda'_z = 0.63$ Curva b: $\Phi_z = 0.77$ $\chi_z = 0.82$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.02 + 0.27 + 0.14 = 0.42$
 Verifica ZZ: $0.02 + 0.21 + 0.14 = 0.37$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g} = 0.03$ (L/5642)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,g} = 0.05$ (L/3975)

Asta n. 252 (-2411 -1255) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 19 SLU $X_1 = 0.66$ - Classe 1
 Sollecitazioni: $T_y = -454.78$ Mx=4.91
 $V, Ed = -454.78$ Vc, Rd, Red=54260.40 V, Ed/Vc, Rd, Red=0.01

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 19 SLU $X_1 = 0.66$ - Classe 1
 Sollecitazioni: $T_z = 1045.32$ Mx=4.91
 $V, Ed = 1045.32$ Vc, Rd, Red=38536.00 V, Ed/Vc, Rd, Red=0.03

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1 = 0.00$ - Classe 3
 Sollecitazioni: $N = -723.14$ $T_z = 2187.84$ $M_y = 4079.38$ $T_y = -750.56$ $M_z = 516.02$ Mx=9.24
 Tensioni: $\sigma_N = -13.44$ $\sigma_{m,d} = -1373.26$ $\tau = 54.87$ $\sigma_{max} = -1386.70$ (sfrut=0.53)
 Tensioni: $\sigma_N = -13.44$ $\sigma_{m,d} = 30.34$ $\tau = 134.99$ $\tau_{max} = 134.99$ (sfrut=0.09)
 Tensioni: $\sigma_N = -13.44$ $\sigma_{m,d} = -1373.26$ $\tau = 54.87$ $\sigma_{ID,max} = 1389.95$ (sfrut=0.53)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N, Ed = -730.98$ My, $Ed = 4079.38$ Mz, $Ed = 516.02$ L=0.88
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 0.88$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 1.27$ M, $cr = 300972.00$ $\lambda_{LT} = 0.23$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.49$ $\beta_{LT} = 0.75$ $f = 0.99$ $\chi_{LT} = 1.00$
 $\lambda_y = 7.07$ Ncr, $y = 22313600.00$ $\lambda'_y = 0.08$ Curva a: $\Phi_y = 0.49$ $\chi_y = 1.00$
 $\lambda_z = 26.30$ Ncr, $z = 1612250.00$ $\lambda'_z = 0.30$ Curva b: $\Phi_z = 0.56$ $\chi_z = 0.96$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01 + 0.27 + 0.23 = 0.50$
 Verifica ZZ: $0.01 + 0.21 + 0.23 = 0.45$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L} = 0.01$ (L/9331)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L} = 0.01$ (L/6743)

Asta n. 252 (-1255 -2416) - Sez. 7 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1 = 0.00$ - Classe 3
 Sollecitazioni: $N = 328.91$ $T_z = 1385.10$ $M_y = 2188.02$ $T_y = -30.12$ $M_z = -159.66$ Mx=-18.45
 Tensioni: $\sigma_N = 6.11$ $\sigma_{m,d} = 591.09$ $\tau = 109.52$ $\sigma_{max} = 597.20$ (sfrut=0.23)
 Tensioni: $\sigma_N = 6.11$ $\sigma_{m,d} = 9.39$ $\tau = 134.15$ $\tau_{max} = 134.15$ (sfrut=0.09)
 Tensioni: $\sigma_N = 6.11$ $\sigma_{m,d} = 591.09$ $\tau = 109.52$ $\sigma_{ID,max} = 626.60$ (sfrut=0.24)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
 Sollecitazioni: My, $Ed = 2025.61$ Mz, $Ed = -209.29$ L=0.73
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 0.73$ Curva b: $\alpha_{imp} = 0.34$ $k_e = 0.94$ $\psi = 1.27$ M, $cr = 440457.00$ $\lambda_{LT} = 0.19$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.48$ $\beta_{LT} = 0.75$ $f = 0.99$ $\chi_{LT} = 1.00$
 $\lambda_y = 5.84$ Ncr, $y = 32712800.00$ $\lambda'_y = 0.07$ Curva a: $\Phi_y = 0.49$ $\chi_y = 1.00$
 $\lambda_z = 21.72$ Ncr, $z = 2363640.00$ $\lambda'_z = 0.25$ Curva b: $\Phi_z = 0.54$ $\chi_z = 0.98$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00 + 0.13 + 0.09 = 0.23$
 Verifica ZZ: $0.00 + 0.11 + 0.09 = 0.20$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L} = 0.00$ (L/19074)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L} = 0.01$ (L/12931)

Asta n. 252 (-2416 -1975) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 1 SLV Xl=0.41 - Classe 1
Sollecitazioni: $T_y=12.80$
 $V, Ed=12.80$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV Xl=0.41 - Classe 1
Sollecitazioni: $T_z=107.95$
 $V, Ed=107.95$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.00$
 - Verifica in termini tensionali [4.2.4] - CC 27 SLU Xl=2.26 - Classe 3
Sollecitazioni: $N=150.86$ $T_z=-89.97$ $M_y=661.36$ $T_y=165.77$ $M_z=281.83$
Tensioni: $\sigma_N=2.80$ $\sigma_{m,d}=468.80$ $\tau=0.00$ $\sigma_{max}=471.61$ (sfrut=0.18)
Tensioni: $\sigma_N=2.80$ $\sigma_{m,d}=-23.66$ $\tau=7.28$ $\tau_{max}=7.28$ (sfrut=0.00)
Tensioni: $\sigma_N=2.80$ $\sigma_{m,d}=468.80$ $\tau=0.00$ $\sigma_{ID,max}=471.61$ (sfrut=0.18)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $M_y, Ed=1206.01$ $M_z, Ed=236.60$ $L=2.26$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.26$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.23$ $M, cr=49211.70$ $\lambda_{LT}=0.56$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.64$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=18.12$ $N_{cr,y}=3396180.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=67.42$ $N_{cr,z}=245388.00$ $\lambda^*_z=0.78$ Curva b: $\Phi_z=0.90$ $\chi_z=0.74$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.08+0.11=0.19$
Verifica ZZ: $0.00+0.07+0.11=0.17$
 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.02$ (L/14094)
 - Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.02$ (L/10119)
- Asta n. 255 (-1982 -2423) - Sez. 8 (IPE200) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU Xl=2.79 - Classe 1
Sollecitazioni: $T_y=-41.35$
 $V, Ed=-41.35$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU Xl=2.79 - Classe 1
Sollecitazioni: $T_z=-1214.03$
 $V, Ed=-1214.03$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.06$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU Xl=1.16 - Classe 1
Sollecitazioni: $N=-1469.95$ $M_y=-908.03$ $T_y=-41.35$ $M_z=44.29$
 $N, Ed=-1469.95$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.02$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-908.03$ $M_y, c, Rd=5804.95$ $M_{Ny, c, Rd}=5804.95$ $M_y, Ed/M_{Ny, c, Rd}=0.16$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=44.29$ $M_z, V, c, Rd=1170.59$ $M_{Nz, c, Rd}=1170.59$ $M_z, Ed/M_{Nz, c, Rd}=0.04$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_{Ny, c, Rd})^2 + (M_z, Ed/M_{Nz, c, Rd})^2 = 0.16$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 1
Sollecitazioni: $N, Ed=-1676.10$ $M_y, Ed=-873.25$ $M_z, Ed=89.83$ $L=2.79$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.79$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.98$ $M, cr=11163.20$ $\lambda_{LT}=0.74$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.76$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.88$
 $\lambda_y=33.81$ $N_{cr,y}=516576.00$ $\lambda^*_y=0.39$ Curva a: $\Phi_y=0.60$ $\chi_y=0.96$
 $\lambda_z=124.90$ $N_{cr,z}=37846.50$ $\lambda^*_z=1.44$ Curva b: $\Phi_z=1.75$ $\chi_z=0.37$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.62, 0.57, 1.03$
Verifica YY: $0.02+0.16+0.05=0.23$
Verifica ZZ: $0.06+0.10+0.08=0.24$
 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.09$ (L/3151)
 - Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.12$ (L/2250)
- Asta n. 256 (-2425 -2401) - Sez. 8 (IPE200) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 29 SLU Xl=0.22 - Classe 1
Sollecitazioni: $T_y=-419.40$ $M_x=-3.12$
 $V, Ed=-419.40$ $V_c, Rd, Red=29269.60$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica a taglio e torsione Dir. Z [4.2.24] - CC 29 SLU Xl=0.22 - Classe 1
Sollecitazioni: $T_z=6215.64$ $M_x=-3.12$
 $V, Ed=6215.64$ $V_c, Rd, Red=20928.60$ $V, Ed/V_c, Rd, Red=0.30$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU Xl=0.22 - Classe 1

Sollecitazioni: $N=-4769.41$ $T_z=6215.64$ $M_y=4849.51$ $T_y=-419.40$ $M_z=241.41$ $M_x=-3.12$
 $N, Ed=-4769.41$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.06$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=4849.51$ $M_y, V, c, Rd=5804.95$ $M_Ny, c, Rd=5804.95$ $M_y, Ed/M_Ny, c, Rd=0.84$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=241.41$ $M_z, V, c, Rd=1170.59$ $M_Nz, c, Rd=1170.59$ $M_z, Ed/M_Nz, c, Rd=0.21$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_Ny, c, Rd)^2 + (M_z, Ed/M_Nz, c, Rd)^2 = 0.90$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $N, Ed=-4770.11$ $M_y, Ed=4849.51$ $M_z, Ed=241.41$ $L=1.04$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.04$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M, cr=49963.30$ $\lambda_{LT}=0.35$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.54$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.59$ $N_{cr,y}=3726550.00$ $\lambda'_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=46.50$ $N_{cr,z}=273023.00$ $\lambda'_z=0.54$ Curva b: $\Phi_z=0.70$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.59, 0.57, 0.98$
 Verifica YY: $0.06+0.79+0.12=0.98$
 Verifica ZZ: $0.06+0.47+0.20=0.74$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.05$ (L/1585)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.08$ (L/1083)

Asta n. 256 (-2422 -2425) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=281.83$
 $V, Ed=281.83$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.01$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=2203.03$
 $V, Ed=2203.03$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.10$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 29 SLU $X_l=1.34$ - Classe 1
 Sollecitazioni: $N=-1001.51$ $T_z=1225.73$ $M_y=-2201.68$ $T_y=281.83$ $M_z=152.22$
 $N, Ed=-1001.51$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-2201.68$ $M_y, V, c, Rd=5804.95$ $M_Ny, c, Rd=5804.95$ $M_y, Ed/M_Ny, c, Rd=0.38$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=152.22$ $M_z, V, c, Rd=1170.59$ $M_Nz, c, Rd=1170.59$ $M_z, Ed/M_Nz, c, Rd=0.13$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/M_Ny, c, Rd)^2 + (M_z, Ed/M_Nz, c, Rd)^2 = 0.38$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 1
 Sollecitazioni: $N, Ed=-1001.51$ $M_y, Ed=-2201.68$ $M_z, Ed=-224.16$ $L=1.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.75$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.79$ $M, cr=20673.00$ $\lambda_{LT}=0.54$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.63$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.97$
 $\lambda_y=21.17$ $N_{cr,y}=1317660.00$ $\lambda'_y=0.24$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=78.20$ $N_{cr,z}=96537.30$ $\lambda'_z=0.90$ Curva b: $\Phi_z=1.02$ $\chi_z=0.66$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.97$
 Verifica YY: $0.01+0.37+0.11=0.50$
 Verifica ZZ: $0.01+0.22+0.19=0.42$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.06$ (L/2099)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.09$ (L/1525)

Asta n. 257 (-1976 -2011) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=1.07$ - Classe 1
 Sollecitazioni: $T_y=-26.81$
 $V, Ed=-26.81$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=1.07$ - Classe 1
 Sollecitazioni: $T_z=-326.44$
 $V, Ed=-326.44$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-2867.55$ $T_z=35.59$ $M_y=-1881.71$ $T_y=-26.81$ $M_z=28.45$
 Tensioni: $\sigma_N=-53.29$ $\sigma_{m,d}=-373.11$ $\tau=0.00$ $\sigma_{max}=-426.40$ (sfrut=0.16)
 Tensioni: $\sigma_N=-53.29$ $\sigma_{m,d}=1.67$ $\tau=1.99$ $\tau_{max}=1.99$ (sfrut=0.00)
 Tensioni: $\sigma_N=-53.29$ $\sigma_{m,d}=-373.11$ $\tau=0.00$ $\sigma_{ID,max}=426.40$ (sfrut=0.16)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed = -3524.47 \text{ My}, Ed = -1443.22 \text{ Mz}, Ed = -116.44 \text{ L} = 3.92$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 3.92$ Curva b: $\alpha_{imp} = 0.34 \quad k_c = 0.94 \quad \psi = 2.07 \text{ M}, cr = 33089.60 \quad \lambda_{LT} = 0.68$
 $\lambda_{LT,0} = 0.40 \quad \Phi_{LT} = 0.72 \quad \beta_{LT} = 0.75 \quad f = 0.97 \quad \chi_{LT} = 0.91$
 $\lambda_y = 31.49 \text{ Ncr}, y = 1124550.00 \quad \lambda'_y = 0.36$ Curva a: $\Phi_y = 0.58 \quad \chi_y = 0.96$
 $\lambda_z = 117.16 \text{ Ncr}, z = 81253.40 \quad \lambda'_z = 1.35$ Curva b: $\Phi_z = 1.61 \quad \chi_z = 0.40$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.96, 0.99, 0.76, 0.99$
 Verifica YY: $0.03 + 0.10 + 0.05 = 0.18$
 Verifica ZZ: $0.06 + 0.08 + 0.05 = 0.20$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L} = 0.06 \text{ (L/6350)}$

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L} = 0.09 \text{ (L/4203)}$

Asta n. 257 (-1975 -1976) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 15 SLV $X1 = 0.00$ - Classe 1
 Sollecitazioni: $T_z = 288.25$
 $V, Ed = 288.25 \quad V_c, Rd = 38836.40 \quad V, Ed/V_c, Rd = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X1 = 3.92$ - Classe 3
 Sollecitazioni: $N = -2912.84 \quad T_z = -17.16 \quad M_y = -1883.00 \quad T_y = 49.53 \quad M_z = 59.21$
 Tensioni: $\sigma_N = -54.13 \quad \sigma_{m,d} = -411.56 \quad \tau = 0.00 \quad \sigma_{max} = -465.69 \text{ (sfrut} = 0.18)$
 Tensioni: $\sigma_N = -54.13 \quad \sigma_{m,d} = 332.09 \quad \tau = 2.17 \quad \tau_{max} = 2.17 \text{ (sfrut} = 0.00)$
 Tensioni: $\sigma_N = -54.13 \quad \sigma_{m,d} = -411.56 \quad \tau = 0.00 \quad \sigma_{TD,max} = 465.69 \text{ (sfrut} = 0.18)$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
 Sollecitazioni: $N, Ed = -3261.90 \text{ My}, Ed = -1759.98 \text{ Mz}, Ed = -153.42 \text{ L} = 3.92$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 3.92$ Curva b: $\alpha_{imp} = 0.34 \quad k_c = 0.94 \quad \psi = 2.15 \text{ M}, cr = 34377.50 \quad \lambda_{LT} = 0.67$
 $\lambda_{LT,0} = 0.40 \quad \Phi_{LT} = 0.71 \quad \beta_{LT} = 0.75 \quad f = 0.97 \quad \chi_{LT} = 0.91$
 $\lambda_y = 31.49 \text{ Ncr}, y = 1124550.00 \quad \lambda'_y = 0.36$ Curva a: $\Phi_y = 0.58 \quad \chi_y = 0.96$
 $\lambda_z = 117.16 \text{ Ncr}, z = 81253.40 \quad \lambda'_z = 1.35$ Curva b: $\Phi_z = 1.61 \quad \chi_z = 0.40$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.98, 0.76, 0.98$
 Verifica YY: $0.02 + 0.13 + 0.07 = 0.22$
 Verifica ZZ: $0.06 + 0.10 + 0.07 = 0.23$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L} = 0.06 \text{ (L/6658)}$

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L} = 0.09 \text{ (L/4415)}$

Asta n. 258 (-2430 -2402) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X1 = 0.21$ - Classe 1
 Sollecitazioni: $T_y = -92.94$
 $V, Ed = -92.94 \quad V_c, Rd = 29609.30 \quad V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X1 = 0.21$ - Classe 1
 Sollecitazioni: $T_z = 654.20$
 $V, Ed = 654.20 \quad V_c, Rd = 21171.50 \quad V, Ed/V_c, Rd = 0.03$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 28 SLU $X1 = 0.21$ - Classe 1
 Sollecitazioni: $N = -755.02 \quad T_z = 648.59 \quad M_y = 179.71 \quad T_y = -132.87 \quad M_z = 119.30$
 $N, Ed = -755.02 \quad N_c, Rd = 74603.30 \quad n = N, Ed/N_c, Rd = 0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed = 179.71 \text{ My}, V, c, Rd = 5804.95 \text{ MNy}, c, Rd = 5804.95 \text{ My}, Ed/MNy, c, Rd = 0.03$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed = 119.30 \text{ Mz}, V, c, Rd = 1170.59 \text{ MNz}, c, Rd = 1170.59 \text{ Mz}, Ed/MNz, c, Rd = 0.10$
 $\alpha = 2.00 \quad \beta = 1.00 \quad (M_y, Ed/MNy, c, Rd)^2 + (M_z, Ed/MNz, c, Rd)^2 = 0.10$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 1
 Sollecitazioni: $N, Ed = -755.02 \text{ My}, Ed = 179.71 \text{ Mz}, Ed = 119.30 \text{ L} = 1.86$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.86$ Curva b: $\alpha_{imp} = 0.34 \quad k_c = 0.94 \quad \psi = 1.64 \text{ M}, cr = 17061.10 \quad \lambda_{LT} = 0.60$
 $\lambda_{LT,0} = 0.40 \quad \Phi_{LT} = 0.67 \quad \beta_{LT} = 0.75 \quad f = 0.97 \quad \chi_{LT} = 0.94$
 $\lambda_y = 22.58 \text{ Ncr}, y = 1158020.00 \quad \lambda'_y = 0.26$ Curva a: $\Phi_y = 0.54 \quad \chi_y = 0.99$
 $\lambda_z = 83.42 \text{ Ncr}, z = 84841.50 \quad \lambda'_z = 0.96$ Curva b: $\Phi_z = 1.09 \quad \chi_z = 0.62$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.58, 0.57, 0.97$
 Verifica YY: $0.01 + 0.03 + 0.06 = 0.10$
 Verifica ZZ: $0.01 + 0.02 + 0.10 = 0.13$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L} = 0.01 \text{ (L/25488)}$

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.01$ (L/28886)

Asta n. 258 (-2424 -2430) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU $X_1=1.36$ - Classe 1
 Sollecitazioni: $T_y=238.16$
 $V, Ed=238.16$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.01$

- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU $X_1=1.36$ - Classe 1
 Sollecitazioni: $T_z=-586.61$
 $V, Ed=-586.61$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.03$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 28 SLU $X_1=1.36$ - Classe 1
 Sollecitazioni: $N=-1003.52$ $T_z=-586.61$ $M_y=126.67$ $T_y=238.16$ $M_z=161.30$
 $N, Ed=-1003.52$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=126.67$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.02$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=161.30$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.14$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.14$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 1
 Sollecitazioni: $N, Ed=-1003.52$ $M_y, Ed=126.67$ $M_z, Ed=-161.70$ $L=1.57$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.57$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.04$ $M_{cr}=28158.80$ $\lambda_{LT}=0.47$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.59$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=18.99$ $N_{cr,y}=1637600.00$ $\lambda^*_y=0.22$ Curva a: $\Phi_y=0.53$ $\chi_y=1.00$
 $\lambda_z=70.15$ $N_{cr,z}=119977.00$ $\lambda^*_z=0.81$ Curva b: $\Phi_z=0.93$ $\chi_z=0.72$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.97$
 Verifica YY: $0.01+0.02+0.08=0.11$
 Verifica ZZ: $0.01+0.01+0.13=0.16$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$ (L/27348)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/35552)

Asta n. 258 (-2426 -2424) - Sez. 8 (IPE200) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU $X_1=0.11$ - Classe 1
 Sollecitazioni: $T_y=-197.65$
 $V, Ed=-197.65$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.01$

- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU $X_1=0.11$ - Classe 1
 Sollecitazioni: $T_z=838.90$
 $V, Ed=838.90$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.04$

- Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 28 SLU $X_1=1.64$ - Classe 1
 Sollecitazioni: $N=-860.56$ $T_z=-193.95$ $M_y=-35.11$ $T_y=-197.65$ $M_z=-162.00$
 $N, Ed=-860.56$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.01$
 Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-35.11$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.01$
 Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=-162.00$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.14$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^2 = 0.14$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 1
 Sollecitazioni: $N, Ed=-861.94$ $M_y, Ed=456.23$ $M_z, Ed=-162.00$ $L=1.64$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.64$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.83$ $M_{cr}=23404.90$ $\lambda_{LT}=0.51$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.62$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=0.98$
 $\lambda_y=19.90$ $N_{cr,y}=1491030.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=73.52$ $N_{cr,z}=109239.00$ $\lambda^*_z=0.85$ Curva b: $\Phi_z=0.97$ $\chi_z=0.70$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.58, 0.57, 0.97$
 Verifica YY: $0.01+0.08+0.08=0.17$
 Verifica ZZ: $0.01+0.05+0.13=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.01$ (L/22982)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.01$ (L/20625)

Asta n. 258 (-2416 -2426) - Sez. 8 (IPE200) - Crit. 1

Relazione di calcolo

- Verifica a taglio Dir. Y [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=92.82$
 $V, Ed=92.82$ $V_c, Rd=29609.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 29 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=921.64$
 $V, Ed=921.64$ $V_c, Rd=21171.50$ $V, Ed/V_c, Rd=0.04$
 - Verifica a presso o tenso flessione biassiale (EC3 6.41) - CC 28 SLU $X_l=1.52$ - Classe 1
Sollecitazioni: $N=182.84$ $T_z=16.77$ $M_y=-758.81$ $T_y=146.30$ $M_z=108.88$
 $N, Ed=182.84$ $N_c, Rd=74603.30$ $n=N, Ed/N_c, Rd=0.00$
Pressoflessione retta YY [4.2.33]:
 $M_y, Ed=-758.81$ $M_y, V, c, Rd=5804.95$ $MN_y, c, Rd=5804.95$ $M_y, Ed/MN_y, c, Rd=0.13$
Pressoflessione retta ZZ [4.2.34]:
 $M_z, Ed=108.88$ $M_z, V, c, Rd=1170.59$ $MN_z, c, Rd=1170.59$ $M_z, Ed/MN_z, c, Rd=0.09$
 $\alpha=2.00$ $\beta=1.00$ $(M_y, Ed/MN_y, c, Rd)^2 + (M_z, Ed/MN_z, c, Rd)^3 = 0.13$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 1
Sollecitazioni: $M_y, Ed=-758.81$ $M_z, Ed=-113.21$ $L=1.83$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.83$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.78$ $M, cr=19018.10$ $\lambda_{LT}=0.57$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.65$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.96$
 $\lambda_y=22.19$ $N_{cr,y}=1198880.00$ $\lambda^*_y=0.26$ Curva a: $\Phi_y=0.54$ $\chi_y=0.99$
 $\lambda_z=81.98$ $N_{cr,z}=87834.80$ $\lambda^*_z=0.94$ Curva b: $\Phi_z=1.07$ $\chi_z=0.63$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.57, 0.57, 0.95$
Verifica YY: $0.00+0.13+0.06=0.18$
Verifica ZZ: $0.00+0.08+0.09=0.17$
 - Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.03$ (L/4928)
 - Verifica freccia massima carichi totali - CC 32
 $f_{z,G}=0.04$ (L/3959)
- Asta n. 271 (-2413 -1264) - Sez. 7 (IPE300) - Crit. 1
-
- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=0.98$ - Classe 3
Sollecitazioni: $N=-3798.20$ $T_z=3140.52$ $M_y=-3097.61$ $T_y=-1365.85$ $M_z=-557.69$
Tensioni: $\sigma_N=-70.58$ $\sigma_{m,d}=-1248.78$ $\tau=0.00$ $\sigma_{max}=-1319.36$ (sfrut=0.50)
Tensioni: $\sigma_N=-70.58$ $\sigma_{m,d}=-32.79$ $\tau=175.41$ $\tau_{max}=175.41$ (sfrut=0.12)
Tensioni: $\sigma_N=-70.58$ $\sigma_{m,d}=-1248.78$ $\tau=0.00$ $\sigma_{ID,max}=1319.36$ (sfrut=0.50)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N, Ed=-3802.29$ $M_y, Ed=-3097.61$ $M_z, Ed=775.25$ $L=0.98$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.98$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.75$ $M, cr=340354.00$ $\lambda_{LT}=0.21$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.48$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=7.83$ $N_{cr,y}=18185200.00$ $\lambda^*_y=0.09$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=29.13$ $N_{cr,z}=1313960.00$ $\lambda^*_z=0.34$ Curva b: $\Phi_z=0.58$ $\chi_z=0.95$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
Verifica YY: $0.03+0.20+0.35=0.58$
Verifica ZZ: $0.03+0.16+0.35=0.54$
 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.00$ (L/21772)
 - Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.01$ (L/15273)
- Asta n. 271 (-1264 -1263) - Sez. 7 (IPE300) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_l=0.96$ - Classe 1
Sollecitazioni: $T_y=190.09$
 $V, Ed=190.09$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=0.96$ - Classe 1
Sollecitazioni: $T_z=160.34$
 $V, Ed=160.34$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.00$
 - Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-3950.79$ $T_z=1042.40$ $M_y=-3099.84$ $T_y=470.14$ $M_z=-478.86$ $M_x=-1.07$
Tensioni: $\sigma_N=-73.42$ $\sigma_{m,d}=-1151.26$ $\tau=6.36$ $\sigma_{max}=-1224.68$ (sfrut=0.47)
Tensioni: $\sigma_N=-73.42$ $\sigma_{m,d}=-28.16$ $\tau=58.74$ $\tau_{max}=58.74$ (sfrut=0.04)
Tensioni: $\sigma_N=-73.42$ $\sigma_{m,d}=-1151.26$ $\tau=6.36$ $\sigma_{ID,max}=1224.73$ (sfrut=0.47)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N, Ed=-3950.79$ $M_y, Ed=-4615.68$ $M_z, Ed=-478.86$ $L=1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$

$L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.18$ $M_{cr}=98767.50$ $\lambda_{LT}=0.39$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.56$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.15$ Ncr,y=7551650.00 $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.21$ Ncr,z=545638.00 $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.03+0.30+0.22=0.55$
 Verifica ZZ: $0.03+0.24+0.22=0.49$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.03$ (L/5106)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.04$ (L/3596)

Asta n. 271 (-1263 -1262) - Sez. 7 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-3942.57$ $T_z=-471.79$ $M_y=-4616.05$ $T_y=-262.26$ $M_z=303.71$ $M_x=-1.12$
 Tensioni: $\sigma_N=-73.26$ $\sigma_{m,d}=-1205.86$ $\tau=6.65$ $\sigma_{max}=-1279.13$ (sfrut=0.49)
 Tensioni: $\sigma_N=-73.26$ $\sigma_{m,d}=-17.86$ $\tau=27.40$ $\tau_{max}=27.40$ (sfrut=0.02)
 Tensioni: $\sigma_N=-73.26$ $\sigma_{m,d}=-1205.86$ $\tau=6.65$ $\sigma_{ID,max}=1279.18$ (sfrut=0.49)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3942.57$ $M_y, Ed=-4616.05$ $M_z, Ed=303.71$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.08$ $M_{cr}=89677.20$ $\lambda_{LT}=0.41$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.57$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.23$ Ncr,y=7452620.00 $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.51$ Ncr,z=538483.00 $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.03+0.30+0.14=0.47$
 Verifica ZZ: $0.03+0.24+0.14=0.41$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.03$ (L/4385)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.05$ (L/3152)

Asta n. 271 (-1262 -1261) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.83$ - Classe 2
 Sollecitazioni: $T_y=-98.48$
 $V, Ed=-98.48$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.83$ - Classe 2
 Sollecitazioni: $T_z=-1664.11$
 $V, Ed=-1664.11$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.04$

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-3966.66$ $T_z=-2905.50$ $M_y=-3833.68$ $T_y=-139.83$ $M_z=120.64$ $M_x=-1.09$
 Tensioni: $\sigma_N=-73.71$ $\sigma_{m,d}=-838.02$ $\tau=6.48$ $\sigma_{max}=-911.73$ (sfrut=0.35)
 Tensioni: $\sigma_N=-73.71$ $\sigma_{m,d}=-7.09$ $\tau=162.38$ $\tau_{max}=162.38$ (sfrut=0.11)
 Tensioni: $\sigma_N=-73.71$ $\sigma_{m,d}=-838.02$ $\tau=6.48$ $\sigma_{ID,max}=911.80$ (sfrut=0.35)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3966.66$ $M_y, Ed=-3833.68$ $M_z, Ed=120.64$ $L=1.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.51$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.93$ $M_{cr}=161560.00$ $\lambda_{LT}=0.31$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.52$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=12.15$ Ncr,y=7551630.00 $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.21$ Ncr,z=545637.00 $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.03+0.25+0.05=0.33$
 Verifica ZZ: $0.03+0.20+0.05=0.28$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.02$ (L/9100)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,L}=0.02$ (L/6714)

Asta n. 271 (-1261 -61) - Sez. 7 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=1.30$ - Classe 3
 Sollecitazioni: $N=-3983.10$ $T_z=-6150.01$ $M_y=8556.23$ $T_y=-333.14$ $M_z=-287.86$
 Tensioni: $\sigma_N=-74.02$ $\sigma_{m,d}=-1893.46$ $\tau=0.00$ $\sigma_{max}=-1967.47$ (sfrut=0.75)
 Tensioni: $\sigma_N=-74.02$ $\sigma_{m,d}=-16.93$ $\tau=343.39$ $\tau_{max}=343.39$ (sfrut=0.23)

Tensioni: $\sigma_N = -74.02$ $\sigma_{m,d} = -1893.46$ $\tau = 0.00$ $\sigma_{ID,max} = 1967.47$ (sfrut=0.75)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N_{Ed} = -3988.54$ $M_{y,Ed} = 8556.23$ $M_{z,Ed} = -287.86$ $L = 1.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.75$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.67$ $M_{cr} = 107478.00$ $\lambda_{LT} = 0.38$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.55$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 14.00$ $N_{cr,y} = 5687190.00$ $\lambda^*_y = 0.16$ Curva a: $\Phi_y = 0.51$ $\chi_y = 1.00$
 $\lambda_z = 52.10$ $N_{cr,z} = 410924.00$ $\lambda^*_z = 0.60$ Curva b: $\Phi_z = 0.75$ $\chi_z = 0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.03 + 0.56 + 0.13 = 0.72$
 Verifica ZZ: $0.03 + 0.45 + 0.13 = 0.61$

- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g} = 0.06$ (L/2243)

- Verifica freccia massima carichi totali - CC 33
 $f_{z,g} = 0.08$ (L/1620)

Asta n. 280 (75 -2410) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_1 = 0.42$ - Classe 1
 Sollecitazioni: $T_y = -54.07$
 $V_{Ed} = -54.07$ $V_c, R_d = 54683.30$ $V_{Ed}/V_c, R_d = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_1 = 0.42$ - Classe 1
 Sollecitazioni: $T_z = -371.31$
 $V_{Ed} = -371.31$ $V_c, R_d = 38836.40$ $V_{Ed}/V_c, R_d = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_1 = 1.66$ - Classe 3
 Sollecitazioni: $N = 202.09$ $T_z = 266.76$ $M_y = -133.84$ $T_y = -269.30$ $M_z = -280.44$ $M_x = 4.24$
 Tensioni: $\sigma_N = 3.76$ $\sigma_{m,d} = 372.38$ $\tau = 25.16$ $\sigma_{max} = 376.13$ (sfrut=0.14)
 Tensioni: $\sigma_N = 3.76$ $\sigma_{m,d} = 3.42$ $\tau = 32.97$ $\tau_{max} = 32.97$ (sfrut=0.02)
 Tensioni: $\sigma_N = 3.76$ $\sigma_{m,d} = 372.38$ $\tau = 25.16$ $\sigma_{ID,max} = 378.65$ (sfrut=0.14)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
 Sollecitazioni: $M_{y,Ed} = 281.55$ $M_{z,Ed} = -280.44$ $L = 1.66$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.66$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 2.32$ $M_{cr} = 162335.00$ $\lambda_{LT} = 0.31$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.52$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 13.36$ $N_{cr,y} = 6248550.00$ $\lambda^*_y = 0.15$ Curva a: $\Phi_y = 0.51$ $\chi_y = 1.00$
 $\lambda_z = 49.70$ $N_{cr,z} = 451484.00$ $\lambda^*_z = 0.57$ Curva b: $\Phi_z = 0.73$ $\chi_z = 0.85$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00 + 0.02 + 0.13 = 0.14$
 Verifica ZZ: $0.00 + 0.01 + 0.13 = 0.14$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g} = 0.00$ (L/44752)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g} = 0.00$ (L/46196)

Asta n. 280 (-2410 -2409) - Sez. 7 (IPE300) - Crit. 1

- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_1 = 0.68$ - Classe 3
 Sollecitazioni: $N = 159.48$ $T_z = -675.03$ $M_y = 401.77$ $T_y = 1099.59$ $M_z = 451.81$ $M_x = -9.46$
 Tensioni: $\sigma_N = 2.96$ $\sigma_{m,d} = 633.35$ $\tau = 56.14$ $\sigma_{max} = 636.32$ (sfrut=0.24)
 Tensioni: $\sigma_N = 2.96$ $\sigma_{m,d} = -33.20$ $\tau = 84.20$ $\tau_{max} = 84.20$ (sfrut=0.06)
 Tensioni: $\sigma_N = 2.96$ $\sigma_{m,d} = 633.35$ $\tau = 56.14$ $\sigma_{ID,max} = 643.71$ (sfrut=0.25)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $M_{y,Ed} = 401.77$ $M_{z,Ed} = 451.81$ $L = 0.90$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 0.90$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.87$ $M_{cr} = 423494.00$ $\lambda_{LT} = 0.19$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.48$ $\beta_{LT} = 0.75$ $f = 0.99$ $\chi_{LT} = 1.00$
 $\lambda_y = 7.24$ $N_{cr,y} = 21257400.00$ $\lambda^*_y = 0.08$ Curva a: $\Phi_y = 0.49$ $\chi_y = 1.00$
 $\lambda_z = 26.95$ $N_{cr,z} = 1535940.00$ $\lambda^*_z = 0.31$ Curva b: $\Phi_z = 0.57$ $\chi_z = 0.96$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00 + 0.03 + 0.20 = 0.23$
 Verifica ZZ: $0.00 + 0.02 + 0.20 = 0.22$

- Verifica freccia massima per soli carichi accidentali - CC 21
 $f_{z,g} = 0.00$

- Verifica freccia massima carichi totali - CC 21
 $f_{z,g} = 0.00$ (L/39513)

Asta n. 280 (-2409 -2408) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 3 SLV $X_l=0.61$ - Classe 1
Sollecitazioni: $T_y=-108.47$ $M_x=4.65$
 $V, Ed=-108.47$ $V_c, Rd, Red=54282.60$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.24] - CC 3 SLV $X_l=0.61$ - Classe 1
Sollecitazioni: $T_z=614.79$ $M_x=4.65$
 $V, Ed=614.79$ $V_c, Rd, Red=38551.80$ $V, Ed/V_c, Rd, Red=0.02$
 - Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_l=0.22$ - Classe 3
Sollecitazioni: $N=-1337.16$ $T_z=2586.96$ $M_y=2930.21$ $T_y=-491.91$ $M_z=123.81$ $M_x=24.31$
Tensioni: $\sigma_N=-24.85$ $\sigma_{m,d}=-679.78$ $\tau=144.29$ $\sigma_{max}=-704.63$ (sfrut=0.27)
Tensioni: $\sigma_N=-24.85$ $\sigma_{m,d}=7.28$ $\tau=205.36$ $\tau_{max}=205.36$ (sfrut=0.14)
Tensioni: $\sigma_N=-24.85$ $\sigma_{m,d}=-679.78$ $\tau=144.29$ $\sigma_{ID,max}=747.64$ (sfrut=0.29)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
Sollecitazioni: $N, Ed=-1337.16$ $M_y, Ed=2930.21$ $M_z, Ed=123.81$ $L=0.61$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.61$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.19$ $M_{cr}=579661.00$ $\lambda_{LT}=0.16$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.47$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=4.91$ $N_{cr,y}=46273800.00$ $\lambda^*_y=0.06$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=18.26$ $N_{cr,z}=3343470.00$ $\lambda^*_z=0.21$ Curva b: $\Phi_z=0.52$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.19+0.06=0.26$
Verifica ZZ: $0.01+0.15+0.06=0.22$
 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L}=0.00$ (L/9789)
 - Verifica freccia massima carichi totali - CC 33
 $f_{z,G}=0.01$ (L/6660)

Asta n. 280 (-2408 -2407) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 1 SLV $X_l=0.42$ - Classe 1
Sollecitazioni: $T_y=-30.89$
 $V, Ed=-30.89$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.42$ - Classe 1
Sollecitazioni: $T_z=440.11$
 $V, Ed=440.11$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-1297.45$ $T_z=1639.69$ $M_y=1931.57$ $T_y=-20.75$ $M_z=-47.57$
Tensioni: $\sigma_N=-24.11$ $\sigma_{m,d}=-405.82$ $\tau=0.00$ $\sigma_{max}=-429.93$ (sfrut=0.16)
Tensioni: $\sigma_N=-24.11$ $\sigma_{m,d}=-2.80$ $\tau=91.55$ $\tau_{max}=91.55$ (sfrut=0.06)
Tensioni: $\sigma_N=-24.11$ $\sigma_{m,d}=-405.82$ $\tau=0.00$ $\sigma_{ID,max}=429.93$ (sfrut=0.16)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: $N, Ed=-1284.18$ $M_y, Ed=1971.86$ $M_z, Ed=-76.43$ $L=1.52$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.52$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.07$ $M_{cr}=171053.00$ $\lambda_{LT}=0.30$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.52$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=12.23$ $N_{cr,y}=7452600.00$ $\lambda^*_y=0.14$ Curva a: $\Phi_y=0.50$ $\chi_y=1.00$
 $\lambda_z=45.51$ $N_{cr,z}=538482.00$ $\lambda^*_z=0.52$ Curva b: $\Phi_z=0.69$ $\chi_z=0.87$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.13+0.03=0.17$
Verifica ZZ: $0.01+0.10+0.03=0.15$
 - Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,G}=0.01$ (L/19734)
 - Verifica freccia massima carichi totali - CC 32
 $f_{z,G}=0.01$ (L/14021)

Asta n. 280 (-2407 -2406) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=0.69$ - Classe 1
Sollecitazioni: $T_y=73.80$
 $V, Ed=73.80$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 5 SLV $X_l=0.69$ - Classe 1
Sollecitazioni: $T_z=196.87$
 $V, Ed=196.87$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_l=1.51$ - Classe 3
Sollecitazioni: $N=-1262.77$ $T_z=600.82$ $M_y=-1477.17$ $T_y=152.42$ $M_z=138.84$
Tensioni: $\sigma_N=-23.47$ $\sigma_{m,d}=-437.62$ $\tau=0.00$ $\sigma_{max}=-461.09$ (sfrut=0.18)
Tensioni: $\sigma_N=-23.47$ $\sigma_{m,d}=8.16$ $\tau=33.55$ $\tau_{max}=33.55$ (sfrut=0.02)

- Tensioni: $\sigma_N = -23.47$ $\sigma_{m,d} = -437.62$ $\tau = 0.00$ $\sigma_{ID,max} = 461.09$ (sfrut=0.18)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
Sollecitazioni: N, Ed=-1269.12 My, Ed=-1477.17 Mz, Ed=138.84 L=1.51
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.51$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.43$ M, cr=119377.00 $\lambda_{LT} = 0.36$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.54$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 12.15$ Ncr, y=7551650.00 $\lambda^*_y = 0.14$ Curva a: $\Phi_y = 0.50$ $\chi_y = 1.00$
 $\lambda_z = 45.21$ Ncr, z=545638.00 $\lambda^*_z = 0.52$ Curva b: $\Phi_z = 0.69$ $\chi_z = 0.87$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.01+0.10+0.06=0.17
Verifica ZZ: 0.01+0.08+0.06=0.15
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L} = 0.01$ (L/20101)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,L} = 0.01$ (L/12963)
- Asta n. 280 (-2406 -2405) - Sez. 7 (IPE300) - Crit. 1
-
- Verifica in termini tensionali [4.2.4] - CC 29 SLU Xl=0.00 - Classe 3
Sollecitazioni: N=-1211.44 Tz=-148.40 My=-1567.36 Ty=-64.13 Mz=127.11 Mx=-1.80
Tensioni: $\sigma_N = -22.51$ $\sigma_{m,d} = -439.24$ $\tau = 10.69$ $\sigma_{max} = -461.75$ (sfrut=0.18)
Tensioni: $\sigma_N = -22.51$ $\sigma_{m,d} = -240.62$ $\tau = 13.82$ $\tau_{max} = 13.82$ (sfrut=0.01)
Tensioni: $\sigma_N = -22.51$ $\sigma_{m,d} = -439.24$ $\tau = 10.69$ $\sigma_{ID,max} = 462.12$ (sfrut=0.18)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: N, Ed=-1211.44 My, Ed=-1567.36 Mz, Ed=127.11 L=1.52
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.52$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.09$ M, cr=90382.40 $\lambda_{LT} = 0.41$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.57$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 12.23$ Ncr, y=7452600.00 $\lambda^*_y = 0.14$ Curva a: $\Phi_y = 0.50$ $\chi_y = 1.00$
 $\lambda_z = 45.51$ Ncr, z=538482.00 $\lambda^*_z = 0.52$ Curva b: $\Phi_z = 0.69$ $\chi_z = 0.87$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.01+0.10+0.06=0.17
Verifica ZZ: 0.01+0.08+0.06=0.15
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L} = 0.01$ (L/13900)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,L} = 0.02$ (L/9134)
- Asta n. 280 (-2405 -2404) - Sez. 7 (IPE300) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 18 SLU Xl=0.69 - Classe 1
Sollecitazioni: Ty=-103.27 Mx=-1.55
V, Ed=-103.27 Vc, Rd, Red=54550.10 V, Ed/Vc, Rd, Red=0.00
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 18 SLU Xl=0.69 - Classe 1
Sollecitazioni: Tz=-741.86 Mx=-1.55
V, Ed=-741.86 Vc, Rd, Red=38741.80 V, Ed/Vc, Rd, Red=0.02
- Verifica in termini tensionali [4.2.4] - CC 29 SLU Xl=0.00 - Classe 3
Sollecitazioni: N=-1131.37 Tz=-913.57 My=-1277.00 Ty=-127.56 Mz=88.82 Mx=-2.18
Tensioni: $\sigma_N = -21.02$ $\sigma_{m,d} = -339.55$ $\tau = 12.96$ $\sigma_{max} = -360.58$ (sfrut=0.14)
Tensioni: $\sigma_N = -21.02$ $\sigma_{m,d} = -5.22$ $\tau = 52.74$ $\tau_{max} = 52.74$ (sfrut=0.03)
Tensioni: $\sigma_N = -21.02$ $\sigma_{m,d} = -339.55$ $\tau = 12.96$ $\sigma_{ID,max} = 361.28$ (sfrut=0.14)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
Sollecitazioni: N, Ed=-1131.37 My, Ed=-1277.00 Mz, Ed=-104.36 L=1.51
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $L_{cr} = 1.51$ Curva b: $\alpha_{imp} = 0.34$ $k_c = 0.94$ $\psi = 1.89$ M, cr=158552.00 $\lambda_{LT} = 0.31$
 $\lambda_{LT,0} = 0.40$ $\Phi_{LT} = 0.52$ $\beta_{LT} = 0.75$ $f = 0.98$ $\chi_{LT} = 1.00$
 $\lambda_y = 12.15$ Ncr, y=7551640.00 $\lambda^*_y = 0.14$ Curva a: $\Phi_y = 0.50$ $\chi_y = 1.00$
 $\lambda_z = 45.21$ Ncr, z=545638.00 $\lambda^*_z = 0.52$ Curva b: $\Phi_z = 0.69$ $\chi_z = 0.87$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.01+0.08+0.05=0.14
Verifica ZZ: 0.01+0.07+0.05=0.12
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,L} = 0.01$ (L/29961)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,L} = 0.01$ (L/19248)
- Asta n. 280 (-2404 -63) - Sez. 7 (IPE300) - Crit. 1

-
- Verifica a taglio Dir. Z [4.2.16] - CC 5 SLV $X_l=0.24$ - Classe 1
 Sollecitazioni: $T_z=-292.42$
 $V, Ed=-292.42$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$
- Verifica in termini tensionali [4.2.4] - CC 29 SLU $X_l=1.30$ - Classe 3
 Sollecitazioni: $N=-1031.95$ $T_z=-1713.03$ $M_y=2344.63$ $T_y=14.31$ $M_z=-21.17$ $M_x=-2.60$
 Tensioni: $\sigma_N=-19.18$ $\sigma_{m,d}=-447.17$ $\tau=15.42$ $\sigma_{max}=-466.35$ (sfrut=0.18)
 Tensioni: $\sigma_N=-19.18$ $\sigma_{m,d}=-1.24$ $\tau=96.89$ $\tau_{max}=96.89$ (sfrut=0.06)
 Tensioni: $\sigma_N=-19.18$ $\sigma_{m,d}=-447.17$ $\tau=15.42$ $\sigma_{ID,max}=467.11$ (sfrut=0.18)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 29 SLU - Classe 3
 Sollecitazioni: $N, Ed=-1037.38$ $M_y, Ed=2344.63$ $M_z, Ed=-39.72$ $L=1.75$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=1.75$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.68$ $M_{cr}=107550.00$ $\lambda_{LT}=0.38$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.55$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=14.00$ $N_{cr,y}=5687190.00$ $\lambda^*_y=0.16$ Curva a: $\Phi_y=0.51$ $\chi_y=1.00$
 $\lambda_z=52.10$ $N_{cr,z}=410924.00$ $\lambda^*_z=0.60$ Curva b: $\Phi_z=0.75$ $\chi_z=0.84$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.15+0.02=0.18$
 Verifica ZZ: $0.01+0.12+0.02=0.15$
- Verifica freccia massima per soli carichi accidentali - CC 33
 $f_{z,g}=0.02$ (L/8189)
- Verifica freccia massima carichi totali - CC 33
 $f_{z,g}=0.02$ (L/5760)
- Asta n. 293 (-78 -1975) - Sez. 7 (IPE300) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 5 SLV $X_l=0.15$ - Classe 1
 Sollecitazioni: $T_y=-28.86$ $M_x=3.82$
 $V, Ed=-28.86$ $V_c, Rd, Red=54354.10$ $V, Ed/V_c, Rd, Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 5 SLV $X_l=0.15$ - Classe 1
 Sollecitazioni: $T_z=407.45$ $M_x=3.82$
 $V, Ed=407.45$ $V_c, Rd, Red=38602.60$ $V, Ed/V_c, Rd, Red=0.01$
- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=0.15$ - Classe 3
 Sollecitazioni: $N=-2337.25$ $T_z=1136.86$ $M_y=1386.87$ $T_y=-2423.20$ $M_z=576.00$ $M_x=13.73$
 Tensioni: $\sigma_N=-43.43$ $\sigma_{m,d}=-964.45$ $\tau=81.51$ $\sigma_{max}=-1007.88$ (sfrut=0.38)
 Tensioni: $\sigma_N=-43.43$ $\sigma_{m,d}=-172.43$ $\tau=140.29$ $\tau_{max}=140.29$ (sfrut=0.09)
 Tensioni: $\sigma_N=-43.43$ $\sigma_{m,d}=-964.45$ $\tau=81.51$ $\sigma_{ID,max}=1017.72$ (sfrut=0.39)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-2337.25$ $M_y, Ed=1386.87$ $M_z, Ed=576.00$ $L=0.57$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.57$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.18$ $M_{cr}=663392.00$ $\lambda_{LT}=0.15$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.47$ $\beta_{LT}=0.75$ $f=1.00$ $\chi_{LT}=1.00$
 $\lambda_y=4.57$ $N_{cr,y}=53307100.00$ $\lambda^*_y=0.05$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=17.02$ $N_{cr,z}=3851660.00$ $\lambda^*_z=0.20$ Curva b: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.02+0.09+0.26=0.37$
 Verifica ZZ: $0.02+0.07+0.26=0.35$
- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,g}=0.00$ (L/22020)
- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.00$ (L/14680)
- Asta n. 293 (75 -78) - Sez. 7 (IPE300) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.83$ - Classe 1
 Sollecitazioni: $T_y=40.07$
 $V, Ed=40.07$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.83$ - Classe 1
 Sollecitazioni: $T_z=863.12$
 $V, Ed=863.12$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.02$
- Verifica in termini tensionali [4.2.4] - CC 28 SLU $X_l=0.30$ - Classe 3
 Sollecitazioni: $N=-766.94$ $T_z=973.39$ $M_y=1358.77$ $T_y=80.47$ $M_z=-83.47$ $M_x=-1.14$
 Tensioni: $\sigma_N=-14.25$ $\sigma_{m,d}=-347.60$ $\tau=6.75$ $\sigma_{max}=-361.85$ (sfrut=0.14)
 Tensioni: $\sigma_N=-14.25$ $\sigma_{m,d}=-4.91$ $\tau=54.80$ $\tau_{max}=54.80$ (sfrut=0.04)
 Tensioni: $\sigma_N=-14.25$ $\sigma_{m,d}=-347.60$ $\tau=6.75$ $\sigma_{ID,max}=362.04$ (sfrut=0.14)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 28 SLU - Classe 3
 Sollecitazioni: $N, Ed=-766.94$ $M_y, Ed=1358.77$ $M_z, Ed=153.11$ $L=3.39$

$\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=3.39$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=2.11$ $M_{cr}=42478.40$ $\lambda_{LT}=0.60$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.67$ $\beta_{LT}=0.75$ $f=0.97$ $\chi_{LT}=0.94$
 $\lambda_y=27.20$ $N_{cr,y}=1507080.00$ $\lambda^*_y=0.31$ Curva a: $\Phi_y=0.56$ $\chi_y=0.97$
 $\lambda_z=101.21$ $N_{cr,z}=108893.00$ $\lambda^*_z=1.17$ Curva b: $\Phi_z=1.34$ $\chi_z=0.50$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.96, 0.76, 0.96$
 Verifica YY: $0.01+0.09+0.07=0.17$
 Verifica ZZ: $0.01+0.08+0.07=0.15$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.02$ (L/15728)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.02$ (L/12430)

Asta n. 310 (-2428 -103) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 18 SLU $X_1=2.05$ - Classe 1
 Sollecitazioni: $T_y=18.40$
 $V, Ed=18.40$ $V_c, Rd=54683.30$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 18 SLU $X_1=2.05$ - Classe 1
 Sollecitazioni: $T_z=-507.66$
 $V, Ed=-507.66$ $V_c, Rd=38836.40$ $V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-340.78$ $T_z=-235.27$ $M_y=-1128.02$ $T_y=29.10$ $M_z=-60.25$ $M_x=1.18$
 Tensioni: $\sigma_N=-6.33$ $\sigma_{m,d}=-277.33$ $\tau=7.01$ $\sigma_{max}=-283.66$ (sfrut=0.11)
 Tensioni: $\sigma_N=-6.33$ $\sigma_{m,d}=3.54$ $\tau=14.93$ $\tau_{max}=14.93$ (sfrut=0.01)
 Tensioni: $\sigma_N=-6.33$ $\sigma_{m,d}=-277.33$ $\tau=7.01$ $\sigma_{ID,max}=283.92$ (sfrut=0.11)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-340.78$ $M_y, Ed=-1128.02$ $M_z, Ed=-60.25$ $L=2.25$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=2.25$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.76$ $M_{cr}=70934.40$ $\lambda_{LT}=0.46$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.59$ $\beta_{LT}=0.75$ $f=0.98$ $\chi_{LT}=1.00$
 $\lambda_y=18.07$ $N_{cr,y}=3414200.00$ $\lambda^*_y=0.21$ Curva a: $\Phi_y=0.52$ $\chi_y=1.00$
 $\lambda_z=67.24$ $N_{cr,z}=246690.00$ $\lambda^*_z=0.77$ Curva b: $\Phi_z=0.90$ $\chi_z=0.74$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.07+0.03=0.10$
 Verifica ZZ: $0.00+0.06+0.03=0.09$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.01$ (L/16869)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.02$ (L/12765)

Asta n. 310 (-2429 -2428) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.24] - CC 1 SLV $X_1=0.10$ - Classe 1
 Sollecitazioni: $T_y=10.00$ $M_x=-1.42$
 $V, Ed=10.00$ $V_c, Rd, Red=54561.40$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 1 SLV $X_1=0.10$ - Classe 1
 Sollecitazioni: $T_z=123.68$ $M_x=-1.42$
 $V, Ed=123.68$ $V_c, Rd, Red=38749.80$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-734.37$ $T_z=-20.17$ $M_y=-1187.66$ $T_y=-334.14$ $M_z=92.31$ $M_x=-3.62$
 Tensioni: $\sigma_N=-13.65$ $\sigma_{m,d}=-327.85$ $\tau=21.50$ $\sigma_{max}=-341.50$ (sfrut=0.13)
 Tensioni: $\sigma_N=-13.65$ $\sigma_{m,d}=-182.09$ $\tau=28.19$ $\tau_{max}=28.19$ (sfrut=0.02)
 Tensioni: $\sigma_N=-13.65$ $\sigma_{m,d}=-327.85$ $\tau=21.50$ $\sigma_{ID,max}=343.52$ (sfrut=0.13)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-734.37$ $M_y, Ed=-1187.66$ $M_z, Ed=92.31$ $L=0.51$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.51$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.02$ $M_{cr}=720125.00$ $\lambda_{LT}=0.15$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.46$ $\beta_{LT}=0.75$ $f=1.00$ $\chi_{LT}=1.00$
 $\lambda_y=4.08$ $N_{cr,y}=67107400.00$ $\lambda^*_y=0.05$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=15.17$ $N_{cr,z}=4848790.00$ $\lambda^*_z=0.17$ Curva b: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.08+0.04=0.12$
 Verifica ZZ: $0.01+0.06+0.04=0.11$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$ (L/40976)

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/33293)

Asta n. 310 (-72 -2429) - Sez. 7 (IPE300) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.24] - CC 11 SLV $X_1=0.41$ - Classe 1
Sollecitazioni: $T_z=167.18$ $M_x=1.24$
 $V, Ed=167.18$ $V_c, Rd, Red=38760.90$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_1=0.41$ - Classe 3
Sollecitazioni: $N=-664.13$ $T_z=109.48$ $M_y=-1176.78$ $T_y=-397.69$ $M_z=196.71$ $M_x=2.03$
Tensioni: $\sigma_N=-12.34$ $\sigma_{m,d}=-455.58$ $\tau=12.04$ $\sigma_{max}=-467.93$ (sfrut=0.18)
Tensioni: $\sigma_N=-12.34$ $\sigma_{m,d}=186.61$ $\tau=20.63$ $\tau_{max}=20.63$ (sfrut=0.01)
Tensioni: $\sigma_N=-12.34$ $\sigma_{m,d}=-455.58$ $\tau=12.04$ $\sigma_{ID,max}=468.39$ (sfrut=0.18)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-664.13$ $M_y, Ed=-1192.91$ $M_z, Ed=196.71$ $L=0.70$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $L_{cr}=0.70$ Curva b: $\alpha_{imp}=0.34$ $k_c=0.94$ $\psi=1.01$ $M_{cr}=372297.00$ $\lambda_{LT}=0.20$
 $\lambda_{LT,0}=0.40$ $\Phi_{LT}=0.48$ $\beta_{LT}=0.75$ $f=0.99$ $\chi_{LT}=1.00$
 $\lambda_y=5.65$ $N_{cr,y}=34979900.00$ $\lambda'_y=0.07$ Curva a: $\Phi_y=0.49$ $\chi_y=1.00$
 $\lambda_z=21.01$ $N_{cr,z}=2527450.00$ $\lambda'_z=0.24$ Curva b: $\Phi_z=0.54$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.08+0.09=0.17$
Verifica ZZ: $0.00+0.06+0.09=0.16$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$ (L/17307)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/17307)

Verifiche e armature pareti

Simbologia

Δ_{sm} = Distanza media tra le fessure
 Φ_{eq} = Diametro equivalente delle barre
 ϵ_{sm} = Deformazione unitaria media dell'armatura (*1000)
 σ_c = Tensione nel calcestruzzo
 σ_f = Tensione nel ferro
 σ_s = Tensione nell'acciaio nella sezione fessurata
 $A_{c\ eff}$ = Area di calcestruzzo efficace
 A_s = Area complessiva dei ferri nell'area di calcestruzzo efficace
CC = Numero della combinazione delle condizioni di carico elementari
Cf = Copriferro
Cls = Tipo di calcestruzzo
Fcd = Resistenza di calcolo a compressione del calcestruzzo
Fck = Resistenza caratteristica cilindrica a compressione del calcestruzzo
Fctd = Resistenza di calcolo a trazione del calcestruzzo
Fctk = Resistenza caratteristica a trazione del calcestruzzo
Fyd = Resistenza di calcolo dell'acciaio
Fyk = Tensione caratteristica di snervamento dell'acciaio
 K_2 = Coefficiente per distribuzione deformazioni
 M'_{ydy} = Momento resistente massimo in campo sostanzialmente elastico intorno all'asse Y
 MR_{dy} = Momento resistente allo stato limite ultimo intorno all'asse Y
My = Momento flettente intorno all'asse Y
N = Sforzo normale
Nu = Sforzo normale ultimo
Sez. = Sezione di verifica
Sic. = Sicurezza
Spess. = Spessore
TCC = Tipo di combinazione di carico
SLU = Stato limite ultimo
SLE R = Stato limite d'esercizio, combinazione rara
SLE F = Stato limite d'esercizio, combinazione frequente
SLE Q = Stato limite d'esercizio, combinazione quasi permanente
SLD = Stato limite di danno
SLV = Stato limite di salvaguardia della vita
SLU I = Stato limite di resistenza al fuoco
SND = Stato limite di salvaguardia della vita (non dissipativo)
Tp = Tipo di acciaio
Ty = Taglio in dir. Y
VRcd = Taglio ultimo lato calcestruzzo
VRsd = Taglio ultimo lato armatura
Vrdu = Taglio ultimo resistente
Vsdu = Taglio agente nella direzione del momento ultimo
Wk = Ampiezza caratteristica delle fessure
Xf = Coordinata X finale

Xi = Coordinata X iniziale
Xv = Coordinata X di verifica
Zona = Zona di verifica
Zv = Coordinata Z di verifica
c = Ricoprimento dell'armatura
s = Distanza massima tra le barre

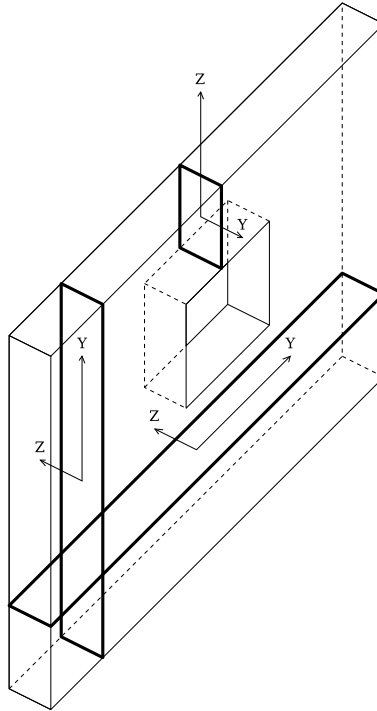


Figura numero 1: Riferimenti sezione

Parete n. 113

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Spess.	Cf	Cls	Fck	Fctk	Fcd	Fctd	Tp	Fyk	Fyd
	<cm>	<cm>		<daN/cm²>	<daN/cm²>	<daN/cm²>	<daN/cm²>		<daN/cm²>	<daN/cm²>
Oriz.	25.00	5.30	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Verifiche su sezioni orizzontali

Stato limite ultimo - Verifiche a flessione/pressoflessione

CC	TCC	Zona	Zv	Xi	Xf	N	My	Nu	MRdy	Sic.
			<m>	<m>	<m>	<daN>	<daNm>	<daN>	<daNm>	
1	SLV	Diff.	0.00	0.00	2.16	133361.00	-3405.20	133361.00	-6380.80	1.874
9	SLV	Diff.	1.50	0.00	2.16	-109252.00	-765.38	-761940.00	-25612.90	6.974
27	SLU	Diff.	3.00	0.00	2.16	-2595.40	-3283.38	-2595.40	-17674.00	5.383
1	SLV	Diff.	4.50	0.00	2.16	16762.80	1531.69	16762.80	16177.70	10.562
17	SLU	Diff.	6.00	0.00	2.16	-4345.98	-830.92	-4345.98	-17808.80	21.433
1	SLV	Diff.	7.50	0.00	2.16	-150.18	-1305.43	-150.18	-17485.60	13.395

Stato limite d'esercizio - Verifiche tensionali

CC	TCC	Zona	Zv <m>	Xi <m>	Xf <m>	N <daN>	My <daNm>	σ _c <daN/cmq>	σ _f <daN/cmq>
20	SLE R	Diff.	0.00	0.00	2.16	-4203.29	2847.61	21.82	591.53
31	SLE R	Diff.	0.00	0.00	2.16	2528.22	2355.79	18.04	619.49
26	SLE Q	Diff.	0.00	0.00	2.16	-3665.05	-357.32	2.48	22.36
31	SLE R	Diff.	1.50	0.00	2.16	302.13	-721.56	5.54	179.38
32	SLE R	Diff.	1.50	0.00	2.16	3828.01	-588.42	4.25	226.63
26	SLE Q	Diff.	1.50	0.00	2.16	-4154.62	-104.03	1.09	13.70
31	SLE R	Diff.	3.00	0.00	2.16	-2566.08	-2194.08	16.83	470.11
26	SLE Q	Diff.	3.00	0.00	2.16	-5310.17	-56.79	1.09	14.93
31	SLE R	Diff.	4.50	0.00	2.16	-7525.93	1196.88	8.80	133.93
26	SLE Q	Diff.	4.50	0.00	2.16	-7862.88	647.25	4.41	43.21
20	SLE R	Diff.	6.00	0.00	2.16	-3325.74	-569.14	4.21	68.32
31	SLE R	Diff.	6.00	0.00	2.16	-3094.16	-554.81	4.12	69.35
26	SLE Q	Diff.	6.00	0.00	2.16	-3273.75	-174.35	1.24	14.02
20	SLE R	Diff.	7.50	0.00	2.16	-1525.84	-243.83	1.79	27.42
26	SLE Q	Diff.	7.50	0.00	2.16	-1421.35	-116.57	0.79	7.79

Stato limite d'esercizio - Verifiche a fessurazione

CC	TCC	Zona	Zv <m>	Xi <m>	Xf <m>	N <daN>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	W _k <mm>
23	SLE F	Diff.	0.00	0.00	2.16	-4029.46	1257.39	45.00	186.73	0.50	16.00	171.83	24.13	1234.04	215.84	0.06	0.02
23	SLE F	Diff.	3.00	0.00	2.16	-5522.76	-1113.80	45.00	186.73	0.50	16.00	166.99	24.13	1160.92	152.33	0.04	0.01

Parete n. 114

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Spess. <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
Oriz.	25.00	5.30	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Verifiche su sezioni orizzontali

Stato limite ultimo - Verifiche a flessione/pressoflessione

CC	TCC	Zona	Zv <m>	Xi <m>	Xf <m>	N <daN>	My <daNm>	Nu <daN>	MRdy <daNm>	Sic.
27	SLU	Diff.	0.00	0.00	2.16	-54183.20	-5663.83	-54183.20	-21600.30	3.814
5	SLV	Diff.	1.50	0.00	2.16	-87857.60	-551.90	-761940.00	-24084.30	8.672
17	SLU	Diff.	3.00	0.00	2.16	-23941.40	3013.83	-23941.40	19312.60	6.408
17	SLU	Diff.	4.50	0.00	2.16	-22822.50	-1039.53	-22822.50	-19226.80	18.496
27	SLU	Diff.	6.00	0.00	2.16	-4447.24	800.39	-4447.24	17816.50	22.260
5	SLV	Diff.	7.50	0.00	2.16	267.42	-1224.33	267.42	-17453.20	14.255

Stato limite d'esercizio - Verifiche tensionali

CC	TCC	Zona	Zv <m>	Xi <m>	Xf <m>	N <daN>	My <daNm>	σ _s <daN/cmq>	σ _f <daN/cmq>
31	SLE R	Diff.	0.00	0.00	2.16	-38341.90	-3785.64	26.32	235.75
20	SLE R	Diff.	0.00	0.00	2.16	-20703.90	-3319.94	24.43	374.60
26	SLE Q	Diff.	0.00	0.00	2.16	-20079.00	-100.24	3.67	52.58
32	SLE R	Diff.	1.50	0.00	2.16	-41941.80	146.78	7.42	107.71
20	SLE R	Diff.	1.50	0.00	2.16	-19097.10	539.10	5.23	65.04
26	SLE Q	Diff.	1.50	0.00	2.16	-18741.90	28.33	3.17	46.87
20	SLE R	Diff.	3.00	0.00	2.16	-17772.40	2001.47	14.17	138.28
26	SLE Q	Diff.	3.00	0.00	2.16	-17637.30	-103.56	3.29	46.71
31	SLE R	Diff.	4.50	0.00	2.16	-20591.30	-622.46	5.80	71.53
20	SLE R	Diff.	4.50	0.00	2.16	-16909.70	-717.99	5.58	65.75
26	SLE Q	Diff.	4.50	0.00	2.16	-16916.50	-320.30	4.02	52.29
31	SLE R	Diff.	6.00	0.00	2.16	-3372.37	546.32	4.02	62.27
20	SLE R	Diff.	6.00	0.00	2.16	-3057.61	531.09	3.93	64.60
26	SLE Q	Diff.	6.00	0.00	2.16	-2992.09	145.57	1.07	12.29
32	SLE R	Diff.	7.50	0.00	2.16	-1509.73	233.84	1.72	25.46
26	SLE Q	Diff.	7.50	0.00	2.16	-1011.30	-191.06	1.42	24.91

Stato limite d'esercizio - Verifiche a fessurazione

CC	TCC	Zona	Zv <m>	Xi <m>	Xf <m>	N <daN>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	W _k <mm>
26	SLE Q	Diff.	7.50	0.00	2.16	-1011.30	-191.06	45.00	186.73	0.50	16.00	165.96	24.13	1145.39	24.91	0.01	0.00
25	SLE F	Diff.	7.50	0.00	2.16	-1001.97	-203.47	45.00	186.73	0.50	16.00	167.09	24.13	1162.47	27.96	0.01	0.00

Parete n. 115

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Spess. <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
Oriz.	25.00	5.30	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Verifiche su sezioni orizzontali

Stato limite ultimo - Verifiche a flessione/pressoflessione

CC	TCC	Zona	Zv <m>	Xi <m>	Xf <m>	N <daN>	My <daNm>	Nu <daN>	MRdy <daNm>	Sic.
27	SLU	Diff.	0.00	0.00	2.06	-14626.60	-9100.79	-14626.60	-17267.10	1.897
9	SLV	Diff.	1.50	0.00	2.06	-117437.00	-495.38	-726666.00	-24844.70	6.188
27	SLU	Diff.	3.00	0.00	2.06	-7507.76	6045.90	-7507.76	16718.80	2.765
9	SLV	Diff.	4.50	0.00	2.06	-36189.60	61.23	-726666.00	18918.20	20.079
27	SLU	Diff.	6.00	0.00	2.06	-2697.18	1020.63	-2697.18	16347.50	16.017
1	SLV	Diff.	7.50	0.00	2.06	-670.25	332.45	-670.25	16190.80	48.702

Stato limite d'esercizio - Verifiche tensionali

CC	TCC	Zona	Zv <m>	Xi <m>	Xf <m>	N <daN>	My <daNm>	σ _s <daN/cmq>	σ _f <daN/cmq>
20	SLE R	Diff.	0.00	0.00	2.06	-23098.30	-6377.99	51.43	1130.01
31	SLE R	Diff.	0.00	0.00	2.06	-12212.90	-6100.02	49.74	1303.59
26	SLE Q	Diff.	0.00	0.00	2.06	-23732.30	-384.98	5.67	74.97
31	SLE R	Diff.	1.50	0.00	2.06	-9562.98	955.22	7.04	62.40
32	SLE R	Diff.	1.50	0.00	2.06	-3981.46	628.38	4.91	75.53

Relazione di calcolo

26	SLE Q	Diff.	1.50	0.00	2.06	-18598.60	19.74	3.28	48.69
31	SLE R	Diff.	3.00	0.00	2.06	-6355.62	4035.04	32.96	902.07
26	SLE Q	Diff.	3.00	0.00	2.06	-12566.50	49.14	2.36	34.18
31	SLE R	Diff.	4.50	0.00	2.06	-4596.85	-526.15	3.95	40.40
26	SLE Q	Diff.	4.50	0.00	2.06	-7385.08	99.91	1.68	22.62
31	SLE R	Diff.	6.00	0.00	2.06	-2104.94	672.76	5.45	126.57
26	SLE Q	Diff.	6.00	0.00	2.06	-2304.97	-87.77	0.76	9.08
34	SLE R	Diff.	7.50	0.00	2.06	-778.62	100.35	0.77	9.38
26	SLE Q	Diff.	7.50	0.00	2.06	-904.55	250.10	2.02	44.34

Stato limite d'esercizio - Verifiche a fessurazione

CC	TCC	Zona	Zv <m>	Xi <m>	Xf <m>	N <daN>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
26	SLE Q	Diff.	7.50	0.00	2.06	-904.55	250.10	45.00	195.40	0.50	16.00	174.50	22.12	1168.01	44.34	0.01	0.00
25	SLE F	Diff.	7.50	0.00	2.06	-911.30	254.40	45.00	195.40	0.50	16.00	174.59	22.12	1169.31	45.29	0.01	0.00

FONDAZIONI CORPO B

Sommario

Verifiche e armature travi.....	2
Travata n. 401	2
Travata n. 409	4
Travata n. 412	5
Travata n. 415	8
Travata n. 421	9
Travata n. 422	10
Travata n. 423	11
Travata n. 425	12
Travata n. 427	13
Travata n. 430	14
Travata n. 432	16
Travata n. 434	17
Travata n. 443	19
Travata n. 446	20
Travata n. 455	21
Travata n. 457	22
Verifiche e armature solette/platee.....	23
Armatura platea a quota 0.00	24
Fondazioni superficiali.....	25
Verifiche capacità portante	25
Cedimenti	38

Verifiche e armature travi

Simbologia

Δ_{sm}	=Distanza media tra le fessure
Φ_{eq}	=Diametro equivalente delle barre
ϵ_{sm}	=Deformazione unitaria media dell'armatura (*1000)
σ_c	=Tensione nel calcestruzzo
σ_f inf	=Tensione nel ferro - inferiore
σ_f sup	=Tensione nel ferro - superiore
σ_s	=Tensione nell'acciaio nella sezione fessurata
A_c eff	=Area di calcestruzzo efficace
A_s	=Area complessiva dei ferri nell'area di calcestruzzo efficace
AfE I	=Area di ferro effettiva totale presente nel punto di verifica, inferiore
AfE S	=Area di ferro effettiva totale presente nel punto di verifica, superiore
AfE St.	=Area di ferro effettiva della staffatura (d'anima per travi a T o L)
AfEP I	=Area di ferro effettiva parziale presente nella CC considerata, per la sollecitazione indicata, inferiore
AfEP S	=Area di ferro effettiva parziale presente nella CC considerata, per la sollecitazione indicata, superiore
B	=Base
CC	=Combinazione delle condizioni di carico elementari
	c = momento fittizio in campata
	a = momento fittizio agli appoggi
	T = momento traslato per taglio
	e = eccentricità aggiuntiva in caso di compressione o pressoflessione
	TG = taglio da gerarchia delle resistenze
	TGND = taglio non dissipativo limitante la gerarchia
	TG (Li) = taglio da gerarchia delle resistenze, limite inferiore
	TG (Ls) = taglio da gerarchia delle resistenze, limite superiore
Caso	=Caso di verifica
Cf inf	=Copriferro inferiore
Cf sup	=Copriferro superiore
Cls	=Tipo di calcestruzzo
El	=Elemento (asta) in cui viene effettuato il progetto/verifica (progressivo sul numero di aste)
Fcd	=Resistenza di calcolo a compressione del calcestruzzo
Fcd (Inc)	=Resistenza di calcolo a compressione del calcestruzzo per verifica al fuoco
Fck	=Resistenza caratteristica cilindrica a compressione del calcestruzzo
Fctd	=Resistenza di calcolo a trazione del calcestruzzo
Fctk	=Resistenza caratteristica a trazione del calcestruzzo
Fyd	=Resistenza di calcolo dell'acciaio
Fyk	=Tensione caratteristica di snervamento dell'acciaio
H	=Altezza
K ₂	=Coefficiente per distribuzione deformazioni
Lung.	=Lunghezza del tratto di progettazione
M'ydy	=Momento resistente massimo in campo sostanzialmente elastico intorno all'asse Y
MRdy	=Momento resistente allo stato limite ultimo intorno all'asse Y
My	=Momento flettente intorno all'asse Y
Sez.	=Numero della sezione
Sic.	=Sicurezza
Staff.	=Staffatura adottata
TCC	=Tipo di combinazione di carico
	SLU = Stato limite ultimo
	SLE R = Stato limite d'esercizio, combinazione rara
	SLE F = Stato limite d'esercizio, combinazione frequente
	SLE Q = Stato limite d'esercizio, combinazione quasi permanente
	SLD = Stato limite di danno
	SLV = Stato limite di salvaguardia della vita
	SLU I = Stato limite di resistenza al fuoco
	SND = Stato limite di salvaguardia della vita (non dissipativo)
Tipo	=Tipologia
	R = Rettangolare
	Is = I stondata
Tp	=Tipo di acciaio
VRcd	=Taglio ultimo lato calcestruzzo
VRsd	=Taglio ultimo lato armatura
Vrdu	=Taglio ultimo resistente
Vsdu	=Taglio agente nella direzione del momento ultimo
Wk	=Ampiezza caratteristica delle fessure
X	=Coordinata progressiva rispetto al nodo iniziale
X0	=Coordinata progressiva (dal nodo iniziale) dell'inizio del tratto
X1	=Coordinata progressiva (dal nodo iniziale) della fine del tratto
Xg	=Coordinata progressiva (dal primo nodo) in cui viene effettuato il progetto/verifica
bw	=Larghezza membratura resistente al taglio
c	=Ricoprimento dell'armatura
ctg θ	=Cotangente dell'angolo di inclinazione dei puntoni di calcestruzzo
s	=Distanza massima tra le barre

Travata n. 401

Nodi: 1 -523 -524 -525 -526 -527 7 -584 -585 -586 -587 -5 -628 -629 -630 -631 -632 -633 -10 -690 -691 -692 -693 -694 -695 -28 -2041 -2042 -2043 -2044 -2045 -2046 -2047 -2048 -2049 -2050 -2040

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fcd (Inc)	Fctd	Tp	Fyk	Fyd
		<cm>	<cm>	<cm>	<cm>		<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>		<daN/cmq>	<daN/cmq>
	5R	90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	X	AfE S	AfE I	AfEP S	AfEP I	My	MRdy	Sic.
<m>				<cm>	<cmq>	<cmq>	<cmq>	<cmq>	<daNm>	<daNm>	
0.45	27	SLU	1	49.33	14.07	14.07	14.07	14.07	-12811.80	-35450.10	2.767
1.26	27	SLU	2	62.89	14.07	14.07	14.07	14.07	-17940.90	-35450.10	1.976
5.43	30	SLU	6	22.50	14.07	14.07	14.07	14.07	5568.18	35450.10	6.367
5.88	19	SLU	7	68.50	28.15	14.07	28.15	14.07	6051.37	35445.00	5.857
7.48	27	SLU	9	91.00	14.07	28.15	14.07	28.15	-2877.51	-35445.00	12.318
9.98	30	SLU	11	22.50	28.15	14.07	28.15	14.07	22146.00	35445.00	1.601
10.44	19	SLU	12	75.50	14.07	14.07	14.07	14.07	16610.90	35450.10	2.134
13.15	30	SLU	15	98.00	14.07	14.07	14.07	14.07	-12363.30	-35450.10	2.867
16.84	29	SLU	18	22.50	28.15	14.07	28.15	14.07	21874.70	35445.00	1.620

Relazione di calcolo

17.30	19	SLU	19	65.64	14.07	14.07	14.07	14.07	22965.60	35450.10	1.544
19.71	30	SLU	22	88.14	14.07	14.07	14.07	14.07	-9215.54	-35450.10	3.847
23.14	30	SLU	25	9.50	28.15	28.15	28.15	28.15	40908.90	70123.70	1.714
23.59	18	SLU	26	35.50	14.07	14.07	14.07	14.07	21789.00	35450.10	1.627
32.22	30	SLU	35	0.00	14.07	14.07	14.07	14.07	-31023.30	-35450.10	1.143
33.91	19	SLU	36	69.73	14.07	14.07	14.07	14.07	-23177.60	-35450.10	1.530

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.45	1	SLV (E)	1	49.33	14.07	14.07	14.07	14.07	-7425.69	-34082.90	4.590
1.26	5	SLV (E)	2	62.89	14.07	14.07	14.07	14.07	-12452.90	-34082.90	2.737
5.43	5	SLV (E)	6	22.50	14.07	14.07	14.07	14.07	-4242.04	-34082.90	8.035
5.88	5	SLV (E)	7	68.50	28.15	14.07	28.15	14.07	5373.76	34362.70	6.395
7.48	1	SLV (E)	9	91.00	14.07	28.15	14.07	28.15	-1871.09	-34362.60	18.365
9.98	9	SLV (E)	11	22.50	28.15	14.07	28.15	14.07	15854.60	34362.70	2.167
10.44	5	SLV (E)	12	75.50	14.07	14.07	14.07	14.07	12872.10	34082.90	2.648
13.15	5	SLV (E)	15	98.00	14.07	14.07	14.07	14.07	-8830.53	-34082.90	3.860
16.84	13	SLV (E)	18	22.50	28.15	14.07	28.15	14.07	15213.00	34362.70	2.259
17.30	5	SLV (E)	19	65.64	14.07	14.07	14.07	14.07	15762.30	34082.90	2.162
19.71	9	SLV (E)	22	88.14	14.07	14.07	14.07	14.07	-6406.49	-34082.90	5.320
23.14	13	SLV (E)	25	9.50	28.15	28.15	28.15	28.15	28821.50	67205.10	2.332
23.59	5	SLV (E)	26	35.50	14.07	14.07	14.07	14.07	14683.90	34082.90	2.321
32.22	5	SLV (E)	35	0.00	14.07	14.07	14.07	14.07	-21122.10	-34082.90	1.614
33.91	5	SLV (E)	36	69.73	14.07	14.07	14.07	14.07	-15817.60	-34082.90	2.155

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.45	31	SLE R	1	49.33	14.07	14.07	-9151.29	1047.71	-210.21	18.67
0.45	26	SLE Q	1	49.33	14.07	14.07	-6305.08	721.86	-144.83	12.87
1.26	31	SLE R	2	62.89	14.07	14.07	-13043.00	1493.26	-299.60	26.61
1.26	26	SLE Q	2	62.89	14.07	14.07	-10647.20	1218.97	-244.57	21.73
5.43	34	SLE R	6	22.50	14.07	14.07	3914.25	-89.91	448.13	7.99
5.43	26	SLE Q	6	22.50	14.07	14.07	-3138.00	359.26	-72.08	6.40
5.88	22	SLE R	7	68.50	28.15	14.07	4393.44	-86.73	499.50	7.95
5.88	26	SLE Q	7	68.50	28.15	14.07	4271.23	-84.32	485.60	7.73
7.48	31	SLE R	9	91.00	14.07	28.15	-2073.17	235.70	-40.93	3.75
7.48	26	SLE Q	9	91.00	14.07	28.15	-1632.37	185.59	-32.23	2.96
9.98	34	SLE R	11	22.50	28.15	14.07	15918.70	-314.26	1809.81	28.82
9.98	26	SLE Q	11	22.50	28.15	14.07	14243.60	-281.19	1619.38	25.79
10.44	22	SLE R	12	75.50	14.07	14.07	12053.00	-276.86	1379.92	24.59
10.44	26	SLE Q	12	75.50	14.07	14.07	11063.50	-254.13	1266.63	22.57
13.15	34	SLE R	15	98.00	14.07	14.07	-8852.32	1013.49	-203.34	18.06
13.15	26	SLE Q	15	98.00	14.07	14.07	-7926.67	907.51	-182.08	16.17
16.84	33	SLE R	18	22.50	28.15	14.07	15523.30	-306.45	1764.86	28.10
16.84	26	SLE Q	18	22.50	28.15	14.07	13397.40	-264.48	1523.16	24.25
17.30	22	SLE R	19	65.64	14.07	14.07	16273.00	-373.80	1863.06	33.20
17.30	26	SLE Q	19	65.64	14.07	14.07	14016.30	-321.96	1604.70	28.60
19.71	34	SLE R	22	88.14	14.07	14.07	-6600.57	755.69	-151.62	13.47
19.71	26	SLE Q	22	88.14	14.07	14.07	-5774.68	661.13	-132.65	11.78
23.14	34	SLE R	25	9.50	28.15	28.15	29079.80	-500.05	1686.31	41.43
23.14	26	SLE Q	25	9.50	28.15	28.15	25982.40	-446.79	1506.69	37.02
23.59	21	SLE R	26	35.50	14.07	14.07	15440.00	-354.66	1767.70	31.50
23.59	26	SLE Q	26	35.50	14.07	14.07	13099.50	-300.90	1499.74	26.73
32.22	34	SLE R	35	0.00	14.07	14.07	-21966.70	2514.93	-504.59	44.82
32.22	26	SLE Q	35	0.00	14.07	14.07	-18880.10	2161.55	-433.69	38.52
33.91	22	SLE R	36	69.73	14.07	14.07	-16389.40	1876.39	-376.47	33.44
33.91	26	SLE Q	36	69.73	14.07	14.07	-13974.70	1599.94	-321.00	28.52

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cmq>	ϵ_{sm}	Wk <mm>
32	0.45	26	SLE Q	1	5	49.33	-6305.08	27.00	135.67	0.50	16.00	143.53	14.07	787.50	721.86	0.21	0.05
34	0.45	23	SLE F	1	5	49.33	-7507.63	27.00	135.67	0.50	16.00	143.53	14.07	787.50	859.53	0.25	0.06
72	1.26	26	SLE Q	2	5	62.89	-10647.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1218.97	0.36	0.09
74	1.26	23	SLE F	2	5	62.89	-11635.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1332.10	0.39	0.09
143	5.43	26	SLE Q	6	5	22.50	-3138.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	359.26	0.10	0.03
149	5.43	24	SLE F	6	5	22.50	-3164.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	362.25	0.11	0.03
204	5.88	26	SLE Q	7	5	68.50	4271.23	27.00	135.67	0.50	16.00	143.53	14.07	787.50	485.60	0.14	0.03
208	5.88	25	SLE F	7	5	68.50	4467.91	27.00	135.67	0.50	16.00	143.53	14.07	787.50	507.96	0.15	0.04
246	7.48	26	SLE Q	9	5	91.00	-1632.37	27.00	135.67	0.50	16.00	143.53	14.07	787.50	185.59	0.05	0.01
248	7.48	23	SLE F	9	5	91.00	-1752.06	27.00	135.67	0.50	16.00	143.53	14.07	787.50	199.19	0.06	0.01
286	9.98	26	SLE Q	11	5	22.50	14243.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1619.38	0.48	0.12
288	9.98	23	SLE F	11	5	22.50	14502.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1648.77	0.48	0.12
326	10.44	26	SLE Q	12	5	75.50	11063.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1266.64	0.37	0.09
330	10.44	25	SLE F	12	5	75.50	11277.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1291.11	0.38	0.09
366	13.15	26	SLE Q	15	5	98.00	-7926.67	27.00	135.67	0.50	16.00	143.53	14.07	787.50	907.51	0.26	0.06

Relazione di calcolo

370	13.15	25	SLE F	15	5	98.00	-8090.12	27.00	135.67	0.50	16.00	143.53	14.07	787.50	926.22	0.27	0.07
406	16.84	26	SLE Q	18	5	22.50	13397.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1523.16	0.44	0.11
409	16.84	24	SLE F	18	5	22.50	13714.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1559.19	0.45	0.11
446	17.30	26	SLE Q	19	5	65.64	14016.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1604.70	0.47	0.11
448	17.30	23	SLE F	19	5	65.64	14336.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1641.41	0.48	0.12
486	19.71	26	SLE Q	22	5	88.14	-5774.68	27.00	135.67	0.50	16.00	143.53	14.07	787.50	661.13	0.19	0.05
490	19.71	25	SLE F	22	5	88.14	-5889.77	27.00	135.67	0.50	16.00	143.53	14.07	787.50	674.31	0.20	0.05
526	23.14	26	SLE Q	25	5	9.50	25982.40	27.00	62.62	0.50	16.00	98.76	28.15	787.50	1506.69	0.56	0.09
530	23.14	25	SLE F	25	5	9.50	26543.30	27.00	62.62	0.50	16.00	98.76	28.15	787.50	1539.22	0.49	0.08
566	23.59	26	SLE Q	26	5	35.50	13099.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1499.74	0.44	0.11
568	23.59	23	SLE F	26	5	35.50	13586.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1555.47	0.45	0.11
606	32.22	26	SLE Q	35	5	0.00	-18880.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	2161.55	0.74	0.18
608	32.22	23	SLE F	35	5	0.00	-19607.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	2244.80	0.65	0.16
646	33.91	26	SLE Q	36	5	69.73	-13974.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1599.94	0.47	0.11
648	33.91	23	SLE F	36	5	69.73	-14839.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1698.98	0.49	0.12

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
5 SLV	0.45	0.90	0.45	ø10/20 4 br.	15.71	0.90	11352.40	2.50	91968.40	154165.00	91968.40	8.101
19 SLU	0.90	4.99	4.08	ø10/20 4 br.	15.71	0.90	12551.50	2.50	91968.40	154165.00	91968.40	7.327
19 SLU	4.99	5.43	0.45	ø10/20 4 br.	15.71	0.90	13363.80	2.50	91968.40	154165.00	91968.40	6.882
19 SLU	5.88	6.33	0.45	ø10/20 4 br.	15.71	0.90	9094.09	2.50	91968.40	154165.00	91968.40	10.113
19 SLU	6.33	9.54	3.20	ø10/20 4 br.	15.71	0.90	19214.90	2.50	91968.40	154165.00	91968.40	4.786
19 SLU	9.54	9.98	0.45	ø10/20 4 br.	15.71	0.90	20538.60	2.50	91968.40	154165.00	91968.40	4.478
19 SLU	10.44	10.88	0.45	ø10/20 4 br.	15.71	0.90	19114.10	2.50	91968.40	154165.00	91968.40	4.812
30 SLU	10.88	16.39	5.51	ø10/20 4 br.	15.71	0.90	21367.10	2.50	91968.40	154165.00	91968.40	4.304
30 SLU	16.39	16.84	0.45	ø10/20 4 br.	15.71	0.90	22869.80	2.50	91968.40	154165.00	91968.40	4.021
19 SLU	17.30	17.75	0.45	ø10/20 4 br.	15.71	0.90	24544.60	2.50	91968.40	154165.00	91968.40	3.747
30 SLU	17.75	22.70	4.95	ø10/20 4 br.	15.71	0.90	28359.20	2.50	91968.40	154165.00	91968.40	3.243
30 SLU	22.70	23.14	0.45	ø10/20 4 br.	15.71	0.90	30137.00	2.50	91968.40	154165.00	91968.40	3.052
19 SLU	23.59	24.05	0.45	ø10/20 4 br.	15.71	0.90	21101.80	2.50	91968.40	154165.00	91968.40	4.358
19 SLU	24.05	33.51	9.46	ø10/20 4 br.	15.71	0.90	18933.20	2.50	91968.40	154165.00	91968.40	4.858
29 SLU	33.51	33.96	0.45	ø10/20 4 br.	15.71	0.90	18075.50	2.50	91968.40	154165.00	91968.40	5.088

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <m>	AfE S <cmq>	AfE I <cmq>	AfE P S <cmq>	AfE P I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.45	40	SLU I	1	49.33	14.07	14.07	14.07	14.07	-6305.08	-35880.40	5.691
1.26	40	SLU I	2	62.89	14.07	14.07	14.07	14.07	-10647.20	-35880.40	3.370
5.43	40	SLU I	6	22.50	14.07	14.07	14.07	14.07	-3138.00	-35880.40	11.434
5.88	40	SLU I	7	68.50	28.15	14.07	28.15	14.07	4271.23	40116.70	9.392
7.48	40	SLU I	9	91.00	14.07	28.15	14.07	28.15	-1632.37	-35881.90	21.982
9.98	40	SLU I	11	22.50	28.15	14.07	28.15	14.07	14243.60	40116.70	2.816
10.44	40	SLU I	12	75.50	14.07	14.07	14.07	14.07	11063.50	40141.80	3.628
13.15	40	SLU I	15	98.00	14.07	14.07	14.07	14.07	-7926.67	-35880.40	4.527
16.84	40	SLU I	18	22.50	28.15	14.07	28.15	14.07	13397.40	40116.70	2.994
17.30	40	SLU I	19	65.64	14.07	14.07	14.07	14.07	14016.30	40141.80	2.864
19.71	40	SLU I	22	88.14	14.07	14.07	14.07	14.07	-5774.68	-35880.40	6.213
23.14	40	SLU I	25	9.50	28.15	28.15	28.15	28.15	25982.40	79914.50	3.076
23.59	40	SLU I	26	35.50	14.07	14.07	14.07	14.07	13099.50	40141.80	3.064
32.22	40	SLU I	35	0.00	14.07	14.07	14.07	14.07	-18880.10	-35880.40	1.900
33.91	40	SLU I	36	69.73	14.07	14.07	14.07	14.07	-13974.70	-35880.40	2.568

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
40 SLU I	0.45	0.90	0.45	ø10/20 4 br.	15.71	0.83	8220.69	2.50	59444.80	214369.00	59444.80	7.231
40 SLU I	0.90	4.99	4.08	ø10/20 4 br.	15.71	0.83	7738.55	2.50	59444.80	214369.00	59444.80	7.682
40 SLU I	4.99	5.43	0.45	ø10/20 4 br.	15.71	0.83	8206.82	2.50	59444.80	214369.00	59444.80	7.243
40 SLU I	5.88	6.33	0.45	ø10/20 4 br.	15.71	0.83	6052.78	2.50	59444.80	214369.00	59444.80	9.821
40 SLU I	6.33	9.54	3.20	ø10/20 4 br.	15.71	0.83	12386.90	2.50	59444.80	214369.00	59444.80	4.799
40 SLU I	9.54	9.98	0.45	ø10/20 4 br.	15.71	0.83	13190.20	2.50	59444.80	214369.00	59444.80	4.507
40 SLU I	10.44	10.88	0.45	ø10/20 4 br.	15.71	0.83	12464.20	2.50	59444.80	214369.00	59444.80	4.769
40 SLU I	10.88	16.39	5.51	ø10/20 4 br.	15.71	0.83	13396.60	2.50	59444.80	214369.00	59444.80	4.437
40 SLU I	16.39	16.84	0.45	ø10/20 4 br.	15.71	0.83	14272.90	2.50	59444.80	214369.00	59444.80	4.165
40 SLU I	17.30	17.75	0.45	ø10/20 4 br.	15.71	0.83	15113.00	2.50	59444.80	214369.00	59444.80	3.933
40 SLU I	17.75	22.70	4.95	ø10/20 4 br.	15.71	0.83	17909.40	2.50	59444.80	214369.00	59444.80	3.319
40 SLU I	22.70	23.14	0.45	ø10/20 4 br.	15.71	0.83	18952.80	2.50	59444.80	214369.00	59444.80	3.136
40 SLU I	23.59	24.05	0.45	ø10/20 4 br.	15.71	0.83	12953.20	2.50	59444.80	214369.00	59444.80	4.589
40 SLU I	24.05	33.51	9.46	ø10/20 4 br.	15.71	0.83	11642.90	2.50	59444.80	214369.00	59444.80	5.106
40 SLU I	33.51	33.96	0.45	ø10/20 4 br.	15.71	0.83	10883.30	2.50	59444.80	214369.00	59444.80	5.462

Travata n. 409

Nodi: -37 -1966 -192 -1960 -1969 -216 -1997 -218 -219 -220 -221 -222 35

Caratteristiche delle sezioni e dei materiali utilizzati

Relazione di calcolo

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
4R		70.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.35	19	SLU	1	49.83	14.07	14.07	14.07	14.07	4048.83	35282.80	8.714
2.26	30	SLU	3	22.50	14.07	28.15	14.07	28.15	30918.90	69678.60	2.254
2.71	19	SLU	4	78.59	28.15	28.15	28.15	28.15	21372.10	69944.60	3.273
9.10	17	SLU	11	93.44	14.07	14.07	14.07	14.07	-13303.60	-35282.80	2.652
10.52	17	SLU	12	45.00	14.07	14.07	14.07	14.07	-12619.70	-35282.80	2.796

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.35	5	SLV (E)	1	49.83	14.07	14.07	14.07	14.07	3455.05	33896.70	9.811
2.26	13	SLV (E)	3	22.50	14.07	28.15	14.07	28.15	21874.50	65719.70	3.004
2.71	5	SLV (E)	4	78.59	28.15	28.15	28.15	28.15	17720.80	66935.30	3.777
9.10	5	SLV (E)	11	93.44	14.07	14.07	14.07	14.07	-10597.60	-33896.70	3.199
10.52	5	SLV (E)	12	45.00	14.07	14.07	14.07	14.07	-9528.50	-33896.70	3.557

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.35	22	SLE R	1	49.83	14.07	14.07	2938.01	-78.59	338.05	6.78
0.35	26	SLE Q	1	49.83	14.07	14.07	2588.80	-69.25	297.87	5.98
2.26	34	SLE R	3	22.50	14.07	28.15	22209.30	-505.94	1311.40	40.46
2.26	26	SLE Q	3	22.50	14.07	28.15	18934.50	-431.34	1118.03	34.49
2.71	22	SLE R	4	78.59	28.15	28.15	15322.90	-301.09	891.88	24.49
2.71	26	SLE Q	4	78.59	28.15	28.15	12423.80	-244.12	723.13	19.86
9.10	20	SLE R	11	93.44	14.07	14.07	-9512.41	1094.51	-254.45	21.96
9.10	26	SLE Q	11	93.44	14.07	14.07	-7876.18	906.25	-210.68	18.18
10.52	20	SLE R	12	45.00	14.07	14.07	-8884.02	1022.21	-237.64	20.51
10.52	26	SLE Q	12	45.00	14.07	14.07	-6240.53	718.05	-166.93	14.41

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cm²>	A _{c eff} <cm²>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
36	0.35	26	SLE Q	1	4	49.83	2588.80	27.00	102.33	0.50	16.00	123.63	14.07	612.50	297.87	0.09	0.02
40	0.35	25	SLE F	1	4	49.83	2657.28	27.00	102.33	0.50	16.00	123.63	14.07	612.50	305.75	0.09	0.02
76	2.26	26	SLE Q	3	4	22.50	18934.50	27.00	47.23	0.50	16.00	88.82	28.15	612.50	1118.03	0.40	0.06
80	2.26	25	SLE F	3	4	22.50	19470.30	27.00	47.23	0.50	16.00	88.82	28.15	612.50	1149.67	0.35	0.05
116	2.71	26	SLE Q	4	4	78.59	12423.80	27.00	47.23	0.50	16.00	88.82	28.15	612.50	723.13	0.21	0.03
118	2.71	23	SLE F	4	4	78.59	13212.10	27.00	47.23	0.50	16.00	88.82	28.15	612.50	769.02	0.22	0.03
156	9.10	26	SLE Q	11	4	93.44	-7876.18	27.00	102.33	0.50	16.00	123.63	14.07	612.50	906.25	0.26	0.06
158	9.10	23	SLE F	11	4	93.44	-8515.31	27.00	102.33	0.50	16.00	123.63	14.07	612.50	979.79	0.29	0.06
196	10.52	26	SLE Q	12	4	45.00	-6240.53	27.00	102.33	0.50	16.00	123.63	14.07	612.50	718.05	0.21	0.04
198	10.52	23	SLE F	12	4	45.00	-7448.20	27.00	102.33	0.50	16.00	123.63	14.07	612.50	857.00	0.25	0.05

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
28 SLU	0.13	0.58	0.45	ø10/25 4 br.	12.57	0.70	5352.63	2.50	73574.70	119906.00	73574.70	13.745
28 SLU	0.58	10.32	9.74	ø10/25 4 br.	12.57	0.70	5352.63	2.50	73574.70	119906.00	73574.70	13.745
17 SLU	10.32	10.77	0.45	ø10/25 4 br.	12.57	0.70	3382.22	2.50	73574.70	119906.00	73574.70	21.753

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.35	40	SLU I	1	49.83	14.07	14.07	14.07	14.07	2588.80	40074.90	15.480
2.26	40	SLU I	3	22.50	14.07	28.15	14.07	28.15	18934.50	78567.80	4.149
2.71	40	SLU I	4	78.59	28.15	28.15	28.15	28.15	12423.80	79778.40	6.421
9.10	40	SLU I	11	93.44	14.07	14.07	14.07	14.07	-7876.18	-35925.60	4.561
10.52	40	SLU I	12	45.00	14.07	14.07	14.07	14.07	-6240.53	-35925.60	5.757

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <cm>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
40 SLU I	0.13	0.58	0.45	ø10/25 4 br.	12.57	0.63	2783.40	2.50	77279.50	162214.00	77279.50	27.764
40 SLU I	0.58	10.32	9.74	ø10/25 4 br.	12.57	0.63	2783.40	2.50	77279.50	162214.00	77279.50	27.764
40 SLU I	10.32	10.77	0.45	ø10/25 4 br.	12.57	0.63	718.55	2.50	77279.50	162214.00	77279.50	>100

Travata n. 412

Relazione di calcolo

Nodi: -12 -1773 -1772 -1771 -16 -1770 -1769 -1293 -1714 -1713 -1712 -1711 97 -358 -357 -356 -355 -354 -353 94 -1971 -312 -311 96 -1486 -1487 -1961 -1305 -1968 -1303 -1996 -1301 -1300 -1299 -1298 -1297 -2353 187 13

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
5R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/presoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cm²>	Afe I <cm²>	Afep S <cm²>	Afep I <cm²>	My <daNm>	MRdy <daNm>	Sic.
0.45	27	SLU	1	35.25	14.07	14.07	14.07	14.07	-8832.67	-35450.10	4.014
1.60	27	SLU	3	80.25	14.07	14.07	14.07	14.07	-12902.10	-35450.10	2.748
2.86	27	SLU	4	35.00	28.15	14.07	28.15	14.07	-10655.10	-69959.00	6.566
3.31	28	SLU	5	71.67	14.07	14.07	14.07	14.07	-5143.39	-35450.10	6.892
10.06	30	SLU	12	15.00	28.15	14.07	28.15	14.07	12434.50	35445.00	2.851
10.36	30	SLU	13	83.00	14.07	14.07	14.07	14.07	17817.10	35450.10	1.990
13.15	30	SLU	16	98.00	14.07	14.07	14.07	14.07	-8345.62	-35450.10	4.248
16.92	28	SLU	19	15.00	28.15	14.07	28.15	14.07	13966.80	35445.00	2.538
17.22	30	SLU	20	84.25	14.07	14.07	14.07	14.07	15185.90	35450.10	2.334
19.39	30	SLU	22	66.17	14.07	14.07	14.07	14.07	-4988.28	-35450.10	7.107
20.89	30	SLU	23	15.00	14.07	14.07	14.07	14.07	-4737.92	-35450.10	7.482
21.19	30	SLU	24	15.00	14.07	14.07	14.07	14.07	-2640.34	-35450.10	13.426
33.70	19	SLU	38	0.00	14.07	14.07	14.07	14.07	-20314.50	-35450.10	1.745
33.76	19	SLU	38	6.00	14.07	14.07	14.07	14.07	-20314.50	-35450.10	1.745

Stato limite elastico - Verifiche a flessione/presoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cm²>	Afe I <cm²>	Afep S <cm²>	Afep I <cm²>	My <daNm>	M'ydy <daNm>	Sic.
0.45	13	SLV (E)	1	35.25	14.07	14.07	14.07	14.07	-9089.75	-34082.90	3.750
1.60	13	SLV (E)	3	80.25	14.07	14.07	14.07	14.07	-11179.10	-34082.90	3.049
2.86	13	SLV (E)	4	35.00	28.15	14.07	28.15	14.07	-8566.31	-66258.60	7.735
3.31	13	SLV (E)	5	71.67	14.07	14.07	14.07	14.07	-10193.20	-34082.90	3.344
10.06	13	SLV (E)	12	15.00	28.15	14.07	28.15	14.07	9446.44	34362.70	3.638
10.36	1	SLV (E)	13	83.00	14.07	14.07	14.07	14.07	14166.50	34082.90	2.406
13.15	5	SLV (E)	16	98.00	14.07	14.07	14.07	14.07	-6029.18	-34082.90	5.653
16.92	13	SLV (E)	19	15.00	28.15	14.07	28.15	14.07	10381.40	34362.70	3.310
17.22	1	SLV (E)	20	84.25	14.07	14.07	14.07	14.07	11149.60	34082.90	3.057
19.39	1	SLV (E)	22	66.17	14.07	14.07	14.07	14.07	-3091.39	-34082.90	11.025
20.89	5	SLV (E)	23	15.00	14.07	14.07	14.07	14.07	-2993.43	-34082.90	11.386
21.19	13	SLV (E)	24	15.00	14.07	14.07	14.07	14.07	-2324.02	-34082.90	14.665
33.70	5	SLV (E)	38	0.00	14.07	14.07	14.07	14.07	-17774.40	-34082.90	1.918
33.76	5	SLV (E)	38	6.00	14.07	14.07	14.07	14.07	-17774.40	-34082.90	1.918

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	Afe S <cm²>	Afe I <cm²>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.45	31	SLE R	1	35.25	14.07	14.07	-6347.35	726.70	-145.80	12.95
0.45	26	SLE Q	1	35.25	14.07	14.07	-4486.21	513.62	-103.05	9.15
1.60	31	SLE R	3	80.25	14.07	14.07	-9362.11	1071.85	-215.05	19.10
1.60	26	SLE Q	3	80.25	14.07	14.07	-7424.11	849.97	-170.53	15.15
2.86	31	SLE R	4	35.00	28.15	14.07	-7757.40	454.95	-151.38	12.34
2.86	26	SLE Q	4	35.00	28.15	14.07	-6194.74	363.31	-120.89	9.85
3.31	32	SLE R	5	71.67	14.07	14.07	-3761.69	430.67	-86.41	7.68
3.31	26	SLE Q	5	71.67	14.07	14.07	-3188.09	365.00	-73.23	6.51
10.06	34	SLE R	12	15.00	28.15	14.07	9005.89	-177.79	1023.89	16.30
10.06	26	SLE Q	12	15.00	28.15	14.07	7901.67	-155.99	898.35	14.30
10.36	34	SLE R	13	83.00	14.07	14.07	12908.30	-296.51	1477.85	26.34
10.36	26	SLE Q	13	83.00	14.07	14.07	11535.70	-264.98	1320.70	23.54
13.15	34	SLE R	16	98.00	14.07	14.07	-6028.49	690.19	-138.48	12.30
13.15	26	SLE Q	16	98.00	14.07	14.07	-5205.35	595.95	-119.57	10.62
16.92	32	SLE R	19	15.00	28.15	14.07	10021.20	-197.83	1139.32	18.14
16.92	26	SLE Q	19	15.00	28.15	14.07	8089.96	-159.71	919.76	14.65
17.22	34	SLE R	20	84.25	14.07	14.07	10888.60	-250.12	1246.61	22.22
17.22	26	SLE Q	20	84.25	14.07	14.07	8833.18	-202.90	1011.29	18.02
19.39	34	SLE R	22	66.17	14.07	14.07	-3565.17	408.17	-81.89	7.27
19.39	26	SLE Q	22	66.17	14.07	14.07	-2708.69	310.11	-62.22	5.53
20.89	34	SLE R	23	15.00	14.07	14.07	-3374.56	386.35	-77.52	6.89
20.89	26	SLE Q	23	15.00	14.07	14.07	-2509.92	287.36	-57.65	5.12
21.19	34	SLE R	24	15.00	14.07	14.07	-1892.61	216.68	-43.47	3.86
21.19	26	SLE Q	24	15.00	14.07	14.07	-1623.29	185.85	-37.29	3.31
33.70	22	SLE R	38	0.00	14.07	14.07	-14584.80	1669.78	-335.02	29.76
33.70	26	SLE Q	38	0.00	14.07	14.07	-12702.30	1454.27	-291.78	25.92
33.76	22	SLE R	38	6.00	14.07	14.07	-14584.80	1669.78	-335.02	29.76
33.76	26	SLE Q	38	6.00	14.07	14.07	-12702.30	1454.27	-291.78	25.92

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cm²>	A _{c eff} <cm²>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
------	-----------	----	-----	----	------	-----------	--------------	-----------	-----------	----------------	-----------------	-------------------------	-------------------------	-----------------------------	-----------------------------	-----------------	------------

Relazione di calcolo

38	0.45	26	SLE Q	1	5	35.25	-4486.21	27.00	135.67	0.50	16.00	143.53	14.07	787.50	513.62	0.15	0.04
40	0.45	23	SLE F	1	5	35.25	-5118.43	27.00	135.67	0.50	16.00	143.53	14.07	787.50	586.00	0.17	0.04
78	1.60	26	SLE Q	3	5	80.25	-7424.11	27.00	135.67	0.50	16.00	143.53	14.07	787.50	849.97	0.25	0.06
80	1.60	23	SLE F	3	5	80.25	-8040.23	27.00	135.67	0.50	16.00	143.53	14.07	787.50	920.51	0.27	0.07
118	2.86	26	SLE Q	4	5	35.00	-6194.74	27.00	62.62	0.50	16.00	98.76	28.15	787.50	363.31	0.11	0.02
120	2.86	23	SLE F	4	5	35.00	-6701.33	27.00	62.62	0.50	16.00	98.76	28.15	787.50	393.02	0.11	0.02
165	3.31	26	SLE Q	5	5	71.67	-3188.09	27.00	135.67	0.50	16.00	143.53	14.07	787.50	365.00	0.11	0.03
171	3.31	36	SLE F	5	5	71.67	-3294.48	27.00	135.67	0.50	16.00	143.53	14.07	787.50	377.18	0.11	0.03
205	10.06	26	SLE Q	12	5	15.00	7901.67	27.00	135.67	0.50	16.00	143.53	14.07	787.50	898.35	0.26	0.06
209	10.06	25	SLE F	12	5	15.00	8081.35	27.00	135.67	0.50	16.00	143.53	14.07	787.50	918.78	0.27	0.07
245	10.36	26	SLE Q	13	5	83.00	11535.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1320.70	0.38	0.09
249	10.36	25	SLE F	13	5	83.00	11803.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1351.38	0.39	0.10
285	13.15	26	SLE Q	16	5	98.00	-5205.35	27.00	135.67	0.50	16.00	143.53	14.07	787.50	595.95	0.17	0.04
289	13.15	25	SLE F	16	5	98.00	-5329.06	27.00	135.67	0.50	16.00	143.53	14.07	787.50	610.11	0.18	0.04
325	16.92	26	SLE Q	19	5	15.00	8089.96	27.00	135.67	0.50	16.00	143.53	14.07	787.50	919.76	0.27	0.07
331	16.92	36	SLE F	19	5	15.00	8446.32	27.00	135.67	0.50	16.00	143.53	14.07	787.50	960.27	0.28	0.07
365	17.22	26	SLE Q	20	5	84.25	8833.18	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1011.29	0.29	0.07
371	17.22	36	SLE F	20	5	84.25	9087.71	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1040.43	0.30	0.07
405	19.39	26	SLE Q	22	5	66.17	-2708.69	27.00	135.67	0.50	16.00	143.53	14.07	787.50	310.11	0.09	0.02
407	19.39	23	SLE F	22	5	66.17	-2866.68	27.00	135.67	0.50	16.00	143.53	14.07	787.50	328.20	0.10	0.02
445	20.89	26	SLE Q	23	5	15.00	-2509.92	27.00	135.67	0.50	16.00	143.53	14.07	787.50	287.36	0.08	0.02
447	20.89	23	SLE F	23	5	15.00	-2695.62	27.00	135.67	0.50	16.00	143.53	14.07	787.50	308.62	0.09	0.02
485	21.19	26	SLE Q	24	5	15.00	-1623.29	27.00	135.67	0.50	16.00	143.53	14.07	787.50	185.85	0.05	0.01
491	21.19	36	SLE F	24	5	15.00	-1680.21	27.00	135.67	0.50	16.00	143.53	14.07	787.50	192.36	0.06	0.01
525	33.70	26	SLE Q	38	5	0.00	-12702.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1454.27	0.42	0.10
529	33.70	25	SLE F	38	5	0.00	-13154.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1506.08	0.44	0.11
565	33.76	26	SLE Q	38	5	6.00	-12702.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1454.27	0.42	0.10
569	33.76	25	SLE F	38	5	6.00	-13154.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1506.08	0.44	0.11

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
1 SLV	0.45	0.90	0.45	ø10/20 4 br.	15.71	0.90	9245.25	2.50	91968.40	154165.00	91968.40	9.948
9 SLV	0.90	2.41	1.51	ø10/20 4 br.	15.71	0.90	4586.04	2.50	91968.40	154165.00	91968.40	20.054
5 SLV	2.41	2.86	0.45	ø10/20 4 br.	15.71	0.90	7732.24	2.50	91968.40	154165.00	91968.40	11.894
5 SLV	3.31	3.76	0.45	ø10/20 4 br.	15.71	0.90	10608.60	2.50	91968.40	154165.00	91968.40	8.669
30 SLU	3.76	9.61	5.85	ø10/20 4 br.	15.71	0.90	10191.50	2.50	91968.40	154165.00	91968.40	9.024
30 SLU	9.61	10.06	0.45	ø10/20 4 br.	15.71	0.90	11143.20	2.50	91968.40	154165.00	91968.40	8.253
30 SLU	10.36	10.81	0.45	ø10/20 4 br.	15.71	0.90	13899.70	2.50	91968.40	154165.00	91968.40	6.617
30 SLU	10.81	16.47	5.66	ø10/20 4 br.	15.71	0.90	13035.90	2.50	91968.40	154165.00	91968.40	7.055
28 SLU	16.47	16.92	0.45	ø10/20 4 br.	15.71	0.90	11719.70	2.50	91968.40	154165.00	91968.40	7.847
30 SLU	17.22	17.67	0.45	ø10/20 4 br.	15.71	0.90	12063.60	2.50	91968.40	154165.00	91968.40	7.624
30 SLU	17.67	20.44	2.77	ø10/20 4 br.	15.71	0.90	11060.80	2.50	91968.40	154165.00	91968.40	8.315
13 SLV	20.44	20.89	0.45	ø10/20 4 br.	15.71	0.90	3146.85	2.50	91968.40	154165.00	91968.40	29.226
17 SLU	21.19	21.64	0.45	ø10/20 4 br.	15.71	0.90	2021.98	2.50	91968.40	154165.00	91968.40	45.484
19 SLU	21.64	33.31	11.67	ø10/20 4 br.	15.71	0.90	7077.79	2.50	91968.40	154165.00	91968.40	12.994
9 SLV	33.31	33.76	0.45	ø10/20 4 br.	15.71	0.90	17478.60	2.50	91968.40	154165.00	91968.40	5.262

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfE P S <cmq>	AfE P I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.45	40	SLU I	1	35.25	14.07	14.07	14.07	14.07	-4486.21	-35880.40	7.998
1.60	40	SLU I	3	80.25	14.07	14.07	14.07	14.07	-7424.11	-35880.40	4.833
2.86	40	SLU I	4	35.00	28.15	14.07	28.15	14.07	-6194.74	-75554.90	12.197
3.31	40	SLU I	5	71.67	14.07	14.07	14.07	14.07	-3188.09	-35880.40	11.255
10.06	40	SLU I	12	15.00	28.15	14.07	28.15	14.07	7901.67	40116.70	5.077
10.36	40	SLU I	13	83.00	14.07	14.07	14.07	14.07	11535.70	40141.80	3.480
13.15	40	SLU I	16	98.00	14.07	14.07	14.07	14.07	-5205.35	-35880.40	6.893
16.92	40	SLU I	19	15.00	28.15	14.07	28.15	14.07	8089.96	40116.70	4.959
17.22	40	SLU I	20	84.25	14.07	14.07	14.07	14.07	8833.18	40141.80	4.544
19.39	40	SLU I	22	66.17	14.07	14.07	14.07	14.07	-2708.69	-35880.40	13.246
20.89	40	SLU I	23	15.00	14.07	14.07	14.07	14.07	-2509.92	-35880.40	14.295
21.19	40	SLU I	24	15.00	14.07	14.07	14.07	14.07	-1623.29	-35880.40	22.103
33.70	40	SLU I	38	0.00	14.07	14.07	14.07	14.07	-12702.30	-35880.40	2.825
33.76	40	SLU I	38	6.00	14.07	14.07	14.07	14.07	-12702.30	-35880.40	2.825

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
40 SLU I	0.45	0.90	0.45	ø10/20 4 br.	15.71	0.83	5008.63	2.50	59444.80	214369.00	59444.80	11.868
40 SLU I	0.90	2.41	1.51	ø10/20 4 br.	15.71	0.83	3003.12	2.50	59444.80	214369.00	59444.80	19.794
40 SLU I	2.41	2.86	0.45	ø10/20 4 br.	15.71	0.83	3791.78	2.50	59444.80	214369.00	59444.80	15.677
40 SLU I	3.31	3.76	0.45	ø10/20 4 br.	15.71	0.83	3064.80	2.50	59444.80	214369.00	59444.80	19.396
40 SLU I	3.76	9.61	5.85	ø10/20 4 br.	15.71	0.83	6610.74	2.50	59444.80	214369.00	59444.80	8.992
40 SLU I	9.61	10.06	0.45	ø10/20 4 br.	15.71	0.83	7160.69	2.50	59444.80	214369.00	59444.80	8.302
40 SLU I	10.36	10.81	0.45	ø10/20 4 br.	15.71	0.83	8726.69	2.50	59444.80	214369.00	59444.80	6.812
40 SLU I	10.81	16.47	5.66	ø10/20 4 br.	15.71	0.83	8235.23	2.50	59444.80	214369.00	59444.80	7.218

Relazione di calcolo

40	SLU	I	16.47	16.92	0.45	ø10/20 4 br.	15.71	0.83	7061.89	2.50	59444.80	214369.00	59444.80	8.418
40	SLU	I	17.22	17.67	0.45	ø10/20 4 br.	15.71	0.83	6979.43	2.50	59444.80	214369.00	59444.80	8.517
40	SLU	I	17.67	20.44	2.77	ø10/20 4 br.	15.71	0.83	6435.17	2.50	59444.80	214369.00	59444.80	9.237
40	SLU	I	20.44	20.89	0.45	ø10/20 4 br.	15.71	0.83	2080.86	2.50	59444.80	214369.00	59444.80	28.567
40	SLU	I	21.19	21.64	0.45	ø10/20 4 br.	15.71	0.83	711.02	2.50	59444.80	214369.00	59444.80	83.605
40	SLU	I	21.64	33.31	11.67	ø10/20 4 br.	15.71	0.83	5228.18	2.50	59444.80	214369.00	59444.80	11.370
40	SLU	I	33.31	33.76	0.45	ø10/20 4 br.	15.71	0.83	11238.10	2.50	59444.80	214369.00	59444.80	5.290

Travata n. 415

Nodi: -85 -1339 -1994 -45 -1349 -1348 -1347 -1346 -1345 -1344 -1343 -1342 -1294

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	TP	Fyk <daN/cm²>	Fyd <daN/cm²>
5R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cm²>	Afe I <cm²>	AfEP S <cm²>	AfEP I <cm²>	My <daNm>	MRdy <daNm>	Sic.
0.30	28	SLU	1	30.00	14.07	14.07	14.07	14.07	-2106.69	-35450.10	16.827
2.41	30	SLU	3	70.33	14.07	14.07	14.07	14.07	15963.50	35450.10	2.221
2.71	30	SLU	4	15.00	28.15	14.07	28.15	14.07	14694.70	35445.00	2.412

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cm²>	Afe I <cm²>	AfEP S <cm²>	AfEP I <cm²>	My <daNm>	M'ydy <daNm>	Sic.
0.30	13	SLV(E)	1	30.00	14.07	14.07	14.07	14.07	-4412.46	-34082.90	7.724
2.41	9	SLV(E)	3	70.33	14.07	14.07	14.07	14.07	16710.50	34082.90	2.040
2.71	9	SLV(E)	4	15.00	28.15	14.07	28.15	14.07	14642.70	34362.70	2.347

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	Afe S <cm²>	Afe I <cm²>	My <daNm>	σ _s sup <daN/cm²>	σ _s inf <daN/cm²>	σ _c <daN/cm²>
0.30	32	SLE R	1	30.00	14.07	14.07	-1549.68	177.42	-35.60	3.16
0.30	26	SLE Q	1	30.00	14.07	14.07	-1232.62	141.12	-28.31	2.52
2.41	34	SLE R	3	70.33	14.07	14.07	11502.20	-264.21	1316.87	23.47
2.41	26	SLE Q	3	70.33	14.07	14.07	9412.45	-216.21	1077.61	19.21
2.71	34	SLE R	4	15.00	28.15	14.07	10619.90	-209.65	1207.39	19.23
2.71	26	SLE Q	4	15.00	28.15	14.07	8820.81	-174.14	1002.85	15.97

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _c eff <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
38	0.30	26	SLE Q	1	5	30.00	-1232.62	27.00	135.67	0.50	16.00	143.53	14.07	787.50	141.12	0.04	0.01
44	0.30	36	SLE F	1	5	30.00	-1382.14	27.00	135.67	0.50	16.00	143.53	14.07	787.50	158.24	0.05	0.01
82	2.41	26	SLE Q	3	5	70.33	9412.45	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1077.61	0.31	0.08
86	2.41	25	SLE F	3	5	70.33	9689.84	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1109.37	0.32	0.08
126	2.71	26	SLE Q	4	5	15.00	8820.81	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1002.85	0.29	0.07
132	2.71	36	SLE F	4	5	15.00	9058.92	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1029.92	0.30	0.07

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
9 SLV	0.30	0.75	0.45	ø10/20 4 br.	15.71	0.90	4995.32	2.50	91968.40	154165.00	91968.40	18.411
30 SLU	0.75	1.96	1.21	ø10/20 4 br.	15.71	0.90	17646.20	2.50	91968.40	154165.00	91968.40	5.212
30 SLU	1.96	2.41	0.45	ø10/20 4 br.	15.71	0.90	18530.80	2.50	91968.40	154165.00	91968.40	4.963
30 SLU	2.71	3.16	0.45	ø10/20 4 br.	15.71	0.90	16038.30	2.50	91968.40	154165.00	91968.40	5.734
30 SLU	3.16	10.91	7.75	ø10/20 4 br.	15.71	0.90	15235.10	2.50	91968.40	154165.00	91968.40	6.037

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cm²>	Afe I <cm²>	AfEP S <cm²>	AfEP I <cm²>	My <daNm>	MRdy <daNm>	Sic.
0.30	40	SLU	I	1	30.00	14.07	14.07	14.07	-1232.62	-35880.40	29.109
2.41	40	SLU	I	3	70.33	14.07	14.07	14.07	9412.45	40141.80	4.265
2.71	40	SLU	I	4	15.00	28.15	14.07	28.15	8820.81	40116.70	4.548

Stato limite ultimo - Verifiche a taglio

CC			X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
40	SLU	I	0.30	0.75	0.45	ø10/20 4 br.	15.71	0.83	819.84	2.50	59444.80	214369.00	59444.80	72.508
40	SLU	I	0.75	1.96	1.21	ø10/20 4 br.	15.71	0.83	10732.80	2.50	59444.80	214369.00	59444.80	5.539
40	SLU	I	1.96	2.41	0.45	ø10/20 4 br.	15.71	0.83	11233.10	2.50	59444.80	214369.00	59444.80	5.292
40	SLU	I	2.71	3.16	0.45	ø10/20 4 br.	15.71	0.83	9197.17	2.50	59444.80	214369.00	59444.80	6.463
40	SLU	I	3.16	10.91	7.75	ø10/20 4 br.	15.71	0.83	8743.44	2.50	59444.80	214369.00	59444.80	6.799

Travata n. 421

Nodi: 31 -1383 -1382 -1131 -1381 -1380 -1216 -1379 -1215 -1378 -1214 -1377 -1213 -1376 30

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cl _s	F _{ck} <daN/cm ² >	F _{ctk} <daN/cm ² >	F _{cd} <daN/cm ² >	F _{cd} (Inc) <daN/cm ² >	F _{ctd} <daN/cm ² >	TP	F _{yk} <daN/cm ² >	F _{yd} <daN/cm ² >
5R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/presoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.30	28	SLU	1	30.00	14.07	14.07	14.07	14.07	-3045.91	-35450.10	11.639
0.85	28	SLU	2	0.00	14.07	14.07	14.07	14.07	-3097.73	-35450.10	11.444
2.33	19	SLU	3	62.83	14.07	14.07	14.07	14.07	7887.14	35450.10	4.495
2.79	19	SLU	4	22.50	28.15	14.07	28.15	14.07	8988.91	35445.00	3.943
8.47	18	SLU	12	0.00	14.07	14.07	14.07	14.07	-18304.10	-35450.10	1.937
10.52	18	SLU	14	42.00	14.07	14.07	14.07	14.07	-10803.00	-35450.10	3.281

Stato limite elastico - Verifiche a flessione/presoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.30	9	SLV (E)	1	30.00	14.07	14.07	14.07	14.07	-1803.45	-34082.90	18.899
0.85	1	SLV (E)	2	0.00	14.07	14.07	14.07	14.07	2628.98	34082.90	12.964
2.33	1	SLV (E)	3	62.83	14.07	14.07	14.07	14.07	8123.65	34082.90	4.196
2.79	13	SLV (E)	4	22.50	28.15	14.07	28.15	14.07	9072.58	34362.70	3.788
8.47	1	SLV (E)	12	0.00	14.07	14.07	14.07	14.07	-13809.80	-34082.90	2.468
10.52	1	SLV (E)	14	42.00	14.07	14.07	14.07	14.07	-8028.11	-34082.90	4.245

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm ² >	σ _f inf <daN/cm ² >	σ _c <daN/cm ² >
0.30	32	SLE R	1	30.00	14.07	14.07	-2086.10	238.83	-47.92	4.26
0.30	26	SLE Q	1	30.00	14.07	14.07	-685.59	78.49	-15.75	1.40
0.85	32	SLE R	2	0.00	14.07	14.07	-2130.93	243.97	-48.95	4.35
0.85	26	SLE Q	2	0.00	14.07	14.07	920.92	-21.15	105.43	1.88
2.33	22	SLE R	3	62.83	14.07	14.07	5716.48	-131.31	654.47	11.66
2.33	26	SLE Q	3	62.83	14.07	14.07	4871.55	-111.90	557.73	9.94
2.79	22	SLE R	4	22.50	28.15	14.07	6540.52	-129.12	743.60	11.84
2.79	26	SLE Q	4	22.50	28.15	14.07	5771.72	-113.94	656.19	10.45
8.47	21	SLE R	12	0.00	14.07	14.07	-13113.50	1501.33	-301.22	26.76
8.47	26	SLE Q	12	0.00	14.07	14.07	-11386.00	1303.56	-261.54	23.23
10.52	21	SLE R	14	42.00	14.07	14.07	-7668.32	877.93	-176.15	15.65
10.52	26	SLE Q	14	42.00	14.07	14.07	-6066.56	694.55	-139.35	12.38

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm ² >	ε _{sm}	Wk <mm>
34	0.30	26	SLE Q	1	5	30.00	-685.59	27.00	135.67	0.50	16.00	143.53	14.07	787.50	78.49	0.02	0.01
40	0.30	36	SLE F	1	5	30.00	-966.14	27.00	135.67	0.50	16.00	143.53	14.07	787.50	110.61	0.03	0.01
96	0.85	26	SLE Q	2	5	0.00	920.92	27.00	135.67	0.50	16.00	143.53	14.07	787.50	105.43	0.03	0.01
109	0.85	36	SLE F	2	5	0.00	-1023.18	27.00	135.67	0.50	16.00	143.53	14.07	787.50	117.14	0.03	0.01
147	2.33	26	SLE Q	3	5	62.83	4871.55	27.00	135.67	0.50	16.00	143.53	14.07	787.50	557.73	0.16	0.04
151	2.33	25	SLE F	3	5	62.83	5013.41	27.00	135.67	0.50	16.00	143.53	14.07	787.50	573.98	0.17	0.04
187	2.79	26	SLE Q	4	5	22.50	5771.72	27.00	135.67	0.50	16.00	143.53	14.07	787.50	656.19	0.19	0.05
191	2.79	25	SLE F	4	5	22.50	5927.36	27.00	135.67	0.50	16.00	143.53	14.07	787.50	673.89	0.20	0.05
227	8.47	26	SLE Q	12	5	0.00	-11386.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1303.56	0.38	0.09
229	8.47	23	SLE F	12	5	0.00	-11870.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1359.07	0.40	0.10
267	10.52	26	SLE Q	14	5	42.00	-6066.56	27.00	135.67	0.50	16.00	143.53	14.07	787.50	694.55	0.20	0.05
269	10.52	23	SLE F	14	5	42.00	-6483.29	27.00	135.67	0.50	16.00	143.53	14.07	787.50	742.26	0.22	0.05

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	VRdu <daN>	Sic.
17 SLU	0.30	0.75	0.45	ø10/20 4 br.	15.71	0.90	1453.98	2.50	91968.40	154165.00	91968.40	63.253
30 SLU	0.75	1.88	1.13	ø10/20 4 br.	15.71	0.90	9573.24	2.50	91968.40	154165.00	91968.40	9.607
30 SLU	1.88	2.33	0.45	ø10/20 4 br.	15.71	0.90	10666.20	2.50	91968.40	154165.00	91968.40	8.622
30 SLU	2.79	3.23	0.45	ø10/20 4 br.	15.71	0.90	12097.10	2.50	91968.40	154165.00	91968.40	7.603
30 SLU	3.23	10.07	6.83	ø10/20 4 br.	15.71	0.90	11196.70	2.50	91968.40	154165.00	91968.40	8.214
28 SLU	10.07	10.52	0.45	ø10/20 4 br.	15.71	0.90	14000.50	2.50	91968.40	154165.00	91968.40	6.569

Verifiche di resistenza al fuoco**Stato limite ultimo - Verifiche a flessione/presoflessione**

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.30	40	SLU I	1	30.00	14.07	14.07	14.07	14.07	-685.59	-35880.40	52.335
0.85	40	SLU I	2	0.00	14.07	14.07	14.07	14.07	920.92	40141.80	43.589
2.33	40	SLU I	3	62.83	14.07	14.07	14.07	14.07	4871.55	40141.80	8.240

Relazione di calcolo

2.79	40	SLU I	4	22.50	28.15	14.07	28.15	14.07	5771.72	40116.70	6.951
8.47	40	SLU I	12	0.00	14.07	14.07	14.07	14.07	-11386.00	-35880.40	3.151
10.52	40	SLU I	14	42.00	14.07	14.07	14.07	14.07	-6066.56	-35880.40	5.914

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
40 SLU I	0.30	0.75	0.45	ø10/20 4 br.	15.71	0.83	841.53	2.50	59444.80	214369.00	59444.80	70.639
40 SLU I	0.75	1.88	1.13	ø10/20 4 br.	15.71	0.83	5708.57	2.50	59444.80	214369.00	59444.80	10.413
40 SLU I	1.88	2.33	0.45	ø10/20 4 br.	15.71	0.83	6287.26	2.50	59444.80	214369.00	59444.80	9.455
40 SLU I	2.79	3.23	0.45	ø10/20 4 br.	15.71	0.83	7518.27	2.50	59444.80	214369.00	59444.80	7.907
40 SLU I	3.23	10.07	6.83	ø10/20 4 br.	15.71	0.83	7049.58	2.50	59444.80	214369.00	59444.80	8.432
40 SLU I	10.07	10.52	0.45	ø10/20 4 br.	15.71	0.83	7494.72	2.50	59444.80	214369.00	59444.80	7.932

Travata n. 422

Nodi: 2 -1886 -1885 -1884 3

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	TP	Fyk <daN/cm²>	Fyd <daN/cm²>
5R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.45	28	SLU	1	35.25	14.07	14.07	14.07	14.07	-7926.37	-35450.10	4.472
1.20	28	SLU	2	40.12	14.07	14.07	14.07	14.07	-9646.58	-35450.10	3.675
2.91	28	SLU	4	30.00	14.07	14.07	14.07	14.07	-7035.42	-35450.10	5.039

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.45	13	SLV(E)	1	35.25	14.07	14.07	14.07	14.07	-8701.44	-34082.90	3.917
1.20	13	SLV(E)	2	40.12	14.07	14.07	14.07	14.07	-10141.60	-34082.90	3.361
2.91	13	SLV(E)	4	30.00	14.07	14.07	14.07	14.07	-6712.01	-34082.90	5.078

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.45	32	SLE R	1	35.25	14.07	14.07	-5747.22	657.99	-132.02	11.73
0.45	26	SLE Q	1	35.25	14.07	14.07	-4178.97	478.44	-95.99	8.53
1.20	32	SLE R	2	40.12	14.07	14.07	-7047.62	806.87	-161.89	14.38
1.20	26	SLE Q	2	40.12	14.07	14.07	-5475.17	626.84	-125.77	11.17
2.91	32	SLE R	4	30.00	14.07	14.07	-5177.40	592.75	-118.93	10.56
2.91	26	SLE Q	4	30.00	14.07	14.07	-4271.12	488.99	-98.11	8.72

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	W _k <mm>
33	0.45	26	SLE Q	1		5 35.25	-4178.97	27.00	135.67	0.50	16.00	143.53	14.07	787.50	478.44	0.14	0.03
39	0.45	36	SLE F	1		5 35.25	-4452.96	27.00	135.67	0.50	16.00	143.53	14.07	787.50	509.81	0.15	0.04
73	1.20	26	SLE Q	2		5 40.12	-5475.17	27.00	135.67	0.50	16.00	143.53	14.07	787.50	626.84	0.18	0.04
79	1.20	36	SLE F	2		5 40.12	-5709.74	27.00	135.67	0.50	16.00	143.53	14.07	787.50	653.70	0.19	0.05
113	2.91	26	SLE Q	4		5 30.00	-4271.12	27.00	135.67	0.50	16.00	143.53	14.07	787.50	488.99	0.14	0.03
115	2.91	23	SLE F	4		5 30.00	-4479.85	27.00	135.67	0.50	16.00	143.53	14.07	787.50	512.89	0.15	0.04

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
13 SLV	0.45	0.90	0.45	ø10/20 4 br.	15.71	0.90	6391.14	2.50	91968.40	154165.00	91968.40	14.390
13 SLV	0.90	2.46	1.56	ø10/20 4 br.	15.71	0.90	6014.47	2.50	91968.40	154165.00	91968.40	15.291
13 SLV	2.46	2.91	0.45	ø10/20 4 br.	15.71	0.90	7909.59	2.50	91968.40	154165.00	91968.40	11.627

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.45	40	SLU I	1	35.25	14.07	14.07	14.07	14.07	-4178.97	-35880.40	8.586
1.20	40	SLU I	2	40.12	14.07	14.07	14.07	14.07	-5475.17	-35880.40	6.553
2.91	40	SLU I	4	30.00	14.07	14.07	14.07	14.07	-4271.12	-35880.40	8.401

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
40 SLU I	0.45	0.90	0.45	ø10/20 4 br.	15.71	0.83	3435.16	2.50	59444.80	214369.00	59444.80	17.305
40 SLU I	0.90	2.46	1.56	ø10/20 4 br.	15.71	0.83	2282.49	2.50	59444.80	214369.00	59444.80	26.044

Relazione di calcolo

40 SLU I	2.46	2.91	0.45	ø10/20 4 br.	15.71	0.83	2799.88	2.50	59444.80	214369.00	59444.80	21.231
----------	------	------	------	--------------	-------	------	---------	------	----------	-----------	----------	--------

Travata n. 423

Nodi: 1 -543 -542 -541 -540 -539 -538 -537 -536 -6 -383 -1774 -12 -1895 -1894 -1893 -1892 -1891 -1890 -108 -1889 -1888 -1887 2

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
5R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cm²>	Afe I <cm²>	AfEP S <cm²>	AfEP I <cm²>	My <daNm>	MRdy <daNm>	Sic.
0.45	17	SLU	1	48.33	14.07	14.07	14.07	14.07	-10043.90	-35450.10	3.530
2.16	19	SLU	3	63.51	14.07	14.07	14.07	14.07	-19141.40	-35450.10	1.852
8.18	19	SLU	9	22.50	28.15	14.07	28.15	14.07	16696.80	35445.00	2.123
8.62	30	SLU	10	58.50	14.07	14.07	14.07	14.07	17681.60	35450.10	2.005
10.61	30	SLU	12	58.50	28.15	14.07	28.15	14.07	15109.10	35445.00	2.346
11.05	28	SLU	13	63.79	14.07	14.07	14.07	14.07	14590.50	35450.10	2.430
13.85	30	SLU	16	43.14	28.15	28.15	28.15	28.15	-9935.39	-70123.70	7.058
16.64	19	SLU	19	22.50	28.15	14.07	28.15	14.07	4498.54	35445.00	7.879
17.09	30	SLU	20	74.25	14.07	14.07	14.07	14.07	8629.49	35450.10	4.108
19.13	27	SLU	22	64.50	14.07	14.07	14.07	14.07	-7622.13	-35450.10	4.651
20.29	27	SLU	23	45.00	14.07	14.07	14.07	14.07	-7106.21	-35450.10	4.989

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cm²>	Afe I <cm²>	AfEP S <cm²>	AfEP I <cm²>	My <daNm>	M'ydy <daNm>	Sic.
0.45	5	SLV (E)	1	48.33	14.07	14.07	14.07	14.07	-11900.80	-34082.90	2.864
2.16	5	SLV (E)	3	63.51	14.07	14.07	14.07	14.07	-16898.10	-34082.90	2.017
8.18	5	SLV (E)	9	22.50	28.15	14.07	28.15	14.07	22673.10	34362.70	1.516
8.62	9	SLV (E)	10	58.50	14.07	14.07	14.07	14.07	12872.10	34082.90	2.648
10.61	13	SLV (E)	12	58.50	28.15	14.07	28.15	14.07	13016.00	34362.70	2.640
11.05	13	SLV (E)	13	63.79	14.07	14.07	14.07	14.07	21111.80	34082.90	1.614
13.85	13	SLV (E)	16	43.14	28.15	28.15	28.15	28.15	-8389.99	-67205.10	8.010
16.64	5	SLV (E)	19	22.50	28.15	14.07	28.15	14.07	15614.20	34362.70	2.201
17.09	5	SLV (E)	20	74.25	14.07	14.07	14.07	14.07	7130.54	34082.90	4.780
19.13	13	SLV (E)	22	64.50	14.07	14.07	14.07	14.07	-11058.60	-34082.90	3.082
20.29	13	SLV (E)	23	45.00	14.07	14.07	14.07	14.07	-10379.80	-34082.90	3.284

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	Afe S <cm²>	Afe I <cm²>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.45	20	SLE R	1	48.33	14.07	14.07	-7199.02	824.20	-165.37	14.69
0.45	26	SLE Q	1	48.33	14.07	14.07	-5619.87	643.41	-129.09	11.47
2.16	22	SLE R	3	63.51	14.07	14.07	-13927.20	1594.50	-319.91	28.42
2.16	26	SLE Q	3	63.51	14.07	14.07	-12369.80	1416.20	-284.14	25.24
8.18	22	SLE R	9	22.50	28.15	14.07	12103.20	-238.94	1376.03	21.91
8.18	26	SLE Q	9	22.50	28.15	14.07	10469.40	-206.68	1190.28	18.95
8.62	34	SLE R	10	58.50	14.07	14.07	12868.30	-295.59	1473.27	26.26
8.62	26	SLE Q	10	58.50	14.07	14.07	11207.80	-257.45	1283.16	22.87
10.61	34	SLE R	12	58.50	28.15	14.07	10931.50	-215.80	1242.82	19.79
10.61	26	SLE Q	12	58.50	28.15	14.07	9538.22	-188.30	1084.41	17.27
11.05	32	SLE R	13	63.79	14.07	14.07	10466.10	-240.41	1198.25	21.36
11.05	26	SLE Q	13	63.79	14.07	14.07	7561.16	-173.68	865.66	15.43
13.85	34	SLE R	16	43.14	28.15	28.15	-7225.50	419.00	-124.25	10.30
13.85	26	SLE Q	16	43.14	28.15	28.15	-6073.96	352.22	-104.45	8.65
16.64	22	SLE R	19	22.50	28.15	14.07	3327.47	-65.69	378.30	6.02
16.64	26	SLE Q	19	22.50	28.15	14.07	4080.45	-80.55	463.91	7.39
17.09	34	SLE R	20	74.25	14.07	14.07	6177.49	-141.90	707.25	12.61
17.09	26	SLE Q	20	74.25	14.07	14.07	5475.03	-125.76	626.83	11.17
19.13	31	SLE R	22	64.50	14.07	14.07	-5431.63	621.86	-124.77	11.08
19.13	26	SLE Q	22	64.50	14.07	14.07	-3152.60	360.94	-72.42	6.43
20.29	31	SLE R	23	45.00	14.07	14.07	-5028.51	575.71	-115.51	10.26
20.29	26	SLE Q	23	45.00	14.07	14.07	-2645.61	302.89	-60.77	5.40

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cm²>	A _{c eff} <cm²>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
42	0.45	26	SLE Q	1		5 48.33	-5619.87	27.00	135.67	0.50	16.00	143.53	14.07	787.50	643.41	0.19	0.05
44	0.45	23	SLE F	1		5 48.33	-6350.15	27.00	135.67	0.50	16.00	143.53	14.07	787.50	727.02	0.21	0.05
82	2.16	26	SLE Q	3		5 63.51	-12369.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1416.20	0.41	0.10
84	2.16	23	SLE F	3		5 63.51	-12985.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1486.71	0.43	0.11
128	8.18	26	SLE Q	9		5 22.50	10469.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1190.28	0.35	0.08
130	8.18	23	SLE F	9		5 22.50	10998.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1250.48	0.36	0.09
168	8.62	26	SLE Q	10		5 58.50	11207.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1283.16	0.37	0.09
170	8.62	23	SLE F	10		5 58.50	11573.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1325.05	0.39	0.09

Relazione di calcolo

208	10.61	26	SLE Q	12	5	58.50	9538.22	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1084.41	0.32	0.08
212	10.61	25	SLE F	12	5	58.50	9760.78	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1109.71	0.32	0.08
251	11.05	26	SLE Q	13	5	63.79	7561.16	27.00	135.67	0.50	16.00	143.53	14.07	787.50	865.66	0.25	0.06
253	11.05	23	SLE F	13	5	63.79	8040.56	27.00	135.67	0.50	16.00	143.53	14.07	787.50	920.55	0.27	0.07
291	13.85	26	SLE Q	16	5	43.14	-6073.96	27.00	62.62	0.50	16.00	98.76	28.15	787.50	352.22	0.10	0.02
293	13.85	23	SLE F	16	5	43.14	-6322.53	27.00	62.62	0.50	16.00	98.76	28.15	787.50	366.64	0.11	0.02
348	16.64	26	SLE Q	19	5	22.50	4080.45	27.00	135.67	0.50	16.00	143.53	14.07	787.50	463.91	0.14	0.03
356	16.64	25	SLE F	19	5	22.50	4201.17	27.00	135.67	0.50	16.00	143.53	14.07	787.50	477.64	0.14	0.03
418	17.09	26	SLE Q	20	5	74.25	5475.03	27.00	135.67	0.50	16.00	143.53	14.07	787.50	626.83	0.18	0.04
423	17.09	25	SLE F	20	5	74.25	5652.82	27.00	135.67	0.50	16.00	143.53	14.07	787.50	647.18	0.19	0.05
463	19.13	26	SLE Q	22	5	64.50	-3152.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	360.94	0.11	0.03
465	19.13	23	SLE F	22	5	64.50	-3942.41	27.00	135.67	0.50	16.00	143.53	14.07	787.50	451.36	0.13	0.03
504	20.29	26	SLE Q	23	5	45.00	-2645.61	27.00	135.67	0.50	16.00	143.53	14.07	787.50	302.89	0.09	0.02
506	20.29	23	SLE F	23	5	45.00	-3510.99	27.00	135.67	0.50	16.00	143.53	14.07	787.50	401.97	0.12	0.03

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
30 SLU	0.45	0.90	0.45	ø10/20 4 br.	15.71	0.90	16003.70	2.50	91968.40	154165.00	91968.40	5.747
5 SLV	0.90	7.72	6.82	ø10/20 4 br.	15.71	0.90	17183.90	2.50	91968.40	154165.00	91968.40	5.352
5 SLV	7.72	8.18	0.45	ø10/20 4 br.	15.71	0.90	19919.80	2.50	91968.40	154165.00	91968.40	4.617
30 SLU	8.62	9.07	0.45	ø10/20 4 br.	15.71	0.90	10761.70	2.50	91968.40	154165.00	91968.40	8.546
30 SLU	9.07	10.15	1.08	ø10/20 4 br.	15.71	0.90	9235.37	2.50	91968.40	154165.00	91968.40	9.958
13 SLV	10.15	10.61	0.45	ø10/20 4 br.	15.71	0.90	7357.11	2.50	91968.40	154165.00	91968.40	12.501
13 SLV	11.05	11.51	0.45	ø10/20 4 br.	15.71	0.90	18759.00	2.50	91968.40	154165.00	91968.40	4.903
13 SLV	11.51	16.20	4.69	ø10/20 4 br.	15.71	0.90	15983.70	2.50	91968.40	154165.00	91968.40	5.754
5 SLV	16.20	16.64	0.45	ø10/20 4 br.	15.71	0.90	14402.80	2.50	91968.40	154165.00	91968.40	6.385
30 SLU	17.09	17.55	0.45	ø10/20 4 br.	15.71	0.90	13053.40	2.50	91968.40	154165.00	91968.40	7.046
30 SLU	17.55	19.84	2.29	ø10/20 4 br.	15.71	0.90	11992.00	2.50	91968.40	154165.00	91968.40	7.669
5 SLV	19.84	20.29	0.45	ø10/20 4 br.	15.71	0.90	4484.17	2.50	91968.40	154165.00	91968.40	20.510

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.45	40	SLU I	1	48.33	14.07	14.07	14.07	14.07	-5619.87	-35880.40	6.385
2.16	40	SLU I	3	63.51	14.07	14.07	14.07	14.07	-12369.80	-35880.40	2.901
8.18	40	SLU I	9	22.50	28.15	14.07	28.15	14.07	10469.40	40116.70	3.832
8.62	40	SLU I	10	58.50	14.07	14.07	14.07	14.07	11207.80	40141.80	3.582
10.61	40	SLU I	12	58.50	28.15	14.07	28.15	14.07	9538.22	40116.70	4.206
11.05	40	SLU I	13	63.79	14.07	14.07	14.07	14.07	7561.16	40141.80	5.309
13.85	40	SLU I	16	43.14	28.15	28.15	28.15	28.15	-6073.96	-75648.30	12.454
16.64	40	SLU I	19	22.50	28.15	14.07	28.15	14.07	4080.45	40116.70	9.831
17.09	40	SLU I	20	74.25	14.07	14.07	14.07	14.07	5475.03	40141.80	7.332
19.13	40	SLU I	22	64.50	14.07	14.07	14.07	14.07	-3152.60	-35880.40	11.381
20.29	40	SLU I	23	45.00	14.07	14.07	14.07	14.07	-2645.61	-35880.40	13.562

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
40 SLU I	0.45	0.90	0.45	ø10/20 4 br.	15.71	0.83	10175.80	2.50	59444.80	214369.00	59444.80	5.842
40 SLU I	0.90	7.72	6.82	ø10/20 4 br.	15.71	0.83	11009.30	2.50	59444.80	214369.00	59444.80	5.400
40 SLU I	7.72	8.18	0.45	ø10/20 4 br.	15.71	0.83	11771.60	2.50	59444.80	214369.00	59444.80	5.050
40 SLU I	8.62	9.07	0.45	ø10/20 4 br.	15.71	0.83	6782.78	2.50	59444.80	214369.00	59444.80	8.764
40 SLU I	9.07	10.15	1.08	ø10/20 4 br.	15.71	0.83	5894.76	2.50	59444.80	214369.00	59444.80	10.084
40 SLU I	10.15	10.61	0.45	ø10/20 4 br.	15.71	0.83	4285.05	2.50	59444.80	214369.00	59444.80	13.873
40 SLU I	11.05	11.51	0.45	ø10/20 4 br.	15.71	0.83	9776.45	2.50	59444.80	214369.00	59444.80	6.080
40 SLU I	11.51	16.20	4.69	ø10/20 4 br.	15.71	0.83	8966.16	2.50	59444.80	214369.00	59444.80	6.630
40 SLU I	16.20	16.64	0.45	ø10/20 4 br.	15.71	0.83	7678.17	2.50	59444.80	214369.00	59444.80	7.742
40 SLU I	17.09	17.55	0.45	ø10/20 4 br.	15.71	0.83	7834.13	2.50	59444.80	214369.00	59444.80	7.588
40 SLU I	17.55	19.84	2.29	ø10/20 4 br.	15.71	0.83	7222.07	2.50	59444.80	214369.00	59444.80	8.231
40 SLU I	19.84	20.29	0.45	ø10/20 4 br.	15.71	0.83	3159.99	2.50	59444.80	214369.00	59444.80	18.812

Travata n. 425

Nodi: -16 -1852 -1851 -1850 -1849 -1848 -1847 -1846 98 -1896 -1897 3

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fcd (Inc) <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
5R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.23	28	SLU	1	22.50	14.07	14.07	14.07	14.07	7077.38	35450.10	5.009
6.83	19	SLU	8	65.69	28.15	14.07	28.15	14.07	3638.26	35445.00	9.742
7.28	19	SLU	9	22.50	14.07	14.07	14.07	14.07	3812.09	35450.10	9.299
8.32	27	SLU	10	31.72	14.07	14.07	14.07	14.07	-4438.49	-35450.10	7.987

9.61	27	SLU	11	65.17	14.07	14.07	14.07	14.07	-3987.33	-35450.10	8.891
------	----	-----	----	-------	-------	-------	-------	-------	----------	-----------	-------

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	X	AfE S	AfE I	AfEP S	AfEP I	My	M'ydy	Sic.
<m>				<cm>	<cmq>	<cmq>	<cmq>	<cmq>	<daNm>	<daNm>	
0.23	13	SLV(E)	1	22.50	14.07	14.07	14.07	14.07	18775.90	34082.90	1.815
6.83	5	SLV(E)	8	65.69	28.15	14.07	28.15	14.07	13031.50	34362.70	2.637
7.28	5	SLV(E)	9	22.50	14.07	14.07	14.07	14.07	4448.63	34082.90	7.661
8.32	13	SLV(E)	10	31.72	14.07	14.07	14.07	14.07	-7388.58	-34082.90	4.613
9.61	13	SLV(E)	11	65.17	14.07	14.07	14.07	14.07	-7282.90	-34082.90	4.680

Stato limite d'esercizio - Verifiche tensionali

Xg	CC	TCC	El	X	AfE S	AfE I	My	σ _f sup	σ _f inf	σ _c
<m>				<cm>	<cmq>	<cmq>	<daNm>	<daN/cmq>	<daN/cmq>	<daN/cmq>
0.23	32	SLE R	1	22.50	14.07	14.07	5122.65	-117.67	586.48	10.45
0.23	26	SLE Q	1	22.50	14.07	14.07	3805.82	-87.42	435.72	7.77
6.83	22	SLE R	8	65.69	28.15	14.07	2674.67	-52.80	304.09	4.84
6.83	26	SLE Q	8	65.69	28.15	14.07	2777.15	-54.83	315.74	5.03
7.28	22	SLE R	9	22.50	14.07	14.07	2786.41	-64.01	319.01	5.69
7.28	26	SLE Q	9	22.50	14.07	14.07	2979.20	-68.43	341.08	6.08
8.32	31	SLE R	10	31.72	14.07	14.07	-3163.99	362.24	-72.68	6.46
8.32	26	SLE Q	10	31.72	14.07	14.07	-1532.73	175.48	-35.21	3.13
9.61	31	SLE R	11	65.17	14.07	14.07	-2828.64	323.85	-64.98	5.77
9.61	26	SLE Q	11	65.17	14.07	14.07	-1340.01	153.41	-30.78	2.73

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg	CC	TCC	El	Sez.	X	My	c	s	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	W _k
	<m>					<cm>	<daNm>	<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cmq>		<mm>
42	0.23	26	SLE Q	1	5	22.50	3805.82	27.00	135.67	0.50	16.00	143.53	14.07	787.50	435.72	0.13	0.03
53	0.23	36	SLE F	1	5	22.50	4121.18	27.00	135.67	0.50	16.00	143.53	14.07	787.50	471.83	0.14	0.03
105	6.83	26	SLE Q	8	5	65.69	2777.15	27.00	135.67	0.50	16.00	143.53	14.07	787.50	315.74	0.09	0.02
113	6.83	25	SLE F	8	5	65.69	2828.82	27.00	135.67	0.50	16.00	143.53	14.07	787.50	321.61	0.09	0.02
178	7.28	26	SLE Q	9	5	22.50	2979.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	341.08	0.10	0.02
186	7.28	25	SLE F	9	5	22.50	3035.79	27.00	135.67	0.50	16.00	143.53	14.07	787.50	347.56	0.10	0.02
227	8.32	26	SLE Q	10	5	31.72	-1532.73	27.00	135.67	0.50	16.00	143.53	14.07	787.50	175.48	0.05	0.01
229	8.32	23	SLE F	10	5	31.72	-2085.17	27.00	135.67	0.50	16.00	143.53	14.07	787.50	238.73	0.07	0.02
272	9.61	26	SLE Q	11	5	65.17	-1340.01	27.00	135.67	0.50	16.00	143.53	14.07	787.50	153.41	0.04	0.01
274	9.61	23	SLE F	11	5	65.17	-1848.31	27.00	135.67	0.50	16.00	143.53	14.07	787.50	211.61	0.06	0.02

Stato limite ultimo - Verifiche a taglio

CC	X0	X1	Lung.	Staff.	AfE St.	bw	Vsdu	ctgθ	VRsd	VRcd	Vrdu	Sic.
	<m>	<m>	<m>		<cmq/m>	<m>	<daN>		<daN>	<daN>	<daN>	
13 SLV	0.23	0.68	0.45	ø10/20 4 br.	15.71	0.90	17128.80	2.50	91968.40	154165.00	91968.40	5.369
13 SLV	0.68	6.38	5.70	ø10/20 4 br.	15.71	0.90	15331.20	2.50	91968.40	154165.00	91968.40	5.999
5 SLV	6.38	6.83	0.45	ø10/20 4 br.	15.71	0.90	10416.70	2.50	91968.40	154165.00	91968.40	8.829
13 SLV	7.28	7.73	0.45	ø10/20 4 br.	15.71	0.90	8647.76	2.50	91968.40	154165.00	91968.40	10.635
13 SLV	7.73	9.16	1.43	ø10/20 4 br.	15.71	0.90	7410.52	2.50	91968.40	154165.00	91968.40	12.411
5 SLV	9.16	9.61	0.45	ø10/20 4 br.	15.71	0.90	1784.39	2.50	91968.40	154165.00	91968.40	51.541

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	X	AfE S	AfE I	AfEP S	AfEP I	My	MRdy	Sic.
<m>				<cm>	<cmq>	<cmq>	<cmq>	<cmq>	<daNm>	<daNm>	
0.23	40	SLU I	1	22.50	14.07	14.07	14.07	14.07	3805.82	40141.80	10.547
6.83	40	SLU I	8	65.69	28.15	14.07	28.15	14.07	2777.15	40116.70	14.445
7.28	40	SLU I	9	22.50	14.07	14.07	14.07	14.07	2979.20	40141.80	13.474
8.32	40	SLU I	10	31.72	14.07	14.07	14.07	14.07	-1532.73	-35880.40	23.410
9.61	40	SLU I	11	65.17	14.07	14.07	14.07	14.07	-1340.01	-35880.40	26.776

Stato limite ultimo - Verifiche a taglio

CC	X0	X1	Lung.	Staff.	AfE St.	bw	Vsdu	ctgθ	VRsd	VRcd	Vrdu	Sic.
	<m>	<m>	<m>		<cmq/m>	<m>	<daN>		<daN>	<daN>	<daN>	
40 SLU I	0.23	0.68	0.45	ø10/20 4 br.	15.71	0.83	6180.40	2.50	59444.80	214369.00	59444.80	9.618
40 SLU I	0.68	6.38	5.70	ø10/20 4 br.	15.71	0.83	5930.40	2.50	59444.80	214369.00	59444.80	10.024
40 SLU I	6.38	6.83	0.45	ø10/20 4 br.	15.71	0.83	4577.78	2.50	59444.80	214369.00	59444.80	12.986
40 SLU I	7.28	7.73	0.45	ø10/20 4 br.	15.71	0.83	4510.66	2.50	59444.80	214369.00	59444.80	13.179
40 SLU I	7.73	9.16	1.43	ø10/20 4 br.	15.71	0.83	4200.14	2.50	59444.80	214369.00	59444.80	14.153
40 SLU I	9.16	9.61	0.45	ø10/20 4 br.	15.71	0.83	828.31	2.50	59444.80	214369.00	59444.80	71.766

Travata n. 427

Nodi: 7 -1724 -1723 -1722 -1721 -1720 -1719 -1718 -1717 -8 -1716 -1715 -1293

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fcd (Inc)	Fctd	TP	Fyk	Fyd
		<cm>	<cm>	<cm>	<cm>		<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>		<daN/cmq>	<daN/cmq>
5R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	X	AfE S	AfE I	AfEP S	AfEP I	My	MRdy	Sic.
<m>				<cm>	<cmq>	<cmq>	<cmq>	<cmq>	<daNm>	<daNm>	
0.45	19	SLU	1	45.00	14.07	14.07	14.07	14.07	-10994.60	-35450.10	3.224
1.87	19	SLU	3	0.00	14.07	14.07	14.07	14.07	-16225.60	-35450.10	2.185
8.18	19	SLU	9	70.83	28.15	14.07	28.15	14.07	21470.90	35445.00	1.651
8.62	30	SLU	10	22.50	14.07	14.07	14.07	14.07	21266.50	35450.10	1.667

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	X	AfE S	AfE I	AfEP S	AfEP I	My	M'ydy	Sic.
<m>				<cm>	<cmq>	<cmq>	<cmq>	<cmq>	<daNm>	<daNm>	
0.45	5	SLV (E)	1	45.00	14.07	14.07	14.07	14.07	-9813.00	-34082.90	3.473
1.87	5	SLV (E)	3	0.00	14.07	14.07	14.07	14.07	-13290.60	-34082.90	2.564
8.18	5	SLV (E)	9	70.83	28.15	14.07	28.15	14.07	17220.20	34362.70	1.995
8.62	13	SLV (E)	10	22.50	14.07	14.07	14.07	14.07	16555.90	34082.90	2.059

Stato limite d'esercizio - Verifiche tensionali

Xg	CC	TCC	El	X	AfE S	AfE I	My	σ_f sup	σ_f inf	σ_c
<m>				<cm>	<cmq>	<cmq>	<daNm>	<daN/cmq>	<daN/cmq>	<daN/cmq>
0.45	22	SLE R	1	45.00	14.07	14.07	-7917.40	906.45	-181.87	16.16
0.45	26	SLE Q	1	45.00	14.07	14.07	-7065.87	808.96	-162.31	14.42
1.87	22	SLE R	3	0.00	14.07	14.07	-11689.70	1338.33	-268.52	23.85
1.87	26	SLE Q	3	0.00	14.07	14.07	-10656.50	1220.04	-244.78	21.74
8.18	22	SLE R	9	70.83	28.15	14.07	15462.40	-305.25	1757.94	27.99
8.18	26	SLE Q	9	70.83	28.15	14.07	13453.40	-265.59	1529.54	24.35
8.62	34	SLE R	10	22.50	14.07	14.07	15340.80	-352.39	1756.34	31.30
8.62	26	SLE Q	10	22.50	14.07	14.07	13531.60	-310.83	1549.20	27.61

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg	CC	TCC	El	Sez.	X	My	c	s	K ₂	Φ_{eq}	Δ_{sm}	A _s	A _{c eff}	σ_s	ϵ_{sm}	Wk
	<m>					<cm>	<daNm>	<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cmq>		<mm>
32	0.45	26	SLE Q	1	5	45.00	-7065.87	27.00	135.67	0.50	16.00	143.53	14.07	787.50	808.96	0.24	0.06
34	0.45	23	SLE F	1	5	45.00	-7321.34	27.00	135.67	0.50	16.00	143.53	14.07	787.50	838.21	0.24	0.06
72	1.87	26	SLE Q	3	5	0.00	-10656.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1220.04	0.36	0.09
76	1.87	25	SLE F	3	5	0.00	-10846.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1241.81	0.36	0.09
112	8.18	26	SLE Q	9	5	70.83	13453.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1529.54	0.45	0.11
116	8.18	25	SLE F	9	5	70.83	13828.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1572.12	0.46	0.11
152	8.62	26	SLE Q	10	5	22.50	13531.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1549.20	0.45	0.11
156	8.62	25	SLE F	10	5	22.50	13900.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1591.41	0.46	0.11

Stato limite ultimo - Verifiche a taglio

CC	X0	X1	Lung.	Staff.	AfE St.	bw	Vsdu	ctgθ	VRsd	VRcd	Vrdu	Sic.
	<m>	<m>	<m>		<cmq/m>	<m>	<daN>		<daN>	<daN>	<daN>	
28 SLU	0.45	0.90	0.45	ø10/20 4 br.	15.71	0.90	9258.32	2.50	91968.40	154165.00	91968.40	9.934
19 SLU	0.90	7.72	6.82	ø10/20 4 br.	15.71	0.90	21351.10	2.50	91968.40	154165.00	91968.40	4.307
19 SLU	7.72	8.18	0.45	ø10/20 4 br.	15.71	0.90	21916.50	2.50	91968.40	154165.00	91968.40	4.196
30 SLU	8.62	9.07	0.45	ø10/20 4 br.	15.71	0.90	21685.80	2.50	91968.40	154165.00	91968.40	4.241
30 SLU	9.07	10.77	1.69	ø10/20 4 br.	15.71	0.90	21055.60	2.50	91968.40	154165.00	91968.40	4.368

Verifiche di resistenza al fuoco**Stato limite ultimo - Verifiche a flessione/pressoflessione**

Xg	CC	TCC	El	X	AfE S	AfE I	AfEP S	AfEP I	My	MRdy	Sic.
<m>				<cm>	<cmq>	<cmq>	<cmq>	<cmq>	<daNm>	<daNm>	
0.45	40	SLU I	1	45.00	14.07	14.07	14.07	14.07	-7065.87	-35880.40	5.078
1.87	40	SLU I	3	0.00	14.07	14.07	14.07	14.07	-10656.50	-35880.40	3.367
8.18	40	SLU I	9	70.83	28.15	14.07	28.15	14.07	13453.40	40116.70	2.982
8.62	40	SLU I	10	22.50	14.07	14.07	14.07	14.07	13531.60	40141.80	2.967

Stato limite ultimo - Verifiche a taglio

CC	X0	X1	Lung.	Staff.	AfE St.	bw	Vsdu	ctgθ	VRsd	VRcd	Vrdu	Sic.
	<m>	<m>	<m>		<cmq/m>	<m>	<daN>		<daN>	<daN>	<daN>	
40 SLU I	0.45	0.90	0.45	ø10/20 4 br.	15.71	0.83	4961.09	2.50	59444.80	214369.00	59444.80	11.982
40 SLU I	0.90	7.72	6.82	ø10/20 4 br.	15.71	0.83	13603.70	2.50	59444.80	214369.00	59444.80	4.370
40 SLU I	7.72	8.18	0.45	ø10/20 4 br.	15.71	0.83	13888.00	2.50	59444.80	214369.00	59444.80	4.280
40 SLU I	8.62	9.07	0.45	ø10/20 4 br.	15.71	0.83	13745.00	2.50	59444.80	214369.00	59444.80	4.325
40 SLU I	9.07	10.77	1.69	ø10/20 4 br.	15.71	0.83	13412.70	2.50	59444.80	214369.00	59444.80	4.432

Travata n. 430

Nodi: -5 -1644 -1643 -1642 -1641 -1640 -1639 -1638 -1637 -1292 -1636 -1635 97

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fcd (Inc)	Fctd	TP	Fyk	Fyd
		<cm>	<cm>	<cm>	<cm>		<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>		<daN/cmq>	<daN/cmq>
5R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/presoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.45	19	SLU	1	48.33	14.07	14.07	14.07	14.07	-11529.50	-35450.10	3.075
2.18	19	SLU	3	62.22	14.07	14.07	14.07	14.07	-18821.80	-35450.10	1.883
8.18	19	SLU	9	22.50	28.15	14.07	28.15	14.07	20399.90	35445.00	1.738
8.62	30	SLU	10	58.50	14.07	14.07	14.07	14.07	21576.90	35450.10	1.643
10.02	30	SLU	12	81.00	14.07	14.07	14.07	14.07	2128.28	35450.10	16.657
10.68	30	SLU	12	15.00	14.07	14.07	14.07	14.07	2128.28	35450.10	16.657

Stato limite elastico - Verifiche a flessione/presoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.45	5	SLV (E)	1	48.33	14.07	14.07	14.07	14.07	-8981.88	-34082.90	3.795
2.18	5	SLV (E)	3	62.22	14.07	14.07	14.07	14.07	-14230.40	-34082.90	2.395
8.18	5	SLV (E)	9	22.50	28.15	14.07	28.15	14.07	15181.40	34362.70	2.263
8.62	13	SLV (E)	10	58.50	14.07	14.07	14.07	14.07	14834.50	34082.90	2.298
10.02	5	SLV (E)	12	81.00	14.07	14.07	14.07	14.07	3410.10	34082.90	9.995
10.68	5	SLV (E)	12	15.00	14.07	14.07	14.07	14.07	3410.10	34082.90	9.995

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.45	22	SLE R	1	48.33	14.07	14.07	-8242.65	943.69	-189.34	16.82
0.45	26	SLE Q	1	48.33	14.07	14.07	-7341.39	840.50	-168.63	14.98
2.18	22	SLE R	3	62.22	14.07	14.07	-13517.00	1547.54	-310.49	27.58
2.18	26	SLE Q	3	62.22	14.07	14.07	-12402.90	1419.99	-284.90	25.31
8.18	22	SLE R	9	22.50	28.15	14.07	14637.60	-288.97	1664.16	26.50
8.18	26	SLE Q	9	22.50	28.15	14.07	12810.50	-252.90	1456.43	23.19
8.62	34	SLE R	10	58.50	14.07	14.07	15424.00	-354.30	1765.87	31.47
8.62	26	SLE Q	10	58.50	14.07	14.07	12907.50	-296.49	1477.76	26.34
10.02	34	SLE R	12	81.00	14.07	14.07	1474.89	-33.88	168.86	3.01
10.02	26	SLE Q	12	81.00	14.07	14.07	1094.71	-25.15	125.33	2.23
10.68	34	SLE R	12	15.00	14.07	14.07	1474.89	-33.88	168.86	3.01
10.68	26	SLE Q	12	15.00	14.07	14.07	1094.71	-25.15	125.33	2.23

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cmq>	ϵ_{sm}	Wk <mm>
32	0.45	26	SLE Q	1	5	48.33	-7341.39	27.00	135.67	0.50	16.00	143.53	14.07	787.50	840.50	0.24	0.06
34	0.45	23	SLE F	1	5	48.33	-7472.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	855.47	0.25	0.06
72	2.18	26	SLE Q	3	5	62.22	-12402.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1419.99	0.41	0.10
76	2.18	25	SLE F	3	5	62.22	-12612.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1443.97	0.42	0.10
112	8.18	26	SLE Q	9	5	22.50	12810.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1456.43	0.42	0.10
116	8.18	25	SLE F	9	5	22.50	13202.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1500.98	0.44	0.11
152	8.62	26	SLE Q	10	5	58.50	12907.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1477.76	0.43	0.11
156	8.62	25	SLE F	10	5	58.50	13296.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1522.24	0.44	0.11
198	10.02	26	SLE Q	12	5	81.00	1094.71	27.00	135.67	0.50	16.00	143.53	14.07	787.50	125.33	0.04	0.01
204	10.02	36	SLE F	12	5	81.00	1136.34	27.00	135.67	0.50	16.00	143.53	14.07	787.50	130.10	0.04	0.01
244	10.68	26	SLE Q	12	5	15.00	1094.71	27.00	135.67	0.50	16.00	143.53	14.07	787.50	125.33	0.04	0.01
250	10.68	36	SLE F	12	5	15.00	1136.34	27.00	135.67	0.50	16.00	143.53	14.07	787.50	130.10	0.04	0.01

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
28 SLU	0.45	0.90	0.45	ø10/20 4 br.	15.71	0.90	12993.70	2.50	91968.40	154165.00	91968.40	7.078
19 SLU	0.90	7.72	6.82	ø10/20 4 br.	15.71	0.90	22630.90	2.50	91968.40	154165.00	91968.40	4.064
19 SLU	7.72	8.18	0.45	ø10/20 4 br.	15.71	0.90	23406.70	2.50	91968.40	154165.00	91968.40	3.929
30 SLU	8.62	9.07	0.45	ø10/20 4 br.	15.71	0.90	24331.60	2.50	91968.40	154165.00	91968.40	3.780
30 SLU	9.07	10.23	1.15	ø10/20 4 br.	15.71	0.90	23388.20	2.50	91968.40	154165.00	91968.40	3.932
13 SLV	10.23	10.68	0.45	ø10/20 4 br.	15.71	0.90	3656.33	2.50	91968.40	154165.00	91968.40	25.153

Verifiche di resistenza al fuoco**Stato limite ultimo - Verifiche a flessione/presoflessione**

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.45	40	SLU I	1	48.33	14.07	14.07	14.07	14.07	-7341.39	-35880.40	4.887
2.18	40	SLU I	3	62.22	14.07	14.07	14.07	14.07	-12402.90	-35880.40	2.893
8.18	40	SLU I	9	22.50	28.15	14.07	28.15	14.07	12810.50	40116.70	3.132
8.62	40	SLU I	10	58.50	14.07	14.07	14.07	14.07	12907.50	40141.80	3.110
10.02	40	SLU I	12	81.00	14.07	14.07	14.07	14.07	1094.71	40141.80	36.669
10.68	40	SLU I	12	15.00	14.07	14.07	14.07	14.07	1094.71	40141.80	36.669

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
----	-----------	-----------	--------------	--------	--------------------	-----------	---------------	--------------	---------------	---------------	---------------	------

Relazione di calcolo

40 SLU I	0.45	0.90	0.45	ø10/20 4 br.	15.71	0.83	6778.61	2.50	59444.80	214369.00	59444.80	8.769
40 SLU I	0.90	7.72	6.82	ø10/20 4 br.	15.71	0.83	14478.80	2.50	59444.80	214369.00	59444.80	4.106
40 SLU I	7.72	8.18	0.45	ø10/20 4 br.	15.71	0.83	14900.80	2.50	59444.80	214369.00	59444.80	3.989
40 SLU I	8.62	9.07	0.45	ø10/20 4 br.	15.71	0.83	14871.20	2.50	59444.80	214369.00	59444.80	3.997
40 SLU I	9.07	10.23	1.15	ø10/20 4 br.	15.71	0.83	14342.60	2.50	59444.80	214369.00	59444.80	4.145
40 SLU I	10.23	10.68	0.45	ø10/20 4 br.	15.71	0.83	1375.97	2.50	59444.80	214369.00	59444.80	43.202

Travata n. 432

Nodi: -10 -1568 -1567 -1566 -1565 -1564 -1563 -1562 -1561 -1291 -1560 -1559 94

Caratteristiche delle sezioni e dei materiali utilizzati

Sez. Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Clas	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	TP	Fyk <daN/cm²>	Fyd <daN/cm²>
5R	90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/presoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cmq>	Afe I <cmq>	Afep S <cmq>	Afep I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.45	18	SLU	1	48.33	14.07	14.07	14.07	14.07	-14066.30	-35450.10	2.520
1.87	19	SLU	3	93.33	14.07	14.07	14.07	14.07	-21480.40	-35450.10	1.650
8.18	19	SLU	9	22.50	28.15	14.07	28.15	14.07	24413.40	35445.00	1.452
8.62	30	SLU	10	58.50	14.07	14.07	14.07	14.07	27403.50	35450.10	1.294
10.02	28	SLU	12	81.00	14.07	14.07	14.07	14.07	-6227.85	-35450.10	5.692
10.68	28	SLU	12	15.00	14.07	14.07	14.07	14.07	-6227.85	-35450.10	5.692

Stato limite elastico - Verifiche a flessione/presoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cmq>	Afe I <cmq>	Afep S <cmq>	Afep I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.45	5	SLV(E)	1	48.33	14.07	14.07	14.07	14.07	-9678.16	-34082.90	3.522
1.87	5	SLV(E)	3	93.33	14.07	14.07	14.07	14.07	-15303.10	-34082.90	2.227
8.18	9	SLV(E)	9	22.50	28.15	14.07	28.15	14.07	17143.10	34362.70	2.004
8.62	5	SLV(E)	10	58.50	14.07	14.07	14.07	14.07	17029.60	34082.90	2.001
10.02	13	SLV(E)	12	81.00	14.07	14.07	14.07	14.07	-4268.00	-34082.90	7.986
10.68	13	SLV(E)	12	15.00	14.07	14.07	14.07	14.07	-4268.00	-34082.90	7.986

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	Afe S <cmq>	Afe I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.45	21	SLE R	1	48.33	14.07	14.07	-9972.44	1141.73	-229.07	20.35
0.45	26	SLE Q	1	48.33	14.07	14.07	-8378.30	959.22	-192.45	17.10
1.87	22	SLE R	3	93.33	14.07	14.07	-15283.00	1749.72	-351.06	31.18
1.87	26	SLE Q	3	93.33	14.07	14.07	-13687.60	1567.06	-314.41	27.93
8.18	22	SLE R	9	22.50	28.15	14.07	17441.10	-344.31	1982.89	31.57
8.18	26	SLE Q	9	22.50	28.15	14.07	14788.50	-291.95	1681.33	26.77
8.62	34	SLE R	10	58.50	14.07	14.07	19444.60	-446.65	2226.18	39.68
8.62	26	SLE Q	10	58.50	14.07	14.07	15069.70	-346.16	1725.31	30.75
10.02	32	SLE R	12	81.00	14.07	14.07	-4441.18	508.46	-102.02	9.06
10.02	26	SLE Q	12	81.00	14.07	14.07	-3047.55	348.91	-70.00	6.22
10.68	32	SLE R	12	15.00	14.07	14.07	-4441.18	508.46	-102.02	9.06
10.68	26	SLE Q	12	15.00	14.07	14.07	-3047.55	348.91	-70.00	6.22

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
32	0.45	26	SLE Q	1	5	48.33	-8378.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	959.22	0.28	0.07
35	0.45	24	SLE F	1	5	48.33	-8629.93	27.00	135.67	0.50	16.00	143.53	14.07	787.50	988.02	0.29	0.07
72	1.87	26	SLE Q	3	5	93.33	-13687.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1567.06	0.46	0.11
75	1.87	24	SLE F	3	5	93.33	-13940.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1595.96	0.46	0.11
112	8.18	26	SLE Q	9	5	22.50	14788.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1681.33	0.51	0.12
116	8.18	25	SLE F	9	5	22.50	15256.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1734.49	0.51	0.12
152	8.62	26	SLE Q	10	5	58.50	15069.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1725.31	0.53	0.13
156	8.62	25	SLE F	10	5	58.50	15544.50	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1779.66	0.52	0.13
205	10.02	26	SLE Q	12	5	81.00	-3047.55	27.00	135.67	0.50	16.00	143.53	14.07	787.50	348.91	0.10	0.02
211	10.02	36	SLE F	12	5	81.00	-3325.91	27.00	135.67	0.50	16.00	143.53	14.07	787.50	380.78	0.11	0.03
258	10.68	26	SLE Q	12	5	15.00	-3047.55	27.00	135.67	0.50	16.00	143.53	14.07	787.50	348.91	0.10	0.02
264	10.68	36	SLE F	12	5	15.00	-3325.91	27.00	135.67	0.50	16.00	143.53	14.07	787.50	380.78	0.11	0.03

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	Afe St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
28 SLU	0.45	0.90	0.45	ø10/20 4 br.	15.71	0.90	14757.30	2.50	91968.40	154165.00	91968.40	6.232
19 SLU	0.90	7.72	6.82	ø10/20 4 br.	15.71	0.90	26675.70	2.50	91968.40	154165.00	91968.40	3.448
19 SLU	7.72	8.18	0.45	ø10/20 4 br.	15.71	0.90	27548.90	2.50	91968.40	154165.00	91968.40	3.338
30 SLU	8.62	9.07	0.45	ø10/20 4 br.	15.71	0.90	32489.20	2.50	91968.40	154165.00	91968.40	2.831
30 SLU	9.07	10.23	1.15	ø10/20 4 br.	15.71	0.90	31393.90	2.50	91968.40	154165.00	91968.40	2.929
28 SLU	10.23	10.68	0.45	ø10/20 4 br.	15.71	0.90	8144.69	2.50	91968.40	154165.00	91968.40	11.292

Verifiche di resistenza al fuoco**Stato limite ultimo - Verifiche a flessione/pressoflessione**

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.45	40	SLU I	1	48.33	14.07	14.07	14.07	14.07	-8378.30	-35880.40	4.283
1.87	40	SLU I	3	93.33	14.07	14.07	14.07	14.07	-13687.60	-35880.40	2.621
8.18	40	SLU I	9	22.50	28.15	14.07	28.15	14.07	14788.50	40116.70	2.713
8.62	40	SLU I	10	58.50	14.07	14.07	14.07	14.07	15069.70	40141.80	2.664
10.02	40	SLU I	12	81.00	14.07	14.07	14.07	14.07	-3047.55	-35880.40	11.774
10.68	40	SLU I	12	15.00	14.07	14.07	14.07	14.07	-3047.55	-35880.40	11.774

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
40 SLU I	0.45	0.90	0.45	ø10/20 4 br.	15.71	0.83	7150.15	2.50	59444.80	214369.00	59444.80	8.314
40 SLU I	0.90	7.72	6.82	ø10/20 4 br.	15.71	0.83	16573.40	2.50	59444.80	214369.00	59444.80	3.587
40 SLU I	7.72	8.18	0.45	ø10/20 4 br.	15.71	0.83	17041.10	2.50	59444.80	214369.00	59444.80	3.488
40 SLU I	8.62	9.07	0.45	ø10/20 4 br.	15.71	0.83	18298.00	2.50	59444.80	214369.00	59444.80	3.249
40 SLU I	9.07	10.23	1.15	ø10/20 4 br.	15.71	0.83	17718.00	2.50	59444.80	214369.00	59444.80	3.355
40 SLU I	10.23	10.68	0.45	ø10/20 4 br.	15.71	0.83	4030.28	2.50	59444.80	214369.00	59444.80	14.749

Travata n. 434

Nodi: -28 -1495 -1494 -1493 -1492 -1491 -1490 -1489 -1999 -37 -1964 -1306 -1961 -1341 -1340 -85 -167 -166 -165 -1238 -1218 -164 -163 -162 31

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
5R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.42	18	SLU	1	42.50	14.07	14.07	14.07	14.07	-11508.90	-35450.10	3.080
2.18	19	SLU	3	31.11	14.07	14.07	14.07	14.07	-21190.20	-35450.10	1.673
8.18	30	SLU	9	70.83	14.07	14.07	14.07	14.07	25699.20	35450.10	1.379
8.62	30	SLU	10	58.50	14.07	14.07	14.07	14.07	23379.80	35450.10	1.516
10.43	30	SLU	12	40.50	14.07	14.07	14.07	14.07	-9601.98	-35450.10	3.692
13.02	30	SLU	15	15.00	14.07	14.07	14.07	14.07	4464.05	35450.10	7.941
13.32	28	SLU	16	77.50	14.07	14.07	14.07	14.07	7671.35	35450.10	4.621
15.95	28	SLU	19	43.50	14.07	14.07	14.07	14.07	-3166.92	-35450.10	11.194
16.80	28	SLU	20	15.00	28.15	14.07	28.15	14.07	-2183.69	-69959.00	32.037
17.10	27	SLU	21	63.75	14.07	14.07	14.07	14.07	-4202.37	-35450.10	8.436
18.61	28	SLU	23	86.75	14.07	14.07	14.07	14.07	-7692.68	-35450.10	4.608
20.04	28	SLU	24	30.00	14.07	14.07	14.07	14.07	-6599.81	-35450.10	5.371

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.42	9	SLV (E)	1	42.50	14.07	14.07	14.07	14.07	-7787.70	-34082.90	4.377
2.18	9	SLV (E)	3	31.11	14.07	14.07	14.07	14.07	-15239.50	-34082.90	2.236
8.18	9	SLV (E)	9	70.83	14.07	14.07	14.07	14.07	20444.60	34082.90	1.667
8.62	5	SLV (E)	10	58.50	14.07	14.07	14.07	14.07	17337.40	34082.90	1.966
10.43	9	SLV (E)	12	40.50	14.07	14.07	14.07	14.07	-8239.05	-34082.90	4.137
13.02	9	SLV (E)	15	15.00	14.07	14.07	14.07	14.07	5114.24	34082.90	6.664
13.32	13	SLV (E)	16	77.50	14.07	14.07	14.07	14.07	7556.11	34082.90	4.511
15.95	1	SLV (E)	19	43.50	14.07	14.07	14.07	14.07	-2616.02	-34082.90	13.028
16.80	1	SLV (E)	20	15.00	28.15	14.07	28.15	14.07	2152.16	34362.70	15.967
17.10	13	SLV (E)	21	63.75	14.07	14.07	14.07	14.07	-3285.16	-34082.90	10.375
18.61	13	SLV (E)	23	86.75	14.07	14.07	14.07	14.07	-6101.42	-34082.90	5.586
20.04	5	SLV (E)	24	30.00	14.07	14.07	14.07	14.07	-5668.13	-34082.90	6.013

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.42	21	SLE R	1	42.50	14.07	14.07	-8160.18	934.24	-187.44	16.65
0.42	26	SLE Q	1	42.50	14.07	14.07	-6638.10	759.98	-152.48	13.54
2.18	22	SLE R	3	31.11	14.07	14.07	-15123.90	1731.51	-347.40	30.86
2.18	26	SLE Q	3	31.11	14.07	14.07	-13466.30	1541.74	-309.33	27.48
8.18	34	SLE R	9	70.83	14.07	14.07	18465.10	-424.15	2114.04	37.68
8.18	26	SLE Q	9	70.83	14.07	14.07	15563.70	-357.51	1781.86	31.76
8.62	34	SLE R	10	58.50	14.07	14.07	16770.00	-385.21	1919.96	34.22
8.62	26	SLE Q	10	58.50	14.07	14.07	14037.40	-322.45	1607.12	28.64
10.43	34	SLE R	12	40.50	14.07	14.07	-6932.72	793.71	-159.25	14.15
10.43	26	SLE Q	12	40.50	14.07	14.07	-5886.32	673.91	-135.21	12.01
13.02	34	SLE R	15	15.00	14.07	14.07	3287.12	-75.51	376.34	6.71
13.02	26	SLE Q	15	15.00	14.07	14.07	3089.37	-70.96	353.70	6.30
13.32	32	SLE R	16	77.50	14.07	14.07	5650.61	-129.80	646.93	11.53

Relazione di calcolo

13.32	26	SLE Q	16	77.50	14.07	14.07	5062.05	-116.28	579.54	10.33
15.95	32	SLE R	19	43.50	14.07	14.07	-2234.45	255.82	-51.33	4.56
15.95	26	SLE Q	19	43.50	14.07	14.07	-1269.97	145.40	-29.17	2.59
16.80	32	SLE R	20	15.00	28.15	14.07	-1528.47	89.64	-29.83	2.43
16.80	26	SLE Q	20	15.00	28.15	14.07	762.04	-15.04	86.64	1.38
17.10	31	SLE R	21	63.75	14.07	14.07	-3071.24	351.62	-70.55	6.27
17.10	26	SLE Q	21	63.75	14.07	14.07	-2324.57	266.14	-53.40	4.74
18.61	32	SLE R	23	86.75	14.07	14.07	-5577.53	638.56	-128.12	11.38
18.61	26	SLE Q	23	86.75	14.07	14.07	-4277.15	489.68	-98.25	8.73
20.04	32	SLE R	24	30.00	14.07	14.07	-4753.21	544.19	-109.18	9.70
20.04	26	SLE Q	24	30.00	14.07	14.07	-3528.07	403.92	-81.04	7.20

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
44	0.42	26	SLE Q	1	5	42.50	-6638.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	759.98	0.22	0.05
46	0.42	23	SLE F	1	5	42.50	-6885.59	27.00	135.67	0.50	16.00	143.53	14.07	787.50	788.32	0.23	0.06
85	2.18	26	SLE Q	3	5	31.11	-13466.30	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1541.74	0.45	0.11
89	2.18	25	SLE F	3	5	31.11	-13704.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1568.99	0.46	0.11
125	8.18	26	SLE Q	9	5	70.83	15563.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1781.86	0.55	0.14
129	8.18	25	SLE F	9	5	70.83	15970.20	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1828.40	0.53	0.13
165	8.62	26	SLE Q	10	5	58.50	14037.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1607.12	0.47	0.11
169	8.62	25	SLE F	10	5	58.50	14423.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1651.28	0.48	0.12
209	10.43	26	SLE Q	12	5	40.50	-5886.32	27.00	135.67	0.50	16.00	143.53	14.07	787.50	673.91	0.20	0.05
215	10.43	36	SLE F	12	5	40.50	-6065.03	27.00	135.67	0.50	16.00	143.53	14.07	787.50	694.37	0.20	0.05
279	13.02	26	SLE Q	15	5	15.00	3089.37	27.00	135.67	0.50	16.00	143.53	14.07	787.50	353.70	0.10	0.03
287	13.02	25	SLE F	15	5	15.00	3137.38	27.00	135.67	0.50	16.00	143.53	14.07	787.50	359.19	0.10	0.03
327	13.32	26	SLE Q	16	5	77.50	5062.05	27.00	135.67	0.50	16.00	143.53	14.07	787.50	579.54	0.17	0.04
333	13.32	36	SLE F	16	5	77.50	5182.52	27.00	135.67	0.50	16.00	143.53	14.07	787.50	593.34	0.17	0.04
375	15.95	26	SLE Q	19	5	43.50	-1269.97	27.00	135.67	0.50	16.00	143.53	14.07	787.50	145.40	0.04	0.01
377	15.95	23	SLE F	19	5	43.50	-1481.29	27.00	135.67	0.50	16.00	143.53	14.07	787.50	169.59	0.05	0.01
432	16.80	26	SLE Q	20	5	15.00	762.04	27.00	135.67	0.50	16.00	143.53	14.07	787.50	86.64	0.03	0.01
438	16.80	24	SLE F	20	5	15.00	819.96	27.00	135.67	0.50	16.00	143.53	14.07	787.50	93.22	0.03	0.01
512	17.10	26	SLE Q	21	5	63.75	-2324.57	27.00	135.67	0.50	16.00	143.53	14.07	787.50	266.14	0.08	0.02
516	17.10	23	SLE F	21	5	63.75	-2558.43	27.00	135.67	0.50	16.00	143.53	14.07	787.50	292.91	0.09	0.02
560	18.61	26	SLE Q	23	5	86.75	-4277.15	27.00	135.67	0.50	16.00	143.53	14.07	787.50	489.68	0.14	0.03
562	18.61	23	SLE F	23	5	86.75	-4539.24	27.00	135.67	0.50	16.00	143.53	14.07	787.50	519.69	0.15	0.04
600	20.04	26	SLE Q	24	5	30.00	-3528.07	27.00	135.67	0.50	16.00	143.53	14.07	787.50	403.92	0.12	0.03
602	20.04	23	SLE F	24	5	30.00	-3785.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	433.41	0.13	0.03

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
28 SLU	0.42	0.88	0.45	ø10/20 4 br.	15.71	0.90	19813.80	2.50	91968.40	154165.00	91968.40	4.642
30 SLU	0.88	7.72	6.85	ø10/20 4 br.	15.71	0.90	23209.10	2.50	91968.40	154165.00	91968.40	3.963
30 SLU	7.72	8.18	0.45	ø10/20 4 br.	15.71	0.90	24103.20	2.50	91968.40	154165.00	91968.40	3.816
30 SLU	8.62	9.07	0.45	ø10/20 4 br.	15.71	0.90	25425.80	2.50	91968.40	154165.00	91968.40	3.617
30 SLU	9.07	12.57	3.49	ø10/20 4 br.	15.71	0.90	24460.20	2.50	91968.40	154165.00	91968.40	3.760
30 SLU	12.57	13.02	0.45	ø10/20 4 br.	15.71	0.90	9202.23	2.50	91968.40	154165.00	91968.40	9.994
28 SLU	13.32	13.77	0.45	ø10/20 4 br.	15.71	0.90	7640.39	2.50	91968.40	154165.00	91968.40	12.037
28 SLU	13.77	16.35	2.58	ø10/20 4 br.	15.71	0.90	6903.82	2.50	91968.40	154165.00	91968.40	13.321
29 SLU	16.35	16.80	0.45	ø10/20 4 br.	15.71	0.90	4969.99	2.50	91968.40	154165.00	91968.40	18.505
28 SLU	17.10	17.55	0.45	ø10/20 4 br.	15.71	0.90	8173.18	2.50	91968.40	154165.00	91968.40	11.252
28 SLU	17.55	19.59	2.04	ø10/20 4 br.	15.71	0.90	7321.88	2.50	91968.40	154165.00	91968.40	12.561
28 SLU	19.59	20.04	0.45	ø10/20 4 br.	15.71	0.90	4868.77	2.50	91968.40	154165.00	91968.40	18.889

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.42	40	SLU I	1	42.50	14.07	14.07	14.07	14.07	-6638.10	-35880.40	5.405
2.18	40	SLU I	3	31.11	14.07	14.07	14.07	14.07	-13466.30	-35880.40	2.664
8.18	40	SLU I	9	70.83	14.07	14.07	14.07	14.07	15563.70	40141.80	2.579
8.62	40	SLU I	10	58.50	14.07	14.07	14.07	14.07	14037.40	40141.80	2.860
10.43	40	SLU I	12	40.50	14.07	14.07	14.07	14.07	-5886.32	-35880.40	6.096
13.02	40	SLU I	15	15.00	14.07	14.07	14.07	14.07	3089.37	40141.80	12.993
13.32	40	SLU I	16	77.50	14.07	14.07	14.07	14.07	5062.05	40141.80	7.930
15.95	40	SLU I	19	43.50	14.07	14.07	14.07	14.07	-1269.97	-35880.40	28.253
16.80	40	SLU I	20	15.00	28.15	14.07	28.15	14.07	762.04	40116.70	52.644
17.10	40	SLU I	21	63.75	14.07	14.07	14.07	14.07	-2324.57	-35880.40	15.435
18.61	40	SLU I	23	86.75	14.07	14.07	14.07	14.07	-4277.15	-35880.40	8.389
20.04	40	SLU I	24	30.00	14.07	14.07	14.07	14.07	-3528.07	-35880.40	10.170

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
40 SLU I	0.42	0.88	0.45	ø10/20 4 br.	15.71	0.83	12057.90	2.50	59444.80	214369.00	59444.80	4.930

Relazione di calcolo

40	SLU	I	0.88	7.72	6.85	ø10/20 4 br.	15.71	0.83	14178.50	2.50	59444.80	214369.00	59444.80	4.193
40	SLU	I	7.72	8.18	0.45	ø10/20 4 br.	15.71	0.83	14640.90	2.50	59444.80	214369.00	59444.80	4.060
40	SLU	I	8.62	9.07	0.45	ø10/20 4 br.	15.71	0.83	15282.50	2.50	59444.80	214369.00	59444.80	3.890
40	SLU	I	9.07	12.57	3.49	ø10/20 4 br.	15.71	0.83	14770.00	2.50	59444.80	214369.00	59444.80	4.025
40	SLU	I	12.57	13.02	0.45	ø10/20 4 br.	15.71	0.83	5973.39	2.50	59444.80	214369.00	59444.80	9.952
40	SLU	I	13.32	13.77	0.45	ø10/20 4 br.	15.71	0.83	4734.83	2.50	59444.80	214369.00	59444.80	12.555
40	SLU	I	13.77	16.35	2.58	ø10/20 4 br.	15.71	0.83	4302.51	2.50	59444.80	214369.00	59444.80	13.816
40	SLU	I	16.35	16.80	0.45	ø10/20 4 br.	15.71	0.83	3197.66	2.50	59444.80	214369.00	59444.80	18.590
40	SLU	I	17.10	17.55	0.45	ø10/20 4 br.	15.71	0.83	4810.38	2.50	59444.80	214369.00	59444.80	12.358
40	SLU	I	17.55	19.59	2.04	ø10/20 4 br.	15.71	0.83	4351.93	2.50	59444.80	214369.00	59444.80	13.659
40	SLU	I	19.59	20.04	0.45	ø10/20 4 br.	15.71	0.83	2746.53	2.50	59444.80	214369.00	59444.80	21.644

Travata n. 443

Nodi: -2040 -2051 -2052 -2133 -2054 -2055 -2056 -2057 -2058 35 -223 -224 13 -225 -226 -1294 -1384 -228 -229 -230 -1219 -117 -118 -119 30

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
5R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cm²>	Afe I <cm²>	AfeP S <cm²>	AfeP I <cm²>	My <daNm>	MRdy <daNm>	Sic.
0.30	30	SLU	1	30.00	14.07	14.07	14.07	14.07	-13881.90	-35450.10	2.554
1.87	30	SLU	3	0.00	14.07	14.07	14.07	14.07	-28013.60	-35450.10	1.265
8.25	19	SLU	9	78.33	28.15	14.07	28.15	14.07	18811.00	35445.00	1.884
8.75	19	SLU	10	46.00	14.07	14.07	14.07	14.07	23173.10	35450.10	1.530
10.61	29	SLU	12	22.50	28.15	14.07	28.15	14.07	8719.44	35445.00	4.065
11.05	28	SLU	13	64.93	14.07	28.15	14.07	28.15	16606.60	69959.00	4.213
13.17	18	SLU	16	83.00	14.07	14.07	14.07	14.07	-12196.90	-35450.10	2.906
16.73	18	SLU	20	22.50	28.15	14.07	28.15	14.07	8064.91	35445.00	4.395
17.18	29	SLU	21	62.25	14.07	14.07	14.07	14.07	7127.07	35450.10	4.974
18.64	27	SLU	23	84.75	14.07	14.07	14.07	14.07	-8165.67	-35450.10	4.341
19.89	27	SLU	24	45.00	14.07	14.07	14.07	14.07	-7459.06	-35450.10	4.753

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cm²>	Afe I <cm²>	AfeP S <cm²>	AfeP I <cm²>	My <daNm>	M'ydy <daNm>	Sic.
0.30	5	SLV(E)	1	30.00	14.07	14.07	14.07	14.07	-9789.55	-34082.90	3.482
1.87	5	SLV(E)	3	0.00	14.07	14.07	14.07	14.07	-19475.80	-34082.90	1.750
8.25	5	SLV(E)	9	78.33	28.15	14.07	28.15	14.07	14784.10	34362.70	2.324
8.75	5	SLV(E)	10	46.00	14.07	14.07	14.07	14.07	16975.30	34082.90	2.008
10.61	9	SLV(E)	12	22.50	28.15	14.07	28.15	14.07	6410.76	34362.70	5.360
11.05	1	SLV(E)	13	64.93	14.07	28.15	14.07	28.15	12689.40	66258.60	5.222
13.17	13	SLV(E)	16	83.00	14.07	14.07	14.07	14.07	-9057.28	-34082.90	3.763
16.73	5	SLV(E)	20	22.50	28.15	14.07	28.15	14.07	7609.28	34362.70	4.516
17.18	5	SLV(E)	21	62.25	14.07	14.07	14.07	14.07	4757.14	34082.90	7.165
18.64	13	SLV(E)	23	84.75	14.07	14.07	14.07	14.07	-4981.08	-34082.90	6.842
19.89	5	SLV(E)	24	45.00	14.07	14.07	14.07	14.07	-4075.22	-34082.90	8.363

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	Afe S <cm²>	Afe I <cm²>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.30	34	SLE R	1	30.00	14.07	14.07	-9902.22	1133.69	-227.46	20.21
0.30	26	SLE Q	1	30.00	14.07	14.07	-8620.73	986.97	-198.02	17.59
1.87	34	SLE R	3	0.00	14.07	14.07	-19928.00	2281.51	-457.75	40.66
1.87	26	SLE Q	3	0.00	14.07	14.07	-17305.60	1981.28	-397.52	35.31
8.25	22	SLE R	9	78.33	28.15	14.07	13539.70	-267.29	1539.34	24.51
8.25	26	SLE Q	9	78.33	28.15	14.07	11522.40	-227.47	1309.99	20.86
8.75	22	SLE R	10	46.00	14.07	14.07	16828.00	-386.55	1926.61	34.34
8.75	26	SLE Q	10	46.00	14.07	14.07	15245.60	-350.20	1745.44	31.11
10.61	33	SLE R	12	22.50	28.15	14.07	6244.33	-123.27	709.92	11.30
10.61	26	SLE Q	12	22.50	28.15	14.07	5376.06	-106.13	611.21	9.73
11.05	32	SLE R	13	64.93	14.07	28.15	11861.50	-231.47	695.65	18.87
11.05	26	SLE Q	13	64.93	14.07	28.15	8826.62	-172.25	517.66	14.04
13.17	21	SLE R	16	83.00	14.07	14.07	-8719.72	998.30	-200.30	17.79
13.17	26	SLE Q	16	83.00	14.07	14.07	-7861.80	900.08	-180.59	16.04
16.73	21	SLE R	20	22.50	28.15	14.07	5632.79	-111.20	640.40	10.20
16.73	26	SLE Q	20	22.50	28.15	14.07	5562.02	-109.80	632.35	10.07
17.18	33	SLE R	21	62.25	14.07	14.07	4847.34	-111.35	554.96	9.89
17.18	26	SLE Q	21	62.25	14.07	14.07	4020.92	-92.36	460.35	8.20
18.64	31	SLE R	23	84.75	14.07	14.07	-5827.09	667.13	-133.85	11.89
18.64	26	SLE Q	23	84.75	14.07	14.07	-3890.57	445.42	-89.37	7.94
19.89	31	SLE R	24	45.00	14.07	14.07	-5233.47	599.17	-120.22	10.68
19.89	26	SLE Q	24	45.00	14.07	14.07	-2985.04	341.75	-68.57	6.09

Stato limite d'esercizio - Verifiche a fessurazione

Relazione di calcolo

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
63	0.30	26	SLE Q	1	5	30.00	-8620.73	27.00	135.67	0.50	16.00	143.53	14.07	787.50	986.97	0.29	0.07
67	0.30	23	SLE F	1	5	30.00	-8941.72	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1023.72	0.30	0.07
112	1.87	26	SLE Q	3	5	0.00	-17305.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1981.28	0.65	0.16
114	1.87	23	SLE F	3	5	0.00	-17669.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	2022.90	0.59	0.14
152	8.25	26	SLE Q	9	5	78.33	11522.40	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1309.99	0.38	0.09
154	8.25	23	SLE F	9	5	78.33	12160.10	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1382.50	0.40	0.10
192	8.75	26	SLE Q	10	5	46.00	15245.60	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1745.44	0.54	0.13
196	8.75	25	SLE F	10	5	46.00	15567.00	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1782.23	0.52	0.13
232	10.61	26	SLE Q	12	5	22.50	5376.06	27.00	135.67	0.50	16.00	143.53	14.07	787.50	611.21	0.18	0.04
238	10.61	36	SLE F	12	5	22.50	5470.61	27.00	135.67	0.50	16.00	143.53	14.07	787.50	621.96	0.18	0.04
272	11.05	26	SLE Q	13	5	64.93	8826.62	27.00	62.62	0.50	16.00	98.76	28.15	787.50	517.66	0.15	0.03
274	11.05	23	SLE F	13	5	64.93	9452.43	27.00	62.62	0.50	16.00	98.76	28.15	787.50	554.37	0.16	0.03
312	13.17	26	SLE Q	16	5	83.00	-7861.80	27.00	135.67	0.50	16.00	143.53	14.07	787.50	900.08	0.26	0.06
315	13.17	24	SLE F	16	5	83.00	-8026.14	27.00	135.67	0.50	16.00	143.53	14.07	787.50	918.90	0.27	0.07
380	16.73	26	SLE Q	20	5	22.50	5562.02	27.00	135.67	0.50	16.00	143.53	14.07	787.50	632.35	0.18	0.04
386	16.73	24	SLE F	20	5	22.50	5824.77	27.00	135.67	0.50	16.00	143.53	14.07	787.50	662.22	0.19	0.05
459	17.18	26	SLE Q	21	5	62.25	4020.92	27.00	135.67	0.50	16.00	143.53	14.07	787.50	460.35	0.13	0.03
465	17.18	24	SLE F	21	5	62.25	4223.26	27.00	135.67	0.50	16.00	143.53	14.07	787.50	483.51	0.14	0.03
508	18.64	26	SLE Q	23	5	84.75	-3890.57	27.00	135.67	0.50	16.00	143.53	14.07	787.50	445.42	0.13	0.03
510	18.64	23	SLE F	23	5	84.75	-4582.14	27.00	135.67	0.50	16.00	143.53	14.07	787.50	524.60	0.15	0.04
548	19.89	26	SLE Q	24	5	45.00	-2985.04	27.00	135.67	0.50	16.00	143.53	14.07	787.50	341.75	0.10	0.02
550	19.89	23	SLE F	24	5	45.00	-3811.44	27.00	135.67	0.50	16.00	143.53	14.07	787.50	436.37	0.13	0.03

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
30 SLU	0.25	0.70	0.45	ø10/20 4 br.	15.71	0.90	30480.20	2.50	91968.40	154165.00	91968.40	3.017
30 SLU	0.70	7.80	7.10	ø10/20 4 br.	15.71	0.90	26894.20	2.50	91968.40	154165.00	91968.40	3.420
19 SLU	7.80	8.25	0.45	ø10/20 4 br.	15.71	0.90	17216.10	2.50	91968.40	154165.00	91968.40	5.342
19 SLU	8.75	9.20	0.45	ø10/20 4 br.	15.71	0.90	21364.90	2.50	91968.40	154165.00	91968.40	4.305
19 SLU	9.20	10.15	0.95	ø10/20 4 br.	15.71	0.90	9862.11	2.50	91968.40	154165.00	91968.40	9.325
9 SLV	10.15	10.61	0.45	ø10/20 4 br.	15.71	0.90	4078.04	2.50	91968.40	154165.00	91968.40	22.552
30 SLU	11.05	11.51	0.45	ø10/20 4 br.	15.71	0.90	19977.80	2.50	91968.40	154165.00	91968.40	4.604
30 SLU	11.51	16.27	4.77	ø10/20 4 br.	15.71	0.90	18931.50	2.50	91968.40	154165.00	91968.40	4.858
18 SLU	16.27	16.73	0.45	ø10/20 4 br.	15.71	0.90	14763.40	2.50	91968.40	154165.00	91968.40	6.229
29 SLU	17.18	17.62	0.45	ø10/20 4 br.	15.71	0.90	14323.60	2.50	91968.40	154165.00	91968.40	6.421
29 SLU	17.62	19.44	1.81	ø10/20 4 br.	15.71	0.90	13280.40	2.50	91968.40	154165.00	91968.40	6.925
19 SLU	19.44	19.89	0.45	ø10/20 4 br.	15.71	0.90	6752.84	2.50	91968.40	154165.00	91968.40	13.619

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S	AfE I	AfE P S	AfE P I	My <daNm>	MRdy <daNm>	Sic.
0.30	40	SLU I	1	30.00	14.07	14.07	14.07	14.07	-8620.73	-35880.40	4.162
1.87	40	SLU I	3	0.00	14.07	14.07	14.07	14.07	-17305.60	-35880.40	2.073
8.25	40	SLU I	9	78.33	28.15	14.07	28.15	14.07	11522.40	40116.70	3.482
8.75	40	SLU I	10	46.00	14.07	14.07	14.07	14.07	15245.60	40141.80	2.633
10.61	40	SLU I	12	22.50	28.15	14.07	28.15	14.07	5376.06	40116.70	7.462
11.05	40	SLU I	13	64.93	14.07	28.15	14.07	28.15	8826.62	79288.20	8.983
13.17	40	SLU I	16	83.00	14.07	14.07	14.07	14.07	-7861.80	-35880.40	4.564
16.73	40	SLU I	20	22.50	28.15	14.07	28.15	14.07	5562.02	40116.70	7.213
17.18	40	SLU I	21	62.25	14.07	14.07	14.07	14.07	4020.92	40141.80	9.983
18.64	40	SLU I	23	84.75	14.07	14.07	14.07	14.07	-3890.57	-35880.40	9.222
19.89	40	SLU I	24	45.00	14.07	14.07	14.07	14.07	-2985.04	-35880.40	12.020

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
40 SLU I	0.25	0.70	0.45	ø10/20 4 br.	15.71	0.83	18454.10	2.50	59444.80	214369.00	59444.80	3.221
40 SLU I	0.70	7.80	7.10	ø10/20 4 br.	15.71	0.83	16329.50	2.50	59444.80	214369.00	59444.80	3.640
40 SLU I	7.80	8.25	0.45	ø10/20 4 br.	15.71	0.83	10512.70	2.50	59444.80	214369.00	59444.80	5.655
40 SLU I	8.75	9.20	0.45	ø10/20 4 br.	15.71	0.83	13640.60	2.50	59444.80	214369.00	59444.80	4.358
40 SLU I	9.20	10.15	0.95	ø10/20 4 br.	15.71	0.83	6372.49	2.50	59444.80	214369.00	59444.80	9.328
40 SLU I	10.15	10.61	0.45	ø10/20 4 br.	15.71	0.83	2595.94	2.50	59444.80	214369.00	59444.80	22.899
40 SLU I	11.05	11.51	0.45	ø10/20 4 br.	15.71	0.83	11625.80	2.50	59444.80	214369.00	59444.80	5.113
40 SLU I	11.51	16.27	4.77	ø10/20 4 br.	15.71	0.83	11060.30	2.50	59444.80	214369.00	59444.80	5.375
40 SLU I	16.27	16.73	0.45	ø10/20 4 br.	15.71	0.83	9664.29	2.50	59444.80	214369.00	59444.80	6.151
40 SLU I	17.18	17.62	0.45	ø10/20 4 br.	15.71	0.83	8183.08	2.50	59444.80	214369.00	59444.80	7.264
40 SLU I	17.62	19.44	1.81	ø10/20 4 br.	15.71	0.83	7597.38	2.50	59444.80	214369.00	59444.80	7.824
40 SLU I	19.44	19.89	0.45	ø10/20 4 br.	15.71	0.83	4706.29	2.50	59444.80	214369.00	59444.80	12.631

Travata n. 446

Nodi: -28 -752 -753 -754 -49 -755 -756 -1998 -2008 -1967 -1995 -761 -762 -763 -764 35

Caratteristiche delle sezioni e dei materiali utilizzati

Relazione di calcolo

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
5R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.54	19	SLU	1	54.02	14.07	14.07	14.07	14.07	-3269.11	-35450.10	10.844
2.02	19	SLU	3	40.30	14.07	14.07	14.07	14.07	-13969.40	-35450.10	2.538
13.37	27	SLU	15	51.45	14.07	14.07	14.07	14.07	-8876.37	-35450.10	3.994

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.54	9	SLV (E)	1	54.02	14.07	14.07	14.07	14.07	-2774.08	-34082.90	12.286
2.02	9	SLV (E)	3	40.30	14.07	14.07	14.07	14.07	-9929.07	-34082.90	3.433
13.37	5	SLV (E)	15	51.45	14.07	14.07	14.07	14.07	-7168.55	-34082.90	4.755

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.54	22	SLE R	1	54.02	14.07	14.07	-2240.87	256.55	-51.47	4.57
0.54	26	SLE Q	1	54.02	14.07	14.07	-2249.74	257.57	-51.68	4.59
2.02	22	SLE R	3	40.30	14.07	14.07	-9879.66	1131.10	-226.94	20.16
2.02	26	SLE Q	3	40.30	14.07	14.07	-8905.33	1019.55	-204.56	18.17
13.37	31	SLE R	15	51.45	14.07	14.07	-6218.35	711.93	-142.84	12.69
13.37	26	SLE Q	15	51.45	14.07	14.07	-4596.13	526.20	-105.58	9.38

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
50	0.54	26	SLE Q	1	5	54.02	-2249.74	27.00	135.67	0.50	16.00	143.53	14.07	787.50	257.57	0.08	0.02
55	0.54	25	SLE F	1	5	54.02	-2296.63	27.00	135.67	0.50	16.00	143.53	14.07	787.50	262.94	0.08	0.02
92	2.02	26	SLE Q	3	5	40.30	-8905.33	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1019.55	0.30	0.07
96	2.02	25	SLE F	3	5	40.30	-9071.63	27.00	135.67	0.50	16.00	143.53	14.07	787.50	1038.59	0.30	0.07
142	13.37	26	SLE Q	15	5	51.45	-4596.13	27.00	135.67	0.50	16.00	143.53	14.07	787.50	526.20	0.15	0.04
145	13.37	23	SLE F	15	5	51.45	-5252.55	27.00	135.67	0.50	16.00	143.53	14.07	787.50	601.35	0.18	0.04

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
30 SLU	0.22	0.67	0.45	ø10/25 4 br.	12.57	0.90	12519.80	2.50	73574.70	154165.00	73574.70	5.877
19 SLU	0.67	13.27	12.59	ø10/25 4 br.	12.57	0.90	13695.70	2.50	73574.70	154165.00	73574.70	5.372
19 SLU	13.27	13.72	0.45	ø10/25 4 br.	12.57	0.90	13989.20	2.50	73574.70	154165.00	73574.70	5.259

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.54	40	SLU I	1	54.02	14.07	14.07	14.07	14.07	-2249.74	-35880.40	15.949
2.02	40	SLU I	3	40.30	14.07	14.07	14.07	14.07	-8905.33	-35880.40	4.029
13.37	40	SLU I	15	51.45	14.07	14.07	14.07	14.07	-4596.13	-35880.40	7.807

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
40 SLU I	0.22	0.67	0.45	ø10/25 4 br.	12.57	0.83	7087.14	2.50	47555.90	214369.00	47555.90	6.710
40 SLU I	0.67	13.27	12.59	ø10/25 4 br.	12.57	0.83	9085.62	2.50	47555.90	214369.00	47555.90	5.234
40 SLU I	13.27	13.72	0.45	ø10/25 4 br.	12.57	0.83	9258.82	2.50	47555.90	214369.00	47555.90	5.136

Travata n. 455

Nodi: 96 -310 -1962 -308 -85

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
5R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.21	28	SLU	1	59.09	9.24	9.24	9.24	9.24	2357.90	23503.70	9.968
1.19	19	SLU	2	38.27	9.24	9.24	9.24	9.24	-2192.49	-23503.70	10.720
3.10	28	SLU	4	10.93	9.24	9.24	9.24	9.24	1507.64	23503.70	15.590

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.21	1	SLV (E)	1	59.09	9.24	9.24	9.24	9.24	2432.27	22578.60	9.283
1.19	9	SLV (E)	2	38.27	9.24	9.24	9.24	9.24	-2633.41	-22578.60	8.574
3.10	1	SLV (E)	4	10.93	9.24	9.24	9.24	9.24	1943.93	22578.60	11.615

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.21	32	SLE R	1	59.09	9.24	9.24	1744.90	-46.56	301.79	4.39
0.21	26	SLE Q	1	59.09	9.24	9.24	1403.16	-37.44	242.68	3.53
1.19	22	SLE R	2	38.27	9.24	9.24	-1552.15	268.45	-41.42	3.91
1.19	26	SLE Q	2	38.27	9.24	9.24	-1233.45	213.33	-32.91	3.11
3.10	32	SLE R	4	10.93	9.24	9.24	1062.76	-28.36	183.81	2.68
3.10	26	SLE Q	4	10.93	9.24	9.24	935.67	-24.97	161.83	2.36

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cmq>	ϵ_{sm}	W _k <mm>
55	0.21	26	SLE Q	1	5	59.09	1403.16	28.00	163.20	0.50	14.00	175.37	9.24	787.50	242.68	0.07	0.02
67	0.21	36	SLE F	1	5	59.09	1473.89	28.00	163.20	0.50	14.00	175.37	9.24	787.50	254.92	0.07	0.02
113	1.19	26	SLE Q	2	5	38.27	-1233.45	28.00	163.20	0.50	14.00	175.37	9.24	787.50	213.33	0.06	0.02
117	1.19	25	SLE F	2	5	38.27	-1295.28	28.00	163.20	0.50	14.00	175.37	9.24	787.50	224.03	0.07	0.02
179	3.10	26	SLE Q	4	5	10.93	935.67	28.00	163.20	0.50	14.00	175.37	9.24	787.50	161.83	0.05	0.01
191	3.10	36	SLE F	4	5	10.93	968.06	28.00	163.20	0.50	14.00	175.37	9.24	787.50	167.43	0.05	0.01

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
28 SLU	0.21	0.66	0.45	ø10/20 4 br.	15.71	0.90	4623.43	2.50	91968.40	154165.00	91968.40	19.892
28 SLU	0.66	2.65	1.99	ø10/20 4 br.	15.71	0.90	3973.19	2.50	91968.40	154165.00	91968.40	23.147
30 SLU	2.65	3.10	0.45	ø10/20 4 br.	15.71	0.90	4075.68	2.50	91968.40	154165.00	91968.40	22.565

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.21	40	SLU I	1	59.09	9.24	9.24	9.24	9.24	1403.16	26426.60	18.834
1.19	40	SLU I	2	38.27	9.24	9.24	9.24	9.24	-1233.45	-23317.30	18.904
3.10	40	SLU I	4	10.93	9.24	9.24	9.24	9.24	935.67	26426.60	28.244

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
40 SLU I	0.21	0.66	0.45	ø10/20 4 br.	15.71	0.83	2820.16	2.50	59444.80	214369.00	59444.80	21.078
40 SLU I	0.66	2.65	1.99	ø10/20 4 br.	15.71	0.83	2451.43	2.50	59444.80	214369.00	59444.80	24.249
40 SLU I	2.65	3.10	0.45	ø10/20 4 br.	15.71	0.83	2378.76	2.50	59444.80	214369.00	59444.80	24.990

Travata n. 457

Nodi: 97 -1838 -1839 -1840 -1841 186 -1842 -1843 -1844 -1845 98

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cl _s	F _{ck} <daN/cmq>	F _{ctk} <daN/cmq>	F _{cd} <daN/cmq>	F _{cd (Inc)} <daN/cmq>	F _{ctd} <daN/cmq>	Tp	F _{yk} <daN/cmq>	F _{yd} <daN/cmq>
5R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	249.00	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.21	28	SLU	1	21.21	14.07	14.07	14.07	14.07	7629.94	35450.10	4.646
2.98	30	SLU	4	0.00	14.07	14.07	14.07	14.07	-3770.01	-35450.10	9.403
4.81	19	SLU	5	83.41	14.07	14.07	14.07	14.07	8540.98	35450.10	4.151
5.45	28	SLU	6	47.67	14.07	13.57	14.07	13.57	7919.28	34209.80	4.320
9.36	28	SLU	10	41.71	14.07	14.07	14.07	14.07	-5215.90	-35450.10	6.797
9.78	28	SLU	10	83.41	14.07	14.07	14.07	14.07	-5080.36	-35450.10	6.978

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.21	13	SLV (E)	1	21.21	14.07	14.07	14.07	14.07	6717.99	34082.90	5.073
2.98	13	SLV (E)	4	0.00	14.07	14.07	14.07	14.07	-3840.70	-34082.90	8.874
4.81	5	SLV (E)	5	83.41	14.07	14.07	14.07	14.07	13286.90	34082.90	2.565
5.45	13	SLV (E)	6	47.67	14.07	13.57	14.07	13.57	14070.50	32904.20	2.339
9.36	13	SLV (E)	10	41.71	14.07	14.07	14.07	14.07	-11018.20	-34082.90	3.093
9.78	13	SLV (E)	10	83.41	14.07	14.07	14.07	14.07	-11018.20	-34082.90	3.093

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.21	32	SLE R	1	21.21	14.07	14.07	5490.70	-126.12	628.62	11.20
0.21	26	SLE Q	1	21.21	14.07	14.07	4536.54	-104.21	519.38	9.26
2.98	34	SLE R	4	0.00	14.07	14.07	-2691.68	308.17	-61.83	5.49
2.98	26	SLE Q	4	0.00	14.07	14.07	-2260.68	258.82	-51.93	4.61
4.81	22	SLE R	5	83.41	14.07	14.07	6185.72	-142.09	708.19	12.62
4.81	26	SLE Q	5	83.41	14.07	14.07	5463.38	-125.50	625.49	11.15
5.45	32	SLE R	6	47.67	14.07	13.57	5684.94	-131.63	674.25	11.76
5.45	26	SLE Q	6	47.67	14.07	13.57	4462.26	-103.32	529.24	9.23
9.36	32	SLE R	10	41.71	14.07	14.07	-3730.63	427.11	-85.69	7.61
9.36	26	SLE Q	10	41.71	14.07	14.07	-2536.70	290.42	-58.27	5.18
9.78	32	SLE R	10	83.41	14.07	14.07	-3625.59	415.09	-83.28	7.40
9.78	26	SLE Q	10	83.41	14.07	14.07	-2367.90	271.10	-54.39	4.83

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cmq>	ϵ_{sm}	Wk <mm>
36	0.21	26	SLE Q	1		5 21.21	4536.54	27.00	135.67	0.50	16.00	143.53	14.07	787.50	519.38	0.15	0.04
42	0.21	36	SLE F	1		5 21.21	4705.83	27.00	135.67	0.50	16.00	143.53	14.07	787.50	538.76	0.16	0.04
84	2.98	26	SLE Q	4		5 0.00	-2260.68	27.00	135.67	0.50	16.00	143.53	14.07	787.50	258.82	0.08	0.02
90	2.98	36	SLE F	4		5 0.00	-2329.43	27.00	135.67	0.50	16.00	143.53	14.07	787.50	266.69	0.08	0.02
130	4.81	26	SLE Q	5		5 83.41	5463.38	27.00	135.67	0.50	16.00	143.53	14.07	787.50	625.49	0.18	0.04
134	4.81	25	SLE F	5		5 83.41	5627.77	27.00	135.67	0.50	16.00	143.53	14.07	787.50	644.31	0.19	0.05
173	5.45	26	SLE Q	6		5 47.67	4462.26	23.00	403.00	0.50	24.00	421.57	13.57	787.50	529.24	0.15	0.11
179	5.45	36	SLE F	6		5 47.67	4728.21	23.00	403.00	0.50	24.00	421.57	13.57	787.50	560.78	0.16	0.12
214	9.36	26	SLE Q	10		5 41.71	-2536.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	290.42	0.08	0.02
216	9.36	23	SLE F	10		5 41.71	-2807.05	27.00	135.67	0.50	16.00	143.53	14.07	787.50	321.37	0.09	0.02
255	9.78	26	SLE Q	10		5 83.41	-2367.90	27.00	135.67	0.50	16.00	143.53	14.07	787.50	271.10	0.08	0.02
257	9.78	23	SLE F	10		5 83.41	-2650.70	27.00	135.67	0.50	16.00	143.53	14.07	787.50	303.47	0.09	0.02

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
30 SLU	0.21	0.66	0.45	ø10/20 4 br.	15.71	0.90	8681.54	2.50	91968.40	154165.00	91968.40	10.594
5 SLV	0.66	4.36	3.70	ø10/20 4 br.	15.71	0.90	10162.70	2.50	91968.40	154165.00	91968.40	9.050
5 SLV	4.36	4.81	0.45	ø10/20 4 br.	15.71	0.90	11672.80	2.50	91968.40	154165.00	91968.40	7.879
13 SLV	5.45	5.90	0.45	ø10/20 4 br.	15.71	0.90	14093.60	2.50	91968.40	154165.00	91968.40	6.526
13 SLV	5.90	9.33	3.43	ø10/20 4 br.	15.71	0.90	12403.20	2.50	91968.40	154165.00	91968.40	7.415
5 SLV	9.33	9.78	0.45	ø10/20 4 br.	15.71	0.90	6434.24	2.50	91968.40	154165.00	91968.40	14.294

Verifiche di resistenza al fuoco**Stato limite ultimo - Verifiche a flessione/pressoflessione**

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.21	40	SLU I	1	21.21	14.07	14.07	14.07	14.07	4536.54	40141.80	8.849
2.98	40	SLU I	4	0.00	14.07	14.07	14.07	14.07	-2260.68	-35880.40	15.871
4.81	40	SLU I	5	83.41	14.07	14.07	14.07	14.07	5463.38	40141.80	7.347
5.45	40	SLU I	6	47.67	14.07	13.57	14.07	13.57	4462.26	38719.60	8.677
9.36	40	SLU I	10	41.71	14.07	14.07	14.07	14.07	-2536.70	-35880.40	14.145
9.78	40	SLU I	10	83.41	14.07	14.07	14.07	14.07	-2367.90	-35880.40	15.153

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
40 SLU I	0.21	0.66	0.45	ø10/20 4 br.	15.71	0.83	5328.79	2.50	59444.80	214369.00	59444.80	11.155
40 SLU I	0.66	4.36	3.70	ø10/20 4 br.	15.71	0.83	6030.15	2.50	59444.80	214369.00	59444.80	9.858
40 SLU I	4.36	4.81	0.45	ø10/20 4 br.	15.71	0.83	6438.51	2.50	59444.80	214369.00	59444.80	9.233
40 SLU I	5.45	5.90	0.45	ø10/20 4 br.	15.71	0.83	6885.53	2.50	59444.80	214369.00	59444.80	8.633
40 SLU I	5.90	9.33	3.43	ø10/20 4 br.	15.71	0.83	6525.34	2.50	59444.80	214369.00	59444.80	9.110
40 SLU I	9.33	9.78	0.45	ø10/20 4 br.	15.71	0.83	2226.68	2.50	59444.80	214369.00	59444.80	26.697

Verifiche e armature solette/platee**Simbologia**

Δ_{sm}	=Distanza media tra le fessure
Φ_{eq}	=Diametro equivalente delle barre
ϵ_{sm}	=Deformazione unitaria media dell'armatura (*1000)
σ_c	=Tensione nel calcestruzzo
σ_f	=Tensione nel ferro
σ_s	=Tensione nell'acciaio nella sezione fessurata
A _{c eff}	=Area di calcestruzzo efficace
A _s	=Area complessiva dei ferri nell'area di calcestruzzo efficace
AfE I	=Area di ferro effettiva totale presente nel punto di verifica, inferiore

Relazione di calcolo

AfE S	=Area di ferro effettiva totale presente nel punto di verifica, superiore
AfE St.	=Area di ferro effettiva della staffatura
CC	=Numero della combinazione delle condizioni di carico elementari
Cf inf	=Copriferro inferiore
Cf sup	=Copriferro superiore
Cls	=Tipo di calcestruzzo
DV	=Direzione di verifica
	XX = Verifica per momento Mxx
	YY = Verifica per momento Myy
Fcd	=Resistenza di calcolo a compressione del calcestruzzo
Fck	=Resistenza caratteristica cilindrica a compressione del calcestruzzo
Fctd	=Resistenza di calcolo a trazione del calcestruzzo
Fctk	=Resistenza caratteristica a trazione del calcestruzzo
Fyd	=Resistenza di calcolo dell'acciaio
Fyk	=Tensione caratteristica di snervamento dell'acciaio
K ₂	=Coefficiente per distribuzione deformazioni
M'ydy	=Momento resistente massimo in campo sostanzialmente elastico intorno all'asse Y
MRdy	=Momento resistente allo stato limite ultimo intorno all'asse Y
Mom	=Momento flettente
My	=Momento flettente intorno all'asse X
Nodo	=Numero del nodo
Sic.	=Sicurezza
Spess.	=Spessore
TCC	=Tipo di combinazione di carico
	SLU = Stato limite ultimo
	SLE R = Stato limite d'esercizio, combinazione rara
	SLE F = Stato limite d'esercizio, combinazione frequente
	SLE Q = Stato limite d'esercizio, combinazione quasi permanente
	SLD = Stato limite di danno
	SLV = Stato limite di salvaguardia della vita
	SLU I = Stato limite di resistenza al fuoco
	SND = Stato limite di salvaguardia della vita (non dissipativo)
TP	=Tipo di acciaio
VRcd	=Taglio ultimo lato calcestruzzo
VRsd	=Taglio ultimo lato armatura
Vrdu	=Taglio ultimo resistente
Vsdu	=Taglio agente nella direzione del momento ultimo
Wk	=Ampiezza caratteristica delle fessure
X	=Coordinata X del nodo
Y	=Coordinata Y del nodo
c	=Ricoprimento dell'armatura
ctgθ	=Cotangente dell'angolo di inclinazione dei puntoni di calcestruzzo
s	=Distanza massima tra le barre

Armatura platea a quota 0.00

Caratteristiche delle sezioni e dei materiali utilizzati

Spess.	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fctd	TP	Fyk	Fyd
<cm>	<cm>	<cm>		<daN/cm²>	<daN/cm²>	<daN/cm²>	<daN/cm²>		<daN/cm²>	<daN/cm²>
35.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	My	MRdy	Sic.
	<m>	<m>				<cm²>	<cm²>	<daNm>	<daNm>	
-2096	32.47	1.57	XX	30	SLU	5.65	5.65	-3679.11	-6942.28	1.887
50	27.96	16.92	XX	19	SLU	5.65	5.65	3013.23	6942.28	2.304
50	27.96	16.92	YY	30	SLU	5.65	5.65	2580.57	6942.28	2.690
-2108	33.18	2.52	YY	30	SLU	5.65	5.65	-3106.09	-6942.28	2.235

Stato limite elastico - Verifiche a flessione/pressoflessione

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	My	M'ydy	Sic.
	<m>	<m>				<cm²>	<cm²>	<daNm>	<daNm>	
-2096	32.47	1.57	XX	5	SLV (E)	5.65	5.65	-2553.36	-6458.78	2.530
50	27.96	16.92	XX	9	SLV (E)	5.65	5.65	4848.36	6458.78	1.332
50	27.96	16.92	YY	1	SLV (E)	5.65	5.65	4538.57	6458.78	1.423
-2108	33.18	2.52	YY	5	SLV (E)	5.65	5.65	-2177.40	-6458.78	2.966

Stato limite ultimo - Verifiche a taglio

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	AfE St.	Vsdu	ctgθ	VRcd	VRsd	Vrdu	Sic.
	<m>	<m>				<cm²>	<cm²>	<cm²/m>	<daN>		<daN>	<daN>	<daN>	
-213	27.24	14.86	XX	9	SLV (E)	5.65	5.65		12287.20				13250.60	1.078
49	27.96	14.86	YY	9	SLV (E)	5.65	5.65		10216.70				13250.60	1.297

Stato limite d'esercizio - Verifiche tensionali

Nodo	X	Y	DV	CC	TCC	AfE S	AfE I	Mom	σ _c	σ _f
	<m>	<m>				<cm²>	<cm²>	<daNm>	<daN/cm²>	<daN/cm²>
-2096	32.47	1.57	XX	34	SLE R	5.65	5.65	-2616.11	25.78	1579.88
-2096	32.47	1.57	XX	26	SLE Q	5.65	5.65	-2265.14	22.32	1367.93
181	27.96	16.23	XX	22	SLE R	5.65	5.65	2593.01	25.55	1565.92

Relazione di calcolo

181	27.96	16.23	XX	26	SLE Q	5.65	5.65	2337.17	23.03	1411.42
-1960	25.72	8.40	YY	34	SLE R	5.65	5.65	2774.48	27.34	1675.52
-1960	25.72	8.40	YY	26	SLE Q	5.65	5.65	2351.23	23.17	1419.92
-2108	33.18	2.52	YY	34	SLE R	5.65	5.65	-2216.66	21.84	1338.65
-2108	33.18	2.52	YY	26	SLE Q	5.65	5.65	-1938.16	19.10	1170.46

Stato limite d'esercizio - Verifiche a fessurazione

Nodo	X <m>	Y <m>	DV	CC	TCC	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
-2096	32.47	1.57	XX	26	SLE Q	29.00	200.00	0.50	12.00	216.05	6.79	875.00	1367.93	0.40	0.15
-2096	32.47	1.57	XX	23	SLE F	29.00	200.00	0.50	12.00	216.05	6.79	875.00	1417.39	0.41	0.15
181	27.96	16.23	XX	26	SLE Q	29.00	200.00	0.50	12.00	216.05	6.79	875.00	1411.42	0.41	0.15
181	27.96	16.23	XX	23	SLE F	29.00	200.00	0.50	12.00	216.05	6.79	875.00	1465.21	0.43	0.16
-1960	25.72	8.40	YY	26	SLE Q	29.00	200.00	0.50	12.00	216.05	6.79	875.00	1419.92	0.41	0.15
-1960	25.72	8.40	YY	25	SLE F	29.00	200.00	0.50	12.00	216.05	6.79	875.00	1456.48	0.42	0.16
-2108	33.18	2.52	YY	26	SLE Q	29.00	200.00	0.50	12.00	216.05	6.79	875.00	1170.46	0.34	0.13
-2108	33.18	2.52	YY	23	SLE F	29.00	200.00	0.50	12.00	216.05	6.79	875.00	1192.54	0.35	0.13

Le verifiche degli elementi di fondazione sono state effettuate utilizzando l'approccio 2.

Coefficienti parziali per le azioni, per verifiche in condizioni statiche:

Permanenti strutturali, sicurezza a favore $\gamma_A = 1.00$;
 Permanenti strutturali, sicurezza a sfavore $\gamma_A = 1.30$;
 Permanenti non strutturali, sicurezza a favore $\gamma_A = 0.00$;
 Permanenti non strutturali, sicurezza a sfavore $\gamma_A = 1.50$;
 Variabili, sicurezza a favore $\gamma_A = 0.00$;
 Variabili, sicurezza a sfavore $\gamma_A = 1.50$.

I coefficienti parziali per le azioni sono posti pari all'unità per le verifiche in condizioni sismiche.

Tali coefficienti sono comunque desumibili dalla tabella delle combinazioni delle CCE (Parametri di calcolo).

Coefficienti parziali per i parametri geotecnici:

Tangente dell'angolo di attrito $\gamma_M = 1.00$;
 Coesione efficace $\gamma_M = 1.00$;
 Coesione non drenata $\gamma_M = 1.00$;

Coefficienti parziali per la resistenza delle fondazioni superficiali:

Capacità portante $\gamma_R = 2.30$;
 Scorrimento $\gamma_R = 1.10$;

Fondazioni superficiali

Simbologia

β = Inclinazione del piano di campagna
 γ_z = Peso specifico rappresentativo del terreno di fondazione
 η = Inclinazione del piano di posa della fondazione
 ϕ'_x = Angolo di attrito rappresentativo del terreno di fondazione
 $\sigma_{v0, f}$ = Pressione verticale alla profondità del piano di posa della fondazione
 B = Base della fondazione
 B' = Base della fondazione reagente
 CC = Numero della combinazione delle condizioni di carico elementari
 D = Profondità del piano di posa della fondazione
 L = Lunghezza della fondazione (L>B)
 L' = Lunghezza della fondazione reagente
 M_x = Momento intorno all'asse X
 M_y = Momento intorno all'asse Y
 N = Sforzo normale
 N_c = Coefficiente di capacità portante relativo alla coesione del terreno di fondazione
 N_g = Coefficiente di capacità portante relativo al peso del terreno di fondazione
 N_q = Coefficiente di capacità portante relativo al sovraccarico laterale
 R_d = Resistenza di progetto (Carico limite)
 Sic. = Sicurezza
 T_x = Taglio in dir. X
 T_y = Taglio in dir. Y
 b_c = Fattore di inclinazione del piano di fondazione relativo a coesione
 b_g = Fattore di inclinazione del piano di fondazione relativo a peso del terreno
 b_q = Fattore di inclinazione del piano di fondazione relativo a sovraccarico laterale
 c'_x = Coesione efficace rappresentativa del terreno di fondazione
 i_c = Fattore di inclinazione relativo alla coesione
 i_g = Fattore di inclinazione relativo al peso del terreno
 i_q = Fattore di inclinazione relativo al sovraccarico laterale
 q_{lim} = Pressione limite
 s_c = Fattore di forma relativo alla coesione
 s_g = Fattore di forma relativo al peso del terreno
 s_q = Fattore di forma relativo al sovraccarico laterale

Verifiche capacità portante

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Indicazioni EC7

Platea n. 200

B=2.06 <m> L=2.16 <m> D=1.90 <m> $\beta=0.00$ <grad> $\eta=0.00$ <grad> $\gamma_r=1059.40$ <daN/mc>
 $\sigma_{v0,r}=3040.00$ <daN/mq>

Verifiche in condizioni drenate

$\phi'_r=26.00$ <grad> $c'_r=1000.00$ <daN/mq>
 $N_q=11.85$ $N_c=22.25$ $N_g=10.59$ $b_q=1.00$ $b_c=1.00$ $b_g=1.00$

CC	N <daN>	T _x <daN>	T _y <daN>	M _x <daNm>	M _y <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	18579.00	-1933.70	53049.10	171.12	2.90	2.04	2.16	1.41	1.45	0.72	1.00	1.00	1.00	91500.00	175408.00	9.44
18	18549.30	6498.92	55176.90	178.47	-37.65	2.04	2.16	1.41	1.45	0.72	1.00	1.00	1.00	91525.70	175083.00	9.44
19	19275.20	14803.60	60529.50	194.34	-61.18	2.04	2.15	1.42	1.45	0.72	1.00	1.00	1.00	91535.30	174836.00	9.07
27	18724.80	-40514.30	78515.80	242.51	111.55	2.03	2.15	1.42	1.45	0.72	1.00	1.00	1.00	91507.30	173841.00	9.28
28	18636.20	-55181.00	95450.50	290.08	137.53	2.03	2.15	1.41	1.45	0.72	1.00	1.00	1.00	91459.10	173073.00	9.29
29	18695.10	-32081.70	80643.60	249.86	71.00	2.03	2.15	1.41	1.45	0.72	1.00	1.00	1.00	91451.40	174013.00	9.31
30	19421.00	-23777.00	85996.20	265.73	47.47	2.03	2.16	1.41	1.45	0.72	1.00	1.00	1.00	91414.70	174107.00	8.96

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Indicazioni EC7

Platea n. 410

B=18.64 <m> L=28.65 <m> D=1.00 <m> $\beta=0.00$ <grad> $\eta=0.00$ <grad> $\gamma_r=835.48$ <daN/mc>
 $\sigma_{v0,r}=1600.00$ <daN/mq>

Verifiche in condizioni drenate

$\phi'_r=26.00$ <grad> $c'_r=999.98$ <daN/mq>
 $N_q=11.85$ $N_c=22.25$ $N_g=10.59$ $b_q=1.00$ $b_c=1.00$ $b_g=1.00$

CC	N <daN>	T _x <daN>	T _y <daN>	M _x <daNm>	M _y <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	1712150.00	1934.40	-53049.90	308293.00	-34268.30	18.28	28.61	1.28	1.31	0.81	1.00	1.00	1.00	118691.00	26981500.00	15.76
18	1734050.00	-6498.50	-55177.40	314548.00	-113767.00	18.27	28.52	1.28	1.31	0.81	1.00	1.00	1.00	118671.00	26887100.00	15.51
19	1814100.00	-14803.10	-60530.00	308129.00	5559.59	18.30	28.64	1.28	1.31	0.81	1.00	1.00	1.00	118765.00	27060400.00	14.92
27	1733850.00	60503.00	-104382.00	366869.00	-70498.10	18.21	28.57	1.28	1.31	0.81	1.00	1.00	1.00	118473.00	26800200.00	15.46
28	1750690.00	88494.80	-138561.00	410658.00	-95503.60	18.17	28.54	1.28	1.30	0.81	1.00	1.00	1.00	118313.00	26670600.00	15.23
29	1755750.00	52070.10	-106510.00	373124.00	-149997.00	18.21	28.48	1.28	1.31	0.81	1.00	1.00	1.00	118456.00	26709700.00	15.21
30	1835800.00	43765.40	-111862.00	366705.00	-30670.30	18.24	28.61	1.28	1.31	0.81	1.00	1.00	1.00	118558.00	26899500.00	14.65

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Indicazioni EC7

Travata 401

B=0.90 <m> L=34.21 <m> D=1.00 <m> $\beta=0.00$ <grad> $\eta=0.00$ <grad> $\gamma_r=1600.00$ <daN/mc>
 $\sigma_{v0,r}=1600.00$ <daN/mq>

Verifiche in condizioni drenate

$\phi'_r=26.00$ <grad> $c'_r=1000.00$ <daN/mq>
 $N_q=11.85$ $N_c=22.25$ $N_g=10.59$ $b_q=1.00$ $b_c=1.00$ $b_g=1.00$

CC	N <daN>	T _x <daN>	T _y <daN>	M _x <daNm>	M _y <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	192172.00	-243.31	6277440.00	1669.89	54929.60	0.88	33.64	1.01	1.01	0.99	1.00	1.00	1.00	49136.10	634280.00	3.30
18	195600.00	-445.28	3767290.00	1685.30	35491.20	0.88	33.85	1.01	1.01	0.99	1.00	1.00	1.00	49134.70	638305.00	3.26
19	201202.00	-198.78	3766110.00	1728.61	55501.30	0.88	33.66	1.01	1.01	0.99	1.00	1.00	1.00	49137.60	634817.00	3.16
27	191762.00	2062.53	6268760.00	1552.85	38238.40	0.88	33.81	1.01	1.01	0.99	1.00	1.00	1.00	49144.40	638502.00	3.33
28	190969.00	3613.02	3751850.00	1460.79	25085.60	0.88	33.95	1.01	1.01	0.99	1.00	1.00	1.00	49150.60	641804.00	3.36
29	195190.00	1860.56	3758610.00	1568.27	18800.00	0.88	34.02	1.01	1.01	0.99	1.00	1.00	1.00	49142.80	642468.00	3.29
30	200792.00	2107.06	3757430.00	1611.57	38810.20	0.88	33.82	1.01	1.01	0.99	1.00	1.00	1.00	49145.50	638852.00	3.18

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Indicazioni EC7

Travata 409

B=0.70 <m> L=10.97 <m> D=1.00 <m> $\beta=0.00$ <grad> $\eta=0.00$ <grad> $\gamma_r=1600.00$ <daN/mc>

Relazione di calcolo

$\sigma_{v0,r}=1600.00$ <daN/mq>

Verifiche in condizioni drenate

$\phi'_r=26.00$ <grad> $c'_r=1000.00$ <daN/mq>

$N_q=11.85$ $N_c=22.25$ $N_g=10.59$ $b_q=1.00$ $b_c=1.00$ $b_g=1.00$

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	Q _{lim} <daN/mq>	R _d <daN>	Sic.
17	28667.30	-172236.00	5451.12	-60.39	4831.11	0.70	10.63	1.03	1.03	0.98	1.00	1.00	1.00	48240.20	155171.00	5.41
18	29146.20	-106071.00	4934.04	-65.44	5177.75	0.70	10.61	1.03	1.03	0.98	1.00	1.00	1.00	48239.40	154841.00	5.31
19	30346.90	-107156.00	4761.20	-66.86	6158.40	0.70	10.56	1.03	1.03	0.98	1.00	1.00	1.00	48245.70	154142.00	5.08
27	28953.90	-170958.00	5206.46	-64.62	5602.89	0.70	10.58	1.03	1.03	0.98	1.00	1.00	1.00	48243.10	154396.00	5.33
28	29062.50	-104118.00	4130.10	-70.60	6109.92	0.70	10.55	1.03	1.03	0.98	1.00	1.00	1.00	48242.70	153819.00	5.29
29	29432.70	-104794.00	4689.39	-69.67	5949.53	0.70	10.57	1.03	1.03	0.98	1.00	1.00	1.00	48242.20	154081.00	5.24
30	30633.40	-105879.00	4516.55	-71.09	6930.19	0.70	10.52	1.03	1.03	0.98	1.00	1.00	1.00	48248.40	153419.00	5.01

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Indicazioni EC7

Travata 412

$B=0.90$ <m> $L=23.24$ <m> $D=1.00$ <m> $\beta=0.00$ <grad> $\eta=0.00$ <grad> $\gamma_r=1600.00$ <daN/mc>

$\sigma_{v0,r}=1600.00$ <daN/mq>

Verifiche in condizioni drenate

$\phi'_r=26.00$ <grad> $c'_r=1000.00$ <daN/mq>

$N_q=11.85$ $N_c=22.25$ $N_g=10.59$ $b_q=1.00$ $b_c=1.00$ $b_g=1.00$

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	Q _{lim} <daN/mq>	R _d <daN>	Sic.
17	82858.60	135717.00	-2096670.00	58.28	-18814.30	0.90	22.79	1.02	1.02	0.99	1.00	1.00	1.00	49490.50	440578.00	5.32
18	84325.00	80118.40	-1256530.00	56.16	-23778.40	0.90	22.68	1.02	1.02	0.99	1.00	1.00	1.00	49494.40	438525.00	5.20
19	87918.70	79811.70	-1256080.00	76.79	-19617.20	0.90	22.79	1.02	1.02	0.99	1.00	1.00	1.00	49487.20	440534.00	5.01
27	84910.10	136590.00	-2100360.00	26.59	-25960.00	0.90	22.63	1.02	1.02	0.99	1.00	1.00	1.00	49502.20	438019.00	5.16
28	86680.60	81589.00	-1262640.00	-3.97	-32405.10	0.90	22.49	1.02	1.02	0.99	1.00	1.00	1.00	49511.10	435720.00	5.03
29	86376.60	80991.50	-1260220.00	24.46	-30924.10	0.90	22.52	1.02	1.02	0.99	1.00	1.00	1.00	49505.80	436056.00	5.05
30	89970.30	80684.80	-1259770.00	45.10	-26762.90	0.90	22.65	1.02	1.02	0.99	1.00	1.00	1.00	49498.30	438122.00	4.87

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Indicazioni EC7

Travata 412

$B=0.90$ <m> $L=10.97$ <m> $D=1.00$ <m> $\beta=0.00$ <grad> $\eta=0.00$ <grad> $\gamma_r=1600.00$ <daN/mc>

$\sigma_{v0,r}=1600.00$ <daN/mq>

Verifiche in condizioni drenate

$\phi'_r=26.00$ <grad> $c'_r=1000.00$ <daN/mq>

$N_q=11.85$ $N_c=22.25$ $N_g=10.59$ $b_q=1.00$ $b_c=1.00$ $b_g=1.00$

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	Q _{lim} <daN/mq>	R _d <daN>	Sic.
17	34965.10	-137532.00	11462.10	-79.59	-11516.50	0.90	10.31	1.04	1.04	0.97	1.00	1.00	1.00	50255.50	201747.00	5.77
18	35581.20	-74136.40	11207.40	-82.23	-11382.50	0.90	10.33	1.04	1.04	0.97	1.00	1.00	1.00	50252.20	202089.00	5.68
19	37146.40	-72058.20	12956.80	-83.60	-11352.70	0.90	10.36	1.04	1.04	0.97	1.00	1.00	1.00	50249.40	202664.00	5.46
27	35536.20	-135687.00	10566.80	-76.35	-11511.10	0.90	10.32	1.04	1.04	0.97	1.00	1.00	1.00	50256.50	202022.00	5.68
28	35982.90	-71358.30	9728.83	-71.53	-11229.50	0.90	10.35	1.04	1.04	0.97	1.00	1.00	1.00	50256.40	202558.00	5.63
29	36152.30	-72290.80	10312.20	-79.00	-11377.00	0.90	10.34	1.04	1.04	0.97	1.00	1.00	1.00	50253.20	202353.00	5.60
30	37717.50	-70212.60	12061.50	-80.37	-11347.20	0.90	10.37	1.04	1.04	0.97	1.00	1.00	1.00	50250.40	202909.00	5.38

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Indicazioni EC7

Travata 415

$B=0.90$ <m> $L=10.97$ <m> $D=1.00$ <m> $\beta=0.00$ <grad> $\eta=0.00$ <grad> $\gamma_r=1600.00$ <daN/mc>

$\sigma_{v0,r}=1600.00$ <daN/mq>

Verifiche in condizioni drenate

$\phi'_r=26.00$ <grad> $c'_r=1000.00$ <daN/mq>

$N_q=11.85$ $N_c=22.25$ $N_g=10.59$ $b_q=1.00$ $b_c=1.00$ $b_g=1.00$

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	33961.70	8134.78	-51842.70	3.47	6199.31	0.90	10.60	1.04	1.04	0.97	1.00	1.00	1.00	50258.10	208511.00	6.14
18	34640.00	5140.50	-31727.60	8.48	6858.96	0.90	10.57	1.04	1.04	0.97	1.00	1.00	1.00	50259.50	207843.00	6.00
19	35981.90	5261.73	-31826.00	2.32	7393.57	0.90	10.56	1.04	1.04	0.97	1.00	1.00	1.00	50265.00	207655.00	5.77
27	34417.60	8596.08	-52434.00	-8.40	7079.03	0.90	10.56	1.04	1.04	0.97	1.00	1.00	1.00	50261.60	207550.00	6.03
28	34911.90	5926.41	-32641.10	-9.26	8105.70	0.90	10.51	1.04	1.04	0.97	1.00	1.00	1.00	50268.30	206527.00	5.92
29	35096.00	5601.81	-32318.90	-3.40	7738.68	0.90	10.53	1.04	1.04	0.97	1.00	1.00	1.00	50268.50	207064.00	5.90
30	36437.80	5723.03	-32417.40	-9.55	8273.29	0.90	10.52	1.04	1.04	0.97	1.00	1.00	1.00	50267.00	206724.00	5.67

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Indicazioni EC7

Travata 421

B=0.90 <m> L=10.97 <m> D=1.00 <m> β=0.00 <grad> η=0.00 <grad> γ_r=1600.00 <daN/mc>
σ_{v0,r}=1600.00 <daN/mq>

Verifiche in condizioni drenate

φ'_r=26.00 <grad> c'_r=1000.00 <daN/mq>
N_q=11.85 N_c=22.25 N_g=10.59 b_q=1.00 b_c=1.00 b_g=1.00

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	41569.00	1360.40	-2017450.00	389.28	-7262.37	0.88	10.62	1.04	1.04	0.98	1.00	1.00	1.00	50073.90	203771.00	4.90
18	41369.00	478.20	-1211670.00	354.96	-6383.35	0.88	10.66	1.04	1.04	0.98	1.00	1.00	1.00	50084.10	204959.00	4.95
19	42672.30	630.49	-1212030.00	363.90	-5944.79	0.88	10.69	1.04	1.04	0.98	1.00	1.00	1.00	50081.20	205548.00	4.82
27	43444.40	2697.02	-2017720.00	434.03	-5718.93	0.88	10.71	1.04	1.04	0.98	1.00	1.00	1.00	50050.50	205036.00	4.72
28	43955.40	2862.90	-1212100.00	426.30	-3725.90	0.88	10.80	1.04	1.04	0.98	1.00	1.00	1.00	50044.30	206942.00	4.71
29	43244.30	1814.81	-1211940.00	399.71	-4839.90	0.88	10.75	1.04	1.04	0.98	1.00	1.00	1.00	50060.10	206180.00	4.77
30	44547.60	1967.11	-1212300.00	408.65	-4401.35	0.88	10.77	1.04	1.04	0.98	1.00	1.00	1.00	50058.10	206708.00	4.64

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Indicazioni EC7

Travata 422

B=0.90 <m> L=3.21 <m> D=1.00 <m> β=0.00 <grad> η=0.00 <grad> γ_r=1600.00 <daN/mc>
σ_{v0,r}=1600.00 <daN/mq>

Verifiche in condizioni drenate

φ'_r=26.00 <grad> c'_r=1000.00 <daN/mq>
N_q=11.85 N_c=22.25 N_g=10.59 b_q=1.00 b_c=1.00 b_g=1.00

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	13985.40	1292.01	-590818.00	-105.66	1064.74	0.88	3.06	1.13	1.14	0.91	1.00	1.00	1.00	53555.20	63003.20	4.50
18	13662.50	692.70	-354468.00	-89.66	975.84	0.89	3.07	1.13	1.14	0.91	1.00	1.00	1.00	53566.50	63352.40	4.64
19	13986.50	690.41	-354496.00	-87.44	1012.87	0.89	3.07	1.13	1.14	0.91	1.00	1.00	1.00	53577.90	63369.20	4.53
27	14725.30	1786.25	-591333.00	-122.66	1342.25	0.88	3.03	1.13	1.14	0.91	1.00	1.00	1.00	53582.70	62307.00	4.23
28	14759.50	1526.63	-355315.00	-116.94	1429.27	0.88	3.02	1.13	1.14	0.91	1.00	1.00	1.00	53611.90	62164.10	4.21
29	14402.40	1186.94	-354983.00	-106.66	1253.36	0.89	3.04	1.13	1.14	0.91	1.00	1.00	1.00	53593.90	62620.70	4.35
30	14726.40	1184.66	-355011.00	-104.43	1290.39	0.89	3.03	1.13	1.14	0.91	1.00	1.00	1.00	53604.10	62652.40	4.25

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Indicazioni EC7

Travata 423

B=0.90 <m> L=20.74 <m> D=1.00 <m> β=0.00 <grad> η=0.00 <grad> γ_r=1600.00 <daN/mc>
σ_{v0,r}=1600.00 <daN/mq>

Verifiche in condizioni drenate

φ'_r=26.00 <grad> c'_r=1000.00 <daN/mq>
N_q=11.85 N_c=22.25 N_g=10.59 b_q=1.00 b_c=1.00 b_g=1.00

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	89370.10	3811710.00	10285.80	-1192.63	18426.70	0.87	20.33	1.02	1.02	0.99	1.00	1.00	1.00	49337.90	380810.00	4.26
18	88496.30	2287830.00	6117.05	-1129.92	12428.90	0.87	20.46	1.02	1.02	0.99	1.00	1.00	1.00	49343.90	383826.00	4.34
19	92649.50	2288370.00	6142.91	-1176.07	15556.80	0.87	20.40	1.02	1.02	0.99	1.00	1.00	1.00	49347.20	382886.00	4.13

Relazione di calcolo

27	91819.00	3812770.00	7104.64	-1279.89	9792.71	0.87	20.53	1.02	1.02	0.99	1.00	1.00	1.00	49320.10	383877.00	4.18
28	92148.00	2289660.00	825.64	-1270.64	274.88	0.87	20.73	1.02	1.02	0.99	1.00	1.00	1.00	49315.70	387853.00	4.21
29	90945.20	2288890.00	2935.94	-1217.17	3794.87	0.87	20.66	1.02	1.02	0.99	1.00	1.00	1.00	49325.80	386842.00	4.25
30	95098.40	2289430.00	2961.80	-1263.32	6922.82	0.87	20.59	1.02	1.02	0.99	1.00	1.00	1.00	49329.70	385797.00	4.06

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Indicazioni EC7

Travata 425

B=0.90 <m> L=9.91 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_t =1600.00 <daN/mc>
 $\sigma_{v0,f}$ =1600.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_t =26.00 <grad> c'_t =1000.00 <daN/mq>
 N_q =11.85 N_c =22.25 N_g =10.59 b_q =1.00 b_c =1.00 b_g =1.00

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	27205.50	-588265.00	-137422.00	28.81	-9480.22	0.90	9.21	1.04	1.05	0.97	1.00	1.00	1.00	50452.80	181460.00	6.67
18	27509.10	-352875.00	-82365.00	23.98	-9097.48	0.90	9.25	1.04	1.05	0.97	1.00	1.00	1.00	50450.30	182227.00	6.62
19	28600.80	-352842.00	-82289.10	26.17	-8639.51	0.90	9.31	1.04	1.05	0.97	1.00	1.00	1.00	50439.50	183298.00	6.41
27	27396.50	-587855.00	-138651.00	46.93	-9673.90	0.90	9.20	1.04	1.05	0.97	1.00	1.00	1.00	50441.30	180972.00	6.61
28	27616.20	-352149.00	-84382.90	53.30	-9228.31	0.90	9.24	1.04	1.05	0.97	1.00	1.00	1.00	50430.30	181589.00	6.58
29	27700.10	-352464.00	-83594.80	42.11	-9291.15	0.90	9.24	1.04	1.05	0.97	1.00	1.00	1.00	50438.90	181737.00	6.56
30	28791.90	-352432.00	-83518.80	44.30	-8833.19	0.90	9.30	1.04	1.05	0.97	1.00	1.00	1.00	50428.60	182818.00	6.35

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Indicazioni EC7

Travata 427

B=0.90 <m> L=10.83 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_t =1600.00 <daN/mc>
 $\sigma_{v0,f}$ =1600.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_t =26.00 <grad> c'_t =1000.00 <daN/mq>
 N_q =11.85 N_c =22.25 N_g =10.59 b_q =1.00 b_c =1.00 b_g =1.00

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	29212.30	605.27	170485.00	-81.99	1927.12	0.89	10.70	1.04	1.04	0.97	1.00	1.00	1.00	50192.70	208806.00	7.15
18	29388.30	-1154.57	102062.00	-96.47	1820.21	0.89	10.71	1.04	1.04	0.97	1.00	1.00	1.00	50182.30	208698.00	7.10
19	31222.50	-1573.70	102066.00	-103.93	1697.99	0.89	10.72	1.04	1.04	0.97	1.00	1.00	1.00	50179.50	208959.00	6.69
27	29272.30	1861.09	168548.00	-75.79	1898.96	0.89	10.70	1.04	1.04	0.97	1.00	1.00	1.00	50196.70	208967.00	7.14
28	29395.10	914.25	98858.10	-84.97	1937.80	0.89	10.70	1.04	1.04	0.97	1.00	1.00	1.00	50191.10	208762.00	7.10
29	29448.30	101.25	100125.00	-90.28	1792.05	0.89	10.71	1.04	1.04	0.97	1.00	1.00	1.00	50186.30	208858.00	7.09
30	31282.50	-317.88	100129.00	-97.74	1669.83	0.89	10.72	1.04	1.04	0.97	1.00	1.00	1.00	50183.20	209109.00	6.68

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Indicazioni EC7

Travata 430

B=0.90 <m> L=10.83 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_t =1600.00 <daN/mc>
 $\sigma_{v0,f}$ =1600.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_t =26.00 <grad> c'_t =1000.00 <daN/mq>
 N_q =11.85 N_c =22.25 N_g =10.59 b_q =1.00 b_c =1.00 b_g =1.00

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	33939.90	-55961.10	20609.40	-86.21	-712.47	0.89	10.79	1.04	1.04	0.98	1.00	1.00	1.00	50186.30	210661.00	6.21
18	34332.80	-30904.30	12716.50	-77.34	-836.91	0.90	10.78	1.04	1.04	0.98	1.00	1.00	1.00	50192.80	210691.00	6.14
19	36219.00	-30441.10	12778.40	-84.33	-1509.54	0.90	10.75	1.04	1.04	0.98	1.00	1.00	1.00	50195.80	209992.00	5.80
27	34103.60	-54864.40	17655.90	-91.63	-1115.65	0.89	10.76	1.04	1.04	0.98	1.00	1.00	1.00	50186.40	210134.00	6.16
28	34326.10	-29063.30	7770.62	-86.99	-1429.89	0.89	10.75	1.04	1.04	0.98	1.00	1.00	1.00	50191.70	209879.00	6.11
29	34496.40	-29807.60	9763.01	-82.76	-1240.09	0.90	10.76	1.04	1.04	0.98	1.00	1.00	1.00	50192.90	210170.00	6.09
30	36382.70	-29344.40	9824.86	-89.76	-1912.72	0.90	10.72	1.04	1.04	0.97	1.00	1.00	1.00	50195.90	209501.00	5.76

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Indicazioni EC7

Travata 432

B=0.90 <m> L=10.83 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =1600.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =11.85 N_c =22.25 N_g =10.59 b_q =1.00 b_c =1.00 b_g =1.00

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	35537.70	-4684.72	-9468.61	61.02	-311.38	0.90	10.81	1.04	1.04	0.98	1.00	1.00	1.00	50199.30	211581.00	5.95
18	36304.10	-4182.02	-5394.58	62.77	-669.51	0.90	10.79	1.04	1.04	0.98	1.00	1.00	1.00	50201.60	211206.00	5.82
19	37809.40	-4506.77	-5648.33	65.47	-1053.59	0.90	10.77	1.04	1.04	0.98	1.00	1.00	1.00	50203.90	210846.00	5.58
27	36424.80	-3643.10	-14011.00	52.85	-1378.23	0.90	10.75	1.04	1.04	0.97	1.00	1.00	1.00	50212.00	210622.00	5.78
28	37095.20	-2458.56	-13187.30	47.68	-2224.59	0.90	10.71	1.04	1.04	0.97	1.00	1.00	1.00	50221.00	209870.00	5.66
29	37191.20	-3140.39	-9937.00	54.59	-1736.36	0.90	10.74	1.04	1.04	0.97	1.00	1.00	1.00	50214.00	210275.00	5.65
30	38696.50	-3465.14	-10190.70	57.29	-2120.44	0.90	10.72	1.04	1.04	0.97	1.00	1.00	1.00	50215.80	209959.00	5.43

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Indicazioni EC7

Travata 434

B=0.90 <m> L=13.17 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =1600.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =11.85 N_c =22.25 N_g =10.59 b_q =1.00 b_c =1.00 b_g =1.00

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	44970.30	143128.00	123915.00	33.46	5756.80	0.90	12.91	1.03	1.03	0.98	1.00	1.00	1.00	49992.70	252210.00	5.61
18	45907.60	89118.80	75079.80	37.36	5305.30	0.90	12.94	1.03	1.03	0.98	1.00	1.00	1.00	49989.20	252639.00	5.50
19	47758.80	89756.20	74693.30	43.23	5546.41	0.90	12.94	1.03	1.03	0.98	1.00	1.00	1.00	49987.50	252557.00	5.29
27	46008.70	144680.00	121370.00	33.02	4746.87	0.90	12.96	1.03	1.03	0.98	1.00	1.00	1.00	49988.80	253175.00	5.50
28	46808.60	91799.60	70471.50	36.76	3692.08	0.90	13.01	1.03	1.03	0.98	1.00	1.00	1.00	49983.20	254058.00	5.43
29	46946.00	90671.70	72535.10	36.92	4295.37	0.90	12.99	1.03	1.03	0.98	1.00	1.00	1.00	49985.40	253576.00	5.40
30	48797.20	91309.00	72148.70	42.79	4536.48	0.90	12.98	1.03	1.03	0.98	1.00	1.00	1.00	49983.90	253460.00	5.19

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Indicazioni EC7

Travata 434

B=0.90 <m> L=7.17 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =1600.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =11.85 N_c =22.25 N_g =10.59 b_q =1.00 b_c =1.00 b_g =1.00

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	28212.80	1367430.00	-130216.00	-102.20	-3525.17	0.89	6.92	1.06	1.06	0.96	1.00	1.00	1.00	50937.50	136822.00	4.85
18	28824.20	820443.00	-78627.70	-112.11	-3183.50	0.89	6.95	1.06	1.06	0.96	1.00	1.00	1.00	50922.90	137274.00	4.76
19	29495.40	820271.00	-78594.50	-102.01	-3137.26	0.89	6.96	1.06	1.06	0.96	1.00	1.00	1.00	50929.50	137585.00	4.66
27	29820.40	1369480.00	-131229.00	-142.79	-4744.39	0.89	6.85	1.06	1.06	0.96	1.00	1.00	1.00	50934.40	135109.00	4.53
28	30955.00	823727.00	-80191.60	-172.93	-5141.52	0.89	6.84	1.06	1.06	0.96	1.00	1.00	1.00	50921.90	134558.00	4.35
29	30431.80	822488.00	-79640.60	-152.70	-4402.72	0.89	6.88	1.06	1.06	0.96	1.00	1.00	1.00	50920.40	135571.00	4.45
30	31103.00	822316.00	-79607.40	-142.59	-4356.48	0.89	6.89	1.06	1.06	0.96	1.00	1.00	1.00	50926.70	135901.00	4.37

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Indicazioni EC7

Travata 443

Relazione di calcolo

B=0.90 <m> L=20.34 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =1600.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =11.85 N_c =22.25 N_g =10.59 b_q =1.00 b_c =1.00 b_g =1.00

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	116113.00	-3765770.00	10878.00	4.27	36979.10	0.90	19.70	1.02	1.02	0.99	1.00	1.00	1.00	49605.70	382424.00	3.29
18	117680.00	-2270980.00	7356.54	20.62	35505.50	0.90	19.74	1.02	1.02	0.99	1.00	1.00	1.00	49601.90	382927.00	3.25
19	119503.00	-2274210.00	7002.61	-35.73	43340.30	0.90	19.61	1.02	1.02	0.99	1.00	1.00	1.00	49604.30	380475.00	3.18
27	117038.00	-3762410.00	8938.25	-25.05	37171.30	0.90	19.70	1.02	1.02	0.99	1.00	1.00	1.00	49602.40	382281.00	3.27
28	116198.00	-2265600.00	3770.76	-48.84	36123.50	0.90	19.72	1.02	1.02	0.99	1.00	1.00	1.00	49598.10	382333.00	3.29
29	118605.00	-2267630.00	5416.82	-8.70	35697.70	0.90	19.74	1.02	1.02	0.99	1.00	1.00	1.00	49603.70	383056.00	3.23
30	120428.00	-2270850.00	5062.89	-65.04	43532.50	0.90	19.62	1.02	1.02	0.99	1.00	1.00	1.00	49599.80	380283.00	3.16

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Indicazioni EC7

Travata 446

B=0.90 <m> L=13.82 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =1600.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =11.85 N_c =22.25 N_g =10.59 b_q =1.00 b_c =1.00 b_g =1.00

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	35817.50	-164052.00	174095.00	-267.44	15764.70	0.89	12.94	1.03	1.03	0.98	1.00	1.00	1.00	49861.80	248216.00	6.93
18	36185.60	-98365.40	105545.00	-267.57	16684.30	0.89	12.89	1.03	1.03	0.98	1.00	1.00	1.00	49866.90	247479.00	6.84
19	37539.70	-98493.30	104766.00	-262.74	17106.70	0.89	12.91	1.03	1.03	0.98	1.00	1.00	1.00	49873.60	247939.00	6.60
27	35839.80	-163874.00	171818.00	-246.15	16737.20	0.89	12.88	1.03	1.03	0.98	1.00	1.00	1.00	49878.10	247601.00	6.91
28	35775.20	-97859.90	100980.00	-219.24	17524.50	0.89	12.84	1.03	1.03	0.98	1.00	1.00	1.00	49896.40	247225.00	6.91
29	36207.80	-98187.40	103268.00	-246.28	17656.80	0.89	12.84	1.03	1.03	0.98	1.00	1.00	1.00	49883.10	246868.00	6.82
30	37561.90	-98315.30	102489.00	-241.45	18079.20	0.89	12.85	1.03	1.03	0.98	1.00	1.00	1.00	49889.10	247350.00	6.59

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Indicazioni EC7

Travata 455

B=0.90 <m> L=3.21 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =1600.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =11.85 N_c =22.25 N_g =10.59 b_q =1.00 b_c =1.00 b_g =1.00

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	11582.40	511601.00	-494416.00	-17.42	-123.70	0.90	3.19	1.12	1.13	0.92	1.00	1.00	1.00	53511.20	66581.70	5.75
18	11896.90	306777.00	-296686.00	-19.83	-122.96	0.90	3.19	1.12	1.13	0.92	1.00	1.00	1.00	53506.00	66565.40	5.60
19	12238.00	306673.00	-296675.00	-16.92	-127.73	0.90	3.19	1.12	1.13	0.92	1.00	1.00	1.00	53513.70	66613.00	5.44
27	11978.70	512292.00	-495319.00	-23.69	-128.86	0.90	3.19	1.12	1.13	0.92	1.00	1.00	1.00	53499.20	66493.20	5.55
28	12334.10	307887.00	-298157.00	-30.42	-134.92	0.90	3.19	1.12	1.13	0.92	1.00	1.00	1.00	53487.00	66398.00	5.38
29	12293.10	307468.00	-297589.00	-26.10	-128.11	0.90	3.19	1.12	1.13	0.92	1.00	1.00	1.00	53494.40	66479.70	5.41
30	12634.20	307364.00	-297578.00	-23.19	-132.88	0.90	3.19	1.12	1.13	0.92	1.00	1.00	1.00	53502.20	66528.00	5.27

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Indicazioni EC7

Travata 457

B=0.90 <m> L=9.94 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =1600.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>

Relazione di calcolo

$N_q=11.85$ $N_c=22.25$ $N_g=10.59$ $b_q=1.00$ $b_c=1.00$ $b_g=1.00$

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	Q _{lim} <daN/mq>	R _d <daN>	Sic.
17	32311.30	-1380810.00	-1372630.00	-217.50	9722.15	0.89	9.34	1.04	1.05	0.97	1.00	1.00	1.00	50317.60	181085.00	5.60
18	32707.10	-828181.00	-823194.00	-222.81	9617.77	0.89	9.35	1.04	1.05	0.97	1.00	1.00	1.00	50313.70	181302.00	5.54
19	34309.80	-828169.00	-823120.00	-228.18	10454.00	0.89	9.33	1.04	1.05	0.97	1.00	1.00	1.00	50320.50	180981.00	5.27
27	32432.20	-1379780.00	-1374360.00	-225.46	10140.20	0.89	9.31	1.04	1.05	0.97	1.00	1.00	1.00	50317.20	180537.00	5.57
28	32761.00	-826469.00	-826071.00	-236.28	10258.20	0.89	9.31	1.04	1.05	0.97	1.00	1.00	1.00	50312.10	180395.00	5.51
29	32828.10	-827153.00	-824921.00	-230.76	10035.80	0.89	9.33	1.04	1.05	0.97	1.00	1.00	1.00	50313.30	180761.00	5.51
30	34430.80	-827141.00	-824846.00	-236.13	10872.10	0.89	9.31	1.04	1.05	0.97	1.00	1.00	1.00	50320.10	180465.00	5.24

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Platea n. 200

B=2.06 <m> L=2.16 <m> D=1.90 <m> $\beta=0.00$ <grad> $\eta=0.00$ <grad> $\gamma_r=1059.40$ <daN/mc>
 $\sigma_{v0,r}=3040.00$ <daN/mq>

Verifiche in condizioni drenate

$\phi'_r=26.00$ <grad> $c'_r=1000.00$ <daN/mq>
 $N_q=11.85$ $N_c=22.25$ $N_g=10.59$ $b_q=1.00$ $b_c=1.00$ $b_g=1.00$

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	Q _{lim} <daN/mq>	R _d <daN>	Sic.
1	15030.40	369129.00	440566.00	1254.77	-1089.74	1.89	2.01	1.41	1.45	0.72	1.00	1.00	1.00	90767.30	150534.00	10.02
3	14818.80	213678.00	269366.00	773.87	-643.62	1.96	2.07	1.41	1.45	0.72	1.00	1.00	1.00	91107.40	160592.00	10.84
5	15031.60	351629.00	439395.00	1252.13	-1039.51	1.89	2.02	1.41	1.45	0.72	1.00	1.00	1.00	90700.60	150952.00	10.04
7	14821.00	181177.00	267192.00	768.98	-550.32	1.96	2.09	1.41	1.45	0.72	1.00	1.00	1.00	90985.60	161408.00	10.89
9	14965.80	396673.00	381565.00	1085.35	-1168.75	1.91	2.00	1.42	1.46	0.71	1.00	1.00	1.00	91231.50	152206.00	10.17
11	14754.10	241222.00	210365.00	604.46	-722.62	1.98	2.06	1.42	1.46	0.71	1.00	1.00	1.00	91567.60	162387.00	11.01
13	14967.00	379173.00	380394.00	1082.72	-1118.51	1.92	2.01	1.42	1.46	0.71	1.00	1.00	1.00	91162.90	152631.00	10.20
15	14756.40	208721.00	208190.00	599.56	-629.32	1.98	2.07	1.42	1.46	0.71	1.00	1.00	1.00	91442.50	163217.00	11.06

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Platea n. 410

B=18.64 <m> L=28.65 <m> D=1.00 <m> $\beta=0.00$ <grad> $\eta=0.00$ <grad> $\gamma_r=835.48$ <daN/mc>
 $\sigma_{v0,r}=1600.00$ <daN/mq>

Verifiche in condizioni drenate

$\phi'_r=26.00$ <grad> $c'_r=999.98$ <daN/mq>
 $N_q=11.85$ $N_c=22.25$ $N_g=10.59$ $b_q=1.00$ $b_c=1.00$ $b_g=1.00$

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	Q _{lim} <daN/mq>	R _d <daN>	Sic.
1	1356060.00	-470353.00	-528515.00	420258.00	163773.00	18.02	28.41	1.28	1.30	0.81	1.00	1.00	1.00	117786.00	26209300.00	19.33
3	1354110.00	-271173.00	-318064.00	356406.00	110797.00	18.11	28.48	1.28	1.30	0.81	1.00	1.00	1.00	118112.00	26490700.00	19.56
5	1356470.00	-448319.00	-525310.00	426745.00	158606.00	18.01	28.41	1.28	1.30	0.81	1.00	1.00	1.00	117754.00	26195800.00	19.31
7	1354870.00	-230251.00	-312113.00	368452.00	101201.00	18.09	28.50	1.28	1.30	0.81	1.00	1.00	1.00	118054.00	26465400.00	19.53
9	1355240.00	-497897.00	-469513.00	432567.00	156482.00	18.00	28.42	1.28	1.30	0.81	1.00	1.00	1.00	117724.00	26178300.00	19.32
11	1353290.00	-298717.00	-259062.00	368715.00	103506.00	18.09	28.49	1.28	1.30	0.81	1.00	1.00	1.00	118051.00	26459700.00	19.55
13	1355640.00	-475862.00	-466309.00	439054.00	151314.00	17.99	28.42	1.28	1.30	0.81	1.00	1.00	1.00	117692.00	26164800.00	19.30
15	1354040.00	-257795.00	-253111.00	380761.00	93909.70	18.07	28.51	1.28	1.30	0.81	1.00	1.00	1.00	117993.00	26434300.00	19.52

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 401

B=0.90 <m> L=34.21 <m> D=1.00 <m> $\beta=0.00$ <grad> $\eta=0.00$ <grad> $\gamma_r=1600.00$ <daN/mc>
 $\sigma_{v0,r}=1600.00$ <daN/mq>

Verifiche in condizioni drenate

$\phi'_r=26.00$ <grad> $c'_r=1000.00$ <daN/mq>
 $N_q=11.85$ $N_c=22.25$ $N_g=10.59$ $b_q=1.00$ $b_c=1.00$ $b_g=1.00$

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	Q _{lim} <daN/mq>	R _d <daN>	Sic.
1	149220.00	-1512.18	-4075.34	1374.12	79929.80	0.88	33.14	1.01	1.01	0.99	1.00	1.00	1.00	49133.40	624091.00	4.18
3	148195.00	-791.84	-2159.89	1318.37	69036.80	0.88	33.28	1.01	1.01	0.99	1.00	1.00	1.00	49137.10	627212.00	4.23
5	149445.00	-1641.48	-4513.41	1386.87	82466.50	0.88	33.11	1.01	1.01	0.99	1.00	1.00	1.00	49132.60	623370.00	4.17

Relazione di calcolo

7	148615.00	-1031.97	-2973.46	1342.06	73747.70	0.88	33.22	1.01	1.01	0.99	1.00	1.00	1.00	49135.60	625855.00	4.21
9	148737.00	1497.33	-4998.38	1346.31	74153.10	0.88	33.21	1.01	1.01	0.99	1.00	1.00	1.00	49135.30	625734.00	4.21
11	147713.00	776.99	-3082.93	1290.56	63260.10	0.88	33.35	1.01	1.01	0.99	1.00	1.00	1.00	49139.00	628879.00	4.26
13	148963.00	1626.63	-5436.46	1359.06	76689.80	0.88	33.18	1.01	1.01	0.99	1.00	1.00	1.00	49134.40	625008.00	4.20
15	148132.00	1017.12	-3896.50	1314.25	67971.10	0.88	33.29	1.01	1.01	0.99	1.00	1.00	1.00	49137.40	627513.00	4.24

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 409

B=0.70 <m> L=10.97 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,f}$ =1600.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =11.85 N_c =22.25 N_g =10.59 b_q =1.00 b_c =1.00 b_g =1.00

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
1	22592.80	-13203.30	7125.42	-72.82	3854.58	0.69	10.63	1.03	1.03	0.98	1.00	1.00	1.00	48218.50	154543.00	6.84
3	22397.70	-9814.85	4769.39	-63.56	3573.96	0.69	10.65	1.03	1.03	0.98	1.00	1.00	1.00	48223.90	155053.00	6.92
5	22590.80	-13353.40	7106.71	-72.88	3847.78	0.69	10.63	1.03	1.03	0.98	1.00	1.00	1.00	48218.40	154550.00	6.84
7	22394.00	-10093.60	4734.65	-63.68	3561.32	0.69	10.65	1.03	1.03	0.98	1.00	1.00	1.00	48223.60	155066.00	6.92
9	22583.60	-12342.10	7470.13	-72.02	3899.69	0.69	10.62	1.03	1.03	0.98	1.00	1.00	1.00	48219.60	154502.00	6.84
11	22388.50	-8953.59	5114.10	-62.77	3619.06	0.69	10.65	1.03	1.03	0.98	1.00	1.00	1.00	48225.00	155012.00	6.92
13	22581.70	-12492.10	7451.42	-72.09	3892.89	0.69	10.63	1.03	1.03	0.98	1.00	1.00	1.00	48219.50	154508.00	6.84
15	22384.90	-9232.30	5079.36	-62.89	3606.43	0.69	10.65	1.03	1.03	0.98	1.00	1.00	1.00	48224.70	155024.00	6.93

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 412

B=0.90 <m> L=23.24 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,f}$ =1600.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =11.85 N_c =22.25 N_g =10.59 b_q =1.00 b_c =1.00 b_g =1.00

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
1	66730.60	-13406.80	21031.10	129.15	-20700.10	0.90	22.62	1.02	1.02	0.99	1.00	1.00	1.00	49472.90	436009.00	6.53
3	66438.40	-8488.51	12298.80	71.45	-17874.80	0.90	22.70	1.02	1.02	0.99	1.00	1.00	1.00	49486.20	438553.00	6.60
5	66794.80	-13735.90	23089.40	141.45	-21334.40	0.90	22.60	1.02	1.02	0.99	1.00	1.00	1.00	49470.10	435452.00	6.52
7	66557.50	-9099.60	16121.30	94.31	-19052.70	0.90	22.67	1.02	1.02	0.99	1.00	1.00	1.00	49481.00	437508.00	6.57
9	66579.20	-12028.30	16705.10	-113.38	-21858.60	0.90	22.58	1.02	1.02	0.99	1.00	1.00	1.00	49478.20	435583.00	6.54
11	66287.00	-7110.04	7972.78	-55.69	-19033.30	0.90	22.67	1.02	1.02	0.99	1.00	1.00	1.00	49491.50	438131.00	6.61
13	66643.40	-12357.40	18763.40	-125.69	-22492.80	0.90	22.57	1.02	1.02	0.99	1.00	1.00	1.00	49475.40	435026.00	6.53
15	66406.10	-7721.12	11795.30	-78.54	-20211.20	0.90	22.63	1.02	1.02	0.99	1.00	1.00	1.00	49486.30	437085.00	6.58

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 412

B=0.90 <m> L=10.97 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,f}$ =1600.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =11.85 N_c =22.25 N_g =10.59 b_q =1.00 b_c =1.00 b_g =1.00

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
1	27950.50	22379.40	9935.42	-88.09	-10651.90	0.89	10.21	1.04	1.04	0.97	1.00	1.00	1.00	50252.90	199322.00	7.13
3	27735.30	19194.20	9061.74	-72.02	-9595.23	0.89	10.28	1.04	1.04	0.97	1.00	1.00	1.00	50253.90	200948.00	7.25
5	27952.70	22180.20	9862.71	-87.93	-10601.80	0.89	10.21	1.04	1.04	0.97	1.00	1.00	1.00	50252.50	199395.00	7.13
7	27739.30	18824.30	8926.72	-71.72	-9502.21	0.89	10.28	1.04	1.04	0.97	1.00	1.00	1.00	50253.20	201083.00	7.25
9	28008.40	22442.10	10276.70	-84.21	-10554.90	0.89	10.22	1.04	1.04	0.97	1.00	1.00	1.00	50254.60	199560.00	7.12
11	27793.20	19256.90	9403.04	-68.13	-9498.32	0.90	10.29	1.04	1.04	0.97	1.00	1.00	1.00	50255.60	201184.00	7.24

Relazione di calcolo

13	28010.60	22242.90	10204.00	-84.04	-10504.90	0.89	10.22	1.04	1.04	0.97	1.00	1.00	1.00	50254.20	199632.00	7.13
15	27797.20	18886.90	9268.02	-67.83	-9405.30	0.90	10.29	1.04	1.04	0.97	1.00	1.00	1.00	50254.80	201319.00	7.24

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 415

B=0.90 <m> L=10.97 <m> D=1.00 <m> β=0.00 <grad> η=0.00 <grad> γ_r=1600.00 <daN/mc>
σ_{v0,r}=1600.00 <daN/mq>

Verifiche in condizioni drenate

φ'_r=26.00 <grad> c'_r=1000.00 <daN/mq>
N_q=11.85 N_c=22.25 N_g=10.59 b_q=1.00 b_c=1.00 b_g=1.00

CC	N <daN>	T _x <daN>	T _y <daN>	M _x <daNm>	M _y <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	Q _{lim} <daN/mq>	R _d <daN>	Sic.
1	29404.70	1733.10	-3058.06	73.04	13013.30	0.90	10.08	1.04	1.04	0.97	1.00	1.00	1.00	50284.00	197338.00	6.71
3	28306.80	1138.50	-2139.10	48.69	9784.56	0.90	10.28	1.04	1.04	0.97	1.00	1.00	1.00	50271.10	201422.00	7.12
5	29394.90	1752.24	-3044.87	72.12	12894.30	0.90	10.09	1.04	1.04	0.97	1.00	1.00	1.00	50283.40	197502.00	6.72
7	28288.50	1174.05	-2114.61	46.97	9563.66	0.90	10.29	1.04	1.04	0.97	1.00	1.00	1.00	50270.20	201742.00	7.13
9	29748.10	1876.12	-2941.69	83.13	13406.20	0.89	10.07	1.04	1.04	0.97	1.00	1.00	1.00	50280.20	196870.00	6.62
11	28650.10	1281.53	-2022.74	58.77	10177.50	0.90	10.26	1.04	1.04	0.97	1.00	1.00	1.00	50267.30	200883.00	7.01
13	29738.20	1895.27	-2928.50	82.21	13287.30	0.89	10.08	1.04	1.04	0.97	1.00	1.00	1.00	50279.70	197032.00	6.63
15	28631.90	1317.08	-1998.25	57.06	9956.60	0.90	10.27	1.04	1.04	0.97	1.00	1.00	1.00	50266.30	201199.00	7.03

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 421

B=0.90 <m> L=10.97 <m> D=1.00 <m> β=0.00 <grad> η=0.00 <grad> γ_r=1600.00 <daN/mc>
σ_{v0,r}=1600.00 <daN/mq>

Verifiche in condizioni drenate

φ'_r=26.00 <grad> c'_r=1000.00 <daN/mq>
N_q=11.85 N_c=22.25 N_g=10.59 b_q=1.00 b_c=1.00 b_g=1.00

CC	N <daN>	T _x <daN>	T _y <daN>	M _x <daNm>	M _y <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	Q _{lim} <daN/mq>	R _d <daN>	Sic.
1	34865.40	-1672.23	-6260.51	326.71	-7790.26	0.88	10.52	1.04	1.04	0.97	1.00	1.00	1.00	50086.70	201949.00	5.79
3	33381.60	-898.25	-4458.16	284.45	-5465.14	0.88	10.64	1.04	1.04	0.98	1.00	1.00	1.00	50087.70	204639.00	6.13
5	34838.70	-1701.99	-6243.36	328.24	-7771.03	0.88	10.52	1.04	1.04	0.97	1.00	1.00	1.00	50085.60	201936.00	5.80
7	33332.10	-953.52	-4426.31	287.29	-5429.42	0.88	10.64	1.04	1.04	0.98	1.00	1.00	1.00	50085.50	204617.00	6.14
9	34566.50	-2076.88	-5980.49	326.55	-8839.05	0.88	10.46	1.04	1.04	0.97	1.00	1.00	1.00	50093.80	200705.00	5.81
11	33082.80	-1302.90	-4178.14	284.29	-6513.93	0.88	10.58	1.04	1.04	0.97	1.00	1.00	1.00	50095.00	203360.00	6.15
13	34539.90	-2106.64	-5963.34	328.08	-8819.81	0.88	10.46	1.04	1.04	0.97	1.00	1.00	1.00	50092.70	200690.00	5.81
15	33033.30	-1358.17	-4146.29	287.12	-6478.21	0.88	10.58	1.04	1.04	0.97	1.00	1.00	1.00	50092.80	203336.00	6.16

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 422

B=0.90 <m> L=3.21 <m> D=1.00 <m> β=0.00 <grad> η=0.00 <grad> γ_r=1600.00 <daN/mc>
σ_{v0,r}=1600.00 <daN/mq>

Verifiche in condizioni drenate

φ'_r=26.00 <grad> c'_r=1000.00 <daN/mq>
N_q=11.85 N_c=22.25 N_g=10.59 b_q=1.00 b_c=1.00 b_g=1.00

CC	N <daN>	T _x <daN>	T _y <daN>	M _x <daNm>	M _y <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	Q _{lim} <daN/mq>	R _d <daN>	Sic.
1	14112.20	-1213.24	5346.87	-160.41	930.14	0.88	3.08	1.12	1.14	0.91	1.00	1.00	1.00	53422.60	62722.40	4.44
3	11731.60	-688.09	2824.70	-92.34	776.93	0.88	3.08	1.13	1.14	0.91	1.00	1.00	1.00	53515.70	63319.50	5.40
5	14684.20	-1340.16	5951.42	-176.55	954.81	0.88	3.08	1.12	1.14	0.91	1.00	1.00	1.00	53402.60	62641.20	4.27
7	12794.00	-923.81	3947.43	-122.31	822.74	0.88	3.08	1.13	1.14	0.91	1.00	1.00	1.00	53465.30	63096.70	4.93
9	15303.00	-969.67	-5125.07	-194.78	986.67	0.87	3.08	1.12	1.14	0.91	1.00	1.00	1.00	53382.30	62538.80	4.09
11	12922.40	-444.52	-2602.90	-126.71	833.46	0.88	3.08	1.13	1.14	0.91	1.00	1.00	1.00	53459.40	63046.80	4.88
13	15875.10	-1096.60	-5729.62	-210.92	1011.34	0.87	3.08	1.12	1.14	0.92	1.00	1.00	1.00	53365.20	62470.20	3.94
15	13984.80	-680.24	-3725.63	-156.68	879.27	0.88	3.08	1.12	1.14	0.91	1.00	1.00	1.00	53417.50	62863.60	4.50

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 423

B=0.90 <m> L=20.74 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =1600.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =11.85 N_c =22.25 N_g =10.59 b_q =1.00 b_c =1.00 b_g =1.00

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
1	73656.10	7004.89	20656.80	-1003.46	46518.20	0.87	19.48	1.02	1.02	0.99	1.00	1.00	1.00	49364.20	364834.00	4.95
3	71199.80	4023.31	10712.20	-909.78	27975.00	0.87	19.95	1.02	1.02	0.99	1.00	1.00	1.00	49361.80	374481.00	5.26
5	73821.70	7329.65	22992.50	-1011.42	51063.30	0.87	19.36	1.02	1.02	0.99	1.00	1.00	1.00	49367.50	362540.00	4.91
7	71507.20	4626.42	15050.00	-924.56	36416.00	0.87	19.72	1.02	1.02	0.99	1.00	1.00	1.00	49367.70	370029.00	5.17
9	74324.10	7987.56	-20848.70	-1031.18	37312.60	0.87	19.74	1.02	1.02	0.99	1.00	1.00	1.00	49349.80	369366.00	4.97
11	71867.80	5005.98	-10904.20	-937.50	18769.40	0.87	20.22	1.02	1.02	0.99	1.00	1.00	1.00	49347.40	379083.00	5.27
13	74489.60	8312.32	-23184.40	-1039.14	41857.80	0.87	19.62	1.02	1.02	0.99	1.00	1.00	1.00	49352.90	367083.00	4.93
15	72175.10	5609.09	-15242.00	-952.28	27210.40	0.87	19.99	1.02	1.02	0.99	1.00	1.00	1.00	49353.00	374654.00	5.19

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 425

B=0.90 <m> L=9.91 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =1600.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =11.85 N_c =22.25 N_g =10.59 b_q =1.00 b_c =1.00 b_g =1.00

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
1	23533.40	-7309.89	19694.00	57.11	-12751.00	0.90	8.83	1.04	1.05	0.97	1.00	1.00	1.00	50496.40	173463.00	7.37
3	22565.70	-3746.99	10287.90	35.54	-8939.75	0.90	9.12	1.04	1.05	0.97	1.00	1.00	1.00	50459.40	179398.00	7.95
5	23731.20	-7866.16	21977.90	56.16	-13661.70	0.90	8.76	1.04	1.05	0.97	1.00	1.00	1.00	50510.70	172204.00	7.26
7	22933.20	-4780.06	14529.40	33.78	-10631.20	0.90	8.98	1.04	1.05	0.97	1.00	1.00	1.00	50486.10	176879.00	7.71
9	24015.00	7850.98	-19204.90	58.99	-14657.40	0.90	8.69	1.05	1.05	0.97	1.00	1.00	1.00	50522.50	170847.00	7.11
11	23047.40	4288.07	-9798.84	37.41	-10846.20	0.90	8.97	1.04	1.05	0.97	1.00	1.00	1.00	50485.70	176542.00	7.66
13	24212.90	8407.24	-21488.80	58.04	-15568.20	0.90	8.62	1.05	1.05	0.97	1.00	1.00	1.00	50536.70	169634.00	7.01
15	23414.80	5321.14	-14040.30	35.65	-12537.60	0.90	8.84	1.04	1.05	0.97	1.00	1.00	1.00	50512.20	174119.00	7.44

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 427

B=0.90 <m> L=10.83 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =1600.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =11.85 N_c =22.25 N_g =10.59 b_q =1.00 b_c =1.00 b_g =1.00

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
1	23968.60	-5672.34	-1792.20	-102.81	3625.30	0.89	10.53	1.04	1.04	0.97	1.00	1.00	1.00	50186.20	204769.00	8.54
3	23619.60	-4455.97	-895.15	-96.48	2373.90	0.89	10.63	1.04	1.04	0.97	1.00	1.00	1.00	50176.70	206799.00	8.76
5	24049.00	-5724.25	-2013.00	-102.29	3920.16	0.89	10.50	1.04	1.04	0.97	1.00	1.00	1.00	50190.00	204344.00	8.50
7	23768.90	-4552.38	-1305.20	-95.52	2921.49	0.89	10.58	1.04	1.04	0.97	1.00	1.00	1.00	50183.90	205987.00	8.67
9	23807.50	-5378.66	-2237.19	-104.11	4211.31	0.89	10.48	1.04	1.04	0.97	1.00	1.00	1.00	50191.40	203755.00	8.56
11	23458.50	-4162.29	-1340.14	-97.79	2959.91	0.89	10.58	1.04	1.04	0.97	1.00	1.00	1.00	50181.80	205782.00	8.77
13	23887.90	-5430.57	-2457.99	-103.59	4506.17	0.89	10.45	1.04	1.04	0.97	1.00	1.00	1.00	50195.30	203330.00	8.51
15	23607.80	-4258.70	-1750.19	-96.82	3507.50	0.89	10.53	1.04	1.04	0.97	1.00	1.00	1.00	50189.10	204972.00	8.68

Verifiche di capacità portante per rottura generale in condizioni sismiche

Relazione di calcolo

Metodo utilizzato: Condizioni statiche

Travata 430

B=0.90 <m> L=10.83 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =1600.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =11.85 N_c =22.25 N_g =10.59 b_q =1.00 b_c =1.00 b_g =1.00

CC	N <daN>	T _x <daN>	T _y <daN>	M _x <daNm>	M _y <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
1	27334.30	8345.93	3112.30	-76.42	-1816.68	0.89	10.70	1.04	1.04	0.97	1.00	1.00	1.00	50193.10	208793.00	7.64
3	27119.00	6694.82	1899.79	-64.96	-1293.59	0.90	10.73	1.04	1.04	0.97	1.00	1.00	1.00	50196.00	209726.00	7.73
5	27378.90	8466.82	3400.55	-75.97	-1921.60	0.89	10.69	1.04	1.04	0.97	1.00	1.00	1.00	50194.40	208664.00	7.62
7	27201.80	6919.33	2435.11	-64.11	-1488.44	0.90	10.72	1.04	1.04	0.97	1.00	1.00	1.00	50198.60	209481.00	7.70
9	27243.40	8816.23	2542.00	-77.67	-1601.08	0.89	10.71	1.04	1.04	0.97	1.00	1.00	1.00	50190.00	209055.00	7.67
11	27028.10	7165.12	1329.48	-66.20	-1077.99	0.90	10.75	1.04	1.04	0.98	1.00	1.00	1.00	50193.00	209993.00	7.77
13	27288.00	8937.12	2830.25	-77.21	-1705.99	0.89	10.71	1.04	1.04	0.97	1.00	1.00	1.00	50191.40	208925.00	7.66
15	27110.90	7389.63	1864.80	-65.35	-1272.83	0.90	10.74	1.04	1.04	0.97	1.00	1.00	1.00	50195.50	209746.00	7.74

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 432

B=0.90 <m> L=10.83 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =1600.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =11.85 N_c =22.25 N_g =10.59 b_q =1.00 b_c =1.00 b_g =1.00

CC	N <daN>	T _x <daN>	T _y <daN>	M _x <daNm>	M _y <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
1	27786.40	-5981.43	-730.02	77.36	-1055.99	0.89	10.75	1.04	1.04	0.98	1.00	1.00	1.00	50185.90	209880.00	7.55
3	27732.70	-4477.17	-380.06	63.53	-900.55	0.90	10.77	1.04	1.04	0.98	1.00	1.00	1.00	50194.20	210362.00	7.59
5	27792.10	-6046.73	-751.40	77.85	-1081.96	0.89	10.75	1.04	1.04	0.98	1.00	1.00	1.00	50185.80	209835.00	7.55
7	27743.40	-4598.45	-419.78	64.46	-948.77	0.90	10.76	1.04	1.04	0.98	1.00	1.00	1.00	50194.00	210279.00	7.58
9	27802.70	-5611.38	-800.26	74.04	-1105.97	0.89	10.75	1.04	1.04	0.98	1.00	1.00	1.00	50188.70	209879.00	7.55
11	27749.10	-4107.12	-450.30	60.21	-950.53	0.90	10.76	1.04	1.04	0.98	1.00	1.00	1.00	50197.00	210361.00	7.58
13	27808.50	-5676.69	-821.64	74.54	-1131.93	0.89	10.75	1.04	1.04	0.98	1.00	1.00	1.00	50188.60	209835.00	7.55
15	27759.80	-4228.40	-490.01	61.14	-998.75	0.90	10.76	1.04	1.04	0.98	1.00	1.00	1.00	50196.80	210278.00	7.57

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 434

B=0.90 <m> L=13.17 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =1600.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =11.85 N_c =22.25 N_g =10.59 b_q =1.00 b_c =1.00 b_g =1.00

CC	N <daN>	T _x <daN>	T _y <daN>	M _x <daNm>	M _y <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
1	36288.70	9584.27	3082.70	45.37	5983.87	0.90	12.84	1.03	1.03	0.98	1.00	1.00	1.00	49989.70	250472.00	6.90
3	35785.40	7966.65	1811.39	38.26	4613.09	0.90	12.91	1.03	1.03	0.98	1.00	1.00	1.00	49986.70	251962.00	7.04
5	36280.50	9656.32	3065.32	45.28	5934.27	0.90	12.84	1.03	1.03	0.98	1.00	1.00	1.00	49989.50	250524.00	6.91
7	35770.20	8100.46	1779.12	38.09	4520.97	0.90	12.92	1.03	1.03	0.98	1.00	1.00	1.00	49986.30	252061.00	7.05
9	36386.40	9992.51	3365.77	46.71	5809.29	0.90	12.85	1.03	1.03	0.98	1.00	1.00	1.00	49988.10	250650.00	6.89
11	35883.00	8374.89	2094.46	39.59	4438.51	0.90	12.92	1.03	1.03	0.98	1.00	1.00	1.00	49985.10	252139.00	7.03
13	36378.20	10064.60	3348.39	46.61	5759.68	0.90	12.85	1.03	1.03	0.98	1.00	1.00	1.00	49987.90	250702.00	6.89
15	35867.80	8508.70	2062.19	39.42	4346.39	0.90	12.93	1.03	1.03	0.98	1.00	1.00	1.00	49984.70	252237.00	7.03

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Relazione di calcolo

Travata 434

B=0.90 <m> L=7.17 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =1600.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =11.85 N_c =22.25 N_g =10.59 b_q =1.00 b_c =1.00 b_g =1.00

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
1	24170.50	-1231.10	-2672.63	-104.06	-4829.55	0.89	6.77	1.06	1.06	0.96	1.00	1.00	1.00	50970.70	133744.00	5.53
3	23475.70	-845.37	-1770.67	-94.20	-3617.47	0.89	6.86	1.06	1.06	0.96	1.00	1.00	1.00	50947.60	135577.00	5.78
5	24069.80	-1236.63	-2657.97	-103.22	-4825.02	0.89	6.77	1.06	1.06	0.96	1.00	1.00	1.00	50971.50	133725.00	5.56
7	23288.80	-855.64	-1743.44	-92.64	-3609.06	0.89	6.86	1.06	1.06	0.96	1.00	1.00	1.00	50948.90	135557.00	5.82
9	23959.70	-1162.68	-2511.68	-108.14	-4406.60	0.89	6.80	1.06	1.06	0.96	1.00	1.00	1.00	50956.00	134270.00	5.60
11	23264.90	-776.95	-1609.72	-98.28	-3194.52	0.89	6.90	1.06	1.06	0.96	1.00	1.00	1.00	50932.50	136136.00	5.85
13	23859.10	-1168.21	-2497.02	-107.30	-4402.07	0.89	6.80	1.06	1.06	0.96	1.00	1.00	1.00	50956.70	134254.00	5.63
15	23078.00	-787.22	-1582.49	-96.72	-3186.11	0.89	6.89	1.06	1.06	0.96	1.00	1.00	1.00	50933.70	136120.00	5.90

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 443

B=0.90 <m> L=20.34 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =1600.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =11.85 N_c =22.25 N_g =10.59 b_q =1.00 b_c =1.00 b_g =1.00

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
1	89913.40	-28217.20	3433.54	-65.06	28490.30	0.90	19.71	1.02	1.02	0.99	1.00	1.00	1.00	49593.00	381804.00	4.25
3	88369.10	-25618.90	2130.91	-37.77	27071.00	0.90	19.73	1.02	1.02	0.99	1.00	1.00	1.00	49597.60	382500.00	4.33
5	89917.30	-28371.90	3463.49	-65.69	28561.80	0.90	19.70	1.02	1.02	0.99	1.00	1.00	1.00	49592.90	381767.00	4.25
7	88376.40	-25906.20	2186.53	-38.95	27203.70	0.90	19.72	1.02	1.02	0.99	1.00	1.00	1.00	49597.50	382430.00	4.33
9	89670.40	-27532.70	3465.77	-71.90	28435.50	0.90	19.71	1.02	1.02	0.99	1.00	1.00	1.00	49591.60	381717.00	4.26
11	88126.10	-24934.40	2163.14	-44.61	27016.10	0.90	19.73	1.02	1.02	0.99	1.00	1.00	1.00	49596.20	382413.00	4.34
13	89674.30	-27687.40	3495.72	-72.54	28506.90	0.90	19.70	1.02	1.02	0.99	1.00	1.00	1.00	49591.50	381680.00	4.26
15	88133.40	-25221.70	2218.76	-45.79	27148.80	0.90	19.72	1.02	1.02	0.99	1.00	1.00	1.00	49596.00	382343.00	4.34

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 446

B=0.90 <m> L=13.82 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =1600.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =11.85 N_c =22.25 N_g =10.59 b_q =1.00 b_c =1.00 b_g =1.00

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	q _{lim} <daN/mq>	R _d <daN>	Sic.
1	28359.50	2661.05	-988.02	-195.53	13135.70	0.89	12.89	1.03	1.03	0.98	1.00	1.00	1.00	49876.90	247726.00	8.74
3	28207.60	1628.46	-532.61	-186.89	12287.30	0.89	12.95	1.03	1.03	0.98	1.00	1.00	1.00	49877.20	248939.00	8.83
5	28362.10	2718.52	-995.69	-196.27	13119.80	0.89	12.89	1.03	1.03	0.98	1.00	1.00	1.00	49876.30	247732.00	8.73
7	28212.50	1735.19	-546.85	-188.27	12257.60	0.89	12.95	1.03	1.03	0.98	1.00	1.00	1.00	49876.10	248950.00	8.82
9	28349.80	2928.72	981.93	-193.43	13188.10	0.89	12.89	1.03	1.03	0.98	1.00	1.00	1.00	49878.60	247698.00	8.74
11	28198.00	1896.13	526.52	-184.79	12339.60	0.89	12.94	1.03	1.03	0.98	1.00	1.00	1.00	49878.90	248911.00	8.83
13	28352.40	2986.19	989.60	-194.17	13172.10	0.89	12.89	1.03	1.03	0.98	1.00	1.00	1.00	49878.10	247704.00	8.74
15	28202.80	2002.86	540.76	-186.17	12310.00	0.89	12.94	1.03	1.03	0.98	1.00	1.00	1.00	49877.80	248922.00	8.83

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 455

B=0.90 <m> L=3.21 <m> D=1.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>

Relazione di calcolo

$\sigma_{v0,r}=1600.00$ <daN/mq>

Verifiche in condizioni drenate

$\phi'_r=26.00$ <grad> $c'_r=1000.00$ <daN/mq>

$N_q=11.85$ $N_c=22.25$ $N_g=10.59$ $b_q=1.00$ $b_c=1.00$ $b_g=1.00$

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	Q _{lim} <daN/mq>	R _d <daN>	Sic.
1	9726.33	-2183.93	-1274.95	-27.61	-296.92	0.89	3.15	1.12	1.14	0.91	1.00	1.00	1.00	53535.50	65587.50	6.74
3	9531.82	-1408.02	-703.16	-24.56	-214.14	0.89	3.17	1.12	1.14	0.92	1.00	1.00	1.00	53518.20	65940.40	6.92
5	9717.36	-2231.41	-1265.03	-27.56	-293.31	0.89	3.15	1.12	1.14	0.91	1.00	1.00	1.00	53534.50	65600.80	6.75
7	9515.16	-1496.18	-684.74	-24.48	-207.43	0.89	3.17	1.12	1.14	0.92	1.00	1.00	1.00	53516.30	65966.30	6.93
9	9744.74	-1969.55	1328.50	-27.05	-303.29	0.89	3.15	1.12	1.14	0.91	1.00	1.00	1.00	53539.00	65576.10	6.73
11	9550.23	-1193.63	756.71	-24.00	-220.51	0.89	3.17	1.12	1.14	0.92	1.00	1.00	1.00	53521.70	65928.10	6.90
13	9735.77	-2017.02	1318.57	-27.00	-299.67	0.89	3.15	1.12	1.14	0.91	1.00	1.00	1.00	53538.00	65589.40	6.74
15	9533.57	-1281.79	738.29	-23.92	-213.79	0.89	3.17	1.12	1.14	0.92	1.00	1.00	1.00	53519.90	65954.00	6.92

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 457

$B=0.90$ <m> $L=9.94$ <m> $D=1.00$ <m> $\beta=0.00$ <grad> $\eta=0.00$ <grad> $\gamma_r=1600.00$ <daN/mc>

$\sigma_{v0,r}=1600.00$ <daN/mq>

Verifiche in condizioni drenate

$\phi'_r=26.00$ <grad> $c'_r=1000.00$ <daN/mq>

$N_q=11.85$ $N_c=22.25$ $N_g=10.59$ $b_q=1.00$ $b_c=1.00$ $b_g=1.00$

CC	N <daN>	Tx <daN>	Ty <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	s _q	s _c	s _g	i _q	i _c	i _g	Q _{lim} <daN/mq>	R _d <daN>	Sic.
1	27489.30	-7313.82	17153.80	-323.26	8951.53	0.88	9.29	1.04	1.05	0.97	1.00	1.00	1.00	50225.20	177754.00	6.47
3	26969.30	-3509.82	9189.58	-244.20	8056.80	0.88	9.34	1.04	1.05	0.97	1.00	1.00	1.00	50270.30	180049.00	6.68
5	27438.20	-8062.29	19092.60	-336.30	9170.42	0.88	9.27	1.04	1.05	0.97	1.00	1.00	1.00	50218.20	177200.00	6.46
7	26874.60	-4899.83	12790.10	-268.41	8463.31	0.88	9.31	1.04	1.05	0.97	1.00	1.00	1.00	50257.10	178999.00	6.66
9	27542.00	8553.69	-15649.30	-362.23	8523.40	0.87	9.32	1.04	1.04	0.97	1.00	1.00	1.00	50191.80	177688.00	6.45
11	27022.10	4749.69	-7685.00	-283.16	7628.67	0.88	9.37	1.04	1.04	0.97	1.00	1.00	1.00	50236.30	179977.00	6.66
13	27490.90	9302.16	-17588.00	-375.26	8742.29	0.87	9.30	1.04	1.04	0.97	1.00	1.00	1.00	50184.70	177135.00	6.44
15	26927.30	6139.70	-11285.50	-307.37	8035.19	0.88	9.34	1.04	1.04	0.97	1.00	1.00	1.00	50222.90	178930.00	6.64

Cedimenti

Metodo utilizzato: Terzaghi (1955)

Simbologia

B =Base della fondazione

CC =Numero della combinazione delle condizioni di carico elementari

Ced=Cedimento calcolato

L =Lunghezza della fondazione (L>B)

N =Sforzo normale

k₁ =Costante di sottofondo standardizzata

k_w =Costante di sottofondo

q_{es} =Pressione di esercizio

Platea n. 200

$B=2.06$ <m> $L=2.16$ <m> $k_1=3000000.00$ <daN/mc> $k_w=984353.00$ <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	15030.40	3377.92	0.34
1	13960.40	3137.46	0.32
2	13550.50	3045.33	0.31
3	14818.80	3330.36	0.34
3	13639.80	3065.39	0.31
4	13407.20	3013.13	0.31
5	15031.60	3378.19	0.34
5	13962.30	3137.87	0.32
6	13551.30	3045.51	0.31
7	14821.00	3330.86	0.34
7	13643.20	3066.16	0.31
8	13408.70	3013.47	0.31
9	14965.80	3363.39	0.34
9	13862.50	3115.45	0.32
10	13506.70	3035.50	0.31
11	14754.10	3315.83	0.34

Relazione di calcolo

11	13541.80	3043.38	0.31
12	13363.50	3003.29	0.31
13	14967.00	3363.67	0.34
13	13864.30	3115.86	0.32
14	13507.60	3035.68	0.31
15	14756.40	3316.34	0.34
15	13545.30	3044.15	0.31
16	13365.00	3003.64	0.31
17	18579.00	4175.44	0.42
18	18549.30	4168.75	0.42
19	19275.20	4331.90	0.44
20	13828.90	3107.89	0.32
21	13809.10	3103.44	0.32
22	14293.00	3212.20	0.33
23	13374.10	3005.69	0.31
24	13260.90	2980.26	0.30
25	13415.30	3014.95	0.31
26	13219.30	2970.91	0.30
27	18724.80	4208.20	0.43
28	18636.20	4188.30	0.43
29	18695.10	4201.51	0.43
30	19421.00	4364.66	0.44
31	13926.10	3129.73	0.32
32	13867.00	3116.47	0.32
33	13906.20	3125.28	0.32
34	14390.20	3234.04	0.33
35	13374.10	3005.69	0.31
36	13251.70	2978.19	0.30
37	13260.90	2980.26	0.30
38	13415.30	3014.95	0.31
39	13219.30	2970.91	0.30
40	13219.30	2970.91	0.30

Platea n. 410

B=18.64 <m> L=28.65 <m> k₁=3000000.00 <daN/mc> kw=774339.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	1356060.00	2539.93	0.33
1	1235240.00	2313.64	0.30
2	1231840.00	2307.27	0.30
3	1354110.00	2536.28	0.33
3	1232290.00	2308.10	0.30
4	1230520.00	2304.80	0.30
5	1356470.00	2540.69	0.33
5	1235860.00	2314.79	0.30
6	1232120.00	2307.78	0.30
7	1354870.00	2537.69	0.33
7	1233430.00	2310.24	0.30
8	1231030.00	2305.75	0.30
9	1355240.00	2538.39	0.33
9	1233990.00	2311.30	0.30
10	1231280.00	2306.22	0.30
11	1353290.00	2534.74	0.33
11	1231040.00	2305.77	0.30
12	1229970.00	2303.75	0.30
13	1355640.00	2539.15	0.33
13	1234610.00	2312.45	0.30
14	1231560.00	2306.74	0.30
15	1354040.00	2536.15	0.33
15	1232180.00	2307.90	0.30
16	1230470.00	2304.71	0.30
17	1712150.00	3206.89	0.41
18	1734050.00	3247.91	0.42
19	1814100.00	3397.84	0.44
20	1260290.00	2360.56	0.30
21	1274890.00	2387.91	0.31
22	1328260.00	2487.86	0.32
23	1227120.00	2298.42	0.30
24	1234300.00	2311.88	0.30
25	1251220.00	2343.57	0.30
26	1229100.00	2302.12	0.30
27	1733850.00	3247.54	0.42
28	1750690.00	3279.08	0.42
29	1755750.00	3288.56	0.42
30	1835800.00	3438.49	0.44
31	1274760.00	2387.66	0.31
32	1285990.00	2408.68	0.31
33	1289360.00	2415.00	0.31

Relazione di calcolo

34	1342730.00	2514.96	0.32
35	1227120.00	2298.42	0.30
36	1233920.00	2311.16	0.30
37	1234300.00	2311.88	0.30
38	1251220.00	2343.57	0.30
39	1229100.00	2302.12	0.30
40	1229100.00	2302.12	0.30

Travata 401

B=0.90 <m> L=34.21 <m> k_i=3000000.00 <daN/mc> k_w=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	149220.00	4846.52	0.36
1	136950.00	4448.01	0.33
2	135158.00	4389.81	0.33
3	148195.00	4813.25	0.36
3	135398.00	4397.60	0.33
4	134464.00	4367.29	0.33
5	149445.00	4853.86	0.36
5	137292.00	4459.13	0.33
6	135311.00	4394.78	0.33
7	148615.00	4826.88	0.36
7	136034.00	4418.25	0.33
8	134749.00	4376.51	0.33
9	148737.00	4830.85	0.36
9	136219.00	4424.27	0.33
10	134831.00	4379.21	0.33
11	147713.00	4797.58	0.36
11	134667.00	4373.86	0.33
12	134138.00	4356.68	0.33
13	148963.00	4838.19	0.36
13	136561.00	4435.39	0.33
14	134984.00	4384.18	0.33
15	148132.00	4811.21	0.36
15	135303.00	4394.51	0.33
16	134422.00	4365.91	0.33
17	192172.00	6241.58	0.47
18	195600.00	6352.92	0.48
19	201202.00	6534.86	0.49
20	139330.00	4525.31	0.34
21	141615.00	4599.54	0.34
22	145350.00	4720.83	0.35
23	134143.00	4356.86	0.33
24	134763.00	4376.99	0.33
25	135832.00	4411.72	0.33
26	133710.00	4342.80	0.33
27	191762.00	6228.27	0.47
28	190969.00	6202.52	0.47
29	195190.00	6339.60	0.48
30	200792.00	6521.54	0.49
31	139057.00	4516.43	0.34
32	138528.00	4499.27	0.34
33	141342.00	4590.66	0.34
34	145076.00	4711.95	0.35
35	134143.00	4356.86	0.33
36	133619.00	4339.84	0.33
37	134763.00	4376.99	0.33
38	135832.00	4411.72	0.33
39	133710.00	4342.80	0.33
40	133710.00	4342.80	0.33

Travata 409

B=0.70 <m> L=10.97 <m> k_i=3000000.00 <daN/mc> k_w=1530610.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	22592.80	2942.15	0.19
1	20799.60	2708.63	0.18
2	20439.10	2661.69	0.17
3	22397.70	2916.75	0.19
3	20504.00	2670.14	0.17
4	20307.00	2644.49	0.17
5	22590.80	2941.89	0.19
5	20796.60	2708.24	0.18
6	20437.80	2661.51	0.17
7	22394.00	2916.27	0.19
7	20498.40	2669.41	0.17
8	20304.50	2644.16	0.17
9	22583.60	2940.96	0.19

Relazione di calcolo

9	20785.70	2706.83	0.18
10	20432.90	2660.88	0.17
11	22388.50	2915.56	0.19
11	20490.10	2668.33	0.17
12	20300.80	2643.68	0.17
13	22581.70	2940.70	0.19
13	20782.70	2706.44	0.18
14	20431.60	2660.71	0.17
15	22384.90	2915.08	0.19
15	20484.50	2667.61	0.17
16	20298.30	2643.36	0.17
17	28667.30	3733.21	0.24
18	29146.20	3795.57	0.25
19	30346.90	3951.93	0.26
20	21050.90	2741.36	0.18
21	21370.20	2782.94	0.18
22	22170.70	2887.18	0.19
23	20216.50	2632.71	0.17
24	20297.60	2643.26	0.17
25	20539.40	2674.75	0.17
26	20147.90	2623.76	0.17
27	28953.90	3770.53	0.25
28	29062.50	3784.67	0.25
29	29432.70	3832.89	0.25
30	30633.40	3989.25	0.26
31	21242.00	2766.24	0.18
32	21314.40	2775.67	0.18
33	21561.20	2807.82	0.18
34	22361.70	2912.06	0.19
35	20216.50	2632.71	0.17
36	20211.60	2632.06	0.17
37	20297.60	2643.26	0.17
38	20539.40	2674.75	0.17
39	20147.90	2623.76	0.17
40	20147.90	2623.76	0.17

Travata 412

B=0.90 <m> L=23.24 <m> k_i=3000000.00 <daN/mc> k_w=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	66730.60	3190.41	0.24
1	61038.40	2918.26	0.22
2	60521.00	2893.53	0.22
3	66438.40	3176.44	0.24
3	60595.50	2897.09	0.22
4	60323.10	2884.06	0.22
5	66794.80	3193.48	0.24
5	61135.50	2922.91	0.22
6	60564.40	2895.60	0.22
7	66557.50	3182.13	0.24
7	60776.00	2905.72	0.22
8	60403.70	2887.92	0.22
9	66579.20	3183.17	0.24
9	60809.00	2907.29	0.22
10	60418.50	2888.63	0.22
11	66287.00	3169.20	0.24
11	60366.10	2886.12	0.22
12	60220.60	2879.16	0.22
13	66643.40	3186.24	0.24
13	60906.20	2911.94	0.22
14	60461.90	2890.70	0.22
15	66406.10	3174.89	0.24
15	60546.60	2894.75	0.22
16	60301.20	2883.02	0.22
17	82858.60	3961.49	0.30
18	84325.00	4031.60	0.30
19	87918.70	4203.42	0.32
20	61175.80	2924.83	0.22
21	62153.40	2971.57	0.22
22	64549.20	3086.11	0.23
23	59767.40	2857.49	0.21
24	60386.60	2887.10	0.22
25	61138.00	2923.02	0.22
26	60103.00	2873.54	0.22
27	84910.10	4059.58	0.30
28	86680.60	4144.23	0.31
29	86376.60	4129.69	0.31
30	89970.30	4301.51	0.32

Relazione di calcolo

31	62543.50	2990.22	0.22
32	63723.80	3046.65	0.23
33	63521.10	3036.96	0.23
34	65916.90	3151.51	0.24
35	59767.40	2857.49	0.21
36	60558.90	2895.34	0.22
37	60386.60	2887.10	0.22
38	61138.00	2923.02	0.22
39	60103.00	2873.54	0.22
40	60103.00	2873.54	0.22

Travata 412

B=0.90 <m> L=10.97 <m> k₁=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	27950.50	2831.01	0.21
1	25672.80	2600.30	0.20
2	25308.80	2563.44	0.19
3	27735.30	2809.21	0.21
3	25346.70	2567.28	0.19
4	25163.10	2548.68	0.19
5	27952.70	2831.22	0.21
5	25676.00	2600.63	0.20
6	25310.30	2563.58	0.19
7	27739.30	2809.61	0.21
7	25352.70	2567.88	0.19
8	25165.80	2548.95	0.19
9	28008.40	2836.87	0.21
9	25760.50	2609.19	0.20
10	25348.00	2567.41	0.19
11	27793.20	2815.07	0.21
11	25434.40	2576.16	0.19
12	25202.30	2552.65	0.19
13	28010.60	2837.09	0.21
13	25763.70	2609.51	0.20
14	25349.50	2567.55	0.19
15	27797.20	2815.48	0.21
15	25440.40	2576.77	0.19
16	25205.00	2552.92	0.19
17	34965.10	3541.48	0.27
18	35581.20	3603.89	0.27
19	37146.40	3762.42	0.28
20	25741.60	2607.27	0.20
21	26152.30	2648.88	0.20
22	27195.80	2754.57	0.21
23	24959.80	2528.09	0.19
24	25161.50	2548.51	0.19
25	25484.90	2581.27	0.19
26	25014.80	2533.66	0.19
27	35536.20	3599.33	0.27
28	35982.90	3644.58	0.27
29	36152.30	3661.73	0.27
30	37717.50	3820.27	0.29
31	26122.40	2645.84	0.20
32	26420.20	2676.00	0.20
33	26533.10	2687.44	0.20
34	27576.60	2793.13	0.21
35	24959.80	2528.09	0.19
36	25141.70	2546.51	0.19
37	25161.50	2548.51	0.19
38	25484.90	2581.27	0.19
39	25014.80	2533.66	0.19
40	25014.80	2533.66	0.19

Travata 415

B=0.90 <m> L=10.97 <m> k₁=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	29404.70	2978.30	0.22
1	28077.80	2843.89	0.21
2	26216.10	2655.34	0.20
3	28306.80	2867.09	0.22
3	26414.20	2675.40	0.20
4	25472.80	2580.04	0.19
5	29394.90	2977.30	0.22
5	28062.90	2842.38	0.21
6	26209.50	2654.66	0.20
7	28288.50	2865.24	0.21

Relazione di calcolo

7	26386.50	2672.60	0.20
8	25460.40	2578.79	0.19
9	29748.10	3013.07	0.23
9	28598.00	2896.59	0.22
10	26448.60	2678.88	0.20
11	28650.10	2901.87	0.22
11	26934.50	2728.09	0.20
12	25705.30	2603.59	0.20
13	29738.20	3012.08	0.23
13	28583.10	2895.08	0.22
14	26442.00	2678.21	0.20
15	28631.90	2900.02	0.22
15	26906.80	2725.29	0.20
16	25692.90	2602.34	0.20
17	33961.70	3439.85	0.26
18	34640.00	3508.56	0.26
19	35981.90	3644.47	0.27
20	25126.80	2545.00	0.19
21	25579.10	2590.81	0.19
22	26473.60	2681.42	0.20
23	24553.60	2486.94	0.19
24	24842.40	2516.19	0.19
25	25118.90	2544.20	0.19
26	24712.20	2503.01	0.19
27	34417.60	3486.03	0.26
28	34911.90	3536.10	0.27
29	35096.00	3554.74	0.27
30	36437.80	3690.65	0.28
31	25430.80	2575.79	0.19
32	25760.40	2609.17	0.20
33	25883.00	2621.60	0.20
34	26777.60	2712.20	0.20
35	24553.60	2486.94	0.19
36	24813.60	2513.27	0.19
37	24842.40	2516.19	0.19
38	25118.90	2544.20	0.19
39	24712.20	2503.01	0.19
40	24712.20	2503.01	0.19

Travata 421

B=0.90 <m> L=10.97 <m> k_i=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	34865.40	3531.39	0.26
1	33757.80	3419.20	0.26
2	30906.30	3130.39	0.23
3	33381.60	3381.10	0.25
3	31509.70	3191.50	0.24
4	29901.80	3028.64	0.23
5	34838.70	3528.68	0.26
5	33717.40	3415.11	0.26
6	30888.30	3128.56	0.23
7	33332.10	3376.09	0.25
7	31434.70	3183.90	0.24
8	29868.20	3025.24	0.23
9	34566.50	3501.12	0.26
9	33305.00	3373.34	0.25
10	30704.00	3109.90	0.23
11	33082.80	3350.83	0.25
11	31056.90	3145.64	0.24
12	29699.40	3008.15	0.23
13	34539.90	3498.42	0.26
13	33264.60	3369.25	0.25
14	30685.90	3108.07	0.23
15	33033.30	3345.82	0.25
15	30981.90	3138.04	0.24
16	29665.90	3004.75	0.23
17	41569.00	4210.38	0.32
18	41369.00	4190.12	0.31
19	42672.30	4322.12	0.32
20	30603.50	3099.72	0.23
21	30470.10	3086.21	0.23
22	31339.00	3174.21	0.24
23	29218.70	2959.46	0.22
24	28746.50	2911.63	0.22
25	29012.20	2938.54	0.22
26	28602.80	2897.07	0.22
27	43444.40	4400.32	0.33

Relazione di calcolo

28	43955.40	4452.08	0.33
29	43244.30	4380.06	0.33
30	44547.60	4512.06	0.34
31	31853.70	3226.34	0.24
32	32194.40	3260.85	0.24
33	31720.30	3212.84	0.24
34	32589.20	3300.84	0.25
35	29218.70	2959.46	0.22
36	29019.50	2939.28	0.22
37	28746.50	2911.63	0.22
38	29012.20	2938.54	0.22
39	28602.80	2897.07	0.22
40	28602.80	2897.07	0.22

Travata 422

B=0.90 <m> L=3.21 <m> k₁=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	14112.20	4884.80	0.37
1	15099.10	5226.42	0.39
2	11960.20	4139.91	0.31
3	11731.60	4060.78	0.30
3	11492.20	3977.91	0.30
4	10348.40	3582.01	0.27
5	14684.20	5082.81	0.38
5	15965.90	5526.45	0.41
6	12347.50	4273.98	0.32
7	12794.00	4428.52	0.33
7	13101.90	4535.09	0.34
8	11067.70	3830.99	0.29
9	15303.00	5296.99	0.40
9	16903.40	5850.96	0.44
10	12766.50	4418.99	0.33
11	12922.40	4472.97	0.34
11	13296.50	4602.44	0.35
12	11154.70	3861.08	0.29
13	15875.10	5495.00	0.41
13	17770.20	6150.98	0.46
14	13153.80	4553.06	0.34
15	13984.80	4840.71	0.36
15	14906.20	5159.62	0.39
16	11874.00	4110.06	0.31
17	13985.40	4840.92	0.36
18	13662.50	4729.14	0.35
19	13986.50	4841.30	0.36
20	10382.70	3593.88	0.27
21	10167.40	3519.36	0.26
22	10383.40	3594.13	0.27
23	9807.03	3394.61	0.25
24	9460.75	3274.75	0.25
25	9526.71	3297.58	0.25
26	9424.43	3262.18	0.24
27	14725.30	5097.04	0.38
28	14759.50	5108.86	0.38
29	14402.40	4985.26	0.37
30	14726.40	5097.42	0.38
31	10876.00	3764.62	0.28
32	10898.80	3772.51	0.28
33	10660.70	3690.11	0.28
34	10876.70	3764.88	0.28
35	9807.03	3394.61	0.25
36	9588.86	3319.09	0.25
37	9460.75	3274.75	0.25
38	9526.71	3297.58	0.25
39	9424.43	3262.18	0.24
40	9424.43	3262.18	0.24

Travata 423

B=0.90 <m> L=20.74 <m> k₁=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	73656.10	3946.01	0.30
1	69839.90	3741.56	0.28
2	65857.60	3528.21	0.26
3	71199.80	3814.41	0.29
3	66118.20	3542.17	0.27
4	64194.50	3439.11	0.26
5	73821.70	3954.87	0.30

Relazione di calcolo

5	70090.70	3754.99	0.28
6	65969.60	3534.21	0.27
7	71507.20	3830.88	0.29
7	66583.90	3567.12	0.27
8	64402.60	3450.26	0.26
9	74324.10	3981.79	0.30
9	70851.90	3795.77	0.28
10	66309.80	3552.44	0.27
11	71867.80	3850.20	0.29
11	67130.20	3596.39	0.27
12	64646.70	3463.34	0.26
13	74489.60	3990.66	0.30
13	71102.70	3809.21	0.29
14	66421.90	3558.44	0.27
15	72175.10	3866.66	0.29
15	67595.90	3621.34	0.27
16	64854.90	3474.49	0.26
17	89370.10	4787.85	0.36
18	88496.30	4741.04	0.36
19	92649.50	4963.54	0.37
20	66118.20	3542.17	0.27
21	65535.70	3510.97	0.26
22	68304.50	3659.30	0.27
23	63726.80	3414.06	0.26
24	62755.10	3362.00	0.25
25	63658.90	3410.42	0.26
26	62640.50	3355.86	0.25
27	91819.00	4919.05	0.37
28	92148.00	4936.67	0.37
29	90945.20	4872.24	0.37
30	95098.40	5094.74	0.38
31	67750.80	3629.64	0.27
32	67970.10	3641.39	0.27
33	67168.30	3598.43	0.27
34	69937.10	3746.76	0.28
35	63726.80	3414.06	0.26
36	63184.70	3385.01	0.25
37	62755.10	3362.00	0.25
38	63658.90	3410.42	0.26
39	62640.50	3355.86	0.25
40	62640.50	3355.86	0.25

Travata 425
 B=0.90 <m> L=9.91 <m> k₁=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	23533.40	2638.57	0.20
1	22347.40	2505.59	0.19
2	21029.00	2357.77	0.18
3	22565.70	2530.07	0.19
3	20881.20	2341.21	0.18
4	20373.80	2284.31	0.17
5	23731.20	2660.75	0.20
5	22647.10	2539.20	0.19
6	21162.90	2372.79	0.18
7	22933.20	2571.27	0.19
7	21438.00	2403.63	0.18
8	20622.60	2312.21	0.17
9	24015.00	2692.57	0.20
9	23077.10	2587.41	0.19
10	21355.10	2394.33	0.18
11	23047.40	2584.07	0.19
11	21611.00	2423.03	0.18
12	20699.90	2320.88	0.17
13	24212.90	2714.75	0.20
13	23376.90	2621.02	0.20
14	21489.00	2409.35	0.18
15	23414.80	2625.27	0.20
15	22167.70	2485.45	0.19
16	20948.70	2348.77	0.18
17	27205.50	3050.28	0.23
18	27509.10	3084.32	0.23
19	28600.80	3206.73	0.24
20	20240.40	2269.36	0.17
21	20442.80	2292.05	0.17
22	21170.70	2373.66	0.18
23	19886.90	2229.73	0.17
24	20020.20	2244.67	0.17

Relazione di calcolo

25	20253.40	2270.82	0.17
26	19963.90	2238.35	0.17
27	27396.50	3071.70	0.23
28	27616.20	3096.33	0.23
29	27700.10	3105.74	0.23
30	28791.90	3228.15	0.24
31	20367.80	2283.64	0.17
32	20514.30	2300.06	0.17
33	20570.20	2306.33	0.17
34	21298.00	2387.94	0.18
35	19886.90	2229.73	0.17
36	20006.30	2243.11	0.17
37	20020.20	2244.67	0.17
38	20253.40	2270.82	0.17
39	19963.90	2238.35	0.17
40	19963.90	2238.35	0.17

Travata 427

B=0.90 <m> L=10.83 <m> k_i=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	23968.60	2459.08	0.18
1	22227.20	2280.41	0.17
2	21622.10	2218.34	0.17
3	23619.60	2423.27	0.18
3	21698.30	2226.15	0.17
4	21385.80	2194.09	0.16
5	24049.00	2467.33	0.19
5	22349.00	2292.91	0.17
6	21676.60	2223.93	0.17
7	23768.90	2438.59	0.18
7	21924.60	2249.37	0.17
8	21486.90	2204.47	0.17
9	23807.50	2442.55	0.18
9	21983.10	2255.37	0.17
10	21513.10	2207.15	0.17
11	23458.50	2406.74	0.18
11	21454.20	2201.11	0.17
12	21276.80	2182.90	0.16
13	23887.90	2450.80	0.18
13	22104.90	2267.87	0.17
14	21567.50	2212.73	0.17
15	23607.80	2422.06	0.18
15	21680.50	2224.33	0.17
16	21377.90	2193.28	0.16
17	29212.30	2997.06	0.22
18	29388.30	3015.12	0.23
19	31222.50	3203.30	0.24
20	21485.60	2204.33	0.17
21	21602.90	2216.37	0.17
22	22825.70	2341.82	0.18
23	21064.30	2161.11	0.16
24	21158.20	2170.74	0.16
25	21561.70	2212.13	0.17
26	21133.40	2168.19	0.16
27	29272.30	3003.21	0.23
28	29395.10	3015.81	0.23
29	29448.30	3021.26	0.23
30	31282.50	3209.45	0.24
31	21525.60	2208.43	0.17
32	21607.40	2216.83	0.17
33	21642.90	2220.47	0.17
34	22865.70	2345.92	0.18
35	21064.30	2161.11	0.16
36	21146.70	2169.56	0.16
37	21158.20	2170.74	0.16
38	21561.70	2212.13	0.17
39	21133.40	2168.19	0.16
40	21133.40	2168.19	0.16

Travata 430

B=0.90 <m> L=10.83 <m> k_i=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	27334.30	2804.38	0.21
1	25121.10	2577.32	0.19
2	24745.40	2538.77	0.19
3	27119.00	2782.29	0.21

Relazione di calcolo

3	24794.80	2543.84	0.19
4	24599.60	2523.81	0.19
5	27378.90	2808.96	0.21
5	25188.70	2584.25	0.19
6	24775.50	2541.86	0.19
7	27201.80	2790.79	0.21
7	24920.30	2556.71	0.19
8	24655.60	2529.56	0.19
9	27243.40	2795.06	0.21
9	24983.40	2563.18	0.19
10	24683.80	2532.45	0.19
11	27028.10	2772.96	0.21
11	24657.10	2529.71	0.19
12	24538.00	2517.49	0.19
13	27288.00	2799.63	0.21
13	25050.90	2570.12	0.19
14	24714.00	2535.55	0.19
15	27110.90	2781.46	0.21
15	24782.50	2542.58	0.19
16	24594.10	2523.25	0.19
17	33939.90	3482.09	0.26
18	34332.80	3522.39	0.26
19	36219.00	3715.92	0.28
20	24920.20	2556.71	0.19
21	25182.10	2583.57	0.19
22	26439.60	2712.59	0.20
23	24347.30	2497.92	0.19
24	24516.30	2515.27	0.19
25	24923.10	2557.00	0.19
26	24441.80	2507.62	0.19
27	34103.60	3498.88	0.26
28	34326.10	3521.71	0.26
29	34496.40	3539.18	0.27
30	36382.70	3732.70	0.28
31	25029.30	2567.90	0.19
32	25177.70	2583.12	0.19
33	25291.20	2594.77	0.19
34	26548.70	2723.78	0.20
35	24347.30	2497.92	0.19
36	24478.20	2511.35	0.19
37	24516.30	2515.27	0.19
38	24923.10	2557.00	0.19
39	24441.80	2507.62	0.19
40	24441.80	2507.62	0.19

Travata 432
B=0.90 <m> L=10.83 <m> k₁=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	27786.40	2850.76	0.21
1	25320.80	2597.80	0.19
2	25237.20	2589.22	0.19
3	27732.70	2845.26	0.21
3	25239.60	2589.47	0.19
4	25200.90	2585.50	0.19
5	27792.10	2851.35	0.21
5	25329.50	2598.70	0.19
6	25241.00	2589.62	0.19
7	27743.40	2846.35	0.21
7	25255.70	2591.13	0.19
8	25208.10	2586.24	0.19
9	27802.70	2852.44	0.21
9	25345.60	2600.35	0.20
10	25248.30	2590.36	0.19
11	27749.10	2846.94	0.21
11	25264.40	2592.02	0.19
12	25212.00	2586.64	0.19
13	27808.50	2853.03	0.21
13	25354.30	2601.24	0.20
14	25252.10	2590.76	0.19
15	27759.80	2848.03	0.21
15	25280.50	2593.67	0.19
16	25219.20	2587.38	0.19
17	35537.70	3646.01	0.27
18	36304.10	3724.64	0.28
19	37809.40	3879.08	0.29
20	25983.50	2665.80	0.20
21	26494.50	2718.22	0.20

Relazione di calcolo

22	27498.00	2821.18	0.21
23	25103.80	2575.54	0.19
24	25352.90	2601.10	0.20
25	25656.90	2632.28	0.20
26	25169.60	2582.29	0.19
27	36424.80	3737.03	0.28
28	37095.20	3805.80	0.29
29	37191.20	3815.65	0.29
30	38696.50	3970.09	0.30
31	26575.00	2726.48	0.20
32	27021.90	2772.33	0.21
33	27085.90	2778.89	0.21
34	28089.40	2881.85	0.22
35	25103.80	2575.54	0.19
36	25366.70	2602.52	0.20
37	25352.90	2601.10	0.20
38	25656.90	2632.28	0.20
39	25169.60	2582.29	0.19
40	25169.60	2582.29	0.19

Travata 434

B=0.90 <m> L=13.17 <m> k_i=3000000.00 <daN/mc> k_w=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	36288.70	3061.56	0.23
1	33628.20	2837.11	0.21
2	32745.30	2762.62	0.21
3	35785.40	3019.10	0.23
3	32865.50	2772.76	0.21
4	32404.50	2733.86	0.21
5	36280.50	3060.87	0.23
5	33615.80	2836.06	0.21
6	32739.80	2762.15	0.21
7	35770.20	3017.81	0.23
7	32842.50	2770.82	0.21
8	32394.20	2733.00	0.20
9	36386.40	3069.80	0.23
9	33776.20	2849.59	0.21
10	32811.40	2768.19	0.21
11	35883.00	3027.33	0.23
11	33013.50	2785.24	0.21
12	32470.60	2739.44	0.21
13	36378.20	3069.11	0.23
13	33763.80	2848.54	0.21
14	32805.90	2767.73	0.21
15	35867.80	3026.05	0.23
15	32990.50	2783.30	0.21
16	32460.30	2738.57	0.21
17	44970.30	3794.00	0.28
18	45907.60	3873.08	0.29
19	47758.80	4029.26	0.30
20	33001.60	2784.24	0.21
21	33626.50	2836.96	0.21
22	34860.60	2941.08	0.22
23	31942.40	2694.88	0.20
24	32253.30	2721.11	0.20
25	32627.80	2752.70	0.21
26	32032.00	2702.44	0.20
27	46008.70	3881.61	0.29
28	46808.60	3949.09	0.30
29	46946.00	3960.69	0.30
30	48797.20	4116.86	0.31
31	33693.90	2842.65	0.21
32	34227.10	2887.63	0.22
33	34318.80	2895.36	0.22
34	35552.90	2999.48	0.22
35	31942.40	2694.88	0.20
36	32262.80	2721.91	0.20
37	32253.30	2721.11	0.20
38	32627.80	2752.70	0.21
39	32032.00	2702.44	0.20
40	32032.00	2702.44	0.20

Travata 434

B=0.90 <m> L=7.17 <m> k_i=3000000.00 <daN/mc> k_w=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	24170.50	3745.62	0.28

Relazione di calcolo

1	23036.60	3569.90	0.27
2	21566.10	3342.02	0.25
3	23475.70	3637.95	0.27
3	21983.90	3406.76	0.26
4	21095.70	3269.12	0.25
5	24069.80	3730.02	0.28
5	22884.00	3546.26	0.27
6	21497.90	3331.46	0.25
7	23288.80	3608.98	0.27
7	21700.60	3362.87	0.25
8	20969.10	3249.51	0.24
9	23959.70	3712.96	0.28
9	22717.20	3520.41	0.26
10	21423.40	3319.91	0.25
11	23264.90	3605.29	0.27
11	21664.50	3357.27	0.25
12	20952.90	3247.01	0.24
13	23859.10	3697.36	0.28
13	22564.70	3496.77	0.26
14	21355.20	3309.34	0.25
15	23078.00	3576.32	0.27
15	21381.20	3313.38	0.25
16	20826.40	3227.39	0.24
17	28212.80	4372.05	0.33
18	28824.20	4466.79	0.34
19	29495.40	4570.81	0.34
20	20910.00	3240.36	0.24
21	21317.60	3303.52	0.25
22	21765.10	3372.86	0.25
23	20325.70	3149.81	0.24
24	20524.40	3180.60	0.24
25	20649.20	3199.93	0.24
26	20378.10	3157.93	0.24
27	29820.40	4621.17	0.35
28	30955.00	4797.00	0.36
29	30431.80	4715.91	0.35
30	31103.00	4819.93	0.36
31	21981.70	3406.44	0.26
32	22738.20	3523.66	0.26
33	22389.30	3469.60	0.26
34	22836.80	3538.94	0.27
35	20325.70	3149.81	0.24
36	20735.40	3213.29	0.24
37	20524.40	3180.60	0.24
38	20649.20	3199.93	0.24
39	20378.10	3157.93	0.24
40	20378.10	3157.93	0.24

Travata 443

B=0.90 <m> L=20.34 <m> k₁=3000000.00 <daN/mc> k_w=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	89913.40	4911.69	0.37
1	83837.50	4579.78	0.34
2	80936.20	4421.29	0.33
3	88369.10	4827.33	0.36
3	81497.70	4451.97	0.33
4	79890.60	4364.18	0.33
5	89917.30	4911.90	0.37
5	83843.40	4580.11	0.34
6	80938.80	4421.44	0.33
7	88376.40	4827.73	0.36
7	81508.70	4452.57	0.33
8	79895.50	4364.44	0.33
9	89670.40	4898.41	0.37
9	83469.30	4559.67	0.34
10	80771.60	4412.30	0.33
11	88126.10	4814.06	0.36
11	81129.50	4431.85	0.33
12	79726.10	4355.19	0.33
13	89674.30	4898.63	0.37
13	83475.20	4559.99	0.34
14	80774.30	4412.45	0.33
15	88133.40	4814.45	0.36
15	81140.50	4432.45	0.33
16	79731.00	4355.46	0.33
17	116113.00	6342.88	0.48
18	117680.00	6428.48	0.48

Relazione di calcolo

19	119503.00	6528.06	0.49
20	84113.70	4594.87	0.34
21	85158.40	4651.94	0.35
22	86373.60	4718.32	0.35
23	79806.50	4359.58	0.33
24	79398.70	4337.31	0.33
25	79669.40	4352.09	0.33
26	78592.30	4293.25	0.32
27	117038.00	6393.45	0.48
28	116198.00	6347.56	0.48
29	118605.00	6479.05	0.49
30	120428.00	6578.62	0.49
31	84730.80	4628.58	0.35
32	84170.80	4597.99	0.34
33	85775.40	4685.65	0.35
34	86990.60	4752.03	0.36
35	79806.50	4359.58	0.33
36	78798.00	4304.49	0.32
37	79398.70	4337.31	0.33
38	79669.40	4352.09	0.33
39	78592.30	4293.25	0.32
40	78592.30	4293.25	0.32

Travata 446
 B=0.90 <m> L=13.82 <m> k_i=3000000.00 <daN/mc> k_w=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	28359.50	2280.62	0.17
1	25981.40	2089.38	0.16
2	25704.80	2067.13	0.16
3	28207.60	2268.40	0.17
3	25751.30	2070.87	0.16
4	25601.90	2058.86	0.15
5	28362.10	2280.83	0.17
5	25985.40	2089.70	0.16
6	25706.50	2067.27	0.16
7	28212.50	2268.79	0.17
7	25758.70	2071.47	0.16
8	25605.20	2059.12	0.15
9	28349.80	2279.84	0.17
9	25966.80	2088.20	0.16
10	25698.20	2066.60	0.15
11	28198.00	2267.63	0.17
11	25736.70	2069.70	0.16
12	25595.40	2058.33	0.15
13	28352.40	2280.05	0.17
13	25970.80	2088.52	0.16
14	25700.00	2066.74	0.16
15	28202.80	2268.02	0.17
15	25744.10	2070.29	0.16
16	25598.70	2058.60	0.15
17	35817.50	2880.37	0.22
18	36185.60	2909.97	0.22
19	37539.70	3018.87	0.23
20	26312.10	2115.97	0.16
21	26557.50	2135.70	0.16
22	27460.30	2208.30	0.17
23	25547.40	2054.47	0.15
24	25600.60	2058.75	0.15
25	25881.60	2081.35	0.16
26	25481.20	2049.15	0.15
27	35839.80	2882.16	0.22
28	35775.20	2876.97	0.22
29	36207.80	2911.76	0.22
30	37561.90	3020.66	0.23
31	26327.00	2117.16	0.16
32	26283.90	2113.70	0.16
33	26572.40	2136.90	0.16
34	27475.10	2209.49	0.17
35	25547.40	2054.47	0.15
36	25486.20	2049.55	0.15
37	25600.60	2058.75	0.15
38	25881.60	2081.35	0.16
39	25481.20	2049.15	0.15
40	25481.20	2049.15	0.15

Travata 455
 B=0.90 <m> L=3.21 <m> k_i=3000000.00 <daN/mc> k_w=1333330.00 <daN/mc>

Relazione di calcolo

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	9726.33	3364.80	0.25
1	9099.73	3148.03	0.24
2	8743.49	3024.79	0.23
3	9531.82	3297.51	0.25
3	8805.01	3046.07	0.23
4	8611.80	2979.23	0.22
5	9717.36	3361.70	0.25
5	9086.14	3143.33	0.24
6	8737.42	3022.69	0.23
7	9515.16	3291.75	0.25
7	8779.77	3037.34	0.23
8	8600.52	2975.33	0.22
9	9744.74	3371.17	0.25
9	9127.63	3157.68	0.24
10	8755.96	3029.10	0.23
11	9550.23	3303.88	0.25
11	8832.91	3055.72	0.23
12	8624.26	2983.54	0.22
13	9735.77	3368.07	0.25
13	9114.03	3152.98	0.24
14	8749.88	3027.00	0.23
15	9533.57	3298.12	0.25
15	8807.66	3046.99	0.23
16	8612.98	2979.64	0.22
17	11582.40	4006.91	0.30
18	11896.90	4115.70	0.31
19	12238.00	4233.70	0.32
20	8577.78	2967.46	0.22
21	8787.43	3039.99	0.23
22	9014.83	3118.66	0.23
23	8379.65	2898.92	0.22
24	8515.23	2945.82	0.22
25	8581.11	2968.61	0.22
26	8455.71	2925.23	0.22
27	11978.70	4143.99	0.31
28	12334.10	4266.95	0.32
29	12293.10	4252.78	0.32
30	12634.20	4370.78	0.33
31	8841.95	3058.85	0.23
32	9078.91	3140.83	0.24
33	9051.59	3131.38	0.23
34	9279.00	3210.05	0.24
35	8379.65	2898.92	0.22
36	8543.76	2955.69	0.22
37	8515.23	2945.82	0.22
38	8581.11	2968.61	0.22
39	8455.71	2925.23	0.22
40	8455.71	2925.23	0.22

Travata 457
 B=0.90 <m> L=9.94 <m> k₁=3000000.00 <daN/mc> k_w=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	27489.30	3073.27	0.23
1	25701.20	2873.37	0.22
2	24718.00	2763.46	0.21
3	26969.30	3015.15	0.23
3	24913.40	2785.30	0.21
4	24366.00	2724.10	0.20
5	27438.20	3067.57	0.23
5	25623.80	2864.72	0.21
6	24683.50	2759.59	0.21
7	26874.60	3004.55	0.23
7	24769.80	2769.24	0.21
8	24301.90	2716.93	0.20
9	27542.00	3079.17	0.23
9	25781.10	2882.30	0.22
10	24753.70	2767.45	0.21
11	27022.10	3021.04	0.23
11	24993.30	2794.23	0.21
12	24401.70	2728.09	0.20
13	27490.90	3073.46	0.23
13	25703.70	2873.65	0.22
14	24719.20	2763.58	0.21
15	26927.30	3010.45	0.23
15	24849.70	2778.17	0.21
16	24337.60	2720.92	0.20

Relazione di calcolo

17	32311.30	3612.37	0.27
18	32707.10	3656.63	0.27
19	34309.80	3835.81	0.29
20	23997.60	2682.91	0.20
21	24261.50	2712.42	0.20
22	25330.00	2831.87	0.21
23	23717.00	2651.54	0.20
24	23963.20	2679.07	0.20
25	24312.80	2718.15	0.20
26	23923.80	2674.66	0.20
27	32432.20	3625.89	0.27
28	32761.00	3662.65	0.27
29	32828.10	3670.15	0.28
30	34430.80	3849.33	0.29
31	24078.30	2691.93	0.20
32	24297.50	2716.43	0.20
33	24342.20	2721.43	0.20
34	25410.60	2840.89	0.21
35	23717.00	2651.54	0.20
36	23950.70	2677.67	0.20
37	23963.20	2679.07	0.20
38	24312.80	2718.15	0.20
39	23923.80	2674.66	0.20
40	23923.80	2674.66	0.20

ELEVAZIONI PALESTRA
Sommario

Verifiche e armature pilastri.....2

 Pilastrata n. 13

 Pilastrata n. 24

 Pilastrata n. 35

 Pilastrata n. 46

 Pilastrata n. 67

 Pilastrata n. 78

 Pilastrata n. 89

 Pilastrata n. 1010

 Pilastrata n. 1211

 Pilastrata n. 1312

 Pilastrata n. 1413

 Pilastrata n. 1513

Verifiche aste in acciaio.....14

Verifiche e armature pilastri

Simbologia

Δ_{sm}	=Distanza media tra le fessure
E_{syrd}	=Deformazione di snervamento dell'acciaio
Φ_{eq}	=Diametro equivalente delle barre
α	=Angolo asse neutro a rottura
α_e	=Coefficiente di efficacia del confinamento
ϵ_r	=Deformazione nell'acciaio (*1000)
ϵ_{sm}	=Deformazione unitaria media dell'armatura (*1000)
λ	=Snellezza massima
λ^*	=Snellezza limite
$\mu\Phi_c$	=Capacità della duttilità di curvatura
$\mu\Phi_d$	=Domanda della duttilità di curvatura
σ_c	=Tensione nel calcestruzzo
σ_f	=Tensione nel ferro
σ_s	=Tensione nell'acciaio nella sezione fessurata
ω_{nd}	=Rapporto meccanico dell'armatura trasversale di confinamento all'interno della zona dissipativa
$A_{c\ eff}$	=Area di calcestruzzo efficace
A_s	=Area complessiva dei ferri nell'area di calcestruzzo efficace
A_{fC}	=Area di ferro compressa
A_{fT}	=Area di ferro tesa
A_{s1}	=Area di ferro superiore delle travi incidenti sulla faccia
A_{s2}	=Area di ferro inferiore delle travi incidenti sulla faccia
A_{sh}	=Area totale della sezione della staffa
B	=Base
B_j	=Larghezza effettiva utile del nodo
Br_y	=Numero bracci in dir. Y locale
Br_z	=Numero bracci in dir. Z locale
$Br.$	=Numero bracci
CC	=Combinazione delle condizioni di carico elementari e = eccentricità aggiuntiva in caso di compressione o pressoflessione α = amplificazione per gerarchia delle resistenze TG = taglio da gerarchia delle resistenze
Cf	=Copriferro
Cls	=Tipo di calcestruzzo
Conf.	=Nodo confinato S = Si N = No
El	=Elemento (asta) in cui viene effettuato il progetto/verifica (progressivo sul numero di aste)
F	=Identificativo faccia del nodo Y+ = Faccia sul lato positivo Y locale pilastro Z+ = Faccia sul lato positivo Z locale pilastro Y- = Faccia sul lato negativo Y locale pilastro Z- = Faccia sul lato negativo Z locale pilastro
Fcd	=Resistenza di calcolo a compressione del calcestruzzo
Fcd (Inc)	=Resistenza di calcolo a compressione del calcestruzzo per verifica al fuoco
Fck	=Resistenza caratteristica cilindrica a compressione del calcestruzzo
Fctd	=Resistenza di calcolo a trazione del calcestruzzo
Fctk	=Resistenza caratteristica a trazione del calcestruzzo
Fyd	=Resistenza di calcolo dell'acciaio
Fyk	=Tensione caratteristica di snervamento dell'acciaio
H	=Altezza
Hjc	=Distanza tra armature pilastro
Hjw	=Distanza tra armature trave
K ₂	=Coefficiente per distribuzione deformazioni
M'ydy,s	=Momento resistente massimo in campo sostanzialmente elastico (ridotto per stabilità) intorno all'asse Y
M'ydz,s	=Momento resistente massimo in campo sostanzialmente elastico (ridotto per stabilità) intorno all'asse Z
MRdy	=Momento resistente allo stato limite ultimo intorno all'asse Y
MRdy,s	=Momento resistente allo stato limite ultimo (ridotto per stabilità) intorno all'asse Y
MRdz	=Momento resistente allo stato limite ultimo intorno all'asse Z
MRdz,s	=Momento resistente allo stato limite ultimo (ridotto per stabilità) intorno all'asse Z
Mod.	=Modalità di verifica faccia I = Interna E = Esterna
My	=Momento flettente intorno all'asse Y
My ver.	=Momento flettente di verifica intorno all'asse Y
Mz	=Momento flettente intorno all'asse Z
Mz ver.	=Momento flettente di verifica intorno all'asse Z
N	=Sforzo normale
Nodo	=Numero del nodo
Nu	=Sforzo normale ultimo
Sez.	=Numero della sezione
Sic.	=Sicurezza
Staff.	=Staffatura adottata
TCC	=Tipo di combinazione di carico SLU = Stato limite ultimo SLE R = Stato limite d'esercizio, combinazione rara SLE F = Stato limite d'esercizio, combinazione frequente SLE Q = Stato limite d'esercizio, combinazione quasi permanente SLD = Stato limite di danno SLV = Stato limite di salvaguardia della vita SLU I = Stato limite di resistenza al fuoco SND = Stato limite di salvaguardia della vita (non dissipativo)
Tipo	=Tipologia L = Sezione a L Ldx = L destra R = Rettangolare Rc = Rettangolare cava
Tp	=Tipo di acciaio
VRcd,y	=Taglio ultimo lato calcestruzzo in dir. Y
VRcd,z	=Taglio ultimo lato calcestruzzo in dir. Z
VRsd,y	=Taglio ultimo lato armatura in dir. Y
VRsd,z	=Taglio ultimo lato armatura in dir. Z
Vsdu,y	=Taglio agente in dir. Y
Vsdu,z	=Taglio agente in dir. Z
Wk	=Ampiezza caratteristica delle fessure
X	=Coordinata progressiva rispetto al nodo iniziale
X0	=Coordinata progressiva (dal nodo iniziale) dell'inizio del tratto
X1	=Coordinata progressiva (dal nodo iniziale) della fine del tratto
Xg	=Coordinata progressiva (dal primo nodo) in cui viene effettuato il progetto/verifica
b _c /b ₀	=Rapporto tra la larghezza minima della sezione trasversale lorda e la larghezza del nucleo confinato

Relazione di calcolo

bw_y	=Larghezza membratura resistente al taglio in dir. Y
bw_z	=Larghezza membratura resistente al taglio in dir. Z
c	=Ricoprimento dell'armatura
$ctg\theta_y$	=Cotangente dell'angolo di inclinazione dei puntoni di calcestruzzo in dir. Y
$ctg\theta_z$	=Cotangente dell'angolo di inclinazione dei puntoni di calcestruzzo in dir. Z
l_0	=Lunghezza libera di inflessione
s	=Distanza massima tra le barre
v_d	=Forza assiale adimensionalizzata di progetto

Pilastrata n. 1

Nodi: 1 22 21 5

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
8R		50.00	60.00	5.30	C45/55	456.50	27.47	258.68	456.50	18.31	B450C	4500.00	3913.04
8R		50.00	60.00	3.50	C45/55	456.50	27.47	258.68	456.50	18.31	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.009	SLV	1	8		0.00	-48649.30	50523.30	50523.30	12238.70	12238.70	-48649.30	57720.50	14720.80	16.88	6.99	1.146
8.189	SLV	1	8	818.00	-42514.30	-46749.90	-46749.90	7605.59	7605.59	-42514.30	-58733.30	9726.93	168.75	7.97	1.257	
8.189	SLV	2	8	0.00	-42904.30	-46655.80	-46655.80	7299.91	7299.91	-42904.30	-58804.00	9717.64	168.75	7.96	1.262	
8.809	SLV	2	8	62.00	-42439.30	-53192.70	-53192.70	8395.32	8395.32	-42439.30	-58719.70	9728.63	168.75	7.97	1.105	
8.809	SLV	3	8	0.00	-42455.20	-53386.90	-53386.90	8618.20	8618.20	-42455.20	-58722.50	9728.25	168.75	7.97	1.101	
8.909	SLV	3	8	10.00	-42380.20	-54707.80	-54707.80	8838.00	8838.00	-42380.20	-58708.90	9730.02	168.75	7.98	1.074	

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cm²>	σ_f <daN/cm²>
0.0032	SLE R	1	8		0.00	-61956.60	8345.77	12310.60	22.62	31.67	85.76	1054.02
0.0026	SLE Q	1	8		0.00	-58244.00	-1754.58	5957.52	4.52	49.76	35.57	473.75
8.1820	SLE R	1	8	818.00	-53391.30	3850.10	-12016.60	22.62	31.67	65.57	814.75	
8.1826	SLE Q	1	8	818.00	-52109.00	3210.49	-11089.10	22.62	31.67	59.05	739.30	
8.1820	SLE R	2	8	0.00	-52673.60	3529.36	-11985.50	22.62	31.67	64.12	797.23	
8.1826	SLE Q	2	8	0.00	-51729.80	3039.60	-11070.30	22.62	31.67	58.28	729.97	
8.8021	SLE R	2	8	62.00	-54290.20	3187.57	-13874.30	27.14	27.14	70.60	871.43	
8.8026	SLE Q	2	8	62.00	-51264.80	3799.39	-13576.80	27.14	27.14	72.02	883.32	
8.8021	SLE R	3	8	0.00	-54801.90	3285.53	-13944.00	27.14	27.14	71.29	880.08	
8.8026	SLE Q	3	8	0.00	-51544.90	3921.67	-13655.20	27.14	27.14	72.86	893.30	
8.9021	SLE R	3	8	10.00	-54726.90	3050.40	-14016.50	27.14	27.14	70.61	872.02	
8.9026	SLE Q	3	8	10.00	-51469.90	4032.86	-14047.30	27.14	27.14	75.00	916.99	

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cm²>	ϵ_{sm}	Wk <mm>
8.1826	SLE Q	1	8	818.00	-52109.00	-11089.10	3210.49	44.00	194.00	0.50	24.00	166.39	4.52	147.77		462.88	0.13	0.04
8.1823	SLE F	1	8	818.00	-51868.80	-11350.50	3537.06	44.00	194.00	0.50	24.00	167.95	4.52	150.71		507.85	0.15	0.04
8.1826	SLE Q	2	8	0.00	-51729.80	-11070.30	3039.60	44.00	194.00	0.50	24.00	168.41	4.52	151.57		456.39	0.13	0.04
8.1823	SLE F	2	8	0.00	-51323.50	-11325.80	3292.34	44.00	194.00	0.50	24.00	170.63	4.52	155.75		498.64	0.15	0.04
8.8026	SLE Q	2	8	62.00	-51264.80	-13576.80	3799.39	44.00	194.00	0.50	24.00	193.30	4.52	198.48		737.64	0.21	0.07
8.8024	SLE F	2	8	62.00	-51967.40	-13777.50	3793.24	44.00	194.00	0.50	24.00	194.16	4.52	200.12		745.63	0.22	0.07
8.8026	SLE Q	3	8	0.00	-51544.90	-13655.20	3921.67	44.00	194.00	0.50	24.00	192.18	4.52	196.37		748.24	0.22	0.07
8.8024	SLE F	3	8	0.00	-52251.80	-13857.10	3915.75	44.00	194.00	0.50	24.00	193.01	4.52	197.94		756.27	0.22	0.07
8.9026	SLE Q	3	8	10.00	-51469.90	-14047.30	4032.86	44.00	194.00	0.50	24.00	195.48	4.52	202.59		793.97	0.23	0.08
8.9024	SLE F	3	8	10.00	-52176.80	-14254.80	4026.76	44.00	194.00	0.50	24.00	196.35	4.52	204.23		802.53	0.23	0.08

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw_y <m>	$Vsdu_y$ <daN>	$ctg\theta_y$	$VRsd_y$ <daN>	$VRcd_y$ <daN>	bw_z <m>	$Vsdu_z$ <daN>	$ctg\theta_z$	$VRsd_z$ <daN>	$VRcd_z$ <daN>	Sic.
0.00	1.48	ø6/ 4	2	28	SLU	0.60	4147.20	2.50	55512.90	118774.00	0.50	7085.86	2.50	67959.80	121171.00		9.591
0.00	1.48	ø6/ 4	2	29(TG)	SLV	0.60	2991.57	2.50	55512.90	115847.00	0.50	15165.80	2.50	67959.80	118185.00		4.481
0.00	1.48	ø6/ 4	2	25(TG)	SLV	0.60	13105.50	2.50	55512.90	115434.00	0.50	3263.90	2.50	67959.80	117763.00		4.236
1.48	8.90	ø6/16	2	28	SLU	0.60	4280.15	2.50	13878.20	118574.00	0.50	6064.05	2.50	16990.00	120967.00		2.802
1.48	8.90	ø6/16	2	27	SLU	0.60	7519.45	2.50	13878.20	118348.00	0.50	4876.64	2.50	16990.00	120737.00		1.846
1.48	8.90	ø6/16	2	29(TG)	SLV	0.60	2991.57	2.50	13878.20	115847.00	0.50	15165.80	2.50	16990.00	118185.00		1.120
1.48	8.90	ø6/16	2	25(TG)	SLV	0.60	13105.50	2.50	13878.20	115434.00	0.50	3263.90	2.50	16990.00	117763.00		1.059

Dettagli costruttivi per la duttilità

- CC=9 $\alpha_e=0.53524$ $\omega_{wd}=0.09491$ $\mu\Phi_d=5.76$ $v_d=0.074666$ $E_{s,y,d}=0.0018995$ $b_c/b_0=1.14504$ $\mu\Phi_c=17.6101$ 0.0508 >= -0.00694 [7.4.29]
- CC=9 $\alpha_e=0.53524$ $\omega_{wd}=0.09491$ $\mu\Phi_d=5.76$ $v_d=0.074666$ $E_{s,y,d}=0.0018995$ $b_c/b_0=1.17925$ $\mu\Phi_c=17.0993$ 0.0508 >= -0.0061 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.0040(e)	SLU I	1	8		0.00	-58244.00	5957.52	-1754.58	-568123.00	61047.90	-26616.70	334.69	39.58	9.754
8.1840	SLU I	1	8	818.00	-52109.00	-11089.10	3210.49	-52109.00	-63693.70	18824.20	161.72	45.64	5.749	
8.1840	SLU I	2	8	0.00	-51729.80	-11070.30	3039.60	-51729.80	-63624.70	18822.90	161.72	45.69	5.776	

Relazione di calcolo

8.80	40	SLU I	2	8	62.00	-51264.80	-13576.80	3799.39	-51264.80	-63540.10	18821.30	161.72	45.74	4.698
8.80	40	SLU I	3	8	0.00	-51544.90	-13655.20	3921.67	-51544.90	-63591.00	18822.30	161.72	45.71	4.666
8.90	40	SLU I	3	8	10.00	-51469.90	-14047.30	4032.86	-51469.90	-63577.40	18822.00	161.72	45.71	4.535

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.00	1.48	ø6/ 4	2	2	40	SLU I	0.54	606.98	2.50	63512.10	179387.00	0.44	2083.94	2.50	77578.70	179387.00	37.227
1.48	8.90	ø6/16	2	2	40	SLU I	0.54	1112.02	2.50	15878.00	179215.00	0.44	3920.32	2.50	19394.70	179215.00	4.947

Pilastrata n. 2

Nodi: 2 30 29 16

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd (Inc) <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
8R		50.00	60.00	5.30	C45/55	456.50	27.47	258.68	456.50	18.31	B450C	4500.00
8R		50.00	60.00	3.50	C45/55	456.50	27.47	258.68	456.50	18.31	B450C	4500.00

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.00	1	SLV	1	8	0.00	-47809.30	50247.20	50247.20	-12457.20	-12457.20	-47809.30	57586.70	-14719.40	343.12	7.01	1.148
8.18	1	SLV	1	8	818.00	-41674.30	-46464.40	-46464.40	8009.64	8009.64	-41674.30	-58580.90	9746.64	168.75	8.00	1.260
8.18	1	SLV	2	8	0.00	-42145.40	-46370.40	-46370.40	7796.65	7796.65	-42145.40	-58666.30	9735.55	168.75	7.98	1.265
8.80	1	SLV	2	8	62.00	-41680.40	-52855.00	-52855.00	7919.57	7919.57	-41680.40	-58582.00	9746.50	168.75	8.00	1.111
8.80	1	SLV	3	8	0.00	-41669.20	-53050.30	-53050.30	8070.52	8070.52	-41669.20	-58580.00	9746.76	168.75	8.00	1.107
8.90	1	SLV	3	8	10.00	-41594.20	-54363.90	-54363.90	8243.38	8243.38	-41594.20	-58566.40	9748.52	168.75	8.01	1.080

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
0.00	32	SLE R	1	8	0.00	-63142.30	12124.50	11896.80	22.62	31.67	101.09	1223.86
0.00	26	SLE Q	1	8	0.00	-57650.20	1589.47	5946.72	4.52	49.76	34.90	465.34
8.18	32	SLE R	1	8	818.00	-57007.30	-8048.34	-12994.30	22.62	31.67	87.70	1068.90
8.18	26	SLE Q	1	8	818.00	-51515.20	-2728.82	-11070.40	18.10	36.19	57.02	715.27
8.18	32	SLE R	2	8	0.00	-56109.40	-7619.09	-12966.90	22.62	31.67	85.74	1045.71
8.18	26	SLE Q	2	8	0.00	-51143.00	-2563.86	-11051.50	18.10	36.19	56.28	706.24
8.80	32	SLE R	2	8	62.00	-55644.40	-7274.65	-14109.90	22.62	31.67	89.19	1083.67
8.80	26	SLE Q	2	8	62.00	-50678.00	-3265.07	-13551.90	27.14	27.14	69.65	855.37
8.80	32	SLE R	3	8	0.00	-56392.00	-7486.00	-14182.30	22.62	31.67	90.38	1098.20
8.80	26	SLE Q	3	8	0.00	-50971.50	-3382.49	-13630.80	27.14	27.14	70.47	865.14
8.90	32	SLE R	3	8	10.00	-56317.00	-7268.28	-14171.30	22.62	31.67	89.38	1086.84
8.90	26	SLE Q	3	8	10.00	-50896.50	-3474.69	-14022.10	27.14	27.14	72.51	887.71

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
8.18	26	SLE Q	1	8	818.00	-51515.20	-11070.40	-2728.82	44.00	194.01	0.50	24.00	172.14	4.52	158.61	441.66	0.13	0.04
8.18	36	SLE F	1	8	818.00	-52320.90	-11311.80	-3718.57	44.00	194.01	0.50	24.00	165.50	4.52	146.09	509.20	0.15	0.04
8.18	26	SLE Q	2	8	0.00	-51143.00	-11051.50	-2563.86	44.00	194.01	0.50	24.00	175.00	4.52	164.00	435.70	0.13	0.04
8.18	23	SLE F	2	8	0.00	-50722.60	-11306.60	-2808.48	44.00	194.01	0.50	24.00	176.80	4.52	167.38	477.26	0.14	0.04
8.80	26	SLE Q	2	8	62.00	-50678.00	-13551.90	-3265.07	44.00	194.01	0.50	24.00	202.09	4.52	215.06	712.43	0.21	0.07
8.80	36	SLE F	2	8	62.00	-51420.90	-13704.80	-4189.00	44.00	194.01	0.50	24.00	190.23	4.52	192.69	771.32	0.22	0.07
8.80	26	SLE Q	3	8	0.00	-50971.50	-13630.80	-3382.49	44.00	194.01	0.50	24.00	200.45	4.52	211.96	722.41	0.21	0.07
8.80	36	SLE F	3	8	0.00	-51759.80	-13784.80	-4329.77	44.00	194.01	0.50	24.00	189.08	4.52	190.54	782.42	0.23	0.07
8.90	26	SLE Q	3	8	10.00	-50896.50	-14022.10	-3474.69	44.00	194.01	0.50	24.00	204.21	4.52	219.05	766.87	0.22	0.08
8.90	24	SLE F	3	8	10.00	-51603.50	-14229.10	-3468.57	44.00	194.01	0.50	24.00	205.27	4.52	221.06	775.47	0.23	0.08

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.00	1.48	ø6/ 4	2	2	28	SLU	0.60	5842.74	2.50	55512.90	119037.00	0.50	6795.65	2.50	67959.80	121439.00	9.501
0.00	1.48	ø6/ 4	2	2	1(TG)	SLV	0.60	2991.15	2.50	55512.90	115784.00	0.50	15148.30	2.50	67959.80	118120.00	4.486
0.00	1.48	ø6/ 4	2	2	13(TG)	SLV	0.60	13102.60	2.50	55512.90	115421.00	0.50	3263.82	2.50	67959.80	117750.00	4.237
1.48	8.90	ø6/16	2	2	28	SLU	0.60	5026.63	2.50	13878.20	118837.00	0.50	5847.51	2.50	16990.00	121235.00	2.761
1.48	8.90	ø6/16	2	2	17	SLU	0.60	7450.11	2.50	13878.20	117959.00	0.50	3323.87	2.50	16990.00	120339.00	1.863
1.48	8.90	ø6/16	2	2	1(TG)	SLV	0.60	2991.15	2.50	13878.20	115784.00	0.50	15148.30	2.50	16990.00	118120.00	1.122
1.48	8.90	ø6/16	2	2	13(TG)	SLV	0.60	13102.60	2.50	13878.20	115421.00	0.50	3263.82	2.50	16990.00	117750.00	1.059

Dettagli costruttivi per la duttilità

- CC=1 α_e=0.53524 ω_{wd}=0.09491 μΦ_d=5.76 v_d=0.074159 E_{sy, d}=0.0018995 b_c/b₀=1.14504 μΦ_c=17.7304
0.0508 >= -0.00713 [7.4.29]
- CC=1 α_e=0.53524 ω_{wd}=0.09491 μΦ_d=5.76 v_d=0.074159 E_{sy, d}=0.0018995 b_c/b₀=1.17925 μΦ_c=17.2161
0.0508 >= -0.00629 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.00	40 (e)	SLU I	1	8	0.00	-57650.20	5946.72	1589.47	-568123.00	60935.00	26643.20	25.31	39.65	9.855

Relazione di calcolo

8.18	40	SLU I	1	8	818.00	-51515.20	-11070.40	-2728.82	-51515.20	-64405.70	-16538.10	196.88	46.79	5.835
8.18	40	SLU I	2	8	0.00	-51143.00	-11051.50	-2563.86	-51143.00	-64999.50	-14358.30	195.47	47.90	5.871
8.80	40	SLU I	2	8	62.00	-50678.00	-13551.90	-3265.07	-50678.00	-64254.20	-16533.40	196.88	46.87	4.762
8.80	40	SLU I	3	8	0.00	-50971.50	-13630.80	-3382.49	-50971.50	-64310.10	-16535.10	196.88	46.84	4.730
8.90	40	SLU I	3	8	10.00	-50896.50	-14022.10	-3474.69	-50896.50	-64297.00	-16534.70	196.88	46.85	4.597

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.00	1.48	ø6/ 4	2	2	40	SLU I	0.54	527.91	2.50	63512.10	179295.00	0.44	2080.33	2.50	77578.70	179295.00	37.292
1.48	8.90	ø6/16	2	2	40	SLU I	0.54	921.94	2.50	15878.00	179122.00	0.44	3913.09	2.50	19394.70	179122.00	4.956

Pilastrata n. 3

Nodi: 3 26 17 9

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fcd (Inc) <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
3R		50.00	60.00	5.30	C45/55	456.50	27.47	258.68	456.50	18.31	B450C	4500.00	3913.04
3R		50.00	60.00	3.50	C45/55	456.50	27.47	258.68	456.50	18.31	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	δ _r	Sic.
0.00	1	SLV	1	3	0.00	-36453.70	-49568.50	-49568.50	12012.20	12012.20	-36453.70	-52190.70	11715.60	163.12	8.87	1.049
8.18	1	SLV	1	3	818.00	-30318.70	44124.40	44124.40	-6839.12	-6839.12	-30318.70	51599.60	-8717.11	348.75	10.90	1.172
8.18	1	SLV	2	3	0.00	-32199.20	41901.40	41901.40	-6835.74	-6835.74	-32199.20	52033.20	-8671.43	348.75	10.79	1.242
8.80	1	SLV	2	3	62.00	-31734.20	47635.70	47635.70	-8263.47	-8263.47	-31734.20	51920.70	-8682.96	348.75	10.81	1.089
8.80	1	SLV	3	3	0.00	-30421.90	49314.00	49314.00	-8274.90	-8274.90	-30421.90	51623.50	-8714.30	348.75	10.89	1.047
8.90	1	SLV	3	3	10.00	-30346.90	50471.30	50471.30	-8505.42	-8505.42	-30346.90	51606.10	-8716.38	348.75	10.90	1.023

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
0.00	32	SLE R	1	3	0.00	-49926.80	7712.65	-2502.41	18.10	27.14	49.35	615.37
0.00	26	SLE Q	1	3	0.00	-47512.10	-1975.18	-4260.56	4.52	40.72	29.74	395.41
8.18	21	SLE R	1	3	818.00	-44099.00	3574.08	7970.16	18.10	27.14	48.50	610.24
8.18	20	SLE R	1	3	818.00	-42517.80	3582.69	7898.18	18.10	27.14	48.27	605.47
8.18	26	SLE Q	1	3	818.00	-41377.10	3599.90	7105.89	18.10	27.14	45.22	568.98
8.18	21	SLE R	2	3	0.00	-43105.20	3571.71	7402.57	18.10	27.14	46.25	583.14
8.18	20	SLE R	2	3	0.00	-41378.80	3580.31	7249.46	18.10	27.14	45.69	574.42
8.18	26	SLE Q	2	3	0.00	-40687.50	3597.51	6709.78	18.10	27.14	43.66	550.10
8.80	21	SLE R	2	3	62.00	-42640.20	3980.50	8320.82	18.10	27.14	51.91	646.86
8.80	26	SLE Q	2	3	62.00	-40222.50	4009.35	8373.29	22.62	22.62	52.38	648.74
8.80	21	SLE R	3	3	0.00	-43693.40	3986.58	8738.46	22.62	22.62	53.60	667.54
8.80	26	SLE Q	3	3	0.00	-40955.40	4015.48	8752.16	22.62	22.62	53.93	667.34
8.90	21	SLE R	3	3	10.00	-43618.40	4054.16	8617.72	22.62	22.62	53.44	665.62
8.90	26	SLE Q	3	3	10.00	-40880.40	4083.56	8959.91	22.62	22.62	55.13	680.80

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
8.18	26	SLE Q	1	3	818.00	-41377.10	7105.89	3599.90	44.00	129.34	0.50	24.00	139.03	4.52	96.19	294.95	0.09	0.02
8.18	23	SLE F	1	3	818.00	-41219.70	7363.15	3596.82	44.00	129.34	0.50	24.00	141.58	4.52	100.99	314.54	0.09	0.02
8.18	26	SLE Q	2	3	0.00	-40687.50	6709.78	3597.51	44.00	129.34	0.50	24.00	136.96	4.52	92.28	275.52	0.08	0.02
8.18	23	SLE F	2	3	0.00	-40317.80	6847.84	3594.44	44.00	129.34	0.50	24.00	138.87	4.52	95.89	288.75	0.08	0.02
8.80	26	SLE Q	2	3	62.00	-40222.50	8373.29	4009.35	44.00	129.34	0.50	24.00	153.81	4.52	124.06	436.78	0.13	0.03
8.80	24	SLE F	2	3	62.00	-40794.80	8507.82	4004.41	44.00	129.34	0.50	24.00	153.77	4.52	123.97	439.16	0.13	0.03
8.80	26	SLE Q	3	3	0.00	-40955.40	8752.16	4015.48	44.00	129.34	0.50	24.00	155.50	4.52	127.24	457.59	0.13	0.04
8.80	24	SLE F	3	3	0.00	-41539.50	8892.91	4010.52	44.00	129.34	0.50	24.00	155.51	4.52	127.25	460.37	0.13	0.04
8.90	26	SLE Q	3	3	10.00	-40880.40	8959.91	4083.56	44.00	129.34	0.50	24.00	157.51	4.52	131.01	481.35	0.14	0.04
8.90	24	SLE F	3	3	10.00	-41464.50	9104.47	4078.52	44.00	129.34	0.50	24.00	157.53	4.52	131.07	484.41	0.14	0.04

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _y <daN>	ctgθ _y	VRsd _y <daN>	VRcd _y <daN>	b _{w,z} <m>	Vsdu _z <daN>	ctgθ _z	VRsd _z <daN>	VRcd _z <daN>	Sic.
0.00	1.48	ø6/ 4	2	2	18	SLU	0.60	878.31	2.50	55512.90	116558.00	0.50	2060.94	2.50	67959.80	118910.00	32.975
0.00	1.48	ø6/ 4	2	2	28	SLU	0.60	3695.08	2.50	55512.90	116494.00	0.50	1328.32	2.50	67959.80	118845.00	15.024
0.00	1.48	ø6/ 4	2	2	1(TG)	SLV	0.60	2897.73	2.50	55512.90	114613.00	0.50	13821.70	2.50	67959.80	116926.00	4.917
0.00	1.48	ø6/ 4	2	2	13(TG)	SLV	0.60	10789.80	2.50	55512.90	114038.00	0.50	3358.68	2.50	67959.80	116339.00	5.145
1.48	8.90	ø6/18	2	2	27	SLU	0.60	1446.69	2.50	12336.20	116172.00	0.50	6208.18	2.50	15102.20	118517.00	2.433
1.48	8.90	ø6/18	2	2	28	SLU	0.60	2997.61	2.50	12336.20	116294.00	0.50	2931.41	2.50	15102.20	118641.00	4.115
1.48	8.90	ø6/18	2	2	1(TG)	SLV	0.60	2897.73	2.50	12336.20	114613.00	0.50	13821.70	2.50	15102.20	116926.00	1.093
1.48	8.90	ø6/18	2	2	13(TG)	SLV	0.60	10789.80	2.50	12336.20	114038.00	0.50	3358.68	2.50	15102.20	116339.00	1.143

Dettagli costruttivi per la duttilità

- CC=1 α_e=0.53524 ω_{wd}=0.09491 μΦ_d=5.76 v_d=0.064906 E_{sy, d}=0.0018995 b_c/b₀=1.14504 μΦ_c=20.2581 0.0508 >= -0.0106 [7.4.29]
- CC=1 α_e=0.53524 ω_{wd}=0.09491 μΦ_d=5.76 v_d=0.064906 E_{sy, d}=0.0018995 b_c/b₀=1.17925 μΦ_c=19.6704

Relazione di calcolo

0.0508 >= -0.00988 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/presoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.00	40 (e)	SLU I	1	3	0.00	-47512.10	-4260.56	-1975.18	-47512.10	-37748.10	18810.20	140.62	37.13	8.847
8.18	40	SLU I	1	3	818.00	-41377.10	7105.89	3599.90	-41377.10	36753.30	18500.00	39.38	37.79	5.160
8.18	40	SLU I	2	3	0.00	-40687.50	6709.78	3597.51	-40687.50	36149.40	19075.50	40.78	37.51	5.362
8.80	40	SLU I	2	3	62.00	-40222.50	8373.29	4009.35	-40222.50	37370.80	17364.70	36.56	38.94	4.435
8.80	40	SLU I	3	3	0.00	-40955.40	8752.16	4015.48	-40955.40	37501.00	17394.80	36.56	38.85	4.290
8.90	40	SLU I	3	3	10.00	-40880.40	8959.91	4083.56	-40880.40	37487.70	17391.80	36.56	38.86	4.194

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	V _{sd,y} <daN>	ctgθ _y	VR _{sd,y} <daN>	VR _{cd,y} <daN>	b _{w,z} <m>	V _{sd,z} <daN>	ctgθ _z	VR _{sd,z} <daN>	VR _{cd,z} <daN>	Sic.
0.00	1.48	ø6/ 4	2	2	40	SLU I	0.50	681.55	2.50	32488.50	149253.00	0.40	1389.54	2.50	40381.90	149253.00	29.061
1.48	8.90	ø6/18	2	2	40	SLU I	0.50	681.55	2.50	7219.66	149080.00	0.40	2077.49	2.50	8973.76	149080.00	4.320

Pilastrata n. 4

Nodi: 4 -797 -793 11

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cl _s	F _{ck} <daN/cm ² >	F _{ctk} <daN/cm ² >	F _{cd} <daN/cm ² >	F _{cd} (Inc) <daN/cm ² >	F _{ctd} <daN/cm ² >	Tp	F _{yk} <daN/cm ² >	F _{yd} <daN/cm ² >
3R		50.00	60.00	5.30	C45/55	456.50	27.47	258.68	456.50	18.31	B450C	4500.00	3913.04
3R		50.00	60.00	3.50	C45/55	456.50	27.47	258.68	456.50	18.31	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/presoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.00	9	SLV	1	3	0.00	-35637.60	-49178.60	-49178.60	-12209.40	-12209.40	-35637.60	-49919.10	-12434.10	195.47	8.42	1.015
8.18	9	SLV	1	3	818.00	-29502.60	43630.10	43630.10	-7553.59	-7553.59	-29502.60	49944.00	-9011.66	348.75	9.59	1.146
8.18	9	SLV	2	3	0.00	-31391.80	41387.50	41387.50	-7550.01	-7550.01	-31391.80	50303.10	-9034.91	348.75	9.50	1.215
8.80	9	SLV	2	3	62.00	-30926.80	46976.40	46976.40	8868.02	8868.02	-30926.80	50220.40	9029.46	11.25	9.52	1.067
8.80	9	SLV	3	3	0.00	-29612.00	48696.70	48696.70	8881.28	8881.28	-29612.00	49965.40	9012.96	11.25	9.59	1.026
8.90	9	SLV	3	3	10.00	-29537.00	49841.90	49841.90	9120.77	9120.77	-29537.00	49950.90	9012.03	11.25	9.59	1.002

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	A _{fT} <cmq>	A _{fC} <cmq>	σ _c <daN/cm ² >	σ _f <daN/cm ² >
0.00	32	SLE R	1	3	0.00	-51072.50	11467.10	-2644.25	22.62	22.62	66.52	798.94
0.00	26	SLE Q	1	3	0.00	-46891.20	1785.41	-4237.53	4.52	40.72	29.20	388.83
8.18	32	SLE R	1	3	818.00	-44937.50	-7869.31	6325.90	18.10	27.14	63.47	774.94
8.18	26	SLE Q	1	3	818.00	-40756.20	-3075.56	7063.37	18.10	27.14	43.52	549.41
8.18	32	SLE R	2	3	0.00	-44073.50	-7865.45	5834.66	22.62	22.62	61.46	750.37
8.18	26	SLE Q	2	3	0.00	-40055.30	-3073.44	6660.73	13.57	31.67	41.81	528.86
8.80	32	SLE R	2	3	62.00	-43608.50	-8531.51	6592.04	22.62	22.62	68.17	824.18
8.80	26	SLE Q	2	3	62.00	-39590.20	-3431.13	8304.78	18.10	27.14	50.62	628.24
8.80	32	SLE R	3	3	0.00	-44565.50	-8545.50	6964.22	22.62	22.62	69.73	843.83
8.80	26	SLE Q	3	3	0.00	-40332.20	-3436.71	8693.46	18.10	27.14	52.35	648.68
8.90	32	SLE R	3	3	10.00	-44490.50	-8655.59	6802.95	22.62	22.62	69.63	841.97
8.90	26	SLE Q	3	3	10.00	-40257.20	-3496.06	8900.00	18.10	27.14	53.56	662.14

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm ² >	ε _{sm}	W _k <mm>
8.18	26	SLE Q	1	3	818.00	-40756.20	7063.37	-3075.56	44.00	194.01	0.50	24.00	141.41	4.52	100.67	279.97	0.08	0.02
8.18	36	SLE F	1	3	818.00	-41339.00	6798.20	-4037.20	44.00	194.01	0.50	24.00	141.47	4.52	100.79	320.67	0.09	0.02
8.18	26	SLE Q	2	3	0.00	-40055.30	6660.73	-3073.44	44.00	194.01	0.50	24.00	138.21	4.52	94.64	257.05	0.07	0.02
8.18	36	SLE F	2	3	0.00	-40659.40	6408.21	-4034.73	44.00	194.01	0.50	24.00	139.34	4.52	96.76	299.38	0.09	0.02
8.80	26	SLE Q	2	3	62.00	-39590.20	8304.78	-3431.13	44.00	194.01	0.50	24.00	159.51	4.52	134.80	426.80	0.12	0.03
8.80	36	SLE F	2	3	62.00	-40194.40	8038.83	-4454.43	44.00	194.01	0.50	24.00	156.39	4.52	128.92	470.75	0.14	0.04
8.80	26	SLE Q	3	3	0.00	-40332.20	8693.46	-3436.71	44.00	194.01	0.50	24.00	162.39	4.52	140.23	452.36	0.13	0.04
8.80	36	SLE F	3	3	0.00	-40923.10	8420.18	-4461.70	44.00	194.01	0.50	24.00	158.32	4.52	132.55	494.77	0.14	0.04
8.90	26	SLE Q	3	3	10.00	-40257.20	8900.00	-3496.06	44.00	194.01	0.50	24.00	164.93	4.52	145.00	477.42	0.14	0.04
8.90	36	SLE F	3	3	10.00	-40848.10	8620.74	-4531.25	44.00	194.01	0.50	24.00	160.34	4.52	136.35	519.84	0.15	0.04

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	V _{sd,y} <daN>	ctgθ _y	VR _{sd,y} <daN>	VR _{cd,y} <daN>	b _{w,z} <m>	V _{sd,z} <daN>	ctgθ _z	VR _{sd,z} <daN>	VR _{cd,z} <daN>	Sic.
0.00	1.48	ø6/ 4	2	2	18	SLU	0.60	764.82	2.50	55512.90	116446.00	0.50	2050.74	2.50	67959.80	118796.00	33.139
0.00	1.48	ø6/ 4	2	2	28	SLU	0.60	5349.76	2.50	55512.90	116749.00	0.50	1372.44	2.50	67959.80	119105.00	10.377
0.00	1.48	ø6/ 4	2	2	9(TG)	SLV	0.60	2831.80	2.50	55512.90	114537.00	0.50	13356.40	2.50	67959.80	116848.00	5.088
0.00	1.48	ø6/ 4	2	2	5(TG)	SLV	0.60	11094.40	2.50	55512.90	114023.00	0.50	3475.96	2.50	67959.80	116324.00	5.004
1.48	8.90	ø6/20	2	2	27	SLU	0.60	3098.05	2.50	11102.60	116281.00	0.50	6191.44	2.50	13592.00	118627.00	2.195
1.48	8.90	ø6/20	2	2	28	SLU	0.60	4652.29	2.50	11102.60	116549.00	0.50	2896.57	2.50	13592.00	118901.00	2.386
1.48	8.90	ø6/20	2	2	9(TG)	SLV	0.60	2831.80	2.50	11102.60	114537.00	0.50	13356.40	2.50	13592.00	116848.00	1.018
1.48	8.90	ø6/20	2	2	5(TG)	SLV	0.60	11094.40	2.50	11102.60	114023.00	0.50	3475.96	2.50	13592.00	116324.00	1.001

Dettagli costruttivi per la duttilità

- CC=9 $\alpha_e=0.36747$ $\omega_{wd}=0.07756$ $\mu\Phi_d=5.76$ $v_d=0.064319$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.14504$ $\mu\Phi_c=15.1304$
0.0285 >= -0.01083 [7.4.29]
- CC=9 $\alpha_e=0.36747$ $\omega_{wd}=0.07756$ $\mu\Phi_d=5.76$ $v_d=0.064319$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.17925$ $\mu\Phi_c=14.6915$
0.0285 >= -0.0101 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/presoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_y	Sic.
0.00	40 (e)	SLU I	1	3	0.00	-46891.20	-4237.53	1785.41	-46891.20	-36890.50	18517.10	151.88	40.29	8.719
8.18	40	SLU I	1	3	818.00	-40756.20	7063.37	-3075.56	-40756.20	36819.50	-16445.60	334.69	41.61	5.239
8.18	40	SLU I	2	3	0.00	-40055.30	6660.73	-3073.44	-40055.30	36713.30	-16395.60	334.69	41.69	5.487
8.80	40	SLU I	2	3	62.00	-39590.20	8304.78	-3431.13	-39590.20	37134.60	-15313.60	336.09	42.16	4.474
8.80	40	SLU I	3	3	0.00	-40332.20	8693.46	-3436.71	-40332.20	37841.50	-14134.20	337.50	42.59	4.324
8.90	40	SLU I	3	3	10.00	-40257.20	8900.00	-3496.06	-40257.20	37829.60	-14130.30	337.50	42.60	4.226

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.00	1.48	ø6/ 4	2	240	SLU I	0.50	594.25	2.50	32488.50	149157.00	0.40	1381.53	2.50	40381.90	149157.00	29.230	
1.48	8.90	ø6/20	2	240	SLU I	0.50	594.25	2.50	6497.69	148984.00	0.40	2065.39	2.50	8076.38	148984.00	3.910	

Pilastrata n. 6

Nodi: -1 23 20 6

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cl _s	Fck <daN/cm ² >	Fctk <daN/cm ² >	Fcd <daN/cm ² >	Fcd (Inc) <daN/cm ² >	Fctd <daN/cm ² >	Tp	Fyk <daN/cm ² >	Fyd <daN/cm ² >
8R		50.00	60.00	5.50	C45/55	456.50	27.47	258.68	456.50	18.31	B450C	4500.00	3913.04
8R		50.00	60.00	3.50	C45/55	456.50	27.47	258.68	456.50	18.31	B450C	4500.00	3913.04

Dati per verifiche di stabilità

Xg <m>	El <m>	l ₀ <m>	λ	λ*	Xg <m>	El <m>	l ₀ <m>	λ	λ*	Xg <m>	El <m>	l ₀ <m>	λ	λ*	Xg <m>	El <m>	l ₀ <m>	λ	λ*
---	1	8.90	61.66	48.94	---	1	8.90	61.66	48.86	---	2	8.90	61.66	48.86	---	2	8.90	61.66	48.99
---	3	8.90	61.66	48.99	---	3	8.90	61.66	48.94										

Stato limite ultimo - Verifiche a flessione/presoflessione - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy,s <daNm>	MRdz,s <daNm>	α <grad>	ϵ_r	Sic.
0.00	1	SLV	1	8	0.00	-137099.00	-49060.30	-49060.30	-19763.10	-19763.10	-137099.00	-56676.30	-23352.90	208.12	4.29	1.159
8.18	1	SLV	1	8	818.00	-140244.00	43182.30	43182.30	23102.20	23102.20	-140244.00	53614.00	28150.10	33.75	4.09	1.236
8.18	1	SLV	2	8	0.00	-139554.00	42822.70	42822.70	23086.20	23086.20	-139554.00	53602.70	28157.00	33.75	4.10	1.245
8.80	1	SLV	2	8	62.00	-139088.00	47664.00	47664.00	26306.30	26306.30	-139088.00	53595.10	28161.80	33.75	4.10	1.112
8.80	1	SLV	3	8	0.00	-139400.00	47938.60	47938.60	26355.40	26355.40	-139400.00	53600.20	28158.60	33.75	4.10	1.107
8.90	1	SLV	3	8	10.00	-139325.00	49391.10	49391.10	26879.40	26879.40	-139325.00	53599.00	28159.40	33.75	4.10	1.077

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cm ² >	σ_f <daN/cm ² >
0.00	21	SLE R	1	8	0.00	-150934.00	-8455.58	-2284.32	0.00	63.33	66.58	906.59
0.00	20	SLE R	1	8	0.00	-146372.00	-8472.80	-2228.23	0.00	63.33	65.33	888.10
0.00	26	SLE Q	1	8	0.00	-141331.00	-8436.35	-2125.36	0.00	63.33	63.70	864.70
8.18	21	SLE R	1	8	818.00	-144799.00	15103.40	3547.99	4.52	58.81	86.74	1137.24
8.18	20	SLE R	1	8	818.00	-140237.00	15134.20	3462.50	9.05	54.29	85.66	1120.43
8.18	26	SLE Q	1	8	818.00	-135196.00	15067.80	3298.49	9.05	54.29	83.98	1096.21
8.18	21	SLE R	2	8	0.00	-143786.00	15093.00	3497.66	9.05	54.29	86.36	1131.83
8.18	20	SLE R	2	8	0.00	-139081.00	15123.80	3394.05	9.05	54.29	85.20	1114.00
8.18	26	SLE Q	2	8	0.00	-134479.00	15057.50	3277.01	9.05	54.29	83.75	1092.82
8.80	21	SLE R	2	8	62.00	-143321.00	16862.20	4902.11	13.57	49.76	95.96	1243.83
8.80	20	SLE R	2	8	62.00	-138616.00	16896.40	4810.85	18.10	45.24	95.02	1228.20
8.80	26	SLE Q	2	8	62.00	-134013.00	16822.60	4521.80	18.10	45.24	93.16	1201.86
8.80	21	SLE R	3	8	0.00	-143961.00	16893.70	4897.29	13.57	49.76	96.17	1246.77
8.80	20	SLE R	3	8	0.00	-139400.00	16928.00	4783.80	18.10	45.24	95.18	1230.74
8.80	26	SLE Q	3	8	0.00	-134374.00	16854.00	4546.69	18.10	45.24	93.40	1205.01
8.90	21	SLE R	3	8	10.00	-143886.00	17181.70	5248.91	13.57	49.76	98.16	1270.05
8.90	20	SLE R	3	8	10.00	-139325.00	17216.60	5128.81	18.10	45.24	97.18	1254.09
8.90	26	SLE Q	3	8	10.00	-134299.00	17141.40	4872.18	18.10	45.24	95.37	1227.83

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.00	1.48	ø8/ 8	2	218	SLU	0.60	3745.17	2.50	49344.90	128899.00	0.50	963.13	2.50	60408.70	131500.00	13.176	
0.00	1.48	ø8/ 8	2	217	SLU	0.60	3753.97	2.50	49344.90	128899.00	0.50	937.16	2.50	60408.70	131500.00	13.145	
0.00	1.48	ø8/ 8	2	21 (TG)	SLV	0.60	6081.90	2.50	49344.90	125422.00	0.50	18073.20	2.50	60408.70	127953.00	3.342	
0.00	1.48	ø8/ 8	2	29 (TG)	SLV	0.60	4791.32	2.50	49344.90	126588.00	0.50	18145.90	2.50	60408.70	129142.00	3.329	
0.00	1.48	ø8/ 8	2	215 (TG)	SLV	0.60	16797.80	2.50	49344.90	126134.00	0.50	5555.63	2.50	60408.70	128679.00	2.938	

Relazione di calcolo

1.48	8.90	ø8/24	2	2	18	SLU	0.60	3745.64	2.50	16448.30	128899.00	0.50	4761.60	2.50	20136.20	131500.00	4.229
1.48	8.90	ø8/24	2	2	28	SLU	0.60	5177.57	2.50	16448.30	128899.00	0.50	4223.74	2.50	20136.20	131500.00	3.177
1.48	8.90	ø8/24	2	2	1 (TG)	SLV	0.60	6081.90	2.50	16448.30	125422.00	0.50	18073.20	2.50	20136.20	127953.00	1.114
1.48	8.90	ø8/24	2	2	9 (TG)	SLV	0.60	4791.32	2.50	16448.30	126588.00	0.50	18145.90	2.50	20136.20	129142.00	1.110
1.48	8.90	ø8/24	2	2	5 (TG)	SLV	0.60	16342.80	2.50	16448.30	125554.00	0.50	6400.38	2.50	20136.20	128088.00	1.006
1.48	8.90	ø8/24	2	2	5 (TG)	SLV	0.60	16437.30	2.50	16448.30	126568.00	0.50	6622.96	2.50	20136.20	129122.00	1.001

Dettagli costruttivi per la duttilità

- CC=1 $\alpha_e=0.49163$ $\omega_{wd}=0.08472$ $\mu\Phi_d=5.76$ $v_d=0.16033$ $E_{s\gamma,d}=0.0018995$ $b_c/b_0=1.14943$ $\mu\Phi_c=7.29885$
0.04165 >= 0.02549 [7.4.29]

- CC=1 $\alpha_e=0.49163$ $\omega_{wd}=0.08472$ $\mu\Phi_d=5.76$ $v_d=0.16033$ $E_{s\gamma,d}=0.0018995$ $b_c/b_0=1.18483$ $\mu\Phi_c=7.08072$
0.04165 >= 0.02735 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione - Controlli di stabilità

Xg	CC	TCC	El	Sez.	X	N	My	My ver.	Mz	Mz ver.	Nu	MRdy,s	M'ydy,s	MRdy	MRdz,s	M'ydz,s	MRdz	α	δ _r	
<m>					<cm>	<daN>	<daNm>	<daNm>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<daNm>	<daNm>	<daNm>	<daNm>	<grad>		
0.00	40 (e)	SLU	I	1	8	0.00	-141331.00	-2125.36	-6289.24	-8436.35	-568123.00	-23645.30	-23645.30	-46360.10	-37322.00	-37322.00	-61175.20	240.47	29.87	
8.18	40 (e)	SLU	I	1	8	818.00	-135196.00	3298.49	6016.23	15067.80	15067.80	-135196.00	16079.20	16079.20	27118.90	40096.30	40096.30	71267.90	70.31	32.75
8.18	40 (e)	SLU	I	2	8	0.00	-134479.00	3277.01	5984.29	15057.50	15057.50	-134479.00	16090.00	16090.00	27147.60	40092.80	40092.80	71172.00	70.31	32.80
8.80	40 (e)	SLU	I	2	8	62.00	-134013.00	4521.80	5963.60	16822.60	16822.60	-134013.00	14644.00	14644.00	25125.20	40389.90	40389.90	71768.70	71.72	33.78
8.80	40 (e)	SLU	I	3	8	0.00	-134374.00	4546.69	5979.64	16854.00	16854.00	-134374.00	14639.70	14639.70	25108.60	40393.80	40393.80	71818.20	71.72	33.75
8.90	40 (e)	SLU	I	3	8	10.00	-134299.00	4872.18	5976.30	17141.40	17141.40	-134299.00	14640.60	14640.60	25112.10	40392.90	40392.90	71807.90	71.72	33.76

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _{,y}	Vsdu _{,y}	ctgθ _{,y}	VRsd _{,y}	VRcd _{,y}	bw _{,z}	Vsdu _{,z}	ctgθ _{,z}	VRsd _{,z}	VRcd _{,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
0.00	1.48	ø8/ 8	2	2	40	SLU I	0.53	2873.36	2.50	54469.90	181351.00	0.43	663.06	2.50	66886.80	181351.00	18.957
1.48	8.90	ø8/24	2	2	40	SLU I	0.53	2873.73	2.50	18156.60	181178.00	0.43	3254.92	2.50	22295.60	181178.00	6.318

Pilastrata n. 7

Nodi: -3 24 19 7

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	Cf	Cls	Fck	Fctk	Fcd	Fcd (Inc)	Fctd	Tp	Fyk	Fyd
		<cm>	<cm>	<cm>		<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>	<daN/cmq>		<daN/cmq>	<daN/cmq>
	8R	50.00	60.00	5.50	C45/55	456.50	27.47	258.68	456.50	18.31	B450C	4500.00	3913.04
	8R	50.00	60.00	3.50	C45/55	456.50	27.47	258.68	456.50	18.31	B450C	4500.00	3913.04

Dati per verifiche di stabilità

Xg	El	l ₀	λ	λ*	Xg	El	l ₀	λ	λ*	Xg	El	l ₀	λ	λ*	Xg	El	l ₀	λ	λ*
<m>		<m>			<m>		<m>			<m>		<m>			<m>		<m>		
---	1	8.90	61.66	48.22	---	1	8.90	61.66	48.16	---	2	8.90	61.66	48.16	---	2	8.90	61.66	48.25
---	3	8.90	61.66	48.25	---	3	8.90	61.66	48.22										

Stato limite ultimo - Verifiche a flessione/pressoflessione - Controlli di stabilità

Xg	CC	TCC	El	Sez.	X	N	My	My ver.	Mz	Mz ver.	Nu	MRdy,s	MRdz,s	α	δ_r	Sic.
<m>					<cm>	<daN>	<daNm>	<daNm>	<daNm>	<daNm>	<daN>	<daNm>	<daNm>	<grad>		
0.00	9	SLV	1	8	0.00	-144938.00	47333.90	47333.90	-19030.20	-19030.20	-144938.00	53380.80	-20647.60	331.88	4.31	1.122
8.18	9	SLV	1	8	818.00	-138803.00	-41079.70	-41079.70	23669.80	23669.80	-138803.00	-48124.80	27497.50	143.44	4.15	1.169
8.18	9	SLV	2	8	0.00	-138382.00	-40773.20	-40773.20	23655.00	23655.00	-138382.00	-48110.40	27497.10	143.44	4.15	1.176
8.80	9	SLV	2	8	62.00	-137917.00	-44903.80	-44903.80	26861.00	26861.00	-137917.00	-47111.50	28553.90	142.03	4.13	1.053
8.80	9	SLV	3	8	0.00	-138115.00	-45170.60	-45170.60	26908.10	26908.10	-138115.00	-47118.30	28554.30	142.03	4.13	1.048
8.90	9	SLV	3	8	10.00	-138040.00	-46357.80	-46357.80	27430.20	27430.20	-138040.00	-47115.90	28554.20	142.03	4.13	1.023

Stato limite d'esercizio - Verifiche tensionali

Xg	CC	TCC	El	Sez.	X	N	Mz	My	AfT	AfC	σ _c	σ _f	
<m>					<cm>	<daN>	<daNm>	<daNm>	<cmq>	<cmq>	<daN/cmq>	<daN/cmq>	
0.00	21	SLE	R	1	8	0.00	-153827.00	-9503.30	1002.48	0.00	54.29	69.86	950.07
0.00	20	SLE	R	1	8	0.00	-149710.00	-9506.79	1005.84	0.00	54.29	68.80	934.10
0.00	26	SLE	Q	1	8	0.00	-145784.00	-9500.92	1010.52	0.00	54.29	67.76	918.62
8.18	21	SLE	R	1	8	818.00	-147692.00	16963.10	-2302.39	13.57	40.72	94.13	1227.39
8.18	20	SLE	R	1	8	818.00	-143575.00	16969.40	-2294.02	13.57	40.72	93.33	1213.99
8.18	26	SLE	Q	1	8	818.00	-139649.00	16957.80	-2283.27	18.10	36.19	92.52	1200.67
8.18	21	SLE	R	2	8	0.00	-146980.00	16952.70	-2349.26	13.57	40.72	94.08	1226.29
8.18	20	SLE	R	2	8	0.00	-142747.00	16959.00	-2359.90	13.57	40.72	93.33	1213.24
8.18	26	SLE	Q	2	8	0.00	-139159.00	16947.40	-2299.94	18.10	36.19	92.45	1199.31
8.80	21	SLE	R	2	8	62.00	-146515.00	18937.70	-3292.09	18.10	36.19	103.94	1339.09
8.80	20	SLE	R	2	8	62.00	-142282.00	18944.80	-3252.63	22.62	31.67	103.19	1325.75
8.80	26	SLE	Q	2	8	62.00	-138694.00	18931.80	-3290.24	22.62	31.67	102.73	1316.53
8.80	21	SLE	R	3	8	0.00	-146993.00	18971.10	-3358.63	18.10	36.19	104.34	1344.32
8.80	20	SLE	R	3	8	0.00	-142875.00	18978.20	-3336.02	22.62	31.67	103.66	1331.95
8.80	26	SLE	Q	3	8	0.00	-138947.00	18965.20	-3330.79	22.62	31.67	103.03	1320.19
8.90	21	SLE	R	3	8	10.00	-146918.00	19294.70	-3541.87	22.62	31.67	106.11	1364.46
8.90	20	SLE	R	3	8	10.00	-142800.00	19301.90	-3517.37	22.62	31.67	105.45	1352.26
8.90	26	SLE	Q	3	8	10.00	-138872.00	19288.70	-3509.98	22.62	31.67	104.83	1340.62

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	bw _{,y}	Vsdu _{,y}	ctgθ _{,y}	VRsd _{,y}	VRcd _{,y}	bw _{,z}	Vsdu _{,z}	ctgθ _{,z}	VRsd _{,z}	VRcd _{,z}	Sic.
<m>	<m>						<m>	<daN>		<daN>	<daN>	<m>	<daN>		<daN>	<daN>	
0.00	1.48	ø8/ 8	2	228	SLU	0.60	3072.32	2.50	49344.90	128899.00	0.50	1433.59	2.50	60408.70	131500.00	16.061	

Relazione di calcolo

0.00	1.48	ø8/ 8	2	2	17	SLU	0.60	4208.07	2.50	49344.90	128899.00	0.50	601.73	2.50	60408.70	131500.00	11.726
0.00	1.48	ø8/ 8	2	2	1(TG)	SLV	0.60	5814.33	2.50	49344.90	126753.00	0.50	16411.00	2.50	60408.70	129311.00	3.681
0.00	1.48	ø8/ 8	2	2	7(TG)	SLV	0.60	15522.40	2.50	49344.90	126988.00	0.50	5009.46	2.50	60408.70	129550.00	3.179
1.48	8.90	ø8/24	2	2	28	SLU	0.60	5607.31	2.50	16448.30	128899.00	0.50	3508.28	2.50	20136.20	131500.00	2.933
1.48	8.90	ø8/24	2	2	1(TG)	SLV	0.60	5814.33	2.50	16448.30	126753.00	0.50	16411.00	2.50	20136.20	129311.00	1.227
1.48	8.90	ø8/24	2	2	7(TG)	SLV	0.60	15522.40	2.50	16448.30	126988.00	0.50	5009.46	2.50	20136.20	129550.00	1.060

Dettagli costruttivi per la duttilità

- CC=5 $\alpha_e=0.49163$ $\omega_{wd}=0.08472$ $\mu\Phi_d=5.76$ $v_d=0.16249$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.14943$ $\mu\Phi_c=7.20159$
0.04165 >= 0.02631 [7.4.29]

- CC=5 $\alpha_e=0.49163$ $\omega_{wd}=0.08472$ $\mu\Phi_d=5.76$ $v_d=0.16249$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.18483$ $\mu\Phi_c=6.98637$
0.04165 >= 0.0282 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy,s <daNm>	M'ydy,s <daNm>	MRdy <daNm>	MRdz,s <daNm>	M'ydz,s <daNm>	MRdz <daNm>	α <grad>	ϵ_r	
0.00	40 (e)	SLU	I	1	8	0.00	-145784.00	1010.52	6487.41	-9500.92	-145784.00	20256.50	20256.50	40191.50	-33027.10	-33027.10	-58004.50	296.72	30.58	
8.18	40 (e)	SLU	I	1	8	818.00	-139649.00	-2283.27	-6214.40	16957.80	16957.80	-139649.00	-13656.90	-13656.90	-24945.00	34754.50	34754.50	64864.40	108.28	33.65
8.18	40 (e)	SLU	I	2	8	0.00	-139159.00	-2299.94	-6192.57	16947.40	16947.40	-139159.00	-13321.50	-13321.50	-23045.70	34822.30	34822.30	66471.20	107.93	33.67
8.80	40 (e)	SLU	I	2	8	62.00	-138694.00	-3290.24	-6171.88	18931.80	18931.80	-138694.00	-12488.70	-12488.70	-21420.00	34983.20	34983.20	67198.40	106.88	34.39
8.80	40 (e)	SLU	I	3	8	0.00	-138947.00	-3330.79	-6183.15	18965.20	18965.20	-138947.00	-12486.40	-12486.40	-21404.40	34987.10	34987.10	67234.90	106.88	34.37
8.90	40 (e)	SLU	I	3	8	10.00	-138872.00	-3509.98	-6179.81	19288.70	19288.70	-138872.00	-12487.10	-12487.10	-21409.00	34985.90	34985.90	67224.10	106.88	34.37

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.00	1.48	ø8/ 8	2	2	40	SLU I	0.53	3234.56	2.50	54469.90	182042.00	0.43	402.66	2.50	66886.80	182042.00	16.840
1.48	8.90	ø8/24	2	2	40	SLU I	0.53	3234.80	2.50	18156.60	181869.00	0.43	1792.00	2.50	22295.60	181869.00	5.613

Pilastrata n. 8

Nodi: -5 25 18 8

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
	8R	50.00	60.00	5.30	C45/55	456.50	27.47	258.68	456.50	18.31	B450C	4500.00	3913.04
	8R	50.00	60.00	3.50	C45/55	456.50	27.47	258.68	456.50	18.31	B450C	4500.00	3913.04

Dati per verifiche di stabilità

Xg <m>	El	l ₀ <m>	λ	λ*	Xg <m>	El	l ₀ <m>	λ	λ*	Xg <m>	El	l ₀ <m>	λ	λ*	Xg <m>	El	l ₀ <m>	λ	λ*
---	1	8.90	61.66	46.93	---	1	8.90	61.66	46.87	---	2	8.90	61.66	46.87	---	2	8.90	61.66	46.97
---	3	8.90	61.66	46.97	---	3	8.90	61.66	46.93										

Stato limite ultimo - Verifiche a flessione/pressoflessione - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy,s <daNm>	MRdz,s <daNm>	α <grad>	ϵ_r	Sic.
0.00	1	SLV	1	8	0.00	-145962.00	-48927.70	-48927.70	-15825.30	-15825.30	-145962.00	-54593.60	-18511.20	205.31	4.41	1.121
8.18	1	SLV	1	8	818.00	-152771.00	42956.30	42956.30	20140.60	20140.60	-152771.00	51533.90	23828.90	32.34	4.07	1.197
8.18	1	SLV	2	8	0.00	-151656.00	42320.90	42320.90	20127.50	20127.50	-151656.00	51485.30	23902.90	32.34	4.08	1.211
8.80	1	SLV	2	8	62.00	-151191.00	46378.00	46378.00	22834.70	22834.70	-151191.00	50512.30	25086.90	33.75	4.05	1.091
8.80	1	SLV	3	8	0.00	-151709.00	46857.20	46857.20	22872.40	22872.40	-151709.00	50524.80	25084.20	33.75	4.05	1.082
8.90	1	SLV	3	8	10.00	-151634.00	48050.80	48050.80	23312.10	23312.10	-151634.00	50523.00	25084.60	33.75	4.05	1.056

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
0.00	21	SLE	R	1	8	0.00	-161922.00	-8274.77	-1777.35	0.00	54.29	965.27
0.00	22	SLE	R	1	8	0.00	-157583.00	-8276.40	-1759.11	0.00	54.29	947.70
0.00	26	SLE	Q	1	8	0.00	-153019.00	-8278.08	-1758.43	0.00	54.29	929.79
8.18	21	SLE	R	1	8	818.00	-155787.00	14783.20	2642.83	0.00	54.29	1185.54
8.18	22	SLE	R	1	8	818.00	-151448.00	14785.90	2626.14	0.00	54.29	1169.22
8.18	26	SLE	Q	1	8	818.00	-146884.00	14788.40	2643.51	4.52	49.76	1153.50
8.18	21	SLE	R	2	8	0.00	-154919.00	14773.70	2728.14	0.00	54.29	1184.79
8.18	22	SLE	R	2	8	0.00	-150597.00	14776.50	2709.04	0.00	54.29	1168.52
8.18	26	SLE	Q	2	8	0.00	-146317.00	14778.90	2705.69	4.52	49.76	1153.21
8.80	21	SLE	R	2	8	62.00	-154454.00	16509.30	3366.51	9.05	45.24	1268.83
8.80	22	SLE	R	2	8	62.00	-150132.00	16512.40	3351.18	9.05	45.24	1254.08
8.80	26	SLE	Q	2	8	62.00	-145852.00	16515.10	3361.34	9.05	45.24	1240.66
8.80	21	SLE	R	3	8	0.00	-154920.00	16536.70	3379.83	9.05	45.24	1271.90
8.80	22	SLE	R	3	8	0.00	-150587.00	16539.80	3364.97	9.05	45.24	1257.12
8.80	26	SLE	Q	3	8	0.00	-146034.00	16542.60	3391.01	9.05	45.24	1243.37
8.90	21	SLE	R	3	8	10.00	-154845.00	16818.70	3415.74	9.05	45.24	1283.78
8.90	22	SLE	R	3	8	10.00	-150512.00	16821.80	3404.28	9.05	45.24	1269.30
8.90	26	SLE	Q	3	8	10.00	-145959.00	16824.60	3439.42	13.57	40.72	1256.09

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.	
0.00	1.48	ø6/ 4	2	2	18	SLU	I	0.60	3664.19	2.50	55512.90	128899.00	0.50	787.29	2.50	67959.80	131500.00	15.150

Relazione di calcolo

0.00	1.48	ø6/ 4	2	2	17	SLU	0.60	3665.02	2.50	55512.90	128899.00	0.50	774.57	2.50	67959.80	131500.00	15.147
0.00	1.48	ø6/ 4	2	2	1(TG)	SLV	0.60	5563.48	2.50	55512.90	126677.00	0.50	17344.00	2.50	67959.80	129233.00	3.918
0.00	1.48	ø6/ 4	2	2	1(TG)	SLV	0.60	4649.26	2.50	55512.90	128404.00	0.50	17414.40	2.50	67959.80	130995.00	3.902
0.00	1.48	ø6/ 4	2	2	7(TG)	SLV	0.60	15516.60	2.50	55512.90	127678.00	0.50	5431.96	2.50	67959.80	130255.00	3.578
1.48	8.90	ø6/14	2	2	18	SLU	0.60	3664.92	2.50	15860.80	128899.00	0.50	787.29	2.50	19417.10	131500.00	4.328
1.48	8.90	ø6/14	2	2	28	SLU	0.60	4865.89	2.50	15860.80	128899.00	0.50	231.97	2.50	19417.10	131500.00	3.260
1.48	8.90	ø6/14	2	2	1(TG)	SLV	0.60	5563.48	2.50	15860.80	126677.00	0.50	17344.00	2.50	19417.10	129233.00	1.120
1.48	8.90	ø6/14	2	2	1(TG)	SLV	0.60	4649.26	2.50	15860.80	128404.00	0.50	17414.40	2.50	19417.10	130995.00	1.115
1.48	8.90	ø6/14	2	2	7(TG)	SLV	0.60	15516.60	2.50	15860.80	127678.00	0.50	5431.96	2.50	19417.10	130255.00	1.022

Dettagli costruttivi per la duttilità

- CC=9 $\alpha_e=0.53524$ $\omega_{wd}=0.09491$ $\mu\Phi_d=5.76$ $v_d=0.17533$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.14504$ $\mu\Phi_c=7.49942$
0.0508 >= 0.0309 [7.4.29]

- CC=9 $\alpha_e=0.53524$ $\omega_{wd}=0.09491$ $\mu\Phi_d=5.76$ $v_d=0.17533$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.17925$ $\mu\Phi_c=7.28188$
0.0508 >= 0.03287 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy,s <daNm>	M'ydy,s <daNm>	MRdy <daNm>	MRdz,s <daNm>	M'ydz,s <daNm>	MRdz <daNm>	α <grad>	ϵ_T	
0.00	40 (e)	SLU	I	1	8	0.00	-153019.00	-1758.43	6809.36	-8278.08	-153019.00	23207.90	23207.90	46880.60	-31498.70	-31498.70	-55110.90	300.94	29.46	
8.18	40 (e)	SLU	I	1	8	818.00	-146884.00	2643.51	-6536.35	14788.40	14788.40	-146884.00	-15147.30	-15147.30	-28172.80	34570.60	34570.60	64577.30	110.39	31.83
8.18	40 (e)	SLU	I	2	8	0.00	-146317.00	2705.69	-6511.09	14778.90	14778.90	-146317.00	-15152.50	-15152.50	-28165.00	34564.20	34564.20	64516.90	110.39	31.86
8.80	40 (e)	SLU	I	2	8	62.00	-145852.00	3361.34	-6490.40	16515.10	16515.10	-145852.00	-14624.80	-14624.80	-26754.10	34701.50	34701.50	65021.10	109.69	32.27
8.80	40 (e)	SLU	I	3	8	0.00	-146034.00	3391.01	-6498.52	16542.60	16542.60	-146034.00	-14622.80	-14622.80	-26747.10	34703.10	34703.10	65045.00	109.69	32.26
8.90	40 (e)	SLU	I	3	8	10.00	-145959.00	3439.42	-6495.18	16824.60	16824.60	-145959.00	-13449.20	-13449.20	-24635.50	34891.30	34891.30	65725.50	108.28	33.13

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.00	1.48	ø6/ 4	2	2	40	SLU I	0.53	2819.86	2.50	61278.60	183164.00	0.43	538.13	2.50	75247.70	183164.00	21.731
1.48	8.90	ø6/14	2	2	40	SLU I	0.53	2820.42	2.50	17508.20	182992.00	0.43	538.13	2.50	21499.30	182992.00	6.208

Pilastrata n. 10

Nodi: -7 10

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fcd (Inc) <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
	3R	50.00	60.00	5.30	C45/55	456.50	27.47	258.68	456.50	18.31	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ϵ_T	Sic.
0.00	5	SLV	1	3	0.00	-21030.90	-9723.08	-9723.08	40673.70	40673.70	-21030.90	-10466.80	47104.30	97.03	10.62	1.154
8.90	5	SLV	1	3	890.00	-14355.90	6317.10	6317.10	-40359.40	-40359.40	-14355.90	6891.18	-46106.20	274.22	12.71	1.141

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ_c <daN/cmq>	σ_f <daN/cmq>	
0.00	32	SLE	R	1	3	0.00	-21513.60	8093.76	-190.34	31.67	22.62	35.89	503.19
0.00	26	SLE	Q	1	3	0.00	-21572.90	218.30	-1546.26	0.00	54.29	10.20	139.90
8.90	32	SLE	R	1	3	890.00	-14838.60	-7981.75	2216.47	27.14	27.14	43.84	721.50
8.90	26	SLE	Q	1	3	890.00	-14897.90	-338.00	2594.09	18.10	36.19	12.32	159.23

Stato limite d'esercizio - Verifiche a fessurazione

Xg	CC	TCC	El	Sez.	X	N	My	Mz	c	s	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	Wk
<m>					<cm>	<daN>	<daNm>	<daNm>	<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cmq>		<mm>
8.90	26	SLE Q	1	3	890.00	-14897.90	2594.09	-338.00	44.00	194.00	0.50	24.00	159.73	4.52	135.21	56.38	0.02	0.00
8.90	36	SLE F	1	3	890.00	-14883.00	2489.35	-1866.82	44.00	122.00	0.50	24.00	147.04	4.52	111.28	139.73	0.04	0.01

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	bw _{,y} <cm>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	bw _{,z} <cm>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.00	1.48	ø6/ 4	2	2	18	SLU	0.60	80.98	2.50	55512.90	111304.00	0.50	672.29	2.50	67959.80	113550.00	>100
0.00	1.48	ø6/ 4	2	2	28	SLU	0.60	2696.82	2.50	55512.90	111286.00	0.50	314.49	2.50	67959.80	113531.00	20.585
0.00	1.48	ø6/ 4	2	2	1(TG)	SLV	0.60	6051.88	2.50	55512.90	109441.00	0.50	12218.50	2.50	67959.80	111649.00	5.562
0.00	1.48	ø6/ 4	2	2	15(TG)	SLV	0.60	11575.80	2.50	55512.90	109538.00	0.50	2043.54	2.50	67959.80	111749.00	4.796
1.48	8.90	ø6/18	2	2	18	SLU	0.60	80.98	2.50	12336.20	111103.00	0.50	672.29	2.50	15102.20	113345.00	22.464
1.48	8.90	ø6/18	2	2	28	SLU	0.60	2696.82	2.50	12336.20	111086.00	0.50	314.49	2.50	15102.20	113327.00	4.574
1.48	8.90	ø6/18	2	2	1(TG)	SLV	0.60	6051.88	2.50	12336.20	109441.00	0.50	12218.50	2.50	15102.20	111649.00	1.236
1.48	8.90	ø6/18	2	2	15(TG)	SLV	0.60	11575.80	2.50	12336.20	109538.00	0.50	2043.54	2.50	15102.20	111749.00	1.066

Dettagli costruttivi per la duttilità

- CC=13 $\alpha_e=0.53524$ $\omega_{wd}=0.09491$ $\mu\Phi_d=5.76$ $v_d=0.024222$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.14504$ $\mu\Phi_c=54.2837$
0.0508 >= -0.0259 [7.4.29]

- CC=13 $\alpha_e=0.53524$ $\omega_{wd}=0.09491$ $\mu\Phi_d=5.76$ $v_d=0.024222$ $E_{sy,d}=0.0018995$ $b_c/b_0=1.17925$ $\mu\Phi_c=52.709$
0.0508 >= -0.02562 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.00	40 (e)	SLU I	1	3	0.00	-21572.90	-1546.26	218.30	-428684.00	-35298.60	22965.00	143.44	38.64	19.871
8.90	40 (e)	SLU I	1	3	890.00	-14897.90	2594.09	-338.00	-14897.90	41956.80	10575.70	14.06	48.61	16.149

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <cm>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	b _{w,z} <cm>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.00	1.48	ø6/ 4	2	2	40	SLU I	0.50	62.51	2.50	32488.50	145228.00	0.40	465.21	2.50	40381.90	145228.00	86.804
1.48	8.90	ø6/18	2	2	40	SLU I	0.50	62.51	2.50	7219.66	145055.00	0.40	465.21	2.50	8973.76	145055.00	19.290

Pilastrata n. 12

Nodi: -6 -796 -792 12

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fcd (Inc) <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
3R		50.00	60.00	5.30	C45/55	456.50	27.47	258.68	456.50	18.31	B450C	4500.00	3913.04
3R		50.00	60.00	3.50	C45/55	456.50	27.47	258.68	456.50	18.31	B450C	4500.00	3913.04

Dati per verifiche di stabilità

Xg	El	l ₀	λ	λ*	Xg	El	l ₀	λ	λ*	Xg	El	l ₀	λ	λ*	Xg	El	l ₀	λ	λ*
<m>		<m>			<m>		<m>			<m>		<m>			<m>		<m>		
---	1	8.90	61.66	46.88	---	1	8.90	61.66	46.81	---	2	8.90	61.66	46.81	---	2	8.90	61.66	46.91
---	3	8.90	61.66	46.91	---	3	8.90	61.66	46.88										

Stato limite ultimo - Verifiche a flessione/pressoflessione - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy,s <daNm>	MRdz,s <daNm>	α <grad>	ε _y	Sic.
0.00	9	SLV	1	3	0.00	-145940.00	-48588.30	-48588.30	15896.90	15896.90	-145940.00	-54592.40	18511.20	154.69	4.41	1.128
8.18	9	SLV	1	3	818.00	-139805.00	42552.40	42552.40	-20078.40	-20078.40	-139805.00	51136.10	-24015.70	327.66	4.23	1.201
8.18	9	SLV	2	3	0.00	-151669.00	41916.10	41916.10	-20065.40	-20065.40	-151669.00	50523.80	-25084.20	326.25	4.05	1.214
8.80	9	SLV	2	3	62.00	-139425.00	45839.40	45839.40	-22771.40	-22771.40	-139425.00	50197.60	-25128.40	326.25	4.20	1.097
8.80	9	SLV	3	3	0.00	-139216.00	46333.20	46333.20	-22811.10	-22811.10	-139216.00	50191.70	-25129.00	326.25	4.20	1.087
8.90	9	SLV	3	3	10.00	-139141.00	47518.40	47518.40	-23250.90	-23250.90	-139141.00	50189.50	-25129.20	326.25	4.20	1.061

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cmq>	σ _f <daN/cmq>
0.00	32	SLE R	1	3	0.00	-165844.00	20440.70	523.80	22.62	31.67	104.58	1360.64
0.00	26	SLE Q	1	3	0.00	-153026.00	8362.66	-1753.59	0.00	54.29	68.31	932.46
8.18	32	SLE R	1	3	818.00	-159709.00	-18246.60	676.54	9.05	45.24	96.33	1261.33
8.18	26	SLE Q	1	3	818.00	-146891.00	-14749.30	2633.87	4.52	49.76	87.54	1151.77
8.18	32	SLE R	2	3	0.00	-158788.00	-18236.20	799.05	13.57	40.72	96.45	1261.94
8.18	26	SLE Q	2	3	0.00	-146311.00	-14740.00	2697.43	4.52	49.76	87.55	1151.48
8.80	32	SLE R	2	3	62.00	-158323.00	-19476.10	1264.93	22.62	31.67	101.92	1324.36
8.80	26	SLE Q	2	3	62.00	-145846.00	-16478.40	3343.26	9.05	45.24	95.09	1238.55
8.80	32	SLE R	3	3	0.00	-158827.00	-19510.10	1255.83	22.62	31.67	102.11	1327.02
8.80	26	SLE Q	3	3	0.00	-146043.00	-16507.30	3373.48	9.05	45.24	95.31	1241.38
8.90	32	SLE R	3	3	10.00	-158752.00	-19712.70	1233.53	22.62	31.67	102.74	1333.96
8.90	26	SLE Q	3	3	10.00	-145968.00	-16789.90	3421.95	13.57	40.72	96.43	1254.11

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <cm>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	b _{w,z} <cm>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.00	1.48	ø6/ 4	2	2	18	SLU	0.60	3671.91	2.50	55512.90	128899.00	0.50	785.22	2.50	67959.80	131500.00	15.118
0.00	1.48	ø6/ 4	2	2	28	SLU	0.60	10649.70	2.50	55512.90	128899.00	0.50	4.63	2.50	67959.80	131500.00	5.213
0.00	1.48	ø6/ 4	2	2	9(TG)	SLV	0.60	4649.25	2.50	55512.90	128408.00	0.50	17415.10	2.50	67959.80	130999.00	3.902
0.00	1.48	ø6/ 4	2	2	15(TG)	SLV	0.60	15516.80	2.50	55512.90	127680.00	0.50	5431.93	2.50	67959.80	130256.00	3.578
1.48	8.90	ø6/14	2	2	18	SLU	0.60	3672.83	2.50	15860.80	128899.00	0.50	785.22	2.50	19417.10	131500.00	4.318
1.48	8.90	ø6/14	2	2	28	SLU	0.60	9155.27	2.50	15860.80	128899.00	0.50	169.18	2.50	19417.10	131500.00	1.732
1.48	8.90	ø6/14	2	2	9(TG)	SLV	0.60	4649.25	2.50	15860.80	128408.00	0.50	17415.10	2.50	19417.10	130999.00	1.115
1.48	8.90	ø6/14	2	2	15(TG)	SLV	0.60	15516.80	2.50	15860.80	127680.00	0.50	5431.93	2.50	19417.10	130256.00	1.022

Dettagli costruttivi per la duttilità

- CC=1 α_e=0.53524 ω_{wd}=0.09491 μΦ_d=5.76 v_d=0.17537 E_{sy,r d}=0.0018995 b_c/b₀=1.14504 μΦ_c=7.49777
0.0508 >= 0.03091 [7.4.29]
- CC=1 α_e=0.53524 ω_{wd}=0.09491 μΦ_d=5.76 v_d=0.17537 E_{sy,r d}=0.0018995 b_c/b₀=1.17925 μΦ_c=7.28028
0.0508 >= 0.03288 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy,s <daNm>	M'ydy,s <daNm>	MRdy <daNm>	MRdz,s <daNm>	M'ydz,s <daNm>	MRdz <daNm>	α <grad>	ε _y
0.00	40 (e)	SLU I	1	3	0.00	-153026.00	-1753.59	-6809.66	8362.66	8362.66	-153026.00	-12034.50	-12034.50	-33814.80	16069.30	16069.30	41752.20	120.94	27.1
8.18	40 (e)	SLU I	1	3	818.00	-146891.00	2633.87	6536.65	-14749.30	-14749.30	-146891.00	7482.51	7482.51	21790.90	-17785.80	-17785.80	-48770.80	289.69	29.1
8.18	40 (e)	SLU I	2	3	0.00	-146311.00	2697.43	6510.85	-14740.00	-14740.00	-146311.00	7485.55	7485.55	21766.20	-17795.60	-17795.60	-48715.60	289.69	29.2
8.80	40 (e)	SLU I	2	3	62.00	-145846.00	3343.26	6490.16	-16478.40	-16478.40	-145846.00	6899.08	6899.08	19697.40	-17885.80	-17885.80	-49484.20	288.28	29.3
8.80	40 (e)	SLU I	3	3	0.00	-146043.00	3373.48	6498.91	-16507.30	-16507.30	-146043.00	6898.03	6898.03	19708.10	-17882.30	-17882.30	-49502.00	288.28	29.5
8.90	40 (e)	SLU I	3	3	10.00	-145968.00	3421.95	6495.58	-16789.90	-16789.90	-145968.00	6898.43	6898.43	19704.00	-17883.60	-17883.60	-49495.20	288.28	29.5

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	b _{w,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.00	1.48	ø6/ 4	2	2	40	SLU I	0.47	2825.43	2.50	30419.70	149441.00	0.38	536.37	2.50	38208.30	149441.00	10.766
1.48	8.90	ø6/14	2	2	40	SLU I	0.47	2826.13	2.50	8691.36	149268.00	0.38	536.37	2.50	10916.70	149268.00	3.075

Pilastrata n. 13

Nodi: -4 -795 -791 13

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
8R		50.00	60.00	5.50	C45/55	456.50	27.47	258.68	456.50	18.31	B450C	4500.00	3913.04
8R		50.00	60.00	3.50	C45/55	456.50	27.47	258.68	456.50	18.31	B450C	4500.00	3913.04

Dati per verifiche di stabilità

Xg <m>	El <m>	l ₀ <m>	λ	λ*	Xg <m>	El <m>	l ₀ <m>	λ	λ*	Xg <m>	El <m>	l ₀ <m>	λ	λ*	Xg <m>	El <m>	l ₀ <m>	λ	λ*
---	1	8.90	61.66	48.16	---	1	8.90	61.66	48.10	---	2	8.90	61.66	48.10	---	2	8.90	61.66	48.19
---	3	8.90	61.66	48.19	---	3	8.90	61.66	48.16										

Stato limite ultimo - Verifiche a flessione/pressoflessione - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy,s <daNm>	MRdz,s <daNm>	α <grad>	ε _y	Sic.
0.00	1	SLV	1	8	0.00	-146660.00	47028.10	47028.10	19164.70	19164.70	-146660.00	53459.70	20622.70	28.12	4.28	1.128
8.18	1	SLV	1	8	818.00	-138841.00	-40739.10	-40739.10	-23718.90	-23718.90	-138841.00	-48125.90	-27497.70	216.56	4.15	1.176
8.18	1	SLV	2	8	0.00	-138415.00	-40433.20	-40433.20	-23704.30	-23704.30	-138415.00	-48112.00	-27497.40	216.56	4.15	1.182
8.80	5	SLV	2	8	62.00	-136195.00	-18557.60	-18557.60	-45230.70	-45230.70	-136195.00	-19975.40	-47786.60	250.31	4.60	1.059
8.80	1	SLV	3	8	0.00	-138151.00	-44747.00	-44747.00	-26971.30	-26971.30	-138151.00	-47119.40	-28554.60	217.97	4.13	1.055
8.90	1	SLV	3	8	10.00	-138076.00	-45925.70	-45925.70	-27495.50	-27495.50	-138076.00	-47117.10	-28554.40	217.97	4.13	1.029

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _f <daN/cm²>
0.00	32	SLE R	1	8	0.00	-157061.00	22058.80	3274.91	22.62	31.67	117.32	1500.30
0.00	26	SLE Q	1	8	0.00	-145821.00	9635.70	1004.52	0.00	54.29	68.14	923.03
8.18	32	SLE R	1	8	818.00	-150926.00	-20437.30	-4216.58	22.62	31.67	113.15	1449.57
8.18	26	SLE Q	1	8	818.00	-139686.00	-17008.00	-2273.11	18.10	36.19	92.68	1202.44
8.18	32	SLE R	2	8	0.00	-150205.00	-20426.10	-4247.94	22.62	31.67	113.11	1448.32
8.18	26	SLE Q	2	8	0.00	-139188.00	-16997.60	-2290.00	18.10	36.19	92.60	1201.07
8.80	32	SLE R	2	8	62.00	-149740.00	-21842.40	-5351.97	22.62	31.67	122.20	1551.76
8.80	26	SLE Q	2	8	62.00	-138723.00	-18994.90	-3276.00	22.62	31.67	102.94	1318.77
8.80	32	SLE R	3	8	0.00	-150230.00	-21882.20	-5430.88	22.62	31.67	122.67	1557.84
8.80	26	SLE Q	3	8	0.00	-138984.00	-19029.60	-3317.10	22.62	31.67	103.23	1322.52
8.90	32	SLE R	3	8	10.00	-150155.00	-22114.70	-5666.63	22.62	31.67	124.38	1577.32
8.90	26	SLE Q	3	8	10.00	-138909.00	-19355.30	-3495.65	22.62	31.67	105.05	1343.04

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	b _{w,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.00	1.48	ø8/ 8	2	2	28	SLU	0.60	11515.10	2.50	49344.90	128899.00	0.50	1370.37	2.50	60408.70	131500.00	4.285
0.00	1.48	ø8/ 8	2	2	1 (TG)	SLV	0.60	6434.60	2.50	49344.90	126528.00	0.50	16947.60	2.50	60408.70	129081.00	3.564
0.00	1.48	ø8/ 8	2	2	15 (TG)	SLV	0.60	15523.80	2.50	49344.90	126997.00	0.50	5009.43	2.50	60408.70	129559.00	3.179
1.48	8.90	ø8/24	2	2	28	SLU	0.60	9928.79	2.50	16448.30	128899.00	0.50	3438.07	2.50	20136.20	131500.00	1.657
1.48	8.90	ø8/24	2	2	1 (TG)	SLV	0.60	6434.60	2.50	16448.30	126528.00	0.50	16947.60	2.50	20136.20	129081.00	1.188
1.48	8.90	ø8/24	2	2	15 (TG)	SLV	0.60	15523.80	2.50	16448.30	126997.00	0.50	5009.43	2.50	20136.20	129559.00	1.060

Dettagli costruttivi per la duttilità

- CC=13 α_e=0.49163 ω_{nd}=0.08472 μΦ_d=5.76 ν_d=0.16252 E_{sy,d}=0.0018995 b_c/b₀=1.14943 μΦ_c=7.20019 0.04165 >= 0.02632 [7.4.29]
- CC=13 α_e=0.49163 ω_{nd}=0.08472 μΦ_d=5.76 ν_d=0.16252 E_{sy,d}=0.0018995 b_c/b₀=1.18483 μΦ_c=6.98501 0.04165 >= 0.02821 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy,s <daNm>	M'ydy,s <daNm>	MRdy <daNm>	MRdz,s <daNm>	M'ydz,s <daNm>	MRdz <daNm>	α <grad>	ε _y
0.00	40 (e)	SLU I	1	8	0.00	-145821.00	1004.52	-6489.04	9635.70	9635.70	-145821.00	-20256.30	-20256.30	-40193.00	33027.30	33027.30	58008.30	116.72	30.5
8.18	40 (e)	SLU I	1	8	818.00	-139686.00	-2273.11	6216.03	-17008.00	-17008.00	-139686.00	13656.40	13656.40	24943.20	-34754.80	-34754.80	-64869.50	288.28	33.6
8.18	40 (e)	SLU I	2	8	0.00	-139188.00	-2290.00	6193.88	-16997.60	-16997.60	-139188.00	13662.10	13662.10	24966.40	-34750.30	-34750.30	-64800.90	288.28	33.6
8.80	40 (e)	SLU I	2	8	62.00	-138723.00	-3276.00	6173.19	-18994.90	-18994.90	-138723.00	12488.40	12488.40	21418.10	-34983.70	-34983.70	-67202.80	286.88	34.3
8.80	40 (e)	SLU I	3	8	0.00	-138984.00	-3317.10	6184.78	-19029.60	-19029.60	-138984.00	12486.00	12486.00	21402.10	-34987.70	-34987.70	-67240.10	286.88	34.3
8.90	40 (e)	SLU I	3	8	10.00	-138909.00	-3495.65	6181.44	-19355.30	-19355.30	-138909.00	12486.70	12486.70	21406.80	-34986.60	-34986.60	-67229.40	286.88	34.3

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	Vsdu _{,y} <daN>	ctgθ _{,y}	VRsd _{,y} <daN>	VRcd _{,y} <daN>	b _{w,z} <m>	Vsdu _{,z} <daN>	ctgθ _{,z}	VRsd _{,z} <daN>	VRcd _{,z} <daN>	Sic.
0.00	1.48	ø8/ 8	2	2	40	SLU I	0.53	3257.18	2.50	54469.90	182047.00	0.43	400.69	2.50	66886.80	182047.00	16.723
1.48	8.90	ø8/24	2	2	40	SLU I	0.53	3257.43	2.50	18156.60	181875.00	0.43	1785.53	2.50	22295.60	181875.00	5.574

Pilastrata n. 14

Nodi: -2 -794 -790 14

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd (Inc) <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
8R		50.00	60.00	5.50	C45/55	456.50	27.47	258.68	456.50	18.31	4500.00	3913.04
8R		50.00	60.00	3.50	C45/55	456.50	27.47	258.68	456.50	18.31	4500.00	3913.04

Dati per verifiche di stabilità

Xg <m>	El <m>	l ₀ <m>	λ	λ*	Xg <m>	El <m>	l ₀ <m>	λ	λ*	Xg <m>	El <m>	l ₀ <m>	λ	λ*	Xg <m>	El <m>	l ₀ <m>	λ	λ*
---	1	8.90	61.66	48.88	---	1	8.90	61.66	48.81	---	2	8.90	61.66	48.81	---	2	8.90	61.66	48.93
---	3	8.90	61.66	48.93	---	3	8.90	61.66	48.88										

Stato limite ultimo - Verifiche a flessione/pressoflessione - Controlli di stabilità

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy,s <daNm>	MRdz,s <daNm>	α <grad>	ε _y	Sic.
0.00	9	SLV	1	8	0.00	-137039.00	-48779.30	-48779.30	19880.10	19880.10	-137039.00	-56673.80	23354.00	151.88	4.29	1.164
8.18	9	SLV	1	8	818.00	-130904.00	42885.30	42885.30	-23120.80	-23120.80	-130904.00	53343.40	-28286.20	326.25	4.20	1.239
8.18	9	SLV	2	8	0.00	-130156.00	42526.40	42526.40	-23104.90	-23104.90	-130156.00	53318.70	-28298.10	326.25	4.21	1.247
8.80	9	SLV	2	8	62.00	-129691.00	47301.70	47301.70	-26334.00	-26334.00	-129691.00	52448.50	-29573.00	324.84	4.19	1.112
8.80	9	SLV	3	8	0.00	-130101.00	47580.40	47580.40	-26384.40	-26384.40	-130101.00	52455.00	-29568.30	324.84	4.18	1.107
8.90	9	SLV	3	8	10.00	-130026.00	49025.90	49025.90	-26910.10	-26910.10	-130026.00	53314.40	-28300.20	326.25	4.21	1.079

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm²>	σ _ε <daN/cm²>
0.00	32	SLE R	1	8	0.00	-155129.00	21099.00	-86.00	27.14	36.19	98.29	21070.78
0.00	26	SLE Q	1	8	0.00	-141326.00	8550.76	-2115.61	0.00	63.33	63.99	867.96
8.18	32	SLE R	1	8	818.00	-148994.00	-18556.10	1765.46	22.62	40.72	93.61	1216.25
8.18	26	SLE Q	1	8	818.00	-135191.00	-15082.00	3280.28	9.05	54.29	83.98	1096.10
8.18	32	SLE R	2	8	0.00	-147952.00	-18544.80	1730.30	22.62	40.72	93.28	1211.33
8.18	26	SLE Q	2	8	0.00	-134466.00	-15071.80	3258.85	9.05	54.29	83.74	1092.68
8.80	32	SLE R	2	8	62.00	-147487.00	-19729.50	3014.77	27.14	36.19	100.92	1299.90
8.80	26	SLE Q	2	8	62.00	-134001.00	-16845.90	4497.97	18.10	45.24	93.17	1201.88
8.80	32	SLE R	3	8	0.00	-148139.00	-19767.20	2999.39	27.14	36.19	101.11	1302.70
8.80	26	SLE Q	3	8	0.00	-134369.00	-16878.20	4523.26	18.10	45.24	93.41	1205.10
8.90	32	SLE R	3	8	10.00	-148064.00	-19961.50	3317.50	27.14	36.19	102.71	1321.43
8.90	26	SLE Q	3	8	10.00	-134294.00	-17167.10	4847.74	18.10	45.24	95.38	1227.95

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <cm>	V _{sdu,y} <daN>	ctgθ _y	VR _{sd,y} <daN>	VR _{cd,y} <daN>	b _{w,z} <cm>	V _{sdu,z} <daN>	ctgθ _z	VR _{sd,z} <daN>	VR _{cd,z} <daN>	Sic.
0.00	1.48	ø8/ 8	2	2	18	SLU	0.60	3766.14	2.50	49344.90	128899.00	0.50	958.85	2.50	60408.70	131500.00	13.102
0.00	1.48	ø8/ 8	2	2	28	SLU	0.60	11120.40	2.50	49344.90	128899.00	0.50	233.80	2.50	60408.70	131500.00	4.437
0.00	1.48	ø8/ 8	2	2	1(TG)	SLV	0.60	5158.32	2.50	49344.90	125299.00	0.50	18718.70	2.50	60408.70	127827.00	3.227
0.00	1.48	ø8/ 8	2	2	7(TG)	SLV	0.60	16797.10	2.50	49344.90	126131.00	0.50	5555.43	2.50	60408.70	128676.00	2.938
1.48	8.90	ø8/24	2	2	18	SLU	0.60	3766.65	2.50	16448.30	128899.00	0.50	4747.64	2.50	20136.20	131500.00	4.241
1.48	8.90	ø8/24	2	2	28	SLU	0.60	9514.92	2.50	16448.30	128899.00	0.50	4260.63	2.50	20136.20	131500.00	1.729
1.48	8.90	ø8/24	2	2	1(TG)	SLV	0.60	5158.32	2.50	16448.30	125299.00	0.50	18718.70	2.50	20136.20	127827.00	1.076
1.48	8.90	ø8/24	2	2	13(TG)	SLV	0.60	16342.10	2.50	16448.30	125551.00	0.50	6400.57	2.50	20136.20	128085.00	1.006

Dettagli costruttivi per la duttilità

- CC=9 α_e=0.49163 ω_{wd}=0.08472 μΦ_d=5.76 v_d=0.1604 E_{sy,d}=0.0018995 b_c/b₀=1.14943 μΦ_c=7.29574
0.04165 >= 0.02551 [7.4.29]
- CC=9 α_e=0.49163 ω_{wd}=0.08472 μΦ_d=5.76 v_d=0.1604 E_{sy,d}=0.0018995 b_c/b₀=1.18483 μΦ_c=7.07771
0.04165 >= 0.02738 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione - Controlli di stabilità

Xg	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy,s <daNm>	M'ydy,s <daNm>	MRdy <daNm>	MRdz,s <daNm>	M'ydz,s <daNm>	MRdz <daNm>	α <grad>	ε _y
0.00	40(e)	SLU I	1	8	0.00	-141326.00	-2115.61	-6289.01	8550.76	8550.76	-568123.00	-22604.10	-22604.10	-44089.30	37901.10	37901.10	62427.40	118.12	30.6
8.18	40(e)	SLU I	1	8	818.00	-135191.00	3280.28	-6016.00	-15082.00	-15082.00	-135191.00	-16079.30	-16079.30	-27119.00	-40096.40	-40096.40	-71267.30	250.31	32.7
8.18	40(e)	SLU I	2	8	0.00	-134466.00	3258.85	-5983.72	-15071.80	-15071.80	-134466.00	-16090.30	-16090.30	-27148.40	-40092.80	-40092.80	-71170.20	250.31	32.8
8.80	40(e)	SLU I	2	8	62.00	-134001.00	4497.97	-5963.02	-16845.90	-16845.90	-134001.00	-14644.10	-14644.10	-25125.80	-40389.80	-40389.80	-71767.00	251.72	33.7
8.80	40(e)	SLU I	3	8	0.00	-134369.00	4523.26	-5979.43	-16878.20	-16878.20	-134369.00	-14639.80	-14639.80	-25108.80	-40393.80	-40393.80	-71817.60	251.72	33.7
8.90	40(e)	SLU I	3	8	10.00	-134294.00	4847.74	-5976.09	-17167.10	-17167.10	-134294.00	-14640.70	-14640.70	-25112.30	-40392.90	-40392.90	-71807.30	251.72	33.7

Stato limite ultimo - Verifiche a taglio

X0	X1	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <cm>	V _{sdu,y} <daN>	ctgθ _y	VR _{sd,y} <daN>	VR _{cd,y} <daN>	b _{w,z} <cm>	V _{sdu,z} <daN>	ctgθ _z	VR _{sd,z} <daN>	VR _{cd,z} <daN>	Sic.
0.00	1.48	ø8/ 8	2	2	40	SLU I	0.53	2889.09	2.50	54469.90	181350.00	0.43	659.64	2.50	66886.80	181350.00	18.854
1.48	8.90	ø8/24	2	2	40	SLU I	0.53	2889.47	2.50	18156.60	181177.00	0.43	3244.84	2.50	22295.60	181177.00	6.284

Pilastrata n. 15

Nodi: -8 28 27 15

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B	H	Cf	Cls	Fck	Fctk	Fcd	Fcd (Inc)	Fctd	Tp	Fyk	Fyd
------	------	---	---	----	-----	-----	------	-----	-----------	------	----	-----	-----

Relazione di calcolo

		<cm>	<cm>	<cm>		<daN/cm>	<daN/cm>	<daN/cm>	<daN/cm>	<daN/cm>		<daN/cm>	<daN/cm>
8R		50.00	60.00	5.30	C45/55	456.50	27.47	258.68	456.50	18.31	B450C	4500.00	3913.04
8R		50.00	60.00	3.50	C45/55	456.50	27.47	258.68	456.50	18.31	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	My ver. <daNm>	Mz <daNm>	Mz ver. <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.00	13	SLV	1	8	0.00	-21223.60	9939.16	9939.16	40508.20	40508.20	-21223.60	12113.30	46932.10	81.56	9.98	1.162
8.18	13	SLV	1	8	818.00	-15088.60	-6388.29	-6388.29	-34476.20	-34476.20	-15088.60	-8755.18	-46115.10	264.38	11.72	1.339
8.18	13	SLV	2	8	0.00	-14546.00	-6383.93	-6383.93	-34125.70	-34125.70	-14546.00	-8763.21	-46013.40	264.38	11.75	1.349
8.80	13	SLV	2	8	62.00	-14081.00	-7609.03	-7609.03	-36377.40	-36377.40	-14081.00	-9674.49	-45864.40	263.67	11.35	1.261
8.80	13	SLV	3	8	0.00	-14261.90	-7617.92	-7617.92	-36645.10	-36645.10	-14261.90	-8767.41	-45960.10	264.38	11.76	1.250
8.90	13	SLV	3	8	10.00	-14186.90	-7817.49	-7817.49	-37772.90	-37772.90	-14186.90	-8768.52	-45946.00	264.38	11.77	1.213

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	Mz <daNm>	My <daNm>	AfT <cmq>	AfC <cmq>	σ _c <daN/cm>	σ _f <daN/cm>
0.00	32	SLE R	1	8	0.00	-21997.10	8420.19	11289.40	36.19	18.10	85.18	1370.07
0.00	26	SLE Q	1	8	0.00	-21793.20	210.86	1784.72	0.00	54.29	10.84	147.90
8.18	32	SLE R	1	8	818.00	-15862.10	-7109.29	-4755.93	27.14	27.14	51.35	788.05
8.18	26	SLE Q	1	8	818.00	-15658.20	-279.93	-3662.05	22.62	31.67	16.33	205.57
8.18	32	SLE R	2	8	0.00	-15290.60	-7058.46	-4754.46	27.14	27.14	51.15	793.46
8.18	26	SLE Q	2	8	0.00	-15458.80	-279.27	-3659.56	22.62	31.67	16.32	205.05
8.80	32	SLE R	2	8	62.00	-14825.60	-7455.55	-3756.42	27.14	27.14	48.47	769.71
8.80	26	SLE Q	2	8	62.00	-14993.80	-357.02	-4065.97	22.62	31.67	18.26	226.04
8.80	32	SLE R	3	8	0.00	-14953.90	-7553.98	-3760.57	27.14	27.14	48.91	777.90
8.80	26	SLE Q	3	8	0.00	-14750.60	-369.94	-4070.78	22.62	31.67	18.33	226.44
8.90	32	SLE R	3	8	10.00	-14878.90	-7760.75	-3600.26	27.14	27.14	49.08	789.65
8.90	26	SLE Q	3	8	10.00	-14675.60	-387.04	-4137.35	27.14	27.14	18.67	230.10

Stato limite d'esercizio - Verifiche a fessurazione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm>	ε _{sm}	W _k <mm>
0.00	36	SLE F	1	8	0.00	-21778.50	3667.74	1852.40	44.00	194.00	0.50	24.00	140.35	4.52	98.68	147.09	0.04	0.01
8.18	26	SLE Q	1	8	818.00	-15658.20	-3662.05	-279.93	44.00	194.00	0.50	24.00	171.80	9.05	315.92	131.54	0.04	0.01
8.18	36	SLE F	1	8	818.00	-15643.50	-3845.19	-1645.57	44.00	194.00	0.50	24.00	173.43	4.52	161.04	227.76	0.07	0.02
8.18	26	SLE Q	2	8	0.00	-15458.80	-3659.56	-279.27	44.00	194.00	0.50	24.00	173.06	9.05	320.65	133.96	0.04	0.01
8.18	36	SLE F	2	8	0.00	-15430.80	-3842.94	-1630.99	44.00	194.00	0.50	24.00	174.68	4.52	163.39	229.84	0.07	0.02
8.80	26	SLE Q	2	8	62.00	-14993.80	-4065.97	-357.02	44.00	194.00	0.50	24.00	182.15	9.05	354.93	182.37	0.05	0.02
8.80	36	SLE F	2	8	62.00	-14965.80	-3964.48	-1783.74	44.00	194.00	0.50	24.00	178.74	4.52	171.03	258.85	0.08	0.02
8.80	26	SLE Q	3	8	0.00	-14750.60	-4070.78	-369.94	44.00	194.00	0.50	24.00	182.72	9.05	357.09	187.18	0.05	0.02
8.80	36	SLE F	3	8	0.00	-14738.60	-3969.11	-1806.75	44.00	194.00	0.50	24.00	179.77	4.52	172.99	264.53	0.08	0.02
8.90	26	SLE Q	3	8	10.00	-14675.60	-4137.35	-387.04	44.00	194.00	0.50	24.00	183.68	9.05	360.71	195.66	0.06	0.02
8.90	36	SLE F	3	8	10.00	-14663.60	-3989.65	-1861.76	44.00	194.00	0.50	24.00	180.05	4.52	173.51	271.50	0.08	0.02

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	V _{sdu,y} <daN>	ctgθ _y	V _{Rsd,y} <daN>	V _{Rcd,y} <daN>	b _{w,z} <m>	V _{sdu,z} <daN>	ctgθ _z	V _{Rsd,z} <daN>	V _{Rcd,z} <daN>	Sic.
0.00	1.48	ø6/ 4	2	28		SLU	0.60	2835.68	2.50	55512.90	111381.00	0.50	8251.01	2.50	67959.80	113628.00	8.237
0.00	1.48	ø6/ 4	2	211 (TG)	SLV	0.60	5453.80	2.50	55512.90	109446.00	0.50	12076.10	2.50	67959.80	111654.00	5.628	
0.00	1.48	ø6/ 4	2	25 (TG)	SLV	0.60	11564.90	2.50	55512.90	109515.00	0.50	1709.54	2.50	67959.80	111725.00	4.800	
1.48	8.90	ø6/18	2	28		SLU	0.60	3067.36	2.50	12336.20	111180.00	0.50	6281.06	2.50	15102.20	113424.00	2.404
1.48	8.90	ø6/18	2	211 (TG)	SLV	0.60	5453.80	2.50	12336.20	109446.00	0.50	12076.10	2.50	15102.20	111654.00	1.251	
1.48	8.90	ø6/18	2	25 (TG)	SLV	0.60	11564.90	2.50	12336.20	109515.00	0.50	1709.54	2.50	15102.20	111725.00	1.067	

Dettagli costruttivi per la duttilità

- CC=5 α_e=0.53524 ω_{nd}=0.09491 μΦ_d=5.76 v_d=0.024494 E_{sy},d=0.0018995 b_c/b₀=1.14504 μΦ_c=53.6823
0.0508 >= -0.02579 [7.4.29]
- CC=5 α_e=0.53524 ω_{nd}=0.09491 μΦ_d=5.76 v_d=0.024494 E_{sy},d=0.0018995 b_c/b₀=1.17925 μΦ_c=52.1251
0.0508 >= -0.02552 [7.4.29]

Verifiche di resistenza al fuoco

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	Sez.	X <cm>	N <daN>	My <daNm>	Mz <daNm>	Nu <daN>	MRdy <daNm>	MRdz <daNm>	α <grad>	ε _y	Sic.
0.00	40 (e)	SLU I	1	8	0.00	-21793.20	1784.72	210.86	-568123.00	53075.20	29152.50	30.94	42.12	26.069
8.18	40 (e)	SLU I	1	8	818.00	-15658.20	-3662.05	-279.93	-15658.20	-59473.70	11270.70	165.94	53.45	16.231
8.18	40 (e)	SLU I	2	8	0.00	-15458.80	-3659.56	-279.27	-15458.80	-59436.90	11268.30	165.94	53.48	16.239
8.80	40 (e)	SLU I	2	8	62.00	-14993.80	-4065.97	-357.02	-14993.80	-59946.20	9309.58	167.34	55.02	14.718
8.80	40 (e)	SLU I	3	8	0.00	-14750.60	-4070.78	-369.94	-14750.60	-59898.20	9312.91	167.34	55.08	14.696
8.90	40 (e)	SLU I	3	8	10.00	-14675.60	-4137.35	-387.04	-14675.60	-59883.40	9313.95	167.34	55.10	14.464

Stato limite ultimo - Verifiche a taglio

X0 <m>	X1 <m>	Staff.	Br _y	Br _z	CC	TCC	b _{w,y} <m>	V _{sdu,y} <daN>	ctgθ _y	V _{Rsd,y} <daN>	V _{Rcd,y} <daN>	b _{w,z} <m>	V _{sdu,z} <daN>	ctgθ _z	V _{Rsd,z} <daN>	V _{Rcd,z} <daN>	Sic.
0.00	1.48	ø6/ 4	2	240	SLU I	0.54	60.00	2.50	63512.10	173731.00	0.44	665.86	2.50	77578.70	173731.00	>100	
1.48	8.90	ø6/18	2	240	SLU I	0.54	170.96	2.50	14113.80	173558.00	0.44	665.86	2.50	17239.70	173558.00	25.891	

Verifiche aste in acciaio

Simbologia

Φ_y	=	Coefficiente Φ per inflessione intorno all'asse y(c)
Φ_z	=	Coefficiente Φ per inflessione intorno all'asse z(e)
$\alpha_{my}, \alpha_{mz}, \alpha_{LT}$	=	Coefficienti correttivi per il momento flettente
χ_y	=	Coefficiente χ di riduzione per instabilità intorno all'asse y(c)
χ_z	=	Coefficiente χ di riduzione per instabilità intorno all'asse z(e)
λ^*_y	=	Snellezza adimensionale per inflessione intorno all'asse y(c)
λ^*_z	=	Snellezza adimensionale per inflessione intorno all'asse z(e)
λ_y	=	Snellezza per inflessione intorno all'asse y(c)
λ_z	=	Snellezza per inflessione intorno all'asse z(e)
$\sigma_{TD,max}$	<daN/cm ² >	=Tensione ideale massima
σ_M	<daN/cm ² >	=Tensione normale per momento flettente
σ_N	<daN/cm ² >	=Tensione normale per sforzo normale
τ	<daN/cm ² >	=Tensione tangenziale per taglio e/o torsione
A_{eff}	<cm ² >	=Area effettiva per trazione
A_{net}	<cm ² >	=Area netta per compressione
A_{area}	<cm ² >	=Area
$A_{tag,y}$	<cm ² >	=Area resistente a taglio in dir. Y
$A_{tag,z}$	<cm ² >	=Area resistente a taglio in dir. Z
CC		=Numero della combinazione delle condizioni di carico elementari
Cod.		=Codice
Curva		=Curva di instabilità adottata
D	<cm>	=Distanza
F_{yk}	<daN/cm ² >	=Tensione caratteristica di snervamento dell'acciaio
F_{yt}	<daN/cm ² >	=Tensione caratteristica di rottura
I_y	<cm ⁴ >	=Raggio giratorio d'inerzia rispetto all'asse Y
I_z	<cm ⁴ >	=Raggio giratorio d'inerzia rispetto all'asse Z
J_0	<cm ⁶ >	=Costante di ingobbamento
J_y	<cm ⁴ >	=Momento d'inerzia rispetto all'asse Y
J_z	<cm ⁴ >	=Momento d'inerzia rispetto all'asse Z
$K_E\phi$		=Fattore di riduzione del modulo di elasticità dell'acciaio in funzione della temperatura
$K_y\phi$		=Fattore di riduzione della resistenza a snervamento dell'acciaio in funzione della temperatura
$K_{yy}, K_{yz}, K_{zy}, K_{zz}$		=Coefficienti di interazione
L	<m>	=Lunghezza dell'asta
M_{Ny}, c, Rd	<daNm>	=Resistenza di calcolo a pressoflessione intorno all'asse Y
M_{Nz}, c, Rd	<daNm>	=Resistenza di calcolo a pressoflessione intorno all'asse Z
M_x	<daNm>	=Momento torcente intorno all'asse X
M_y	<daNm>	=Momento flettente intorno all'asse Y
$M_{y,Ed}$	<daNm>	=Momento flettente di calcolo intorno all'asse Y
$M_{y,V,c,Rd}$	<daNm>	=Resistenza di calcolo a flessione ridotta per taglio intorno all'asse Y
M_z	<daNm>	=Momento flettente intorno all'asse Z
$M_{z,Ed}$	<daNm>	=Momento flettente di calcolo intorno all'asse Z
$M_{z,V,c,Rd}$	<daNm>	=Resistenza di calcolo a flessione ridotta per taglio intorno all'asse Z
N	<daN>	=Sforzo normale
N_{Ed}	<daN>	=Forza assiale di calcolo
$N_{c,Rd}$	<daN>	=Resistenza a compressione
$N_{cr,y}$	<daN>	=Sforzo normale critico euleriano per inflessione intorno all'asse y(c)
$N_{cr,z}$	<daN>	=Sforzo normale critico euleriano per inflessione intorno all'asse z(e)
$N_{pl,Rd}$	<daN>	=Resistenza plastica a trazione per sezione lorda
$N_{t,Rd}$	<daN>	=Resistenza a trazione ultima
$N_{u,Rd}$	<daN>	=Resistenza a rottura di trazione per sezione netta
Sez.		=Numero della sezione
Temp.	<°C>	=Temperatura
Tipo		=Tipologia L = Sezione a L Ldx = L destra R = Rettangolare Rc = Rettangolare cava
Tp		=Tipo di acciaio
T_y	<daN>	=Taglio in dir. Y
T_z	<daN>	=Taglio in dir. Z
V_{Ed}	<daN>	=Forza di taglio di calcolo
$V_{c,Rd}$	<daN>	=Resistenza a taglio
$V_{c,Rd,Red}$	<daN>	=Resistenza a taglio ridotta
$W_{y,plas}$	<cm ³ >	=Modulo di resistenza plastico intorno all'asse Y
W_{ymin}	<cm ³ >	=Modulo di resistenza minimo rispetto all'asse Y
$W_{z,plas}$	<cm ³ >	=Modulo di resistenza plastico intorno all'asse Z
W_{zmin}	<cm ³ >	=Modulo di resistenza minimo rispetto all'asse Z
X_l	<m>	=Coordinata progressiva (dal nodo iniziale dell'asta) in cui viene effettuato il progetto/verifica
$f_{z,g}$	<cm>	=Freccia in direzione Z globale
$f_{z,l}$	<cm>	=Freccia in direzione Z locale

Caratteristiche profilati utilizzati

Sez.	Cod.	Tipo	D	Area	Anet	Aeff	Jy	Jz	Iy	Iz	Wymin	Wzmin	Tp			Fyk	Fyt
			<cm>	<cm ² >	<cm ² >	<cm ² >	<cm ⁴ >	<cm ⁴ >	<cm ⁴ >	<cm ⁴ >	<cm ³ >	<cm ³ >				<daN/cm ² >	<daN/cm ² >
6	RC80x80x3	Rc	--	9.24	9.24	9.24	91.45	91.45	3.15	3.15	22.86	22.86	S275H UNI EN 10210-1			2750.00	4300.00
7	RC60x60x3	Rc	--	6.84	6.84	6.84	37.14	37.14	2.33	2.33	12.38	12.38	S275H UNI EN 10210-1			2750.00	4300.00

Caratteristiche profilati utilizzati

Sez.	Cod.	Wy,plas	Wz,plas	Atag,y	Atag,z	J0	Temp.	Kyφ	KEφ
		<cm ³ >	<cm ³ >	<cm ³ >	<cm ³ >	<cm ⁶ >	<°C>		
6	RC80x80x3	26.69	26.69	4.62	4.62				
7	RC60x60x3	14.63	14.63	3.42	3.42				

Asta n. 31 (31 32) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV Xl=0.00 - Classe 1
Sollecitazioni: Tz=-27.52
V,Ed=-27.52 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica in termini tensionali [4.2.4] - CC 1 SLV Xl=0.00 - Classe 3
Sollecitazioni: N=-2720.24 Tz=-23.99 My=34.50 Ty=3.40 Mz=-4.09
Tensioni: σ_N =-294.40 $\sigma_{m,d}$ =-168.80 τ =0.00 σ_{max} =-463.20 (sfrut=0.18)
Tensioni: σ_N =-294.40 $\sigma_{m,d}$ =-16.53 τ =5.84 τ_{max} =5.84 (sfrut=0.00)
Tensioni: σ_N =-294.40 $\sigma_{m,d}$ =-168.80 τ =0.00 $\sigma_{ID,max}$ =463.20 (sfrut=0.18)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, E_d = -2720.24 \text{ My}, E_d = 34.50 \text{ Mz}, E_d = 4.33 \text{ L} = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71 \text{ Ncr}, y = 493055.00 \lambda^*_y = 0.23 \text{ Curva a: } \Phi_y = 0.53 \chi_y = 0.99$
 $\lambda_z = 19.71 \text{ Ncr}, z = 493055.00 \lambda^*_z = 0.23 \text{ Curva a: } \Phi_z = 0.53 \chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.11 + 0.06 + 0.01 = 0.17$
 Verifica ZZ: $0.11 + 0.04 + 0.01 = 0.16$

Asta n. 33 (34 33) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_y = 1.16 \text{ M}_x = -1.58$
 $V, E_d = 1.16 \text{ Vc}, R_d, R_d = 6965.58 \text{ V}, E_d / Vc, R_d, R_d = 0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_z = -39.16 \text{ M}_x = -1.58$
 $V, E_d = -39.16 \text{ Vc}, R_d, R_d = 6965.58 \text{ V}, E_d / Vc, R_d, R_d = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l = 0.62$ - Classe 3
 Sollecitazioni: $N = 90.56 \text{ T}_z = -39.16 \text{ M}_y = 13.09 \text{ T}_y = 1.16 \text{ M}_z = 1.46 \text{ M}_x = -1.58$
 Tensioni: $\sigma_N = 9.80 \sigma_{m,d} = 63.67 \tau = 4.45 \sigma_{max} = 73.47 \text{ (sfrut} = 0.03)$
 Tensioni: $\sigma_N = 9.80 \sigma_{m,d} = 5.92 \tau = 13.98 \tau_{max} = 13.98 \text{ (sfrut} = 0.01)$
 Tensioni: $\sigma_N = 9.80 \sigma_{m,d} = 63.67 \tau = 4.45 \sigma_{ID,max} = 73.87 \text{ (sfrut} = 0.03)$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N, E_d = -78.11 \text{ My}, E_d = 13.09 \text{ Mz}, E_d = 1.46 \text{ L} = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71 \text{ Ncr}, y = 493055.00 \lambda^*_y = 0.23 \text{ Curva a: } \Phi_y = 0.53 \chi_y = 0.99$
 $\lambda_z = 19.71 \text{ Ncr}, z = 493055.00 \lambda^*_z = 0.23 \text{ Curva a: } \Phi_z = 0.53 \chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00 + 0.02 + 0.00 = 0.03$
 Verifica ZZ: $0.00 + 0.02 + 0.00 = 0.02$

Asta n. 35 (35 36) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_z = -49.05 \text{ M}_x = -1.67$
 $V, E_d = -49.05 \text{ Vc}, R_d, R_d = 6964.42 \text{ V}, E_d / Vc, R_d, R_d = 0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $X_l = 0.62$ - Classe 1
 Sollecitazioni: $N = -8.40 \text{ T}_z = -49.05 \text{ M}_y = 15.30 \text{ M}_x = -1.67$
 $\text{My}, E_d = 15.30 \text{ My}, V, c, R_d = 699.13$
 $N, E_d = -8.40 \text{ Nc}, R_d = -24200.00 \text{ YY } n = N, E_d / Nc, R_d = 0.00 \text{ MNy}, c, R_d = 699.13 \text{ My}, E_d / \text{MNy}, c, R_d = 0.02$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N, E_d = -32.33 \text{ My}, E_d = 15.30 \text{ Mz}, E_d = 0.25 \text{ L} = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71 \text{ Ncr}, y = 493055.00 \lambda^*_y = 0.23 \text{ Curva a: } \Phi_y = 0.53 \chi_y = 0.99$
 $\lambda_z = 19.71 \text{ Ncr}, z = 493055.00 \lambda^*_z = 0.23 \text{ Curva a: } \Phi_z = 0.53 \chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00 + 0.02 + 0.00 = 0.03$
 Verifica ZZ: $0.00 + 0.02 + 0.00 = 0.02$

Asta n. 37 (38 37) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_z = -49.82 \text{ M}_x = -1.68$
 $V, E_d = -49.82 \text{ Vc}, R_d, R_d = 6964.31 \text{ V}, E_d / Vc, R_d, R_d = 0.01$

- Verifica a flessione e taglio YY [4.2.32] - CC 9 SLV $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_z = -49.82 \text{ M}_y = -15.66 \text{ M}_x = -1.68$
 $\text{My}, E_d = -15.66 \text{ My}, V, c, R_d = 699.13 \text{ My}, E_d / \text{My}, V, c, R_d = 0.02$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N, E_d = -22.88 \text{ My}, E_d = -15.66 \text{ Mz}, E_d = 0.07 \text{ L} = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71 \text{ Ncr}, y = 493055.00 \lambda^*_y = 0.23 \text{ Curva a: } \Phi_y = 0.53 \chi_y = 0.99$
 $\lambda_z = 19.71 \text{ Ncr}, z = 493055.00 \lambda^*_z = 0.23 \text{ Curva a: } \Phi_z = 0.53 \chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00 + 0.02 + 0.00 = 0.03$
 Verifica ZZ: $0.00 + 0.02 + 0.00 = 0.02$

Asta n. 39 (39 40) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_z = -51.10 \text{ M}_x = -1.68$
 $V, E_d = -51.10 \text{ Vc}, R_d, R_d = 6964.36 \text{ V}, E_d / Vc, R_d, R_d = 0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $X_l=0.62$ - Classe 1
Sollecitazioni: $N=-7.37$ $T_z=-51.10$ $M_y=16.07$ $M_x=-1.68$
 $M_y, Ed=16.07$ $M_y, V, c, Rd=699.13$
 $N, Ed=-7.37$ $Nc, Rd=-24200.00$ YY $n=N, Ed/Nc, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.02$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-33.57$ $M_y, Ed=16.07$ $M_z, Ed=0.02$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr, $y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr, $z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.03+0.00=0.03$
Verifica ZZ: $0.00+0.02+0.00=0.02$
- Asta n. 41 (42 41) - Sez. 6 (RC80x80x3) - Crit. 1
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=-52.31$ $M_x=-1.68$
 $V, Ed=-52.31$ $Vc, Rd, Red=6964.31$ $V, Ed/Vc, Rd, Red=0.01$
- Verifica a flessione e taglio YY[4.2.32] - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=-52.31$ $M_y=-16.45$ $M_x=-1.68$
 $M_y, Ed=-16.45$ $M_y, V, c, Rd=699.13$ $M_y, Ed/M_y, V, c, Rd=0.02$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-22.25$ $M_y, Ed=-16.45$ $M_z, Ed=0.01$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr, $y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr, $z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.03+0.00=0.03$
Verifica ZZ: $0.00+0.02+0.00=0.02$
- Asta n. 43 (43 44) - Sez. 6 (RC80x80x3) - Crit. 1
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=-53.52$ $M_x=-1.68$
 $V, Ed=-53.52$ $Vc, Rd, Red=6964.36$ $V, Ed/Vc, Rd, Red=0.01$
- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $X_l=0.62$ - Classe 1
Sollecitazioni: $N=-7.31$ $T_z=-53.52$ $M_y=16.83$ $M_x=-1.68$
 $M_y, Ed=16.83$ $M_y, V, c, Rd=699.13$
 $N, Ed=-7.31$ $Nc, Rd=-24200.00$ YY $n=N, Ed/Nc, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.02$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-33.66$ $M_y, Ed=16.83$ $M_z, Ed=-0.01$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr, $y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr, $z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.03+0.00=0.03$
Verifica ZZ: $0.00+0.02+0.00=0.02$
- Asta n. 45 (46 45) - Sez. 6 (RC80x80x3) - Crit. 1
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=-54.64$ $M_x=-1.68$
 $V, Ed=-54.64$ $Vc, Rd, Red=6964.31$ $V, Ed/Vc, Rd, Red=0.01$
- Verifica a flessione e taglio YY[4.2.32] - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=-54.64$ $M_y=-17.16$ $M_x=-1.68$
 $M_y, Ed=-17.16$ $M_y, V, c, Rd=699.13$ $M_y, Ed/M_y, V, c, Rd=0.02$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-21.35$ $M_y, Ed=-17.16$ $M_z, Ed=0.04$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr, $y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr, $z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.03+0.00=0.03$
Verifica ZZ: $0.00+0.02+0.00=0.02$
- Asta n. 47 (47 48) - Sez. 6 (RC80x80x3) - Crit. 1
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=-56.18$ $M_x=-1.68$
 $V, Ed=-56.18$ $Vc, Rd, Red=6964.36$ $V, Ed/Vc, Rd, Red=0.01$
- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $X_l=0.62$ - Classe 1

Relazione di calcolo

Sollecitazioni: $N=-5.92$ $T_z=-56.18$ $M_y=17.46$ $M_x=-1.68$
 $M_y, Ed=17.46$ $M_y, V, c, Rd=699.13$
 $N, Ed=-5.92$ $Nc, Rd=-24200.00$ YY $n=N, Ed/Nc, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.02$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-37.29$ $M_y, Ed=17.46$ $M_z, Ed=0.24$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica $YY: 0.00+0.03+0.00=0.03$
Verifica $ZZ: 0.00+0.02+0.00=0.02$

Asta n. 49 (50 49) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X1=0.00$ - Classe 1
Sollecitazioni: $T_z=-47.59$ $M_x=-1.61$
 $V, Ed=-47.59$ $Vc, Rd, Red=6965.27$ $V, Ed/Vc, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X1=0.62$ - Classe 3
Sollecitazioni: $N=60.56$ $T_z=-47.59$ $M_y=16.42$ $M_z=1.27$ $M_x=-1.61$
Tensioni: $\sigma_N=6.55$ $\sigma_{m, d}=77.38$ $\tau=4.52$ $\sigma_{max}=83.94$ (sfrut=0.03)
Tensioni: $\sigma_N=6.55$ $\sigma_{m, d}=5.54$ $\tau=16.09$ $\tau_{max}=16.09$ (sfrut=0.01)
Tensioni: $\sigma_N=6.55$ $\sigma_{m, d}=77.38$ $\tau=4.52$ $\sigma_{ID, max}=84.30$ (sfrut=0.03)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-16.31$ $M_y, Ed=16.42$ $M_z, Ed=1.49$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica $YY: 0.00+0.03+0.00=0.03$
Verifica $ZZ: 0.00+0.02+0.00=0.02$

Asta n. 51 (51 52) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU $X1=0.52$ - Classe 1
Sollecitazioni: $T_y=-2.61$ $M_x=-1.31$
 $V, Ed=-2.61$ $Vc, Rd, Red=6969.10$ $V, Ed/Vc, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU $X1=0.52$ - Classe 1
Sollecitazioni: $T_z=-53.53$ $M_x=-1.31$
 $V, Ed=-53.53$ $Vc, Rd, Red=6969.10$ $V, Ed/Vc, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X1=0.00$ - Classe 3
Sollecitazioni: $N=-708.10$ $T_z=-80.58$ $M_y=-43.15$ $T_y=-2.03$ $M_z=8.28$ $M_x=-1.28$
Tensioni: $\sigma_N=-76.63$ $\sigma_{m, d}=-224.96$ $\tau=3.59$ $\sigma_{max}=-301.59$ (sfrut=0.12)
Tensioni: $\sigma_N=-76.63$ $\sigma_{m, d}=33.48$ $\tau=23.20$ $\tau_{max}=23.20$ (sfrut=0.02)
Tensioni: $\sigma_N=-76.63$ $\sigma_{m, d}=-224.96$ $\tau=3.59$ $\sigma_{ID, max}=301.65$ (sfrut=0.12)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-708.10$ $M_y, Ed=-43.15$ $M_z, Ed=8.28$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica $YY: 0.03+0.07+0.01=0.11$
Verifica $ZZ: 0.03+0.05+0.01=0.10$

Asta n. 53 (53 54) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 19 SLU $X1=0.41$ - Classe 1
Sollecitazioni: $T_y=-1.31$
 $V, Ed=-1.31$ $Vc, Rd=6986.14$ $V, Ed/Vc, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 19 SLU $X1=0.41$ - Classe 1
Sollecitazioni: $T_z=41.52$
 $V, Ed=41.52$ $Vc, Rd=6986.14$ $V, Ed/Vc, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X1=0.00$ - Classe 3
Sollecitazioni: $N=274.93$ $T_z=53.58$ $M_y=29.95$ $M_z=6.11$
Tensioni: $\sigma_N=29.75$ $\sigma_{m, d}=157.74$ $\tau=0.00$ $\sigma_{max}=187.50$ (sfrut=0.07)
Tensioni: $\sigma_N=29.75$ $\sigma_{m, d}=26.72$ $\tau=13.03$ $\tau_{max}=13.03$ (sfrut=0.01)
Tensioni: $\sigma_N=29.75$ $\sigma_{m, d}=157.74$ $\tau=0.00$ $\sigma_{ID, max}=187.50$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed=-265.27$ $M_y, Ed=29.95$ $M_z, Ed=6.11$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$

$\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.05+0.01=0.07$
 Verifica ZZ: $0.01+0.04+0.01=0.06$

Asta n. 55 (55 56) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_y=-2.25$ $M_x=1.10$
 $V, Ed=-2.25$ $V_c, Rd, Red=6971.84$ $V, Ed/V_c, Rd, Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_z=54.82$ $M_x=1.10$
 $V, Ed=54.82$ $V_c, Rd, Red=6971.84$ $V, Ed/V_c, Rd, Red=0.01$
- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-423.49$ $T_z=59.55$ $M_y=33.96$ $T_y=-1.91$ $M_z=6.32$ $M_x=1.29$
 Tensioni: $\sigma_N=-45.83$ $\sigma_{m,d}=-176.18$ $\tau=3.63$ $\sigma_{max}=-222.01$ (sfrut=0.08)
 Tensioni: $\sigma_N=-45.83$ $\sigma_{m,d}=25.58$ $\tau=18.11$ $\tau_{max}=18.11$ (sfrut=0.01)
 Tensioni: $\sigma_N=-45.83$ $\sigma_{m,d}=-176.18$ $\tau=3.63$ $\sigma_{ID,max}=222.10$ (sfrut=0.08)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed=-423.49$ $M_y, Ed=33.96$ $M_z, Ed=6.32$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.02+0.05+0.01=0.08$
 Verifica ZZ: $0.02+0.04+0.01=0.07$

Asta n. 57 (57 58) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=29.93$
 $V, Ed=29.93$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$
- Verifica in termini tensionali [4.2.4] - CC 5 SLV $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-1257.02$ $T_z=-1.28$ $M_y=4.92$ $T_y=29.93$ $M_z=-35.63$
 Tensioni: $\sigma_N=-136.04$ $\sigma_{m,d}=-177.40$ $\tau=0.00$ $\sigma_{max}=-313.44$ (sfrut=0.12)
 Tensioni: $\sigma_N=-136.04$ $\sigma_{m,d}=19.91$ $\tau=7.28$ $\tau_{max}=7.28$ (sfrut=0.00)
 Tensioni: $\sigma_N=-136.04$ $\sigma_{m,d}=-177.40$ $\tau=0.00$ $\sigma_{ID,max}=313.44$ (sfrut=0.12)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
 Sollecitazioni: $N, Ed=-1257.02$ $M_y, Ed=4.92$ $M_z, Ed=-35.63$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.05+0.01+0.06=0.12$
 Verifica ZZ: $0.05+0.01+0.06=0.12$

Asta n. 59 (60 59) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=55.01$
 $V, Ed=55.01$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
- Verifica in termini tensionali [4.2.4] - CC 5 SLV $X_l=0.21$ - Classe 3
 Sollecitazioni: $N=-312.09$ $T_z=-1.40$ $M_y=1.02$ $T_y=55.01$ $M_z=-17.20$
 Tensioni: $\sigma_N=-33.78$ $\sigma_{m,d}=-79.67$ $\tau=0.00$ $\sigma_{max}=-113.44$ (sfrut=0.04)
 Tensioni: $\sigma_N=-33.78$ $\sigma_{m,d}=4.11$ $\tau=13.38$ $\tau_{max}=13.38$ (sfrut=0.01)
 Tensioni: $\sigma_N=-33.78$ $\sigma_{m,d}=-79.67$ $\tau=0.00$ $\sigma_{ID,max}=113.44$ (sfrut=0.04)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
 Sollecitazioni: $N, Ed=-313.59$ $M_y, Ed=1.60$ $M_z, Ed=-28.56$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.00+0.05=0.06$
 Verifica ZZ: $0.01+0.00+0.05=0.06$

Asta n. 61 (62 61) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_y=2.30$ $M_x=-1.14$
 $V, Ed=2.30$ $V_c, Rd, Red=6971.39$ $V, Ed/V_c, Rd, Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l=0.62$ - Classe 1

Sollecitazioni: $T_z=54.46$ $M_x=-1.14$
 $V, Ed=54.46$ $V_c, Rd, Red=6971.39$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-428.73$ $T_z=59.12$ $M_y=33.92$ $T_y=1.76$ $M_z=-6.37$ $M_x=-1.32$
 Tensioni: $\sigma_N=-46.40$ $\sigma_{m,d}=-176.23$ $\tau=3.71$ $\sigma_{max}=-222.63$ (sfrut=0.09)
 Tensioni: $\sigma_N=-46.40$ $\sigma_{m,d}=25.79$ $\tau=18.09$ $\tau_{max}=18.09$ (sfrut=0.01)
 Tensioni: $\sigma_N=-46.40$ $\sigma_{m,d}=-176.23$ $\tau=3.71$ $\sigma_{ID,max}=222.72$ (sfrut=0.09)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N, Ed=-428.73$ $M_y, Ed=33.92$ $M_z, Ed=-6.37$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.02+0.05+0.01=0.08$
 Verifica ZZ: $0.02+0.04+0.01=0.07$

Asta n. 63 (64 63) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 19 SLU $X_l=0.41$ - Classe 1
 Sollecitazioni: $T_y=1.10$
 $V, Ed=1.10$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 19 SLU $X_l=0.41$ - Classe 1
 Sollecitazioni: $T_z=41.80$
 $V, Ed=41.80$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=279.75$ $T_z=53.34$ $M_y=30.00$ $M_z=-6.17$
 Tensioni: $\sigma_N=30.28$ $\sigma_{m,d}=158.19$ $\tau=0.00$ $\sigma_{max}=188.46$ (sfrut=0.07)
 Tensioni: $\sigma_N=30.28$ $\sigma_{m,d}=-26.98$ $\tau=12.98$ $\tau_{max}=12.98$ (sfrut=0.01)
 Tensioni: $\sigma_N=30.28$ $\sigma_{m,d}=158.19$ $\tau=0.00$ $\sigma_{ID,max}=188.46$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N, Ed=-270.72$ $M_y, Ed=30.00$ $M_z, Ed=-6.17$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.05+0.01=0.07$
 Verifica ZZ: $0.01+0.04+0.01=0.06$

Asta n. 65 (66 65) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU $X_l=0.52$ - Classe 1
 Sollecitazioni: $T_y=3.22$ $M_x=1.52$
 $V, Ed=3.22$ $V_c, Rd, Red=6966.35$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU $X_l=0.52$ - Classe 1
 Sollecitazioni: $T_z=-53.50$ $M_x=1.52$
 $V, Ed=-53.50$ $V_c, Rd, Red=6966.35$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-727.80$ $T_z=-80.80$ $M_y=-43.51$ $T_y=1.86$ $M_z=-8.34$ $M_x=1.31$
 Tensioni: $\sigma_N=-78.77$ $\sigma_{m,d}=-226.78$ $\tau=3.68$ $\sigma_{max}=-305.55$ (sfrut=0.12)
 Tensioni: $\sigma_N=-78.77$ $\sigma_{m,d}=33.73$ $\tau=23.34$ $\tau_{max}=23.34$ (sfrut=0.02)
 Tensioni: $\sigma_N=-78.77$ $\sigma_{m,d}=-226.78$ $\tau=3.68$ $\sigma_{ID,max}=305.62$ (sfrut=0.12)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed=-727.80$ $M_y, Ed=-43.51$ $M_z, Ed=-8.34$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.03+0.07+0.01=0.11$
 Verifica ZZ: $0.03+0.06+0.01=0.10$

Asta n. 67 (67 68) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=-48.03$ $M_x=1.68$
 $V, Ed=-48.03$ $V_c, Rd, Red=6964.33$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.62$ - Classe 3
 Sollecitazioni: $N=61.42$ $T_z=-48.03$ $M_y=16.58$ $M_z=-1.31$ $M_x=1.68$
 Tensioni: $\sigma_N=6.65$ $\sigma_{m,d}=78.25$ $\tau=4.72$ $\sigma_{max}=84.90$ (sfrut=0.03)
 Tensioni: $\sigma_N=6.65$ $\sigma_{m,d}=5.29$ $\tau=16.41$ $\tau_{max}=16.41$ (sfrut=0.01)

Tensioni: $\sigma_N=6.65$ $\sigma_{m,d}=78.25$ $\tau=4.72$ $\sigma_{ID,max}=85.29$ (sfrut=0.03)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed=-15.71$ $M_y, Ed=16.58$ $M_z, Ed=-1.53$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr_y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr_z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.03+0.00=0.03$
 Verifica ZZ: $0.00+0.02+0.00=0.02$

Asta n. 69 (70 69) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=-56.73$ $M_x=1.76$
 $V, Ed=-56.73$ $V_c, Rd, Red=6963.35$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $X_l=0.62$ - Classe 1
 Sollecitazioni: $N=-5.69$ $T_z=-56.73$ $M_y=17.63$ $M_x=1.76$
 $M_y, Ed=17.63$ $M_y, V, c, Rd=699.13$
 $N, Ed=-5.69$ $Nc, Rd=-24200.00$ YY $n=N, Ed/Nc, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed=-37.43$ $M_y, Ed=17.63$ $M_z, Ed=-0.25$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr_y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr_z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.03+0.00=0.03$
 Verifica ZZ: $0.00+0.02+0.00=0.02$

Asta n. 71 (71 72) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=-55.20$ $M_x=1.76$
 $V, Ed=-55.20$ $V_c, Rd, Red=6963.30$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica a flessione e taglio YY[4.2.32] - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=-55.20$ $M_y=-17.34$ $M_x=1.76$
 $M_y, Ed=-17.34$ $M_y, V, c, Rd=699.13$ $M_y, Ed/M_y, V, c, Rd=0.02$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed=-21.43$ $M_y, Ed=-17.34$ $M_z, Ed=-0.04$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr_y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr_z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.03+0.00=0.03$
 Verifica ZZ: $0.00+0.02+0.00=0.02$

Asta n. 73 (74 73) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=-54.08$ $M_x=1.76$
 $V, Ed=-54.08$ $V_c, Rd, Red=6963.35$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $X_l=0.62$ - Classe 1
 Sollecitazioni: $N=-7.08$ $T_z=-54.08$ $M_y=17.01$ $M_x=1.76$
 $M_y, Ed=17.01$ $M_y, V, c, Rd=699.13$
 $N, Ed=-7.08$ $Nc, Rd=-24200.00$ YY $n=N, Ed/Nc, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.02$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed=-33.75$ $M_y, Ed=17.01$ $M_z, Ed=0.01$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr_y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr_z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.03+0.00=0.03$
 Verifica ZZ: $0.00+0.02+0.00=0.02$

Asta n. 75 (75 76) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=-52.87$ $M_x=1.76$
 $V, Ed=-52.87$ $V_c, Rd, Red=6963.29$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica a flessione e taglio YY[4.2.32] - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=-52.87$ $M_y=-16.63$ $M_x=1.76$
 $M_y, Ed=-16.63$ $M_y, V, c, Rd=699.13$ $M_y, Ed/M_y, V, c, Rd=0.02$

Relazione di calcolo

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed = -22.34$ My, $Ed = -16.63$ Mz, $Ed = -0.01$ L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ Ncr, $y = 493055.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ Ncr, $z = 493055.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
Kyy, Kyz, Kzy, Kzz = 0.95, 0.95, 0.76, 0.95
Verifica YY: $0.00 + 0.03 = 0.03$
Verifica ZZ: $0.00 + 0.02 = 0.02$
- Asta n. 77 (78 77) - Sez. 6 (RC80x80x3) - Crit. 1
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $Xl = 0.00$ - Classe 1
Sollecitazioni: $T_z = -51.66$ Mx = 1.76
 $V, Ed = -51.66$ Vc, Rd, Red = 6963.35 V, Ed/Vc, Rd, Red = 0.01
- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $Xl = 0.62$ - Classe 1
Sollecitazioni: $N = -7.13$ $T_z = -51.66$ My = 16.25 Mx = 1.76
My, Ed = 16.25 My, V, c, Rd = 699.13
 $N, Ed = -7.13$ Nc, Rd = -24200.00 YY n = N, Ed/Nc, Rd = 0.00 MNy, c, Rd = 699.13 My, Ed/MNy, c, Rd = 0.02
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed = -33.66$ My, $Ed = 16.25$ Mz, $Ed = -0.03$ L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ Ncr, $y = 493055.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ Ncr, $z = 493055.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
Kyy, Kyz, Kzy, Kzz = 0.95, 0.95, 0.76, 0.95
Verifica YY: $0.00 + 0.03 + 0.00 = 0.03$
Verifica ZZ: $0.00 + 0.02 + 0.00 = 0.02$
- Asta n. 79 (79 80) - Sez. 6 (RC80x80x3) - Crit. 1
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $Xl = 0.00$ - Classe 1
Sollecitazioni: $T_z = -50.37$ Mx = 1.76
 $V, Ed = -50.37$ Vc, Rd, Red = 6963.29 V, Ed/Vc, Rd, Red = 0.01
- Verifica a flessione e taglio YY [4.2.32] - CC 1 SLV $Xl = 0.00$ - Classe 1
Sollecitazioni: $T_z = -50.37$ My = -15.83 Mx = 1.76
My, Ed = -15.83 My, V, c, Rd = 699.13 My, Ed/My, V, c, Rd = 0.02
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed = -22.98$ My, $Ed = -15.83$ Mz, $Ed = -0.07$ L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ Ncr, $y = 493055.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ Ncr, $z = 493055.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
Kyy, Kyz, Kzy, Kzz = 0.95, 0.95, 0.76, 0.95
Verifica YY: $0.00 + 0.03 + 0.00 = 0.03$
Verifica ZZ: $0.00 + 0.02 + 0.00 = 0.02$
- Asta n. 81 (82 81) - Sez. 6 (RC80x80x3) - Crit. 1
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $Xl = 0.00$ - Classe 1
Sollecitazioni: $T_z = -49.62$ Mx = 1.75
 $V, Ed = -49.62$ Vc, Rd, Red = 6963.41 V, Ed/Vc, Rd, Red = 0.01
- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $Xl = 0.62$ - Classe 1
Sollecitazioni: $N = -8.11$ $T_z = -49.62$ My = 15.48 Mx = 1.75
My, Ed = 15.48 My, V, c, Rd = 699.13
 $N, Ed = -8.11$ Nc, Rd = -24200.00 YY n = N, Ed/Nc, Rd = 0.00 MNy, c, Rd = 699.13 My, Ed/MNy, c, Rd = 0.02
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed = -32.47$ My, $Ed = 15.48$ Mz, $Ed = -0.25$ L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ Ncr, $y = 493055.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ Ncr, $z = 493055.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
Kyy, Kyz, Kzy, Kzz = 0.95, 0.95, 0.76, 0.95
Verifica YY: $0.00 + 0.02 + 0.00 = 0.03$
Verifica ZZ: $0.00 + 0.02 + 0.00 = 0.02$
- Asta n. 83 (83 84) - Sez. 6 (RC80x80x3) - Crit. 1
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $Xl = 0.00$ - Classe 1
Sollecitazioni: $T_z = -39.61$ Mx = 1.66
 $V, Ed = -39.61$ Vc, Rd, Red = 6964.63 V, Ed/Vc, Rd, Red = 0.01
- Verifica in termini tensionali [4.2.4] - CC 1 SLV $Xl = 0.62$ - Classe 3
Sollecitazioni: $N = 91.78$ $T_z = -39.61$ My = 13.23 Ty = -1.22 Mz = -1.48 Mx = 1.66
Tensioni: $\sigma_N = 9.93$ $\sigma_{m,d} = 64.35$ $\tau = 4.66$ $\sigma_{max} = 74.28$ (sfrut=0.03)
Tensioni: $\sigma_N = 9.93$ $\sigma_{m,d} = 6.00$ $\tau = 14.29$ $\tau_{max} = 14.29$ (sfrut=0.01)
Tensioni: $\sigma_N = 9.93$ $\sigma_{m,d} = 64.35$ $\tau = 4.66$ $\sigma_{ID,max} = 74.72$ (sfrut=0.03)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: N,Ed=-78.60 My,Ed=13.23 Mz,Ed=-1.48 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.00+0.02+0.00=0.03
 Verifica ZZ: 0.00+0.02+0.00=0.02

Asta n. 85 (86 85) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV Xl=0.00 - Classe 1
 Sollecitazioni: Tz=-27.36
 V,Ed=-27.36 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica in termini tensionali [4.2.4] - CC 9 SLV Xl=0.00 - Classe 3
 Sollecitazioni: N=-2785.98 Tz=-23.88 My=34.85 Ty=-3.24 Mz=4.40
 Tensioni: $\sigma_N=-301.51$ $\sigma_{m,d}=-171.68$ $\tau=0.00$ $\sigma_{max}=-473.19$ (sfrut=0.18)
 Tensioni: $\sigma_N=-301.51$ $\sigma_{m,d}=17.80$ $\tau=5.81$ $\tau_{max}=5.81$ (sfrut=0.00)
 Tensioni: $\sigma_N=-301.51$ $\sigma_{m,d}=-171.68$ $\tau=0.00$ $\sigma_{ID,max}=473.19$ (sfrut=0.18)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: N,Ed=-2785.98 My,Ed=34.85 Mz,Ed=4.40 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.12+0.06+0.01=0.18
 Verifica ZZ: 0.12+0.04+0.01=0.17

Asta n. 799 (-799 -798) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU Xl=0.52 - Classe 1
 Sollecitazioni: Tz=40.84
 V,Ed=40.84 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.01

- Verifica in termini tensionali [4.2.4] - CC 1 SLV Xl=0.00 - Classe 3
 Sollecitazioni: N=-374.92 Tz=48.71 My=30.08 Mz=5.06
 Tensioni: $\sigma_N=-40.58$ $\sigma_{m,d}=-153.69$ $\tau=0.00$ $\sigma_{max}=-194.26$ (sfrut=0.07)
 Tensioni: $\sigma_N=-40.58$ $\sigma_{m,d}=22.11$ $\tau=11.85$ $\tau_{max}=11.85$ (sfrut=0.01)
 Tensioni: $\sigma_N=-40.58$ $\sigma_{m,d}=-153.69$ $\tau=0.00$ $\sigma_{ID,max}=194.26$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: N,Ed=-374.92 My,Ed=30.08 Mz,Ed=5.06 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.02+0.05+0.01=0.07
 Verifica ZZ: 0.02+0.04+0.01=0.06

Asta n. 801 (-801 -800) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV Xl=0.00 - Classe 1
 Sollecitazioni: Tz=25.14
 V,Ed=25.14 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica in termini tensionali [4.2.4] - CC 9 SLV Xl=0.62 - Classe 3
 Sollecitazioni: N=48.38 Tz=21.42 My=-8.05 Mz=1.10
 Tensioni: $\sigma_N=5.24$ $\sigma_{m,d}=40.04$ $\tau=0.00$ $\sigma_{max}=45.27$ (sfrut=0.02)
 Tensioni: $\sigma_N=5.24$ $\sigma_{m,d}=4.82$ $\tau=5.21$ $\tau_{max}=5.21$ (sfrut=0.00)
 Tensioni: $\sigma_N=5.24$ $\sigma_{m,d}=40.04$ $\tau=0.00$ $\sigma_{ID,max}=45.27$ (sfrut=0.02)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: N,Ed=-17.72 My,Ed=-9.39 Mz,Ed=0.98 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.00+0.01+0.00=0.02
 Verifica ZZ: 0.00+0.01+0.00=0.01

Asta n. 803 (-803 -802) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV Xl=0.00 - Classe 1
 Sollecitazioni: Tz=30.71
 V,Ed=30.71 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-15.80$ $T_z=30.71$ $M_y=9.58$
 $M_y, Ed=9.58$ $M_y, V, c, Rd=699.13$
 $N, Ed=-15.80$ $Nc, Rd=-24200.00$ YY $n=N, Ed/Nc, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed=-28.78$ $M_y, Ed=9.58$ $M_z, Ed=0.17$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.02+0.00=0.02$
 Verifica ZZ: $0.00+0.01+0.00=0.01$

Asta n. 805 (-805 -804) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=29.40$
 $V, Ed=29.40$ $Vc, Rd=6986.14$ $V, Ed/Vc, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-6.38$ $T_z=29.40$ $M_y=9.23$
 $M_y, Ed=9.23$ $M_y, V, c, Rd=699.13$
 $N, Ed=-6.38$ $Nc, Rd=-24200.00$ YY $n=N, Ed/Nc, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed=-12.61$ $M_y, Ed=9.23$ $M_z, Ed=0.04$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.01+0.00=0.02$
 Verifica ZZ: $0.00+0.01+0.00=0.01$

Asta n. 807 (-807 -806) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=28.26$
 $V, Ed=28.26$ $Vc, Rd=6986.14$ $V, Ed/Vc, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $X_l=0.62$ - Classe 1
 Sollecitazioni: $N=-13.04$ $T_z=28.26$ $M_y=-8.89$
 $M_y, Ed=-8.89$ $M_y, V, c, Rd=699.13$
 $N, Ed=-13.04$ $Nc, Rd=-24200.00$ YY $n=N, Ed/Nc, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed=-24.78$ $M_y, Ed=-8.89$ $M_z, Ed=0.01$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.01+0.00=0.02$
 Verifica ZZ: $0.00+0.01+0.00=0.01$

Asta n. 809 (-809 -808) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=27.05$
 $V, Ed=27.05$ $Vc, Rd=6986.14$ $V, Ed/Vc, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-6.21$ $T_z=27.05$ $M_y=8.51$
 $M_y, Ed=8.51$ $M_y, V, c, Rd=699.13$
 $N, Ed=-6.21$ $Nc, Rd=-24200.00$ YY $n=N, Ed/Nc, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed=-13.36$ $M_y, Ed=8.51$ $M_z, Ed=0.00$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.01=0.01$
 Verifica ZZ: $0.00+0.01=0.01$

Asta n. 811 (-811 -810) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=25.84$
 $V, Ed=25.84$ $Vc, Rd=6986.14$ $V, Ed/Vc, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $X_l=0.62$ - Classe 1
 Sollecitazioni: $N=-13.06$ $T_z=25.84$ $M_y=-8.13$
 $M_y, Ed=-8.13$ $M_y, V, c, Rd=699.13$
 $N, Ed=-13.06$ $Nc, Rd=-24200.00$ YY $n=N, Ed/Nc, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed=-24.72$ $M_y, Ed=-8.13$ $M_z, Ed=-0.00$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.01=0.01$
 Verifica ZZ: $0.00+0.01=0.01$

Asta n. 813 (-813 -812) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=-26.29$
 $V, Ed=-26.29$ $Vc, Rd=6986.14$ $V, Ed/Vc, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-5.68$ $T_z=-26.29$ $M_y=-8.27$
 $M_y, Ed=-8.27$ $M_y, V, c, Rd=699.13$
 $N, Ed=-5.68$ $Nc, Rd=-24200.00$ YY $n=N, Ed/Nc, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N, Ed=-12.84$ $M_y, Ed=-8.27$ $M_z, Ed=-0.00$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.01=0.01$
 Verifica ZZ: $0.00+0.01=0.01$

Asta n. 815 (-815 -814) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=-27.50$
 $V, Ed=-27.50$ $Vc, Rd=6986.14$ $V, Ed/Vc, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $X_l=0.62$ - Classe 1
 Sollecitazioni: $N=-12.54$ $T_z=-27.50$ $M_y=8.65$
 $M_y, Ed=8.65$ $M_y, V, c, Rd=699.13$
 $N, Ed=-12.54$ $Nc, Rd=-24200.00$ YY $n=N, Ed/Nc, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N, Ed=-24.20$ $M_y, Ed=8.65$ $M_z, Ed=0.01$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.01=0.01$
 Verifica ZZ: $0.00+0.01=0.01$

Asta n. 817 (-817 -816) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=-28.68$
 $V, Ed=-28.68$ $Vc, Rd=6986.14$ $V, Ed/Vc, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-5.36$ $T_z=-28.68$ $M_y=-9.01$
 $M_y, Ed=-9.01$ $M_y, V, c, Rd=699.13$
 $N, Ed=-5.36$ $Nc, Rd=-24200.00$ YY $n=N, Ed/Nc, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N, Ed=-12.56$ $M_y, Ed=-9.01$ $M_z, Ed=0.04$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.01+0.00=0.01$
 Verifica ZZ: $0.00+0.01+0.00=0.01$

Asta n. 819 (-819 -818) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=-30.09$
 $V, Ed=-30.09$ $Vc, Rd=6986.14$ $V, Ed/Vc, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV Xl=0.62 - Classe 1
 Sollecitazioni: N=-13.29 T_z=-30.09 M_y=9.40
 My,Ed=9.40 My,V,c,Rd=699.13
 N,Ed=-13.29 Nc,Rd=-24200.00 YY n=N,Ed/Nc,Rd=0.00 MNy,c,Rd=699.13 My,Ed/MNy,c,Rd=0.01

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: N,Ed=-24.96 My,Ed=9.40 Mz,Ed=0.25 L=0.62
 amy, amz, αLT=0.95, 0.95, 0.95
 λ_y=19.71 Ncr,y=493055.00 λ_y^{*}=0.23 Curva a: Φ_y=0.53 χ_y=0.99
 λ_z=19.71 Ncr,z=493055.00 λ_z^{*}=0.23 Curva a: Φ_z=0.53 χ_z=0.99
 Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.00+0.01+0.00=0.02
 Verifica ZZ: 0.00+0.01+0.00=0.01

Asta n. 821 (-821 -820) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV Xl=0.00 - Classe 1
 Sollecitazioni: T_z=-27.11
 V,Ed=-27.11 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica in termini tensionali [4.2.4] - CC 9 SLV Xl=0.62 - Classe 3
 Sollecitazioni: N=27.35 T_z=-27.11 M_y=8.87 M_z=1.38
 Tensioni: σ_N=2.96 σ_{m,d}=44.83 τ=0.00 σ_{max}=47.79 (sfrut=0.02)
 Tensioni: σ_N=2.96 σ_{m,d}=6.04 τ=6.59 τ_{max}=6.59 (sfrut=0.00)
 Tensioni: σ_N=2.96 σ_{m,d}=44.83 τ=0.00 σ_{ID,max}=47.79 (sfrut=0.02)

Asta n. 823 (-823 -822) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU Xl=0.62 - Classe 1
 Sollecitazioni: T_y=-1.51
 V,Ed=-1.51 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU Xl=0.62 - Classe 1
 Sollecitazioni: T_z=-27.85
 V,Ed=-27.85 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica in termini tensionali [4.2.4] - CC 9 SLV Xl=0.00 - Classe 3
 Sollecitazioni: N=-298.94 T_z=-45.25 M_y=-20.15 T_y=-2.31 M_z=8.33
 Tensioni: σ_N=-32.35 σ_{m,d}=-124.57 τ=0.00 σ_{max}=-156.93 (sfrut=0.06)
 Tensioni: σ_N=-32.35 σ_{m,d}=33.71 τ=11.01 τ_{max}=11.01 (sfrut=0.01)
 Tensioni: σ_N=-32.35 σ_{m,d}=-124.57 τ=0.00 σ_{ID,max}=156.93 (sfrut=0.06)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: N,Ed=-298.94 My,Ed=-20.15 Mz,Ed=8.33 L=0.62
 amy, amz, αLT=0.95, 0.95, 0.95
 λ_y=19.71 Ncr,y=493055.00 λ_y^{*}=0.23 Curva a: Φ_y=0.53 χ_y=0.99
 λ_z=19.71 Ncr,z=493055.00 λ_z^{*}=0.23 Curva a: Φ_z=0.53 χ_z=0.99
 Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.01+0.03+0.01=0.06
 Verifica ZZ: 0.01+0.03+0.01=0.05

Asta n. 825 (-825 -824) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV Xl=0.00 - Classe 1
 Sollecitazioni: T_z=25.87
 V,Ed=25.87 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica in termini tensionali [4.2.4] - CC 1 SLV Xl=0.62 - Classe 3
 Sollecitazioni: N=85.40 T_z=25.87 M_y=-9.45 M_z=1.12
 Tensioni: σ_N=9.24 σ_{m,d}=46.20 τ=0.00 σ_{max}=55.44 (sfrut=0.02)
 Tensioni: σ_N=9.24 σ_{m,d}=4.88 τ=6.29 τ_{max}=6.29 (sfrut=0.00)
 Tensioni: σ_N=9.24 σ_{m,d}=46.20 τ=0.00 σ_{ID,max}=55.44 (sfrut=0.02)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: N,Ed=-0.09 My,Ed=-9.45 Mz,Ed=1.12 L=0.62
 amy, amz, αLT=0.95, 0.95, 0.95
 λ_y=19.71 Ncr,y=493055.00 λ_y^{*}=0.23 Curva a: Φ_y=0.53 χ_y=0.99
 λ_z=19.71 Ncr,z=493055.00 λ_z^{*}=0.23 Curva a: Φ_z=0.53 χ_z=0.99
 Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.00+0.01+0.00=0.02
 Verifica ZZ: 0.00+0.01+0.00=0.01

Asta n. 827 (-827 -826) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV Xl=0.00 - Classe 1
 Sollecitazioni: T_z=31.24
 V,Ed=31.24 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

Relazione di calcolo

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV Xl=0.00 - Classe 1
Sollecitazioni: N=7.31 T_z=31.24 M_y=9.72
M_y,Ed=9.72 M_y,V,c,Rd=699.13
N,Ed=7.31 Nc,Rd=24200.00 YY n=N,Ed/Nc,Rd=0.00 MN_y,c,Rd=699.13 M_y,Ed/MN_y,c,Rd=0.01

Asta n. 829 (-829 -828) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV Xl=0.00 - Classe 1
Sollecitazioni: T_z=29.90
V,Ed=29.90 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV Xl=0.00 - Classe 1
Sollecitazioni: N=22.38 T_z=29.90 M_y=9.38
M_y,Ed=9.38 M_y,V,c,Rd=699.13
N,Ed=22.38 Nc,Rd=24200.00 YY n=N,Ed/Nc,Rd=0.00 MN_y,c,Rd=699.13 M_y,Ed/MN_y,c,Rd=0.01

Asta n. 831 (-831 -830) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV Xl=0.00 - Classe 1
Sollecitazioni: T_z=28.75
V,Ed=28.75 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV Xl=0.62 - Classe 1
Sollecitazioni: N=14.78 T_z=28.75 M_y=-9.04
M_y,Ed=-9.04 M_y,V,c,Rd=699.13
N,Ed=14.78 Nc,Rd=24200.00 YY n=N,Ed/Nc,Rd=0.00 MN_y,c,Rd=699.13 M_y,Ed/MN_y,c,Rd=0.01

Asta n. 833 (-833 -832) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV Xl=0.00 - Classe 1
Sollecitazioni: T_z=27.54
V,Ed=27.54 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV Xl=0.00 - Classe 1
Sollecitazioni: N=21.69 T_z=27.54 M_y=8.66
M_y,Ed=8.66 M_y,V,c,Rd=699.13
N,Ed=21.69 Nc,Rd=24200.00 YY n=N,Ed/Nc,Rd=0.00 MN_y,c,Rd=699.13 M_y,Ed/MN_y,c,Rd=0.01

Asta n. 835 (-835 -834) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV Xl=0.00 - Classe 1
Sollecitazioni: T_z=-26.50
V,Ed=-26.50 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV Xl=0.62 - Classe 1
Sollecitazioni: N=14.48 T_z=-26.50 M_y=8.34
M_y,Ed=8.34 M_y,V,c,Rd=699.13
N,Ed=14.48 Nc,Rd=24200.00 YY n=N,Ed/Nc,Rd=0.00 MN_y,c,Rd=699.13 M_y,Ed/MN_y,c,Rd=0.01

Asta n. 837 (-837 -836) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV Xl=0.00 - Classe 1
Sollecitazioni: T_z=-27.71
V,Ed=-27.71 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV Xl=0.00 - Classe 1
Sollecitazioni: N=21.34 T_z=-27.71 M_y=-8.72
M_y,Ed=-8.72 M_y,V,c,Rd=699.13
N,Ed=21.34 Nc,Rd=24200.00 YY n=N,Ed/Nc,Rd=0.00 MN_y,c,Rd=699.13 M_y,Ed/MN_y,c,Rd=0.01

Asta n. 839 (-839 -838) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV Xl=0.00 - Classe 1
Sollecitazioni: T_z=-28.92
V,Ed=-28.92 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV Xl=0.62 - Classe 1
Sollecitazioni: N=14.45 T_z=-28.92 M_y=9.10
M_y,Ed=9.10 M_y,V,c,Rd=699.13
N,Ed=14.45 Nc,Rd=24200.00 YY n=N,Ed/Nc,Rd=0.00 MN_y,c,Rd=699.13 M_y,Ed/MN_y,c,Rd=0.01

Asta n. 841 (-841 -840) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV Xl=0.00 - Classe 1
Sollecitazioni: T_z=-30.10
V,Ed=-30.10 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV Xl=0.00 - Classe 1
Sollecitazioni: N=21.77 T_z=-30.10 M_y=-9.46
M_y,Ed=-9.46 M_y,V,c,Rd=699.13
N,Ed=21.77 Nc,Rd=24200.00 YY n=N,Ed/Nc,Rd=0.00 MN_y,c,Rd=699.13 M_y,Ed/MN_y,c,Rd=0.01

Relazione di calcolo

Asta n. 843 (-843 -842) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=0.00$ - Classe 1

Sollecitazioni: $T_z=-31.58$

$V, Ed=-31.58$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $X_l=0.62$ - Classe 1

Sollecitazioni: $N=11.85$ $T_z=-31.58$ $M_y=9.89$

$M_y, Ed=9.89$ $M_y, V, c, Rd=699.13$

$N, Ed=11.85$ $N_c, Rd=24200.00$ YY $n=N, Ed/N_c, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.01$

Asta n. 845 (-845 -844) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=0.00$ - Classe 1

Sollecitazioni: $T_z=-28.55$

$V, Ed=-28.55$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.62$ - Classe 3

Sollecitazioni: $N=62.07$ $T_z=-28.55$ $M_y=9.09$ $M_z=1.50$

Tensioni: $\sigma_N=6.72$ $\sigma_{m,d}=46.33$ $\tau=0.00$ $\sigma_{max}=53.05$ (sfrut=0.02)

Tensioni: $\sigma_N=6.72$ $\sigma_{m,d}=6.58$ $\tau=6.95$ $\tau_{max}=6.95$ (sfrut=0.00)

Tensioni: $\sigma_N=6.72$ $\sigma_{m,d}=46.33$ $\tau=0.00$ $\sigma_{ID,max}=53.05$ (sfrut=0.02)

Asta n. 847 (-847 -846) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 15 SLV $X_l=0.52$ - Classe 1

Sollecitazioni: $T_y=1.02$

$V, Ed=1.02$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 15 SLV $X_l=0.52$ - Classe 1

Sollecitazioni: $T_z=-21.89$

$V, Ed=-21.89$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.00$ - Classe 3

Sollecitazioni: $N=-380.38$ $T_z=-45.02$ $M_y=-18.96$ $M_z=7.69$

Tensioni: $\sigma_N=-41.17$ $\sigma_{m,d}=-116.57$ $\tau=0.00$ $\sigma_{max}=-157.74$ (sfrut=0.06)

Tensioni: $\sigma_N=-41.17$ $\sigma_{m,d}=33.62$ $\tau=10.95$ $\tau_{max}=10.95$ (sfrut=0.01)

Tensioni: $\sigma_N=-41.17$ $\sigma_{m,d}=-116.57$ $\tau=0.00$ $\sigma_{ID,max}=157.74$ (sfrut=0.06)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3

Sollecitazioni: $N, Ed=-380.38$ $M_y, Ed=-18.96$ $M_z, Ed=8.00$ $L=0.62$

$\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$

$\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$

$\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$

$K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$

Verifica YY: $0.02+0.03+0.01=0.06$

Verifica ZZ: $0.02+0.02+0.01=0.05$

Asta n. 849 (-849 -848) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l=0.00$ - Classe 1

Sollecitazioni: $T_z=34.35$ $M_x=1.40$

$V, Ed=34.35$ $V_c, Rd, Red=6967.96$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.62$ - Classe 3

Sollecitazioni: $N=-33.17$ $T_z=34.35$ $M_y=-12.26$ $M_z=1.01$ $M_x=1.40$

Tensioni: $\sigma_N=-3.59$ $\sigma_{m,d}=-58.04$ $\tau=3.93$ $\sigma_{max}=-61.63$ (sfrut=0.02)

Tensioni: $\sigma_N=-3.59$ $\sigma_{m,d}=4.40$ $\tau=12.29$ $\tau_{max}=12.29$ (sfrut=0.01)

Tensioni: $\sigma_N=-3.59$ $\sigma_{m,d}=-58.04$ $\tau=3.93$ $\sigma_{ID,max}=62.01$ (sfrut=0.02)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3

Sollecitazioni: $N, Ed=-37.67$ $M_y, Ed=-12.26$ $M_z, Ed=1.05$ $L=0.62$

$\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$

$\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$

$\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$

$K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$

Verifica YY: $0.00+0.02+0.00=0.02$

Verifica ZZ: $0.00+0.02+0.00=0.02$

Asta n. 851 (-851 -850) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l=0.00$ - Classe 1

Sollecitazioni: $T_z=40.28$ $M_x=1.43$

$V, Ed=40.28$ $V_c, Rd, Red=6967.54$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $X_l=0.00$ - Classe 1

Sollecitazioni: $N=-34.27$ $T_z=40.28$ $M_y=12.50$ $M_x=1.43$

$M_y, Ed=12.50$ $M_y, V, c, Rd=699.13$

$N, Ed=-34.27$ $N_c, Rd=24200.00$ YY $n=N, Ed/N_c, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.02$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed = -60.20$ $M_y, Ed = 12.50$ $M_z, Ed = 0.17$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr,y} = 493055.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $N_{cr,z} = 493055.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00 + 0.02 + 0.00 = 0.02$
Verifica ZZ: $0.00 + 0.02 + 0.00 = 0.02$
- Asta n. 853 (-853 -852) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l = 0.00$ - Classe 1
Sollecitazioni: $T_z = 38.95$ $M_x = 1.43$
 $V, Ed = 38.95$ $V_c, Rd, Red = 6967.53$ $V, Ed/V_c, Rd, Red = 0.01$
- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $X_l = 0.00$ - Classe 1
Sollecitazioni: $N = -25.02$ $T_z = 38.95$ $M_y = 12.23$ $M_x = 1.43$
 $M_y, Ed = 12.23$ $M_y, V, c, Rd = 699.13$
 $N, Ed = -25.02$ $N_c, Rd = -24200.00$ YY $n = N, Ed/N_c, Rd = 0.00$ $M_{Ny}, c, Rd = 699.13$ $M_y, Ed/M_{Ny}, c, Rd = 0.02$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed = -43.90$ $M_y, Ed = 12.23$ $M_z, Ed = 0.03$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr,y} = 493055.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $N_{cr,z} = 493055.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00 + 0.02 + 0.00 = 0.02$
Verifica ZZ: $0.00 + 0.02 + 0.00 = 0.02$
- Asta n. 855 (-855 -854) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l = 0.00$ - Classe 1
Sollecitazioni: $T_z = 37.81$ $M_x = 1.43$
 $V, Ed = 37.81$ $V_c, Rd, Red = 6967.56$ $V, Ed/V_c, Rd, Red = 0.01$
- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $X_l = 0.62$ - Classe 1
Sollecitazioni: $N = -31.66$ $T_z = 37.81$ $M_y = -11.89$ $M_x = 1.43$
 $M_y, Ed = -11.89$ $M_y, V, c, Rd = 699.13$
 $N, Ed = -31.66$ $N_c, Rd = -24200.00$ YY $n = N, Ed/N_c, Rd = 0.00$ $M_{Ny}, c, Rd = 699.13$ $M_y, Ed/M_{Ny}, c, Rd = 0.02$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed = -56.10$ $M_y, Ed = -11.89$ $M_z, Ed = -0.01$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr,y} = 493055.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $N_{cr,z} = 493055.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00 + 0.02 + 0.00 = 0.02$
Verifica ZZ: $0.00 + 0.02 + 0.00 = 0.02$
- Asta n. 857 (-857 -856) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l = 0.00$ - Classe 1
Sollecitazioni: $T_z = 36.60$ $M_x = 1.43$
 $V, Ed = 36.60$ $V_c, Rd, Red = 6967.53$ $V, Ed/V_c, Rd, Red = 0.01$
- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $X_l = 0.00$ - Classe 1
Sollecitazioni: $N = -24.84$ $T_z = 36.60$ $M_y = 11.51$ $M_x = 1.43$
 $M_y, Ed = 11.51$ $M_y, V, c, Rd = 699.13$
 $N, Ed = -24.84$ $N_c, Rd = -24200.00$ YY $n = N, Ed/N_c, Rd = 0.00$ $M_{Ny}, c, Rd = 699.13$ $M_y, Ed/M_{Ny}, c, Rd = 0.02$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed = -44.69$ $M_y, Ed = 11.51$ $M_z, Ed = -0.01$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr,y} = 493055.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $N_{cr,z} = 493055.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00 + 0.02 + 0.00 = 0.02$
Verifica ZZ: $0.00 + 0.01 + 0.00 = 0.02$
- Asta n. 859 (-859 -858) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l = 0.00$ - Classe 1
Sollecitazioni: $T_z = 35.39$ $M_x = 1.43$
 $V, Ed = 35.39$ $V_c, Rd, Red = 6967.56$ $V, Ed/V_c, Rd, Red = 0.01$
- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $X_l = 0.62$ - Classe 1
Sollecitazioni: $N = -31.68$ $T_z = 35.39$ $M_y = -11.13$ $M_x = 1.43$
 $M_y, Ed = -11.13$ $M_y, V, c, Rd = 699.13$
 $N, Ed = -31.68$ $N_c, Rd = -24200.00$ YY $n = N, Ed/N_c, Rd = 0.00$ $M_{Ny}, c, Rd = 699.13$ $M_y, Ed/M_{Ny}, c, Rd = 0.02$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: N,Ed=-56.04 My,Ed=-11.13 Mz,Ed=-0.01 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.00+0.02+0.00=0.02
 Verifica ZZ: 0.00+0.01+0.00=0.02

Asta n. 861 (-861 -860) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV Xl=0.00 - Classe 1
 Sollecitazioni: Tz=34.17 Mx=1.43
 V,Ed=34.17 Vc,Rd,Red=6967.53 V,Ed/Vc,Rd,Red=0.00

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV Xl=0.00 - Classe 1
 Sollecitazioni: N=-24.83 Tz=34.17 My=10.75 Mx=1.43
 My,Ed=10.75 My,V,c,Rd=699.13
 N,Ed=-24.83 Nc,Rd=-24200.00 YY n=N,Ed/Nc,Rd=0.00 MNy,c,Rd=699.13 My,Ed/MNy,c,Rd=0.02

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: N,Ed=-44.70 My,Ed=10.75 Mz,Ed=0.01 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.00+0.02+0.00=0.02
 Verifica ZZ: 0.00+0.01+0.00=0.02

Asta n. 863 (-863 -862) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV Xl=0.00 - Classe 1
 Sollecitazioni: Tz=32.96 Mx=1.43
 V,Ed=32.96 Vc,Rd,Red=6967.56 V,Ed/Vc,Rd,Red=0.00

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV Xl=0.62 - Classe 1
 Sollecitazioni: N=-31.69 Tz=32.96 My=-10.37 Mx=1.43
 My,Ed=-10.37 My,V,c,Rd=699.13
 N,Ed=-31.69 Nc,Rd=-24200.00 YY n=N,Ed/Nc,Rd=0.00 MNy,c,Rd=699.13 My,Ed/MNy,c,Rd=0.01

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: N,Ed=-56.03 My,Ed=-10.37 Mz,Ed=0.02 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.00+0.02+0.00=0.02
 Verifica ZZ: 0.00+0.01+0.00=0.02

Asta n. 865 (-865 -864) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV Xl=0.00 - Classe 1
 Sollecitazioni: Tz=31.76 Mx=1.43
 V,Ed=31.76 Vc,Rd,Red=6967.52 V,Ed/Vc,Rd,Red=0.00

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV Xl=0.00 - Classe 1
 Sollecitazioni: N=-24.76 Tz=31.76 My=9.99 Mx=1.43
 My,Ed=9.99 My,V,c,Rd=699.13
 N,Ed=-24.76 Nc,Rd=-24200.00 YY n=N,Ed/Nc,Rd=0.00 MNy,c,Rd=699.13 My,Ed/MNy,c,Rd=0.01

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: N,Ed=-44.70 My,Ed=9.99 Mz,Ed=0.03 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.00+0.02+0.00=0.02
 Verifica ZZ: 0.00+0.01+0.00=0.01

Asta n. 867 (-867 -866) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV Xl=0.00 - Classe 1
 Sollecitazioni: Tz=30.42 Mx=1.43
 V,Ed=30.42 Vc,Rd,Red=6967.55 V,Ed/Vc,Rd,Red=0.00

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV Xl=0.62 - Classe 1
 Sollecitazioni: N=-32.79 Tz=30.42 My=-9.56 Mx=1.43
 My,Ed=-9.56 My,V,c,Rd=699.13
 N,Ed=-32.79 Nc,Rd=-24200.00 YY n=N,Ed/Nc,Rd=0.00 MNy,c,Rd=699.13 My,Ed/MNy,c,Rd=0.01

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: N,Ed=-55.28 My,Ed=-9.56 Mz,Ed=0.13 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.00+0.02+0.00=0.02
Verifica ZZ: 0.00+0.01+0.00=0.01
- Asta n. 869 (-869 -868) - Sez. 6 (RC80x80x3) - Crit. 1
-
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV Xl=0.00 - Classe 1
Sollecitazioni: Tz=30.35 Mx=1.42
V,Ed=30.35 Vc,Rd,Red=6967.74 V,Ed/Vc,Rd,Red=0.00
- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV Xl=0.00 - Classe 1
Sollecitazioni: N=-20.92 Tz=30.35 My=9.45 Mx=1.42
My,Ed=9.45 My,V,c,Rd=699.13
N,Ed=-20.92 Nc,Rd=-24200.00 YY n=N,Ed/Nc,Rd=0.00 MNy,c,Rd=699.13 My,Ed/MNy,c,Rd=0.01
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: N,Ed=-42.76 My,Ed=9.45 Mz,Ed=0.70 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.00+0.01+0.00=0.02
Verifica ZZ: 0.00+0.01+0.00=0.01
- Asta n. 871 (-871 -870) - Sez. 6 (RC80x80x3) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU Xl=0.00 - Classe 1
Sollecitazioni: Ty=1.88 Mx=1.22
V,Ed=1.88 Vc,Rd,Red=6970.30 V,Ed/Vc,Rd,Red=0.00
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU Xl=0.00 - Classe 1
Sollecitazioni: Tz=29.65 Mx=1.22
V,Ed=29.65 Vc,Rd,Red=6970.30 V,Ed/Vc,Rd,Red=0.00
- Verifica in termini tensionali [4.2.4] - CC 5 SLV Xl=0.00 - Classe 3
Sollecitazioni: N=-112.30 Tz=6.30 My=1.72 Ty=-9.70 Mz=10.95 Mx=1.55
Tensioni: $\sigma_N=-12.15$ $\sigma_{m,d}=-55.43$ $\tau=4.34$ $\sigma_{max}=-67.58$ (sfrut=0.03)
Tensioni: $\sigma_N=-12.15$ $\sigma_{m,d}=6.94$ $\tau=6.70$ $\tau_{max}=6.70$ (sfrut=0.00)
Tensioni: $\sigma_N=-12.15$ $\sigma_{m,d}=-55.43$ $\tau=4.34$ $\sigma_{ID,max}=68.00$ (sfrut=0.03)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
Sollecitazioni: N,Ed=-112.30 My,Ed=-2.19 Mz,Ed=10.95 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.00+0.00+0.02=0.03
Verifica ZZ: 0.00+0.00+0.02=0.02
- Asta n. 873 (-873 -872) - Sez. 6 (RC80x80x3)- Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV Xl=0.00 - Classe 1
Sollecitazioni: Ty=20.83
V,Ed=20.83 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00
- Verifica in termini tensionali [4.2.4] - CC 13 SLV Xl=0.62 - Classe 3
Sollecitazioni: N=94.78 My=1.06 Ty=-17.81 Mz=7.17
Tensioni: $\sigma_N=10.26$ $\sigma_{m,d}=36.03$ $\tau=0.00$ $\sigma_{max}=46.28$ (sfrut=0.02)
Tensioni: $\sigma_N=10.26$ $\sigma_{m,d}=-4.65$ $\tau=4.33$ $\tau_{max}=4.33$ (sfrut=0.00)
Tensioni: $\sigma_N=10.26$ $\sigma_{m,d}=36.03$ $\tau=0.00$ $\sigma_{ID,max}=46.28$ (sfrut=0.02)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
Sollecitazioni: N,Ed=-67.05 My,Ed=0.87 Mz,Ed=8.90 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.00+0.00+0.01=0.02
Verifica ZZ: 0.00+0.00+0.01=0.02
- Asta n. 875 (-875 -874) - Sez. 6 (RC80x80x3) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV Xl=0.00 - Classe 1

Relazione di calcolo

Sollecitazioni: $T_y=30.88$
 $V, Ed=30.88$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-3.80$ $T_y=30.88$ $M_z=-9.72$
 $M_z, Ed=-9.72$ $M_z, V, c, Rd=699.13$
 $N, Ed=-3.80$ $N_c, Rd=-24200.00$ ZZ $n=N, Ed/N_c, Rd=0.00$ $MN_z, c, Rd=699.13$ $M_z, Ed/MN_z, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
Sollecitazioni: $N, Ed=-31.79$ $M_y, Ed=0.15$ $M_z, Ed=-9.72$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.00+0.02=0.02$
Verifica ZZ: $0.00+0.00+0.02=0.02$

Asta n. 877 (-877 -876) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=29.41$
 $V, Ed=29.41$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=14.37$ $T_y=29.41$ $M_z=-9.22$
 $M_z, Ed=-9.22$ $M_z, V, c, Rd=699.13$
 $N, Ed=14.37$ $N_c, Rd=24200.00$ ZZ $n=N, Ed/N_c, Rd=0.00$ $MN_z, c, Rd=699.13$ $M_z, Ed/MN_z, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
Sollecitazioni: $N, Ed=-23.66$ $M_y, Ed=0.02$ $M_z, Ed=-9.22$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.00+0.01=0.02$
Verifica ZZ: $0.00+0.00+0.01=0.02$

Asta n. 879 (-879 -878) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=28.31$
 $V, Ed=28.31$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 5 SLV $X_l=0.62$ - Classe 1
Sollecitazioni: $N=6.25$ $T_y=28.31$ $M_z=8.90$
 $M_z, Ed=8.90$ $M_z, V, c, Rd=699.13$
 $N, Ed=6.25$ $N_c, Rd=24200.00$ ZZ $n=N, Ed/N_c, Rd=0.00$ $MN_z, c, Rd=699.13$ $M_z, Ed/MN_z, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
Sollecitazioni: $N, Ed=-38.27$ $M_y, Ed=-0.01$ $M_z, Ed=-8.86$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.00+0.01=0.02$
Verifica ZZ: $0.00+0.01=0.02$

Asta n. 881 (-881 -880) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-29.38$
 $V, Ed=-29.38$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 13 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=9.35$ $T_y=-29.38$ $M_z=9.24$
 $M_z, Ed=9.24$ $M_z, V, c, Rd=699.13$
 $N, Ed=9.35$ $N_c, Rd=24200.00$ ZZ $n=N, Ed/N_c, Rd=0.00$ $MN_z, c, Rd=699.13$ $M_z, Ed/MN_z, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
Sollecitazioni: $N, Ed=-27.00$ $M_y, Ed=-0.01$ $M_z, Ed=9.24$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.00+0.01=0.02$
Verifica ZZ: $0.00+0.00+0.01=0.02$

Asta n. 883 (-883 -882) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l=0.00$ - Classe 1

Relazione di calcolo

Sollecitazioni: $T_y = -30.59$
 $V, Ed = -30.59$ $V_c, Rd = 6986.14$ $V, Ed/V_c, Rd = 0.00$

- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 13 SLV $X_l = 0.62$ - Classe 1
 Sollecitazioni: $N = 2.49$ $T_y = -30.59$ $M_z = -9.62$
 $M_z, Ed = -9.62$ $M_z, V, c, Rd = 699.13$
 $N, Ed = 2.49$ $N_c, Rd = 24200.00$ ZZ $n = N, Ed/N_c, Rd = 0.00$ $MN_z, c, Rd = 699.13$ $M_z, Ed/MN_z, c, Rd = 0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
 Sollecitazioni: $N, Ed = -38.33$ $M_y, Ed = -0.01$ $M_z, Ed = -9.62$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr, y} = 493055.00$ $\lambda_y^* = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $N_{cr, z} = 493055.00$ $\lambda_z^* = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00 + 0.02 = 0.02$
 Verifica ZZ: $0.00 + 0.02 = 0.02$

Asta n. 885 (-885 -884) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_y = -31.80$
 $V, Ed = -31.80$ $V_c, Rd = 6986.14$ $V, Ed/V_c, Rd = 0.00$

- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 13 SLV $X_l = 0.00$ - Classe 1
 Sollecitazioni: $N = 9.34$ $T_y = -31.80$ $M_z = 10.00$
 $M_z, Ed = 10.00$ $M_z, V, c, Rd = 699.13$
 $N, Ed = 9.34$ $N_c, Rd = 24200.00$ ZZ $n = N, Ed/N_c, Rd = 0.00$ $MN_z, c, Rd = 699.13$ $M_z, Ed/MN_z, c, Rd = 0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
 Sollecitazioni: $N, Ed = -26.99$ $M_y, Ed = -0.00$ $M_z, Ed = 10.00$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr, y} = 493055.00$ $\lambda_y^* = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $N_{cr, z} = 493055.00$ $\lambda_z^* = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00 + 0.02 = 0.02$
 Verifica ZZ: $0.00 + 0.02 = 0.02$

Asta n. 887 (-886 -887) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_y = -33.01$
 $V, Ed = -33.01$ $V_c, Rd = 6986.14$ $V, Ed/V_c, Rd = 0.00$

- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 13 SLV $X_l = 0.62$ - Classe 1
 Sollecitazioni: $N = 2.49$ $T_y = -33.01$ $M_z = -10.38$
 $M_z, Ed = -10.38$ $M_z, V, c, Rd = 699.13$
 $N, Ed = 2.49$ $N_c, Rd = 24200.00$ ZZ $n = N, Ed/N_c, Rd = 0.00$ $MN_z, c, Rd = 699.13$ $M_z, Ed/MN_z, c, Rd = 0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
 Sollecitazioni: $N, Ed = -38.33$ $M_y, Ed = 0.00$ $M_z, Ed = -10.38$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr, y} = 493055.00$ $\lambda_y^* = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $N_{cr, z} = 493055.00$ $\lambda_z^* = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00 + 0.02 = 0.02$
 Verifica ZZ: $0.00 + 0.02 = 0.02$

Asta n. 889 (-888 -889) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_y = -34.22$
 $V, Ed = -34.22$ $V_c, Rd = 6986.14$ $V, Ed/V_c, Rd = 0.00$

- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 13 SLV $X_l = 0.00$ - Classe 1
 Sollecitazioni: $N = 9.34$ $T_y = -34.22$ $M_z = 10.77$
 $M_z, Ed = 10.77$ $M_z, V, c, Rd = 699.13$
 $N, Ed = 9.34$ $N_c, Rd = 24200.00$ ZZ $n = N, Ed/N_c, Rd = 0.00$ $MN_z, c, Rd = 699.13$ $M_z, Ed/MN_z, c, Rd = 0.02$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
 Sollecitazioni: $N, Ed = -26.99$ $M_y, Ed = 0.00$ $M_z, Ed = 10.77$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr, y} = 493055.00$ $\lambda_y^* = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $N_{cr, z} = 493055.00$ $\lambda_z^* = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00 + 0.02 = 0.02$
 Verifica ZZ: $0.00 + 0.02 = 0.02$

Asta n. 891 (-890 -891) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l = 0.00$ - Classe 1

Relazione di calcolo

Sollecitazioni: $T_y = -35.44$
 $V, Ed = -35.44$ $V_c, Rd = 6986.14$ $V, Ed/V_c, Rd = 0.01$

- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 13 SLV $X_l = 0.62$ - Classe 1
Sollecitazioni: $N = 2.49$ $T_y = -35.44$ $M_z = -11.15$
 $M_z, Ed = -11.15$ $M_z, V, c, Rd = 699.13$
 $N, Ed = 2.49$ $N_c, Rd = 24200.00$ ZZ $n = N, Ed/N_c, Rd = 0.00$ $MN_z, c, Rd = 699.13$ $M_z, Ed/MN_z, c, Rd = 0.02$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
Sollecitazioni: $N, Ed = -38.33$ $M_y, Ed = 0.01$ $M_z, Ed = -11.15$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr, y} = 493055.00$ $\lambda_y^* = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $N_{cr, z} = 493055.00$ $\lambda_z^* = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00 + 0.00 + 0.02 = 0.02$
Verifica ZZ: $0.00 + 0.00 + 0.02 = 0.02$

Asta n. 893 (-892 -893) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l = 0.00$ - Classe 1
Sollecitazioni: $T_y = -36.65$
 $V, Ed = -36.65$ $V_c, Rd = 6986.14$ $V, Ed/V_c, Rd = 0.01$

- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 13 SLV $X_l = 0.00$ - Classe 1
Sollecitazioni: $N = 9.34$ $T_y = -36.65$ $M_z = 11.53$
 $M_z, Ed = 11.53$ $M_z, V, c, Rd = 699.13$
 $N, Ed = 9.34$ $N_c, Rd = 24200.00$ ZZ $n = N, Ed/N_c, Rd = 0.00$ $MN_z, c, Rd = 699.13$ $M_z, Ed/MN_z, c, Rd = 0.02$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
Sollecitazioni: $N, Ed = -26.99$ $M_y, Ed = 0.01$ $M_z, Ed = 11.53$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr, y} = 493055.00$ $\lambda_y^* = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $N_{cr, z} = 493055.00$ $\lambda_z^* = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00 + 0.00 + 0.02 = 0.02$
Verifica ZZ: $0.00 + 0.00 + 0.02 = 0.02$

Asta n. 895 (-894 -895) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l = 0.00$ - Classe 1
Sollecitazioni: $T_y = -37.86$
 $V, Ed = -37.86$ $V_c, Rd = 6986.14$ $V, Ed/V_c, Rd = 0.01$

- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 13 SLV $X_l = 0.62$ - Classe 1
Sollecitazioni: $N = 2.45$ $T_y = -37.86$ $M_z = -11.91$
 $M_z, Ed = -11.91$ $M_z, V, c, Rd = 699.13$
 $N, Ed = 2.45$ $N_c, Rd = 24200.00$ ZZ $n = N, Ed/N_c, Rd = 0.00$ $MN_z, c, Rd = 699.13$ $M_z, Ed/MN_z, c, Rd = 0.02$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
Sollecitazioni: $N, Ed = -38.29$ $M_y, Ed = 0.02$ $M_z, Ed = -11.91$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr, y} = 493055.00$ $\lambda_y^* = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $N_{cr, z} = 493055.00$ $\lambda_z^* = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00 + 0.00 + 0.02 = 0.02$
Verifica ZZ: $0.00 + 0.00 + 0.02 = 0.02$

Asta n. 897 (-896 -897) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l = 0.00$ - Classe 1
Sollecitazioni: $T_y = -39.07$
 $V, Ed = -39.07$ $V_c, Rd = 6986.14$ $V, Ed/V_c, Rd = 0.01$

- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 13 SLV $X_l = 0.00$ - Classe 1
Sollecitazioni: $N = 9.60$ $T_y = -39.07$ $M_z = 12.30$
 $M_z, Ed = 12.30$ $M_z, V, c, Rd = 699.13$
 $N, Ed = 9.60$ $N_c, Rd = 24200.00$ ZZ $n = N, Ed/N_c, Rd = 0.00$ $MN_z, c, Rd = 699.13$ $M_z, Ed/MN_z, c, Rd = 0.02$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
Sollecitazioni: $N, Ed = -27.23$ $M_y, Ed = 0.03$ $M_z, Ed = 12.30$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr, y} = 493055.00$ $\lambda_y^* = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $N_{cr, z} = 493055.00$ $\lambda_z^* = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00 + 0.00 + 0.02 = 0.02$
Verifica ZZ: $0.00 + 0.00 + 0.02 = 0.02$

Asta n. 899 (-898 -899) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l = 0.00$ - Classe 1

Relazione di calcolo

Sollecitazioni: $T_y = -40.63$
 $V, Ed = -40.63$ $V_c, Rd = 6986.14$ $V, Ed/V_c, Rd = 0.01$

- Verifica a flessione e taglio ZZ [4.2.32] - CC 13 SLV $X_l = 0.62$ - Classe 1
Sollecitazioni: $T_y = -40.63$ $M_z = -12.88$
 $M_z, Ed = -12.88$ $M_z, V, c, Rd = 699.13$ $M_z, Ed/M_z, V, c, Rd = 0.02$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
Sollecitazioni: $N, Ed = -34.84$ $M_y, Ed = 0.09$ $M_z, Ed = -12.88$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr,y} = 493055.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $N_{cr,z} = 493055.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00 + 0.00 + 0.02 = 0.02$
Verifica ZZ: $0.00 + 0.00 + 0.02 = 0.02$

Asta n. 901 (-900 -901) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l = 0.00$ - Classe 1
Sollecitazioni: $T_y = -40.68$
 $V, Ed = -40.68$ $V_c, Rd = 6986.14$ $V, Ed/V_c, Rd = 0.01$

- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 13 SLV $X_l = 0.00$ - Classe 1
Sollecitazioni: $N = 27.87$ $T_y = -40.68$ $M_z = 13.63$
 $M_z, Ed = 13.63$ $M_z, V, c, Rd = 699.13$
 $N, Ed = 27.87$ $N_c, Rd = 24200.00$ ZZ $n = N, Ed/N_c, Rd = 0.00$ $MN_z, c, Rd = 699.13$ $M_z, Ed/MN_z, c, Rd = 0.02$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
Sollecitazioni: $N, Ed = -42.53$ $M_y, Ed = 0.56$ $M_z, Ed = 13.63$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr,y} = 493055.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $N_{cr,z} = 493055.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00 + 0.00 + 0.02 = 0.02$
Verifica ZZ: $0.00 + 0.00 + 0.02 = 0.02$

Asta n. 903 (-902 -903) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l = 0.00$ - Classe 1
Sollecitazioni: $T_y = -41.85$
 $V, Ed = -41.85$ $V_c, Rd = 6986.14$ $V, Ed/V_c, Rd = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 13 SLV $X_l = 0.62$ - Classe 3
Sollecitazioni: $N = -479.89$ $T_z = -2.13$ $M_y = 2.72$ $T_y = -41.85$ $M_z = -16.85$
Tensioni: $\sigma_N = -51.94$ $\sigma_{m,d} = -85.58$ $\tau = 0.00$ $\sigma_{max} = -137.51$ (sfrut=0.05)
Tensioni: $\sigma_N = -51.94$ $\sigma_{m,d} = 10.99$ $\tau = 10.18$ $\tau_{max} = 10.18$ (sfrut=0.01)
Tensioni: $\sigma_N = -51.94$ $\sigma_{m,d} = -85.58$ $\tau = 0.00$ $\sigma_{ID,max} = 137.51$ (sfrut=0.05)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
Sollecitazioni: $N, Ed = -484.39$ $M_y, Ed = 2.72$ $M_z, Ed = -16.85$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr,y} = 493055.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $N_{cr,z} = 493055.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.02 + 0.00 + 0.03 = 0.05$
Verifica ZZ: $0.02 + 0.00 + 0.03 = 0.05$

Asta n. 905 (-904 -905) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l = 0.00$ - Classe 1
Sollecitazioni: $T_y = 40.90$
 $V, Ed = 40.90$ $V_c, Rd = 6986.14$ $V, Ed/V_c, Rd = 0.01$

- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 5 SLV $X_l = 0.62$ - Classe 1
Sollecitazioni: $N = 26.97$ $T_y = 40.90$ $M_z = 13.82$
 $M_z, Ed = 13.82$ $M_z, V, c, Rd = 699.13$
 $N, Ed = 26.97$ $N_c, Rd = 24200.00$ ZZ $n = N, Ed/N_c, Rd = 0.00$ $MN_z, c, Rd = 699.13$ $M_z, Ed/MN_z, c, Rd = 0.02$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
Sollecitazioni: $N, Ed = -18.74$ $M_y, Ed = 0.33$ $M_z, Ed = 13.82$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr,y} = 493055.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $N_{cr,z} = 493055.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00 + 0.00 + 0.02 = 0.02$
Verifica ZZ: $0.00 + 0.00 + 0.02 = 0.02$

Asta n. 907 (-906 -907) - Sez. 6 (RC80x80x3) - Crit. 1

Relazione di calcolo

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=44.51$
 $V, Ed=44.51$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 5 SLV $X_l=0.62$ - Classe 1
Sollecitazioni: $N=8.18$ $T_y=44.51$ $M_z=13.85$
 $M_z, Ed=13.85$ $M_z, V, c, Rd=699.13$
 $N, Ed=8.18$ $N_c, Rd=24200.00$ ZZ $n=N, Ed/N_c, Rd=0.00$ $MN_z, c, Rd=699.13$ $M_z, Ed/MN_z, c, Rd=0.02$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
Sollecitazioni: $N, Ed=-40.14$ $M_y, Ed=0.05$ $M_z, Ed=13.85$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.00+0.02=0.02$
Verifica ZZ: $0.00+0.00+0.02=0.02$

Asta n. 909 (-908 -909) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=43.26$
 $V, Ed=43.26$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=11.85$ $T_y=43.26$ $M_z=-13.59$
 $M_z, Ed=-13.59$ $M_z, V, c, Rd=699.13$
 $N, Ed=11.85$ $N_c, Rd=24200.00$ ZZ $n=N, Ed/N_c, Rd=0.00$ $MN_z, c, Rd=699.13$ $M_z, Ed/MN_z, c, Rd=0.02$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
Sollecitazioni: $N, Ed=-24.91$ $M_y, Ed=0.03$ $M_z, Ed=-13.59$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.00+0.02=0.02$
Verifica ZZ: $0.00+0.00+0.02=0.02$

Asta n. 911 (-910 -911) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=42.09$
 $V, Ed=42.09$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 5 SLV $X_l=0.62$ - Classe 1
Sollecitazioni: $N=5.44$ $T_y=42.09$ $M_z=13.24$
 $M_z, Ed=13.24$ $M_z, V, c, Rd=699.13$
 $N, Ed=5.44$ $N_c, Rd=24200.00$ ZZ $n=N, Ed/N_c, Rd=0.00$ $MN_z, c, Rd=699.13$ $M_z, Ed/MN_z, c, Rd=0.02$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
Sollecitazioni: $N, Ed=-36.88$ $M_y, Ed=0.02$ $M_z, Ed=13.24$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.00+0.02=0.02$
Verifica ZZ: $0.00+0.00+0.02=0.02$

Asta n. 913 (-912 -913) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=40.88$
 $V, Ed=40.88$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=12.24$ $T_y=40.88$ $M_z=-12.86$
 $M_z, Ed=-12.86$ $M_z, V, c, Rd=699.13$
 $N, Ed=12.24$ $N_c, Rd=24200.00$ ZZ $n=N, Ed/N_c, Rd=0.00$ $MN_z, c, Rd=699.13$ $M_z, Ed/MN_z, c, Rd=0.02$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
Sollecitazioni: $N, Ed=-25.48$ $M_y, Ed=0.01$ $M_z, Ed=-12.86$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.00+0.02=0.02$
Verifica ZZ: $0.00+0.00+0.02=0.02$

Asta n. 915 (-914 -915) - Sez. 6 (RC80x80x3) - Crit. 1

Relazione di calcolo

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=39.67$
 $V, Ed=39.67$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 5 SLV $X_l=0.62$ - Classe 1
Sollecitazioni: $N=5.40$ $T_y=39.67$ $M_z=12.48$
 $M_z, Ed=12.48$ $M_z, V, c, Rd=699.13$
 $N, Ed=5.40$ $N_c, Rd=24200.00$ ZZ $n=N, Ed/N_c, Rd=0.00$ $MN_z, c, Rd=699.13$ $M_z, Ed/MN_z, c, Rd=0.02$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
Sollecitazioni: $N, Ed=-36.83$ $M_y, Ed=0.01$ $M_z, Ed=12.48$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.02=0.02$
Verifica ZZ: $0.00+0.02=0.02$

Asta n. 917 (-916 -917) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=38.46$
 $V, Ed=38.46$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=12.24$ $T_y=38.46$ $M_z=-12.10$
 $M_z, Ed=-12.10$ $M_z, V, c, Rd=699.13$
 $N, Ed=12.24$ $N_c, Rd=24200.00$ ZZ $n=N, Ed/N_c, Rd=0.00$ $MN_z, c, Rd=699.13$ $M_z, Ed/MN_z, c, Rd=0.02$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
Sollecitazioni: $N, Ed=-25.49$ $M_y, Ed=0.00$ $M_z, Ed=-12.10$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.02=0.02$
Verifica ZZ: $0.00+0.02=0.02$

Asta n. 919 (-918 -919) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=37.25$
 $V, Ed=37.25$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 5 SLV $X_l=0.62$ - Classe 1
Sollecitazioni: $N=5.40$ $T_y=37.25$ $M_z=11.72$
 $M_z, Ed=11.72$ $M_z, V, c, Rd=699.13$
 $N, Ed=5.40$ $N_c, Rd=24200.00$ ZZ $n=N, Ed/N_c, Rd=0.00$ $MN_z, c, Rd=699.13$ $M_z, Ed/MN_z, c, Rd=0.02$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
Sollecitazioni: $N, Ed=-36.83$ $M_y, Ed=-0.00$ $M_z, Ed=11.72$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.02=0.02$
Verifica ZZ: $0.00+0.02=0.02$

Asta n. 921 (-920 -921) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=36.04$
 $V, Ed=36.04$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=12.26$ $T_y=36.04$ $M_z=-11.34$
 $M_z, Ed=-11.34$ $M_z, V, c, Rd=699.13$
 $N, Ed=12.26$ $N_c, Rd=24200.00$ ZZ $n=N, Ed/N_c, Rd=0.00$ $MN_z, c, Rd=699.13$ $M_z, Ed/MN_z, c, Rd=0.02$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
Sollecitazioni: $N, Ed=-25.50$ $M_y, Ed=-0.01$ $M_z, Ed=-11.34$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.00+0.02=0.02$
Verifica ZZ: $0.00+0.00+0.02=0.02$

Asta n. 923 (-922 -923) - Sez. 6 (RC80x80x3) - Crit. 1

Relazione di calcolo

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=34.83$
 $V, Ed=34.83$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$
- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 5 SLV $X_l=0.62$ - Classe 1
Sollecitazioni: $N=5.33$ $T_y=34.83$ $M_z=10.95$
 $M_z, Ed=10.95$ $M_z, V, c, Rd=699.13$
 $N, Ed=5.33$ $N_c, Rd=24200.00$ ZZ $n=N, Ed/N_c, Rd=0.00$ $MN_z, c, Rd=699.13$ $M_z, Ed/MN_z, c, Rd=0.02$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
Sollecitazioni: $N, Ed=-36.77$ $M_y, Ed=-0.01$ $M_z, Ed=10.95$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.00+0.02=0.02$
Verifica ZZ: $0.00+0.00+0.02=0.02$

Asta n. 925 (-924 -925) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=33.55$
 $V, Ed=33.55$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$
- Verifica a presso o tenso-flessione retta ZZ (4.2.4.1.2.7) - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=13.21$ $T_y=33.55$ $M_z=-10.53$
 $M_z, Ed=-10.53$ $M_z, V, c, Rd=699.13$
 $N, Ed=13.21$ $N_c, Rd=24200.00$ ZZ $n=N, Ed/N_c, Rd=0.00$ $MN_z, c, Rd=699.13$ $M_z, Ed/MN_z, c, Rd=0.02$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
Sollecitazioni: $N, Ed=-26.27$ $M_y, Ed=0.03$ $M_z, Ed=-10.53$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.00+0.02=0.02$
Verifica ZZ: $0.00+0.00+0.02=0.02$

Asta n. 927 (-926 -927) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 13 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-34.84$ $M_x=-1.01$
 $V, Ed=-34.84$ $V_c, Rd, Red=6973.08$ $V, Ed/V_c, Rd, Red=0.00$
- Verifica a flessione e taglio ZZ[4.2.32] - CC 13 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-34.84$ $M_z=10.93$ $M_x=-1.01$
 $M_z, Ed=10.93$ $M_z, V, c, Rd=699.13$ $M_z, Ed/M_z, V, c, Rd=0.02$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
Sollecitazioni: $N, Ed=-30.12$ $M_y, Ed=0.15$ $M_z, Ed=10.93$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.00+0.02=0.02$
Verifica ZZ: $0.00+0.00+0.02=0.02$

Asta n. 929 (-928 -929) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-24.39$
 $V, Ed=-24.39$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$
- Verifica in termini tensionali [4.2.4] - CC 5 SLV $X_l=0.62$ - Classe 3
Sollecitazioni: $N=98.26$ $M_y=1.07$ $T_y=23.90$ $M_z=8.97$
Tensioni: $\sigma_N=10.63$ $\sigma_{m,d}=43.94$ $\tau=0.00$ $\sigma_{max}=54.58$ (sfrut=0.02)
Tensioni: $\sigma_N=10.63$ $\sigma_{m,d}=-4.69$ $\tau=5.81$ $\tau_{max}=5.81$ (sfrut=0.00)
Tensioni: $\sigma_N=10.63$ $\sigma_{m,d}=43.94$ $\tau=0.00$ $\sigma_{ID,max}=54.58$ (sfrut=0.02)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
Sollecitazioni: $N, Ed=-68.50$ $M_y, Ed=0.91$ $M_z, Ed=-9.97$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.00+0.02=0.02$
Verifica ZZ: $0.00+0.00+0.02=0.02$

Asta n. 931 (-930 -931) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-33.32$
 $V, Ed=-33.32$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 13 SLV $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-1341.02$ $T_z=-1.33$ $M_y=5.02$ $T_y=-33.32$ $M_z=37.04$
 Tensioni: $\sigma_N=-145.13$ $\sigma_{m,d}=-183.99$ $\tau=0.00$ $\sigma_{max}=-329.12$ (sfrut=0.13)
 Tensioni: $\sigma_N=-145.13$ $\sigma_{m,d}=20.31$ $\tau=8.11$ $\tau_{max}=8.11$ (sfrut=0.01)
 Tensioni: $\sigma_N=-145.13$ $\sigma_{m,d}=-183.99$ $\tau=0.00$ $\sigma_{ID,max}=329.12$ (sfrut=0.13)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
 Sollecitazioni: $N, Ed=-1341.02$ $M_y, Ed=5.02$ $M_z, Ed=37.04$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr,y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr,z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.06+0.01+0.06=0.12$
 Verifica ZZ: $0.06+0.01+0.06=0.12$

Asta n. 933 (-932 -933) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=29.79$ $M_x=-1.26$
 $V, Ed=29.79$ $V_c, Rd, Red=6969.82$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=0.62$ - Classe 3
 Sollecitazioni: $N=-28.94$ $T_z=29.75$ $M_y=-13.20$ $M_z=-1.65$ $M_x=-1.23$
 Tensioni: $\sigma_N=-3.13$ $\sigma_{m,d}=-64.94$ $\tau=3.45$ $\sigma_{max}=-68.07$ (sfrut=0.03)
 Tensioni: $\sigma_N=-3.13$ $\sigma_{m,d}=6.67$ $\tau=10.68$ $\tau_{max}=10.68$ (sfrut=0.01)
 Tensioni: $\sigma_N=-3.13$ $\sigma_{m,d}=-64.94$ $\tau=3.45$ $\sigma_{ID,max}=68.33$ (sfrut=0.03)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-34.78$ $M_y, Ed=-13.20$ $M_z, Ed=-2.12$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr,y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr,z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.02+0.00=0.03$
 Verifica ZZ: $0.00+0.02+0.00=0.02$

Asta n. 935 (-934 -935) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=30.42$ $M_x=-1.48$
 $V, Ed=30.42$ $V_c, Rd, Red=6966.89$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-20.91$ $T_z=30.42$ $M_y=9.47$ $M_x=-1.48$
 $M_y, Ed=9.47$ $M_y, V, c, Rd=699.13$
 $N, Ed=-20.91$ $N_c, Rd=-24200.00$ YY $n=N, Ed/N_c, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N, Ed=-42.73$ $M_y, Ed=9.47$ $M_z, Ed=-0.69$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr,y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr,z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.02+0.00=0.02$
 Verifica ZZ: $0.00+0.01+0.00=0.01$

Asta n. 937 (-936 -937) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=30.49$ $M_x=-1.50$
 $V, Ed=30.49$ $V_c, Rd, Red=6966.70$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $X_l=0.62$ - Classe 1
 Sollecitazioni: $N=-32.68$ $T_z=30.49$ $M_y=-9.58$ $M_x=-1.50$
 $M_y, Ed=-9.58$ $M_y, V, c, Rd=699.13$
 $N, Ed=-32.68$ $N_c, Rd=-24200.00$ YY $n=N, Ed/N_c, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N, Ed=-55.23$ $M_y, Ed=-9.58$ $M_z, Ed=-0.13$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr,y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr,z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.00+0.02+0.00=0.02$

Relazione di calcolo

Verifica ZZ: 0.00+0.01+0.00=0.01

Asta n. 939 (-938 -939) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV Xl=0.00 - Classe 1

Sollecitazioni: $T_z=31.83$ $M_x=-1.50$
 $V, Ed=31.83$ $V_c, Rd, Red=6966.67$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV Xl=0.00 - Classe 1

Sollecitazioni: $N=-24.66$ $T_z=31.83$ $M_y=10.01$ $M_x=-1.50$
 $M_y, Ed=10.01$ $M_y, V, c, Rd=699.13$
 $N, Ed=-24.66$ $N_c, Rd=-24200.00$ YY $n=N, Ed/N_c, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3

Sollecitazioni: $N, Ed=-44.65$ $M_y, Ed=10.01$ $M_z, Ed=-0.03$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: 0.00+0.02+0.00=0.02
Verifica ZZ: 0.00+0.01+0.00=0.01

Asta n. 941 (-940 -941) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV Xl=0.00 - Classe 1

Sollecitazioni: $T_z=33.03$ $M_x=-1.50$
 $V, Ed=33.03$ $V_c, Rd, Red=6966.71$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV Xl=0.62 - Classe 1

Sollecitazioni: $N=-31.59$ $T_z=33.03$ $M_y=-10.39$ $M_x=-1.50$
 $M_y, Ed=-10.39$ $M_y, V, c, Rd=699.13$
 $N, Ed=-31.59$ $N_c, Rd=-24200.00$ YY $n=N, Ed/N_c, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3

Sollecitazioni: $N, Ed=-55.98$ $M_y, Ed=-10.39$ $M_z, Ed=-0.02$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: 0.00+0.02+0.00=0.02
Verifica ZZ: 0.00+0.01+0.00=0.02

Asta n. 943 (-942 -943) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV Xl=0.00 - Classe 1

Sollecitazioni: $T_z=34.24$ $M_x=-1.50$
 $V, Ed=34.24$ $V_c, Rd, Red=6966.67$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV Xl=0.00 - Classe 1

Sollecitazioni: $N=-24.73$ $T_z=34.24$ $M_y=10.77$ $M_x=-1.50$
 $M_y, Ed=10.77$ $M_y, V, c, Rd=699.13$
 $N, Ed=-24.73$ $N_c, Rd=-24200.00$ YY $n=N, Ed/N_c, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.02$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3

Sollecitazioni: $N, Ed=-44.65$ $M_y, Ed=10.77$ $M_z, Ed=-0.01$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: 0.00+0.02+0.00=0.02
Verifica ZZ: 0.00+0.01+0.00=0.02

Asta n. 945 (-944 -945) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV Xl=0.00 - Classe 1

Sollecitazioni: $T_z=35.46$ $M_x=-1.50$
 $V, Ed=35.46$ $V_c, Rd, Red=6966.71$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV Xl=0.62 - Classe 1

Sollecitazioni: $N=-31.57$ $T_z=35.46$ $M_y=-11.15$ $M_x=-1.50$
 $M_y, Ed=-11.15$ $M_y, V, c, Rd=699.13$
 $N, Ed=-31.57$ $N_c, Rd=-24200.00$ YY $n=N, Ed/N_c, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.02$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3

Sollecitazioni: $N, Ed=-55.99$ $M_y, Ed=-11.15$ $M_z, Ed=0.01$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: 0.00+0.02+0.00=0.02

Relazione di calcolo

Verifica ZZ: 0.00+0.01+0.00=0.02

Asta n. 947 (-946 -947) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=36.67$ $M_x=-1.50$
 $V, Ed=36.67$ $V_c, Rd, Red=6966.67$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-24.73$ $T_z=36.67$ $M_y=11.53$ $M_x=-1.50$
 $M_y, Ed=11.53$ $M_y, V, c, Rd=699.13$
 $N, Ed=-24.73$ $N_c, Rd=-24200.00$ YY $n=N, Ed/N_c, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.02$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-44.64$ $M_y, Ed=11.53$ $M_z, Ed=0.01$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: 0.00+0.02+0.00=0.02
Verifica ZZ: 0.00+0.01+0.00=0.02

Asta n. 949 (-948 -949) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=37.88$ $M_x=-1.50$
 $V, Ed=37.88$ $V_c, Rd, Red=6966.71$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $X_l=0.62$ - Classe 1
Sollecitazioni: $N=-31.55$ $T_z=37.88$ $M_y=-11.91$ $M_x=-1.50$
 $M_y, Ed=-11.91$ $M_y, V, c, Rd=699.13$
 $N, Ed=-31.55$ $N_c, Rd=-24200.00$ YY $n=N, Ed/N_c, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.02$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-56.05$ $M_y, Ed=-11.91$ $M_z, Ed=0.02$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: 0.00+0.02+0.00=0.02
Verifica ZZ: 0.00+0.02+0.00=0.02

Asta n. 951 (-950 -951) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=39.02$ $M_x=-1.50$
 $V, Ed=39.02$ $V_c, Rd, Red=6966.68$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-24.91$ $T_z=39.02$ $M_y=12.25$ $M_x=-1.50$
 $M_y, Ed=12.25$ $M_y, V, c, Rd=699.13$
 $N, Ed=-24.91$ $N_c, Rd=-24200.00$ YY $n=N, Ed/N_c, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.02$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-43.85$ $M_y, Ed=12.25$ $M_z, Ed=-0.03$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: 0.00+0.02+0.00=0.02
Verifica ZZ: 0.00+0.02+0.00=0.02

Asta n. 953 (-952 -953) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=40.34$ $M_x=-1.50$
 $V, Ed=40.34$ $V_c, Rd, Red=6966.69$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-34.16$ $T_z=40.34$ $M_y=12.53$ $M_x=-1.50$
 $M_y, Ed=12.53$ $M_y, V, c, Rd=699.13$
 $N, Ed=-34.16$ $N_c, Rd=-24200.00$ YY $n=N, Ed/N_c, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.02$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-60.19$ $M_y, Ed=12.53$ $M_z, Ed=-0.18$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: 0.00+0.02+0.00=0.02

Relazione di calcolo

Verifica ZZ: $0.00+0.02+0.00=0.02$

Asta n. 955 (-954 -955) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=34.43$ $M_x=-1.46$
 $V, Ed=34.43$ $V_c, Rd, Red=6967.14$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.62$ - Classe 3
Sollecitazioni: $N=-32.82$ $T_z=34.43$ $M_y=-12.30$ $M_z=-1.02$ $M_x=-1.46$
Tensioni: $\sigma_N=-3.55$ $\sigma_{m,d}=-58.24$ $\tau=4.11$ $\sigma_{max}=-61.80$ (sfrut=0.02)
Tensioni: $\sigma_N=-3.55$ $\sigma_{m,d}=4.12$ $\tau=12.49$ $\tau_{max}=12.49$ (sfrut=0.01)
Tensioni: $\sigma_N=-3.55$ $\sigma_{m,d}=-58.24$ $\tau=4.11$ $\sigma_{ID,max}=62.21$ (sfrut=0.02)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-37.32$ $M_y, Ed=-12.30$ $M_z, Ed=-1.07$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.02+0.00=0.02$
Verifica ZZ: $0.00+0.02+0.00=0.02$

Asta n. 957 (-956 -957) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 7 SLV $X_l=0.52$ - Classe 1
Sollecitazioni: $T_z=-22.06$
 $V, Ed=-22.06$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-384.79$ $T_z=-45.58$ $M_y=-19.18$ $M_z=-7.71$
Tensioni: $\sigma_N=-41.64$ $\sigma_{m,d}=-117.64$ $\tau=0.00$ $\sigma_{max}=-159.29$ (sfrut=0.06)
Tensioni: $\sigma_N=-41.64$ $\sigma_{m,d}=-33.74$ $\tau=11.09$ $\tau_{max}=11.09$ (sfrut=0.01)
Tensioni: $\sigma_N=-41.64$ $\sigma_{m,d}=-117.64$ $\tau=0.00$ $\sigma_{ID,max}=159.29$ (sfrut=0.06)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed=-384.79$ $M_y, Ed=-19.18$ $M_z, Ed=-8.23$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.02+0.03+0.01=0.06$
Verifica ZZ: $0.02+0.02+0.01=0.05$

Asta n. 959 (-958 -959) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=-28.67$
 $V, Ed=-28.67$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.62$ - Classe 3
Sollecitazioni: $N=62.50$ $T_z=-28.67$ $M_y=9.12$ $M_z=-1.53$
Tensioni: $\sigma_N=6.76$ $\sigma_{m,d}=46.60$ $\tau=0.00$ $\sigma_{max}=53.37$ (sfrut=0.02)
Tensioni: $\sigma_N=6.76$ $\sigma_{m,d}=-6.70$ $\tau=6.97$ $\tau_{max}=6.97$ (sfrut=0.00)
Tensioni: $\sigma_N=6.76$ $\sigma_{m,d}=46.60$ $\tau=0.00$ $\sigma_{ID,max}=53.37$ (sfrut=0.02)

Asta n. 961 (-960 -961) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=-31.77$
 $V, Ed=-31.77$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $X_l=0.62$ - Classe 1
Sollecitazioni: $N=11.84$ $T_z=-31.77$ $M_y=9.95$
 $M_y, Ed=9.95$ $M_y, V, c, Rd=699.13$
 $N, Ed=11.84$ $N_c, Rd=24200.00$ YY $n=N, Ed/N_c, Rd=0.00$ $MN_y, c, Rd=699.13$ $M_y, Ed/MN_y, c, Rd=0.01$

Asta n. 963 (-962 -963) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=-30.28$
 $V, Ed=-30.28$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=21.80$ $T_z=-30.28$ $M_y=-9.52$
 $M_y, Ed=-9.52$ $M_y, V, c, Rd=699.13$
 $N, Ed=21.80$ $N_c, Rd=24200.00$ YY $n=N, Ed/N_c, Rd=0.00$ $MN_y, c, Rd=699.13$ $M_y, Ed/MN_y, c, Rd=0.01$

Asta n. 965 (-964 -965) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=-29.10$
 $V, Ed=-29.10$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $X_l=0.62$ - Classe 1
 Sollecitazioni: $N=14.47$ $T_z=-29.10$ $M_y=9.15$
 $My, Ed=9.15$ $My, V, c, Rd=699.13$
 $N, Ed=14.47$ $N_c, Rd=24200.00$ YY $n=N, Ed/N_c, Rd=0.00$ $MNy, c, Rd=699.13$ $My, Ed/MNy, c, Rd=0.01$

Asta n. 967 (-966 -967) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=-27.89$
 $V, Ed=-27.89$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=21.36$ $T_z=-27.89$ $M_y=-8.77$
 $My, Ed=-8.77$ $My, V, c, Rd=699.13$
 $N, Ed=21.36$ $N_c, Rd=24200.00$ YY $n=N, Ed/N_c, Rd=0.00$ $MNy, c, Rd=699.13$ $My, Ed/MNy, c, Rd=0.01$

Asta n. 969 (-968 -969) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=-26.68$
 $V, Ed=-26.68$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $X_l=0.62$ - Classe 1
 Sollecitazioni: $N=14.51$ $T_z=-26.68$ $M_y=8.39$
 $My, Ed=8.39$ $My, V, c, Rd=699.13$
 $N, Ed=14.51$ $N_c, Rd=24200.00$ YY $n=N, Ed/N_c, Rd=0.00$ $MNy, c, Rd=699.13$ $My, Ed/MNy, c, Rd=0.01$

Asta n. 971 (-970 -971) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=27.74$
 $V, Ed=27.74$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=21.74$ $T_z=27.74$ $M_y=8.72$
 $My, Ed=8.72$ $My, V, c, Rd=699.13$
 $N, Ed=21.74$ $N_c, Rd=24200.00$ YY $n=N, Ed/N_c, Rd=0.00$ $MNy, c, Rd=699.13$ $My, Ed/MNy, c, Rd=0.01$

Asta n. 973 (-972 -973) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=28.95$
 $V, Ed=28.95$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $X_l=0.62$ - Classe 1
 Sollecitazioni: $N=14.83$ $T_z=28.95$ $M_y=-9.10$
 $My, Ed=-9.10$ $My, V, c, Rd=699.13$
 $N, Ed=14.83$ $N_c, Rd=24200.00$ YY $n=N, Ed/N_c, Rd=0.00$ $MNy, c, Rd=699.13$ $My, Ed/MNy, c, Rd=0.01$

Asta n. 975 (-974 -975) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=30.09$
 $V, Ed=30.09$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=22.43$ $T_z=30.09$ $M_y=9.45$
 $My, Ed=9.45$ $My, V, c, Rd=699.13$
 $N, Ed=22.43$ $N_c, Rd=24200.00$ YY $n=N, Ed/N_c, Rd=0.00$ $MNy, c, Rd=699.13$ $My, Ed/MNy, c, Rd=0.01$

Asta n. 977 (-976 -977) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=31.44$
 $V, Ed=31.44$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=7.20$ $T_z=31.44$ $M_y=9.78$
 $My, Ed=9.78$ $My, V, c, Rd=699.13$
 $N, Ed=7.20$ $N_c, Rd=24200.00$ YY $n=N, Ed/N_c, Rd=0.00$ $MNy, c, Rd=699.13$ $My, Ed/MNy, c, Rd=0.01$

Asta n. 979 (-978 -979) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=26.06$
 $V, Ed=26.06$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

Relazione di calcolo

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.62$ - Classe 3
Sollecitazioni: $N=85.72$ $T_z=26.06$ $M_y=-9.52$ $M_z=-1.14$
Tensioni: $\sigma_N=9.28$ $\sigma_{m,d}=46.62$ $\tau=0.00$ $\sigma_{max}=55.90$ (sfrut=0.02)
Tensioni: $\sigma_N=9.28$ $\sigma_{m,d}=-5.00$ $\tau=6.34$ $\tau_{max}=6.34$ (sfrut=0.00)
Tensioni: $\sigma_N=9.28$ $\sigma_{m,d}=46.62$ $\tau=0.00$ $\sigma_{ID,max}=55.90$ (sfrut=0.02)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $M_y,Ed=-9.52$ $M_z,Ed=-1.14$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.02+0.00=0.02$
Verifica ZZ: $0.00+0.01+0.00=0.01$
- Asta n. 981 (-980 -981) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 28 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_y=3.03$
 $V,Ed=3.03$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 28 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-28.10$
 $V,Ed=-28.10$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$
- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-304.22$ $T_z=-45.76$ $M_y=-20.38$ $T_y=2.04$ $M_z=-8.43$
Tensioni: $\sigma_N=-32.92$ $\sigma_{m,d}=-126.01$ $\tau=0.00$ $\sigma_{max}=-158.94$ (sfrut=0.06)
Tensioni: $\sigma_N=-32.92$ $\sigma_{m,d}=-34.12$ $\tau=11.13$ $\tau_{max}=11.13$ (sfrut=0.01)
Tensioni: $\sigma_N=-32.92$ $\sigma_{m,d}=-126.01$ $\tau=0.00$ $\sigma_{ID,max}=158.94$ (sfrut=0.06)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N,Ed=-304.22$ $M_y,Ed=-20.38$ $M_z,Ed=-8.43$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.03+0.01=0.06$
Verifica ZZ: $0.01+0.03+0.01=0.05$
- Asta n. 983 (-982 -983) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=-27.38$
 $V,Ed=-27.38$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$
- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.62$ - Classe 3
Sollecitazioni: $N=27.63$ $T_z=-27.38$ $M_y=8.96$ $M_z=-1.41$
Tensioni: $\sigma_N=2.99$ $\sigma_{m,d}=45.36$ $\tau=0.00$ $\sigma_{max}=48.35$ (sfrut=0.02)
Tensioni: $\sigma_N=2.99$ $\sigma_{m,d}=-6.18$ $\tau=6.66$ $\tau_{max}=6.66$ (sfrut=0.00)
Tensioni: $\sigma_N=2.99$ $\sigma_{m,d}=45.36$ $\tau=0.00$ $\sigma_{ID,max}=48.35$ (sfrut=0.02)
- Asta n. 985 (-984 -985) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=-30.42$
 $V,Ed=-30.42$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$
- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $X_l=0.62$ - Classe 1
Sollecitazioni: $N=-13.35$ $T_z=-30.42$ $M_y=9.50$
 $M_y,Ed=9.50$ $M_y,V,c,Rd=699.13$
 $N,Ed=-13.35$ $N_c,Rd=-24200.00$ YY n=N,Ed/Nc,Rd=0.00 $MNy,c,Rd=699.13$ $M_y,Ed/MNy,c,Rd=0.01$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N,Ed=-24.87$ $M_y,Ed=9.50$ $M_z,Ed=-0.25$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.02+0.00=0.02$
Verifica ZZ: $0.00+0.01+0.00=0.01$
- Asta n. 987 (-986 -987) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=-29.00$
 $V,Ed=-29.00$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$
- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $X_l=0.00$ - Classe 1

Relazione di calcolo

Sollecitazioni: $N=-5.41$ $T_z=-29.00$ $M_y=-9.12$
 $M_y, Ed=-9.12$ $M_y, V, c, Rd=699.13$
 $N, Ed=-5.41$ $Nc, Rd=-24200.00$ YY $n=N, Ed/Nc, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed=-12.45$ $M_y, Ed=-9.12$ $M_z, Ed=-0.04$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica $YY: 0.00+0.01+0.00=0.02$
Verifica $ZZ: 0.00+0.01+0.00=0.01$

Asta n. 989 (-988 -989) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $Xl=0.00$ - Classe 1
Sollecitazioni: $T_z=-27.83$
 $V, Ed=-27.83$ $Vc, Rd=6986.14$ $V, Ed/Vc, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $Xl=0.62$ - Classe 1
Sollecitazioni: $N=-12.60$ $T_z=-27.83$ $M_y=8.75$
 $M_y, Ed=8.75$ $M_y, V, c, Rd=699.13$
 $N, Ed=-12.60$ $Nc, Rd=-24200.00$ YY $n=N, Ed/Nc, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed=-24.09$ $M_y, Ed=8.75$ $M_z, Ed=-0.01$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica $YY: 0.00+0.01=0.01$
Verifica $ZZ: 0.00+0.01=0.01$

Asta n. 991 (-990 -991) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $Xl=0.00$ - Classe 1
Sollecitazioni: $T_z=-26.62$
 $V, Ed=-26.62$ $Vc, Rd=6986.14$ $V, Ed/Vc, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 1 SLV $Xl=0.00$ - Classe 1
Sollecitazioni: $N=-5.73$ $T_z=-26.62$ $M_y=-8.37$
 $M_y, Ed=-8.37$ $M_y, V, c, Rd=699.13$
 $N, Ed=-5.73$ $Nc, Rd=-24200.00$ YY $n=N, Ed/Nc, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed=-12.72$ $M_y, Ed=-8.37$ $M_z, Ed=0.00$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica $YY: 0.00+0.01=0.01$
Verifica $ZZ: 0.00+0.01=0.01$

Asta n. 993 (-992 -993) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $Xl=0.00$ - Classe 1
Sollecitazioni: $T_z=26.16$
 $V, Ed=26.16$ $Vc, Rd=6986.14$ $V, Ed/Vc, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $Xl=0.62$ - Classe 1
Sollecitazioni: $N=-13.10$ $T_z=26.16$ $M_y=-8.23$
 $M_y, Ed=-8.23$ $M_y, V, c, Rd=699.13$
 $N, Ed=-13.10$ $Nc, Rd=-24200.00$ YY $n=N, Ed/Nc, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-24.59$ $M_y, Ed=-8.23$ $M_z, Ed=0.00$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica $YY: 0.00+0.01=0.01$
Verifica $ZZ: 0.00+0.01=0.01$

Asta n. 995 (-994 -995) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $Xl=0.00$ - Classe 1
Sollecitazioni: $T_z=27.37$
 $V, Ed=27.37$ $Vc, Rd=6986.14$ $V, Ed/Vc, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $Xl=0.00$ - Classe 1

Relazione di calcolo

Sollecitazioni: $N=-6.26$ $T_z=27.37$ $M_y=8.61$
 $M_y, Ed=8.61$ $M_y, V, c, Rd=699.13$
 $N, Ed=-6.26$ $Nc, Rd=-24200.00$ YY $n=N, Ed/Nc, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-13.24$ $M_y, Ed=8.61$ $M_z, Ed=-0.00$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica $YY: 0.00+0.01=0.01$
Verifica $ZZ: 0.00+0.01=0.01$

Asta n. 997 (-996 -997) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $Xl=0.00$ - Classe 1
Sollecitazioni: $T_z=28.58$
 $V, Ed=28.58$ $Vc, Rd=6986.14$ $V, Ed/Vc, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $Xl=0.62$ - Classe 1
Sollecitazioni: $N=-13.08$ $T_z=28.58$ $M_y=-8.99$
 $M_y, Ed=-8.99$ $M_y, V, c, Rd=699.13$
 $N, Ed=-13.08$ $Nc, Rd=-24200.00$ YY $n=N, Ed/Nc, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-24.65$ $M_y, Ed=-8.99$ $M_z, Ed=-0.01$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica $YY: 0.00+0.01+0.00=0.02$
Verifica $ZZ: 0.00+0.01+0.00=0.01$

Asta n. 999 (-998 -999) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $Xl=0.00$ - Classe 1
Sollecitazioni: $T_z=29.73$
 $V, Ed=29.73$ $Vc, Rd=6986.14$ $V, Ed/Vc, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $Xl=0.00$ - Classe 1
Sollecitazioni: $N=-6.42$ $T_z=29.73$ $M_y=9.33$
 $M_y, Ed=9.33$ $M_y, V, c, Rd=699.13$
 $N, Ed=-6.42$ $Nc, Rd=-24200.00$ YY $n=N, Ed/Nc, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-12.48$ $M_y, Ed=9.33$ $M_z, Ed=-0.04$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica $YY: 0.00+0.01+0.00=0.02$
Verifica $ZZ: 0.00+0.01+0.00=0.01$

Asta n. 1001 (-1000 -1001) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $Xl=0.00$ - Classe 1
Sollecitazioni: $T_z=31.03$
 $V, Ed=31.03$ $Vc, Rd=6986.14$ $V, Ed/Vc, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 9 SLV $Xl=0.00$ - Classe 1
Sollecitazioni: $N=-15.81$ $T_z=31.03$ $M_y=9.68$
 $M_y, Ed=9.68$ $M_y, V, c, Rd=699.13$
 $N, Ed=-15.81$ $Nc, Rd=-24200.00$ YY $n=N, Ed/Nc, Rd=0.00$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.01$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-28.75$ $M_y, Ed=9.68$ $M_z, Ed=-0.17$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica $YY: 0.00+0.02+0.00=0.02$
Verifica $ZZ: 0.00+0.01+0.00=0.01$

Asta n. 1003 (-1002 -1003) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $Xl=0.00$ - Classe 1
Sollecitazioni: $T_z=25.46$
 $V, Ed=25.46$ $Vc, Rd=6986.14$ $V, Ed/Vc, Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $Xl=0.62$ - Classe 3

Sollecitazioni: $N=55.57$ $T_z=25.46$ $M_y=-9.51$ $M_z=-1.01$
Tensioni: $\sigma_N=6.01$ $\sigma_{m,d}=46.05$ $\tau=0.00$ $\sigma_{max}=52.06$ (sfrut=0.02)
Tensioni: $\sigma_N=6.01$ $\sigma_{m,d}=-4.43$ $\tau=6.19$ $\tau_{max}=6.19$ (sfrut=0.00)
Tensioni: $\sigma_N=6.01$ $\sigma_{m,d}=46.05$ $\tau=0.00$ $\sigma_{ID,max}=52.06$ (sfrut=0.02)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-17.33$ $M_y, Ed=-9.51$ $M_z, Ed=-1.01$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr, $y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr, $z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.02+0.00=0.02$
Verifica ZZ: $0.00+0.01+0.00=0.01$

Asta n. 1005 (-1004 -1005) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.52$ - Classe 1
Sollecitazioni: $T_z=40.77$
 $V, Ed=40.77$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-386.48$ $T_z=48.11$ $M_y=30.14$ $M_z=-5.10$
Tensioni: $\sigma_N=-41.83$ $\sigma_{m,d}=-154.12$ $\tau=0.00$ $\sigma_{max}=-195.95$ (sfrut=0.07)
Tensioni: $\sigma_N=-41.83$ $\sigma_{m,d}=-22.30$ $\tau=11.70$ $\tau_{max}=11.70$ (sfrut=0.01)
Tensioni: $\sigma_N=-41.83$ $\sigma_{m,d}=-154.12$ $\tau=0.00$ $\sigma_{ID,max}=195.95$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-386.48$ $M_y, Ed=30.14$ $M_z, Ed=-5.10$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr, $y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr, $z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.02+0.05+0.01=0.07$
Verifica ZZ: $0.02+0.04+0.01=0.06$

Asta n. 40001 (-871 21) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_l=0.10$ - Classe 1
Sollecitazioni: $T_y=17.30$
 $V, Ed=17.30$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l=0.10$ - Classe 1
Sollecitazioni: $T_z=178.17$
 $V, Ed=178.17$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.03$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.00$ - Classe 3
Sollecitazioni: $N=548.78$ $T_z=178.50$ $M_y=38.92$ $T_y=-21.53$ $M_z=4.37$
Tensioni: $\sigma_N=80.23$ $\sigma_{m,d}=349.61$ $\tau=0.00$ $\sigma_{max}=429.84$ (sfrut=0.16)
Tensioni: $\sigma_N=80.23$ $\sigma_{m,d}=31.73$ $\tau=58.61$ $\tau_{max}=58.61$ (sfrut=0.04)
Tensioni: $\sigma_N=80.23$ $\sigma_{m,d}=349.61$ $\tau=0.00$ $\sigma_{ID,max}=429.84$ (sfrut=0.16)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed=-434.62$ $M_y, Ed=34.71$ $M_z, Ed=-8.04$ $L=0.78$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=33.39$ Ncr, $y=127175.00$ $\lambda^*_y=0.38$ Curva a: $\Phi_y=0.59$ $\chi_y=0.96$
 $\lambda_z=33.39$ Ncr, $z=127175.00$ $\lambda^*_z=0.38$ Curva a: $\Phi_z=0.59$ $\chi_z=0.96$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.10+0.02=0.15$
Verifica ZZ: $0.02+0.08+0.02=0.13$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/6314) $f_{z,L}=0.00$ (L/20266)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/7143) $f_{z,L}=0.00$ (L/9903)

Asta n. 40002 (-932 29) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 1 SLV $X_l=0.10$ - Classe 1
Sollecitazioni: $T_y=-18.86$
 $V, Ed=-18.86$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l=0.10$ - Classe 1
Sollecitazioni: $T_z=178.22$
 $V, Ed=178.22$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.03$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.00$ - Classe 3
Sollecitazioni: $N=552.18$ $T_z=178.56$ $M_y=38.93$ $T_y=20.30$ $M_z=-4.19$
Tensioni: $\sigma_N=80.73$ $\sigma_{m,d}=348.31$ $\tau=0.00$ $\sigma_{max}=429.04$ (sfrut=0.16)

Tensioni: $\sigma_N=80.73$ $\sigma_{m,d}=-30.49$ $\tau=58.63$ $\tau_{max}=58.63$ (sfrut=0.04)
Tensioni: $\sigma_N=80.73$ $\sigma_{m,d}=348.31$ $\tau=0.00$ $\sigma_{ID,max}=429.04$ (sfrut=0.16)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: N,Ed=-350.95 My,Ed=38.93 Mz,Ed=-5.58 L=0.78
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=33.39$ Ncr,y=127175.00 $\lambda^*_y=0.38$ Curva a: $\Phi_y=0.59$ $\chi_y=0.96$
 $\lambda_z=33.39$ Ncr,z=127175.00 $\lambda^*_z=0.38$ Curva a: $\Phi_z=0.59$ $\chi_z=0.96$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.02+0.11+0.02=0.15
Verifica ZZ: 0.02+0.09+0.02=0.13

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/6224) $f_{z,L}=0.00$ (L/19365)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/7143) $f_{z,L}=0.00$ (L/9903)

Asta n. 40003 (21 57) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 5 SLV Xl=0.88 - Classe 1
Sollecitazioni: Tz=-154.69 Mx=-1.30
V,Ed=-154.69 Vc,Rd,Red=5148.81 V,Ed/Vc,Rd,Red=0.03

- Verifica in termini tensionali [4.2.4] - CC 5 SLV Xl=0.88 - Classe 3
Sollecitazioni: N=-223.84 Tz=-154.69 My=48.14 Ty=24.14 Mz=4.17 Mx=-1.30
Tensioni: $\sigma_N=-32.73$ $\sigma_{m,d}=-422.52$ $\tau=6.65$ $\sigma_{max}=-455.25$ (sfrut=0.17)
Tensioni: $\sigma_N=-32.73$ $\sigma_{m,d}=30.31$ $\tau=57.45$ $\tau_{max}=57.45$ (sfrut=0.04)
Tensioni: $\sigma_N=-32.73$ $\sigma_{m,d}=-422.52$ $\tau=6.65$ $\sigma_{ID,max}=455.39$ (sfrut=0.17)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
Sollecitazioni: N,Ed=-223.84 My,Ed=48.14 Mz,Ed=-8.46 L=0.88
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.01+0.14+0.02=0.18
Verifica ZZ: 0.01+0.11+0.02=0.15

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.00$ (L/11197) $f_{z,L}=0.00$ (L/19251)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.00$ (L/11430) $f_{z,L}=0.00$

Asta n. 40009 (-868 -871) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU Xl=0.00 - Classe 1
Sollecitazioni: Tz=20.44
V,Ed=20.44 Vc,Rd=5171.56 V,Ed/Vc,Rd=0.00

- Verifica in termini tensionali [4.2.4] - CC 1 SLV Xl=0.00 - Classe 3
Sollecitazioni: N=624.82 Tz=-4.71 My=-5.97 Ty=-1.67 Mz=-1.04
Tensioni: $\sigma_N=91.35$ $\sigma_{m,d}=56.61$ $\tau=0.00$ $\sigma_{max}=147.96$ (sfrut=0.06)
Tensioni: $\sigma_N=91.35$ $\sigma_{m,d}=-7.54$ $\tau=1.55$ $\tau_{max}=1.55$ (sfrut=0.00)
Tensioni: $\sigma_N=91.35$ $\sigma_{m,d}=56.61$ $\tau=0.00$ $\sigma_{ID,max}=147.96$ (sfrut=0.06)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: N,Ed=-474.54 My,Ed=-5.47 Mz,Ed=-1.20 L=0.88
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
Verifica YY: 0.03+0.02+0.00=0.05
Verifica ZZ: 0.03+0.01+0.00=0.04

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/9993) $f_{z,L}=0.00$ (L/76617)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/9478) $f_{z,L}=0.00$ (L/42763)

Asta n. 40010 (-935 -932) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU Xl=0.00 - Classe 1
Sollecitazioni: Tz=20.01
V,Ed=20.01 Vc,Rd=5171.56 V,Ed/Vc,Rd=0.00

- Verifica in termini tensionali [4.2.4] - CC 9 SLV Xl=0.00 - Classe 3

Sollecitazioni: $N=626.14$ $T_z=-4.71$ $M_y=-5.97$ $T_y=1.60$ $M_z=1.10$
 Tensioni: $\sigma_N=91.54$ $\sigma_{m,d}=57.10$ $\tau=0.00$ $\sigma_{max}=148.64$ (sfrut=0.06)
 Tensioni: $\sigma_N=91.54$ $\sigma_{m,d}=7.97$ $\tau=1.55$ $\tau_{max}=1.55$ (sfrut=0.00)
 Tensioni: $\sigma_N=91.54$ $\sigma_{m,d}=57.10$ $\tau=0.00$ $\sigma_{ID,max}=148.64$ (sfrut=0.06)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed=-476.77$ $M_y, Ed=-5.47$ $M_z, Ed=1.20$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.03+0.02+0.00=0.05$
 Verifica ZZ: $0.03+0.01+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/9993) $f_{z,L}=0.00$ (L/76617)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/9577) $f_{z,L}=0.00$ (L/42763)

Asta n. 40011 (57 -872) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
 Sollecitazioni: $T_y=2.10$
 $V, Ed=2.10$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
 Sollecitazioni: $T_z=-34.62$
 $V, Ed=-34.62$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 5 SLV $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-692.41$ $T_z=-25.51$ $M_y=-12.46$ $T_y=2.48$ $M_z=-1.06$
 Tensioni: $\sigma_N=-101.23$ $\sigma_{m,d}=-109.18$ $\tau=0.00$ $\sigma_{max}=-210.41$ (sfrut=0.08)
 Tensioni: $\sigma_N=-101.23$ $\sigma_{m,d}=-7.68$ $\tau=8.38$ $\tau_{max}=8.38$ (sfrut=0.01)
 Tensioni: $\sigma_N=-101.23$ $\sigma_{m,d}=-109.18$ $\tau=0.00$ $\sigma_{ID,max}=210.41$ (sfrut=0.08)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
 Sollecitazioni: $N, Ed=-692.41$ $M_y, Ed=-12.46$ $M_z, Ed=1.12$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.04+0.04+0.00=0.08$
 Verifica ZZ: $0.04+0.03+0.00=0.07$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/9993) $f_{z,L}=0.00$ (L/52537)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/10447) $f_{z,L}=0.00$ (L/28731)

Asta n. 40017 (-867 -868) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.55$ - Classe 1
 Sollecitazioni: $T_z=-16.95$
 $V, Ed=-16.95$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.88$ - Classe 3
 Sollecitazioni: $N=548.64$ $T_z=3.93$ $M_y=-4.76$ $M_z=1.20$
 Tensioni: $\sigma_N=80.21$ $\sigma_{m,d}=48.15$ $\tau=0.00$ $\sigma_{max}=128.36$ (sfrut=0.05)
 Tensioni: $\sigma_N=80.21$ $\sigma_{m,d}=9.71$ $\tau=1.29$ $\tau_{max}=1.29$ (sfrut=0.00)
 Tensioni: $\sigma_N=80.21$ $\sigma_{m,d}=48.15$ $\tau=0.00$ $\sigma_{ID,max}=128.36$ (sfrut=0.05)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed=-514.49$ $M_y, Ed=-5.08$ $M_z, Ed=1.14$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.03+0.02+0.00=0.05$
 Verifica ZZ: $0.03+0.01+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10447) $f_{z,L}=0.00$ (L/73552)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/44849)

Asta n. 40018 (-936 -935) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.55$ - Classe 1
 Sollecitazioni: $T_z=-16.96$
 $V, Ed=-16.96$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.88$ - Classe 3
 Sollecitazioni: $N=550.70$ $T_z=3.92$ $M_y=-4.76$ $M_z=-1.27$
 Tensioni: $\sigma_N=80.51$ $\sigma_{m,d}=48.70$ $\tau=0.00$ $\sigma_{max}=129.21$ (sfrut=0.05)
 Tensioni: $\sigma_N=80.51$ $\sigma_{m,d}=-10.28$ $\tau=1.29$ $\tau_{max}=1.29$ (sfrut=0.00)
 Tensioni: $\sigma_N=80.51$ $\sigma_{m,d}=48.70$ $\tau=0.00$ $\sigma_{TD,max}=129.21$ (sfrut=0.05)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N, Ed=-515.93$ $M_y, Ed=-5.08$ $M_z, Ed=-1.20$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.03+0.02+0.00=0.05$
 Verifica ZZ: $0.03+0.01+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/65671)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/42763)

Asta n. 40019 (-872 -875) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=23.37$
 $V, Ed=23.37$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU $X_l=0.88$ - Classe 1
 Sollecitazioni: $N=-291.77$ $T_z=19.04$ $M_y=-10.16$
 $M_y, Ed=-10.16$ $M_y, V, c, Rd=383.27$
 $N, Ed=-291.77$ $N_c, Rd=-17914.30$ YY $n=N, Ed/N_c, Rd=0.02$ $MN_y, c, Rd=383.27$ $M_y, Ed/MN_y, c, Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-291.77$ $M_y, Ed=-10.16$ $M_z, Ed=-0.65$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.02+0.03+0.00=0.05$
 Verifica ZZ: $0.02+0.02+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10447) $f_{z,L}=0.00$ (L/70723)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/9993) $f_{z,L}=0.00$ (L/55721)

Asta n. 40025 (-864 -867) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.33$ - Classe 1
 Sollecitazioni: $T_z=17.42$
 $V, Ed=17.42$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica a trazione (4.2.4.1.2.1) - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=685.71$ $T_z=-1.71$
 Verifica a trazione [4.2.5]
 $N, Ed=685.71$ $N_{pl}, Rd=17914.30$ $N_u, Rd=21176.60$ $N, Ed/N_t, Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N, Ed=-440.89$ $M_y, Ed=-4.85$ $M_z, Ed=-0.87$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.02+0.01+0.00=0.04$
 Verifica ZZ: $0.02+0.01+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/73552)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/9381) $f_{z,L}=0.00$ (L/45970)

Asta n. 40026 (-939 -936) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.33$ - Classe 1
 Sollecitazioni: $T_z=17.44$
 $V, Ed=17.44$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=687.00$ $T_z=-5.14$ $M_y=-5.20$ $M_z=1.01$
 Tensioni: $\sigma_N=100.44$ $\sigma_{m,d}=50.20$ $\tau=0.00$ $\sigma_{max}=150.64$ (sfrut=0.06)
 Tensioni: $\sigma_N=100.44$ $\sigma_{m,d}=8.18$ $\tau=1.69$ $\tau_{max}=1.69$ (sfrut=0.00)
 Tensioni: $\sigma_N=100.44$ $\sigma_{m,d}=50.20$ $\tau=0.00$ $\sigma_{ID,max}=150.64$ (sfrut=0.06)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed=-443.27$ $M_y, Ed=-4.85$ $M_z, Ed=0.92$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda_z^*=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.02+0.01+0.00=0.04$
 Verifica ZZ: $0.02+0.01+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/73552)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/9381) $f_{z,L}=0.00$ (L/45970)

Asta n. 40027 (-875 -876) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
 Sollecitazioni: $T_z=-24.21$
 $V, Ed=-24.21$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica a compressione (4.2.4.1.2.2) - CC 5 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-606.78$
 Verifica a compressione [4.2.9]
 $N, Ed=-606.78$ $N_c, Rd=-17914.30$ $N, Ed/N_c, Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
 Sollecitazioni: $N, Ed=-606.78$ $M_y, Ed=-3.83$ $M_z, Ed=0.65$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda_z^*=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.03+0.01+0.00=0.05$
 Verifica ZZ: $0.03+0.01+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/9993) $f_{z,L}=0.00$ (L/57462)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/43781)

Asta n. 40033 (-863 -864) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.55$ - Classe 1
 Sollecitazioni: $T_z=-17.58$
 $V, Ed=-17.58$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-339.03$ $T_z=-14.88$ $M_y=-8.49$ $M_z=1.19$
 Tensioni: $\sigma_N=-49.57$ $\sigma_{m,d}=-78.15$ $\tau=0.00$ $\sigma_{max}=-127.71$ (sfrut=0.05)
 Tensioni: $\sigma_N=-49.57$ $\sigma_{m,d}=9.60$ $\tau=4.88$ $\tau_{max}=4.88$ (sfrut=0.00)
 Tensioni: $\sigma_N=-49.57$ $\sigma_{m,d}=-78.15$ $\tau=0.00$ $\sigma_{ID,max}=127.71$ (sfrut=0.05)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-339.03$ $M_y, Ed=-8.49$ $M_z, Ed=1.22$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda_z^*=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.02+0.02+0.00=0.05$
 Verifica ZZ: $0.02+0.02+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/76617)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/49697)

Asta n. 40034 (-940 -939) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.55$ - Classe 1
 Sollecitazioni: $T_z=-17.60$
 $V, Ed=-17.60$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-338.71$ $T_z=-14.89$ $M_y=-8.49$ $M_z=-1.25$
 Tensioni: $\sigma_N=-49.52$ $\sigma_{m,d}=-78.64$ $\tau=0.00$ $\sigma_{max}=-128.16$ (sfrut=0.05)
 Tensioni: $\sigma_N=-49.52$ $\sigma_{m,d}=-10.06$ $\tau=4.89$ $\tau_{max}=4.89$ (sfrut=0.00)
 Tensioni: $\sigma_N=-49.52$ $\sigma_{m,d}=-78.64$ $\tau=0.00$ $\sigma_{ID,max}=128.16$ (sfrut=0.05)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-338.71$ $M_y, Ed=-8.49$ $M_z, Ed=-1.27$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.02+0.03+0.00=0.05$
 Verifica ZZ: $0.02+0.02+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/70723)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/47148)

Asta n. 40035 (-876 -879) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=24.05$
 $V, Ed=24.05$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica a trazione (4.2.4.1.2.1) - CC 5 SLV $X_l=0.77$ - Classe 1
 Sollecitazioni: $N=549.75$
 Verifica a trazione [4.2.5]
 $N, Ed=549.75$ $N_{pl}, Rd=17914.30$ $N_u, Rd=21176.60$ $N, Ed/N_t, Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-351.82$ $M_y, Ed=-10.31$ $M_z, Ed=-0.42$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.76, 0.96$
 Verifica YY: $0.02+0.03+0.00=0.05$
 Verifica ZZ: $0.02+0.02+0.00=0.05$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10447) $f_{z,L}=0.00$ (L/79948)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/59316)

Asta n. 40041 (-860 -863) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.33$ - Classe 1
 Sollecitazioni: $T_z=17.34$
 $V, Ed=17.34$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=733.24$ $T_z=-5.18$ $M_y=-4.34$ $M_z=-1.01$
 Tensioni: $\sigma_N=107.20$ $\sigma_{m,d}=43.21$ $\tau=0.00$ $\sigma_{max}=150.41$ (sfrut=0.06)
 Tensioni: $\sigma_N=107.20$ $\sigma_{m,d}=-8.18$ $\tau=1.70$ $\tau_{max}=1.70$ (sfrut=0.00)
 Tensioni: $\sigma_N=107.20$ $\sigma_{m,d}=43.21$ $\tau=0.00$ $\sigma_{ID,max}=150.41$ (sfrut=0.06)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N, Ed=-393.58$ $M_y, Ed=-4.11$ $M_z, Ed=-0.92$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.76, 0.96$
 Verifica YY: $0.02+0.01+0.00=0.04$
 Verifica ZZ: $0.02+0.01+0.00=0.03$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/75053)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/9381) $f_{z,L}=0.00$ (L/54889)

Relazione di calcolo

Asta n. 40042 (-943 -940) - Sez. 7 (RC60x60x3) - Crit. 1

-
- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.33$ - Classe 1
Sollecitazioni: $T_z=17.36$
 $V, Ed=17.36$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

 - Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.00$ - Classe 3
Sollecitazioni: $N=734.52$ $T_z=-5.17$ $M_y=-4.33$ $M_z=1.06$
Tensioni: $\sigma_N=107.39$ $\sigma_{m,d}=43.56$ $\tau=0.00$ $\sigma_{max}=150.94$ (sfrut=0.06)
Tensioni: $\sigma_N=107.39$ $\sigma_{m,d}=8.54$ $\tau=1.70$ $\tau_{max}=1.70$ (sfrut=0.00)
Tensioni: $\sigma_N=107.39$ $\sigma_{m,d}=43.56$ $\tau=0.00$ $\sigma_{ID,max}=150.94$ (sfrut=0.06)

 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed=-395.96$ $M_y, Ed=-4.11$ $M_z, Ed=0.98$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr, $y=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr, $z=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.01+0.00=0.04$
Verifica ZZ: $0.02+0.01+0.00=0.03$

 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/73552)

 - Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/9381) $f_{z,L}=0.00$ (L/53298)

Asta n. 40043 (-879 -880) - Sez. 7 (RC60x60x3) - Crit. 1

-
- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
Sollecitazioni: $T_z=-24.03$
 $V, Ed=-24.03$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

 - Verifica a trazione (4.2.4.1.2.1) - CC 13 SLV $X_l=0.55$ - Classe 1
Sollecitazioni: $N=610.62$ $T_z=-1.53$
Verifica a trazione [4.2.5]
 $N, Ed=610.62$ $N_{pl}, Rd=17914.30$ $N_u, Rd=21176.60$ $N, Ed/N_t, Rd=0.03$

 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-223.61$ $M_y, Ed=-10.01$ $M_z, Ed=0.45$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr, $y=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr, $z=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.03+0.00=0.04$
Verifica ZZ: $0.01+0.02+0.00=0.04$

 - Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/9886) $f_{z,L}=0.00$ (L/62332)

 - Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/9780) $f_{z,L}=0.00$ (L/51078)

Asta n. 40049 (-859 -860) - Sez. 7 (RC60x60x3) - Crit. 1

-
- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.55$ - Classe 1
Sollecitazioni: $T_z=-17.64$
 $V, Ed=-17.64$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

 - Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-400.68$ $T_z=-14.93$ $M_y=-8.28$ $M_z=1.14$
Tensioni: $\sigma_N=-58.58$ $\sigma_{m,d}=-76.04$ $\tau=0.00$ $\sigma_{max}=-134.62$ (sfrut=0.05)
Tensioni: $\sigma_N=-58.58$ $\sigma_{m,d}=9.19$ $\tau=4.90$ $\tau_{max}=4.90$ (sfrut=0.00)
Tensioni: $\sigma_N=-58.58$ $\sigma_{m,d}=-76.04$ $\tau=0.00$ $\sigma_{ID,max}=134.62$ (sfrut=0.05)

 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-400.68$ $M_y, Ed=-8.28$ $M_z, Ed=1.17$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr, $y=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr, $z=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.02+0.00=0.05$
Verifica ZZ: $0.02+0.02+0.00=0.05$

 - Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/70723)

 - Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/10447) $f_{z,L}=0.00$ (L/57462)

Asta n. 40050 (-944 -943) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.55$ - Classe 1
Sollecitazioni: $T_z=-17.65$
 $V, Ed=-17.65$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$
- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-400.36$ $T_z=-14.95$ $M_y=-8.28$ $M_z=-1.19$
Tensioni: $\sigma_N=-58.53$ $\sigma_{m,d}=-76.51$ $\tau=0.00$ $\sigma_{max}=-135.04$ (sfrut=0.05)
Tensioni: $\sigma_N=-58.53$ $\sigma_{m,d}=-9.63$ $\tau=4.91$ $\tau_{max}=4.91$ (sfrut=0.00)
Tensioni: $\sigma_N=-58.53$ $\sigma_{m,d}=-76.51$ $\tau=0.00$ $\sigma_{ID,max}=135.04$ (sfrut=0.05)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-400.36$ $M_y, Ed=-8.28$ $M_z, Ed=-1.22$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.02+0.00=0.05$
Verifica ZZ: $0.02+0.02+0.00=0.05$
- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/76617)
- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/10567) $f_{z,L}=0.00$ (L/61293)

Asta n. 40051 (-880 -883) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=24.11$
 $V, Ed=24.11$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$
- Verifica a compressione (4.2.4.1.2.2) - CC 13 SLV $X_l=0.88$ - Classe 1
Sollecitazioni: $N=-541.86$ $T_z=-1.21$
Verifica a compressione [4.2.9]
 $N, Ed=-541.86$ $N_c, Rd=-17914.30$ $N, Ed/N_c, Rd=0.03$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-413.45$ $M_y, Ed=-10.16$ $M_z, Ed=-0.41$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.03+0.00=0.05$
Verifica ZZ: $0.02+0.02+0.00=0.05$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/70723)
- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/57462)

Asta n. 40057 (-856 -859) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.33$ - Classe 1
Sollecitazioni: $T_z=17.29$
 $V, Ed=17.29$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$
- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.00$ - Classe 3
Sollecitazioni: $N=780.65$ $T_z=-5.22$ $M_y=-3.41$ $M_z=-1.06$
Tensioni: $\sigma_N=114.13$ $\sigma_{m,d}=36.06$ $\tau=0.00$ $\sigma_{max}=150.19$ (sfrut=0.06)
Tensioni: $\sigma_N=114.13$ $\sigma_{m,d}=-8.54$ $\tau=1.71$ $\tau_{max}=1.71$ (sfrut=0.00)
Tensioni: $\sigma_N=114.13$ $\sigma_{m,d}=36.06$ $\tau=0.00$ $\sigma_{ID,max}=150.19$ (sfrut=0.06)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-346.17$ $M_y, Ed=-3.31$ $M_z, Ed=-0.98$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.01+0.00=0.03$
Verifica ZZ: $0.02+0.01+0.00=0.03$
- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/9993) $f_{z,L}=0.00$ (L/70723)
- Verifica freccia massima carichi totali - CC 31

$f_{z,G}=0.01$ (L/8926) $f_{z,L}=0.00$ (L/58374)

Asta n. 40058 (-947 -944) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.33$ - Classe 1
 Sollecitazioni: $T_z=17.31$
 $V, Ed=17.31$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=781.93$ $T_z=-5.21$ $M_y=-3.40$ $M_z=1.10$
 Tensioni: $\sigma_N=114.32$ $\sigma_{m,d}=36.41$ $\tau=0.00$ $\sigma_{max}=150.72$ (sfrut=0.06)
 Tensioni: $\sigma_N=114.32$ $\sigma_{m,d}=8.92$ $\tau=1.71$ $\tau_{max}=1.71$ (sfrut=0.00)
 Tensioni: $\sigma_N=114.32$ $\sigma_{m,d}=36.41$ $\tau=0.00$ $\sigma_{ID,max}=150.72$ (sfrut=0.06)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed=-348.55$ $M_y, Ed=-3.31$ $M_z, Ed=1.04$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda_z^*=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.76, 0.96$
 Verifica YY: $0.02+0.01+0.00=0.03$
 Verifica ZZ: $0.02+0.01+0.00=0.03$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/78247)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/9103) $f_{z,L}=0.00$ (L/62332)

Asta n. 40059 (-883 -884) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
 Sollecitazioni: $T_z=-23.98$
 $V, Ed=-23.98$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica a trazione (4.2.4.1.2.1) - CC 13 SLV $X_l=0.88$ - Classe 1
 Sollecitazioni: $N=659.28$ $T_z=-2.74$
 Verifica a trazione [4.2.5]
 $N, Ed=659.28$ $N_{pl}, Rd=17914.30$ $N_u, Rd=21176.60$ $N, Ed/N_t, Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-161.97$ $M_y, Ed=-9.89$ $M_z, Ed=0.46$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda_z^*=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.03+0.00=0.04$
 Verifica ZZ: $0.01+0.02+0.00=0.03$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.01$ (L/9780) $f_{z,L}=0.00$ (L/64519)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/9478) $f_{z,L}=0.00$ (L/51078)

Asta n. 40065 (-855 -856) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.55$ - Classe 1
 Sollecitazioni: $T_z=-17.69$
 $V, Ed=-17.69$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-462.32$ $T_z=-14.98$ $M_y=-7.98$ $M_z=1.09$
 Tensioni: $\sigma_N=-67.59$ $\sigma_{m,d}=-73.22$ $\tau=0.00$ $\sigma_{max}=-140.81$ (sfrut=0.05)
 Tensioni: $\sigma_N=-67.59$ $\sigma_{m,d}=8.77$ $\tau=4.92$ $\tau_{max}=4.92$ (sfrut=0.00)
 Tensioni: $\sigma_N=-67.59$ $\sigma_{m,d}=-73.22$ $\tau=0.00$ $\sigma_{ID,max}=140.81$ (sfrut=0.05)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-462.32$ $M_y, Ed=-7.98$ $M_z, Ed=1.12$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda_z^*=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.03+0.02+0.00=0.05$
 Verifica ZZ: $0.03+0.02+0.00=0.05$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/70723)

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/10816) $f_{z,L}=0.00$ (L/70723)

Asta n. 40066 (-948 -947) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.55$ - Classe 1
Sollecitazioni: $T_z=-17.70$
 $V,Ed=-17.70$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-462.00$ $T_z=-15.00$ $M_y=-7.98$ $M_z=-1.14$
Tensioni: $\sigma_N=-67.54$ $\sigma_{m,d}=-73.67$ $\tau=0.00$ $\sigma_{max}=-141.21$ (sfrut=0.05)
Tensioni: $\sigma_N=-67.54$ $\sigma_{m,d}=-9.18$ $\tau=4.92$ $\tau_{max}=4.92$ (sfrut=0.00)
Tensioni: $\sigma_N=-67.54$ $\sigma_{m,d}=-73.67$ $\tau=0.00$ $\sigma_{ID,max}=141.21$ (sfrut=0.05)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-462.00$ $M_y,Ed=-7.98$ $M_z,Ed=-1.17$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.03+0.02+0.00=0.05$
Verifica ZZ: $0.03+0.02+0.00=0.05$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/76617)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/10816) $f_{z,L}=0.00$ (L/70723)

Asta n. 40067 (-884 -886) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=24.16$
 $V,Ed=24.16$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a compressione (4.2.4.1.2.2) - CC 13 SLV $X_l=0.88$ - Classe 1
Sollecitazioni: $N=-589.27$ $T_z=-1.17$
Verifica a compressione [4.2.9]
 $N,Ed=-589.27$ $N_c,Rd=-17914.30$ $N,Ed/N_c,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N,Ed=-475.08$ $M_y,Ed=-9.93$ $M_z,Ed=-0.40$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.03+0.03+0.00=0.06$
Verifica ZZ: $0.03+0.02+0.00=0.05$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/76617)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/10816) $f_{z,L}=0.00$ (L/65671)

Asta n. 40073 (-852 -855) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.33$ - Classe 1
Sollecitazioni: $T_z=16.73$
 $V,Ed=16.73$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.88$ - Classe 3
Sollecitazioni: $N=824.69$ $T_z=-8.60$ $M_y=3.66$ $M_z=-1.07$
Tensioni: $\sigma_N=120.57$ $\sigma_{m,d}=38.25$ $\tau=0.00$ $\sigma_{max}=158.82$ (sfrut=0.06)
Tensioni: $\sigma_N=120.57$ $\sigma_{m,d}=-8.68$ $\tau=2.82$ $\tau_{max}=2.82$ (sfrut=0.00)
Tensioni: $\sigma_N=120.57$ $\sigma_{m,d}=38.25$ $\tau=0.00$ $\sigma_{ID,max}=158.82$ (sfrut=0.06)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N,Ed=-298.75$ $M_y,Ed=3.41$ $M_z,Ed=-1.04$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.02+0.01+0.00=0.03$
Verifica ZZ: $0.02+0.01+0.00=0.03$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/79948)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/9194) $f_{z,L}=0.00$ (L/87562)

Asta n. 40074 (-951 -948) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.44$ - Classe 1
 Sollecitazioni: $T_z=16.71$
 $V,Ed=16.71$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.88$ - Classe 3
 Sollecitazioni: $N=825.97$ $T_z=-8.60$ $M_y=3.66$ $M_z=1.12$
 Tensioni: $\sigma_N=120.76$ $\sigma_{m,d}=38.66$ $\tau=0.00$ $\sigma_{max}=159.42$ (sfrut=0.06)
 Tensioni: $\sigma_N=120.76$ $\sigma_{m,d}=9.07$ $\tau=2.82$ $\tau_{max}=2.82$ (sfrut=0.00)
 Tensioni: $\sigma_N=120.76$ $\sigma_{m,d}=38.66$ $\tau=0.00$ $\sigma_{ID,max}=159.42$ (sfrut=0.06)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N,Ed=-301.13$ $M_y,Ed=3.41$ $M_z,Ed=1.10$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.02+0.01+0.00=0.03$
 Verifica ZZ: $0.02+0.01+0.00=0.03$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/76617)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/9013) $f_{z,L}=0.00$ (L/76617)

Asta n. 40075 (-886 -889) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
 Sollecitazioni: $T_z=-23.93$
 $V,Ed=-23.93$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a trazione (4.2.4.1.2.1) - CC 13 SLV $X_l=0.88$ - Classe 1
 Sollecitazioni: $N=706.70$ $T_z=-2.70$
 Verifica a trazione [4.2.5]
 $N,Ed=706.70$ $N_{pl,Rd}=17914.30$ $N_u,Rd=21176.60$ $N,Ed/N_t,Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-100.34$ $M_y,Ed=-9.69$ $M_z,Ed=0.47$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.03+0.00=0.04$
 Verifica ZZ: $0.01+0.02+0.00=0.03$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/68104)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/9381) $f_{z,L}=0.00$ (L/61293)

Asta n. 40081 (-851 -852) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.44$ - Classe 1
 Sollecitazioni: $T_z=-17.33$
 $V,Ed=-17.33$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.88$ - Classe 3
 Sollecitazioni: $N=-519.89$ $T_z=-19.49$ $M_y=7.52$ $M_z=1.08$
 Tensioni: $\sigma_N=-76.01$ $\sigma_{m,d}=-69.52$ $\tau=0.00$ $\sigma_{max}=-145.53$ (sfrut=0.06)
 Tensioni: $\sigma_N=-76.01$ $\sigma_{m,d}=8.76$ $\tau=6.40$ $\tau_{max}=6.40$ (sfrut=0.00)
 Tensioni: $\sigma_N=-76.01$ $\sigma_{m,d}=-69.52$ $\tau=0.00$ $\sigma_{ID,max}=145.53$ (sfrut=0.06)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-524.22$ $M_y,Ed=-7.67$ $M_z,Ed=1.08$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.03+0.02+0.00=0.06$
 Verifica ZZ: $0.03+0.02+0.00=0.05$

- Verifica freccia massima per soli carichi accidentali - CC 20

Relazione di calcolo

$f_{z,G}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/65671)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/11212) $f_{z,L}=0.00$ (L/57462)

Asta n. 40082 (-952 -951) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.44$ - Classe 1
 Sollecitazioni: $T_z=-17.34$
 $V,Ed=-17.34$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-523.90$ $T_z=-15.18$ $M_y=-7.68$ $M_z=-1.03$
 Tensioni: $\sigma_N=-76.59$ $\sigma_{m,d}=-70.35$ $\tau=0.00$ $\sigma_{max}=-146.94$ (sfrut=0.06)
 Tensioni: $\sigma_N=-76.59$ $\sigma_{m,d}=-8.35$ $\tau=4.98$ $\tau_{max}=4.98$ (sfrut=0.00)
 Tensioni: $\sigma_N=-76.59$ $\sigma_{m,d}=-70.35$ $\tau=0.00$ $\sigma_{ID,max}=146.94$ (sfrut=0.06)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-523.90$ $M_y,Ed=-7.68$ $M_z,Ed=-1.13$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.03+0.02+0.00=0.06$
 Verifica ZZ: $0.03+0.02+0.00=0.05$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/65671)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/11638) $f_{z,L}=0.00$ (L/65671)

Asta n. 40083 (-889 -890) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=24.21$
 $V,Ed=24.21$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a compressione (4.2.4.1.2.2) - CC 13 SLV $X_l=0.88$ - Classe 1
 Sollecitazioni: $N=-636.69$ $T_z=-1.13$
 Verifica a compressione [4.2.9]
 $N,Ed=-636.69$ $N_c,Rd=-17914.30$ $N,Ed/N_c,Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-536.72$ $M_y,Ed=9.73$ $M_z,Ed=-0.38$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.03+0.03+0.00=0.06$
 Verifica ZZ: $0.03+0.02+0.00=0.05$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/76617)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/10945) $f_{z,L}=0.00$ (L/61293)

Asta n. 40089 (-848 -851) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.44$ - Classe 1
 Sollecitazioni: $T_z=16.09$
 $V,Ed=16.09$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.88$ - Classe 3
 Sollecitazioni: $N=866.87$ $T_z=-9.77$ $M_y=5.15$ $M_z=-1.09$
 Tensioni: $\sigma_N=126.74$ $\sigma_{m,d}=50.35$ $\tau=0.00$ $\sigma_{max}=177.09$ (sfrut=0.07)
 Tensioni: $\sigma_N=126.74$ $\sigma_{m,d}=-8.78$ $\tau=3.21$ $\tau_{max}=3.21$ (sfrut=0.00)
 Tensioni: $\sigma_N=126.74$ $\sigma_{m,d}=50.35$ $\tau=0.00$ $\sigma_{ID,max}=177.09$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N,Ed=-251.02$ $M_y,Ed=4.72$ $M_z,Ed=-1.20$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.01+0.00=0.03$
 Verifica ZZ: $0.01+0.01+0.00=0.03$

Relazione di calcolo

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/73552)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/8756) $f_{z,L}=0.00$

Asta n. 40090 (-955 -952) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.44$ - Classe 1
Sollecitazioni: $T_z=16.11$
 $V,Ed=16.11$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.88$ - Classe 3
Sollecitazioni: $N=868.17$ $T_z=-9.78$ $M_y=5.15$ $M_z=1.14$
Tensioni: $\sigma_N=126.93$ $\sigma_{m,d}=50.82$ $\tau=0.00$ $\sigma_{max}=177.75$ (sfrut=0.07)
Tensioni: $\sigma_N=126.93$ $\sigma_{m,d}=9.19$ $\tau=3.21$ $\tau_{max}=3.21$ (sfrut=0.00)
Tensioni: $\sigma_N=126.93$ $\sigma_{m,d}=50.82$ $\tau=0.00$ $\sigma_{ID,max}=177.75$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N,Ed=-253.46$ $M_y,Ed=4.72$ $M_z,Ed=1.24$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda_z^*=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.01+0.00=0.03$
Verifica ZZ: $0.01+0.01+0.00=0.03$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/76617)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/8756) $f_{z,L}=0.00$

Asta n. 40091 (-890 -893) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
Sollecitazioni: $T_z=-23.88$
 $V,Ed=-23.88$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a trazione (4.2.4.1.2.1) - CC 13 SLV $X_l=0.88$ - Classe 1
Sollecitazioni: $N=754.11$ $T_z=-2.66$
Verifica a trazione [4.2.5]
 $N,Ed=754.11$ $N_{pl,Rd}=17914.30$ $N_u,Rd=21176.60$ $N,Ed/N_t,Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
Sollecitazioni: $N,Ed=-416.70$ $M_y,Ed=2.33$ $M_z,Ed=0.69$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda_z^*=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.01+0.00=0.03$
Verifica ZZ: $0.02+0.01+0.00=0.03$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/73552)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/9286) $f_{z,L}=0.00$ (L/76617)

Asta n. 40097 (55 -848) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.66$ - Classe 1
Sollecitazioni: $T_y=2.78$
 $V,Ed=2.78$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.66$ - Classe 1
Sollecitazioni: $T_z=-29.98$
 $V,Ed=-29.98$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.88$ - Classe 3
Sollecitazioni: $N=-620.33$ $T_z=-31.06$ $M_y=11.39$ $T_y=2.78$ $M_z=1.60$
Tensioni: $\sigma_N=-90.69$ $\sigma_{m,d}=-104.95$ $\tau=0.00$ $\sigma_{max}=-195.64$ (sfrut=0.07)
Tensioni: $\sigma_N=-90.69$ $\sigma_{m,d}=11.64$ $\tau=10.20$ $\tau_{max}=10.20$ (sfrut=0.01)
Tensioni: $\sigma_N=-90.69$ $\sigma_{m,d}=-104.95$ $\tau=0.00$ $\sigma_{ID,max}=195.64$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-624.66$ $M_y,Ed=-13.95$ $M_z,Ed=1.60$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$

$\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.03+0.04+0.00=0.08$
 Verifica ZZ: $0.03+0.03+0.00=0.07$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/10215) $f_{z,l}=0.00$ (L/54082)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/11350) $f_{z,l}=0.00$ (L/35361)

Asta n. 40098 (62 -955) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.55$ - Classe 1
 Sollecitazioni: $T_y=-2.84$
 $V, Ed=-2.84$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.55$ - Classe 1
 Sollecitazioni: $T_z=-29.46$
 $V, Ed=-29.46$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-620.10$ $T_z=-26.16$ $M_y=-13.75$ $T_y=-3.14$ $M_z=1.00$
 Tensioni: $\sigma_N=-90.66$ $\sigma_{m,d}=-119.17$ $\tau=0.00$ $\sigma_{max}=-209.83$ (sfrut=0.08)
 Tensioni: $\sigma_N=-90.66$ $\sigma_{m,d}=7.30$ $\tau=8.59$ $\tau_{max}=8.59$ (sfrut=0.01)
 Tensioni: $\sigma_N=-90.66$ $\sigma_{m,d}=-119.17$ $\tau=0.00$ $\sigma_{TD,max}=209.83$ (sfrut=0.08)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-624.26$ $M_y, Ed=-13.96$ $M_z, Ed=-1.66$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.03+0.04+0.00=0.08$
 Verifica ZZ: $0.03+0.03+0.00=0.07$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/10103) $f_{z,l}=0.00$ (L/57462)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/11492) $f_{z,l}=0.00$ (L/38308)

Asta n. 40099 (-893 -894) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=24.26$
 $V, Ed=24.26$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica a compressione (4.2.4.1.2.2) - CC 13 SLV $X_l=0.88$ - Classe 1
 Sollecitazioni: $N=-684.10$ $T_z=-1.09$
 Verifica a compressione [4.2.9]
 $N, Ed=-684.10$ $N_c, Rd=-17914.30$ $N, Ed/N_c, Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-598.36$ $M_y, Ed=10.18$ $M_z, Ed=-0.37$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.03+0.03+0.00=0.06$
 Verifica ZZ: $0.03+0.02+0.00=0.06$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10447) $f_{z,l}=0.00$ (L/70723)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/11212) $f_{z,l}=0.00$ (L/83582)

Asta n. 40105 (20 55) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV $X_l=0.88$ - Classe 1
 Sollecitazioni: $T_y=8.31$ $M_x=-1.83$
 $V, Ed=8.31$ $V_c, Rd, Red=5139.45$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l=0.88$ - Classe 1
 Sollecitazioni: $T_z=-86.20$ $M_x=-1.83$
 $V, Ed=-86.20$ $V_c, Rd, Red=5139.45$ $V, Ed/V_c, Rd, Red=0.02$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.21$ - Classe 3
 Sollecitazioni: $N=534.34$ $T_z=-83.67$ $M_y=-25.11$ $T_y=22.82$ $M_z=-11.09$ $M_x=-1.83$

Tensioni: $\sigma_N=78.12$ $\sigma_{m,d}=292.38$ $\tau=9.39$ $\sigma_{max}=370.50$ (sfrut=0.14)
Tensioni: $\sigma_N=78.12$ $\sigma_{m,d}=-80.62$ $\tau=36.87$ $\tau_{max}=36.87$ (sfrut=0.02)
Tensioni: $\sigma_N=78.12$ $\sigma_{m,d}=292.38$ $\tau=9.39$ $\sigma_{ID,max}=370.85$ (sfrut=0.14)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed=-147.84$ $M_y, Ed=31.35$ $M_z, Ed=-11.09$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.09+0.03=0.13$
Verifica ZZ: $0.01+0.07+0.03=0.11$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10249) $f_{z,L}=0.00$ (L/30976)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/9418) $f_{z,L}=0.00$ (L/35741)

Asta n. 40106 (-790 62) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV $X_1=0.88$ - Classe 1
Sollecitazioni: $T_y=-8.55$ $M_x=1.87$
 $V, Ed=-8.55$ $V_c, Rd, Red=5138.79$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_1=0.88$ - Classe 1
Sollecitazioni: $T_z=-87.01$ $M_x=1.87$
 $V, Ed=-87.01$ $V_c, Rd, Red=5138.79$ $V, Ed/V_c, Rd, Red=0.02$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_1=0.21$ - Classe 3
Sollecitazioni: $N=542.17$ $T_z=-84.48$ $M_y=-25.42$ $T_y=-23.45$ $M_z=11.38$ $M_x=1.87$
Tensioni: $\sigma_N=79.26$ $\sigma_{m,d}=297.20$ $\tau=9.58$ $\sigma_{max}=376.47$ (sfrut=0.14)
Tensioni: $\sigma_N=79.26$ $\sigma_{m,d}=-82.69$ $\tau=37.33$ $\tau_{max}=37.33$ (sfrut=0.02)
Tensioni: $\sigma_N=79.26$ $\sigma_{m,d}=297.20$ $\tau=9.58$ $\sigma_{ID,max}=376.83$ (sfrut=0.14)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-156.90$ $M_y, Ed=31.57$ $M_z, Ed=11.38$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.09+0.03=0.13$
Verifica ZZ: $0.01+0.07+0.03=0.12$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10402) $f_{z,L}=0.00$ (L/29658)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/9418) $f_{z,L}=0.00$ (L/36682)

Asta n. 40107 (-894 -897) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLV $X_1=0.88$ - Classe 1
Sollecitazioni: $T_z=-23.82$
 $V, Ed=-23.82$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica a trazione (4.2.4.1.2.1) - CC 13 SLV $X_1=0.88$ - Classe 1
Sollecitazioni: $N=801.51$ $T_z=2.92$
Verifica a trazione [4.2.5]
 $N, Ed=801.51$ $N_{pl}, Rd=17914.30$ $N_u, Rd=21176.60$ $N, Ed/N_t, Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
Sollecitazioni: $N, Ed=-369.28$ $M_y, Ed=3.20$ $M_z, Ed=0.70$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.01+0.00=0.03$
Verifica ZZ: $0.02+0.01+0.00=0.03$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/70723)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/8926) $f_{z,L}=0.00$ (L/76617)

Asta n. 40113 (-847 20) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 9 SLV $X_1=0.00$ - Classe 1

Sollecitazioni: $T_y = -9.39$
 $V, Ed = -9.39$ $V_c, Rd = 5171.56$ $V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 9 SLV $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_z = 75.48$
 $V, Ed = 75.48$ $V_c, Rd = 5171.56$ $V, Ed/V_c, Rd = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l = 0.56$ - Classe 3
 Sollecitazioni: $N = -599.02$ $T_z = 63.99$ $M_y = 20.33$ $T_y = -33.33$ $M_z = -15.15$ $M_x = 1.16$
 Tensioni: $\sigma_N = -87.58$ $\sigma_{m,d} = -286.59$ $\tau = 5.93$ $\sigma_{max} = -374.16$ (sfrut=0.14)
 Tensioni: $\sigma_N = -87.58$ $\sigma_{m,d} = -110.11$ $\tau = 26.95$ $\tau_{max} = 26.95$ (sfrut=0.02)
 Tensioni: $\sigma_N = -87.58$ $\sigma_{m,d} = -286.59$ $\tau = 5.93$ $\sigma_{ID,max} = 374.31$ (sfrut=0.14)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed = -601.89$ $M_y, Ed = 20.33$ $M_z, Ed = -15.15$ $L = 0.65$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 27.83$ $N_{cr,y} = 183068.00$ $\lambda^*_y = 0.32$ Curva a: $\Phi_y = 0.56$ $\chi_y = 0.97$
 $\lambda_z = 27.83$ $N_{cr,z} = 183068.00$ $\lambda^*_z = 0.32$ Curva a: $\Phi_z = 0.56$ $\chi_z = 0.97$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.03 + 0.06 + 0.04 = 0.14$
 Verifica ZZ: $0.03 + 0.05 + 0.04 = 0.13$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g} = 0.01$ (L/7535) $f_{z,L} = 0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g} = 0.01$ (L/9184) $f_{z,L} = 0.00$ (L/23511)

Asta n. 40114 (-956 -790) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 1 SLV $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_y = 9.70$
 $V, Ed = 9.70$ $V_c, Rd = 5171.56$ $V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 1 SLV $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_z = 76.55$
 $V, Ed = 76.55$ $V_c, Rd = 5171.56$ $V, Ed/V_c, Rd = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l = 0.56$ - Classe 3
 Sollecitazioni: $N = -611.84$ $T_z = 64.89$ $M_y = 20.66$ $T_y = 34.40$ $M_z = 15.56$ $M_x = -1.18$
 Tensioni: $\sigma_N = -89.45$ $\sigma_{m,d} = -292.58$ $\tau = 6.06$ $\sigma_{max} = -382.04$ (sfrut=0.15)
 Tensioni: $\sigma_N = -89.45$ $\sigma_{m,d} = -113.12$ $\tau = 27.38$ $\tau_{max} = 27.38$ (sfrut=0.02)
 Tensioni: $\sigma_N = -89.45$ $\sigma_{m,d} = -292.58$ $\tau = 6.06$ $\sigma_{ID,max} = 382.18$ (sfrut=0.15)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N, Ed = -614.72$ $M_y, Ed = 20.66$ $M_z, Ed = 15.56$ $L = 0.65$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 27.83$ $N_{cr,y} = 183068.00$ $\lambda^*_y = 0.32$ Curva a: $\Phi_y = 0.56$ $\chi_y = 0.97$
 $\lambda_z = 27.83$ $N_{cr,z} = 183068.00$ $\lambda^*_z = 0.32$ Curva a: $\Phi_z = 0.56$ $\chi_z = 0.97$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.03 + 0.06 + 0.05 = 0.14$
 Verifica ZZ: $0.03 + 0.05 + 0.05 = 0.13$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g} = 0.01$ (L/7535) $f_{z,L} = 0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g} = 0.01$ (L/9184) $f_{z,L} = 0.00$ (L/23511)

Asta n. 40115 (-897 -898) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l = 0.00$ - Classe 1
 Sollecitazioni: $T_z = 24.36$
 $V, Ed = 24.36$ $V_c, Rd = 5171.56$ $V, Ed/V_c, Rd = 0.00$

- Verifica a compressione (4.2.4.1.2.2) - CC 13 SLV $X_l = 0.11$ - Classe 1
 Sollecitazioni: $N = -728.85$ $T_z = 1.93$
 Verifica a compressione [4.2.9]
 $N, Ed = -728.85$ $N_c, Rd = -17914.30$ $N, Ed/N_c, Rd = 0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed = -659.89$ $M_y, Ed = 10.73$ $M_z, Ed = -0.37$ $L = 0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 37.63$ $N_{cr,y} = 100129.00$ $\lambda^*_y = 0.43$ Curva a: $\Phi_y = 0.62$ $\chi_y = 0.94$
 $\lambda_z = 37.63$ $N_{cr,z} = 100129.00$ $\lambda^*_z = 0.43$ Curva a: $\Phi_z = 0.62$ $\chi_z = 0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.04 + 0.03 + 0.00 = 0.07$
 Verifica ZZ: $0.04 + 0.03 + 0.00 = 0.06$

Relazione di calcolo

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10567) $f_{z,L}=0.00$ (L/76617)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/11492) $f_{z,L}=0.00$ (L/76617)

Asta n. 40121 (-844 -847) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_y=-2.88$
 $V_{Ed}=-2.88$ $V_{c,Rd}=5171.56$ $V_{Ed}/V_{c,Rd}=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=42.10$
 $V_{Ed}=42.10$ $V_{c,Rd}=5171.56$ $V_{Ed}/V_{c,Rd}=0.01$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_1=0.88$ - Classe 3
Sollecitazioni: $N=-532.10$ $T_z=37.77$ $M_y=-18.24$ $T_y=-2.88$ $M_z=-2.10$
Tensioni: $\sigma_N=-77.79$ $\sigma_{m,d}=-164.24$ $\tau=0.00$ $\sigma_{max}=-242.03$ (sfrut=0.09)
Tensioni: $\sigma_N=-77.79$ $\sigma_{m,d}=-15.23$ $\tau=12.40$ $\tau_{max}=12.40$ (sfrut=0.01)
Tensioni: $\sigma_N=-77.79$ $\sigma_{m,d}=-164.24$ $\tau=0.00$ $\sigma_{ID,max}=242.03$ (sfrut=0.09)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N_{Ed}=-532.10$ $M_{y,Ed}=-18.24$ $M_{z,Ed}=-2.10$ $L=0.88$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda_z^*=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.96$, 0.96 , 0.77 , 0.96
Verifica YY: $0.03+0.05+0.01=0.09$
Verifica ZZ: $0.03+0.04+0.01=0.08$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/68104)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/31703)

Asta n. 40122 (-959 -956) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_y=3.91$
 $V_{Ed}=3.91$ $V_{c,Rd}=5171.56$ $V_{Ed}/V_{c,Rd}=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=42.14$
 $V_{Ed}=42.14$ $V_{c,Rd}=5171.56$ $V_{Ed}/V_{c,Rd}=0.01$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_1=0.88$ - Classe 3
Sollecitazioni: $N=-530.46$ $T_z=37.82$ $M_y=-18.27$ $T_y=3.91$ $M_z=2.78$
Tensioni: $\sigma_N=-77.55$ $\sigma_{m,d}=-170.02$ $\tau=0.00$ $\sigma_{max}=-247.58$ (sfrut=0.09)
Tensioni: $\sigma_N=-77.55$ $\sigma_{m,d}=20.19$ $\tau=12.42$ $\tau_{max}=12.42$ (sfrut=0.01)
Tensioni: $\sigma_N=-77.55$ $\sigma_{m,d}=-170.02$ $\tau=0.00$ $\sigma_{ID,max}=247.58$ (sfrut=0.09)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N_{Ed}=-530.46$ $M_{y,Ed}=-18.27$ $M_{z,Ed}=2.78$ $L=0.88$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda_z^*=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.96$, 0.96 , 0.77 , 0.96
Verifica YY: $0.03+0.05+0.01=0.09$
Verifica ZZ: $0.03+0.04+0.01=0.08$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/63407)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/32259)

Asta n. 40123 (-898 -901) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=0.88$ - Classe 1
Sollecitazioni: $T_z=-23.22$
 $V_{Ed}=-23.22$ $V_{c,Rd}=5171.56$ $V_{Ed}/V_{c,Rd}=0.00$

- Verifica a trazione (4.2.4.1.2.1) - CC 7 SLV $X_1=0.88$ - Classe 1
Sollecitazioni: $N=719.64$ $T_z=1.66$
Verifica a trazione [4.2.5]
 $N_{Ed}=719.64$ $N_{pl,Rd}=17914.30$ $N_{u,Rd}=21176.60$ $N_{Ed}/N_{t,Rd}=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3

Relazione di calcolo

Sollecitazioni: $M_y, E_d=10.47$ $M_z, E_d=0.46$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.03+0.00=0.03$
Verifica ZZ: $0.00+0.02+0.00=0.03$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/9677) $f_{z,L}=0.00$ (L/68104)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/8592) $f_{z,L}=0.00$ (L/59316)

Asta n. 40129 (-843 -844) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.88$ - Classe 1
Sollecitazioni: $T_z=-27.92$
 $V, E_d=-27.92$ $V_c, R_d=5171.56$ $V, E_d/V_c, R_d=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 9 SLV $X_l=0.88$ - Classe 1
Sollecitazioni: $N=604.10$ $T_z=-2.80$
Verifica a trazione [4.2.5]
 $N, E_d=604.10$ $N_{pl}, R_d=17914.30$ $N_u, R_d=21176.60$ $N, E_d/N_t, R_d=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, E_d=-179.54$ $M_y, E_d=11.86$ $M_z, E_d=0.34$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.03+0.00=0.05$
Verifica ZZ: $0.01+0.03+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/70723)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/9780) $f_{z,L}=0.00$ (L/65671)

Asta n. 40130 (-960 -959) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.88$ - Classe 1
Sollecitazioni: $T_z=-27.91$
 $V, E_d=-27.91$ $V_c, R_d=5171.56$ $V, E_d/V_c, R_d=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 1 SLV $X_l=0.88$ - Classe 1
Sollecitazioni: $N=607.80$ $T_z=-2.78$
Verifica a trazione [4.2.5]
 $N, E_d=607.80$ $N_{pl}, R_d=17914.30$ $N_u, R_d=21176.60$ $N, E_d/N_t, R_d=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, E_d=-179.68$ $M_y, E_d=11.85$ $M_z, E_d=-0.35$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.03+0.00=0.05$
Verifica ZZ: $0.01+0.03+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/61293)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/9886) $f_{z,L}=0.00$ (L/65671)

Asta n. 40131 (-901 -902) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=27.39$
 $V, E_d=27.39$ $V_c, R_d=5171.56$ $V, E_d/V_c, R_d=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 13 SLV $X_l=0.22$ - Classe 1
Sollecitazioni: $N=-785.11$ $T_z=6.70$
Verifica a compressione [4.2.9]
 $N, E_d=-785.11$ $N_c, R_d=-17914.30$ $N, E_d/N_c, R_d=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, E_d=-703.91$ $M_y, E_d=12.06$ $M_z, E_d=-0.57$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$

$\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.04+0.04+0.00=0.08
 Verifica ZZ: 0.04+0.03+0.00=0.07

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/76617)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/11787) $f_{z,L}=0.00$ (L/54082)

Asta n. 40137 (-840 -843) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=29.45$
 $V,Ed=29.45$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 9 SLV $X_l=0.88$ - Classe 1
 Sollecitazioni: $N=-623.24$
 Verifica a compressione [4.2.9]
 $N,Ed=-623.24$ $N_c,Rd=-17914.30$ $N,Ed/N_c,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-459.29$ $M_y,Ed=12.65$ $M_z,Ed=-0.25$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.03+0.04+0.00=0.06
 Verifica ZZ: 0.03+0.03+0.00=0.06

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/73552)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/10690) $f_{z,L}=0.00$ (L/57462)

Asta n. 40138 (-963 -960) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=29.44$
 $V,Ed=29.44$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 1 SLV $X_l=0.88$ - Classe 1
 Sollecitazioni: $N=-626.52$
 Verifica a compressione [4.2.9]
 $N,Ed=-626.52$ $N_c,Rd=-17914.30$ $N,Ed/N_c,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-457.52$ $M_y,Ed=12.64$ $M_z,Ed=0.27$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.03+0.04+0.00=0.06
 Verifica ZZ: 0.03+0.03+0.00=0.06

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/70723)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/10567) $f_{z,L}=0.00$ (L/55721)

Asta n. 40139 (21 58) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 5 SLV $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_y=-5.10$ $M_x=-6.61$
 $V,Ed=-5.10$ $V_c,Rd,Red=6900.36$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 5 SLV $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_z=-1158.92$ $M_x=-6.61$
 $V,Ed=-1158.92$ $V_c,Rd,Red=6900.36$ $V,Ed/V_c,Rd,Red=0.17$

- Verifica in termini tensionali [4.2.4] - CC 13 SLV $X_l=0.50$ - Classe 3
 Sollecitazioni: $N=-3343.08$ $T_z=-936.88$ $M_y=-56.66$ $T_y=-7.19$ $M_z=1.18$ $M_x=-7.77$
 Tensioni: $\sigma_N=-361.81$ $\sigma_{m,d}=-253.01$ $\tau=21.83$ $\sigma_{max}=-614.81$ (sfrut=0.23)
 Tensioni: $\sigma_N=-361.81$ $\sigma_{m,d}=4.76$ $\tau=249.74$ $\tau_{max}=249.74$ (sfrut=0.17)
 Tensioni: $\sigma_N=-361.81$ $\sigma_{m,d}=-224.13$ $\tau=179.61$ $\sigma_{ID,max}=663.40$ (sfrut=0.25)

Relazione di calcolo

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N_{Ed}=-5159.38$ My, $E_{d}=-13.30$ Mz, $E_{d}=0.74$ L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr, $y=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr, $z=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.98, 0.98, 0.78, 0.98
 Verifica YY: $0.21+0.02+0.00=0.24$
 Verifica ZZ: $0.21+0.02+0.00=0.23$

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.00$ (L/6990)

- Verifica freccia massima carichi totali - CC 21
 $f_{z,L}=0.00$ (L/5719)

Asta n. 40139 (58 -872) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 5 SLV X1=0.00 - Classe 1
 Sollecitazioni: $T_y=-4.37$ Mx=-2.14
 $V_{Ed}=-4.37$ Vc,Rd,Red=6958.35 V,Ed/Vc,Rd,Red=0.00

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 5 SLV X1=0.00 - Classe 1
 Sollecitazioni: $T_z=93.62$ Mx=-2.14
 $V_{Ed}=93.62$ Vc,Rd,Red=6958.35 V,Ed/Vc,Rd,Red=0.01

- Verifica in termini tensionali [4.2.4] - CC 27 SLU X1=0.62 - Classe 3
 Sollecitazioni: $N=-5162.67$ $T_z=-62.41$ $M_y=18.53$ $T_y=-3.19$ $M_z=-1.29$ $M_x=-1.57$
 Tensioni: $\sigma_N=-558.73$ $\sigma_{m,d}=-86.72$ $\tau=4.41$ $\sigma_{max}=-645.45$ (sfrut=0.25)
 Tensioni: $\sigma_N=-558.73$ $\sigma_{m,d}=-5.22$ $\tau=19.59$ $\tau_{max}=19.59$ (sfrut=0.01)
 Tensioni: $\sigma_N=-558.73$ $\sigma_{m,d}=-86.72$ $\tau=4.41$ $\sigma_{ID,max}=645.49$ (sfrut=0.25)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N_{Ed}=-5162.67$ My, $E_{d}=18.53$ Mz, $E_{d}=-1.29$ L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr, $y=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr, $z=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.98, 0.98, 0.78, 0.98
 Verifica YY: $0.21+0.03+0.00=0.25$
 Verifica ZZ: $0.21+0.02+0.00=0.24$

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.00$ (L/59101)

- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.00$

Asta n. 40139 (-872 -874) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_y=-1.54$
 $V_{Ed}=-1.54$ Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_z=85.70$
 $V_{Ed}=85.70$ Vc,Rd=6986.14 V,Ed/Vc,Rd=0.01

- Verifica a compressione (4.2.4.1.2.2) - CC 28 SLU X1=0.21 - Classe 1
 Sollecitazioni: $N=-3626.07$ $T_z=44.68$ $T_y=-1.11$
 Verifica a compressione [4.2.9]
 $N_{Ed}=-3626.07$ Nc,Rd=-24200.00 N,Ed/Nc,Rd=0.15

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N_{Ed}=-5148.05$ My, $E_{d}=-28.86$ Mz, $E_{d}=-0.42$ L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr, $y=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr, $z=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.98, 0.98, 0.78, 0.98
 Verifica YY: $0.21+0.05+0.00=0.26$
 Verifica ZZ: $0.21+0.04+0.00=0.25$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/54176)

Asta n. 40139 (-874 -876) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU X1=0.62 - Classe 1
 Sollecitazioni: $T_y=-1.29$

Relazione di calcolo

V,Ed=-1.29 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU Xl=0.62 - Classe 1
Sollecitazioni: Tz=-87.85
V,Ed=-87.85 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.01

- Verifica a compressione (4.2.4.1.2.2) - CC 28 SLU Xl=0.41 - Classe 1
Sollecitazioni: N=-3621.15 Tz=-51.38 Ty=-1.10
Verifica a compressione [4.2.9]
N,Ed=-3621.15 Nc,Rd=-24200.00 N,Ed/Nc,Rd=0.15

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: N,Ed=-5145.61 My,Ed=-29.72 Mz,Ed=-0.68 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53 \chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53 \chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.98, 0.98, 0.78, 0.98
Verifica YY: 0.21+0.05+0.00=0.26
Verifica ZZ: 0.21+0.04+0.00=0.25

- Verifica freccia massima per soli carichi accidentali - CC 31
fz,l=0.00 (L/59101)

- Verifica freccia massima carichi totali - CC 31
fz,g=0.00 (L/46436)

Asta n. 40139 (-876 -878) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU Xl=0.00 - Classe 1
Sollecitazioni: Ty=-1.46
V,Ed=-1.46 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU Xl=0.00 - Classe 1
Sollecitazioni: Tz=86.36
V,Ed=86.36 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.01

- Verifica a compressione (4.2.4.1.2.2) - CC 28 SLU Xl=0.21 - Classe 1
Sollecitazioni: N=-3435.80 Tz=43.81 Ty=-1.04
Verifica a compressione [4.2.9]
N,Ed=-3435.80 Nc,Rd=-24200.00 N,Ed/Nc,Rd=0.14

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: N,Ed=-5032.47 My,Ed=-28.27 Mz,Ed=0.39 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53 \chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53 \chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.98, 0.98, 0.78, 0.98
Verifica YY: 0.21+0.05+0.00=0.25
Verifica ZZ: 0.21+0.04+0.00=0.25

- Verifica freccia massima per soli carichi accidentali - CC 20
fz,l=0.00

- Verifica freccia massima carichi totali - CC 31
fz,l=0.00 (L/54176)

Asta n. 40139 (-878 -880) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU Xl=0.62 - Classe 1
Sollecitazioni: Ty=-1.24
V,Ed=-1.24 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU Xl=0.62 - Classe 1
Sollecitazioni: Tz=-90.08
V,Ed=-90.08 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.01

- Verifica a compressione (4.2.4.1.2.2) - CC 13 SLV Xl=0.52 - Classe 1
Sollecitazioni: N=-1780.62 Tz=-3.75
Verifica a compressione [4.2.9]
N,Ed=-1780.62 Nc,Rd=-24200.00 N,Ed/Nc,Rd=0.07

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: N,Ed=-5026.95 My,Ed=-30.01 Mz,Ed=-0.60 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53 \chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53 \chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.98, 0.98, 0.78, 0.98
Verifica YY: 0.21+0.05+0.00=0.26
Verifica ZZ: 0.21+0.04+0.00=0.25

Relazione di calcolo

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$ (L/59101)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/46436)

Asta n. 40139 (-880 -882) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_L=0.00$ - Classe 1
Sollecitazioni: $T_y=-1.47$
 $V,Ed=-1.47$ $Vc,Rd=6986.14$ $V,Ed/Vc,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_L=0.00$ - Classe 1
Sollecitazioni: $T_z=84.51$
 $V,Ed=84.51$ $Vc,Rd=6986.14$ $V,Ed/Vc,Rd=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 28 SLU $X_L=0.21$ - Classe 1
Sollecitazioni: $N=-3152.00$ $T_z=41.94$ $T_y=-1.04$
Verifica a compressione [4.2.9]
 $N,Ed=-3152.00$ $Nc,Rd=-24200.00$ $N,Ed/Nc,Rd=0.13$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N,Ed=-4823.36$ $M_y,Ed=-27.11$ $M_z,Ed=0.45$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr,y=493056.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr,z=493056.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.20+0.04+0.00=0.24$
Verifica ZZ: $0.20+0.04+0.00=0.24$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40139 (-882 -884) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_L=0.62$ - Classe 1
Sollecitazioni: $T_y=-1.24$
 $V,Ed=-1.24$ $Vc,Rd=6986.14$ $V,Ed/Vc,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_L=0.62$ - Classe 1
Sollecitazioni: $T_z=-91.97$
 $V,Ed=-91.97$ $Vc,Rd=6986.14$ $V,Ed/Vc,Rd=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU $X_L=0.00$ - Classe 1
Sollecitazioni: $N=-4814.70$ $T_z=-86.12$ $M_y=-29.83$ $T_y=-1.24$
 $M_y,Ed=-29.83$ $M_y,Vc,Rd=699.13$
 $N,Ed=-4814.70$ $Nc,Rd=-24200.00$ $YY\ n=N,Ed/Nc,Rd=0.20$ $MNy,c,Rd=699.13$ $M_y,Ed/MNy,c,Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N,Ed=-4814.70$ $M_y,Ed=-29.83$ $M_z,Ed=-0.54$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr,y=493056.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr,z=493056.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.20+0.05+0.00=0.25$
Verifica ZZ: $0.20+0.04+0.00=0.24$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/59101)

Asta n. 40139 (-884 -887) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_L=0.00$ - Classe 1
Sollecitazioni: $T_y=-1.47$
 $V,Ed=-1.47$ $Vc,Rd=6986.14$ $V,Ed/Vc,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_L=0.00$ - Classe 1
Sollecitazioni: $T_z=82.63$
 $V,Ed=82.63$ $Vc,Rd=6986.14$ $V,Ed/Vc,Rd=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 17 SLU $X_L=0.62$ - Classe 1
Sollecitazioni: $N=-4530.66$ $T_z=76.78$ $M_y=-26.42$ $T_y=-1.47$
 $M_y,Ed=-26.42$ $M_y,Vc,Rd=699.13$
 $N,Ed=-4530.66$ $Nc,Rd=-24200.00$ $YY\ n=N,Ed/Nc,Rd=0.19$ $MNy,c,Rd=699.13$ $M_y,Ed/MNy,c,Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed = -4530.66$ My, $Ed = -26.42$ Mz, $Ed = 0.60$ L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ Ncr, $y = 493056.00$ $\lambda_y^* = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ Ncr, $z = 493056.00$ $\lambda_z^* = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 Kyy, Kyz, Kzy, Kzz = 0.97, 0.97, 0.78, 0.97
 Verifica YY: $0.19 + 0.04 + 0.00 = 0.23$
 Verifica ZZ: $0.19 + 0.03 + 0.00 = 0.22$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L} = 0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L} = 0.00$

Asta n. 40139 (-887 -889) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X1 = 0.62$ - Classe 1
 Sollecitazioni: $T_y = -1.24$
 $V, Ed = -1.24$ Vc, Rd = 6986.14 V, Ed/Vc, Rd = 0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X1 = 0.62$ - Classe 1
 Sollecitazioni: $T_z = -93.85$
 $V, Ed = -93.85$ Vc, Rd = 6986.14 V, Ed/Vc, Rd = 0.01

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU $X1 = 0.00$ - Classe 1
 Sollecitazioni: $N = -4508.91$ $T_z = -88.01$ My, $Ed = -29.36$ $T_y = -1.24$
 My, $Ed = -29.36$ My, V, c, Rd = 699.13
 $N, Ed = -4508.91$ Nc, Rd = -24200.00 YY $n = N, Ed / Nc, Rd = 0.19$ MNy, c, Rd = 699.13 My, Ed/MNy, c, Rd = 0.04

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed = -4508.91$ My, $Ed = -29.36$ Mz, $Ed = -0.49$ L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ Ncr, $y = 493056.00$ $\lambda_y^* = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ Ncr, $z = 493056.00$ $\lambda_z^* = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 Kyy, Kyz, Kzy, Kzz = 0.97, 0.97, 0.78, 0.97
 Verifica YY: $0.19 + 0.05 + 0.00 = 0.23$
 Verifica ZZ: $0.19 + 0.04 + 0.00 = 0.23$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L} = 0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L} = 0.00$ (L/59101)

Asta n. 40139 (-889 -891) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X1 = 0.00$ - Classe 1
 Sollecitazioni: $T_y = -1.47$
 $V, Ed = -1.47$ Vc, Rd = 6986.14 V, Ed/Vc, Rd = 0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X1 = 0.00$ - Classe 1
 Sollecitazioni: $T_z = 80.74$
 $V, Ed = 80.74$ Vc, Rd = 6986.14 V, Ed/Vc, Rd = 0.01

- Verifica a compressione (4.2.4.1.2.2) - CC 28 SLU $X1 = 0.31$ - Classe 1
 Sollecitazioni: $N = -2303.80$ $T_z = 37.19$ $T_y = -1.05$
 Verifica a compressione [4.2.9]
 $N, Ed = -2303.80$ Nc, Rd = -24200.00 N, Ed/Nc, Rd = 0.10

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed = -4266.56$ My, $Ed = -25.07$ Mz, $Ed = 0.66$ L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ Ncr, $y = 493056.00$ $\lambda_y^* = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ Ncr, $z = 493056.00$ $\lambda_z^* = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 Kyy, Kyz, Kzy, Kzz = 0.97, 0.97, 0.78, 0.97
 Verifica YY: $0.18 + 0.04 + 0.00 = 0.22$
 Verifica ZZ: $0.18 + 0.03 + 0.00 = 0.21$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L} = 0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L} = 0.00$

Asta n. 40139 (-891 -893) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X1 = 0.62$ - Classe 1
 Sollecitazioni: $T_y = -1.23$
 $V, Ed = -1.23$ Vc, Rd = 6986.14 V, Ed/Vc, Rd = 0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-95.74$
 $V, Ed=-95.74$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
 - Verifica a compressione (4.2.4.1.2.2) - CC 17 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-4256.04$ $T_z=-90.41$ $T_y=-1.47$
Verifica a compressione [4.2.9]
 $N, Ed=-4256.04$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.18$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-4256.04$ $M_y, Ed=-28.38$ $M_z, Ed=-0.51$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.18+0.05+0.00=0.22$
Verifica ZZ: $0.18+0.04+0.00=0.21$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,l}=0.00$
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$
- Asta n. 40139 (-893 -895) - Sez. 6 (RC80x80x3) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-1.47$
 $V, Ed=-1.47$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=78.86$
 $V, Ed=78.86$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
 - Verifica a compressione (4.2.4.1.2.2) - CC 17 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-3908.93$ $T_z=75.93$ $T_y=-1.47$
Verifica a compressione [4.2.9]
 $N, Ed=-3908.93$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.16$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-3908.93$ $M_y, Ed=23.65$ $M_z, Ed=0.73$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.16+0.04+0.00=0.20$
Verifica ZZ: $0.16+0.03+0.00=0.19$
 - Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,l}=0.00$
 - Verifica freccia massima carichi totali - CC 31
 $f_{z,l}=0.00$
- Asta n. 40139 (-895 -897) - Sez. 6 (RC80x80x3) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_y=-1.23$
 $V, Ed=-1.23$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-97.61$
 $V, Ed=-97.61$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
 - Verifica a compressione (4.2.4.1.2.2) - CC 17 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-3895.27$ $T_z=-92.27$ $T_y=-1.46$
Verifica a compressione [4.2.9]
 $N, Ed=-3895.27$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.16$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-3895.27$ $M_y, Ed=29.48$ $M_z, Ed=0.46$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.16+0.05+0.00=0.21$
Verifica ZZ: $0.16+0.04+0.00=0.20$
 - Verifica freccia massima per soli carichi accidentali - CC 20

$f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40139 (-897 -899) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-1.47$
 $V,Ed=-1.47$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=76.69$
 $V,Ed=76.69$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 13 SLV $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=3269.14$ $T_z=-36.06$ $M_y=-4.75$ $T_y=-1.82$ $M_z=1.03$
 Tensioni: $\sigma_N=353.80$ $\sigma_{m,d}=25.29$ $\tau=0.00$ $\sigma_{max}=379.09$ (sfrut=0.14)
 Tensioni: $\sigma_N=353.80$ $\sigma_{m,d}=4.17$ $\tau=8.77$ $\tau_{max}=8.77$ (sfrut=0.01)
 Tensioni: $\sigma_N=353.80$ $\sigma_{m,d}=25.29$ $\tau=0.00$ $\sigma_{ID,max}=379.09$ (sfrut=0.14)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-3457.83$ $M_y,Ed=24.38$ $M_z,Ed=0.79$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
 Verifica YY: $0.14+0.04+0.00=0.18$
 Verifica ZZ: $0.14+0.03+0.00=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40139 (-899 -901) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_y=-1.26$
 $V,Ed=-1.26$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_z=-98.10$
 $V,Ed=-98.10$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.62$ - Classe 3
 Sollecitazioni: $N=1643.13$ $T_z=-8.67$ $M_y=6.86$ $T_y=-4.06$ $M_z=-1.04$ $M_x=-1.82$
 Tensioni: $\sigma_N=177.83$ $\sigma_{m,d}=34.52$ $\tau=5.13$ $\sigma_{max}=212.35$ (sfrut=0.08)
 Tensioni: $\sigma_N=177.83$ $\sigma_{m,d}=-4.19$ $\tau=7.24$ $\tau_{max}=7.24$ (sfrut=0.00)
 Tensioni: $\sigma_N=177.83$ $\sigma_{m,d}=34.52$ $\tau=5.13$ $\sigma_{ID,max}=212.54$ (sfrut=0.08)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-3441.23$ $M_y,Ed=30.64$ $M_z,Ed=0.52$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
 Verifica YY: $0.14+0.05+0.00=0.19$
 Verifica ZZ: $0.14+0.04+0.00=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/59101)

Asta n. 40139 (-901 -903) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-1.44$
 $V,Ed=-1.44$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=52.18$
 $V,Ed=52.18$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 13 SLV $X_l=0.52$ - Classe 1
 Sollecitazioni: $N=4501.24$ $T_z=-15.97$
 Verifica a trazione [4.2.5]

N,Ed=4501.24 Npl,Rd=24200.00 Nu,Rd=28607.00 N,Ed/Nt,Rd=0.19

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: N,Ed=-2923.04 My,Ed=22.46 Mz,Ed=0.62 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.77, 0.97
 Verifica YY: 0.12+0.04+0.00=0.16
 Verifica ZZ: 0.12+0.03+0.00=0.15

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.00$ (L/46436)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/36117)

Asta n. 40139 (-903 27) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 5 SLV Xl=0.14 - Classe 1
 Sollecitazioni: Tz=-483.15 Mx=2.38
 V,Ed=-483.15 Vc,Rd,Red=6955.29 V,Ed/Vc,Rd,Red=0.07

- Verifica in termini tensionali [4.2.4] - CC 13 SLV Xl=0.14 - Classe 3
 Sollecitazioni: N=4543.08 Tz=458.78 My=-66.78 Ty=-4.68 Mz=-1.27 Mx=2.61
 Tensioni: $\sigma_N=491.68$ $\sigma_{m,d}=297.68$ $\tau=7.35$ $\sigma_{max}=789.36$ (sfrut=0.30)
 Tensioni: $\sigma_N=491.68$ $\sigma_{m,d}=-5.14$ $\tau=118.95$ $\tau_{max}=118.95$ (sfrut=0.08)
 Tensioni: $\sigma_N=491.68$ $\sigma_{m,d}=297.68$ $\tau=7.35$ $\sigma_{TD,max}=789.46$ (sfrut=0.30)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
 Sollecitazioni: N,Ed=-2512.05 My,Ed=77.00 Mz,Ed=-0.94 L=0.14
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=4.45$ Ncr,y=9669760.00 $\lambda^*_y=0.05$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=4.45$ Ncr,z=9669760.00 $\lambda^*_z=0.05$ Curva a: $\Phi_z=0.00$ $\chi_z=1.00$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.10+0.12+0.00=0.23
 Verifica ZZ: 0.10+0.10+0.00=0.20

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.00$

Asta n. 40139 (27 59) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 13 SLV Xl=0.25 - Classe 1
 Sollecitazioni: Tz=281.31
 V,Ed=281.31 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.04

- Verifica in termini tensionali [4.2.4] - CC 5 SLV Xl=0.25 - Classe 3
 Sollecitazioni: N=4414.10 Tz=226.28 My=53.40 Ty=3.81 Mz=-1.20 Mx=-1.00
 Tensioni: $\sigma_N=477.72$ $\sigma_{m,d}=238.82$ $\tau=2.82$ $\sigma_{max}=716.54$ (sfrut=0.27)
 Tensioni: $\sigma_N=477.72$ $\sigma_{m,d}=4.86$ $\tau=57.87$ $\tau_{max}=57.87$ (sfrut=0.04)
 Tensioni: $\sigma_N=477.72$ $\sigma_{m,d}=238.82$ $\tau=2.82$ $\sigma_{TD,max}=716.56$ (sfrut=0.27)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
 Sollecitazioni: N,Ed=-2733.05 My,Ed=65.86 Mz,Ed=-0.98 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.11+0.11+0.00=0.22
 Verifica ZZ: 0.11+0.08+0.00=0.20

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.00$ (L/16868)

- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.00$ (L/10777)

Asta n. 40139 (-905 59) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU Xl=0.00 - Classe 1
 Sollecitazioni: Ty=1.52
 V,Ed=1.52 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU Xl=0.00 - Classe 1
 Sollecitazioni: Tz=83.36

- V,Ed=83.36 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.01
- Verifica in termini tensionali [4.2.4] - CC 5 SLV Xl=0.00 - Classe 3
Sollecitazioni: N=4359.10 Tz=-75.98 My=-7.88 Ty=2.43 Mz=-1.13
Tensioni: $\sigma_N=471.76$ $\sigma_{m,d}=39.42$ $\tau=0.00$ $\sigma_{max}=511.18$ (sfrut=0.20)
Tensioni: $\sigma_N=471.76$ $\sigma_{m,d}=-4.57$ $\tau=18.48$ $\tau_{max}=18.48$ (sfrut=0.01)
Tensioni: $\sigma_N=471.76$ $\sigma_{m,d}=39.42$ $\tau=0.00$ $\sigma_{ID,max}=511.18$ (sfrut=0.20)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: N,Ed=-3699.31 My,Ed=25.05 Mz,Ed=-0.67 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
Verifica YY: 0.15+0.04+0.00=0.19
Verifica ZZ: 0.15+0.03+0.00=0.19
 - Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.00$ (L/59101)
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/59101)
- Asta n. 40139 (-907 -905) - Sez. 6 (RC80x80x3) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU Xl=0.62 - Classe 1
Sollecitazioni: Ty=1.62
V,Ed=1.62 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00
 - Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU Xl=0.62 - Classe 1
Sollecitazioni: Tz=-97.44
V,Ed=-97.44 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.01
 - Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU Xl=0.31 - Classe 1
Sollecitazioni: N=-4049.17 Tz=-92.17 Ty=1.36
Verifica a compressione [4.2.9]
N,Ed=-4049.17 Nc,Rd=-24200.00 N,Ed/Nc,Rd=0.17
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: N,Ed=-4049.17 My,Ed=29.18 Mz,Ed=-0.49 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
Verifica YY: 0.17+0.05+0.00=0.22
Verifica ZZ: 0.17+0.04+0.00=0.21
 - Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$
- Asta n. 40139 (-909 -907) - Sez. 6 (RC80x80x3) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU Xl=0.00 - Classe 1
Sollecitazioni: Ty=1.36
V,Ed=1.36 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00
 - Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU Xl=0.00 - Classe 1
Sollecitazioni: Tz=82.68
V,Ed=82.68 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.01
 - Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU Xl=0.31 - Classe 1
Sollecitazioni: N=-4059.49 Tz=79.76 Ty=1.36
Verifica a compressione [4.2.9]
N,Ed=-4059.49 Nc,Rd=-24200.00 N,Ed/Nc,Rd=0.17
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: N,Ed=-4059.49 My,Ed=-24.74 Mz,Ed=-0.74 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
Verifica YY: 0.17+0.04+0.00=0.21
Verifica ZZ: 0.17+0.03+0.00=0.20
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40139 (-911 -909) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_1=0.62$ - Classe 1
 Sollecitazioni: $T_y=1.61$
 $V,Ed=1.61$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=0.62$ - Classe 1
 Sollecitazioni: $T_z=-95.89$
 $V,Ed=-95.89$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_1=0.31$ - Classe 1
 Sollecitazioni: $N=-4307.34$ $T_z=-90.10$ $T_y=1.35$
 Verifica a compressione [4.2.9]
 $N,Ed=-4307.34$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.18$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4307.34$ $M_y,Ed=-28.27$ $M_z,Ed=0.42$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.18+0.05+0.00=0.22$
 Verifica ZZ: $0.18+0.04+0.00=0.22$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40139 (-913 -911) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_y=1.36$
 $V,Ed=1.36$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=84.58$
 $V,Ed=84.58$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 17 SLU $X_1=0.31$ - Classe 1
 Sollecitazioni: $N=-4087.21$ $T_z=78.24$ $T_y=1.62$
 Verifica a compressione [4.2.9]
 $N,Ed=-4087.21$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.17$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4314.40$ $M_y,Ed=-26.06$ $M_z,Ed=-0.66$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.18+0.04+0.00=0.22$
 Verifica ZZ: $0.18+0.03+0.00=0.21$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40139 (-915 -913) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_1=0.62$ - Classe 1
 Sollecitazioni: $T_y=1.61$
 $V,Ed=1.61$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=0.62$ - Classe 1
 Sollecitazioni: $T_z=-94.02$
 $V,Ed=-94.02$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 17 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $N=-4395.38$ $T_z=-88.17$ $M_y=-28.85$ $T_y=1.61$
 $M_y,Ed=-28.85$ $M_y,V,c,Rd=699.13$
 $N,Ed=-4395.38$ $N_c,Rd=-24200.00$ YY $n=N,Ed/N_c,Rd=0.18$ $MNy,c,Rd=699.13$ $M_y,Ed/MNy,c,Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4471.79$ $M_y,Ed=-28.30$ $M_z,Ed=0.50$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$

$\lambda_y=19.71$ Ncr,y=493056.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
 Verifica YY: 0.18+0.05+0.00=0.23
 Verifica ZZ: 0.18+0.04+0.00=0.22

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,l}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.00$

Asta n. 40139 (-917 -915) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=1.36$
 $V,Ed=1.36$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=86.47$
 $V,Ed=86.47$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $N=-4475.70$ $T_z=80.62$ $M_y=-27.07$ $T_y=1.36$
 $M_y,Ed=-27.07$ $M_y,V,c,Rd=699.13$
 $N,Ed=-4475.70$ $N_c,Rd=-24200.00$ YY $n=N,Ed/N_c,Rd=0.18$ $MNy,c,Rd=699.13$ $M_y,Ed/MNy,c,Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4475.70$ $M_y,Ed=-27.07$ $M_z,Ed=-0.58$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
 Verifica YY: 0.18+0.04+0.00=0.23
 Verifica ZZ: 0.18+0.04+0.00=0.22

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,l}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,l}=0.00$

Asta n. 40139 (-919 -917) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_y=1.62$
 $V,Ed=1.62$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_z=-92.13$
 $V,Ed=-92.13$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 17 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-4622.32$ $T_z=-86.29$ $M_y=-29.07$ $T_y=1.62$
 $M_y,Ed=-29.07$ $M_y,V,c,Rd=699.13$
 $N,Ed=-4622.32$ $N_c,Rd=-24200.00$ YY $n=N,Ed/N_c,Rd=0.19$ $MNy,c,Rd=699.13$ $M_y,Ed/MNy,c,Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4622.32$ $M_y,Ed=-29.07$ $M_z,Ed=0.69$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
 Verifica YY: 0.19+0.05+0.00=0.24
 Verifica ZZ: 0.19+0.04+0.00=0.23

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,l}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$ (L/59101)

Asta n. 40139 (-921 -919) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=1.35$
 $V,Ed=1.35$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=88.35$

Relazione di calcolo

V,Ed=88.35 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.01

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU Xl=0.62 - Classe 1
 Sollecitazioni: N=-4543.46 Tz=82.50 My=-27.79 Ty=1.35
 My,Ed=-27.79 My,V,c,Rd=699.13
 N,Ed=-4543.46 Nc,Rd=-24200.00 YY n=N,Ed/Nc,Rd=0.19 MNy,c,Rd=699.13 My,Ed/MNy,c,Rd=0.04

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: N,Ed=-4628.33 My,Ed=-27.18 Mz,Ed=-0.60 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
 Verifica YY: 0.19+0.04+0.00=0.24
 Verifica ZZ: 0.19+0.04+0.00=0.23

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40139 (-923 -921) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU Xl=0.62 - Classe 1
 Sollecitazioni: Ty=1.62
 V,Ed=1.62 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU Xl=0.62 - Classe 1
 Sollecitazioni: Tz=-90.24
 V,Ed=-90.24 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.01

- Verifica in termini tensionali [4.2.4] - CC 5 SLV Xl=0.62 - Classe 3
 Sollecitazioni: N=-1690.13 Tz=-9.26 My=-4.34 Ty=2.05 Mz=1.01 Mx=1.06
 Tensioni: $\sigma_N=-182.91$ $\sigma_{m,d}=-23.42$ $\tau=2.97$ $\sigma_{max}=-206.34$ (sfrut=0.08)
 Tensioni: $\sigma_N=-182.91$ $\sigma_{m,d}=-4.09$ $\tau=5.22$ $\tau_{max}=5.22$ (sfrut=0.00)
 Tensioni: $\sigma_N=-182.91$ $\sigma_{m,d}=-23.42$ $\tau=2.97$ $\sigma_{TD,max}=206.40$ (sfrut=0.08)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: N,Ed=-4755.73 My,Ed=-28.99 Mz,Ed=0.78 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493058.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493058.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.98, 0.98, 0.78, 0.98
 Verifica YY: 0.20+0.05+0.00=0.25
 Verifica ZZ: 0.20+0.04+0.00=0.24

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/54176)

Asta n. 40139 (-925 -923) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU Xl=0.00 - Classe 1
 Sollecitazioni: Ty=1.35
 V,Ed=1.35 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU Xl=0.00 - Classe 1
 Sollecitazioni: Tz=90.19
 V,Ed=90.19 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.01

- Verifica a compressione (4.2.4.1.2.2) - CC 28 SLU Xl=0.31 - Classe 1
 Sollecitazioni: N=-2595.51 Tz=53.77 Ty=1.14
 Verifica a compressione [4.2.9]
 N,Ed=-2595.51 Nc,Rd=-24200.00 N,Ed/Nc,Rd=0.11

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: N,Ed=-4758.60 My,Ed=-28.09 Mz,Ed=-0.51 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493058.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493058.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.98, 0.98, 0.78, 0.98
 Verifica YY: 0.20+0.05+0.00=0.24
 Verifica ZZ: 0.20+0.04+0.00=0.23

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$ $f_{z,G}=0.00$

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40139 (-927 -925) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_y=1.68$
 $V,Ed=1.68$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-87.92$
 $V,Ed=-87.92$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 5 SLV $X_l=0.62$ - Classe 3
Sollecitazioni: $N=-2690.30$ $T_z=9.99$ $M_y=-7.95$ $T_y=2.13$ $M_z=1.18$ $M_x=1.10$
Tensioni: $\sigma_N=-291.16$ $\sigma_{m,d}=-39.93$ $\tau=3.11$ $\sigma_{max}=-331.09$ (sfrut=0.13)
Tensioni: $\sigma_N=-291.16$ $\sigma_{m,d}=4.75$ $\tau=5.54$ $\tau_{max}=5.54$ (sfrut=0.00)
Tensioni: $\sigma_N=-291.16$ $\sigma_{m,d}=-39.93$ $\tau=3.11$ $\sigma_{ID,max}=331.13$ (sfrut=0.13)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-4795.51$ $M_y,Ed=-28.41$ $M_z,Ed=0.90$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493058.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493058.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.20+0.05+0.00=0.25$
Verifica ZZ: $0.20+0.04+0.00=0.24$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40139 (-929 -927) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=1.43$
 $V,Ed=1.43$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=89.03$
 $V,Ed=89.03$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 5 SLV $X_l=0.62$ - Classe 1
Sollecitazioni: $N=-2722.80$ $T_z=15.38$ $T_y=2.16$ $M_x=1.28$
Verifica a compressione [4.2.9]
 $N,Ed=-2722.80$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.11$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-4795.28$ $M_y,Ed=-28.36$ $M_z,Ed=0.57$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493058.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493058.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.20+0.05+0.00=0.25$
Verifica ZZ: $0.20+0.04+0.00=0.24$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40139 (-931 -929) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 13 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=94.42$ $M_x=2.25$
 $V,Ed=94.42$ $V_c,Rd,Red=6956.95$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.62$ - Classe 3
Sollecitazioni: $N=-4731.50$ $T_z=-54.08$ $M_y=19.15$ $T_y=3.76$ $M_z=1.51$ $M_x=1.70$
Tensioni: $\sigma_N=-512.07$ $\sigma_{m,d}=-90.34$ $\tau=4.79$ $\sigma_{max}=-602.41$ (sfrut=0.23)
Tensioni: $\sigma_N=-512.07$ $\sigma_{m,d}=-6.09$ $\tau=17.95$ $\tau_{max}=17.95$ (sfrut=0.01)
Tensioni: $\sigma_N=-512.07$ $\sigma_{m,d}=-90.34$ $\tau=4.79$ $\sigma_{ID,max}=602.47$ (sfrut=0.23)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-4731.50$ $M_y,Ed=19.15$ $M_z,Ed=1.51$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$

$\lambda_y=19.71$ Ncr,y=493058.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493058.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.98, 0.98, 0.78, 0.98
 Verifica YY: 0.20+0.03+0.00=0.23
 Verifica ZZ: 0.20+0.02+0.00=0.22

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.00$ (L/50008)

- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.00$ (L/46436)

Asta n. 40139 (29 -931) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 13 SLV $X_l=0.61$ - Classe 1
 Sollecitazioni: $T_y=-1.42$ $M_x=6.86$
 $V,Ed=-1.42$ $V_c,Rd,Red=6897.07$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 13 SLV $X_l=0.61$ - Classe 1
 Sollecitazioni: $T_z=-1242.11$ $M_x=6.86$
 $V,Ed=-1242.11$ $V_c,Rd,Red=6897.07$ $V,Ed/V_c,Rd,Red=0.18$

- Verifica in termini tensionali [4.2.4] - CC 5 SLV $X_l=0.50$ - Classe 3
 Sollecitazioni: $N=-3656.06$ $T_z=-1001.29$ $M_y=-54.25$ $T_y=7.61$ $M_z=-1.21$ $M_x=8.07$
 Tensioni: $\sigma_N=-395.68$ $\sigma_{m,d}=-242.59$ $\tau=22.68$ $\sigma_{max}=-638.26$ (sfrut=0.24)
 Tensioni: $\sigma_N=-395.68$ $\sigma_{m,d}=4.88$ $\tau=266.26$ $\tau_{max}=266.26$ (sfrut=0.18)
 Tensioni: $\sigma_N=-395.68$ $\sigma_{m,d}=-214.25$ $\tau=191.31$ $\sigma_{ID,max}=694.12$ (sfrut=0.27)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
 Sollecitazioni: $N,Ed=-3656.06$ $M_y,Ed=55.94$ $M_z,Ed=-1.21$ $L=0.61$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.39$ Ncr,y=509347.00 $\lambda^*_y=0.22$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.39$ Ncr,z=509347.00 $\lambda^*_z=0.22$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
 Verifica YY: 0.15+0.09+0.00=0.24
 Verifica ZZ: 0.15+0.07+0.00=0.23

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.00$ (L/6070)

- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.00$ (L/3035)

Asta n. 40145 (-839 -840) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.88$ - Classe 1
 Sollecitazioni: $T_z=-29.07$
 $V,Ed=-29.07$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU $X_l=0.88$ - Classe 1
 Sollecitazioni: $N=-207.87$ $T_z=-29.07$ $M_y=12.42$
 $M_y,Ed=12.42$ $M_y,V,c,Rd=383.27$
 $N,Ed=-207.87$ $N_c,Rd=-17914.30$ YY $n=N,Ed/N_c,Rd=0.01$ $MN_y,c,Rd=383.27$ $M_y,Ed/MN_y,c,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-238.70$ $M_y,Ed=12.33$ $M_z,Ed=0.20$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.01+0.04+0.00=0.05
 Verifica ZZ: 0.01+0.03+0.00=0.04

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/76617)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/65671)

Asta n. 40146 (-964 -963) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.88$ - Classe 1
 Sollecitazioni: $T_z=-29.06$
 $V,Ed=-29.06$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU $X_l=0.88$ - Classe 1
 Sollecitazioni: $N=-209.40$ $T_z=-29.06$ $M_y=12.41$
 $M_y,Ed=12.41$ $M_y,V,c,Rd=383.27$
 $N,Ed=-209.40$ $N_c,Rd=-17914.30$ YY $n=N,Ed/N_c,Rd=0.01$ $MN_y,c,Rd=383.27$ $M_y,Ed/MN_y,c,Rd=0.03$

-
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed = -238.83 \text{ My}, Ed = 12.32 \text{ Mz}, Ed = -0.20 \text{ L} = 0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 37.63 \text{ Ncr}, y = 100129.00 \lambda^*_y = 0.43 \text{ Curva a: } \Phi_y = 0.62 \chi_y = 0.94$
 $\lambda_z = 37.63 \text{ Ncr}, z = 100129.00 \lambda^*_z = 0.43 \text{ Curva a: } \Phi_z = 0.62 \chi_z = 0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01 + 0.04 + 0.00 = 0.05$
 Verifica ZZ: $0.01 + 0.03 + 0.00 = 0.04$

 - Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g} = 0.01 \text{ (L/9993)} \quad f_{z,L} = 0.00 \text{ (L/61293)}$

 - Verifica freccia massima carichi totali - CC 31
 $f_{z,g} = 0.01 \text{ (L/9886)} \quad f_{z,L} = 0.00 \text{ (L/57462)}$
- Asta n. 40153 (-836 -839) - Sez. 7 (RC60x60x3) - Crit. 1
-
- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X1 = 0.00$ - Classe 1
 Sollecitazioni: $T_z = 29.24$
 $V, Ed = 29.24 \quad V_c, Rd = 5171.56 \quad V, Ed/V_c, Rd = 0.01$

 - Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU $X1 = 0.00$ - Classe 1
 Sollecitazioni: $N = -393.28 \quad T_z = 29.24 \quad M_y = 12.43$
 $M_y, Ed = 12.43 \quad M_y, V, c, Rd = 383.27$
 $N, Ed = -393.28 \quad N_c, Rd = -17914.30 \quad YY \quad n = N, Ed/N_c, Rd = 0.02 \quad MN_y, c, Rd = 383.27 \quad M_y, Ed/MN_y, c, Rd = 0.03$

 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed = -397.61 \text{ My}, Ed = 12.43 \text{ Mz}, Ed = -0.19 \text{ L} = 0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 37.63 \text{ Ncr}, y = 100129.00 \lambda^*_y = 0.43 \text{ Curva a: } \Phi_y = 0.62 \chi_y = 0.94$
 $\lambda_z = 37.63 \text{ Ncr}, z = 100129.00 \lambda^*_z = 0.43 \text{ Curva a: } \Phi_z = 0.62 \chi_z = 0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.96, 0.96, 0.76, 0.96$
 Verifica YY: $0.02 + 0.04 + 0.00 = 0.06$
 Verifica ZZ: $0.02 + 0.03 + 0.00 = 0.05$

 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g} = 0.01 \text{ (L/10103)} \quad f_{z,L} = 0.00 \text{ (L/65671)}$

 - Verifica freccia massima carichi totali - CC 20
 $f_{z,g} = 0.01 \text{ (L/10215)} \quad f_{z,L} = 0.00 \text{ (L/54082)}$
- Asta n. 40154 (-967 -964) - Sez. 7 (RC60x60x3) - Crit. 1
-
- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X1 = 0.00$ - Classe 1
 Sollecitazioni: $T_z = 29.23$
 $V, Ed = 29.23 \quad V_c, Rd = 5171.56 \quad V, Ed/V_c, Rd = 0.01$

 - Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU $X1 = 0.00$ - Classe 1
 Sollecitazioni: $N = -391.50 \quad T_z = 29.23 \quad M_y = 12.42$
 $M_y, Ed = 12.42 \quad M_y, V, c, Rd = 383.27$
 $N, Ed = -391.50 \quad N_c, Rd = -17914.30 \quad YY \quad n = N, Ed/N_c, Rd = 0.02 \quad MN_y, c, Rd = 383.27 \quad M_y, Ed/MN_y, c, Rd = 0.03$

 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed = -395.83 \text{ My}, Ed = 12.42 \text{ Mz}, Ed = 0.19 \text{ L} = 0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 37.63 \text{ Ncr}, y = 100129.00 \lambda^*_y = 0.43 \text{ Curva a: } \Phi_y = 0.62 \chi_y = 0.94$
 $\lambda_z = 37.63 \text{ Ncr}, z = 100129.00 \lambda^*_z = 0.43 \text{ Curva a: } \Phi_z = 0.62 \chi_z = 0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.96, 0.96, 0.76, 0.96$
 Verifica YY: $0.02 + 0.04 + 0.00 = 0.06$
 Verifica ZZ: $0.02 + 0.03 + 0.00 = 0.05$

 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g} = 0.01 \text{ (L/10215)} \quad f_{z,L} = 0.00 \text{ (L/70723)}$

 - Verifica freccia massima carichi totali - CC 20
 $f_{z,g} = 0.01 \text{ (L/10330)} \quad f_{z,L} = 0.00 \text{ (L/63407)}$
- Asta n. 40155 (22 57) - Sez. 6 (RC80x80x3) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 5 SLV $X1 = 0.50$ - Classe 1
 Sollecitazioni: $T_y = -1.60 \quad M_x = 3.86$
 $V, Ed = -1.60 \quad V_c, Rd, Red = 6936.03 \quad V, Ed/V_c, Rd, Red = 0.00$

 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 5 SLV $X1 = 0.50$ - Classe 1
 Sollecitazioni: $T_z = 1926.09 \quad M_x = 3.86$
 $V, Ed = 1926.09 \quad V_c, Rd, Red = 6936.03 \quad V, Ed/V_c, Rd, Red = 0.28$

 - Verifica in termini tensionali [4.2.4] - CC 7 SLV $X1 = 0.62$ - Classe 3
 Sollecitazioni: $N = 3900.84 \quad T_z = 1916.24 \quad M_y = -122.69 \quad T_y = -18.33 \quad M_z = -4.48$
 Tensioni: $\sigma_N = 422.17 \quad \sigma_{m,d} = 556.26 \quad \tau = 0.00 \quad \sigma_{max} = 978.43 \text{ (sfrut} = 0.37)$

Tensioni: $\sigma_N=422.17$ $\sigma_{m,d}=-18.12$ $\tau=466.15$ $\tau_{max}=466.15$ (sfrut=0.31)
Tensioni: $\sigma_N=422.17$ $\sigma_{m,d}=516.01$ $\tau=322.71$ $\sigma_{ID,max}=1092.06$ (sfrut=0.42)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
Sollecitazioni: $N, Ed=-3542.33$ $M_y, Ed=-123.56$ $M_z, Ed=-4.66$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr_y=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr_z=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.15+0.20+0.01=0.35$
Verifica ZZ: $0.15+0.16+0.01=0.31$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$ (L/5242)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.01$ (L/2330)

Asta n. 40155 (57 -873) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_y=1.48$
 $V, Ed=1.48$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-118.59$
 $V, Ed=-118.59$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.02$

- Verifica in termini tensionali [4.2.4] - CC 5 SLV $X_l=0.00$ - Classe 3
Sollecitazioni: $N=3630.27$ $T_z=-69.83$ $M_y=-27.33$ $T_y=2.08$ $M_z=-1.07$
Tensioni: $\sigma_N=392.89$ $\sigma_{m,d}=124.23$ $\tau=0.00$ $\sigma_{max}=517.11$ (sfrut=0.20)
Tensioni: $\sigma_N=392.89$ $\sigma_{m,d}=-4.33$ $\tau=16.99$ $\tau_{max}=16.99$ (sfrut=0.01)
Tensioni: $\sigma_N=392.89$ $\sigma_{m,d}=124.23$ $\tau=0.00$ $\sigma_{ID,max}=517.11$ (sfrut=0.20)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-3246.66$ $M_y, Ed=-43.96$ $M_z, Ed=-0.79$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr_y=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr_z=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
Verifica YY: $0.13+0.07+0.00=0.21$
Verifica ZZ: $0.13+0.06+0.00=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$ (L/50009)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/28265)

Asta n. 40155 (-873 -875) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=1.34$
 $V, Ed=1.34$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=92.86$
 $V, Ed=92.86$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 13 SLV $X_l=0.62$ - Classe 1
Sollecitazioni: $N=4402.88$ $T_z=-40.13$ $T_y=1.61$
Verifica a trazione [4.2.5]
 $N, Ed=4402.88$ $N_{pl}, Rd=24200.00$ $N_u, Rd=28607.00$ $N, Ed/N_t, Rd=0.18$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-3246.82$ $M_y, Ed=-29.22$ $M_z, Ed=-0.49$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr_y=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr_z=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
Verifica YY: $0.13+0.05+0.00=0.18$
Verifica ZZ: $0.13+0.04+0.00=0.17$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Relazione di calcolo

Asta n. 40155 (-875 -877) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_y=1.32$
 $V, Ed=1.32$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-88.05$
 $V, Ed=-88.05$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 13 SLV $X_l=0.00$ - Classe 3
Sollecitazioni: $N=3666.29$ $T_z=13.04$ $M_y=-9.76$ $T_y=1.98$ $M_z=-1.05$
Tensioni: $\sigma_N=396.79$ $\sigma_{m,d}=47.28$ $\tau=0.00$ $\sigma_{max}=444.06$ (sfrut=0.17)
Tensioni: $\sigma_N=396.79$ $\sigma_{m,d}=-4.24$ $\tau=3.17$ $\tau_{max}=3.17$ (sfrut=0.00)
Tensioni: $\sigma_N=396.79$ $\sigma_{m,d}=47.28$ $\tau=0.00$ $\sigma_{ID,max}=444.06$ (sfrut=0.17)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-3188.36$ $M_y, Ed=-28.06$ $M_z, Ed=-0.81$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
Verifica YY: $0.13+0.05+0.00=0.18$
Verifica ZZ: $0.13+0.04+0.00=0.17$
 - Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$ (L/59101)
 - Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.00$ (L/46436)

Asta n. 40155 (-877 -879) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=1.56$
 $V, Ed=1.56$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=86.01$
 $V, Ed=86.01$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
 - Verifica a trazione (4.2.4.1.2.1) - CC 13 SLV $X_l=0.52$ - Classe 1
Sollecitazioni: $N=3639.41$ $T_z=15.00$ $T_y=1.96$
Verifica a trazione [4.2.5]
 $N, Ed=3639.41$ $N_{pl}, Rd=24200.00$ $N_u, Rd=28607.00$ $N, Ed/N_t, Rd=0.15$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-3187.90$ $M_y, Ed=-28.07$ $M_z, Ed=0.49$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
Verifica YY: $0.13+0.05+0.00=0.18$
Verifica ZZ: $0.13+0.04+0.00=0.17$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/59101)

Asta n. 40155 (-879 -881) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_y=1.33$
 $V, Ed=1.33$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-89.64$
 $V, Ed=-89.64$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
 - Verifica a trazione (4.2.4.1.2.1) - CC 13 SLV $X_l=0.52$ - Classe 1
Sollecitazioni: $N=2831.10$ $T_z=-3.38$ $T_y=1.99$
Verifica a trazione [4.2.5]
 $N, Ed=2831.10$ $N_{pl}, Rd=24200.00$ $N_u, Rd=28607.00$ $N, Ed/N_t, Rd=0.12$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-3218.67$ $M_y, Ed=-28.43$ $M_z, Ed=-0.75$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$

$\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
 Verifica YY: $0.13+0.05+0.00=0.18$
 Verifica ZZ: $0.13+0.04+0.00=0.17$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/50009)

Asta n. 40155 (-881 -883) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_y=1.58$
 $V, Ed=1.58$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=84.06$
 $V, Ed=84.06$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 13 SLV $X_1=0.41$ - Classe 1
 Sollecitazioni: $N=2801.75$ $T_z=14.18$ $T_y=1.98$
 Verifica a trazione [4.2.5]
 $N, Ed=2801.75$ $N_{pl}, Rd=24200.00$ $N_u, Rd=28607.00$ $N, Ed/N_t, Rd=0.12$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3221.31$ $M_y, Ed=-27.29$ $M_z, Ed=0.56$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
 Verifica YY: $0.13+0.04+0.00=0.18$
 Verifica ZZ: $0.13+0.04+0.00=0.17$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40155 (-883 -885) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_1=0.62$ - Classe 1
 Sollecitazioni: $T_y=1.33$
 $V, Ed=1.33$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=0.62$ - Classe 1
 Sollecitazioni: $T_z=-91.52$
 $V, Ed=-91.52$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 13 SLV $X_1=0.31$ - Classe 1
 Sollecitazioni: $N=1925.21$ $T_z=-3.34$
 Verifica a trazione [4.2.5]
 $N, Ed=1925.21$ $N_{pl}, Rd=24200.00$ $N_u, Rd=28607.00$ $N, Ed/N_t, Rd=0.08$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3342.46$ $M_y, Ed=-28.70$ $M_z, Ed=-0.68$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
 Verifica YY: $0.14+0.05+0.00=0.19$
 Verifica ZZ: $0.14+0.04+0.00=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/50009)

Asta n. 40155 (-885 -886) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_y=1.58$
 $V, Ed=1.58$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=82.18$
 $V, Ed=82.18$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

Relazione di calcolo

- Verifica a trazione (4.2.4.1.2.1) - CC 13 SLV $X_l=0.31$ - Classe 1
Sollecitazioni: $N=1893.50$ $T_z=13.48$ $T_y=1.98$
Verifica a trazione [4.2.5]
 $N, Ed=1893.50$ $N_{pl}, Rd=24200.00$ $N_u, Rd=28607.00$ $N, Ed/N_t, Rd=0.08$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-3348.26$ $M_y, Ed=-26.22$ $M_z, Ed=0.63$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
Verifica YY: $0.14+0.04+0.00=0.18$
Verifica ZZ: $0.14+0.03+0.00=0.17$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,l}=0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$
- Asta n. 40155 (-886 -888) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_y=1.33$
 $V, Ed=1.33$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-93.40$
 $V, Ed=-93.40$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-3611.19$ $T_z=-87.55$ $M_y=-29.33$ $T_y=1.33$
 $M_y, Ed=-29.33$ $M_y, V, c, Rd=699.13$
 $N, Ed=-3611.19$ $N_c, Rd=-24200.00$ YY $n=N, Ed/N_c, Rd=0.15$ $MN_y, c, Rd=699.13$ $M_y, Ed/MN_y, c, Rd=0.04$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-3611.19$ $M_y, Ed=-29.33$ $M_z, Ed=-0.52$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.15+0.05+0.00=0.20$
Verifica ZZ: $0.15+0.04+0.00=0.19$
- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,l}=0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$ (L/59101)
- Asta n. 40155 (-888 -890) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=1.58$
 $V, Ed=1.58$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=80.29$
 $V, Ed=80.29$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-3624.58$ $T_z=74.45$ $T_y=1.33$
Verifica a compressione [4.2.9]
 $N, Ed=-3624.58$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.15$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-3624.58$ $M_y, Ed=-23.60$ $M_z, Ed=0.59$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.15+0.04+0.00=0.19$
Verifica ZZ: $0.15+0.03+0.00=0.18$
- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,l}=0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$

Relazione di calcolo

Asta n. 40155 (-890 -892) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_y=1.33$
 $V, Ed=1.33$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-95.29$
 $V, Ed=-95.29$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
 - Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-4054.13$ $T_z=-92.36$ $T_y=1.33$
Verifica a compressione [4.2.9]
 $N, Ed=-4054.13$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.17$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-4054.13$ $M_y, Ed=28.68$ $M_z, Ed=-0.46$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.17+0.05+0.00=0.21$
Verifica ZZ: $0.17+0.04+0.00=0.21$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,l}=0.00$
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$

Asta n. 40155 (-892 -894) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=1.59$
 $V, Ed=1.59$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=78.41$
 $V, Ed=78.41$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
 - Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-4070.67$ $T_z=72.57$ $T_y=1.33$
Verifica a compressione [4.2.9]
 $N, Ed=-4070.67$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.17$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-4070.67$ $M_y, Ed=23.48$ $M_z, Ed=0.65$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.17+0.04+0.00=0.21$
Verifica ZZ: $0.17+0.03+0.00=0.20$
 - Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,l}=0.00$
 - Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.00$

Asta n. 40155 (-894 -896) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_y=1.33$
 $V, Ed=1.33$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-97.19$
 $V, Ed=-97.19$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
 - Verifica a compressione (4.2.4.1.2.2) - CC 17 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-4275.06$ $T_z=-91.87$ $T_y=1.58$
Verifica a compressione [4.2.9]
 $N, Ed=-4275.06$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.18$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-4590.61$ $M_y, Ed=30.90$ $M_z, Ed=0.42$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$

Relazione di calcolo

Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
Verifica YY: 0.19+0.05+0.00=0.24
Verifica ZZ: 0.19+0.04+0.00=0.23

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40155 (-896 -898) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=1.60$
 $V,Ed=1.60$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=76.67$
 $V,Ed=76.67$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 28 SLU $X_l=0.41$ - Classe 1
Sollecitazioni: $N=-3086.42$ $T_z=32.03$ $T_y=1.14$
Verifica a compressione [4.2.9]
 $N,Ed=-3086.42$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.13$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N,Ed=-4610.30$ $M_y,Ed=24.72$ $M_z,Ed=0.71$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
Verifica YY: 0.19+0.04+0.00=0.23
Verifica ZZ: 0.19+0.03+0.00=0.22

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40155 (-898 -900) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_y=1.53$
 $V,Ed=1.53$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-100.33$
 $V,Ed=-100.33$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.62$ - Classe 3
Sollecitazioni: $N=-1129.14$ $T_z=-6.65$ $M_y=5.74$ $T_y=4.90$ $M_z=1.85$ $M_x=-2.14$
Tensioni: $\sigma_N=-122.20$ $\sigma_{m,d}=-33.19$ $\tau=6.01$ $\sigma_{max}=-155.39$ (sfrut=0.06)
Tensioni: $\sigma_N=-122.20$ $\sigma_{m,d}=7.48$ $\tau=7.62$ $\tau_{max}=7.62$ (sfrut=0.01)
Tensioni: $\sigma_N=-122.20$ $\sigma_{m,d}=-33.19$ $\tau=6.01$ $\sigma_{TD,max}=155.74$ (sfrut=0.06)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N,Ed=-5221.15$ $M_y,Ed=34.00$ $M_z,Ed=0.56$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.98, 0.98, 0.78, 0.98
Verifica YY: 0.22+0.06+0.00=0.27
Verifica ZZ: 0.22+0.04+0.00=0.26

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/54176)

Asta n. 40155 (-900 -902) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=2.25$
 $V,Ed=2.25$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=83.71$
 $V,Ed=83.71$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_1=0.62$ - Classe 3
 Sollecitazioni: $N=-5244.23$ $T_z=71.91$ $M_y=-19.26$ $T_y=1.90$ $M_z=1.22$
 Tensioni: $\sigma_N=-567.56$ $\sigma_{m,d}=-89.59$ $\tau=0.00$ $\sigma_{max}=-657.15$ (sfrut=0.25)
 Tensioni: $\sigma_N=-567.56$ $\sigma_{m,d}=4.94$ $\tau=17.49$ $\tau_{max}=17.49$ (sfrut=0.01)
 Tensioni: $\sigma_N=-567.56$ $\sigma_{m,d}=-89.59$ $\tau=0.00$ $\sigma_{ID,max}=657.15$ (sfrut=0.25)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-5244.23$ $M_y,Ed=27.14$ $M_z,Ed=1.22$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
 Verifica YY: $0.22+0.04+0.00=0.26$
 Verifica ZZ: $0.22+0.04+0.00=0.25$
- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.00$ (L/59101)
- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/54176)
- Asta n. 40155 (-902 28) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 13 SLV $X_1=0.14$ - Classe 1
 Sollecitazioni: $T_z=-948.34$ $M_x=-2.49$
 $V,Ed=-948.34$ $V_c,Rd,Red=6953.78$ $V,Ed/V_c,Rd,Red=0.14$
- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_1=0.14$ - Classe 3
 Sollecitazioni: $N=-5700.37$ $T_z=-898.97$ $M_y=89.92$ $T_y=5.64$ $M_z=1.35$ $M_x=-2.64$
 Tensioni: $\sigma_N=-616.92$ $\sigma_{m,d}=-399.24$ $\tau=7.42$ $\sigma_{max}=-1016.17$ (sfrut=0.39)
 Tensioni: $\sigma_N=-616.92$ $\sigma_{m,d}=5.91$ $\tau=226.11$ $\tau_{max}=226.11$ (sfrut=0.15)
 Tensioni: $\sigma_N=-616.92$ $\sigma_{m,d}=-369.30$ $\tau=146.21$ $\sigma_{ID,max}=1018.22$ (sfrut=0.39)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-5700.37$ $M_y,Ed=89.92$ $M_z,Ed=1.35$ $L=0.14$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=4.45$ $N_{cr,y}=9669760.00$ $\lambda^*_y=0.05$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=4.45$ $N_{cr,z}=9669760.00$ $\lambda^*_z=0.05$ Curva a: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.24+0.14+0.00=0.38$
 Verifica ZZ: $0.24+0.11+0.00=0.35$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.00$
- Asta n. 40155 (28 60) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 5 SLV $X_1=0.25$ - Classe 1
 Sollecitazioni: $T_z=480.20$ $M_x=1.53$
 $V,Ed=480.20$ $V_c,Rd,Red=6966.27$ $V,Ed/V_c,Rd,Red=0.07$
- Verifica in termini tensionali [4.2.4] - CC 5 SLV $X_1=0.25$ - Classe 3
 Sollecitazioni: $N=-3560.96$ $T_z=480.20$ $M_y=123.72$ $T_y=-10.01$ $M_z=3.05$ $M_x=1.53$
 Tensioni: $\sigma_N=-385.39$ $\sigma_{m,d}=-554.53$ $\tau=4.30$ $\sigma_{max}=-939.91$ (sfrut=0.36)
 Tensioni: $\sigma_N=-385.39$ $\sigma_{m,d}=12.34$ $\tau=121.12$ $\tau_{max}=121.12$ (sfrut=0.08)
 Tensioni: $\sigma_N=-385.39$ $\sigma_{m,d}=-554.53$ $\tau=4.30$ $\sigma_{ID,max}=939.94$ (sfrut=0.36)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
 Sollecitazioni: $N,Ed=-3560.96$ $M_y,Ed=123.72$ $M_z,Ed=3.05$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.15+0.20+0.00=0.35$
 Verifica ZZ: $0.15+0.16+0.00=0.31$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$ (L/13378)
- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/9237)
- Asta n. 40155 (-904 60) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_1=0.00$ - Classe 1

Relazione di calcolo

Sollecitazioni: $T_y = -2.15$
 $V, Ed = -2.15$ $V_c, Rd = 6986.14$ $V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l = 0.00$ - Classe 1
Sollecitazioni: $T_z = 92.41$
 $V, Ed = 92.41$ $V_c, Rd = 6986.14$ $V, Ed/V_c, Rd = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l = 0.62$ - Classe 3
Sollecitazioni: $N = -4690.42$ $T_z = 86.57$ $M_y = -27.77$ $T_y = -2.15$ $M_z = -1.31$
Tensioni: $\sigma_N = -507.62$ $\sigma_{m,d} = -127.20$ $\tau = 0.00$ $\sigma_{max} = -634.82$ (sfrut=0.24)
Tensioni: $\sigma_N = -507.62$ $\sigma_{m,d} = -5.31$ $\tau = 21.06$ $\tau_{max} = 21.06$ (sfrut=0.01)
Tensioni: $\sigma_N = -507.62$ $\sigma_{m,d} = -127.20$ $\tau = 0.00$ $\sigma_{ID,max} = 634.82$ (sfrut=0.24)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed = -4690.42$ $M_y, Ed = -27.77$ $M_z, Ed = -1.31$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr,y} = 493056.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $N_{cr,z} = 493056.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.19 + 0.05 + 0.00 = 0.24$
Verifica ZZ: $0.19 + 0.04 + 0.00 = 0.23$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L} = 0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L} = 0.00$

Asta n. 40155 (-906 -904) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l = 0.62$ - Classe 1
Sollecitazioni: $T_y = -1.88$
 $V, Ed = -1.88$ $V_c, Rd = 6986.14$ $V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l = 0.62$ - Classe 1
Sollecitazioni: $T_z = -99.22$
 $V, Ed = -99.22$ $V_c, Rd = 6986.14$ $V, Ed/V_c, Rd = 0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_l = 0.31$ - Classe 1
Sollecitazioni: $N = -4240.66$ $T_z = -92.43$ $T_y = -1.59$
Verifica a compressione [4.2.9]
 $N, Ed = -4240.66$ $N_c, Rd = -24200.00$ $N, Ed/N_c, Rd = 0.18$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed = -4675.81$ $M_y, Ed = 31.96$ $M_z, Ed = -0.69$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr,y} = 493056.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $N_{cr,z} = 493056.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.19 + 0.05 + 0.00 = 0.25$
Verifica ZZ: $0.19 + 0.04 + 0.00 = 0.24$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L} = 0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L} = 0.00$

Asta n. 40155 (-908 -906) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l = 0.00$ - Classe 1
Sollecitazioni: $T_y = -1.50$
 $V, Ed = -1.50$ $V_c, Rd = 6986.14$ $V, Ed/V_c, Rd = 0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l = 0.00$ - Classe 1
Sollecitazioni: $T_z = 82.32$
 $V, Ed = 82.32$ $V_c, Rd = 6986.14$ $V, Ed/V_c, Rd = 0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 17 SLU $X_l = 0.31$ - Classe 1
Sollecitazioni: $N = -4233.19$ $T_z = 76.07$ $T_y = -1.79$
Verifica a compressione [4.2.9]
 $N, Ed = -4233.19$ $N_c, Rd = -24200.00$ $N, Ed/N_c, Rd = 0.17$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed = -4233.19$ $M_y, Ed = 24.72$ $M_z, Ed = -0.93$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr,y} = 493056.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $N_{cr,z} = 493056.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.17 + 0.04 + 0.00 = 0.22$

Relazione di calcolo

Verifica ZZ: $0.17+0.03+0.00=0.21$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40155 (-910 -908) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_y=-1.77$
 $V,Ed=-1.77$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-95.47$
 $V,Ed=-95.47$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 17 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-4219.33$ $T_z=-92.55$ $T_y=-1.77$
Verifica a compressione [4.2.9]
 $N,Ed=-4219.33$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.17$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-4219.33$ $M_y,Ed=29.07$ $M_z,Ed=0.55$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.17+0.05+0.00=0.22$
Verifica ZZ: $0.17+0.04+0.00=0.21$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40155 (-912 -910) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-1.49$
 $V,Ed=-1.49$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=84.13$
 $V,Ed=84.13$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 17 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-3865.97$ $T_z=77.79$ $T_y=-1.78$
Verifica a compressione [4.2.9]
 $N,Ed=-3865.97$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.16$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-3865.97$ $M_y,Ed=-24.21$ $M_z,Ed=-0.84$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.16+0.04+0.00=0.20$
Verifica ZZ: $0.16+0.03+0.00=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40155 (-914 -912) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_y=-1.77$
 $V,Ed=-1.77$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-93.56$
 $V,Ed=-93.56$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-3855.24$ $T_z=-87.72$ $M_y=-28.80$ $T_y=-1.77$
 $M_y,Ed=-28.80$ $M_y,V_c,Rd=699.13$

N,Ed=-3855.24 Nc,Rd=-24200.00 YY n=N,Ed/Nc,Rd=0.16 MNy,c,Rd=699.13 My,Ed/MNy,c,Rd=0.04

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: N,Ed=-3855.24 My,Ed=-28.80 Mz,Ed=0.64 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
 Verifica YY: $0.16+0.05+0.00=0.21$
 Verifica ZZ: $0.16+0.04+0.00=0.20$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40155 (-916 -914) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU Xl=0.00 - Classe 1
 Sollecitazioni: $T_y=-1.49$
 $V,Ed=-1.49$ Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU Xl=0.00 - Classe 1
 Sollecitazioni: $T_z=86.01$
 $V,Ed=86.01$ Vc,Rd=6986.14 V,Ed/Vc,Rd=0.01

- Verifica in termini tensionali [4.2.4] - CC 13 SLV Xl=0.62 - Classe 3
 Sollecitazioni: N=1258.04 $T_z=-33.89$ $M_y=8.70$ $T_y=-2.46$ $M_z=-1.03$ $M_x=1.17$
 Tensioni: $\sigma_N=136.15$ $\sigma_{m,d}=42.58$ $\tau=3.28$ $\sigma_{max}=178.73$ (sfrut=0.07)
 Tensioni: $\sigma_N=136.15$ $\sigma_{m,d}=4.17$ $\tau=11.52$ $\tau_{max}=11.52$ (sfrut=0.01)
 Tensioni: $\sigma_N=136.15$ $\sigma_{m,d}=42.58$ $\tau=3.28$ $\sigma_{ID,max}=178.82$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: N,Ed=-3619.73 My,Ed=-26.90 Mz,Ed=-0.62 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
 Verifica YY: $0.15+0.04+0.00=0.19$
 Verifica ZZ: $0.15+0.03+0.00=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40155 (-918 -916) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU Xl=0.62 - Classe 1
 Sollecitazioni: $T_y=-1.77$
 $V,Ed=-1.77$ Vc,Rd=6986.14 V,Ed/Vc,Rd=0.00

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU Xl=0.62 - Classe 1
 Sollecitazioni: $T_z=-91.68$
 $V,Ed=-91.68$ Vc,Rd=6986.14 V,Ed/Vc,Rd=0.01

- Verifica in termini tensionali [4.2.4] - CC 13 SLV Xl=0.00 - Classe 3
 Sollecitazioni: N=1289.18 $T_z=13.57$ $M_y=4.86$ $T_y=-2.46$ $M_z=1.02$ $M_x=1.17$
 Tensioni: $\sigma_N=139.52$ $\sigma_{m,d}=25.72$ $\tau=3.28$ $\sigma_{max}=165.24$ (sfrut=0.06)
 Tensioni: $\sigma_N=139.52$ $\sigma_{m,d}=4.13$ $\tau=6.58$ $\tau_{max}=6.58$ (sfrut=0.00)
 Tensioni: $\sigma_N=139.52$ $\sigma_{m,d}=25.72$ $\tau=3.28$ $\sigma_{ID,max}=165.34$ (sfrut=0.06)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: N,Ed=-3584.68 My,Ed=-28.99 Mz,Ed=0.74 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
 Verifica YY: $0.15+0.05+0.00=0.20$
 Verifica ZZ: $0.15+0.04+0.00=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/59101)

Relazione di calcolo

Asta n. 40155 (-920 -918) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-1.48$
 $V, Ed=-1.48$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=87.90$
 $V, Ed=87.90$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
 - Verifica a trazione (4.2.4.1.2.1) - CC 5 SLV $X_l=0.41$ - Classe 1
Sollecitazioni: $N=2542.89$ $T_z=17.31$ $M_x=1.05$
Verifica a trazione [4.2.5]
 $N, Ed=2542.89$ $N_{pl}, Rd=24200.00$ $N_u, Rd=28607.00$ $N, Ed/N_t, Rd=0.11$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-3595.59$ $M_y, Ed=-27.65$ $M_z, Ed=-0.55$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.15+0.04+0.00=0.19$
Verifica ZZ: $0.15+0.04+0.00=0.19$
 - Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,l}=0.00$
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$

Asta n. 40155 (-922 -920) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_y=-1.78$
 $V, Ed=-1.78$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-89.80$
 $V, Ed=-89.80$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 5 SLV $X_l=0.00$ - Classe 3
Sollecitazioni: $N=2578.91$ $T_z=12.63$ $M_y=-8.86$ $T_y=-2.27$ $M_z=1.08$ $M_x=1.06$
Tensioni: $\sigma_N=279.10$ $\sigma_{m,d}=43.51$ $\tau=2.97$ $\sigma_{max}=322.61$ (sfrut=0.12)
Tensioni: $\sigma_N=279.10$ $\sigma_{m,d}=4.38$ $\tau=6.04$ $\tau_{max}=6.04$ (sfrut=0.00)
Tensioni: $\sigma_N=279.10$ $\sigma_{m,d}=43.51$ $\tau=2.97$ $\sigma_{ID,max}=322.65$ (sfrut=0.12)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-3596.40$ $M_y, Ed=-27.30$ $M_z, Ed=0.69$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493058.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493058.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.15+0.04+0.00=0.19$
Verifica ZZ: $0.15+0.04+0.00=0.19$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,l}=0.00$
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$ (L/54176)

Asta n. 40155 (-924 -922) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-1.47$
 $V, Ed=-1.47$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=89.86$
 $V, Ed=89.86$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
 - Verifica a trazione (4.2.4.1.2.1) - CC 5 SLV $X_l=0.52$ - Classe 1
Sollecitazioni: $N=3578.33$ $T_z=18.13$ $M_x=1.04$
Verifica a trazione [4.2.5]
 $N, Ed=3578.33$ $N_{pl}, Rd=24200.00$ $N_u, Rd=28607.00$ $N, Ed/N_t, Rd=0.15$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-3664.96$ $M_y, Ed=-28.10$ $M_z, Ed=-0.46$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493058.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$

$\lambda_z=19.71$ Ncr,z=493058.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.15+0.05+0.00=0.20$
 Verifica ZZ: $0.15+0.04+0.00=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,l}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$

Asta n. 40155 (-926 -924) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_y=-1.77$
 $V, Ed=-1.77$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_z=-88.32$
 $V, Ed=-88.32$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 5 SLV $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=3611.86$ $T_z=13.25$ $M_y=-11.33$ $T_y=-2.26$ $M_z=1.21$ $M_x=1.01$
 Tensioni: $\sigma_N=390.89$ $\sigma_{m,d}=54.83$ $\tau=2.85$ $\sigma_{max}=445.72$ (sfrut=0.17)
 Tensioni: $\sigma_N=390.89$ $\sigma_{m,d}=4.88$ $\tau=6.07$ $\tau_{max}=6.07$ (sfrut=0.00)
 Tensioni: $\sigma_N=390.89$ $\sigma_{m,d}=54.83$ $\tau=2.85$ $\sigma_{ID,max}=445.75$ (sfrut=0.17)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3668.87$ $M_y, Ed=-26.66$ $M_z, Ed=0.76$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493058.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493058.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.15+0.04+0.00=0.20$
 Verifica ZZ: $0.15+0.03+0.00=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,l}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$ (L/54176)

Asta n. 40155 (-928 -926) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-1.22$
 $V, Ed=-1.22$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=98.03$
 $V, Ed=98.03$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 5 SLV $X_l=0.62$ - Classe 1
 Sollecitazioni: $N=4539.07$ $T_z=28.46$
 Verifica a trazione [4.2.5]
 $N, Ed=4539.07$ $N_{pl}, Rd=24200.00$ $N_u, Rd=28607.00$ $N, Ed/N_t, Rd=0.19$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3826.16$ $M_y, Ed=29.87$ $M_z, Ed=0.46$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493058.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493058.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.16+0.05+0.00=0.21$
 Verifica ZZ: $0.16+0.04+0.00=0.20$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$

Asta n. 40155 (-930 -928) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_y=-1.33$
 $V, Ed=-1.33$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_z=-128.08$

Relazione di calcolo

- V,Ed=-128.08 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.02
- Verifica in termini tensionali [4.2.4] - CC 5 SLV Xl=0.00 - Classe 3
Sollecitazioni: N=4562.87 Tz=-56.30 My=-22.40 Ty=-2.12 Mz=1.24
Tensioni: $\sigma_N=493.82$ $\sigma_{m,d}=103.42$ $\tau=0.00$ $\sigma_{max}=597.24$ (sfrut=0.23)
Tensioni: $\sigma_N=493.82$ $\sigma_{m,d}=5.02$ $\tau=13.70$ $\tau_{max}=13.70$ (sfrut=0.01)
Tensioni: $\sigma_N=493.82$ $\sigma_{m,d}=103.42$ $\tau=0.00$ $\sigma_{ID,max}=597.24$ (sfrut=0.23)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: N,Ed=-3828.17 My,Ed=-46.91 Mz,Ed=0.71 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493058.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493058.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
Verifica YY: 0.16+0.08+0.00=0.24
Verifica ZZ: 0.16+0.06+0.00=0.22
 - Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$ (L/43341)
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/27088)
- Asta n. 40155 (30 -930) - Sez. 6 (RC80x80x3) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 13 SLV Xl=0.50 - Classe 1
Sollecitazioni: Ty=1.80 Mx=-3.90
V,Ed=1.80 Vc,Rd,Red=6935.55 V,Ed/Vc,Rd,Red=0.00
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 13 SLV Xl=0.50 - Classe 1
Sollecitazioni: Tz=2090.45 Mx=-3.90
V,Ed=2090.45 Vc,Rd,Red=6935.55 V,Ed/Vc,Rd,Red=0.30
 - Verifica in termini tensionali [4.2.4] - CC 15 SLV Xl=0.61 - Classe 3
Sollecitazioni: N=4112.05 Tz=2073.98 My=-124.39 Ty=18.52 Mz=4.66
Tensioni: $\sigma_N=445.03$ $\sigma_{m,d}=564.47$ $\tau=0.00$ $\sigma_{max}=1009.50$ (sfrut=0.39)
Tensioni: $\sigma_N=445.03$ $\sigma_{m,d}=18.86$ $\tau=504.52$ $\tau_{max}=504.52$ (sfrut=0.33)
Tensioni: $\sigma_N=445.03$ $\sigma_{m,d}=523.66$ $\tau=349.27$ $\sigma_{ID,max}=1142.08$ (sfrut=0.44)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
Sollecitazioni: N,Ed=-3837.58 My,Ed=-125.63 Mz,Ed=4.84 L=0.61
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.39$ Ncr,y=509347.00 $\lambda^*_y=0.22$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.39$ Ncr,z=509347.00 $\lambda^*_z=0.22$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
Verifica YY: 0.16+0.20+0.01=0.37
Verifica ZZ: 0.16+0.16+0.01=0.33
 - Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.00$ (L/2507)
 - Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.01$ (L/1558)
- Asta n. 40161 (-835 -836) - Sez. 7 (RC60x60x3) - Crit. 1
-
- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU Xl=0.88 - Classe 1
Sollecitazioni: Tz=-29.14
V,Ed=-29.14 Vc,Rd=5171.56 V,Ed/Vc,Rd=0.01
 - Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU Xl=0.88 - Classe 1
Sollecitazioni: N=-269.48 Tz=-29.14 My=12.34
My,Ed=12.34 My,V,c,Rd=383.27
N,Ed=-269.48 Nc,Rd=-17914.30 YY n=N,Ed/Nc,Rd=0.02 MNy,c,Rd=383.27 My,Ed/MNy,c,Rd=0.03
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: N,Ed=-300.31 My,Ed=12.29 Mz,Ed=0.19 L=0.88
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.02+0.04+0.00=0.05
Verifica ZZ: 0.02+0.03+0.00=0.05
 - Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.01$ (L/9886) $f_{z,L}=0.00$ (L/57462)
 - Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/9886) $f_{z,L}=0.00$ (L/51078)

Asta n. 40162 (-968 -967) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.88$ - Classe 1
Sollecitazioni: $T_z=-29.13$
 $V, Ed=-29.13$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.01$
- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU $X_l=0.88$ - Classe 1
Sollecitazioni: $N=-271.01$ $T_z=-29.13$ $M_y=12.34$
 $M_y, Ed=12.34$ $M_y, V, c, Rd=383.27$
 $N, Ed=-271.01$ $N_c, Rd=-17914.30$ YY $n=N, Ed/N_c, Rd=0.02$ $MN_y, c, Rd=383.27$ $M_y, Ed/MN_y, c, Rd=0.03$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-300.45$ $M_y, Ed=12.28$ $M_z, Ed=-0.19$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.02+0.04+0.00=0.05$
Verifica ZZ: $0.02+0.03+0.00=0.05$
- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/57462)
- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/9993) $f_{z,L}=0.00$ (L/45970)

Asta n. 40163 (-902 27) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 13 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-6.57$
 $V, Ed=-6.57$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 13 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=71.43$
 $V, Ed=71.43$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.01$
- Verifica in termini tensionali [4.2.4] - CC 13 SLV $X_l=0.58$ - Classe 3
Sollecitazioni: $N=179.58$ $T_z=70.75$ $M_y=-25.19$ $T_y=-6.57$ $M_z=-3.15$
Tensioni: $\sigma_N=26.25$ $\sigma_{m,d}=228.92$ $\tau=0.00$ $\sigma_{max}=255.17$ (sfrut=0.10)
Tensioni: $\sigma_N=26.25$ $\sigma_{m,d}=-22.89$ $\tau=23.23$ $\tau_{max}=23.23$ (sfrut=0.02)
Tensioni: $\sigma_N=26.25$ $\sigma_{m,d}=228.92$ $\tau=0.00$ $\sigma_{ID,max}=255.17$ (sfrut=0.10)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
Sollecitazioni: $N, Ed=-46.67$ $M_y, Ed=-25.19$ $M_z, Ed=-3.15$ $L=0.64$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=27.28$ $N_{cr,y}=190543.00$ $\lambda^*_y=0.31$ Curva a: $\Phi_y=0.56$ $\chi_y=0.97$
 $\lambda_z=27.28$ $N_{cr,z}=190543.00$ $\lambda^*_z=0.31$ Curva a: $\Phi_z=0.56$ $\chi_z=0.97$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.00+0.07+0.01=0.09$
Verifica ZZ: $0.00+0.06+0.01=0.07$
- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.01$ (L/7334) $f_{z,L}=0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/7246) $f_{z,L}=0.00$

Asta n. 40169 (-832 -835) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=29.19$
 $V, Ed=29.19$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.01$
- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-331.64$ $T_z=29.19$ $M_y=12.34$
 $M_y, Ed=12.34$ $M_y, V, c, Rd=383.27$
 $N, Ed=-331.64$ $N_c, Rd=-17914.30$ YY $n=N, Ed/N_c, Rd=0.02$ $MN_y, c, Rd=383.27$ $M_y, Ed/MN_y, c, Rd=0.03$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-335.97$ $M_y, Ed=12.34$ $M_z, Ed=-0.20$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.02+0.04+0.00=0.06$
Verifica ZZ: $0.02+0.03+0.00=0.05$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/73552)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/61293)

Asta n. 40170 (-971 -968) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=29.18$
 $V,Ed=29.18$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-329.87$ $T_z=29.18$ $M_y=12.34$
 $M_y,Ed=12.34$ $M_y,V,c,Rd=383.27$
 $N,Ed=-329.87$ $N_c,Rd=-17914.30$ YY $n=N,Ed/N_c,Rd=0.02$ $MN_y,c,Rd=383.27$ $M_y,Ed/MN_y,c,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-334.20$ $M_y,Ed=12.34$ $M_z,Ed=0.20$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.02+0.04+0.00=0.06$
 Verifica ZZ: $0.02+0.03+0.00=0.05$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10447) $f_{z,L}=0.00$ (L/76617)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/61293)

Asta n. 40171 (27 60) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 5 SLV $X_l=0.88$ - Classe 1
 Sollecitazioni: $T_z=-69.41$
 $V,Ed=-69.41$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 5 SLV $X_l=0.88$ - Classe 3
 Sollecitazioni: $N=718.06$ $T_z=-69.41$ $M_y=26.18$ $T_y=5.95$ $M_z=1.76$
 Tensioni: $\sigma_N=104.98$ $\sigma_{m,d}=225.68$ $\tau=0.00$ $\sigma_{max}=330.66$ (sfrut=0.13)
 Tensioni: $\sigma_N=104.98$ $\sigma_{m,d}=12.83$ $\tau=22.79$ $\tau_{max}=22.79$ (sfrut=0.02)
 Tensioni: $\sigma_N=104.98$ $\sigma_{m,d}=225.68$ $\tau=0.00$ $\sigma_{ID,max}=330.66$ (sfrut=0.13)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
 Sollecitazioni: $N,Ed=-195.82$ $M_y,Ed=26.18$ $M_z,Ed=-2.40$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.08+0.01=0.09$
 Verifica ZZ: $0.01+0.06+0.01=0.08$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10486) $f_{z,L}=0.00$ (L/31914)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/9410) $f_{z,L}=0.00$ (L/21589)

Asta n. 40177 (-831 -832) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.88$ - Classe 1
 Sollecitazioni: $T_z=-29.19$
 $V,Ed=-29.19$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-580.88$ $T_z=-1.18$
 Verifica a compressione [4.2.9]
 $N,Ed=-580.88$ $N_c,Rd=-17914.30$ $N,Ed/N_c,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-361.95$ $M_y,Ed=12.33$ $M_z,Ed=0.18$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.76, 0.96$
 Verifica YY: $0.02+0.04+0.00=0.06$
 Verifica ZZ: $0.02+0.03+0.00=0.05$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/76617)

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/61293)

Asta n. 40178 (-972 -971) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.88$ - Classe 1
Sollecitazioni: $T_z=-29.18$
 $V,Ed=-29.18$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-584.82$ $T_z=-1.19$
Verifica a compressione [4.2.9]
 $N,Ed=-584.82$ $N_c,Rd=-17914.30$ $N,Ed/N_c,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-362.08$ $M_y,Ed=12.32$ $M_z,Ed=-0.19$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.04+0.00=0.06$
Verifica ZZ: $0.02+0.03+0.00=0.05$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/76617)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/51078)

Asta n. 40179 (60 -905) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
Sollecitazioni: $T_z=-29.17$
 $V,Ed=-29.17$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 5 SLV $X_l=0.22$ - Classe 1
Sollecitazioni: $N=-883.97$ $T_z=8.01$
Verifica a compressione [4.2.9]
 $N,Ed=-883.97$ $N_c,Rd=-17914.30$ $N,Ed/N_c,Rd=0.05$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-633.87$ $M_y,Ed=12.14$ $M_z,Ed=-0.53$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.04+0.04+0.00=0.07$
Verifica ZZ: $0.04+0.03+0.00=0.07$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/55721)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/11638) $f_{z,L}=0.00$ (L/63407)

Asta n. 40185 (-828 -831) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=29.13$
 $V,Ed=29.13$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-270.04$ $T_z=29.13$ $M_y=12.34$
 $M_y,Ed=12.34$ $M_y,V,c,Rd=383.27$
 $N,Ed=-270.04$ $N_c,Rd=-17914.30$ YY $n=N,Ed/N_c,Rd=0.02$ $MN_y,c,Rd=383.27$ $M_y,Ed/MN_y,c,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N,Ed=-274.37$ $M_y,Ed=12.34$ $M_z,Ed=-0.21$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.02+0.04+0.00=0.05$
Verifica ZZ: $0.02+0.03+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/73552)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/65671)

Asta n. 40186 (-975 -972) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=29.12$
 $V, Ed=29.12$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.01$
- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-268.27$ $T_z=29.12$ $M_y=12.34$
 $M_y, Ed=12.34$ $M_y, V, c, Rd=383.27$
 $N, Ed=-268.27$ $N_c, Rd=-17914.30$ YY $n=N, Ed/N_c, Rd=0.01$ $MN_y, c, Rd=383.27$ $M_y, Ed/MN_y, c, Rd=0.03$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-272.59$ $M_y, Ed=12.34$ $M_z, Ed=0.22$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.02+0.04+0.00=0.05$
Verifica ZZ: $0.02+0.03+0.00=0.04$
- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/73552)
- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/9993) $f_{z,L}=0.00$ (L/68104)

Asta n. 40187 (-905 -906) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=24.38$
 $V, Ed=24.38$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$
- Verifica a trazione (4.2.4.1.2.1) - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=926.14$ $T_z=-3.75$
Verifica a trazione [4.2.5]
 $N, Ed=926.14$ $N_{pl}, Rd=17914.30$ $N_u, Rd=21176.60$ $N, Ed/N_t, Rd=0.05$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
Sollecitazioni: $N, Ed=-448.59$ $M_y, Ed=4.12$ $M_z, Ed=0.80$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.03+0.01+0.00=0.04$
Verifica ZZ: $0.03+0.01+0.00=0.04$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/76617)
- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/9013) $f_{z,L}=0.00$ (L/70723)

Asta n. 40193 (-827 -828) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.88$ - Classe 1
Sollecitazioni: $T_z=-29.34$
 $V, Ed=-29.34$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.01$
- Verifica a compressione (4.2.4.1.2.2) - CC 1 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-628.53$
Verifica a compressione [4.2.9]
 $N, Ed=-628.53$ $N_c, Rd=-17914.30$ $N, Ed/N_c, Rd=0.04$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-423.86$ $M_y, Ed=12.48$ $M_z, Ed=0.19$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.04+0.00=0.06$
Verifica ZZ: $0.02+0.03+0.00=0.05$
- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/65671)
- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/10690) $f_{z,L}=0.00$ (L/65671)

Asta n. 40194 (-976 -975) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.88$ - Classe 1
 Sollecitazioni: $T_z=-29.33$
 $V, Ed=-29.33$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 9 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-632.47$
 Verifica a compressione [4.2.9]
 $N, Ed=-632.47$ $N_c, Rd=-17914.30$ $N, Ed/N_c, Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-423.99$ $M_y, Ed=12.48$ $M_z, Ed=-0.20$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.76, 0.96$
 Verifica YY: $0.02+0.04+0.00=0.06$
 Verifica ZZ: $0.02+0.03+0.00=0.05$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/65671)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/10447) $f_{z,L}=0.00$ (L/57462)

Asta n. 40195 (-906 -909) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
 Sollecitazioni: $T_z=-24.73$
 $V, Ed=-24.73$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica a compressione (4.2.4.1.2.2) - CC 5 SLV $X_l=0.66$ - Classe 1
 Sollecitazioni: $N=-814.43$ $T_z=-1.64$
 Verifica a compressione [4.2.9]
 $N, Ed=-814.43$ $N_c, Rd=-17914.30$ $N, Ed/N_c, Rd=0.05$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-551.95$ $M_y, Ed=10.43$ $M_z, Ed=-0.48$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.03+0.03+0.00=0.06$
 Verifica ZZ: $0.03+0.02+0.00=0.06$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/9993) $f_{z,L}=0.00$ (L/68104)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/10567) $f_{z,L}=0.00$ (L/70723)

Asta n. 40201 (-824 -827) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=28.75$
 $V, Ed=28.75$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=590.66$ $T_z=2.59$
 Verifica a trazione [4.2.5]
 $N, Ed=590.66$ $N_{pl}, Rd=17914.30$ $N_u, Rd=21176.60$ $N, Ed/N_t, Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-216.87$ $M_y, Ed=12.27$ $M_z, Ed=-0.49$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.04+0.00=0.05$
 Verifica ZZ: $0.01+0.03+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/70723)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/9886) $f_{z,L}=0.00$ (L/61293)

Asta n. 40202 (-979 -976) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1

Relazione di calcolo

- Sollecitazioni: $T_z=28.74$
 $V, Ed=28.74$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.01$
- Verifica a trazione (4.2.4.1.2.1) - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=594.46$ $T_z=2.58$
Verifica a trazione [4.2.5]
 $N, Ed=594.46$ $N_{pl}, Rd=17914.30$ $N_u, Rd=21176.60$ $N, Ed/N_t, Rd=0.03$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-215.12$ $M_y, Ed=12.26$ $M_z, Ed=0.58$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.04+0.00=0.05$
Verifica ZZ: $0.01+0.03+0.00=0.04$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/70723)
- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/9780) $f_{z,L}=0.00$ (L/65671)
- Asta n. 40203 (-909 -910) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=24.39$
 $V, Ed=24.39$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$
- Verifica a trazione (4.2.4.1.2.1) - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=882.16$ $T_z=3.10$
Verifica a trazione [4.2.5]
 $N, Ed=882.16$ $N_{pl}, Rd=17914.30$ $N_u, Rd=21176.60$ $N, Ed/N_t, Rd=0.05$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
Sollecitazioni: $N, Ed=-498.16$ $M_y, Ed=2.87$ $M_z, Ed=0.76$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.03+0.01+0.00=0.04$
Verifica ZZ: $0.03+0.01+0.00=0.04$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/65671)
- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/9381) $f_{z,L}=0.00$ (L/76617)
- Asta n. 40209 (53 -824) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
Sollecitazioni: $T_y=2.49$
 $V, Ed=2.49$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
Sollecitazioni: $T_z=-38.98$
 $V, Ed=-38.98$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.01$
- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-525.19$ $T_z=-34.65$ $M_y=-16.82$ $T_y=2.49$ $M_z=-1.46$
Tensioni: $\sigma_N=-76.78$ $\sigma_{m,d}=-147.63$ $\tau=0.00$ $\sigma_{max}=-224.42$ (sfrut=0.09)
Tensioni: $\sigma_N=-76.78$ $\sigma_{m,d}=-10.62$ $\tau=11.38$ $\tau_{max}=11.38$ (sfrut=0.01)
Tensioni: $\sigma_N=-76.78$ $\sigma_{m,d}=-147.63$ $\tau=0.00$ $\sigma_{TD,max}=224.42$ (sfrut=0.09)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-525.19$ $M_y, Ed=-16.82$ $M_z, Ed=-1.46$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.03+0.05+0.00=0.08$
Verifica ZZ: $0.03+0.04+0.00=0.07$
- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/51078)
- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/10945) $f_{z,L}=0.00$ (L/38308)

Relazione di calcolo

Asta n. 40210 (64 -979) - Sez. 7 (RC60x60x3) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
Sollecitazioni: $T_y=-2.55$
 $V, Ed=-2.55$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
Sollecitazioni: $T_z=-38.98$
 $V, Ed=-38.98$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-525.48$ $T_z=-34.66$ $M_y=-16.82$ $T_y=-2.55$ $M_z=1.50$
Tensioni: $\sigma_N=-76.82$ $\sigma_{m,d}=-147.95$ $\tau=0.00$ $\sigma_{max}=-224.77$ (sfrut=0.09)
Tensioni: $\sigma_N=-76.82$ $\sigma_{m,d}=10.87$ $\tau=11.38$ $\tau_{max}=11.38$ (sfrut=0.01)
Tensioni: $\sigma_N=-76.82$ $\sigma_{m,d}=-147.95$ $\tau=0.00$ $\sigma_{TD,max}=224.77$ (sfrut=0.09)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-525.48$ $M_y, Ed=-16.82$ $M_z, Ed=1.50$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.03+0.05+0.00=0.08$
Verifica ZZ: $0.03+0.04+0.00=0.07$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/51078)
 - Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/10690) $f_{z,L}=0.00$ (L/32835)

Asta n. 40211 (-910 -913) - Sez. 7 (RC60x60x3) - Crit. 1

-
- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
Sollecitazioni: $T_z=-24.63$
 $V, Ed=-24.63$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$
 - Verifica a compressione (4.2.4.1.2.2) - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-769.38$
Verifica a compressione [4.2.9]
 $N, Ed=-769.38$ $N_c, Rd=-17914.30$ $N, Ed/N_c, Rd=0.04$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-490.18$ $M_y, Ed=10.04$ $M_z, Ed=-0.50$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.03+0.03+0.00=0.06$
Verifica ZZ: $0.03+0.02+0.00=0.05$
 - Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/9780) $f_{z,L}=0.00$ (L/68104)
 - Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/10567) $f_{z,L}=0.00$ (L/61293)

Asta n. 40218 (29 -933) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV $X_l=0.47$ - Classe 1
Sollecitazioni: $T_y=9.55$ $M_x=2.39$
 $V, Ed=9.55$ $V_c, Rd, Red=6955.13$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l=0.47$ - Classe 1
Sollecitazioni: $T_z=-150.21$ $M_x=2.39$
 $V, Ed=-150.21$ $V_c, Rd, Red=6955.13$ $V, Ed/V_c, Rd, Red=0.02$
 - Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-4772.12$ $T_z=-59.62$ $M_y=-30.70$ $T_y=5.10$ $M_z=-1.72$
Tensioni: $\sigma_N=-516.46$ $\sigma_{m,d}=-141.82$ $\tau=0.00$ $\sigma_{max}=-658.29$ (sfrut=0.25)
Tensioni: $\sigma_N=-516.46$ $\sigma_{m,d}=-6.97$ $\tau=14.50$ $\tau_{max}=14.50$ (sfrut=0.01)
Tensioni: $\sigma_N=-516.46$ $\sigma_{m,d}=-141.82$ $\tau=0.00$ $\sigma_{TD,max}=658.29$ (sfrut=0.25)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-4754.91$ $M_y, Ed=-32.22$ $M_z, Ed=-0.83$ $L=0.47$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=14.94$ $N_{cr,y}=857989.00$ $\lambda^*_y=0.17$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=14.94$ $N_{cr,z}=857989.00$ $\lambda^*_z=0.17$ Curva a: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$

Relazione di calcolo

Verifica YY: $0.20+0.05+0.00=0.25$
Verifica ZZ: $0.20+0.04+0.00=0.24$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/23468)

Asta n. 40218 (-933 -935) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV $X_1=0.00$ - Classe 1
Sollecitazioni: $T_y=2.47$ $M_x=1.89$
 $V,Ed=2.47$ $V_c,Rd,Red=6961.57$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=45.42$ $M_x=1.89$
 $V,Ed=45.42$ $V_c,Rd,Red=6961.57$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_1=0.62$ - Classe 3
Sollecitazioni: $N=-4742.33$ $T_z=-47.25$ $M_y=12.70$ $T_y=4.37$ $M_z=2.13$ $M_x=1.55$
Tensioni: $\sigma_N=-513.24$ $\sigma_{m,d}=-64.88$ $\tau=4.36$ $\sigma_{max}=-578.12$ (sfrut=0.22)
Tensioni: $\sigma_N=-513.24$ $\sigma_{m,d}=-8.61$ $\tau=15.86$ $\tau_{max}=15.86$ (sfrut=0.01)
Tensioni: $\sigma_N=-513.24$ $\sigma_{m,d}=-64.88$ $\tau=4.36$ $\sigma_{ID,max}=578.17$ (sfrut=0.22)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-4742.33$ $M_y,Ed=-14.78$ $M_z,Ed=2.13$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.20+0.02+0.00=0.22$
Verifica ZZ: $0.20+0.02+0.00=0.22$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40218 (-935 -937) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_y=3.72$ $M_x=1.87$
 $V,Ed=3.72$ $V_c,Rd,Red=6961.81$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=63.41$ $M_x=1.87$
 $V,Ed=63.41$ $V_c,Rd,Red=6961.81$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_1=0.62$ - Classe 3
Sollecitazioni: $N=-4640.75$ $T_z=57.56$ $M_y=-23.96$ $T_y=3.72$ $M_z=1.36$ $M_x=1.87$
Tensioni: $\sigma_N=-502.25$ $\sigma_{m,d}=-110.75$ $\tau=5.27$ $\sigma_{max}=-613.00$ (sfrut=0.23)
Tensioni: $\sigma_N=-502.25$ $\sigma_{m,d}=5.48$ $\tau=19.27$ $\tau_{max}=19.27$ (sfrut=0.01)
Tensioni: $\sigma_N=-502.25$ $\sigma_{m,d}=-110.75$ $\tau=5.27$ $\sigma_{ID,max}=613.07$ (sfrut=0.23)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-4640.75$ $M_y,Ed=-23.96$ $M_z,Ed=1.36$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.19+0.04+0.00=0.23$
Verifica ZZ: $0.19+0.03+0.00=0.23$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/50009)

Asta n. 40218 (-937 -939) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_1=0.31$ - Classe 1
Sollecitazioni: $T_y=3.72$ $M_x=1.92$
 $V,Ed=3.72$ $V_c,Rd,Red=6961.17$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_1=0.31$ - Classe 1
Sollecitazioni: $T_z=-67.80$ $M_x=1.92$
 $V,Ed=-67.80$ $V_c,Rd,Red=6961.17$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.62$ - Classe 3
 Sollecitazioni: $N=-4635.84$ $T_z=-70.72$ $M_y=16.47$ $T_y=3.72$ $M_z=2.00$ $M_x=1.92$
 Tensioni: $\sigma_N=-501.71$ $\sigma_{m,d}=-80.81$ $\tau=5.41$ $\sigma_{max}=-582.52$ (sfrut=0.22)
 Tensioni: $\sigma_N=-501.71$ $\sigma_{m,d}=-8.11$ $\tau=22.61$ $\tau_{max}=22.61$ (sfrut=0.01)
 Tensioni: $\sigma_N=-501.71$ $\sigma_{m,d}=-80.81$ $\tau=5.41$ $\sigma_{ID,max}=582.60$ (sfrut=0.22)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4635.84$ $M_y,Ed=-25.57$ $M_z,Ed=2.00$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.19+0.04+0.00=0.24$
 Verifica ZZ: $0.19+0.03+0.00=0.23$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/46436)
- Asta n. 40218 (-939 -941) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l=0.10$ - Classe 1
 Sollecitazioni: $T_y=3.68$ $M_x=1.92$
 $V,Ed=3.68$ $V_c,Rd,Red=6961.17$ $V,Ed/V_c,Rd,Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l=0.10$ - Classe 1
 Sollecitazioni: $T_z=62.56$ $M_x=1.92$
 $V,Ed=62.56$ $V_c,Rd,Red=6961.17$ $V,Ed/V_c,Rd,Red=0.01$
- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.62$ - Classe 3
 Sollecitazioni: $N=-4457.54$ $T_z=57.69$ $M_y=-23.15$ $T_y=3.68$ $M_z=1.08$ $M_x=1.92$
 Tensioni: $\sigma_N=-482.42$ $\sigma_{m,d}=-106.00$ $\tau=5.40$ $\sigma_{max}=-588.42$ (sfrut=0.22)
 Tensioni: $\sigma_N=-482.42$ $\sigma_{m,d}=4.38$ $\tau=19.44$ $\tau_{max}=19.44$ (sfrut=0.01)
 Tensioni: $\sigma_N=-482.42$ $\sigma_{m,d}=-106.00$ $\tau=5.40$ $\sigma_{ID,max}=588.50$ (sfrut=0.22)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4457.54$ $M_y,Ed=-23.15$ $M_z,Ed=-1.20$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.18+0.04+0.00=0.22$
 Verifica ZZ: $0.18+0.03+0.00=0.22$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/54176)
- Asta n. 40218 (-941 -943) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l=0.41$ - Classe 1
 Sollecitazioni: $T_y=3.71$ $M_x=1.93$
 $V,Ed=3.71$ $V_c,Rd,Red=6961.10$ $V,Ed/V_c,Rd,Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l=0.41$ - Classe 1
 Sollecitazioni: $T_z=-70.92$ $M_x=1.93$
 $V,Ed=-70.92$ $V_c,Rd,Red=6961.10$ $V,Ed/V_c,Rd,Red=0.01$
- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.62$ - Classe 3
 Sollecitazioni: $N=-4449.75$ $T_z=-72.87$ $M_y=17.76$ $T_y=3.71$ $M_z=1.72$ $M_x=1.93$
 Tensioni: $\sigma_N=-481.57$ $\sigma_{m,d}=-85.24$ $\tau=5.42$ $\sigma_{max}=-566.82$ (sfrut=0.22)
 Tensioni: $\sigma_N=-481.57$ $\sigma_{m,d}=-6.97$ $\tau=23.15$ $\tau_{max}=23.15$ (sfrut=0.02)
 Tensioni: $\sigma_N=-481.57$ $\sigma_{m,d}=-85.24$ $\tau=5.42$ $\sigma_{ID,max}=566.89$ (sfrut=0.22)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4449.75$ $M_y,Ed=-25.60$ $M_z,Ed=1.72$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.18+0.04+0.00=0.23$
 Verifica ZZ: $0.18+0.03+0.00=0.22$
- Verifica freccia massima per soli carichi accidentali - CC 20

Relazione di calcolo

$f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.00$ (L/46436)

Asta n. 40218 (-943 -945) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_1=0.21$ - Classe 1
 Sollecitazioni: $T_y=3.70$ $M_x=1.93$
 $V,Ed=3.70$ $Vc,Rd,Red=6961.13$ $V,Ed/Vc,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_1=0.21$ - Classe 1
 Sollecitazioni: $T_z=59.72$ $M_x=1.93$
 $V,Ed=59.72$ $Vc,Rd,Red=6961.13$ $V,Ed/Vc,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-4181.19$ $T_z=61.67$ $M_y=14.65$ $T_y=3.70$ $M_z=-1.49$ $M_x=1.93$
 Tensioni: $\sigma_N=-452.51$ $\sigma_{m,d}=-70.58$ $\tau=5.41$ $\sigma_{max}=-523.09$ (sfrut=0.20)
 Tensioni: $\sigma_N=-452.51$ $\sigma_{m,d}=-6.01$ $\tau=20.42$ $\tau_{max}=20.42$ (sfrut=0.01)
 Tensioni: $\sigma_N=-452.51$ $\sigma_{m,d}=-70.58$ $\tau=5.41$ $\sigma_{ID,max}=523.18$ (sfrut=0.20)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4181.19$ $M_y,Ed=-21.77$ $M_z,Ed=-1.49$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr,y=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr,z=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.17+0.04+0.00=0.21$
 Verifica ZZ: $0.17+0.03+0.00=0.20$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.00$

Asta n. 40218 (-945 -947) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_1=0.41$ - Classe 1
 Sollecitazioni: $T_y=3.69$ $M_x=1.93$
 $V,Ed=3.69$ $Vc,Rd,Red=6961.13$ $V,Ed/Vc,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_1=0.41$ - Classe 1
 Sollecitazioni: $T_z=-72.81$ $M_x=1.93$
 $V,Ed=-72.81$ $Vc,Rd,Red=6961.13$ $V,Ed/Vc,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_1=0.62$ - Classe 3
 Sollecitazioni: $N=-4170.26$ $T_z=-74.75$ $M_y=19.33$ $T_y=3.69$ $M_z=1.44$ $M_x=1.93$
 Tensioni: $\sigma_N=-451.33$ $\sigma_{m,d}=-90.82$ $\tau=5.41$ $\sigma_{max}=-542.15$ (sfrut=0.21)
 Tensioni: $\sigma_N=-451.33$ $\sigma_{m,d}=-5.82$ $\tau=23.60$ $\tau_{max}=23.60$ (sfrut=0.02)
 Tensioni: $\sigma_N=-451.33$ $\sigma_{m,d}=-90.82$ $\tau=5.41$ $\sigma_{ID,max}=542.23$ (sfrut=0.21)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4170.26$ $M_y,Ed=-25.21$ $M_z,Ed=1.44$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr,y=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr,z=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.17+0.04+0.00=0.22$
 Verifica ZZ: $0.17+0.03+0.00=0.21$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/54176)

Asta n. 40218 (-947 -949) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_1=0.31$ - Classe 1
 Sollecitazioni: $T_y=3.71$ $M_x=1.93$
 $V,Ed=3.71$ $Vc,Rd,Red=6961.07$ $V,Ed/Vc,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_1=0.31$ - Classe 1
 Sollecitazioni: $T_z=56.86$ $M_x=1.93$
 $V,Ed=56.86$ $Vc,Rd,Red=6961.07$ $V,Ed/Vc,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-3811.30$ $T_z=59.78$ $M_y=15.16$ $T_y=3.71$ $M_z=-1.77$ $M_x=1.93$
 Tensioni: $\sigma_N=-412.48$ $\sigma_{m,d}=-74.07$ $\tau=5.43$ $\sigma_{max}=-486.55$ (sfrut=0.19)

Tensioni: $\sigma_N = -412.48$ $\sigma_{m,d} = -7.16$ $\tau = 19.97$ $\tau_{max} = 19.97$ (sfrut=0.01)
Tensioni: $\sigma_N = -412.48$ $\sigma_{m,d} = -74.07$ $\tau = 5.43$ $\sigma_{ID,max} = 486.64$ (sfrut=0.19)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed = -3811.30$ $My, Ed = -20.09$ $Mz, Ed = -1.77$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ Ncr, $y = 493056.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ Ncr, $z = 493056.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
Kyy, Kyz, Kzy, Kzz = 0.97, 0.97, 0.78, 0.97
Verifica YY: $0.16 + 0.03 + 0.00 = 0.19$
Verifica ZZ: $0.16 + 0.03 + 0.00 = 0.19$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L} = 0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L} = 0.00$

Asta n. 40218 (-949 -951) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X1 = 0.52$ - Classe 1
Sollecitazioni: $T_y = 3.68$ $M_x = 1.93$
 $V, Ed = 3.68$ $V_c, Rd, Red = 6961.08$ $V, Ed/V_c, Rd, Red = 0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X1 = 0.52$ - Classe 1
Sollecitazioni: $T_z = -75.64$ $M_x = 1.93$
 $V, Ed = -75.64$ $V_c, Rd, Red = 6961.08$ $V, Ed/V_c, Rd, Red = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X1 = 0.00$ - Classe 3
Sollecitazioni: $N = -3797.23$ $T_z = -70.76$ $M_y = -24.51$ $T_y = 3.68$ $M_z = -1.13$ $M_x = 1.93$
Tensioni: $\sigma_N = -410.95$ $\sigma_{m,d} = -112.17$ $\tau = 5.42$ $\sigma_{max} = -523.13$ (sfrut=0.20)
Tensioni: $\sigma_N = -410.95$ $\sigma_{m,d} = 4.57$ $\tau = 22.64$ $\tau_{max} = 22.64$ (sfrut=0.01)
Tensioni: $\sigma_N = -410.95$ $\sigma_{m,d} = -112.17$ $\tau = 5.42$ $\sigma_{ID,max} = 523.21$ (sfrut=0.20)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed = -3797.23$ $My, Ed = -24.51$ $Mz, Ed = 1.16$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ Ncr, $y = 493056.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ Ncr, $z = 493056.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
Kyy, Kyz, Kzy, Kzz = 0.97, 0.97, 0.78, 0.97
Verifica YY: $0.16 + 0.04 + 0.00 = 0.20$
Verifica ZZ: $0.16 + 0.03 + 0.00 = 0.19$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L} = 0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L} = 0.00$

Asta n. 40218 (-951 -953) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X1 = 0.31$ - Classe 1
Sollecitazioni: $T_y = 3.79$ $M_x = 1.97$
 $V, Ed = 3.79$ $V_c, Rd, Red = 6960.55$ $V, Ed/V_c, Rd, Red = 0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X1 = 0.31$ - Classe 1
Sollecitazioni: $T_z = 54.62$ $M_x = 1.97$
 $V, Ed = 54.62$ $V_c, Rd, Red = 6960.55$ $V, Ed/V_c, Rd, Red = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X1 = 0.00$ - Classe 3
Sollecitazioni: $N = -3347.68$ $T_z = 57.54$ $M_y = 15.92$ $T_y = 3.79$ $M_z = -2.08$ $M_x = 1.97$
Tensioni: $\sigma_N = -362.30$ $\sigma_{m,d} = -78.72$ $\tau = 5.54$ $\sigma_{max} = -441.02$ (sfrut=0.17)
Tensioni: $\sigma_N = -362.30$ $\sigma_{m,d} = -8.40$ $\tau = 19.54$ $\tau_{max} = 19.54$ (sfrut=0.01)
Tensioni: $\sigma_N = -362.30$ $\sigma_{m,d} = -78.72$ $\tau = 5.54$ $\sigma_{ID,max} = 441.12$ (sfrut=0.17)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed = -3347.68$ $My, Ed = -17.94$ $Mz, Ed = -2.08$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ Ncr, $y = 493056.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ Ncr, $z = 493056.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
Kyy, Kyz, Kzy, Kzz = 0.97, 0.97, 0.77, 0.97
Verifica YY: $0.14 + 0.03 + 0.00 = 0.17$
Verifica ZZ: $0.14 + 0.02 + 0.00 = 0.16$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L} = 0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G} = 0.00$

Asta n. 40218 (-953 -955) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_y=3.79$ $M_x=2.10$
 $V, Ed=3.79$ $V_c, Rd, Red=6958.86$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-76.92$ $M_x=2.10$
 $V, Ed=-76.92$ $V_c, Rd, Red=6958.86$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-3330.30$ $T_z=-71.07$ $M_y=-23.29$ $T_y=3.79$ $M_z=-1.39$ $M_x=2.10$
Tensioni: $\sigma_N=-360.42$ $\sigma_{m,d}=-107.97$ $\tau=5.90$ $\sigma_{max}=-468.39$ (sfrut=0.18)
Tensioni: $\sigma_N=-360.42$ $\sigma_{m,d}=5.63$ $\tau=23.19$ $\tau_{max}=23.19$ (sfrut=0.02)
Tensioni: $\sigma_N=-360.42$ $\sigma_{m,d}=-107.97$ $\tau=5.90$ $\sigma_{ID,max}=468.50$ (sfrut=0.18)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-3330.30$ $M_y, Ed=-23.29$ $M_z, Ed=-1.39$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
Verifica YY: $0.14+0.04+0.00=0.18$
Verifica ZZ: $0.14+0.03+0.00=0.17$
 - Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40218 (61 -955) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=5.11$ $M_x=2.88$
 $V, Ed=5.11$ $V_c, Rd, Red=6948.68$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=98.11$ $M_x=2.88$
 $V, Ed=98.11$ $V_c, Rd, Red=6948.68$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.00$ - Classe 3
Sollecitazioni: $N=3702.51$ $T_z=98.11$ $M_y=44.25$ $T_y=5.68$ $M_z=-1.08$ $M_x=2.88$
Tensioni: $\sigma_N=400.70$ $\sigma_{m,d}=198.26$ $\tau=8.11$ $\sigma_{max}=598.96$ (sfrut=0.23)
Tensioni: $\sigma_N=400.70$ $\sigma_{m,d}=-4.36$ $\tau=31.98$ $\tau_{max}=31.98$ (sfrut=0.02)
Tensioni: $\sigma_N=400.70$ $\sigma_{m,d}=198.26$ $\tau=8.11$ $\sigma_{ID,max}=599.13$ (sfrut=0.23)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-2763.18$ $M_y, Ed=13.31$ $M_z, Ed=3.00$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.11+0.02+0.00=0.14$
Verifica ZZ: $0.11+0.02+0.00=0.14$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40218 (-790 61) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV $X_l=0.62$ - Classe 1
Sollecitazioni: $T_y=7.43$ $M_x=8.17$
 $V, Ed=7.43$ $V_c, Rd, Red=6880.00$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-326.13$ $M_x=8.17$
 $V, Ed=-326.13$ $V_c, Rd, Red=6880.00$ $V, Ed/V_c, Rd, Red=0.05$
 - Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.30$ - Classe 3
Sollecitazioni: $N=3761.59$ $T_z=-323.81$ $M_y=-62.47$ $T_y=6.83$ $M_z=-1.76$ $M_x=8.17$
Tensioni: $\sigma_N=407.10$ $\sigma_{m,d}=280.94$ $\tau=22.97$ $\sigma_{max}=688.04$ (sfrut=0.26)
Tensioni: $\sigma_N=407.10$ $\sigma_{m,d}=7.12$ $\tau=101.74$ $\tau_{max}=101.74$ (sfrut=0.07)
Tensioni: $\sigma_N=407.10$ $\sigma_{m,d}=280.94$ $\tau=22.97$ $\sigma_{ID,max}=689.19$ (sfrut=0.26)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed = -1459.55 \text{ My}, Ed = -53.21 \text{ Mz}, Ed = -2.22 \text{ L} = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71 \text{ Ncr}, y = 493056.00 \lambda^*_y = 0.23 \text{ Curva a: } \Phi_y = 0.53 \chi_y = 0.99$
 $\lambda_z = 19.71 \text{ Ncr}, z = 493056.00 \lambda^*_z = 0.23 \text{ Curva a: } \Phi_z = 0.53 \chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.06 + 0.09 + 0.00 = 0.15$
 Verifica ZZ: $0.06 + 0.07 + 0.00 = 0.13$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g} = 0.00 \text{ (L/27962)}$

- Verifica freccia massima carichi totali - CC 21
 $f_{z,l} = 0.00$

Asta n. 40218 (-957 -790) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X1 = 0.00$ - Classe 1
 Sollecitazioni: $T_z = 356.44 \text{ Mx} = -10.17$
 $V, Ed = 356.44 \text{ Vc}, Rd, Red = 6854.10 \text{ V}, Ed/Vc, Rd, Red = 0.05$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X1 = 0.19$ - Classe 3
 Sollecitazioni: $N = -2320.73 \text{ T}_z = 303.78 \text{ M}_y = 50.94 \text{ T}_y = -1.65 \text{ M}_z = -1.05 \text{ M}_x = -11.25$
 Tensioni: $\sigma_N = -251.16 \sigma_{m,d} = -227.44 \tau = 31.63 \sigma_{max} = -478.61 \text{ (sfrut} = 0.18)$
 Tensioni: $\sigma_N = -251.16 \sigma_{m,d} = 4.27 \tau = 105.52 \tau_{max} = 105.52 \text{ (sfrut} = 0.07)$
 Tensioni: $\sigma_N = -251.16 \sigma_{m,d} = -227.44 \tau = 31.63 \sigma_{TD,max} = 481.73 \text{ (sfrut} = 0.18)$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed = -4236.10 \text{ My}, Ed = -24.11 \text{ Mz}, Ed = -0.74 \text{ L} = 0.19$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 6.04 \text{ Ncr}, y = 5250710.00 \lambda^*_y = 0.07 \text{ Curva a: } \Phi_y = 0.00 \chi_y = 1.00$
 $\lambda_z = 6.04 \text{ Ncr}, z = 5250710.00 \lambda^*_z = 0.07 \text{ Curva a: } \Phi_z = 0.00 \chi_z = 1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.18 + 0.04 + 0.00 = 0.21$
 Verifica ZZ: $0.18 + 0.03 + 0.00 = 0.21$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g} = 0.00$

- Verifica freccia massima carichi totali - CC 32
 $f_{z,l} = 0.00$

Asta n. 40218 (-959 -957) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X1 = 0.00$ - Classe 1
 Sollecitazioni: $T_y = -1.93 \text{ Mx} = -1.66$
 $V, Ed = -1.93 \text{ Vc}, Rd, Red = 6964.52 \text{ V}, Ed/Vc, Rd, Red = 0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X1 = 0.00$ - Classe 1
 Sollecitazioni: $T_z = 57.39 \text{ Mx} = -1.66$
 $V, Ed = 57.39 \text{ Vc}, Rd, Red = 6964.52 \text{ V}, Ed/Vc, Rd, Red = 0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 1 SLV $X1 = 0.62$ - Classe 1
 Sollecitazioni: $N = 2545.40 \text{ T}_z = -5.97 \text{ Mx} = -1.94$
 Verifica a trazione [4.2.5]
 $N, Ed = 2545.40 \text{ Npl}, Rd = 24200.00 \text{ Nu}, Rd = 28607.00 \text{ N}, Ed/Nt, Rd = 0.11$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed = -4243.20 \text{ My}, Ed = 25.88 \text{ Mz}, Ed = 0.67 \text{ L} = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71 \text{ Ncr}, y = 493055.00 \lambda^*_y = 0.23 \text{ Curva a: } \Phi_y = 0.53 \chi_y = 0.99$
 $\lambda_z = 19.71 \text{ Ncr}, z = 493055.00 \lambda^*_z = 0.23 \text{ Curva a: } \Phi_z = 0.53 \chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.18 + 0.04 + 0.00 = 0.22$
 Verifica ZZ: $0.18 + 0.03 + 0.00 = 0.21$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,l} = 0.00 \text{ (L/54176)}$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,l} = 0.00 \text{ (L/32505)}$

Asta n. 40218 (-961 -959) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X1 = 0.62$ - Classe 1
 Sollecitazioni: $T_z = -107.65$
 $V, Ed = -107.65 \text{ Vc}, Rd = 6986.14 \text{ V}, Ed/Vc, Rd = 0.02$

- Verifica a compressione (4.2.4.1.2.2) - CC 17 SLU $X1 = 0.31$ - Classe 1
 Sollecitazioni: $N = -4484.70 \text{ T}_z = -103.59$

Verifica a compressione [4.2.9]
 $N, Ed = -4484.70$ $Nc, Rd = -24200.00$ $N, Ed/Nc, Rd = 0.19$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed = -4484.70$ $My, Ed = 33.24$ $Mz, Ed = -0.20$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $Ncr, y = 493055.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $Ncr, z = 493055.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.19 + 0.05 + 0.00 = 0.24$
 Verifica ZZ: $0.19 + 0.04 + 0.00 = 0.23$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z, L} = 0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z, L} = 0.00$ $f_{z, G} = 0.00$

Asta n. 40218 (-963 -961) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_L = 0.00$ - Classe 1
 Sollecitazioni: $T_z = 101.69$
 $V, Ed = 101.69$ $Vc, Rd = 6986.14$ $V, Ed/Vc, Rd = 0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 19 SLU $X_L = 0.31$ - Classe 1
 Sollecitazioni: $N = -2750.82$ $T_z = 62.31$
 Verifica a compressione [4.2.9]
 $N, Ed = -2750.82$ $Nc, Rd = -24200.00$ $N, Ed/Nc, Rd = 0.11$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed = -4491.04$ $My, Ed = 32.07$ $Mz, Ed = -0.26$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $Ncr, y = 493055.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $Ncr, z = 493055.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.19 + 0.05 + 0.00 = 0.24$
 Verifica ZZ: $0.19 + 0.04 + 0.00 = 0.23$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z, L} = 0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z, L} = 0.00$ (L/54176)

Asta n. 40218 (-965 -963) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_L = 0.62$ - Classe 1
 Sollecitazioni: $T_z = -109.24$
 $V, Ed = -109.24$ $Vc, Rd = 6986.14$ $V, Ed/Vc, Rd = 0.02$

- Verifica a compressione (4.2.4.1.2.2) - CC 17 SLU $X_L = 0.31$ - Classe 1
 Sollecitazioni: $N = -4631.46$ $T_z = -105.17$
 Verifica a compressione [4.2.9]
 $N, Ed = -4631.46$ $Nc, Rd = -24200.00$ $N, Ed/Nc, Rd = 0.19$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed = -4631.46$ $My, Ed = 33.76$ $Mz, Ed = 0.23$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $Ncr, y = 493055.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $Ncr, z = 493055.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.19 + 0.05 + 0.00 = 0.25$
 Verifica ZZ: $0.19 + 0.04 + 0.00 = 0.24$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z, L} = 0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z, L} = 0.00$

Asta n. 40218 (-967 -965) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_L = 0.00$ - Classe 1
 Sollecitazioni: $T_z = 104.17$
 $V, Ed = 104.17$ $Vc, Rd = 6986.14$ $V, Ed/Vc, Rd = 0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 17 SLU $X_L = 0.31$ - Classe 1
 Sollecitazioni: $N = -4634.77$ $T_z = 101.25$
 Verifica a compressione [4.2.9]
 $N, Ed = -4634.77$ $Nc, Rd = -24200.00$ $N, Ed/Nc, Rd = 0.19$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed = -4634.77$ My, $Ed = 32.37$ Mz, $Ed = -0.26$ L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ Ncr, $y = 493055.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ Ncr, $z = 493055.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
Kyy, Kyz, Kzy, Kzz = 0.97, 0.97, 0.78, 0.97
Verifica YY: $0.19 + 0.05 + 0.00 = 0.24$
Verifica ZZ: $0.19 + 0.04 + 0.00 = 0.23$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L} = 0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,L} = 0.00$
- Asta n. 40218 (-969 -967) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l = 0.62$ - Classe 1
Sollecitazioni: $T_z = -107.41$
 $V, Ed = -107.41$ $V_c, Rd = 6986.14$ $V, Ed/V_c, Rd = 0.02$
- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_l = 0.31$ - Classe 1
Sollecitazioni: $N = -4685.82$ $T_z = -104.48$
Verifica a compressione [4.2.9]
 $N, Ed = -4685.82$ $N_c, Rd = -24200.00$ $N, Ed/N_c, Rd = 0.19$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed = -4685.82$ My, $Ed = 33.39$ Mz, $Ed = 0.27$ L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ Ncr, $y = 493055.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ Ncr, $z = 493055.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
Kyy, Kyz, Kzy, Kzz = 0.98, 0.98, 0.78, 0.98
Verifica YY: $0.19 + 0.05 + 0.00 = 0.25$
Verifica ZZ: $0.19 + 0.04 + 0.00 = 0.24$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L} = 0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,L} = 0.00$
- Asta n. 40218 (-971 -969) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l = 0.00$ - Classe 1
Sollecitazioni: $T_z = 106.06$
 $V, Ed = 106.06$ $V_c, Rd = 6986.14$ $V, Ed/V_c, Rd = 0.02$
- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_l = 0.31$ - Classe 1
Sollecitazioni: $N = -4687.33$ $T_z = 102.69$
Verifica a compressione [4.2.9]
 $N, Ed = -4687.33$ $N_c, Rd = -24200.00$ $N, Ed/N_c, Rd = 0.19$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed = -4684.89$ My, $Ed = 32.88$ Mz, $Ed = -0.22$ L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ Ncr, $y = 493055.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ Ncr, $z = 493055.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
Kyy, Kyz, Kzy, Kzz = 0.98, 0.98, 0.78, 0.98
Verifica YY: $0.19 + 0.05 + 0.00 = 0.25$
Verifica ZZ: $0.19 + 0.04 + 0.00 = 0.24$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L} = 0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,L} = 0.00$ (L/59101)
- Asta n. 40218 (-973 -971) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l = 0.62$ - Classe 1
Sollecitazioni: $T_z = -105.52$
 $V, Ed = -105.52$ $V_c, Rd = 6986.14$ $V, Ed/V_c, Rd = 0.02$
- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_l = 0.31$ - Classe 1
Sollecitazioni: $N = -4685.29$ $T_z = -102.60$
Verifica a compressione [4.2.9]
 $N, Ed = -4685.29$ $N_c, Rd = -24200.00$ $N, Ed/N_c, Rd = 0.19$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3

Relazione di calcolo

Sollecitazioni: N,Ed=-4685.29 My,Ed=32.72 Mz,Ed=0.30 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.98, 0.98, 0.78, 0.98
Verifica YY: 0.19+0.05+0.00=0.25
Verifica ZZ: 0.19+0.04+0.00=0.24

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40218 (-975 -973) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU Xl=0.00 - Classe 1
Sollecitazioni: Tz=107.93
V,Ed=107.93 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.02

- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU Xl=0.31 - Classe 1
Sollecitazioni: N=-4683.65 Tz=104.55
Verifica a compressione [4.2.9]
N,Ed=-4683.65 Nc,Rd=-24200.00 N,Ed/Nc,Rd=0.19

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: N,Ed=-4683.65 My,Ed=33.42 Mz,Ed=-0.19 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.98, 0.98, 0.78, 0.98
Verifica YY: 0.19+0.05+0.00=0.25
Verifica ZZ: 0.19+0.04+0.00=0.24

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/59101)

Asta n. 40218 (-977 -975) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU Xl=0.62 - Classe 1
Sollecitazioni: Tz=-103.40
V,Ed=-103.40 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.01

- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU Xl=0.31 - Classe 1
Sollecitazioni: N=-4591.02 Tz=-100.47
Verifica a compressione [4.2.9]
N,Ed=-4591.02 Nc,Rd=-24200.00 N,Ed/Nc,Rd=0.19

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: N,Ed=-4591.02 My,Ed=32.32 Mz,Ed=0.35 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
Verifica YY: 0.19+0.05+0.00=0.24
Verifica ZZ: 0.19+0.04+0.00=0.23

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40218 (-979 -977) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU Xl=0.00 - Classe 1
Sollecitazioni: Tz=108.84
V,Ed=108.84 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.02

- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU Xl=0.31 - Classe 1
Sollecitazioni: N=-4586.04 Tz=105.57
Verifica a compressione [4.2.9]
N,Ed=-4586.04 Nc,Rd=-24200.00 N,Ed/Nc,Rd=0.19

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: N,Ed=-4586.04 My,Ed=33.99 Mz,Ed=-0.22 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$

$\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
 Verifica YY: 0.19+0.06+0.00=0.25
 Verifica ZZ: 0.19+0.04+0.00=0.23

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.00$ (L/59101)

Asta n. 40218 (63 -979) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU Xl=0.52 - Classe 1
 Sollecitazioni: $T_y=2.73$ $M_x=1.90$
 $V,Ed=2.73$ $V_c,Rd,Red=6961.43$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU Xl=0.52 - Classe 1
 Sollecitazioni: $T_z=-89.58$ $M_x=1.90$
 $V,Ed=-89.58$ $V_c,Rd,Red=6961.43$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU Xl=0.62 - Classe 3
 Sollecitazioni: $N=-4375.73$ $T_z=-90.56$ $M_y=29.75$ $T_y=2.73$ $M_z=1.24$ $M_x=1.90$
 Tensioni: $\sigma_N=-473.56$ $\sigma_{m,d}=-135.57$ $\tau=5.35$ $\sigma_{max}=-609.13$ (sfrut=0.23)
 Tensioni: $\sigma_N=-473.56$ $\sigma_{m,d}=-5.04$ $\tau=27.38$ $\tau_{max}=27.38$ (sfrut=0.02)
 Tensioni: $\sigma_N=-473.56$ $\sigma_{m,d}=-135.57$ $\tau=5.35$ $\sigma_{ID,max}=609.20$ (sfrut=0.23)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4375.73$ $M_y,Ed=29.75$ $M_z,Ed=1.24$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
 Verifica YY: 0.18+0.05+0.00=0.23
 Verifica ZZ: 0.18+0.04+0.00=0.22

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40218 (-791 63) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV Xl=0.30 - Classe 1
 Sollecitazioni: $T_y=2.28$ $M_x=7.22$
 $V,Ed=2.28$ $V_c,Rd,Red=6892.38$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV Xl=0.30 - Classe 1
 Sollecitazioni: $T_z=291.31$ $M_x=7.22$
 $V,Ed=291.31$ $V_c,Rd,Red=6892.38$ $V,Ed/V_c,Rd,Red=0.04$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU Xl=0.30 - Classe 3
 Sollecitazioni: $N=-4331.16$ $T_z=193.87$ $M_y=29.09$ $T_y=4.14$ $M_z=-1.17$ $M_x=7.61$
 Tensioni: $\sigma_N=-468.74$ $\sigma_{m,d}=-132.37$ $\tau=21.38$ $\sigma_{max}=-601.11$ (sfrut=0.23)
 Tensioni: $\sigma_N=-468.74$ $\sigma_{m,d}=-4.74$ $\tau=68.55$ $\tau_{max}=68.55$ (sfrut=0.05)
 Tensioni: $\sigma_N=-468.74$ $\sigma_{m,d}=-132.37$ $\tau=21.38$ $\sigma_{ID,max}=602.25$ (sfrut=0.23)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4331.16$ $M_y,Ed=-32.47$ $M_z,Ed=-1.17$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
 Verifica YY: 0.18+0.05+0.00=0.23
 Verifica ZZ: 0.18+0.04+0.00=0.22

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$ (L/27962)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/13421)

Asta n. 40218 (-981 -791) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV Xl=0.00 - Classe 1
 Sollecitazioni: $T_y=-3.59$ $M_x=-9.47$
 $V,Ed=-3.59$ $V_c,Rd,Red=6863.11$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=260.06$ $M_x=-9.47$
 $V, Ed=260.06$ $V_c, Rd, Red=6863.11$ $V, Ed/V_c, Rd, Red=0.04$
 - Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.27$ - Classe 3
Sollecitazioni: $N=2597.67$ $T_z=258.10$ $M_y=-57.18$ $T_y=-6.12$ $M_z=-2.07$ $M_x=-9.47$
Tensioni: $\sigma_N=281.13$ $\sigma_{m,d}=259.17$ $\tau=26.63$ $\sigma_{max}=540.30$ (sfrut=0.21)
Tensioni: $\sigma_N=281.13$ $\sigma_{m,d}=8.38$ $\tau=89.42$ $\tau_{max}=89.42$ (sfrut=0.06)
Tensioni: $\sigma_N=281.13$ $\sigma_{m,d}=259.17$ $\tau=26.63$ $\sigma_{ID,max}=542.27$ (sfrut=0.21)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-3904.34$ $M_y, Ed=-24.42$ $M_z, Ed=-2.39$ $L=0.27$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=8.58$ $N_{cr,y}=2600080.00$ $\lambda^*_y=0.10$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=8.58$ $N_{cr,z}=2600080.00$ $\lambda^*_z=0.10$ Curva a: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.16+0.04+0.00=0.20$
Verifica ZZ: $0.16+0.03+0.00=0.20$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$
- Asta n. 40218 (-983 -981) - Sez. 6 (RC80x80x3) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l=0.21$ - Classe 1
Sollecitazioni: $T_y=-3.95$ $M_x=-2.11$
 $V, Ed=-3.95$ $V_c, Rd, Red=6958.77$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l=0.21$ - Classe 1
Sollecitazioni: $T_z=45.58$ $M_x=-2.11$
 $V, Ed=45.58$ $V_c, Rd, Red=6958.77$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-4020.55$ $T_z=47.53$ $M_y=18.52$ $T_y=-3.95$ $M_z=1.58$ $M_x=-2.11$
Tensioni: $\sigma_N=-435.12$ $\sigma_{m,d}=-87.91$ $\tau=5.93$ $\sigma_{max}=-523.04$ (sfrut=0.20)
Tensioni: $\sigma_N=-435.12$ $\sigma_{m,d}=-6.39$ $\tau=17.49$ $\tau_{max}=17.49$ (sfrut=0.01)
Tensioni: $\sigma_N=-435.12$ $\sigma_{m,d}=-87.91$ $\tau=5.93$ $\sigma_{ID,max}=523.14$ (sfrut=0.20)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-4020.55$ $M_y, Ed=18.52$ $M_z, Ed=1.58$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.17+0.03+0.00=0.20$
Verifica ZZ: $0.17+0.02+0.00=0.19$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$ (L/59101)
 - Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/59101)
- Asta n. 40218 (-985 -983) - Sez. 6 (RC80x80x3) - Crit. 1
-
- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-87.08$
 $V, Ed=-87.08$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
 - Verifica a trazione (4.2.4.1.2.1) - CC 1 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=1632.87$ $T_z=-11.23$
Verifica a trazione [4.2.5]
 $N, Ed=1632.87$ $N_{pl}, Rd=24200.00$ $N_u, Rd=28607.00$ $N, Ed/N_t, Rd=0.07$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-4248.23$ $M_y, Ed=-27.01$ $M_z, Ed=0.36$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.18+0.04+0.00=0.22$
Verifica ZZ: $0.18+0.04+0.00=0.21$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$

Asta n. 40218 (-987 -985) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=81.61$
 $V,Ed=81.61$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 1 SLV $X_l=0.10$ - Classe 1
 Sollecitazioni: $N=1602.45$ $T_z=3.90$
 Verifica a trazione [4.2.5]
 $N,Ed=1602.45$ $N_{pl},Rd=24200.00$ $N_u,Rd=28607.00$ $N,Ed/N_t,Rd=0.07$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4254.05$ $M_y,Ed=-25.32$ $M_z,Ed=0.53$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.18+0.04+0.00=0.22$
 Verifica ZZ: $0.18+0.03+0.00=0.21$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,l}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$

Asta n. 40218 (-989 -987) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_z=-87.84$
 $V,Ed=-87.84$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-4343.16$ $T_z=-81.99$ $M_y=-27.36$
 $M_y,Ed=-27.36$ $M_y,V,c,Rd=699.13$
 $N,Ed=-4343.16$ $N_c,Rd=-24200.00$ YY $n=N,Ed/N_c,Rd=0.18$ $MN_y,c,Rd=699.13$ $M_y,Ed/MN_y,c,Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4377.28$ $M_y,Ed=-27.30$ $M_z,Ed=0.29$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.18+0.04+0.00=0.23$
 Verifica ZZ: $0.18+0.04+0.00=0.22$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,l}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$ (L/59101)

Asta n. 40218 (-991 -989) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=83.96$
 $V,Ed=83.96$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 17 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $N=-4379.99$ $T_z=78.12$ $M_y=-26.45$
 $M_y,Ed=-26.45$ $M_y,V,c,Rd=699.13$
 $N,Ed=-4379.99$ $N_c,Rd=-24200.00$ YY $n=N,Ed/N_c,Rd=0.18$ $MN_y,c,Rd=699.13$ $M_y,Ed/MN_y,c,Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4379.99$ $M_y,Ed=-26.45$ $M_z,Ed=0.41$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.18+0.04+0.00=0.22$
 Verifica ZZ: $0.18+0.03+0.00=0.22$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,l}=0.00$

- Verifica freccia massima carichi totali - CC 31

```

fz,l=0.00

Asta n. 40218 (-993 -991) - Sez. 6 (RC80x80x3) - Crit. 1
-----
- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU Xl=0.62 - Classe 1
  Sollecitazioni: Tz=-86.00
  V,Ed=-86.00 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.01

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU Xl=0.00 - Classe 1
  Sollecitazioni: N=-4410.93 Tz=-80.15 My=-27.08
  My,Ed=-27.08 My,V,c,Rd=699.13
  N,Ed=-4410.93 Nc,Rd=-24200.00 YY n=N,Ed/Nc,Rd=0.18 MNy,c,Rd=699.13 My,Ed/MNy,c,Rd=0.04

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
  Sollecitazioni: N,Ed=-4410.93 My,Ed=-27.08 Mz,Ed=-0.24 L=0.62
  αmy, αmz, αLT=0.95, 0.95, 0.95
  λy=19.71 Ncr,y=493055.00 λy*=0.23 Curva a: Φy=0.53 χy=0.99
  λz=19.71 Ncr,z=493055.00 λz*=0.23 Curva a: Φz=0.53 χz=0.99
  Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
  Verifica YY: 0.18+0.04+0.00=0.23
  Verifica ZZ: 0.18+0.04+0.00=0.22

- Verifica freccia massima per soli carichi accidentali - CC 20
  fz,l=0.00

- Verifica freccia massima carichi totali - CC 20
  fz,l=0.00

Asta n. 40218 (-995 -993) - Sez. 6 (RC80x80x3) - Crit. 1
-----
- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU Xl=0.00 - Classe 1
  Sollecitazioni: Tz=85.85
  V,Ed=85.85 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.01

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 17 SLU Xl=0.62 - Classe 1
  Sollecitazioni: N=-4412.29 Tz=80.01 My=-27.05
  My,Ed=-27.05 My,V,c,Rd=699.13
  N,Ed=-4412.29 Nc,Rd=-24200.00 YY n=N,Ed/Nc,Rd=0.18 MNy,c,Rd=699.13 My,Ed/MNy,c,Rd=0.04

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
  Sollecitazioni: N,Ed=-4412.29 My,Ed=-27.05 Mz,Ed=0.31 L=0.62
  αmy, αmz, αLT=0.95, 0.95, 0.95
  λy=19.71 Ncr,y=493055.00 λy*=0.23 Curva a: Φy=0.53 χy=0.99
  λz=19.71 Ncr,z=493055.00 λz*=0.23 Curva a: Φz=0.53 χz=0.99
  Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
  Verifica YY: 0.18+0.04+0.00=0.23
  Verifica ZZ: 0.18+0.04+0.00=0.22

- Verifica freccia massima per soli carichi accidentali - CC 31
  fz,l=0.00

- Verifica freccia massima carichi totali - CC 31
  fz,l=0.00

Asta n. 40218 (-997 -995) - Sez. 6 (RC80x80x3) - Crit. 1
-----
- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU Xl=0.62 - Classe 1
  Sollecitazioni: Tz=-84.11
  V,Ed=-84.11 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.01

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU Xl=0.00 - Classe 1
  Sollecitazioni: N=-4385.16 Tz=-78.26 My=-26.50
  My,Ed=-26.50 My,V,c,Rd=699.13
  N,Ed=-4385.16 Nc,Rd=-24200.00 YY n=N,Ed/Nc,Rd=0.18 MNy,c,Rd=699.13 My,Ed/MNy,c,Rd=0.04

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
  Sollecitazioni: N,Ed=-4385.16 My,Ed=-26.50 Mz,Ed=-0.34 L=0.62
  αmy, αmz, αLT=0.95, 0.95, 0.95
  λy=19.71 Ncr,y=493055.00 λy*=0.23 Curva a: Φy=0.53 χy=0.99
  λz=19.71 Ncr,z=493055.00 λz*=0.23 Curva a: Φz=0.53 χz=0.99
  Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
  Verifica YY: 0.18+0.04+0.00=0.22
  Verifica ZZ: 0.18+0.03+0.00=0.22

- Verifica freccia massima per soli carichi accidentali - CC 20
  fz,l=0.00

- Verifica freccia massima carichi totali - CC 20
  fz,l=0.00

```

Relazione di calcolo

Asta n. 40218 (-999 -997) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=87.71$
 $V, Ed=87.71$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
 - Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 17 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $N=-4351.06$ $T_z=81.86$ $M_y=-27.35$
 $M_y, Ed=-27.35$ $M_y, V, c, Rd=699.13$
 $N, Ed=-4351.06$ $N_c, Rd=-24200.00$ YY $n=N, Ed/N_c, Rd=0.18$ $MNy, c, Rd=699.13$ $M_y, Ed/MNy, c, Rd=0.04$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-4382.66$ $M_y, Ed=-27.28$ $M_z, Ed=0.22$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.18+0.04+0.00=0.23$
Verifica ZZ: $0.18+0.04+0.00=0.22$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40218 (-1001 -999) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-81.87$
 $V, Ed=-81.87$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
 - Verifica a trazione (4.2.4.1.2.1) - CC 9 SLV $X_l=0.41$ - Classe 1
Sollecitazioni: $N=1624.56$ $T_z=-6.33$
Verifica a trazione [4.2.5]
 $N, Ed=1624.56$ $N_{pl}, Rd=24200.00$ $N_u, Rd=28607.00$ $N, Ed/N_t, Rd=0.07$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-4265.65$ $M_y, Ed=-25.46$ $M_z, Ed=-0.41$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.18+0.04+0.00=0.22$
Verifica ZZ: $0.18+0.03+0.00=0.21$
 - Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40218 (-1003 -1001) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=87.93$
 $V, Ed=87.93$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
 - Verifica a trazione (4.2.4.1.2.1) - CC 9 SLV $X_l=0.62$ - Classe 1
Sollecitazioni: $N=1655.59$ $T_z=5.02$
Verifica a trazione [4.2.5]
 $N, Ed=1655.59$ $N_{pl}, Rd=24200.00$ $N_u, Rd=28607.00$ $N, Ed/N_t, Rd=0.07$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-4259.85$ $M_y, Ed=-27.16$ $M_z, Ed=-0.32$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.18+0.04+0.00=0.22$
Verifica ZZ: $0.18+0.04+0.00=0.21$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.00$

Asta n. 40218 (-1005 -1003) - Sez. 6 (RC80x80x3) - Crit. 1

Relazione di calcolo

-
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=76.12$ $M_x=1.20$
 $V, Ed=76.12$ $V_c, Rd, Red=6970.59$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica a compressione (4.2.4.1.2.2) - CC 30 SLU $X_l=0.21$ - Classe 1
Sollecitazioni: $N=-2278.86$ $T_z=-22.16$ $M_x=1.09$
Verifica a compressione [4.2.9]
 $N, Ed=-2278.86$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.09$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-4025.42$ $M_y, Ed=19.80$ $M_z, Ed=0.27$ $L=0.62$
 $\alpha_m, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.17+0.03+0.00=0.20$
Verifica ZZ: $0.17+0.03+0.00=0.19$
 - Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,l}=0.00$
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$
- Asta n. 40218 (-792 -1005) - Sez. 6 (RC80x80x3) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV $X_l=0.62$ - Classe 1
Sollecitazioni: $T_y=1.20$ $M_x=6.16$
 $V, Ed=1.20$ $V_c, Rd, Red=6906.09$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-305.87$ $M_x=6.16$
 $V, Ed=-305.87$ $V_c, Rd, Red=6906.09$ $V, Ed/V_c, Rd, Red=0.04$
 - Verifica a compressione (4.2.4.1.2.2) - CC 28 SLU $X_l=0.30$ - Classe 1
Sollecitazioni: $N=-2305.55$ $T_z=34.95$ $T_y=1.71$ $M_x=6.77$
Verifica a compressione [4.2.9]
 $N, Ed=-2305.55$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.10$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-3984.93$ $M_y, Ed=-19.57$ $M_z, Ed=-0.46$ $L=0.62$
 $\alpha_m, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.16+0.03+0.00=0.20$
Verifica ZZ: $0.16+0.03+0.00=0.19$
 - Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.00$ (L/25811)
 - Verifica freccia massima carichi totali - CC 21
 $f_{z,l}=0.00$
- Asta n. 40218 (65 -792) - Sez. 6 (RC80x80x3) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-9.16$ $M_x=-9.23$
 $V, Ed=-9.16$ $V_c, Rd, Red=6866.30$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=-639.44$ $M_x=-9.23$
 $V, Ed=-639.44$ $V_c, Rd, Red=6866.30$ $V, Ed/V_c, Rd, Red=0.09$
 - Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.17$ - Classe 3
Sollecitazioni: $N=4261.13$ $T_z=622.47$ $M_y=-63.97$ $T_y=-8.56$ $M_z=-1.64$ $M_x=-11.09$
Tensioni: $\sigma_N=461.16$ $\sigma_{m,d}=286.99$ $\tau=31.18$ $\sigma_{max}=748.15$ (sfrut=0.29)
Tensioni: $\sigma_N=461.16$ $\sigma_{m,d}=6.64$ $\tau=182.60$ $\tau_{max}=182.60$ (sfrut=0.12)
Tensioni: $\sigma_N=461.16$ $\sigma_{m,d}=266.00$ $\tau=136.01$ $\sigma_{ID,max}=764.37$ (sfrut=0.29)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-2265.82$ $M_y, Ed=73.74$ $M_z, Ed=-2.02$ $L=0.47$
 $\alpha_m, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=14.94$ $N_{cr,y}=857996.00$ $\lambda^*_y=0.17$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=14.94$ $N_{cr,z}=857996.00$ $\lambda^*_z=0.17$ Curva a: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.09+0.12+0.00=0.21$
Verifica ZZ: $0.09+0.09+0.00=0.19$
 - Verifica freccia massima per soli carichi accidentali - CC 32

$f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40218 (68 65) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV $X_l=0.52$ - Classe 1
 Sollecitazioni: $T_y=-6.71$ $M_x=-3.63$
 $V,Ed=-6.71$ $V_c,Rd,Red=6938.98$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l=0.52$ - Classe 1
 Sollecitazioni: $T_z=-98.85$ $M_x=-3.63$
 $V,Ed=-98.85$ $V_c,Rd,Red=6938.98$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.62$ - Classe 3
 Sollecitazioni: $N=4180.33$ $T_z=-99.60$ $M_y=48.54$ $T_y=-7.79$ $M_z=-1.54$ $M_x=-3.63$
 Tensioni: $\sigma_N=452.42$ $\sigma_{m,d}=219.07$ $\tau=10.21$ $\sigma_{max}=671.48$ (sfrut=0.26)
 Tensioni: $\sigma_N=452.42$ $\sigma_{m,d}=-6.22$ $\tau=34.44$ $\tau_{max}=34.44$ (sfrut=0.02)
 Tensioni: $\sigma_N=452.42$ $\sigma_{m,d}=219.07$ $\tau=10.21$ $\sigma_{ID,max}=671.72$ (sfrut=0.26)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N,Ed=-2263.54$ $M_y,Ed=42.20$ $M_z,Ed=3.19$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493058.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493058.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.09+0.07+0.01=0.17$
 Verifica ZZ: $0.09+0.05+0.01=0.15$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$ (L/54176)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/46436)

Asta n. 40218 (69 68) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU $X_l=0.52$ - Classe 1
 Sollecitazioni: $T_y=-4.85$ $M_x=-2.76$
 $V,Ed=-4.85$ $V_c,Rd,Red=6950.33$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU $X_l=0.52$ - Classe 1
 Sollecitazioni: $T_z=-93.35$ $M_x=-2.76$
 $V,Ed=-93.35$ $V_c,Rd,Red=6950.33$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.62$ - Classe 3
 Sollecitazioni: $N=-3592.20$ $T_z=-93.92$ $M_y=29.45$ $T_y=-4.72$ $M_z=-1.09$ $M_x=-2.65$
 Tensioni: $\sigma_N=-388.77$ $\sigma_{m,d}=-133.59$ $\tau=7.46$ $\sigma_{max}=-522.35$ (sfrut=0.20)
 Tensioni: $\sigma_N=-388.77$ $\sigma_{m,d}=-4.40$ $\tau=30.31$ $\tau_{max}=30.31$ (sfrut=0.02)
 Tensioni: $\sigma_N=-388.77$ $\sigma_{m,d}=-133.59$ $\tau=7.46$ $\sigma_{ID,max}=522.51$ (sfrut=0.20)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-3592.20$ $M_y,Ed=29.45$ $M_z,Ed=1.84$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.15+0.05+0.00=0.20$
 Verifica ZZ: $0.15+0.04+0.00=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40218 (72 69) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l=0.31$ - Classe 1
 Sollecitazioni: $T_y=-4.66$ $M_x=-2.50$
 $V,Ed=-4.66$ $V_c,Rd,Red=6953.64$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l=0.31$ - Classe 1
 Sollecitazioni: $T_z=69.77$ $M_x=-2.50$
 $V,Ed=69.77$ $V_c,Rd,Red=6953.64$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-3611.71$ $T_z=72.69$ $M_y=22.27$ $T_y=-4.66$ $M_z=2.61$ $M_x=-2.50$
 Tensioni: $\sigma_N=-390.88$ $\sigma_{m,d}=-108.86$ $\tau=7.04$ $\sigma_{max}=-499.74$ (sfrut=0.19)

Tensioni: $\sigma_N=-390.88$ $\sigma_{m,d}=-10.58$ $\tau=24.72$ $\tau_{max}=24.72$ (sfrut=0.02)
Tensioni: $\sigma_N=-390.88$ $\sigma_{m,d}=-108.86$ $\tau=7.04$ $\sigma_{ID,max}=499.89$ (sfrut=0.19)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-3611.71$ $M_y, Ed=22.27$ $M_z, Ed=2.61$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.15+0.04+0.00=0.19$
Verifica ZZ: $0.15+0.03+0.00=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40218 (73 72) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU $X1=0.41$ - Classe 1
Sollecitazioni: $T_y=-4.63$ $M_x=-2.52$
 $V, Ed=-4.63$ $V_c, Rd, Red=6953.42$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU $X1=0.41$ - Classe 1
Sollecitazioni: $T_z=-93.15$ $M_x=-2.52$
 $V, Ed=-93.15$ $V_c, Rd, Red=6953.42$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X1=0.00$ - Classe 3
Sollecitazioni: $N=-4125.26$ $T_z=-88.71$ $M_y=-28.53$ $T_y=-4.51$ $M_z=1.30$ $M_x=-2.45$
Tensioni: $\sigma_N=-446.46$ $\sigma_{m,d}=-130.51$ $\tau=6.89$ $\sigma_{max}=-576.97$ (sfrut=0.22)
Tensioni: $\sigma_N=-446.46$ $\sigma_{m,d}=5.27$ $\tau=28.47$ $\tau_{max}=28.47$ (sfrut=0.02)
Tensioni: $\sigma_N=-446.46$ $\sigma_{m,d}=-130.51$ $\tau=6.89$ $\sigma_{ID,max}=577.09$ (sfrut=0.22)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-4125.26$ $M_y, Ed=-28.53$ $M_z, Ed=-1.49$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.17+0.05+0.00=0.22$
Verifica ZZ: $0.17+0.04+0.00=0.21$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40218 (76 73) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X1=0.31$ - Classe 1
Sollecitazioni: $T_y=-4.53$ $M_x=-2.45$
 $V, Ed=-4.53$ $V_c, Rd, Red=6954.32$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X1=0.31$ - Classe 1
Sollecitazioni: $T_z=72.15$ $M_x=-2.45$
 $V, Ed=72.15$ $V_c, Rd, Red=6954.32$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X1=0.00$ - Classe 3
Sollecitazioni: $N=-4141.56$ $T_z=75.07$ $M_y=21.32$ $T_y=-4.53$ $M_z=2.00$ $M_x=-2.45$
Tensioni: $\sigma_N=-448.22$ $\sigma_{m,d}=-102.04$ $\tau=6.89$ $\sigma_{max}=-550.26$ (sfrut=0.21)
Tensioni: $\sigma_N=-448.22$ $\sigma_{m,d}=-8.10$ $\tau=25.15$ $\tau_{max}=25.15$ (sfrut=0.02)
Tensioni: $\sigma_N=-448.22$ $\sigma_{m,d}=-102.04$ $\tau=6.89$ $\sigma_{ID,max}=550.39$ (sfrut=0.21)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-4141.56$ $M_y, Ed=-23.41$ $M_z, Ed=2.00$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493058.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493058.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.17+0.04+0.00=0.21$
Verifica ZZ: $0.17+0.03+0.00=0.20$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40218 (77 76) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $T_y=-4.65$ $M_x=-2.52$
 $V, Ed=-4.65$ $V_c, Rd, Red=6953.47$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $T_z=-90.33$ $M_x=-2.52$
 $V, Ed=-90.33$ $V_c, Rd, Red=6953.47$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=0.62$ - Classe 3
Sollecitazioni: $N=-4590.17$ $T_z=-93.25$ $M_y=26.24$ $T_y=-4.65$ $M_z=-2.13$ $M_x=-2.52$
Tensioni: $\sigma_N=-496.77$ $\sigma_{m,d}=-124.11$ $\tau=7.07$ $\sigma_{max}=-620.88$ (sfrut=0.24)
Tensioni: $\sigma_N=-496.77$ $\sigma_{m,d}=-8.63$ $\tau=29.76$ $\tau_{max}=29.76$ (sfrut=0.02)
Tensioni: $\sigma_N=-496.77$ $\sigma_{m,d}=-124.11$ $\tau=7.07$ $\sigma_{ID,max}=621.00$ (sfrut=0.24)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-4590.17$ $M_y, Ed=-29.76$ $M_z, Ed=-2.13$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.19+0.05+0.00=0.24$
Verifica ZZ: $0.19+0.04+0.00=0.23$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/54176)

Asta n. 40218 (80 77) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l=0.10$ - Classe 1
Sollecitazioni: $T_y=-4.50$ $M_x=-2.44$
 $V, Ed=-4.50$ $V_c, Rd, Red=6954.44$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l=0.10$ - Classe 1
Sollecitazioni: $T_z=75.96$ $M_x=-2.44$
 $V, Ed=75.96$ $V_c, Rd, Red=6954.44$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=0.62$ - Classe 3
Sollecitazioni: $N=-4605.77$ $T_z=68.71$ $M_y=-24.86$ $T_y=-4.62$ $M_z=-1.41$ $M_x=-2.51$
Tensioni: $\sigma_N=-498.46$ $\sigma_{m,d}=-114.91$ $\tau=7.04$ $\sigma_{max}=-613.37$ (sfrut=0.23)
Tensioni: $\sigma_N=-498.46$ $\sigma_{m,d}=5.72$ $\tau=23.76$ $\tau_{max}=23.76$ (sfrut=0.02)
Tensioni: $\sigma_N=-498.46$ $\sigma_{m,d}=-114.91$ $\tau=7.04$ $\sigma_{ID,max}=613.49$ (sfrut=0.23)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-4605.77$ $M_y, Ed=-24.86$ $M_z, Ed=1.45$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493058.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493058.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.19+0.04+0.00=0.23$
Verifica ZZ: $0.19+0.03+0.00=0.23$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40218 (81 80) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU $X_l=0.21$ - Classe 1
Sollecitazioni: $T_y=-4.67$ $M_x=-2.48$
 $V, Ed=-4.67$ $V_c, Rd, Red=6953.88$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU $X_l=0.21$ - Classe 1
Sollecitazioni: $T_z=-87.14$ $M_x=-2.48$
 $V, Ed=-87.14$ $V_c, Rd, Red=6953.88$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=0.62$ - Classe 3
Sollecitazioni: $N=-5008.22$ $T_z=-91.03$ $M_y=24.19$ $T_y=-4.67$ $M_z=-2.72$ $M_x=-2.48$
Tensioni: $\sigma_N=-542.01$ $\sigma_{m,d}=-117.70$ $\tau=6.98$ $\sigma_{max}=-659.71$ (sfrut=0.25)
Tensioni: $\sigma_N=-542.01$ $\sigma_{m,d}=-11.01$ $\tau=29.13$ $\tau_{max}=29.13$ (sfrut=0.02)
Tensioni: $\sigma_N=-542.01$ $\sigma_{m,d}=-117.70$ $\tau=6.98$ $\sigma_{ID,max}=659.82$ (sfrut=0.25)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N_{Ed}=-5008.22$ My, $E_{d}=-30.44$ Mz, $E_{d}=-2.72$ L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr, $y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr, $z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.98, 0.98, 0.78, 0.98
 Verifica YY: $0.21+0.05+0.00=0.26$
 Verifica ZZ: $0.21+0.04+0.00=0.25$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/50009)

Asta n. 40218 (84 81) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_y=-4.67$ Mx=-2.30
 $V_{Ed}=-4.67$ Vc,Rd,Red=6956.22 V,Ed/Vc,Rd,Red=0.00

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_z=77.29$ Mx=-2.30
 $V_{Ed}=77.29$ Vc,Rd,Red=6956.22 V,Ed/Vc,Rd,Red=0.01

- Verifica in termini tensionali [4.2.4] - CC 27 SLU X1=0.62 - Classe 3
 Sollecitazioni: $N=-5020.52$ $T_z=69.12$ $M_y=-26.46$ $T_y=-4.77$ $M_z=-1.98$ $M_x=-2.29$
 Tensioni: $\sigma_N=-543.35$ $\sigma_{m,d}=-124.40$ $\tau=6.44$ $\sigma_{max}=-667.75$ (sfrut=0.25)
 Tensioni: $\sigma_N=-543.35$ $\sigma_{m,d}=8.01$ $\tau=23.25$ $\tau_{max}=23.25$ (sfrut=0.02)
 Tensioni: $\sigma_N=-543.35$ $\sigma_{m,d}=-124.40$ $\tau=6.44$ $\sigma_{ID,max}=667.84$ (sfrut=0.25)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N_{Ed}=-5020.52$ My, $E_{d}=-26.46$ Mz, $E_{d}=-1.98$ L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr, $y=493058.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr, $z=493058.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.98, 0.98, 0.78, 0.98
 Verifica YY: $0.21+0.04+0.00=0.25$
 Verifica ZZ: $0.21+0.03+0.00=0.25$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/59101)

Asta n. 40218 (85 84) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV X1=0.10 - Classe 1
 Sollecitazioni: $T_y=-7.46$ Mx=-2.29
 $V_{Ed}=-7.46$ Vc,Rd,Red=6956.44 V,Ed/Vc,Rd,Red=0.00

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV X1=0.10 - Classe 1
 Sollecitazioni: $T_z=92.68$ Mx=-2.29
 $V_{Ed}=92.68$ Vc,Rd,Red=6956.44 V,Ed/Vc,Rd,Red=0.01

- Verifica in termini tensionali [4.2.4] - CC 27 SLU X1=0.62 - Classe 3
 Sollecitazioni: $N=-5323.91$ $T_z=-54.40$ $M_y=19.07$ $T_y=-6.79$ $M_z=-2.57$
 Tensioni: $\sigma_N=-576.18$ $\sigma_{m,d}=-94.63$ $\tau=0.00$ $\sigma_{max}=-670.81$ (sfrut=0.26)
 Tensioni: $\sigma_N=-576.18$ $\sigma_{m,d}=-10.39$ $\tau=13.23$ $\tau_{max}=13.23$ (sfrut=0.01)
 Tensioni: $\sigma_N=-576.18$ $\sigma_{m,d}=-94.63$ $\tau=0.00$ $\sigma_{ID,max}=670.81$ (sfrut=0.26)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N_{Ed}=-5323.91$ My, $E_{d}=19.07$ Mz, $E_{d}=-2.57$ L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr, $y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr, $z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.98, 0.98, 0.78, 0.98
 Verifica YY: $0.22+0.03+0.00=0.26$
 Verifica ZZ: $0.22+0.02+0.00=0.25$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40218 (-793 85) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV $X_l=0.62$ - Classe 1
Sollecitazioni: $T_y=-10.68$ $M_x=-4.68$
 $V, Ed=-10.68$ $V_c, Rd, Red=6925.34$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-2688.05$ $M_x=-4.68$
 $V, Ed=-2688.05$ $V_c, Rd, Red=6925.34$ $V, Ed/V_c, Rd, Red=0.39$
 - Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.60$ - Classe 3
Sollecitazioni: $N=-3158.33$ $T_z=-2687.91$ $M_y=22.80$ $T_y=-7.12$ $M_z=1.04$ $M_x=-4.68$
Tensioni: $\sigma_N=-341.81$ $\sigma_{m,d}=-104.25$ $\tau=13.16$ $\sigma_{max}=-446.06$ (sfrut=0.17)
Tensioni: $\sigma_N=-341.81$ $\sigma_{m,d}=4.53$ $\tau=667.02$ $\tau_{max}=667.02$ (sfrut=0.44)
Tensioni: $\sigma_N=-341.81$ $\sigma_{m,d}=4.19$ $\tau=667.02$ $\sigma_{TD,max}=1203.64$ (sfrut=0.46)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed=-3697.55$ $M_y, Ed=65.67$ $M_z, Ed=0.84$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.15+0.11+0.00=0.26$
Verifica ZZ: $0.15+0.09+0.00=0.24$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/511)
- Asta n. 40219 (-913 -914) - Sez. 7 (RC60x60x3) - Crit. 1
-
- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=24.44$
 $V, Ed=24.44$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$
 - Verifica a trazione (4.2.4.1.2.1) - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=834.78$ $T_z=-2.76$
Verifica a trazione [4.2.5]
 $N, Ed=834.78$ $N_{pl}, Rd=17914.30$ $N_u, Rd=21176.60$ $N, Ed/N_t, Rd=0.05$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-173.53$ $M_y, Ed=-9.82$ $M_z, Ed=0.45$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.03+0.00=0.04$
Verifica ZZ: $0.01+0.02+0.00=0.03$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/76617)
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/9381) $f_{z,L}=0.00$ (L/57462)
- Asta n. 40225 (22 -871) - Sez. 6 (RC80x80x3) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-7.76$ $M_x=-2.31$
 $V, Ed=-7.76$ $V_c, Rd, Red=6956.15$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=241.12$ $M_x=-2.31$
 $V, Ed=241.12$ $V_c, Rd, Red=6956.15$ $V, Ed/V_c, Rd, Red=0.03$
 - Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.00$ - Classe 3
Sollecitazioni: $N=5248.25$ $T_z=211.34$ $M_y=71.11$ $T_y=34.29$ $M_z=-10.58$ $M_x=-3.99$
Tensioni: $\sigma_N=567.99$ $\sigma_{m,d}=357.37$ $\tau=11.21$ $\sigma_{max}=925.36$ (sfrut=0.35)
Tensioni: $\sigma_N=567.99$ $\sigma_{m,d}=42.83$ $\tau=62.62$ $\tau_{max}=62.62$ (sfrut=0.04)
Tensioni: $\sigma_N=567.99$ $\sigma_{m,d}=357.37$ $\tau=11.21$ $\sigma_{TD,max}=925.56$ (sfrut=0.35)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-1306.51$ $M_y, Ed=82.33$ $M_z, Ed=-7.88$ $L=0.47$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=14.94$ $N_{cr,y}=857989.00$ $\lambda^*_y=0.17$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=14.94$ $N_{cr,z}=857989.00$ $\lambda^*_z=0.17$ Curva a: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.76, 0.96$
Verifica YY: $0.05+0.13+0.01=0.20$
Verifica ZZ: $0.05+0.11+0.01=0.17$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40225 (-871 -869) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_1=0.62$ - Classe 1
Sollecitazioni: $T_y=4.56$ $M_x=-1.90$
 $V,Ed=4.56$ $V_c,Rd,Red=6961.44$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_1=0.62$ - Classe 1
Sollecitazioni: $T_z=-71.70$ $M_x=-1.90$
 $V,Ed=-71.70$ $V_c,Rd,Red=6961.44$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_1=0.31$ - Classe 3
Sollecitazioni: $N=4505.81$ $T_z=24.62$ $M_y=-12.06$ $T_y=3.99$ $M_z=-1.15$ $M_x=-2.19$
Tensioni: $\sigma_N=487.64$ $\sigma_{m,d}=57.81$ $\tau=6.15$ $\sigma_{max}=545.45$ (sfrut=0.21)
Tensioni: $\sigma_N=487.64$ $\sigma_{m,d}=4.67$ $\tau=12.14$ $\tau_{max}=12.14$ (sfrut=0.01)
Tensioni: $\sigma_N=487.64$ $\sigma_{m,d}=57.81$ $\tau=6.15$ $\sigma_{ID,max}=545.55$ (sfrut=0.21)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-1470.59$ $M_y,Ed=-26.77$ $M_z,Ed=-2.77$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.06+0.04+0.00=0.11$
Verifica ZZ: $0.06+0.03+0.00=0.10$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/38242)

Asta n. 40225 (-869 -867) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_1=0.21$ - Classe 1
Sollecitazioni: $T_y=4.13$ $M_x=-1.85$
 $V,Ed=4.13$ $V_c,Rd,Red=6962.07$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_1=0.21$ - Classe 1
Sollecitazioni: $T_z=64.11$ $M_x=-1.85$
 $V,Ed=64.11$ $V_c,Rd,Red=6962.07$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_1=0.00$ - Classe 3
Sollecitazioni: $N=4475.46$ $T_z=-39.94$ $M_y=-22.72$ $T_y=3.61$ $M_z=-1.33$ $M_x=-1.63$
Tensioni: $\sigma_N=484.36$ $\sigma_{m,d}=105.22$ $\tau=4.58$ $\sigma_{max}=589.58$ (sfrut=0.23)
Tensioni: $\sigma_N=484.36$ $\sigma_{m,d}=-5.39$ $\tau=14.30$ $\tau_{max}=14.30$ (sfrut=0.01)
Tensioni: $\sigma_N=484.36$ $\sigma_{m,d}=105.22$ $\tau=4.58$ $\sigma_{ID,max}=589.63$ (sfrut=0.23)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-1472.23$ $M_y,Ed=-24.25$ $M_z,Ed=-1.50$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.06+0.04+0.00=0.10$
Verifica ZZ: $0.06+0.03+0.00=0.09$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.00$ (L/54176)

Asta n. 40225 (-867 -865) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_1=0.62$ - Classe 1
Sollecitazioni: $T_y=4.00$ $M_x=-1.85$
 $V,Ed=4.00$ $V_c,Rd,Red=6962.07$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_1=0.62$ - Classe 1
Sollecitazioni: $T_z=-70.58$ $M_x=-1.85$
 $V,Ed=-70.58$ $V_c,Rd,Red=6962.07$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 3 SLV $X_1=0.00$ - Classe 3

- Sollecitazioni: $N=3586.74$ $T_z=28.33$ $M_y=9.22$ $T_y=3.58$ $M_z=-1.85$ $M_x=-1.48$
Tensioni: $\sigma_N=388.18$ $\sigma_{m,d}=48.42$ $\tau=4.15$ $\sigma_{max}=436.59$ (sfrut=0.17)
Tensioni: $\sigma_N=388.18$ $\sigma_{m,d}=7.49$ $\tau=11.05$ $\tau_{max}=11.05$ (sfrut=0.01)
Tensioni: $\sigma_N=388.18$ $\sigma_{m,d}=48.42$ $\tau=4.15$ $\sigma_{ID,max}=436.65$ (sfrut=0.17)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N_{Ed}=-1604.62$ $M_{y,Ed}=-25.64$ $M_{z,Ed}=-2.05$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.07+0.04+0.00=0.11$
Verifica ZZ: $0.07+0.03+0.00=0.10$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/43341)
- Asta n. 40225 (-865 -863) - Sez. 6 (RC80x80x3) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_L=0.10$ - Classe 1
Sollecitazioni: $T_y=3.96$ $M_x=-1.84$
 $V_{Ed}=3.96$ $V_{c,Rd,Red}=6962.21$ $V_{Ed}/V_{c,Rd,Red}=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_L=0.10$ - Classe 1
Sollecitazioni: $T_z=62.08$ $M_x=-1.84$
 $V_{Ed}=62.08$ $V_{c,Rd,Red}=6962.21$ $V_{Ed}/V_{c,Rd,Red}=0.01$
- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_L=0.00$ - Classe 3
Sollecitazioni: $N=3566.15$ $T_z=-41.36$ $M_y=-20.21$ $T_y=3.57$ $M_z=-1.07$ $M_x=-1.66$
Tensioni: $\sigma_N=385.95$ $\sigma_{m,d}=93.08$ $\tau=4.67$ $\sigma_{max}=479.03$ (sfrut=0.18)
Tensioni: $\sigma_N=385.95$ $\sigma_{m,d}=-4.33$ $\tau=14.73$ $\tau_{max}=14.73$ (sfrut=0.01)
Tensioni: $\sigma_N=385.95$ $\sigma_{m,d}=93.08$ $\tau=4.67$ $\sigma_{ID,max}=479.10$ (sfrut=0.18)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N_{Ed}=-1610.85$ $M_{y,Ed}=-22.94$ $M_{z,Ed}=1.30$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.07+0.04+0.00=0.11$
Verifica ZZ: $0.07+0.03+0.00=0.10$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/59101)
- Asta n. 40225 (-863 -861) - Sez. 6 (RC80x80x3) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_L=0.62$ - Classe 1
Sollecitazioni: $T_y=3.98$ $M_x=-1.85$
 $V_{Ed}=3.98$ $V_{c,Rd,Red}=6962.16$ $V_{Ed}/V_{c,Rd,Red}=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_L=0.62$ - Classe 1
Sollecitazioni: $T_z=-72.38$ $M_x=-1.85$
 $V_{Ed}=-72.38$ $V_{c,Rd,Red}=6962.16$ $V_{Ed}/V_{c,Rd,Red}=0.01$
- Verifica in termini tensionali [4.2.4] - CC 3 SLV $X_L=0.00$ - Classe 3
Sollecitazioni: $N=2613.89$ $T_z=26.94$ $M_y=7.03$ $T_y=3.57$ $M_z=-1.62$ $M_x=-1.45$
Tensioni: $\sigma_N=282.89$ $\sigma_{m,d}=37.83$ $\tau=4.09$ $\sigma_{max}=320.72$ (sfrut=0.12)
Tensioni: $\sigma_N=282.89$ $\sigma_{m,d}=6.55$ $\tau=10.64$ $\tau_{max}=10.64$ (sfrut=0.01)
Tensioni: $\sigma_N=282.89$ $\sigma_{m,d}=37.83$ $\tau=4.09$ $\sigma_{ID,max}=320.80$ (sfrut=0.12)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N_{Ed}=-1834.93$ $M_{y,Ed}=-25.54$ $M_{z,Ed}=-1.78$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.08+0.04+0.00=0.12$
Verifica ZZ: $0.08+0.03+0.00=0.11$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/50009)

Asta n. 40225 (-861 -859) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_L=0.00$ - Classe 1
Sollecitazioni: $T_y=3.97$ $M_x=-1.84$
 $V,Ed=3.97$ $V_c,Rd,Red=6962.19$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_L=0.00$ - Classe 1
Sollecitazioni: $T_z=61.15$ $M_x=-1.84$
 $V,Ed=61.15$ $V_c,Rd,Red=6962.19$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_L=0.62$ - Classe 3
Sollecitazioni: $N=2585.61$ $T_z=-47.30$ $M_y=10.47$ $T_y=3.58$ $M_z=1.38$ $M_x=-1.66$
Tensioni: $\sigma_N=279.83$ $\sigma_{m,d}=51.85$ $\tau=4.68$ $\sigma_{max}=331.68$ (sfrut=0.13)
Tensioni: $\sigma_N=279.83$ $\sigma_{m,d}=5.60$ $\tau=16.19$ $\tau_{max}=16.19$ (sfrut=0.01)
Tensioni: $\sigma_N=279.83$ $\sigma_{m,d}=51.85$ $\tau=4.68$ $\sigma_{ID,max}=331.77$ (sfrut=0.13)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-1844.31$ $M_y,Ed=-21.52$ $M_z,Ed=1.57$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.08+0.03+0.00=0.11$
Verifica ZZ: $0.08+0.03+0.00=0.11$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/59101)

Asta n. 40225 (-859 -857) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_L=0.62$ - Classe 1
Sollecitazioni: $T_y=3.97$ $M_x=-1.84$
 $V,Ed=3.97$ $V_c,Rd,Red=6962.20$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_L=0.62$ - Classe 1
Sollecitazioni: $T_z=-74.26$ $M_x=-1.84$
 $V,Ed=-74.26$ $V_c,Rd,Red=6962.20$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_L=0.00$ - Classe 3
Sollecitazioni: $N=-2158.78$ $T_z=-68.42$ $M_y=-25.17$ $T_y=3.97$ $M_z=-1.51$ $M_x=-1.84$
Tensioni: $\sigma_N=-233.63$ $\sigma_{m,d}=-116.71$ $\tau=5.18$ $\sigma_{max}=-350.35$ (sfrut=0.13)
Tensioni: $\sigma_N=-233.63$ $\sigma_{m,d}=-6.11$ $\tau=21.83$ $\tau_{max}=21.83$ (sfrut=0.01)
Tensioni: $\sigma_N=-233.63$ $\sigma_{m,d}=-116.71$ $\tau=5.18$ $\sigma_{ID,max}=350.46$ (sfrut=0.13)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-2158.78$ $M_y,Ed=-25.17$ $M_z,Ed=-1.51$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.09+0.04+0.00=0.13$
Verifica ZZ: $0.09+0.03+0.00=0.12$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/50009)

Asta n. 40225 (-857 -855) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_L=0.00$ - Classe 1
Sollecitazioni: $T_y=3.99$ $M_x=-1.85$
 $V,Ed=3.99$ $V_c,Rd,Red=6962.17$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_L=0.00$ - Classe 1
Sollecitazioni: $T_z=59.27$ $M_x=-1.85$
 $V,Ed=59.27$ $V_c,Rd,Red=6962.17$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_L=0.62$ - Classe 3
Sollecitazioni: $N=-2171.31$ $T_z=53.42$ $M_y=-19.82$ $T_y=3.99$ $M_z=1.83$ $M_x=-1.85$
Tensioni: $\sigma_N=-234.99$ $\sigma_{m,d}=-94.70$ $\tau=5.19$ $\sigma_{max}=-329.69$ (sfrut=0.13)
Tensioni: $\sigma_N=-234.99$ $\sigma_{m,d}=-7.42$ $\tau=18.18$ $\tau_{max}=18.18$ (sfrut=0.01)

Tensioni: $\sigma_N=-234.99$ $\sigma_{m,d}=-94.70$ $\tau=5.19$ $\sigma_{ID,max}=329.81$ (sfrut=0.13)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-2171.31$ $M_y, Ed=-19.82$ $M_z, Ed=1.83$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.09+0.03+0.00=0.12$
Verifica ZZ: $0.09+0.03+0.00=0.12$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40225 (-855 -853) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l=0.52$ - Classe 1
Sollecitazioni: $T_y=3.95$ $M_x=-1.83$
 $V, Ed=3.95$ $V_c, Rd, Red=6962.32$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l=0.52$ - Classe 1
Sollecitazioni: $T_z=-75.23$ $M_x=-1.83$
 $V, Ed=-75.23$ $V_c, Rd, Red=6962.32$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-2576.16$ $T_z=-70.36$ $M_y=-24.51$ $T_y=3.95$ $M_z=-1.24$ $M_x=-1.83$
Tensioni: $\sigma_N=-278.81$ $\sigma_{m,d}=-112.66$ $\tau=5.16$ $\sigma_{max}=-391.46$ (sfrut=0.15)
Tensioni: $\sigma_N=-278.81$ $\sigma_{m,d}=-5.02$ $\tau=22.27$ $\tau_{max}=22.27$ (sfrut=0.01)
Tensioni: $\sigma_N=-278.81$ $\sigma_{m,d}=-112.66$ $\tau=5.16$ $\sigma_{ID,max}=391.57$ (sfrut=0.15)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-2576.16$ $M_y, Ed=-24.51$ $M_z, Ed=-1.24$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.11+0.04+0.00=0.15$
Verifica ZZ: $0.11+0.03+0.00=0.14$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40225 (-853 -851) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=3.99$ $M_x=-1.81$
 $V, Ed=3.99$ $V_c, Rd, Red=6962.58$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=57.83$ $M_x=-1.81$
 $V, Ed=57.83$ $V_c, Rd, Red=6962.58$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.62$ - Classe 3
Sollecitazioni: $N=-2591.78$ $T_z=51.98$ $M_y=-18.02$ $T_y=3.99$ $M_z=2.09$ $M_x=-1.81$
Tensioni: $\sigma_N=-280.50$ $\sigma_{m,d}=-87.97$ $\tau=5.10$ $\sigma_{max}=-368.47$ (sfrut=0.14)
Tensioni: $\sigma_N=-280.50$ $\sigma_{m,d}=-8.46$ $\tau=17.75$ $\tau_{max}=17.75$ (sfrut=0.01)
Tensioni: $\sigma_N=-280.50$ $\sigma_{m,d}=-87.97$ $\tau=5.10$ $\sigma_{ID,max}=368.57$ (sfrut=0.14)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-2591.78$ $M_y, Ed=-18.02$ $M_z, Ed=2.09$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.11+0.03+0.00=0.14$
Verifica ZZ: $0.11+0.02+0.00=0.13$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Relazione di calcolo

Asta n. 40225 (-851 -849) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X1=0.41$ - Classe 1
Sollecitazioni: $T_y=3.69$ $M_x=-1.60$
 $V, Ed=3.69$ $V_c, Rd, Red=6965.36$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X1=0.41$ - Classe 1
Sollecitazioni: $T_z=-81.27$ $M_x=-1.60$
 $V, Ed=-81.27$ $V_c, Rd, Red=6965.36$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 17 SLU $X1=0.62$ - Classe 3
Sollecitazioni: $N=-3084.66$ $T_z=-83.22$ $M_y=25.57$ $T_y=3.69$ $M_z=1.42$ $M_x=-1.60$
Tensioni: $\sigma_N=-333.84$ $\sigma_{m,d}=-118.08$ $\tau=4.50$ $\sigma_{max}=-451.92$ (sfrut=0.17)
Tensioni: $\sigma_N=-333.84$ $\sigma_{m,d}=5.75$ $\tau=24.74$ $\tau_{max}=24.74$ (sfrut=0.02)
Tensioni: $\sigma_N=-333.84$ $\sigma_{m,d}=-118.08$ $\tau=4.50$ $\sigma_{ID,max}=451.98$ (sfrut=0.17)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-3084.66$ $M_y, Ed=25.57$ $M_z, Ed=1.42$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
Verifica YY: $0.13+0.04+0.00=0.17$
Verifica ZZ: $0.13+0.03+0.00=0.16$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40225 (-849 55) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X1=0.00$ - Classe 1
Sollecitazioni: $T_y=4.00$
 $V, Ed=4.00$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X1=0.00$ - Classe 1
Sollecitazioni: $T_z=95.57$
 $V, Ed=95.57$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 17 SLU $X1=0.62$ - Classe 3
Sollecitazioni: $N=-3097.86$ $T_z=89.72$ $M_y=-34.96$ $T_y=4.00$ $M_z=2.35$
Tensioni: $\sigma_N=-335.27$ $\sigma_{m,d}=-163.24$ $\tau=0.00$ $\sigma_{max}=-498.50$ (sfrut=0.19)
Tensioni: $\sigma_N=-335.27$ $\sigma_{m,d}=9.53$ $\tau=21.83$ $\tau_{max}=21.83$ (sfrut=0.01)
Tensioni: $\sigma_N=-335.27$ $\sigma_{m,d}=-163.24$ $\tau=0.00$ $\sigma_{ID,max}=498.50$ (sfrut=0.19)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-3097.86$ $M_y, Ed=-34.96$ $M_z, Ed=2.35$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
Verifica YY: $0.13+0.06+0.00=0.19$
Verifica ZZ: $0.13+0.05+0.00=0.18$
 - Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$ (L/59101)
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/40632)

Asta n. 40225 (55 23) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV $X1=0.32$ - Classe 1
Sollecitazioni: $T_y=-1.21$ $M_x=5.62$
 $V, Ed=-1.21$ $V_c, Rd, Red=6913.19$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X1=0.32$ - Classe 1
Sollecitazioni: $T_z=-651.97$ $M_x=5.62$
 $V, Ed=-651.97$ $V_c, Rd, Red=6913.19$ $V, Ed/V_c, Rd, Red=0.09$
 - Verifica in termini tensionali [4.2.4] - CC 1 SLV $X1=0.32$ - Classe 3
Sollecitazioni: $N=2525.53$ $T_z=-651.97$ $M_y=132.31$ $T_y=-15.24$ $M_z=1.89$ $M_x=5.62$
Tensioni: $\sigma_N=273.33$ $\sigma_{m,d}=587.02$ $\tau=15.79$ $\sigma_{max}=860.35$ (sfrut=0.33)
Tensioni: $\sigma_N=273.33$ $\sigma_{m,d}=-7.65$ $\tau=174.39$ $\tau_{max}=174.39$ (sfrut=0.12)
Tensioni: $\sigma_N=273.33$ $\sigma_{m,d}=587.02$ $\tau=15.79$ $\sigma_{ID,max}=860.78$ (sfrut=0.33)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3

Sollecitazioni: N,Ed=-1836.24 My,Ed=132.31 Mz,Ed=4.87 L=0.62
 α_{my} , α_{mz} , α_{LT} =0.95, 0.95, 0.95
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.08+0.21+0.01=0.30
 Verifica ZZ: 0.08+0.17+0.01=0.25

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.00$ (L/11983)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/4793)

Asta n. 40225 (-847 23) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV Xl=0.00 - Classe 1
 Sollecitazioni: $T_y=9.17$ $M_x=-8.90$
 $V,Ed=9.17$ $V_c,Rd,Red=6870.53$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV Xl=0.00 - Classe 1
 Sollecitazioni: $T_z=-1045.22$ $M_x=-8.90$
 $V,Ed=-1045.22$ $V_c,Rd,Red=6870.53$ $V,Ed/V_c,Rd,Red=0.15$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU Xl=0.19 - Classe 3
 Sollecitazioni: N=-5721.16 $T_z=-1161.61$ $M_y=132.94$ $T_y=24.30$ $M_z=2.80$ $M_x=-7.36$
 Tensioni: $\sigma_N=-619.17$ $\sigma_{m,d}=-593.78$ $\tau=20.68$ $\sigma_{max}=-1212.95$ (sfrut=0.46)
 Tensioni: $\sigma_N=-619.17$ $\sigma_{m,d}=11.35$ $\tau=303.26$ $\tau_{max}=303.26$ (sfrut=0.20)
 Tensioni: $\sigma_N=-619.17$ $\sigma_{m,d}=-593.78$ $\tau=20.68$ $\sigma_{ID,max}=1213.48$ (sfrut=0.46)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: N,Ed=-5721.16 My,Ed=132.94 Mz,Ed=2.80 L=0.19
 α_{my} , α_{mz} , α_{LT} =0.95, 0.95, 0.95
 $\lambda_y=6.04$ Ncr,y=5250710.00 $\lambda^*_y=0.07$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=6.04$ Ncr,z=5250710.00 $\lambda^*_z=0.07$ Curva a: $\Phi_z=0.00$ $\chi_z=1.00$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.24+0.21+0.00=0.45
 Verifica ZZ: 0.24+0.17+0.00=0.41

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,l}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$

Asta n. 40225 (-845 -847) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU Xl=0.00 - Classe 1
 Sollecitazioni: $T_y=1.43$ $M_x=-1.65$
 $V,Ed=1.43$ $V_c,Rd,Red=6964.72$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU Xl=0.00 - Classe 1
 Sollecitazioni: $T_z=141.89$ $M_x=-1.65$
 $V,Ed=141.89$ $V_c,Rd,Red=6964.72$ $V,Ed/V_c,Rd,Red=0.02$

- Verifica a compressione (4.2.4.1.2.2) - CC 9 SLV Xl=0.10 - Classe 1
 Sollecitazioni: N=-2650.43 $T_z=8.59$ $T_y=1.19$ $M_x=-1.77$
 Verifica a compressione [4.2.9]
 $N,Ed=-2650.43$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.11$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: N,Ed=-5557.27 My,Ed=-47.87 Mz,Ed=0.92 L=0.62
 α_{my} , α_{mz} , α_{LT} =0.95, 0.95, 0.95
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.98, 0.98, 0.78, 0.98
 Verifica YY: 0.23+0.08+0.00=0.31
 Verifica ZZ: 0.23+0.06+0.00=0.29

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,l}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$ (L/38242)

Asta n. 40225 (-843 -845) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU Xl=0.62 - Classe 1
 Sollecitazioni: $T_y=1.12$
 $V,Ed=1.12$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-117.03$
 $V, Ed=-117.03$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.02$
- Verifica a compressione (4.2.4.1.2.2) - CC 1 SLV $X_l=0.10$ - Classe 1
Sollecitazioni: $N=-2291.02$ $T_y=1.01$
Verifica a compressione [4.2.9]
 $N, Ed=-2291.02$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.09$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-5552.01$ $M_y, Ed=38.46$ $M_z, Ed=-0.37$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.23+0.06+0.00=0.29$
Verifica ZZ: $0.23+0.05+0.00=0.28$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/54176)
- Asta n. 40225 (-841 -843) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=102.39$
 $V, Ed=102.39$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
- Verifica a compressione (4.2.4.1.2.2) - CC 17 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-5231.79$ $T_z=99.46$
Verifica a compressione [4.2.9]
 $N, Ed=-5231.79$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.22$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-5326.75$ $M_y, Ed=32.30$ $M_z, Ed=0.32$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.22+0.05+0.00=0.27$
Verifica ZZ: $0.22+0.04+0.00=0.26$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/59101)
- Asta n. 40225 (-839 -841) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-109.01$
 $V, Ed=-109.01$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.02$
- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-5320.48$ $T_z=-106.09$
Verifica a compressione [4.2.9]
 $N, Ed=-5320.48$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.22$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-5320.48$ $M_y, Ed=34.25$ $M_z, Ed=-0.24$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.22+0.06+0.00=0.28$
Verifica ZZ: $0.22+0.04+0.00=0.27$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.00$
- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ $f_{z,G}=0.00$
- Asta n. 40225 (-837 -839) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1

Relazione di calcolo

Sollecitazioni: $T_z=103.76$
 $V, Ed=103.76$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-5184.53$ $T_z=100.34$
Verifica a compressione [4.2.9]
 $N, Ed=-5184.53$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.21$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-5184.53$ $M_y, Ed=32.27$ $M_z, Ed=0.27$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.21+0.05+0.00=0.27$
Verifica ZZ: $0.21+0.04+0.00=0.26$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/59101)

Asta n. 40225 (-835 -837) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-107.05$
 $V, Ed=-107.05$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.02$

- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-5181.37$ $T_z=-104.12$
Verifica a compressione [4.2.9]
 $N, Ed=-5181.37$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.21$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-5181.37$ $M_y, Ed=33.27$ $M_z, Ed=-0.27$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.21+0.05+0.00=0.27$
Verifica ZZ: $0.21+0.04+0.00=0.26$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40225 (-833 -835) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=105.64$
 $V, Ed=105.64$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.02$

- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-5135.79$ $T_z=102.22$
Verifica a compressione [4.2.9]
 $N, Ed=-5135.79$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.21$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-5135.79$ $M_y, Ed=32.62$ $M_z, Ed=0.24$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.21+0.05+0.00=0.27$
Verifica ZZ: $0.21+0.04+0.00=0.26$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40225 (-831 -833) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-105.16$
 $V, Ed=-105.16$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.02$

- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-5135.78$ $T_z=-102.24$
Verifica a compressione [4.2.9]
 $N, Ed=-5135.78$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.21$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-5135.78$ $M_y, Ed=32.62$ $M_z, Ed=-0.31$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.21+0.05+0.00=0.27$
Verifica ZZ: $0.21+0.04+0.00=0.26$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40225 (-829 -831) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=107.58$
 $V, Ed=107.58$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.02$
- Verifica a compressione (4.2.4.1.2.2) - CC 17 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-5211.14$ $T_z=104.65$
Verifica a compressione [4.2.9]
 $N, Ed=-5211.14$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.22$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-5211.14$ $M_y, Ed=33.55$ $M_z, Ed=0.20$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.22+0.05+0.00=0.27$
Verifica ZZ: $0.22+0.04+0.00=0.26$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.00$ (L/59101)

Asta n. 40225 (-827 -829) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-103.63$
 $V, Ed=-103.63$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
- Verifica a compressione (4.2.4.1.2.2) - CC 17 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-5215.63$ $T_z=-99.53$
Verifica a compressione [4.2.9]
 $N, Ed=-5215.63$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.22$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-5215.63$ $M_y, Ed=32.15$ $M_z, Ed=-0.32$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.22+0.05+0.00=0.27$
Verifica ZZ: $0.22+0.04+0.00=0.26$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40225 (-825 -827) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=113.64$
 $V, Ed=113.64$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.02$
- Verifica a compressione (4.2.4.1.2.2) - CC 1 SLV $X_l=0.52$ - Classe 1

Relazione di calcolo

Sollecitazioni: $N=-2720.10$ $T_z=-7.47$
Verifica a compressione [4.2.9]
 $N, Ed=-2720.10$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.11$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-5388.99$ $M_y, Ed=36.69$ $M_z, Ed=-0.09$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.22+0.06+0.00=0.28$
Verifica ZZ: $0.22+0.05+0.00=0.27$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/50009)

Asta n. 40225 (53 -825) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-134.19$
 $V, Ed=-134.19$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.02$

- Verifica a compressione (4.2.4.1.2.2) - CC 1 SLV $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-2745.97$ $T_z=-1.34$
Verifica a compressione [4.2.9]
 $N, Ed=-2745.97$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.11$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-5391.59$ $M_y, Ed=-44.60$ $M_z, Ed=0.16$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.22+0.07+0.00=0.30$
Verifica ZZ: $0.22+0.06+0.00=0.28$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$ (L/50009)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/36117)

Asta n. 40225 (53 24) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV $X_l=0.32$ - Classe 1
Sollecitazioni: $T_y=-7.67$ $M_x=6.29$
 $V, Ed=-7.67$ $V_c, Rd, Red=6904.42$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l=0.32$ - Classe 1
Sollecitazioni: $T_z=-621.25$ $M_x=6.29$
 $V, Ed=-621.25$ $V_c, Rd, Red=6904.42$ $V, Ed/V_c, Rd, Red=0.09$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-5312.77$ $T_z=-452.18$ $M_y=-76.51$ $T_y=-17.53$ $M_z=4.32$ $M_x=6.08$
Tensioni: $\sigma_N=-574.98$ $\sigma_{m,d}=-353.56$ $\tau=17.09$ $\sigma_{max}=-928.54$ (sfrut=0.35)
Tensioni: $\sigma_N=-574.98$ $\sigma_{m,d}=-17.48$ $\tau=127.09$ $\tau_{max}=127.09$ (sfrut=0.08)
Tensioni: $\sigma_N=-574.98$ $\sigma_{m,d}=-353.56$ $\tau=17.09$ $\sigma_{TD,max}=929.01$ (sfrut=0.35)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed=-3500.92$ $M_y, Ed=123.42$ $M_z, Ed=4.58$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.14+0.20+0.01=0.35$
Verifica ZZ: $0.14+0.16+0.01=0.31$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$ (L/12427)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.01$ (L/5785)

Asta n. 40225 (-823 24) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU $X_l=0.13$ - Classe 1
Sollecitazioni: $T_y=24.17$ $M_x=-6.37$

V,Ed=24.17 Vc,Rd,Red=6903.37 V,Ed/Vc,Rd,Red=0.00

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU Xl=0.13 - Classe 1
Sollecitazioni: Tz=-732.59 Mx=-6.37
V,Ed=-732.59 Vc,Rd,Red=6903.37 V,Ed/Vc,Rd,Red=0.11

- Verifica in termini tensionali [4.2.4] - CC 27 SLU Xl=0.27 - Classe 3
Sollecitazioni: N=-3930.99 Tz=-733.86 My=116.96 Ty=24.17 Mz=2.92 Mx=-6.37
Tensioni: $\sigma_N=-425.43$ $\sigma_{m,d}=-524.41$ $\tau=17.92$ $\sigma_{max}=-949.84$ (sfrut=0.36)
Tensioni: $\sigma_N=-425.43$ $\sigma_{m,d}=11.83$ $\tau=196.44$ $\tau_{max}=196.44$ (sfrut=0.13)
Tensioni: $\sigma_N=-425.43$ $\sigma_{m,d}=-524.41$ $\tau=17.92$ $\sigma_{ID,max}=950.35$ (sfrut=0.36)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: N,Ed=-3930.99 My,Ed=116.96 Mz,Ed=-3.60 L=0.27
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=8.58$ Ncr,y=2600080.00 $\lambda^*_y=0.10$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=8.58$ Ncr,z=2600080.00 $\lambda^*_z=0.10$ Curva a: $\Phi_z=0.00$ $\chi_z=1.00$
Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
Verifica YY: 0.16+0.19+0.01=0.36
Verifica ZZ: 0.16+0.15+0.01=0.32

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.00$

- Verifica freccia massima carichi totali - CC 32
 $f_{z,g}=0.00$

Asta n. 40225 (-821 -823) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU Xl=0.00 - Classe 1
Sollecitazioni: Tz=116.75 Mx=-1.05
V,Ed=116.75 Vc,Rd,Red=6972.44 V,Ed/Vc,Rd,Red=0.02

- Verifica a trazione (4.2.4.1.2.1) - CC 1 SLV Xl=0.31 - Classe 1
Sollecitazioni: N=2569.83 Tz=3.53 Mx=-1.54
Verifica a trazione [4.2.5]
N,Ed=2569.83 Npl,Rd=24200.00 Nu,Rd=28607.00 N,Ed/Nt,Rd=0.11

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: N,Ed=-3764.03 My,Ed=-41.85 Mz,Ed=-0.29 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
Verifica YY: 0.16+0.07+0.00=0.22
Verifica ZZ: 0.16+0.05+0.00=0.21

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/34216)

Asta n. 40225 (-819 -821) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU Xl=0.62 - Classe 1
Sollecitazioni: Tz=-94.68
V,Ed=-94.68 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.01

- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU Xl=0.31 - Classe 1
Sollecitazioni: N=-3759.58 Tz=-91.75
Verifica a compressione [4.2.9]
N,Ed=-3759.58 Nc,Rd=-24200.00 N,Ed/Nc,Rd=0.16

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: N,Ed=-3759.58 My,Ed=28.89 Mz,Ed=-0.29 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
Verifica YY: 0.16+0.05+0.00=0.20
Verifica ZZ: 0.16+0.04+0.00=0.19

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40225 (-817 -819) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=82.05$
 $V, Ed=82.05$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 1 SLV $X_l=0.21$ - Classe 1
 Sollecitazioni: $N=1942.55$ $T_z=5.35$
 Verifica a trazione [4.2.5]
 $N, Ed=1942.55$ $N_{pl}, Rd=24200.00$ $N_u, Rd=28607.00$ $N, Ed/N_t, Rd=0.08$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3559.23$ $M_y, Ed=-25.16$ $M_z, Ed=-0.49$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.15+0.04+0.00=0.19$
 Verifica ZZ: $0.15+0.03+0.00=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40225 (-815 -817) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_z=-87.51$
 $V, Ed=-87.51$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 1 SLV $X_l=0.10$ - Classe 1
 Sollecitazioni: $N=1920.32$ $T_z=-7.75$
 Verifica a trazione [4.2.5]
 $N, Ed=1920.32$ $N_{pl}, Rd=24200.00$ $N_u, Rd=28607.00$ $N, Ed/N_t, Rd=0.08$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3553.83$ $M_y, Ed=-27.28$ $M_z, Ed=-0.31$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.15+0.04+0.00=0.19$
 Verifica ZZ: $0.15+0.04+0.00=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40225 (-813 -815) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=83.50$
 $V, Ed=83.50$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 1 SLV $X_l=0.31$ - Classe 1
 Sollecitazioni: $N=1248.13$ $T_z=5.81$
 Verifica a trazione [4.2.5]
 $N, Ed=1248.13$ $N_{pl}, Rd=24200.00$ $N_u, Rd=28607.00$ $N, Ed/N_t, Rd=0.05$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3442.57$ $M_y, Ed=-25.98$ $M_z, Ed=-0.42$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
 Verifica YY: $0.14+0.04+0.00=0.18$
 Verifica ZZ: $0.14+0.03+0.00=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40225 (-811 -813) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1

Relazione di calcolo

Sollecitazioni: $T_z=-85.56$
 $V, Ed=-85.56$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 1 SLV $X_1=0.21$ - Classe 1
Sollecitazioni: $N=1223.50$ $T_z=-7.01$
Verifica a trazione [4.2.5]
 $N, Ed=1223.50$ $N_{pl}, Rd=24200.00$ $N_u, Rd=28607.00$ $N, Ed/N_t, Rd=0.05$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-3440.26$ $M_y, Ed=-26.97$ $M_z, Ed=0.27$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
Verifica YY: $0.14+0.04+0.00=0.19$
Verifica ZZ: $0.14+0.03+0.00=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/59101)

Asta n. 40225 (-809 -811) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=85.38$
 $V, Ed=85.38$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 17 SLU $X_1=0.62$ - Classe 1
Sollecitazioni: $N=-3434.10$ $T_z=79.53$ $M_y=-26.92$
 $M_y, Ed=-26.92$ $M_y, V, c, Rd=699.13$
 $N, Ed=-3434.10$ $N_c, Rd=-24200.00$ YY $n=N, Ed/N_c, Rd=0.14$ $MN_y, c, Rd=699.13$ $M_y, Ed/MN_y, c, Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-3434.10$ $M_y, Ed=-26.92$ $M_z, Ed=-0.35$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
Verifica YY: $0.14+0.04+0.00=0.19$
Verifica ZZ: $0.14+0.03+0.00=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40225 (-807 -809) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=0.62$ - Classe 1
Sollecitazioni: $T_z=-83.68$
 $V, Ed=-83.68$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $N=-3420.22$ $T_z=-77.83$ $M_y=-26.36$
 $M_y, Ed=-26.36$ $M_y, V, c, Rd=699.13$
 $N, Ed=-3420.22$ $N_c, Rd=-24200.00$ YY $n=N, Ed/N_c, Rd=0.14$ $MN_y, c, Rd=699.13$ $M_y, Ed/MN_y, c, Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-3436.10$ $M_y, Ed=-26.06$ $M_z, Ed=0.36$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
Verifica YY: $0.14+0.04+0.00=0.18$
Verifica ZZ: $0.14+0.03+0.00=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40225 (-805 -807) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=87.32$
 $V, Ed=87.32$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 9 SLV $X_l=0.41$ - Classe 1
Sollecitazioni: $N=1497.17$ $T_z=5.69$
Verifica a trazione [4.2.5]
 $N, Ed=1497.17$ $N_{pl}, Rd=24200.00$ $Nu, Rd=28607.00$ $N, Ed/Nt, Rd=0.06$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-3538.87$ $My, Ed=-27.26$ $Mz, Ed=-0.26$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.15+0.04+0.00=0.19$
Verifica ZZ: $0.15+0.04+0.00=0.18$
- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40225 (-803 -805) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-82.23$
 $V, Ed=-82.23$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
 - Verifica a trazione (4.2.4.1.2.1) - CC 9 SLV $X_l=0.41$ - Classe 1
Sollecitazioni: $N=1518.60$ $T_z=-8.28$
Verifica a trazione [4.2.5]
 $N, Ed=1518.60$ $N_{pl}, Rd=24200.00$ $Nu, Rd=28607.00$ $N, Ed/Nt, Rd=0.06$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-3543.97$ $My, Ed=-25.27$ $Mz, Ed=0.47$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.15+0.04+0.00=0.19$
Verifica ZZ: $0.15+0.03+0.00=0.18$
 - Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.00$

Asta n. 40225 (-801 -803) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-1.24$
 $V, Ed=-1.24$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=94.39$
 $V, Ed=94.39$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
 - Verifica a compressione (4.2.4.1.2.2) - CC 17 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-3734.82$ $T_z=91.47$ $T_y=-1.24$
Verifica a compressione [4.2.9]
 $N, Ed=-3734.82$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.15$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-3734.82$ $My, Ed=28.75$ $Mz, Ed=0.48$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr, y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr, z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.15+0.05+0.00=0.20$
Verifica ZZ: $0.15+0.04+0.00=0.19$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40225 (-799 -801) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l=0.62$ - Classe 1

Sollecitazioni: $T_y=-1.59$ $M_x=1.27$
 $V, Ed=-1.59$ $V_c, Rd, Red=6969.68$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_z=-119.50$ $M_x=1.27$
 $V, Ed=-119.50$ $V_c, Rd, Red=6969.68$ $V, Ed/V_c, Rd, Red=0.02$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-3737.55$ $T_z=-113.65$ $M_y=-43.31$ $T_y=-1.59$ $M_z=1.15$ $M_x=1.27$
 Tensioni: $\sigma_N=-404.50$ $\sigma_{m,d}=-194.50$ $\tau=3.56$ $\sigma_{max}=-599.00$ (sfrut=0.23)
 Tensioni: $\sigma_N=-404.50$ $\sigma_{m,d}=-4.67$ $\tau=31.21$ $\tau_{max}=31.21$ (sfrut=0.02)
 Tensioni: $\sigma_N=-404.50$ $\sigma_{m,d}=-194.50$ $\tau=3.56$ $\sigma_{ID,max}=599.03$ (sfrut=0.23)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3737.55$ $M_y, Ed=-43.31$ $M_z, Ed=1.15$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.15+0.07+0.00=0.23$
 Verifica ZZ: $0.15+0.06+0.00=0.21$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$ (L/50009)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/29550)

Asta n. 40225 (25 -799) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV $X_l=0.41$ - Classe 1
 Sollecitazioni: $T_y=-18.67$ $M_x=5.59$
 $V, Ed=-18.67$ $V_c, Rd, Red=6913.53$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l=0.41$ - Classe 1
 Sollecitazioni: $T_z=640.63$ $M_x=5.59$
 $V, Ed=640.63$ $V_c, Rd, Red=6913.53$ $V, Ed/V_c, Rd, Red=0.09$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.30$ - Classe 3
 Sollecitazioni: $N=2236.95$ $T_z=641.40$ $M_y=127.80$ $T_y=-18.67$ $M_z=2.45$ $M_x=5.59$
 Tensioni: $\sigma_N=242.09$ $\sigma_{m,d}=569.72$ $\tau=15.72$ $\sigma_{max}=811.82$ (sfrut=0.31)
 Tensioni: $\sigma_N=242.09$ $\sigma_{m,d}=9.90$ $\tau=171.75$ $\tau_{max}=171.75$ (sfrut=0.11)
 Tensioni: $\sigma_N=242.09$ $\sigma_{m,d}=569.72$ $\tau=15.72$ $\sigma_{ID,max}=812.27$ (sfrut=0.31)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed=-2069.39$ $M_y, Ed=127.80$ $M_z, Ed=-3.54$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.09+0.21+0.01=0.30$
 Verifica ZZ: $0.09+0.16+0.01=0.26$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.00$ (L/11570)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.01$ (L/4793)

Asta n. 40225 (25 51) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 13 SLV $X_l=0.47$ - Classe 1
 Sollecitazioni: $T_y=-18.80$ $M_x=-14.31$
 $V, Ed=-18.80$ $V_c, Rd, Red=6800.25$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 13 SLV $X_l=0.47$ - Classe 1
 Sollecitazioni: $T_z=800.08$ $M_x=-14.31$
 $V, Ed=800.08$ $V_c, Rd, Red=6800.25$ $V, Ed/V_c, Rd, Red=0.12$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.30$ - Classe 3
 Sollecitazioni: $N=-3080.37$ $T_z=1499.77$ $M_y=160.53$ $T_y=17.08$ $M_z=3.23$ $M_x=-8.11$
 Tensioni: $\sigma_N=-333.37$ $\sigma_{m,d}=-716.30$ $\tau=22.79$ $\sigma_{max}=-1049.67$ (sfrut=0.40)
 Tensioni: $\sigma_N=-333.37$ $\sigma_{m,d}=-13.05$ $\tau=387.63$ $\tau_{max}=387.63$ (sfrut=0.26)
 Tensioni: $\sigma_N=-333.37$ $\sigma_{m,d}=-663.63$ $\tau=275.36$ $\sigma_{ID,max}=1105.22$ (sfrut=0.42)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N, Ed=-3080.37$ $M_y, Ed=160.53$ $M_z, Ed=5.75$ $L=0.47$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=14.94$ $N_{cr,y}=857996.00$ $\lambda^*_y=0.17$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$

$\lambda_z=14.94$ Ncr,z=857996.00 $\lambda^*_z=0.17$ Curva a: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.13+0.26+0.01=0.39$
 Verifica ZZ: $0.13+0.21+0.01=0.34$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$ (L/6602)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.01$ (L/2922)

Asta n. 40225 (51 50) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_y=-5.69$
 $V, Ed=-5.69$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_z=-117.06$
 $V, Ed=-117.06$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.02$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-4538.31$ $T_z=-111.21$ $M_y=-40.79$ $T_y=-5.69$ $M_z=3.71$
 Tensioni: $\sigma_N=-491.16$ $\sigma_{m,d}=-194.63$ $\tau=0.00$ $\sigma_{max}=-685.79$ (sfrut=0.26)
 Tensioni: $\sigma_N=-491.16$ $\sigma_{m,d}=15.00$ $\tau=27.05$ $\tau_{max}=27.05$ (sfrut=0.02)
 Tensioni: $\sigma_N=-491.16$ $\sigma_{m,d}=-194.63$ $\tau=0.00$ $\sigma_{ID,max}=685.79$ (sfrut=0.26)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-4538.31$ $M_y, Ed=-40.79$ $M_z, Ed=3.71$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493058.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493058.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.19+0.07+0.01=0.26$
 Verifica ZZ: $0.19+0.05+0.01=0.25$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$ (L/50008)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.00$ (L/32505)

Asta n. 40225 (50 47) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU $X_l=0.31$ - Classe 1
 Sollecitazioni: $T_y=-4.92$ $M_x=1.97$
 $V, Ed=-4.92$ $V_c, Rd, Red=6960.56$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU $X_l=0.31$ - Classe 1
 Sollecitazioni: $T_z=100.36$ $M_x=1.97$
 $V, Ed=100.36$ $V_c, Rd, Red=6960.56$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-4520.67$ $T_z=103.28$ $M_y=34.09$ $T_y=-4.92$ $M_z=2.05$ $M_x=1.97$
 Tensioni: $\sigma_N=-489.25$ $\sigma_{m,d}=-158.06$ $\tau=5.54$ $\sigma_{max}=-647.31$ (sfrut=0.25)
 Tensioni: $\sigma_N=-489.25$ $\sigma_{m,d}=8.28$ $\tau=30.66$ $\tau_{max}=30.66$ (sfrut=0.02)
 Tensioni: $\sigma_N=-489.25$ $\sigma_{m,d}=-158.06$ $\tau=5.54$ $\sigma_{ID,max}=647.38$ (sfrut=0.25)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-4520.67$ $M_y, Ed=34.09$ $M_z, Ed=2.05$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.19+0.06+0.00=0.25$
 Verifica ZZ: $0.19+0.04+0.00=0.23$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/50009)

Asta n. 40225 (47 46) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_y=-5.27$ $M_x=2.31$
 $V, Ed=-5.27$ $V_c, Rd, Red=6956.13$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l=0.62$ - Classe 1

Sollecitazioni: $T_z=-73.12$ $M_x=2.31$
 $V, Ed=-73.12$ $V_c, Rd, Red=6956.13$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-3890.97$ $T_z=-67.27$ $M_y=-21.10$ $T_y=-5.27$ $M_z=2.76$ $M_x=2.31$
 Tensioni: $\sigma_N=-421.10$ $\sigma_{m,d}=-104.37$ $\tau=6.50$ $\sigma_{max}=-525.47$ (sfrut=0.20)
 Tensioni: $\sigma_N=-421.10$ $\sigma_{m,d}=-11.17$ $\tau=22.86$ $\tau_{max}=22.86$ (sfrut=0.02)
 Tensioni: $\sigma_N=-421.10$ $\sigma_{m,d}=-104.37$ $\tau=6.50$ $\sigma_{ID,max}=525.59$ (sfrut=0.20)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3890.97$ $M_y, Ed=22.42$ $M_z, Ed=2.76$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.16+0.04+0.00=0.20$
 Verifica ZZ: $0.16+0.03+0.00=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40225 (46 43) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU $X_l=0.10$ - Classe 1
 Sollecitazioni: $T_y=-5.06$ $M_x=2.27$
 $V, Ed=-5.06$ $V_c, Rd, Red=6956.63$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU $X_l=0.10$ - Classe 1
 Sollecitazioni: $T_z=93.89$ $M_x=2.27$
 $V, Ed=93.89$ $V_c, Rd, Red=6956.63$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.62$ - Classe 3
 Sollecitazioni: $N=-3872.96$ $T_z=88.45$ $M_y=-28.58$ $T_y=-5.22$ $M_z=-1.71$ $M_x=2.34$
 Tensioni: $\sigma_N=-419.15$ $\sigma_{m,d}=-132.53$ $\tau=6.58$ $\sigma_{max}=-551.68$ (sfrut=0.21)
 Tensioni: $\sigma_N=-419.15$ $\sigma_{m,d}=-6.94$ $\tau=28.09$ $\tau_{max}=28.09$ (sfrut=0.02)
 Tensioni: $\sigma_N=-419.15$ $\sigma_{m,d}=-132.53$ $\tau=6.58$ $\sigma_{ID,max}=551.79$ (sfrut=0.21)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3872.96$ $M_y, Ed=-28.58$ $M_z, Ed=-1.71$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.16+0.05+0.00=0.21$
 Verifica ZZ: $0.16+0.04+0.00=0.20$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40225 (43 42) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l=0.52$ - Classe 1
 Sollecitazioni: $T_y=-5.25$ $M_x=2.35$
 $V, Ed=-5.25$ $V_c, Rd, Red=6955.59$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l=0.52$ - Classe 1
 Sollecitazioni: $T_z=-73.51$ $M_x=2.35$
 $V, Ed=-73.51$ $V_c, Rd, Red=6955.59$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-3399.46$ $T_z=-68.63$ $M_y=-23.08$ $T_y=-5.25$ $M_z=2.21$ $M_x=2.35$
 Tensioni: $\sigma_N=-367.91$ $\sigma_{m,d}=-110.65$ $\tau=6.61$ $\sigma_{max}=-478.56$ (sfrut=0.18)
 Tensioni: $\sigma_N=-367.91$ $\sigma_{m,d}=-8.95$ $\tau=23.31$ $\tau_{max}=23.31$ (sfrut=0.02)
 Tensioni: $\sigma_N=-367.91$ $\sigma_{m,d}=-110.65$ $\tau=6.61$ $\sigma_{ID,max}=478.70$ (sfrut=0.18)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3399.46$ $M_y, Ed=-23.08$ $M_z, Ed=2.21$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493058.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493058.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
 Verifica YY: $0.14+0.04+0.00=0.18$
 Verifica ZZ: $0.14+0.03+0.00=0.17$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$
- Asta n. 40225 (42 39) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_y=-5.10$ $M_x=2.29$
 $V,Ed=-5.10$ $V_c,Rd,Red=6956.46$ $V,Ed/V_c,Rd,Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=92.91$ $M_x=2.29$
 $V,Ed=92.91$ $V_c,Rd,Red=6956.46$ $V,Ed/V_c,Rd,Red=0.01$
- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_1=0.62$ - Classe 3
 Sollecitazioni: $N=-3384.54$ $T_z=86.50$ $M_y=-29.47$ $T_y=-5.26$ $M_z=-2.28$ $M_x=2.35$
 Tensioni: $\sigma_N=-366.29$ $\sigma_{m,d}=-138.85$ $\tau=6.62$ $\sigma_{max}=-505.14$ (sfrut=0.19)
 Tensioni: $\sigma_N=-366.29$ $\sigma_{m,d}=-9.21$ $\tau=27.66$ $\tau_{max}=27.66$ (sfrut=0.02)
 Tensioni: $\sigma_N=-366.29$ $\sigma_{m,d}=-138.85$ $\tau=6.62$ $\sigma_{ID,max}=505.27$ (sfrut=0.19)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-3384.54$ $M_y,Ed=-29.47$ $M_z,Ed=-2.28$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
 Verifica YY: $0.14+0.05+0.00=0.19$
 Verifica ZZ: $0.14+0.04+0.00=0.18$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$
- Asta n. 40225 (39 38) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_1=0.41$ - Classe 1
 Sollecitazioni: $T_y=-5.23$ $M_x=2.35$
 $V,Ed=-5.23$ $V_c,Rd,Red=6955.61$ $V,Ed/V_c,Rd,Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_1=0.41$ - Classe 1
 Sollecitazioni: $T_z=-74.47$ $M_x=2.35$
 $V,Ed=-74.47$ $V_c,Rd,Red=6955.61$ $V,Ed/V_c,Rd,Red=0.01$
- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-3001.38$ $T_z=-70.58$ $M_y=-25.03$ $T_y=-5.23$ $M_z=1.66$ $M_x=2.35$
 Tensioni: $\sigma_N=-324.82$ $\sigma_{m,d}=-116.73$ $\tau=6.61$ $\sigma_{max}=-441.55$ (sfrut=0.17)
 Tensioni: $\sigma_N=-324.82$ $\sigma_{m,d}=-6.70$ $\tau=23.78$ $\tau_{max}=23.78$ (sfrut=0.02)
 Tensioni: $\sigma_N=-324.82$ $\sigma_{m,d}=-116.73$ $\tau=6.61$ $\sigma_{ID,max}=441.70$ (sfrut=0.17)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-3001.38$ $M_y,Ed=-25.03$ $M_z,Ed=1.66$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493058.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493058.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
 Verifica YY: $0.12+0.04+0.00=0.17$
 Verifica ZZ: $0.12+0.03+0.00=0.16$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/59101)
- Asta n. 40225 (38 35) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_y=-5.14$ $M_x=2.29$
 $V,Ed=-5.14$ $V_c,Rd,Red=6956.46$ $V,Ed/V_c,Rd,Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=91.45$ $M_x=2.29$
 $V,Ed=91.45$ $V_c,Rd,Red=6956.46$ $V,Ed/V_c,Rd,Red=0.01$
- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_1=0.62$ - Classe 3

Sollecitazioni: $N=-2989.56$ $T_z=85.06$ $M_y=-30.28$ $T_y=-5.30$ $M_z=-2.85$ $M_x=2.37$
 Tensioni: $\sigma_N=-323.55$ $\sigma_{m,d}=-144.90$ $\tau=6.65$ $\sigma_{max}=-468.44$ (sfrut=0.18)
 Tensioni: $\sigma_N=-323.55$ $\sigma_{m,d}=-11.53$ $\tau=27.35$ $\tau_{max}=27.35$ (sfrut=0.02)
 Tensioni: $\sigma_N=-323.55$ $\sigma_{m,d}=-144.90$ $\tau=6.65$ $\sigma_{ID,max}=468.58$ (sfrut=0.18)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N_{Ed}=-2989.56$ $M_{y,Ed}=-30.28$ $M_{z,Ed}=-2.85$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
 Verifica YY: $0.12+0.05+0.00=0.18$
 Verifica ZZ: $0.12+0.04+0.00=0.17$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.00$ (L/59101)

Asta n. 40225 (35 34) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l=0.31$ - Classe 1
 Sollecitazioni: $T_y=-5.76$ $M_x=2.33$
 $V_{Ed}=-5.76$ $V_{c,Rd,Red}=6955.86$ $V_{Ed}/V_{c,Rd,Red}=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l=0.31$ - Classe 1
 Sollecitazioni: $T_z=-80.55$ $M_x=2.33$
 $V_{Ed}=-80.55$ $V_{c,Rd,Red}=6955.86$ $V_{Ed}/V_{c,Rd,Red}=0.01$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.62$ - Classe 3
 Sollecitazioni: $N=4140.31$ $T_z=45.80$ $M_y=-25.89$ $T_y=-4.51$ $M_z=-1.81$ $M_x=1.99$
 Tensioni: $\sigma_N=448.08$ $\sigma_{m,d}=121.14$ $\tau=5.60$ $\sigma_{max}=569.23$ (sfrut=0.22)
 Tensioni: $\sigma_N=448.08$ $\sigma_{m,d}=-7.32$ $\tau=16.74$ $\tau_{max}=16.74$ (sfrut=0.01)
 Tensioni: $\sigma_N=448.08$ $\sigma_{m,d}=121.14$ $\tau=5.60$ $\sigma_{ID,max}=569.31$ (sfrut=0.22)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N_{Ed}=-2694.40$ $M_{y,Ed}=-27.34$ $M_{z,Ed}=-2.42$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493058.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493058.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.11+0.04+0.00=0.16$
 Verifica ZZ: $0.11+0.04+0.00=0.15$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/54176)

Asta n. 40225 (34 31) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-7.17$ $M_x=2.24$
 $V_{Ed}=-7.17$ $V_{c,Rd,Red}=6957.08$ $V_{Ed}/V_{c,Rd,Red}=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=127.73$ $M_x=2.24$
 $V_{Ed}=127.73$ $V_{c,Rd,Red}=6957.08$ $V_{Ed}/V_{c,Rd,Red}=0.02$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.62$ - Classe 3
 Sollecitazioni: $N=4179.47$ $T_z=54.45$ $M_y=-25.05$ $T_y=-5.42$ $M_z=-3.60$ $M_x=2.74$
 Tensioni: $\sigma_N=452.32$ $\sigma_{m,d}=125.34$ $\tau=7.69$ $\sigma_{max}=577.66$ (sfrut=0.22)
 Tensioni: $\sigma_N=452.32$ $\sigma_{m,d}=-14.57$ $\tau=20.94$ $\tau_{max}=20.94$ (sfrut=0.01)
 Tensioni: $\sigma_N=452.32$ $\sigma_{m,d}=125.34$ $\tau=7.69$ $\sigma_{ID,max}=577.82$ (sfrut=0.22)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N_{Ed}=-2680.10$ $M_{y,Ed}=-49.22$ $M_{z,Ed}=-4.95$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.11+0.08+0.01=0.20$
 Verifica ZZ: $0.11+0.06+0.01=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$ (L/59101)

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/27088)

Asta n. 40225 (31 26) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV $X_1=0.02$ - Classe 1
Sollecitazioni: $T_y=1.59$ $M_x=3.94$
 $V,Ed=1.59$ $V_c,Rd,Red=6934.91$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_1=0.02$ - Classe 1
Sollecitazioni: $T_z=-3802.82$ $M_x=3.94$
 $V,Ed=-3802.82$ $V_c,Rd,Red=6934.91$ $V,Ed/V_c,Rd,Red=0.55$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_1=0.02$ - Classe 3
Sollecitazioni: $N=4222.13$ $T_z=-3802.82$ $M_y=-59.47$ $T_y=-29.21$ $M_z=-5.19$ $M_x=3.94$
Tensioni: $\sigma_N=456.94$ $\sigma_{m,d}=282.84$ $\tau=11.09$ $\sigma_{max}=739.78$ (sfrut=0.28)
Tensioni: $\sigma_N=456.94$ $\sigma_{m,d}=21.01$ $\tau=936.16$ $\tau_{max}=936.16$ (sfrut=0.62)
Tensioni: $\sigma_N=456.94$ $\sigma_{m,d}=22.71$ $\tau=936.16$ $\sigma_{ID,max}=1690.94$ (sfrut=0.65)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N,Ed=-2204.95$ $M_y,Ed=-135.49$ $M_z,Ed=-5.22$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.09+0.22+0.01=0.32$
Verifica ZZ: $0.09+0.17+0.01=0.27$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$ (L/1103)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.01$ (L/395)

Asta n. 40226 (30 -932) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV $X_1=0.00$ - Classe 1
Sollecitazioni: $T_y=8.75$ $M_x=2.22$
 $V,Ed=8.75$ $V_c,Rd,Red=6957.30$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=240.28$ $M_x=2.22$
 $V,Ed=240.28$ $V_c,Rd,Red=6957.30$ $V,Ed/V_c,Rd,Red=0.03$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_1=0.00$ - Classe 3
Sollecitazioni: $N=5251.59$ $T_z=210.64$ $M_y=70.88$ $T_y=-33.75$ $M_z=10.49$ $M_x=3.91$
Tensioni: $\sigma_N=568.35$ $\sigma_{m,d}=355.94$ $\tau=11.00$ $\sigma_{max}=924.30$ (sfrut=0.35)
Tensioni: $\sigma_N=568.35$ $\sigma_{m,d}=42.46$ $\tau=62.24$ $\tau_{max}=62.24$ (sfrut=0.04)
Tensioni: $\sigma_N=568.35$ $\sigma_{m,d}=355.94$ $\tau=11.00$ $\sigma_{ID,max}=924.49$ (sfrut=0.35)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N,Ed=-1322.28$ $M_y,Ed=82.04$ $M_z,Ed=7.75$ $L=0.47$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=14.94$ $N_{cr,y}=857989.00$ $\lambda^*_y=0.17$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=14.94$ $N_{cr,z}=857989.00$ $\lambda^*_z=0.17$ Curva a: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.76, 0.96$
Verifica YY: $0.05+0.13+0.01=0.20$
Verifica ZZ: $0.05+0.10+0.01=0.17$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.00$ (L/44802)

Asta n. 40226 (-934 -932) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_y=-4.76$ $M_x=1.94$
 $V,Ed=-4.76$ $V_c,Rd,Red=6960.95$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=71.60$ $M_x=1.94$
 $V,Ed=71.60$ $V_c,Rd,Red=6960.95$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_1=0.31$ - Classe 3
Sollecitazioni: $N=4507.48$ $T_z=-24.73$ $M_y=-12.07$ $T_y=-4.17$ $M_z=-1.21$ $M_x=2.21$
Tensioni: $\sigma_N=487.82$ $\sigma_{m,d}=58.10$ $\tau=6.22$ $\sigma_{max}=545.92$ (sfrut=0.21)
Tensioni: $\sigma_N=487.82$ $\sigma_{m,d}=4.90$ $\tau=12.23$ $\tau_{max}=12.23$ (sfrut=0.01)

Tensioni: $\sigma_N=487.82$ $\sigma_{m,d}=58.10$ $\tau=6.22$ $\sigma_{ID,max}=546.03$ (sfrut=0.21)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N_{Ed}=-1477.36$ $M_{y,Ed}=-26.70$ $M_{z,Ed}=-2.91$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.06+0.04+0.00=0.11$
Verifica ZZ: $0.06+0.03+0.00=0.10$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/50009)

Asta n. 40226 (-936 -934) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_L=0.41$ - Classe 1
Sollecitazioni: $T_y=-4.31$ $M_x=1.93$
 $V_{Ed}=-4.31$ $V_c, R_d, Red=6961.07$ $V_{Ed}/V_c, R_d, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_L=0.41$ - Classe 1
Sollecitazioni: $T_z=-64.16$ $M_x=1.93$
 $V_{Ed}=-64.16$ $V_c, R_d, Red=6961.07$ $V_{Ed}/V_c, R_d, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_L=0.62$ - Classe 3
Sollecitazioni: $N=4477.07$ $T_z=39.96$ $M_y=-22.74$ $T_y=-3.77$ $M_z=-1.40$ $M_x=1.70$
Tensioni: $\sigma_N=484.53$ $\sigma_{m,d}=105.57$ $\tau=4.78$ $\sigma_{max}=590.10$ (sfrut=0.23)
Tensioni: $\sigma_N=484.53$ $\sigma_{m,d}=-5.66$ $\tau=14.50$ $\tau_{max}=14.50$ (sfrut=0.01)
Tensioni: $\sigma_N=484.53$ $\sigma_{m,d}=105.57$ $\tau=4.78$ $\sigma_{ID,max}=590.16$ (sfrut=0.23)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N_{Ed}=-1478.96$ $M_{y,Ed}=-24.26$ $M_{z,Ed}=-1.58$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.06+0.04+0.00=0.10$
Verifica ZZ: $0.06+0.03+0.00=0.09$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/46436)

Asta n. 40226 (-938 -936) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_L=0.00$ - Classe 1
Sollecitazioni: $T_y=-4.19$ $M_x=1.94$
 $V_{Ed}=-4.19$ $V_c, R_d, Red=6960.97$ $V_{Ed}/V_c, R_d, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_L=0.00$ - Classe 1
Sollecitazioni: $T_z=70.62$ $M_x=1.94$
 $V_{Ed}=70.62$ $V_c, R_d, Red=6960.97$ $V_{Ed}/V_c, R_d, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 11 SLV $X_L=0.62$ - Classe 3
Sollecitazioni: $N=3586.28$ $T_z=-28.34$ $M_y=9.24$ $T_y=-3.74$ $M_z=-1.95$ $M_x=1.52$
Tensioni: $\sigma_N=388.12$ $\sigma_{m,d}=48.94$ $\tau=4.28$ $\sigma_{max}=437.06$ (sfrut=0.17)
Tensioni: $\sigma_N=388.12$ $\sigma_{m,d}=7.88$ $\tau=11.18$ $\tau_{max}=11.18$ (sfrut=0.01)
Tensioni: $\sigma_N=388.12$ $\sigma_{m,d}=48.94$ $\tau=4.28$ $\sigma_{ID,max}=437.13$ (sfrut=0.17)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N_{Ed}=-1610.62$ $M_{y,Ed}=-25.64$ $M_{z,Ed}=-2.16$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.07+0.04+0.00=0.11$
Verifica ZZ: $0.07+0.03+0.00=0.10$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/54176)

Relazione di calcolo

Asta n. 40226 (-940 -938) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X1=0.52$ - Classe 1
Sollecitazioni: $T_y=-4.15$ $M_x=1.93$
 $V, Ed=-4.15$ $V_c, Rd, Red=6961.10$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X1=0.52$ - Classe 1
Sollecitazioni: $T_z=-62.15$ $M_x=1.93$
 $V, Ed=-62.15$ $V_c, Rd, Red=6961.10$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 9 SLV $X1=0.62$ - Classe 3
Sollecitazioni: $N=3565.70$ $T_z=41.37$ $M_y=-20.22$ $T_y=-3.74$ $M_z=-1.12$ $M_x=1.74$
Tensioni: $\sigma_N=385.90$ $\sigma_{m,d}=93.35$ $\tau=4.88$ $\sigma_{max}=479.25$ (sfrut=0.18)
Tensioni: $\sigma_N=385.90$ $\sigma_{m,d}=-4.55$ $\tau=14.95$ $\tau_{max}=14.95$ (sfrut=0.01)
Tensioni: $\sigma_N=385.90$ $\sigma_{m,d}=93.35$ $\tau=4.88$ $\sigma_{ID,max}=479.32$ (sfrut=0.18)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-1616.82$ $M_y, Ed=-22.95$ $M_z, Ed=1.35$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.07+0.04+0.00=0.11$
Verifica ZZ: $0.07+0.03+0.00=0.10$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/50009)

Asta n. 40226 (-942 -940) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X1=0.00$ - Classe 1
Sollecitazioni: $T_y=-4.17$ $M_x=1.93$
 $V, Ed=-4.17$ $V_c, Rd, Red=6961.05$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X1=0.00$ - Classe 1
Sollecitazioni: $T_z=72.42$ $M_x=1.93$
 $V, Ed=72.42$ $V_c, Rd, Red=6961.05$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 11 SLV $X1=0.62$ - Classe 3
Sollecitazioni: $N=2611.28$ $T_z=-26.95$ $M_y=7.04$ $T_y=-3.73$ $M_z=-1.70$ $M_x=1.50$
Tensioni: $\sigma_N=282.61$ $\sigma_{m,d}=38.24$ $\tau=4.22$ $\sigma_{max}=320.84$ (sfrut=0.12)
Tensioni: $\sigma_N=282.61$ $\sigma_{m,d}=6.87$ $\tau=10.77$ $\tau_{max}=10.77$ (sfrut=0.01)
Tensioni: $\sigma_N=282.61$ $\sigma_{m,d}=38.24$ $\tau=4.22$ $\sigma_{ID,max}=320.93$ (sfrut=0.12)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-1840.18$ $M_y, Ed=-25.54$ $M_z, Ed=-1.87$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.08+0.04+0.00=0.12$
Verifica ZZ: $0.08+0.03+0.00=0.11$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/54176)

Asta n. 40226 (-944 -942) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X1=0.62$ - Classe 1
Sollecitazioni: $T_y=-4.16$ $M_x=1.93$
 $V, Ed=-4.16$ $V_c, Rd, Red=6961.08$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X1=0.62$ - Classe 1
Sollecitazioni: $T_z=-61.22$ $M_x=1.93$
 $V, Ed=-61.22$ $V_c, Rd, Red=6961.08$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 9 SLV $X1=0.00$ - Classe 3
Sollecitazioni: $N=2583.10$ $T_z=47.32$ $M_y=10.48$ $T_y=-3.75$ $M_z=1.44$ $M_x=1.74$
Tensioni: $\sigma_N=279.56$ $\sigma_{m,d}=52.16$ $\tau=4.89$ $\sigma_{max}=331.72$ (sfrut=0.13)
Tensioni: $\sigma_N=279.56$ $\sigma_{m,d}=5.84$ $\tau=16.40$ $\tau_{max}=16.40$ (sfrut=0.01)
Tensioni: $\sigma_N=279.56$ $\sigma_{m,d}=52.16$ $\tau=4.89$ $\sigma_{ID,max}=331.82$ (sfrut=0.13)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3

Sollecitazioni: N,Ed=-1849.54 My,Ed=-21.54 Mz,Ed=1.64 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.08+0.03+0.00=0.11
 Verifica ZZ: 0.08+0.03+0.00=0.11

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/59101)

Asta n. 40226 (-946 -944) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_y=-4.16$ $M_x=1.93$
 $V, Ed=-4.16$ $V_c, Rd, Red=6961.09$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU X1=0.00 - Classe 1
 Sollecitazioni: $T_z=74.30$ $M_x=1.93$
 $V, Ed=74.30$ $V_c, Rd, Red=6961.09$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU X1=0.62 - Classe 3
 Sollecitazioni: N=-2163.30 $T_z=68.45$ $M_y=-25.18$ $T_y=-4.16$ $M_z=-1.59$ $M_x=1.93$
 Tensioni: $\sigma_N=-234.12$ $\sigma_{m,d}=-117.07$ $\tau=5.42$ $\sigma_{max}=-351.19$ (sfrut=0.13)
 Tensioni: $\sigma_N=-234.12$ $\sigma_{m,d}=-6.42$ $\tau=22.08$ $\tau_{max}=22.08$ (sfrut=0.01)
 Tensioni: $\sigma_N=-234.12$ $\sigma_{m,d}=-117.07$ $\tau=5.42$ $\sigma_{ID,max}=351.32$ (sfrut=0.13)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: N,Ed=-2163.30 My,Ed=-25.18 Mz,Ed=-1.59 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.09+0.04+0.00=0.13
 Verifica ZZ: 0.09+0.03+0.00=0.12

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40226 (-948 -946) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU X1=0.62 - Classe 1
 Sollecitazioni: $T_y=-4.18$ $M_x=1.93$
 $V, Ed=-4.18$ $V_c, Rd, Red=6961.06$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU X1=0.62 - Classe 1
 Sollecitazioni: $T_z=-59.34$ $M_x=1.93$
 $V, Ed=-59.34$ $V_c, Rd, Red=6961.06$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU X1=0.00 - Classe 3
 Sollecitazioni: N=-2175.80 $T_z=-53.49$ $M_y=-19.83$ $T_y=-4.18$ $M_z=1.92$ $M_x=1.93$
 Tensioni: $\sigma_N=-235.48$ $\sigma_{m,d}=-95.14$ $\tau=5.43$ $\sigma_{max}=-330.62$ (sfrut=0.13)
 Tensioni: $\sigma_N=-235.48$ $\sigma_{m,d}=-7.77$ $\tau=18.44$ $\tau_{max}=18.44$ (sfrut=0.01)
 Tensioni: $\sigma_N=-235.48$ $\sigma_{m,d}=-95.14$ $\tau=5.43$ $\sigma_{ID,max}=330.75$ (sfrut=0.13)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: N,Ed=-2175.80 My,Ed=-19.83 Mz,Ed=1.92 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.09+0.03+0.00=0.12
 Verifica ZZ: 0.09+0.03+0.00=0.12

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40226 (-950 -948) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU X1=0.10 - Classe 1

Sollecitazioni: $T_y = -4.14$ $M_x = 1.92$
 $V, Ed = -4.14$ $V_c, Rd, Red = 6961.21$ $V, Ed/V_c, Rd, Red = 0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l = 0.10$ - Classe 1
 Sollecitazioni: $T_z = 75.27$ $M_x = 1.92$
 $V, Ed = 75.27$ $V_c, Rd, Red = 6961.21$ $V, Ed/V_c, Rd, Red = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l = 0.62$ - Classe 3
 Sollecitazioni: $N = -2579.93$ $T_z = 70.40$ $M_y = -24.52$ $T_y = -4.14$ $M_z = -1.30$ $M_x = 1.92$
 Tensioni: $\sigma_N = -279.21$ $\sigma_{m,d} = -112.95$ $\tau = 5.40$ $\sigma_{max} = -392.16$ (sfrut=0.15)
 Tensioni: $\sigma_N = -279.21$ $\sigma_{m,d} = -5.26$ $\tau = 22.52$ $\tau_{max} = 22.52$ (sfrut=0.01)
 Tensioni: $\sigma_N = -279.21$ $\sigma_{m,d} = -112.95$ $\tau = 5.40$ $\sigma_{ID,max} = 392.27$ (sfrut=0.15)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed = -2579.93$ $M_y, Ed = -24.52$ $M_z, Ed = -1.30$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr,y} = 493056.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $N_{cr,z} = 493056.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.11 + 0.04 + 0.00 = 0.15$
 Verifica ZZ: $0.11 + 0.03 + 0.00 = 0.14$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L} = 0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L} = 0.00$

Asta n. 40226 (-952 -950) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l = 0.62$ - Classe 1
 Sollecitazioni: $T_y = -4.18$ $M_x = 1.90$
 $V, Ed = -4.18$ $V_c, Rd, Red = 6961.47$ $V, Ed/V_c, Rd, Red = 0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l = 0.62$ - Classe 1
 Sollecitazioni: $T_z = -57.90$ $M_x = 1.90$
 $V, Ed = -57.90$ $V_c, Rd, Red = 6961.47$ $V, Ed/V_c, Rd, Red = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l = 0.00$ - Classe 3
 Sollecitazioni: $N = -2595.53$ $T_z = -52.05$ $M_y = -18.04$ $T_y = -4.18$ $M_z = 2.19$ $M_x = 1.90$
 Tensioni: $\sigma_N = -280.90$ $\sigma_{m,d} = -88.50$ $\tau = 5.34$ $\sigma_{max} = -369.40$ (sfrut=0.14)
 Tensioni: $\sigma_N = -280.90$ $\sigma_{m,d} = -8.88$ $\tau = 18.00$ $\tau_{max} = 18.00$ (sfrut=0.01)
 Tensioni: $\sigma_N = -280.90$ $\sigma_{m,d} = -88.50$ $\tau = 5.34$ $\sigma_{ID,max} = 369.52$ (sfrut=0.14)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed = -2595.53$ $M_y, Ed = -18.04$ $M_z, Ed = 2.19$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr,y} = 493056.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $N_{cr,z} = 493056.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.11 + 0.03 + 0.00 = 0.14$
 Verifica ZZ: $0.11 + 0.02 + 0.00 = 0.13$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L} = 0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G} = 0.00$

Asta n. 40226 (-954 -952) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l = 0.21$ - Classe 1
 Sollecitazioni: $T_y = -3.88$ $M_x = 1.68$
 $V, Ed = -3.88$ $V_c, Rd, Red = 6964.32$ $V, Ed/V_c, Rd, Red = 0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l = 0.21$ - Classe 1
 Sollecitazioni: $T_z = 81.32$ $M_x = 1.68$
 $V, Ed = 81.32$ $V_c, Rd, Red = 6964.32$ $V, Ed/V_c, Rd, Red = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l = 0.00$ - Classe 3
 Sollecitazioni: $N = -3087.69$ $T_z = 83.26$ $M_y = 25.59$ $T_y = -3.88$ $M_z = 1.50$ $M_x = 1.68$
 Tensioni: $\sigma_N = -334.17$ $\sigma_{m,d} = -118.50$ $\tau = 4.72$ $\sigma_{max} = -452.67$ (sfrut=0.17)
 Tensioni: $\sigma_N = -334.17$ $\sigma_{m,d} = 6.07$ $\tau = 24.98$ $\tau_{max} = 24.98$ (sfrut=0.02)
 Tensioni: $\sigma_N = -334.17$ $\sigma_{m,d} = -118.50$ $\tau = 4.72$ $\sigma_{ID,max} = 452.74$ (sfrut=0.17)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed = -3087.69$ $M_y, Ed = 25.59$ $M_z, Ed = 1.50$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr,y} = 493056.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$

$\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
 Verifica YY: $0.13+0.04+0.00=0.17$
 Verifica ZZ: $0.13+0.03+0.00=0.16$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40226 (62 -954) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_y=-4.21$
 $V, Ed=-4.21$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_z=-95.66$
 $V, Ed=-95.66$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-3100.87$ $T_z=-89.82$ $M_y=-35.00$ $T_y=-4.21$ $M_z=2.50$
 Tensioni: $\sigma_N=-335.59$ $\sigma_{m,d}=-163.99$ $\tau=0.00$ $\sigma_{max}=-499.58$ (sfrut=0.19)
 Tensioni: $\sigma_N=-335.59$ $\sigma_{m,d}=10.10$ $\tau=21.85$ $\tau_{max}=21.85$ (sfrut=0.01)
 Tensioni: $\sigma_N=-335.59$ $\sigma_{m,d}=-163.99$ $\tau=0.00$ $\sigma_{ID,max}=499.58$ (sfrut=0.19)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3100.87$ $M_y, Ed=-35.00$ $M_z, Ed=2.50$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
 Verifica YY: $0.13+0.06+0.00=0.19$
 Verifica ZZ: $0.13+0.05+0.00=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$ (L/50009)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.00$ (L/34216)

Asta n. 40226 (62 -794) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV $X_l=0.32$ - Classe 1
 Sollecitazioni: $T_y=1.26$ $M_x=-5.58$
 $V, Ed=1.26$ $V_c, Rd, Red=6913.62$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.32$ - Classe 1
 Sollecitazioni: $T_z=-652.86$ $M_x=-5.58$
 $V, Ed=-652.86$ $V_c, Rd, Red=6913.62$ $V, Ed/V_c, Rd, Red=0.09$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.32$ - Classe 3
 Sollecitazioni: $N=2535.66$ $T_z=-652.86$ $M_y=132.35$ $T_y=15.82$ $M_z=-1.97$ $M_x=-5.58$
 Tensioni: $\sigma_N=274.42$ $\sigma_{m,d}=587.56$ $\tau=15.70$ $\sigma_{max}=861.99$ (sfrut=0.33)
 Tensioni: $\sigma_N=274.42$ $\sigma_{m,d}=-7.97$ $\tau=174.51$ $\tau_{max}=174.51$ (sfrut=0.12)
 Tensioni: $\sigma_N=274.42$ $\sigma_{m,d}=587.56$ $\tau=15.70$ $\sigma_{ID,max}=862.41$ (sfrut=0.33)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N, Ed=-1851.44$ $M_y, Ed=132.35$ $M_z, Ed=-5.05$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.08+0.21+0.01=0.30$
 Verifica ZZ: $0.08+0.17+0.01=0.25$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$ (L/11983)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.01$ (L/4793)

Asta n. 40226 (-956 -794) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-9.61$ $M_x=8.84$
 $V, Ed=-9.61$ $V_c, Rd, Red=6871.34$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l=0.00$ - Classe 1

Sollecitazioni: $T_z=-1050.97$ $M_x=8.84$
 $V, Ed=-1050.97$ $V_c, Rd, Red=6871.34$ $V, Ed/V_c, Rd, Red=0.15$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=0.19$ - Classe 3
 Sollecitazioni: $N=-5708.41$ $T_z=-1162.92$ $M_y=133.01$ $T_y=-29.87$ $M_z=-3.25$ $M_x=10.18$
 Tensioni: $\sigma_N=-617.79$ $\sigma_{m,d}=-596.04$ $\tau=28.61$ $\sigma_{max}=-1213.84$ (sfrut=0.46)
 Tensioni: $\sigma_N=-617.79$ $\sigma_{m,d}=13.17$ $\tau=311.51$ $\tau_{max}=311.51$ (sfrut=0.21)
 Tensioni: $\sigma_N=-617.79$ $\sigma_{m,d}=-596.04$ $\tau=28.61$ $\sigma_{ID,max}=1214.85$ (sfrut=0.46)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-5708.41$ $M_y, Ed=133.01$ $M_z, Ed=-3.25$ $L=0.19$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=6.04$ $N_{cr,y}=5250710.00$ $\lambda^*_y=0.07$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=6.04$ $N_{cr,z}=5250710.00$ $\lambda^*_z=0.07$ Curva a: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.24+0.21+0.01=0.45$
 Verifica ZZ: $0.24+0.17+0.01=0.41$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40226 (-958 -956) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-1.62$ $M_x=2.12$
 $V, Ed=-1.62$ $V_c, Rd, Red=6958.67$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=142.08$ $M_x=2.12$
 $V, Ed=142.08$ $V_c, Rd, Red=6958.67$ $V, Ed/V_c, Rd, Red=0.02$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=0.62$ - Classe 3
 Sollecitazioni: $N=-5546.89$ $T_z=136.23$ $M_y=-47.99$ $T_y=-1.62$ $M_z=-1.05$ $M_x=2.12$
 Tensioni: $\sigma_N=-600.31$ $\sigma_{m,d}=-214.51$ $\tau=5.95$ $\sigma_{max}=-814.82$ (sfrut=0.31)
 Tensioni: $\sigma_N=-600.31$ $\sigma_{m,d}=-4.23$ $\tau=39.09$ $\tau_{max}=39.09$ (sfrut=0.03)
 Tensioni: $\sigma_N=-600.31$ $\sigma_{m,d}=-214.51$ $\tau=5.95$ $\sigma_{ID,max}=814.88$ (sfrut=0.31)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-5546.89$ $M_y, Ed=-47.99$ $M_z, Ed=-1.05$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
 Verifica YY: $0.23+0.08+0.00=0.31$
 Verifica ZZ: $0.23+0.06+0.00=0.29$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/36117)

Asta n. 40226 (-960 -958) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_y=-1.27$
 $V, Ed=-1.27$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_z=-116.96$
 $V, Ed=-116.96$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.02$

- Verifica a compressione (4.2.4.1.2.2) - CC 9 SLV $X_l=0.10$ - Classe 1
 Sollecitazioni: $N=-2295.50$ $T_y=-1.32$
 Verifica a compressione [4.2.9]
 $N, Ed=-2295.50$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.09$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-5541.73$ $M_y, Ed=38.42$ $M_z, Ed=0.43$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
 Verifica YY: $0.23+0.06+0.00=0.29$
 Verifica ZZ: $0.23+0.05+0.00=0.28$

Relazione di calcolo

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/54176)

Asta n. 40226 (-962 -960) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_L=0.00$ - Classe 1
Sollecitazioni: $T_z=102.35$
 $V,Ed=102.35$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 17 SLU $X_L=0.31$ - Classe 1
Sollecitazioni: $N=-5227.16$ $T_z=99.43$
Verifica a compressione [4.2.9]
 $N,Ed=-5227.16$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.22$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N,Ed=-5318.90$ $M_y,Ed=32.28$ $M_z,Ed=-0.31$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.22+0.05+0.00=0.27$
Verifica ZZ: $0.22+0.04+0.00=0.26$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/59101)

Asta n. 40226 (-964 -962) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_L=0.62$ - Classe 1
Sollecitazioni: $T_z=-108.92$
 $V,Ed=-108.92$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.02$

- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_L=0.31$ - Classe 1
Sollecitazioni: $N=-5312.72$ $T_z=-106.00$
Verifica a compressione [4.2.9]
 $N,Ed=-5312.72$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.22$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N,Ed=-5312.72$ $M_y,Ed=34.20$ $M_z,Ed=0.26$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.22+0.06+0.00=0.28$
Verifica ZZ: $0.22+0.04+0.00=0.26$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40226 (-966 -964) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_L=0.00$ - Classe 1
Sollecitazioni: $T_z=103.73$
 $V,Ed=103.73$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_L=0.31$ - Classe 1
Sollecitazioni: $N=-5179.18$ $T_z=100.35$
Verifica a compressione [4.2.9]
 $N,Ed=-5179.18$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.21$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N,Ed=-5179.18$ $M_y,Ed=32.26$ $M_z,Ed=-0.27$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.21+0.05+0.00=0.27$
Verifica ZZ: $0.21+0.04+0.00=0.26$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.00$

Asta n. 40226 (-968 -966) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_z=-106.95$
 $V,Ed=-106.95$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.02$

- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_l=0.31$ - Classe 1
 Sollecitazioni: $N=-5176.11$ $T_z=-104.03$
 Verifica a compressione [4.2.9]
 $N,Ed=-5176.11$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.21$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-5176.11$ $M_y,Ed=33.23$ $M_z,Ed=0.28$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
 Verifica YY: $0.21+0.05+0.00=0.27$
 Verifica ZZ: $0.21+0.04+0.00=0.26$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,l}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$

Asta n. 40226 (-970 -968) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=105.61$
 $V,Ed=105.61$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.02$

- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_l=0.31$ - Classe 1
 Sollecitazioni: $N=-5132.95$ $T_z=102.23$
 Verifica a compressione [4.2.9]
 $N,Ed=-5132.95$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.21$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-5132.95$ $M_y,Ed=32.61$ $M_z,Ed=-0.24$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
 Verifica YY: $0.21+0.05+0.00=0.27$
 Verifica ZZ: $0.21+0.04+0.00=0.26$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,l}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$

Asta n. 40226 (-972 -970) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_z=-105.07$
 $V,Ed=-105.07$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.02$

- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_l=0.31$ - Classe 1
 Sollecitazioni: $N=-5133.02$ $T_z=-102.15$
 Verifica a compressione [4.2.9]
 $N,Ed=-5133.02$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.21$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-5133.02$ $M_y,Ed=32.59$ $M_z,Ed=0.31$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
 Verifica YY: $0.21+0.05+0.00=0.27$
 Verifica ZZ: $0.21+0.04+0.00=0.26$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.00$

- Verifica freccia massima carichi totali - CC 20

Relazione di calcolo

$f_{z,L}=0.00$

Asta n. 40226 (-974 -972) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=107.54$
 $V,Ed=107.54$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.02$

- Verifica a compressione (4.2.4.1.2.2) - CC 17 SLU $X_1=0.31$ - Classe 1
Sollecitazioni: $N=-5207.70$ $T_z=104.62$
Verifica a compressione [4.2.9]
 $N,Ed=-5207.70$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.22$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-5207.70$ $M_y,Ed=33.54$ $M_z,Ed=-0.20$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.22+0.05+0.00=0.27$
Verifica ZZ: $0.22+0.04+0.00=0.26$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.00$

Asta n. 40226 (-976 -974) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=0.62$ - Classe 1
Sollecitazioni: $T_z=-103.54$
 $V,Ed=-103.54$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 17 SLU $X_1=0.31$ - Classe 1
Sollecitazioni: $N=-5212.21$ $T_z=-99.48$
Verifica a compressione [4.2.9]
 $N,Ed=-5212.21$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.22$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-5212.21$ $M_y,Ed=32.13$ $M_z,Ed=0.33$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.22+0.05+0.00=0.27$
Verifica ZZ: $0.22+0.04+0.00=0.26$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.00$

Asta n. 40226 (-978 -976) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=113.61$
 $V,Ed=113.61$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.02$

- Verifica a compressione (4.2.4.1.2.2) - CC 9 SLV $X_1=0.52$ - Classe 1
Sollecitazioni: $N=-2736.22$ $T_z=-7.60$
Verifica a compressione [4.2.9]
 $N,Ed=-2736.22$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.11$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-5385.95$ $M_y,Ed=36.68$ $M_z,Ed=0.10$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.22+0.06+0.00=0.28$
Verifica ZZ: $0.22+0.05+0.00=0.27$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/54176)

Relazione di calcolo

Asta n. 40226 (64 -978) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-134.33$
 $V, Ed=-134.33$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.02$
- Verifica a compressione (4.2.4.1.2.2) - CC 9 SLV $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-2762.28$ $T_z=-1.65$
Verifica a compressione [4.2.9]
 $N, Ed=-2762.28$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.11$
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-5388.55$ $M_y, Ed=-44.62$ $M_z, Ed=-0.16$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.22+0.07+0.00=0.30$
Verifica ZZ: $0.22+0.06+0.00=0.28$
- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,l}=0.00$ (L/50009)
- Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$ (L/36117)

Asta n. 40226 (64 -795) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV $X_l=0.32$ - Classe 1
Sollecitazioni: $T_y=8.17$ $M_x=-6.28$
 $V, Ed=8.17$ $V_c, Rd, Red=6904.52$ $V, Ed/V_c, Rd, Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.32$ - Classe 1
Sollecitazioni: $T_z=-623.16$ $M_x=-6.28$
 $V, Ed=-623.16$ $V_c, Rd, Red=6904.52$ $V, Ed/V_c, Rd, Red=0.09$
- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.32$ - Classe 3
Sollecitazioni: $N=-3526.85$ $T_z=-623.16$ $M_y=123.66$ $T_y=21.35$ $M_z=2.03$ $M_x=-6.28$
Tensioni: $\sigma_N=-381.69$ $\sigma_{m,d}=-549.81$ $\tau=17.67$ $\sigma_{max}=-931.50$ (sfrut=0.36)
Tensioni: $\sigma_N=-381.69$ $\sigma_{m,d}=8.23$ $\tau=169.26$ $\tau_{max}=169.26$ (sfrut=0.11)
Tensioni: $\sigma_N=-381.69$ $\sigma_{m,d}=-549.81$ $\tau=17.67$ $\sigma_{ID,max}=932.00$ (sfrut=0.36)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-3526.85$ $M_y, Ed=123.66$ $M_z, Ed=-4.80$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.15+0.20+0.01=0.35$
Verifica ZZ: $0.15+0.16+0.01=0.31$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,l}=0.00$ (L/12427)
- Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.01$ (L/5687)

Asta n. 40226 (-980 -795) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU $X_l=0.13$ - Classe 1
Sollecitazioni: $T_y=-30.60$ $M_x=8.54$
 $V, Ed=-30.60$ $V_c, Rd, Red=6875.26$ $V, Ed/V_c, Rd, Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU $X_l=0.13$ - Classe 1
Sollecitazioni: $T_z=-733.92$ $M_x=8.54$
 $V, Ed=-733.92$ $V_c, Rd, Red=6875.26$ $V, Ed/V_c, Rd, Red=0.11$
- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=0.27$ - Classe 3
Sollecitazioni: $N=-3926.84$ $T_z=-735.20$ $M_y=117.07$ $T_y=-30.60$ $M_z=-3.75$ $M_x=8.54$
Tensioni: $\sigma_N=-424.98$ $\sigma_{m,d}=-528.47$ $\tau=24.00$ $\sigma_{max}=-953.46$ (sfrut=0.36)
Tensioni: $\sigma_N=-424.98$ $\sigma_{m,d}=15.16$ $\tau=202.85$ $\tau_{max}=202.85$ (sfrut=0.13)
Tensioni: $\sigma_N=-424.98$ $\sigma_{m,d}=-528.47$ $\tau=24.00$ $\sigma_{ID,max}=954.36$ (sfrut=0.36)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-3926.84$ $M_y, Ed=117.07$ $M_z, Ed=4.51$ $L=0.27$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=8.58$ $N_{cr,y}=2600080.00$ $\lambda^*_y=0.10$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=8.58$ $N_{cr,z}=2600080.00$ $\lambda^*_z=0.10$ Curva a: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$

Relazione di calcolo

Verifica YY: $0.16+0.19+0.01=0.36$
Verifica ZZ: $0.16+0.15+0.01=0.32$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40226 (-982 -980) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=116.98$ $M_x=1.43$
 $V, Ed=116.98$ $V_c, Rd, Red=6967.59$ $V, Ed/V_c, Rd, Red=0.02$

- Verifica a trazione (4.2.4.1.2.1) - CC 9 SLV $X_1=0.31$ - Classe 1
Sollecitazioni: $N=2588.04$ $T_z=3.66$ $M_x=1.58$
Verifica a trazione [4.2.5]
 $N, Ed=2588.04$ $N_{pl}, Rd=24200.00$ $N_u, Rd=28607.00$ $N, Ed/N_t, Rd=0.11$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-3761.26$ $M_y, Ed=-41.96$ $M_z, Ed=0.25$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.16+0.07+0.00=0.22$
Verifica ZZ: $0.16+0.05+0.00=0.21$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/38242)

Asta n. 40226 (-984 -982) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=0.62$ - Classe 1
Sollecitazioni: $T_z=-94.68$
 $V, Ed=-94.68$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_1=0.31$ - Classe 1
Sollecitazioni: $N=-3756.91$ $T_z=-91.76$
Verifica a compressione [4.2.9]
 $N, Ed=-3756.91$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.16$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-3756.91$ $M_y, Ed=28.88$ $M_z, Ed=0.31$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.16+0.05+0.00=0.20$
Verifica ZZ: $0.16+0.04+0.00=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$ $f_{z,g}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40226 (-986 -984) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=82.08$
 $V, Ed=82.08$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 9 SLV $X_1=0.21$ - Classe 1
Sollecitazioni: $N=1951.01$ $T_z=5.61$
Verifica a trazione [4.2.5]
 $N, Ed=1951.01$ $N_{pl}, Rd=24200.00$ $N_u, Rd=28607.00$ $N, Ed/N_t, Rd=0.08$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-3558.69$ $M_y, Ed=-25.19$ $M_z, Ed=0.55$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.15+0.04+0.00=0.19$
Verifica ZZ: $0.15+0.03+0.00=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ $f_{z,G}=0.00$

Asta n. 40226 (-988 -986) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=0.62$ - Classe 1
 Sollecitazioni: $T_z=-87.49$
 $V,Ed=-87.49$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 9 SLV $X_1=0.10$ - Classe 1
 Sollecitazioni: $N=1928.45$ $T_z=-7.89$
 Verifica a trazione [4.2.5]
 $N,Ed=1928.45$ $N_{pl},Rd=24200.00$ $N_u,Rd=28607.00$ $N,Ed/N_t,Rd=0.08$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-3553.36$ $M_y,Ed=-27.28$ $M_z,Ed=0.35$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.15+0.04+0.00=0.19$
 Verifica ZZ: $0.15+0.04+0.00=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40226 (-990 -988) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=83.52$
 $V,Ed=83.52$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 9 SLV $X_1=0.31$ - Classe 1
 Sollecitazioni: $N=1246.91$ $T_z=6.07$
 Verifica a trazione [4.2.5]
 $N,Ed=1246.91$ $N_{pl},Rd=24200.00$ $N_u,Rd=28607.00$ $N,Ed/N_t,Rd=0.05$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-3444.22$ $M_y,Ed=-26.01$ $M_z,Ed=0.47$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
 Verifica YY: $0.14+0.04+0.00=0.19$
 Verifica ZZ: $0.14+0.03+0.00=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40226 (-992 -990) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=0.62$ - Classe 1
 Sollecitazioni: $T_z=-85.54$
 $V,Ed=-85.54$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 9 SLV $X_1=0.21$ - Classe 1
 Sollecitazioni: $N=1221.96$ $T_z=-7.15$
 Verifica a trazione [4.2.5]
 $N,Ed=1221.96$ $N_{pl},Rd=24200.00$ $N_u,Rd=28607.00$ $N,Ed/N_t,Rd=0.05$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-3441.99$ $M_y,Ed=-26.96$ $M_z,Ed=-0.29$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
 Verifica YY: $0.14+0.04+0.00=0.19$
 Verifica ZZ: $0.14+0.03+0.00=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 31

Relazione di calcolo

$f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.00$

Asta n. 40226 (-994 -992) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=85.40$
 $V,Ed=85.40$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 17 SLU $X_1=0.62$ - Classe 1
Sollecitazioni: $N=-3436.62$ $T_z=79.55$ $M_y=-26.92$
 $M_y,Ed=-26.92$ $M_y,V,c,Rd=699.13$
 $N,Ed=-3436.62$ $N_c,Rd=-24200.00$ YY $n=N,Ed/N_c,Rd=0.14$ $MNy,c,Rd=699.13$ $M_y,Ed/MNy,c,Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-3436.62$ $M_y,Ed=-26.92$ $M_z,Ed=0.36$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr,y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr,z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
Verifica YY: $0.14+0.04+0.00=0.19$
Verifica ZZ: $0.14+0.03+0.00=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40226 (-996 -994) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=0.62$ - Classe 1
Sollecitazioni: $T_z=-83.66$
 $V,Ed=-83.66$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $N=-3424.14$ $T_z=-77.82$ $M_y=-26.35$
 $M_y,Ed=-26.35$ $M_y,V,c,Rd=699.13$
 $N,Ed=-3424.14$ $N_c,Rd=-24200.00$ YY $n=N,Ed/N_c,Rd=0.14$ $MNy,c,Rd=699.13$ $M_y,Ed/MNy,c,Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-3438.63$ $M_y,Ed=-26.07$ $M_z,Ed=-0.38$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr,y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr,z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
Verifica YY: $0.14+0.04+0.00=0.18$
Verifica ZZ: $0.14+0.03+0.00=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40226 (-998 -996) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=87.35$
 $V,Ed=87.35$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 1 SLV $X_1=0.41$ - Classe 1
Sollecitazioni: $N=1514.18$ $T_z=5.91$
Verifica a trazione [4.2.5]
 $N,Ed=1514.18$ $N_{pl},Rd=24200.00$ $N_u,Rd=28607.00$ $N,Ed/N_t,Rd=0.06$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-3541.46$ $M_y,Ed=-27.26$ $M_z,Ed=0.27$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr,y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr,z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.15+0.04+0.00=0.19$
Verifica ZZ: $0.15+0.04+0.00=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40226 (-1000 -998) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_z=-82.22$
 $V,Ed=-82.22$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 1 SLV $X_l=0.41$ - Classe 1
 Sollecitazioni: $N=1535.95$ $T_z=-8.45$
 Verifica a trazione [4.2.5]
 $N,Ed=1535.95$ $N_{pl,Rd}=24200.00$ $N_u,Rd=28607.00$ $N,Ed/N_t,Rd=0.06$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-3546.56$ $M_y,Ed=-25.27$ $M_z,Ed=-0.48$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.15+0.04+0.00=0.19$
 Verifica ZZ: $0.15+0.03+0.00=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40226 (-1002 -1000) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=1.27$
 $V,Ed=1.27$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=94.44$
 $V,Ed=94.44$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 17 SLU $X_l=0.31$ - Classe 1
 Sollecitazioni: $N=-3737.47$ $T_z=91.51$ $T_y=1.27$
 Verifica a compressione [4.2.9]
 $N,Ed=-3737.47$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.15$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-3737.47$ $M_y,Ed=28.77$ $M_z,Ed=-0.50$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.15+0.05+0.00=0.20$
 Verifica ZZ: $0.15+0.04+0.00=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40226 (-1004 -1002) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_y=1.64$ $M_x=-1.31$
 $V,Ed=1.64$ $V_c,Rd=6969.17$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_z=-119.66$ $M_x=-1.31$
 $V,Ed=-119.66$ $V_c,Rd,Red=6969.17$ $V,Ed/V_c,Rd,Red=0.02$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-3740.18$ $T_z=-113.81$ $M_y=-43.38$ $T_y=1.64$ $M_z=-1.18$ $M_x=-1.31$
 Tensioni: $\sigma_N=-404.78$ $\sigma_{m,d}=-194.93$ $\tau=3.67$ $\sigma_{max}=-599.71$ (sfrut=0.23)
 Tensioni: $\sigma_N=-404.78$ $\sigma_{m,d}=-4.79$ $\tau=31.36$ $\tau_{max}=31.36$ (sfrut=0.02)
 Tensioni: $\sigma_N=-404.78$ $\sigma_{m,d}=-194.93$ $\tau=3.67$ $\sigma_{ID,max}=599.74$ (sfrut=0.23)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-3740.18$ $M_y,Ed=-43.38$ $M_z,Ed=-1.18$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$

Relazione di calcolo

Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
Verifica YY: 0.15+0.07+0.00=0.23
Verifica ZZ: 0.15+0.06+0.00=0.21

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.00$ (L/50009)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/29550)

Asta n. 40226 (-796 -1004) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV Xl=0.41 - Classe 1
Sollecitazioni: $T_y=7.16$ $M_x=-5.56$
 $V,Ed=7.16$ $Vc,Rd,Red=6913.99$ $V,Ed/Vc,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV Xl=0.41 - Classe 1
Sollecitazioni: $T_z=645.17$ $M_x=-5.56$
 $V,Ed=645.17$ $Vc,Rd,Red=6913.99$ $V,Ed/Vc,Rd,Red=0.09$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV Xl=0.30 - Classe 3
Sollecitazioni: $N=2275.47$ $T_z=645.94$ $M_y=128.48$ $T_y=20.10$ $M_z=-2.65$ $M_x=-5.56$
Tensioni: $\sigma_N=246.26$ $\sigma_{m,d}=573.57$ $\tau=15.62$ $\sigma_{max}=819.83$ (sfrut=0.31)
Tensioni: $\sigma_N=246.26$ $\sigma_{m,d}=10.71$ $\tau=172.75$ $\tau_{max}=172.75$ (sfrut=0.11)
Tensioni: $\sigma_N=246.26$ $\sigma_{m,d}=573.57$ $\tau=15.62$ $\sigma_{ID,max}=820.28$ (sfrut=0.31)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N,Ed=-2117.17$ $M_y,Ed=128.48$ $M_z,Ed=3.79$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr,y=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr,z=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
Verifica YY: 0.09+0.21+0.01=0.30
Verifica ZZ: 0.09+0.17+0.01=0.26

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$ (L/11570)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/4726)

Asta n. 40226 (-796 66) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 5 SLV Xl=0.47 - Classe 1
Sollecitazioni: $T_y=20.18$ $M_x=14.13$
 $V,Ed=20.18$ $Vc,Rd,Red=6802.69$ $V,Ed/Vc,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 5 SLV Xl=0.47 - Classe 1
Sollecitazioni: $T_z=810.69$ $M_x=14.13$
 $V,Ed=810.69$ $Vc,Rd,Red=6802.69$ $V,Ed/Vc,Rd,Red=0.12$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV Xl=0.30 - Classe 3
Sollecitazioni: $N=-3130.33$ $T_z=1513.51$ $M_y=161.59$ $T_y=-19.01$ $M_z=-3.32$ $M_x=7.96$
Tensioni: $\sigma_N=-338.78$ $\sigma_{m,d}=-721.35$ $\tau=22.39$ $\sigma_{max}=-1060.13$ (sfrut=0.40)
Tensioni: $\sigma_N=-338.78$ $\sigma_{m,d}=-13.45$ $\tau=390.56$ $\tau_{max}=390.56$ (sfrut=0.26)
Tensioni: $\sigma_N=-338.78$ $\sigma_{m,d}=-668.34$ $\tau=277.27$ $\sigma_{ID,max}=1115.77$ (sfrut=0.43)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N,Ed=-3130.33$ $M_y,Ed=161.59$ $M_z,Ed=-6.10$ $L=0.47$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=14.94$ $Ncr,y=857996.00$ $\lambda^*_y=0.17$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=14.94$ $Ncr,z=857996.00$ $\lambda^*_z=0.17$ Curva a: $\Phi_z=0.00$ $\chi_z=1.00$
Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
Verifica YY: 0.13+0.26+0.01=0.40
Verifica ZZ: 0.13+0.21+0.01=0.35

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$ (L/7130)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.01$ (L/2922)

Asta n. 40226 (66 67) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU Xl=0.62 - Classe 1
Sollecitazioni: $T_y=6.12$
 $V,Ed=6.12$ $Vc,Rd=6986.14$ $V,Ed/Vc,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU Xl=0.62 - Classe 1
Sollecitazioni: $T_z=-117.38$

V,Ed=-117.38 Vc,Rd=6986.14 V,Ed/Vc,Rd=0.02

- Verifica in termini tensionali [4.2.4] - CC 27 SLU Xl=0.00 - Classe 3
 Sollecitazioni: N=-4528.41 T_z=-111.53 M_y=-40.95 T_y=6.12 M_z=-3.96
 Tensioni: $\sigma_N=-490.09$ $\sigma_{m,d}=-196.47$ $\tau=0.00$ $\sigma_{max}=-686.56$ (sfrut=0.26)
 Tensioni: $\sigma_N=-490.09$ $\sigma_{m,d}=-16.03$ $\tau=27.13$ $\tau_{max}=27.13$ (sfrut=0.02)
 Tensioni: $\sigma_N=-490.09$ $\sigma_{m,d}=-196.47$ $\tau=0.00$ $\sigma_{ID,max}=686.56$ (sfrut=0.26)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: N,Ed=-4528.41 My,Ed=-40.95 Mz,Ed=-3.96 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493058.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493058.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97
 Verifica YY: 0.19+0.07+0.01=0.26
 Verifica ZZ: 0.19+0.05+0.01=0.25

- Verifica freccia massima per soli carichi accidentali - CC 20
 f_{z,L}=0.00 (L/46436)

- Verifica freccia massima carichi totali - CC 20
 f_{z,L}=0.00 (L/32505)

Asta n. 40226 (67 70) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU Xl=0.31 - Classe 1
 Sollecitazioni: T_y=5.32 M_x=-2.11
 V,Ed=5.32 Vc,Rd,Red=6958.69 V,Ed/Vc,Rd,Red=0.00

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU Xl=0.31 - Classe 1
 Sollecitazioni: T_z=100.27 M_x=-2.11
 V,Ed=100.27 Vc,Rd,Red=6958.69 V,Ed/Vc,Rd,Red=0.01

- Verifica in termini tensionali [4.2.4] - CC 27 SLU Xl=0.00 - Classe 3
 Sollecitazioni: N=-4511.06 T_z=103.19 M_y=34.03 T_y=5.32 M_z=-2.22 M_x=-2.11
 Tensioni: $\sigma_N=-488.21$ $\sigma_{m,d}=-158.58$ $\tau=5.94$ $\sigma_{max}=-646.79$ (sfrut=0.25)
 Tensioni: $\sigma_N=-488.21$ $\sigma_{m,d}=9.00$ $\tau=31.04$ $\tau_{max}=31.04$ (sfrut=0.02)
 Tensioni: $\sigma_N=-488.21$ $\sigma_{m,d}=-158.58$ $\tau=5.94$ $\sigma_{ID,max}=646.87$ (sfrut=0.25)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: N,Ed=-4511.06 My,Ed=34.03 Mz,Ed=-2.22 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97
 Verifica YY: 0.19+0.06+0.00=0.25
 Verifica ZZ: 0.19+0.04+0.00=0.23

- Verifica freccia massima per soli carichi accidentali - CC 31
 f_{z,L}=0.00

- Verifica freccia massima carichi totali - CC 31
 f_{z,G}=0.00 (L/50009)

Asta n. 40226 (70 71) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU Xl=0.62 - Classe 1
 Sollecitazioni: T_y=5.50 M_x=-2.41
 V,Ed=5.50 Vc,Rd,Red=6954.81 V,Ed/Vc,Rd,Red=0.00

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU Xl=0.62 - Classe 1
 Sollecitazioni: T_z=-73.27 M_x=-2.41
 V,Ed=-73.27 Vc,Rd,Red=6954.81 V,Ed/Vc,Rd,Red=0.01

- Verifica in termini tensionali [4.2.4] - CC 17 SLU Xl=0.00 - Classe 3
 Sollecitazioni: N=-3889.16 T_z=-67.42 M_y=-21.16 T_y=5.50 M_z=-2.88 M_x=-2.41
 Tensioni: $\sigma_N=-420.90$ $\sigma_{m,d}=-105.17$ $\tau=6.78$ $\sigma_{max}=-526.08$ (sfrut=0.20)
 Tensioni: $\sigma_N=-420.90$ $\sigma_{m,d}=-11.65$ $\tau=23.18$ $\tau_{max}=23.18$ (sfrut=0.02)
 Tensioni: $\sigma_N=-420.90$ $\sigma_{m,d}=-105.17$ $\tau=6.78$ $\sigma_{ID,max}=526.21$ (sfrut=0.20)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: N,Ed=-3889.16 My,Ed=22.45 Mz,Ed=-2.88 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97
 Verifica YY: 0.16+0.04+0.00=0.20
 Verifica ZZ: 0.16+0.03+0.00=0.19

Relazione di calcolo

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40226 (71 74) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU $X_1=0.21$ - Classe 1
Sollecitazioni: $T_y=5.59$ $M_x=-2.51$
 $V_{Ed}=5.59$ $V_{c,Rd,Red}=6953.58$ $V_{Ed}/V_{c,Rd,Red}=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU $X_1=0.21$ - Classe 1
Sollecitazioni: $T_z=92.82$ $M_x=-2.51$
 $V_{Ed}=92.82$ $V_{c,Rd,Red}=6953.58$ $V_{Ed}/V_{c,Rd,Red}=0.01$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_1=0.62$ - Classe 3
Sollecitazioni: $N=-3864.47$ $T_z=88.93$ $M_y=-28.68$ $T_y=5.59$ $M_z=1.84$ $M_x=-2.51$
Tensioni: $\sigma_N=-418.23$ $\sigma_{m,d}=-133.52$ $\tau=7.05$ $\sigma_{max}=-551.75$ (sfrut=0.21)
Tensioni: $\sigma_N=-418.23$ $\sigma_{m,d}=-7.46$ $\tau=28.68$ $\tau_{max}=28.68$ (sfrut=0.02)
Tensioni: $\sigma_N=-418.23$ $\sigma_{m,d}=-133.52$ $\tau=7.05$ $\sigma_{ID,max}=551.89$ (sfrut=0.21)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N_{Ed}=-3871.33$ $M_{y,Ed}=-28.57$ $M_{z,Ed}=1.79$ $L=0.62$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.97$, 0.97 , 0.78 , 0.97
Verifica YY: $0.16+0.05+0.00=0.21$
Verifica ZZ: $0.16+0.04+0.00=0.20$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ $f_{z,G}=0.00$

Asta n. 40226 (74 75) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_1=0.52$ - Classe 1
Sollecitazioni: $T_y=5.48$ $M_x=-2.46$
 $V_{Ed}=5.48$ $V_{c,Rd,Red}=6954.25$ $V_{Ed}/V_{c,Rd,Red}=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_1=0.52$ - Classe 1
Sollecitazioni: $T_z=-73.66$ $M_x=-2.46$
 $V_{Ed}=-73.66$ $V_{c,Rd,Red}=6954.25$ $V_{Ed}/V_{c,Rd,Red}=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_1=0.00$ - Classe 3
Sollecitazioni: $N=-3403.18$ $T_z=-68.78$ $M_y=-23.13$ $T_y=5.48$ $M_z=-2.31$ $M_x=-2.46$
Tensioni: $\sigma_N=-368.31$ $\sigma_{m,d}=-111.27$ $\tau=6.90$ $\sigma_{max}=-479.58$ (sfrut=0.18)
Tensioni: $\sigma_N=-368.31$ $\sigma_{m,d}=-9.34$ $\tau=23.63$ $\tau_{max}=23.63$ (sfrut=0.02)
Tensioni: $\sigma_N=-368.31$ $\sigma_{m,d}=-111.27$ $\tau=6.90$ $\sigma_{ID,max}=479.73$ (sfrut=0.18)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N_{Ed}=-3403.18$ $M_{y,Ed}=-23.13$ $M_{z,Ed}=-2.31$ $L=0.62$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $\lambda_y=19.71$ $N_{cr,y}=493058.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493058.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.97$, 0.97 , 0.77 , 0.97
Verifica YY: $0.14+0.04+0.00=0.18$
Verifica ZZ: $0.14+0.03+0.00=0.17$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40226 (75 78) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU $X_1=0.10$ - Classe 1
Sollecitazioni: $T_y=5.64$ $M_x=-2.52$
 $V_{Ed}=5.64$ $V_{c,Rd,Red}=6953.36$ $V_{Ed}/V_{c,Rd,Red}=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU $X_1=0.10$ - Classe 1
Sollecitazioni: $T_z=91.84$ $M_x=-2.52$
 $V_{Ed}=91.84$ $V_{c,Rd,Red}=6953.36$ $V_{Ed}/V_{c,Rd,Red}=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_1=0.62$ - Classe 3
Sollecitazioni: $N=-3388.45$ $T_z=86.42$ $M_y=-29.43$ $T_y=5.48$ $M_z=2.38$ $M_x=-2.46$

Tensioni: $\sigma_N=-366.71$ $\sigma_{m,d}=-139.13$ $\tau=6.91$ $\sigma_{max}=-505.84$ (sfrut=0.19)
Tensioni: $\sigma_N=-366.71$ $\sigma_{m,d}=-9.61$ $\tau=27.93$ $\tau_{max}=27.93$ (sfrut=0.02)
Tensioni: $\sigma_N=-366.71$ $\sigma_{m,d}=-139.13$ $\tau=6.91$ $\sigma_{ID,max}=505.99$ (sfrut=0.19)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: N,Ed=-3388.45 My,Ed=-29.43 Mz,Ed=2.38 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.77, 0.97
Verifica YY: 0.14+0.05+0.00=0.19
Verifica ZZ: 0.14+0.04+0.00=0.18

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40226 (78 79) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU X1=0.41 - Classe 1
Sollecitazioni: Ty=5.46 Mx=-2.45
V,Ed=5.46 Vc,Rd,Red=6954.28 V,Ed/Vc,Rd,Red=0.00

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU X1=0.41 - Classe 1
Sollecitazioni: Tz=-74.62 Mx=-2.45
V,Ed=-74.62 Vc,Rd,Red=6954.28 V,Ed/Vc,Rd,Red=0.01

- Verifica in termini tensionali [4.2.4] - CC 17 SLU X1=0.00 - Classe 3
Sollecitazioni: N=-3010.65 Tz=-70.72 My=-25.06 Ty=5.46 Mz=-1.73 Mx=-2.45
Tensioni: $\sigma_N=-325.83$ $\sigma_{m,d}=-117.17$ $\tau=6.90$ $\sigma_{max}=-442.99$ (sfrut=0.17)
Tensioni: $\sigma_N=-325.83$ $\sigma_{m,d}=-7.00$ $\tau=24.10$ $\tau_{max}=24.10$ (sfrut=0.02)
Tensioni: $\sigma_N=-325.83$ $\sigma_{m,d}=-117.17$ $\tau=6.90$ $\sigma_{ID,max}=443.15$ (sfrut=0.17)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: N,Ed=-3010.65 My,Ed=-25.06 Mz,Ed=-1.73 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493058.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493058.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.77, 0.97
Verifica YY: 0.12+0.04+0.00=0.17
Verifica ZZ: 0.12+0.03+0.00=0.16

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/59101)

Asta n. 40226 (79 82) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU X1=0.00 - Classe 1
Sollecitazioni: Ty=5.69 Mx=-2.55
V,Ed=5.69 Vc,Rd,Red=6953.05 V,Ed/Vc,Rd,Red=0.00

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU X1=0.00 - Classe 1
Sollecitazioni: Tz=91.35 Mx=-2.55
V,Ed=91.35 Vc,Rd,Red=6953.05 V,Ed/Vc,Rd,Red=0.01

- Verifica in termini tensionali [4.2.4] - CC 17 SLU X1=0.62 - Classe 3
Sollecitazioni: N=-2999.01 Tz=84.98 My=-30.22 Ty=5.53 Mz=2.97 Mx=-2.47
Tensioni: $\sigma_N=-324.57$ $\sigma_{m,d}=-145.19$ $\tau=6.94$ $\sigma_{max}=-469.76$ (sfrut=0.18)
Tensioni: $\sigma_N=-324.57$ $\sigma_{m,d}=-12.02$ $\tau=27.61$ $\tau_{max}=27.61$ (sfrut=0.02)
Tensioni: $\sigma_N=-324.57$ $\sigma_{m,d}=-145.19$ $\tau=6.94$ $\sigma_{ID,max}=469.92$ (sfrut=0.18)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: N,Ed=-2999.01 My,Ed=-30.22 Mz,Ed=2.97 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.77, 0.97
Verifica YY: 0.12+0.05+0.00=0.18
Verifica ZZ: 0.12+0.04+0.00=0.17

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31

$f_{z,L}=0.00$ (L/54176)

Asta n. 40226 (82 83) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_1=0.31$ - Classe 1
 Sollecitazioni: $T_y=5.98$ $M_x=-2.42$
 $V,Ed=5.98$ $V_c,Rd,Red=6954.72$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_1=0.31$ - Classe 1
 Sollecitazioni: $T_z=-80.64$ $M_x=-2.42$
 $V,Ed=-80.64$ $V_c,Rd,Red=6954.72$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_1=0.62$ - Classe 3
 Sollecitazioni: $N=4176.91$ $T_z=46.21$ $M_y=-26.11$ $T_y=4.89$ $M_z=1.97$ $M_x=-2.06$
 Tensioni: $\sigma_N=452.05$ $\sigma_{m,d}=122.83$ $\tau=5.79$ $\sigma_{max}=574.88$ (sfrut=0.22)
 Tensioni: $\sigma_N=452.05$ $\sigma_{m,d}=-7.96$ $\tau=17.03$ $\tau_{max}=17.03$ (sfrut=0.01)
 Tensioni: $\sigma_N=452.05$ $\sigma_{m,d}=122.83$ $\tau=5.79$ $\sigma_{TD,max}=574.97$ (sfrut=0.22)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-2709.22$ $M_y,Ed=-27.34$ $M_z,Ed=2.51$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493058.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493058.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.11+0.04+0.00=0.16$
 Verifica ZZ: $0.11+0.04+0.00=0.15$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.00$ (L/54176)

Asta n. 40226 (83 86) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_y=7.45$ $M_x=-2.27$
 $V,Ed=7.45$ $V_c,Rd,Red=6956.72$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=127.26$ $M_x=-2.27$
 $V,Ed=127.26$ $V_c,Rd,Red=6956.72$ $V,Ed/V_c,Rd,Red=0.02$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_1=0.62$ - Classe 3
 Sollecitazioni: $N=4216.52$ $T_z=55.04$ $M_y=-25.22$ $T_y=6.12$ $M_z=4.23$ $M_x=-2.78$
 Tensioni: $\sigma_N=456.33$ $\sigma_{m,d}=128.80$ $\tau=7.82$ $\sigma_{max}=585.13$ (sfrut=0.22)
 Tensioni: $\sigma_N=456.33$ $\sigma_{m,d}=-17.11$ $\tau=21.21$ $\tau_{max}=21.21$ (sfrut=0.01)
 Tensioni: $\sigma_N=456.33$ $\sigma_{m,d}=128.80$ $\tau=7.82$ $\sigma_{TD,max}=585.29$ (sfrut=0.22)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-2695.14$ $M_y,Ed=-48.96$ $M_z,Ed=5.14$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.11+0.08+0.01=0.20$
 Verifica ZZ: $0.11+0.06+0.01=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/26004)

Asta n. 40226 (86 -797) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV $X_1=0.02$ - Classe 1
 Sollecitazioni: $T_y=-3.73$ $M_x=-3.58$
 $V,Ed=-3.73$ $V_c,Rd,Red=6939.59$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_1=0.02$ - Classe 1
 Sollecitazioni: $T_z=-3837.69$ $M_x=-3.58$
 $V,Ed=-3837.69$ $V_c,Rd,Red=6939.59$ $V,Ed/V_c,Rd,Red=0.55$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=4283.27$ $T_z=-3837.54$ $M_y=-137.38$ $T_y=30.26$ $M_z=5.73$ $M_x=-3.58$
 Tensioni: $\sigma_N=463.56$ $\sigma_{m,d}=625.97$ $\tau=10.08$ $\sigma_{max}=1089.53$ (sfrut=0.42)
 Tensioni: $\sigma_N=463.56$ $\sigma_{m,d}=23.18$ $\tau=943.60$ $\tau_{max}=943.60$ (sfrut=0.62)
 Tensioni: $\sigma_N=463.56$ $\sigma_{m,d}=25.06$ $\tau=943.60$ $\sigma_{TD,max}=1705.84$ (sfrut=0.65)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N, Ed = -2331.38$ $My, Ed = -137.38$ $Mz, Ed = 5.73$ $L = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71$ $N_{cr,y} = 493055.00$ $\lambda^*_y = 0.23$ Curva a: $\Phi_y = 0.53$ $\chi_y = 0.99$
 $\lambda_z = 19.71$ $N_{cr,z} = 493055.00$ $\lambda^*_z = 0.23$ Curva a: $\Phi_z = 0.53$ $\chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.10 + 0.22 + 0.01 = 0.33$
 Verifica ZZ: $0.10 + 0.18 + 0.01 = 0.28$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L} = 0.00$ (L/1165)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L} = 0.01$ (L/395)

Asta n. 40227 (-914 -917) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X1 = 0.88$ - Classe 1
 Sollecitazioni: $T_z = -24.58$
 $V, Ed = -24.58$ $V_c, Rd = 5171.56$ $V, Ed/V_c, Rd = 0.00$

- Verifica a compressione (4.2.4.1.2.2) - CC 5 SLV $X1 = 0.00$ - Classe 1
 Sollecitazioni: $N = -721.97$
 Verifica a compressione [4.2.9]
 $N, Ed = -721.97$ $N_c, Rd = -17914.30$ $N, Ed/N_c, Rd = 0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed = -428.54$ $My, Ed = -9.91$ $Mz, Ed = -0.52$ $L = 0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 37.63$ $N_{cr,y} = 100129.00$ $\lambda^*_y = 0.43$ Curva a: $\Phi_y = 0.62$ $\chi_y = 0.94$
 $\lambda_z = 37.63$ $N_{cr,z} = 100129.00$ $\lambda^*_z = 0.43$ Curva a: $\Phi_z = 0.62$ $\chi_z = 0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.02 + 0.03 + 0.00 = 0.05$
 Verifica ZZ: $0.02 + 0.02 + 0.00 = 0.05$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G} = 0.01$ (L/9886) $f_{z,L} = 0.00$ (L/73552)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G} = 0.01$ (L/10447) $f_{z,L} = 0.00$ (L/65671)

Asta n. 40233 (21 -870) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X1 = 0.47$ - Classe 1
 Sollecitazioni: $T_z = -150.13$ $M_x = -2.22$
 $V, Ed = -150.13$ $V_c, Rd, Red = 6957.29$ $V, Ed/V_c, Rd, Red = 0.02$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X1 = 0.00$ - Classe 3
 Sollecitazioni: $N = -4752.37$ $T_z = -63.71$ $M_y = -32.14$ $T_y = -6.39$ $M_z = 2.35$ $M_x = -1.11$
 Tensioni: $\sigma_N = -514.33$ $\sigma_{m,d} = -150.86$ $\tau = 3.13$ $\sigma_{max} = -665.19$ (sfrut=0.25)
 Tensioni: $\sigma_N = -514.33$ $\sigma_{m,d} = 9.51$ $\tau = 18.63$ $\tau_{max} = 18.63$ (sfrut=0.01)
 Tensioni: $\sigma_N = -514.33$ $\sigma_{m,d} = -150.86$ $\tau = 3.13$ $\sigma_{ID,max} = 665.21$ (sfrut=0.25)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed = -4752.37$ $My, Ed = -32.14$ $Mz, Ed = 2.35$ $L = 0.47$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 14.94$ $N_{cr,y} = 857989.00$ $\lambda^*_y = 0.17$ Curva a: $\Phi_y = 0.00$ $\chi_y = 1.00$
 $\lambda_z = 14.94$ $N_{cr,z} = 857989.00$ $\lambda^*_z = 0.17$ Curva a: $\Phi_z = 0.00$ $\chi_z = 1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.20 + 0.05 + 0.00 = 0.25$
 Verifica ZZ: $0.20 + 0.04 + 0.00 = 0.24$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L} = 0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L} = 0.00$ (L/24641)

Asta n. 40233 (-870 -868) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV $X1 = 0.00$ - Classe 1
 Sollecitazioni: $T_y = -4.75$ $M_x = -1.78$
 $V, Ed = -4.75$ $V_c, Rd, Red = 6963.00$ $V, Ed/V_c, Rd, Red = 0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X1 = 0.00$ - Classe 1
 Sollecitazioni: $T_z = 45.42$ $M_x = -1.78$
 $V, Ed = 45.42$ $V_c, Rd, Red = 6963.00$ $V, Ed/V_c, Rd, Red = 0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X1 = 0.62$ - Classe 3

Sollecitazioni: $N=-4744.15$ $T_z=-47.19$ $M_y=12.67$ $T_y=-4.07$ $M_z=-1.98$ $M_x=-1.44$
 Tensioni: $\sigma_N=-513.44$ $\sigma_{m,d}=-64.07$ $\tau=4.04$ $\sigma_{max}=-577.50$ (sfrut=0.22)
 Tensioni: $\sigma_N=-513.44$ $\sigma_{m,d}=-8.00$ $\tau=15.52$ $\tau_{max}=15.52$ (sfrut=0.01)
 Tensioni: $\sigma_N=-513.44$ $\sigma_{m,d}=-64.07$ $\tau=4.04$ $\sigma_{ID,max}=577.55$ (sfrut=0.22)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4744.15$ $M_y,Ed=-14.77$ $M_z,Ed=-1.98$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
 Verifica YY: $0.20+0.02+0.00=0.22$
 Verifica ZZ: $0.20+0.02+0.00=0.22$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 32
 $f_{z,L}=0.00$

Asta n. 40233 (-868 -866) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_L=0.00$ - Classe 1
 Sollecitazioni: $T_y=-3.56$ $M_x=-1.78$
 $V,Ed=-3.56$ $V_{c,Rd,Red}=6963.01$ $V,Ed/V_{c,Rd,Red}=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_L=0.00$ - Classe 1
 Sollecitazioni: $T_z=63.34$ $M_x=-1.78$
 $V,Ed=63.34$ $V_{c,Rd,Red}=6963.01$ $V,Ed/V_{c,Rd,Red}=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_L=0.62$ - Classe 3
 Sollecitazioni: $N=-4641.98$ $T_z=57.49$ $M_y=-23.96$ $T_y=-3.56$ $M_z=-1.28$ $M_x=-1.78$
 Tensioni: $\sigma_N=-502.38$ $\sigma_{m,d}=-110.38$ $\tau=5.01$ $\sigma_{max}=-612.76$ (sfrut=0.23)
 Tensioni: $\sigma_N=-502.38$ $\sigma_{m,d}=5.17$ $\tau=18.99$ $\tau_{max}=18.99$ (sfrut=0.01)
 Tensioni: $\sigma_N=-502.38$ $\sigma_{m,d}=-110.38$ $\tau=5.01$ $\sigma_{ID,max}=612.82$ (sfrut=0.23)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4641.98$ $M_y,Ed=-23.96$ $M_z,Ed=-1.28$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.19+0.04+0.00=0.23$
 Verifica ZZ: $0.19+0.03+0.00=0.23$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/50009)

Asta n. 40233 (-866 -864) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_L=0.31$ - Classe 1
 Sollecitazioni: $T_y=-3.56$ $M_x=-1.84$
 $V,Ed=-3.56$ $V_{c,Rd,Red}=6962.30$ $V,Ed/V_{c,Rd,Red}=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_L=0.31$ - Classe 1
 Sollecitazioni: $T_z=-67.76$ $M_x=-1.84$
 $V,Ed=-67.76$ $V_{c,Rd,Red}=6962.30$ $V,Ed/V_{c,Rd,Red}=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_L=0.62$ - Classe 3
 Sollecitazioni: $N=-4637.04$ $T_z=-70.68$ $M_y=16.45$ $T_y=-3.56$ $M_z=-1.90$ $M_x=-1.84$
 Tensioni: $\sigma_N=-501.84$ $\sigma_{m,d}=-80.25$ $\tau=5.16$ $\sigma_{max}=-582.10$ (sfrut=0.22)
 Tensioni: $\sigma_N=-501.84$ $\sigma_{m,d}=-7.69$ $\tau=22.35$ $\tau_{max}=22.35$ (sfrut=0.01)
 Tensioni: $\sigma_N=-501.84$ $\sigma_{m,d}=-80.25$ $\tau=5.16$ $\sigma_{ID,max}=582.16$ (sfrut=0.22)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4637.04$ $M_y,Ed=-25.56$ $M_z,Ed=-1.90$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.19+0.04+0.00=0.24$
 Verifica ZZ: $0.19+0.03+0.00=0.23$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.00$

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/46436)

Asta n. 40233 (-864 -862) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l=0.10$ - Classe 1
 Sollecitazioni: $T_y=-3.52$ $M_x=-1.84$
 $V,Ed=-3.52$ $V_c,Rd,Red=6962.29$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l=0.10$ - Classe 1
 Sollecitazioni: $T_z=62.49$ $M_x=-1.84$
 $V,Ed=62.49$ $V_c,Rd,Red=6962.29$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.62$ - Classe 3
 Sollecitazioni: $N=-4458.02$ $T_z=57.62$ $M_y=-23.14$ $T_y=-3.52$ $M_z=-1.02$ $M_x=-1.84$
 Tensioni: $\sigma_N=-482.47$ $\sigma_{m,d}=-105.70$ $\tau=5.16$ $\sigma_{max}=-588.17$ (sfrut=0.22)
 Tensioni: $\sigma_N=-482.47$ $\sigma_{m,d}=4.14$ $\tau=19.18$ $\tau_{max}=19.18$ (sfrut=0.01)
 Tensioni: $\sigma_N=-482.47$ $\sigma_{m,d}=-105.70$ $\tau=5.16$ $\sigma_{ID,max}=588.24$ (sfrut=0.22)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4458.02$ $M_y,Ed=-23.14$ $M_z,Ed=1.16$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.18+0.04+0.00=0.22$
 Verifica ZZ: $0.18+0.03+0.00=0.22$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/54176)

Asta n. 40233 (-862 -860) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l=0.41$ - Classe 1
 Sollecitazioni: $T_y=-3.55$ $M_x=-1.84$
 $V,Ed=-3.55$ $V_c,Rd,Red=6962.21$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l=0.41$ - Classe 1
 Sollecitazioni: $T_z=-70.88$ $M_x=-1.84$
 $V,Ed=-70.88$ $V_c,Rd,Red=6962.21$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.62$ - Classe 3
 Sollecitazioni: $N=-4450.22$ $T_z=-72.83$ $M_y=17.74$ $T_y=-3.55$ $M_z=-1.64$ $M_x=-1.84$
 Tensioni: $\sigma_N=-481.62$ $\sigma_{m,d}=-84.77$ $\tau=5.18$ $\sigma_{max}=-566.40$ (sfrut=0.22)
 Tensioni: $\sigma_N=-481.62$ $\sigma_{m,d}=-6.62$ $\tau=22.90$ $\tau_{max}=22.90$ (sfrut=0.02)
 Tensioni: $\sigma_N=-481.62$ $\sigma_{m,d}=-84.77$ $\tau=5.18$ $\sigma_{ID,max}=566.47$ (sfrut=0.22)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4450.22$ $M_y,Ed=-25.60$ $M_z,Ed=-1.64$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.18+0.04+0.00=0.23$
 Verifica ZZ: $0.18+0.03+0.00=0.22$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.00$ (L/50009)

Asta n. 40233 (-860 -858) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l=0.21$ - Classe 1
 Sollecitazioni: $T_y=-3.54$ $M_x=-1.84$
 $V,Ed=-3.54$ $V_c,Rd,Red=6962.24$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l=0.21$ - Classe 1
 Sollecitazioni: $T_z=59.65$ $M_x=-1.84$
 $V,Ed=59.65$ $V_c,Rd,Red=6962.24$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-4180.93$ $T_z=61.60$ $M_y=14.62$ $T_y=-3.54$ $M_z=1.43$ $M_x=-1.84$
 Tensioni: $\sigma_N=-452.48$ $\sigma_{m,d}=-70.20$ $\tau=5.17$ $\sigma_{max}=-522.69$ (sfrut=0.20)
 Tensioni: $\sigma_N=-452.48$ $\sigma_{m,d}=-5.78$ $\tau=20.16$ $\tau_{max}=20.16$ (sfrut=0.01)

Tensioni: $\sigma_N=-452.48$ $\sigma_{m,d}=-70.20$ $\tau=5.17$ $\sigma_{ID,max}=522.76$ (sfrut=0.20)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-4180.93$ $M_y, Ed=-21.76$ $M_z, Ed=1.43$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr_y=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr_z=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.17+0.04+0.00=0.21$
 Verifica ZZ: $0.17+0.03+0.00=0.20$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40233 (-858 -856) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_L=0.41$ - Classe 1
 Sollecitazioni: $T_y=-3.53$ $M_x=-1.84$
 $V, Ed=-3.53$ $V_c, Rd, Red=6962.24$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_L=0.41$ - Classe 1
 Sollecitazioni: $T_z=-72.77$ $M_x=-1.84$
 $V, Ed=-72.77$ $V_c, Rd, Red=6962.24$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_L=0.62$ - Classe 3
 Sollecitazioni: $N=-4169.98$ $T_z=-74.72$ $M_y=19.31$ $T_y=-3.53$ $M_z=-1.37$ $M_x=-1.84$
 Tensioni: $\sigma_N=-451.30$ $\sigma_{m,d}=-90.45$ $\tau=5.17$ $\sigma_{max}=-541.74$ (sfrut=0.21)
 Tensioni: $\sigma_N=-451.30$ $\sigma_{m,d}=-5.54$ $\tau=23.35$ $\tau_{max}=23.35$ (sfrut=0.02)
 Tensioni: $\sigma_N=-451.30$ $\sigma_{m,d}=-90.45$ $\tau=5.17$ $\sigma_{ID,max}=541.82$ (sfrut=0.21)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-4169.98$ $M_y, Ed=-25.20$ $M_z, Ed=-1.37$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr_y=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr_z=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.17+0.04+0.00=0.22$
 Verifica ZZ: $0.17+0.03+0.00=0.21$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/50009)

Asta n. 40233 (-856 -854) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_L=0.21$ - Classe 1
 Sollecitazioni: $T_y=-3.55$ $M_x=-1.84$
 $V, Ed=-3.55$ $V_c, Rd, Red=6962.19$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_L=0.21$ - Classe 1
 Sollecitazioni: $T_z=57.76$ $M_x=-1.84$
 $V, Ed=57.76$ $V_c, Rd, Red=6962.19$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_L=0.00$ - Classe 3
 Sollecitazioni: $N=-3810.31$ $T_z=59.71$ $M_y=15.14$ $T_y=-3.55$ $M_z=1.70$ $M_x=-1.84$
 Tensioni: $\sigma_N=-412.37$ $\sigma_{m,d}=-73.62$ $\tau=5.18$ $\sigma_{max}=-486.00$ (sfrut=0.19)
 Tensioni: $\sigma_N=-412.37$ $\sigma_{m,d}=-6.86$ $\tau=19.71$ $\tau_{max}=19.71$ (sfrut=0.01)
 Tensioni: $\sigma_N=-412.37$ $\sigma_{m,d}=-73.62$ $\tau=5.18$ $\sigma_{ID,max}=486.08$ (sfrut=0.19)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-3810.31$ $M_y, Ed=-20.07$ $M_z, Ed=1.70$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $Ncr_y=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $Ncr_z=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.16+0.03+0.00=0.19$
 Verifica ZZ: $0.16+0.03+0.00=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Relazione di calcolo

Asta n. 40233 (-854 -852) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X1=0.52$ - Classe 1
Sollecitazioni: $T_y=-3.52$ $M_x=-1.84$
 $V, Ed=-3.52$ $V_c, Rd, Red=6962.20$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X1=0.52$ - Classe 1
Sollecitazioni: $T_z=-75.60$ $M_x=-1.84$
 $V, Ed=-75.60$ $V_c, Rd, Red=6962.20$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 17 SLU $X1=0.00$ - Classe 3
Sollecitazioni: $N=-3796.20$ $T_z=-70.73$ $M_y=-24.51$ $T_y=-3.52$ $M_z=1.08$ $M_x=-1.84$
Tensioni: $\sigma_N=-410.85$ $\sigma_{m,d}=-111.92$ $\tau=5.18$ $\sigma_{max}=-522.77$ (sfrut=0.20)
Tensioni: $\sigma_N=-410.85$ $\sigma_{m,d}=4.37$ $\tau=22.39$ $\tau_{max}=22.39$ (sfrut=0.01)
Tensioni: $\sigma_N=-410.85$ $\sigma_{m,d}=-111.92$ $\tau=5.18$ $\sigma_{ID,max}=522.84$ (sfrut=0.20)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-3796.20$ $M_y, Ed=-24.51$ $M_z, Ed=-1.11$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.16+0.04+0.00=0.20$
Verifica ZZ: $0.16+0.03+0.00=0.19$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40233 (-852 -850) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X1=0.31$ - Classe 1
Sollecitazioni: $T_y=-3.63$ $M_x=-1.88$
 $V, Ed=-3.63$ $V_c, Rd, Red=6961.67$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X1=0.31$ - Classe 1
Sollecitazioni: $T_z=54.55$ $M_x=-1.88$
 $V, Ed=54.55$ $V_c, Rd, Red=6961.67$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 17 SLU $X1=0.00$ - Classe 3
Sollecitazioni: $N=-3345.94$ $T_z=57.47$ $M_y=15.89$ $T_y=-3.63$ $M_z=1.98$ $M_x=-1.88$
Tensioni: $\sigma_N=-362.12$ $\sigma_{m,d}=-78.20$ $\tau=5.30$ $\sigma_{max}=-440.31$ (sfrut=0.17)
Tensioni: $\sigma_N=-362.12$ $\sigma_{m,d}=-8.03$ $\tau=19.28$ $\tau_{max}=19.28$ (sfrut=0.01)
Tensioni: $\sigma_N=-362.12$ $\sigma_{m,d}=-78.20$ $\tau=5.30$ $\sigma_{ID,max}=440.41$ (sfrut=0.17)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-3345.94$ $M_y, Ed=-17.93$ $M_z, Ed=1.98$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493056.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493056.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.77, 0.97$
Verifica YY: $0.14+0.03+0.00=0.17$
Verifica ZZ: $0.14+0.02+0.00=0.16$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40233 (-850 -848) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X1=0.62$ - Classe 1
Sollecitazioni: $T_y=-3.63$ $M_x=-2.01$
 $V, Ed=-3.63$ $V_c, Rd, Red=6959.99$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X1=0.62$ - Classe 1
Sollecitazioni: $T_z=-76.89$ $M_x=-2.01$
 $V, Ed=-76.89$ $V_c, Rd, Red=6959.99$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 17 SLU $X1=0.00$ - Classe 3
Sollecitazioni: $N=-3328.54$ $T_z=-71.04$ $M_y=-23.28$ $T_y=-3.63$ $M_z=1.33$ $M_x=-2.01$
Tensioni: $\sigma_N=-360.23$ $\sigma_{m,d}=-107.64$ $\tau=5.66$ $\sigma_{max}=-467.87$ (sfrut=0.18)
Tensioni: $\sigma_N=-360.23$ $\sigma_{m,d}=5.36$ $\tau=22.94$ $\tau_{max}=22.94$ (sfrut=0.02)
Tensioni: $\sigma_N=-360.23$ $\sigma_{m,d}=-107.64$ $\tau=5.66$ $\sigma_{ID,max}=467.97$ (sfrut=0.18)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3

Sollecitazioni: N,Ed=-3328.54 My,Ed=-23.28 Mz,Ed=1.33 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.77, 0.97
 Verifica YY: 0.14+0.04+0.00=0.18
 Verifica ZZ: 0.14+0.03+0.00=0.17

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40233 (56 -848) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV Xl=0.00 - Classe 1
 Sollecitazioni: T_y=-4.92 M_x=-2.81
 V,Ed=-4.92 Vc,Rd,Red=6949.60 V,Ed/Vc,Rd,Red=0.00

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV Xl=0.00 - Classe 1
 Sollecitazioni: T_z=97.65 M_x=-2.81
 V,Ed=97.65 Vc,Rd,Red=6949.60 V,Ed/Vc,Rd,Red=0.01

- Verifica in termini tensionali [4.2.4] - CC 1 SLV Xl=0.00 - Classe 3
 Sollecitazioni: N=3695.44 T_z=97.65 M_y=44.00 T_y=-5.53 M_z=1.05 M_x=-2.81
 Tensioni: $\sigma_N=399.94$ $\sigma_{m,d}=197.05$ $\tau=7.91$ $\sigma_{max}=596.99$ (sfrut=0.23)
 Tensioni: $\sigma_N=399.94$ $\sigma_{m,d}=-4.24$ $\tau=31.67$ $\tau_{max}=31.67$ (sfrut=0.02)
 Tensioni: $\sigma_N=399.94$ $\sigma_{m,d}=197.05$ $\tau=7.91$ $\sigma_{ID,max}=597.15$ (sfrut=0.23)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: N,Ed=-2760.66 My,Ed=13.29 Mz,Ed=-2.89 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.11+0.02+0.00=0.14
 Verifica ZZ: 0.11+0.02+0.00=0.14

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40233 (20 56) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV Xl=0.62 - Classe 1
 Sollecitazioni: T_y=-6.63 M_x=-7.97
 V,Ed=-6.63 Vc,Rd,Red=6882.64 V,Ed/Vc,Rd,Red=0.00

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV Xl=0.62 - Classe 1
 Sollecitazioni: T_z=-321.33 M_x=-7.97
 V,Ed=-321.33 Vc,Rd,Red=6882.64 V,Ed/Vc,Rd,Red=0.05

- Verifica in termini tensionali [4.2.4] - CC 1 SLV Xl=0.30 - Classe 3
 Sollecitazioni: N=3754.96 T_z=-319.01 M_y=-61.41 T_y=-7.43 M_z=2.14 M_x=-7.97
 Tensioni: $\sigma_N=406.38$ $\sigma_{m,d}=277.98$ $\tau=22.40$ $\sigma_{max}=684.36$ (sfrut=0.26)
 Tensioni: $\sigma_N=406.38$ $\sigma_{m,d}=8.64$ $\tau=100.01$ $\tau_{max}=100.01$ (sfrut=0.07)
 Tensioni: $\sigma_N=406.38$ $\sigma_{m,d}=277.98$ $\tau=22.40$ $\sigma_{ID,max}=685.46$ (sfrut=0.26)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: N,Ed=-1448.93 My,Ed=-52.31 Mz,Ed=2.20 L=0.62
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493056.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493056.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.06+0.08+0.00=0.15
 Verifica ZZ: 0.06+0.07+0.00=0.13

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.00$ (L/27962)

- Verifica freccia massima carichi totali - CC 21
 $f_{z,G}=0.00$

Asta n. 40233 (-846 20) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV Xl=0.00 - Classe 1

Sollecitazioni: $T_y=1.91$ $M_x=9.91$
 $V, Ed=1.91$ $V_c, Rd, Red=6857.41$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=352.18$ $M_x=9.91$
 $V, Ed=352.18$ $V_c, Rd, Red=6857.41$ $V, Ed/V_c, Rd, Red=0.05$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.19$ - Classe 3
 Sollecitazioni: $N=-2302.60$ $T_z=300.15$ $M_y=50.25$ $T_y=1.97$ $M_z=1.10$ $M_x=10.96$
 Tensioni: $\sigma_N=-249.20$ $\sigma_{m,d}=-224.60$ $\tau=30.80$ $\sigma_{max}=-473.80$ (sfrut=0.18)
 Tensioni: $\sigma_N=-249.20$ $\sigma_{m,d}=4.44$ $\tau=103.81$ $\tau_{max}=103.81$ (sfrut=0.07)
 Tensioni: $\sigma_N=-249.20$ $\sigma_{m,d}=-224.60$ $\tau=30.80$ $\sigma_{TD,max}=476.79$ (sfrut=0.18)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-4234.96$ $M_y, Ed=-24.24$ $M_z, Ed=0.78$ $L=0.19$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=6.04$ $N_{cr,y}=5250710.00$ $\lambda^*_y=0.07$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=6.04$ $N_{cr,z}=5250710.00$ $\lambda^*_z=0.07$ Curva a: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.17+0.04+0.00=0.21$
 Verifica ZZ: $0.17+0.03+0.00=0.21$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40233 (-844 -846) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=1.92$ $M_x=1.64$
 $V, Ed=1.92$ $V_c, Rd, Red=6964.90$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=57.48$ $M_x=1.64$
 $V, Ed=57.48$ $V_c, Rd, Red=6964.90$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 9 SLV $X_l=0.62$ - Classe 1
 Sollecitazioni: $N=2528.61$ $T_z=-5.74$ $T_y=2.42$ $M_x=1.91$
 Verifica a trazione [4.2.5]
 $N, Ed=2528.61$ $N_{pl}, Rd=24200.00$ $N_u, Rd=28607.00$ $N, Ed/N_t, Rd=0.10$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-4242.05$ $M_y, Ed=25.91$ $M_z, Ed=-0.67$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.18+0.04+0.00=0.22$
 Verifica ZZ: $0.18+0.03+0.00=0.21$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.00$ (L/50009)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/32505)

Asta n. 40233 (-842 -844) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_z=-107.76$
 $V, Ed=-107.76$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.02$

- Verifica a compressione (4.2.4.1.2.2) - CC 17 SLU $X_l=0.31$ - Classe 1
 Sollecitazioni: $N=-4483.92$ $T_z=-103.65$
 Verifica a compressione [4.2.9]
 $N, Ed=-4483.92$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.19$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-4483.92$ $M_y, Ed=33.27$ $M_z, Ed=0.19$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.19+0.05+0.00=0.24$
 Verifica ZZ: $0.19+0.04+0.00=0.23$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$

Asta n. 40233 (-840 -842) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=101.72$
 $V,Ed=101.72$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 19 SLU $X_l=0.31$ - Classe 1
 Sollecitazioni: $N=-2750.08$ $T_z=62.34$
 Verifica a compressione [4.2.9]
 $N,Ed=-2750.08$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.11$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4490.27$ $M_y,Ed=32.09$ $M_z,Ed=0.25$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.19+0.05+0.00=0.24$
 Verifica ZZ: $0.19+0.04+0.00=0.23$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,l}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$

Asta n. 40233 (-838 -840) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
 Sollecitazioni: $T_z=-109.33$
 $V,Ed=-109.33$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.02$

- Verifica a compressione (4.2.4.1.2.2) - CC 17 SLU $X_l=0.31$ - Classe 1
 Sollecitazioni: $N=-4631.08$ $T_z=-105.22$
 Verifica a compressione [4.2.9]
 $N,Ed=-4631.08$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.19$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4631.08$ $M_y,Ed=33.79$ $M_z,Ed=-0.22$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.19+0.06+0.00=0.25$
 Verifica ZZ: $0.19+0.04+0.00=0.24$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.00$

Asta n. 40233 (-836 -838) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=104.20$
 $V,Ed=104.20$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 17 SLU $X_l=0.31$ - Classe 1
 Sollecitazioni: $N=-4634.41$ $T_z=101.28$
 Verifica a compressione [4.2.9]
 $N,Ed=-4634.41$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.19$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-4634.41$ $M_y,Ed=32.39$ $M_z,Ed=0.25$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.19+0.05+0.00=0.24$
 Verifica ZZ: $0.19+0.04+0.00=0.23$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,l}=0.00$

- Verifica freccia massima carichi totali - CC 20

Relazione di calcolo

$f_{z,L}=0.00$

Asta n. 40233 (-834 -836) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=0.62$ - Classe 1
Sollecitazioni: $T_z=-107.50$
 $V,Ed=-107.50$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.02$

- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_1=0.31$ - Classe 1
Sollecitazioni: $N=-4685.56$ $T_z=-104.58$
Verifica a compressione [4.2.9]
 $N,Ed=-4685.56$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.19$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N,Ed=-4685.56$ $M_y,Ed=33.43$ $M_z,Ed=-0.25$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.19+0.05+0.00=0.25$
Verifica ZZ: $0.19+0.04+0.00=0.24$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40233 (-832 -834) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=106.10$
 $V,Ed=106.10$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.02$

- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_1=0.31$ - Classe 1
Sollecitazioni: $N=-4687.15$ $T_z=102.67$
Verifica a compressione [4.2.9]
 $N,Ed=-4687.15$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.19$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-4684.92$ $M_y,Ed=32.90$ $M_z,Ed=0.22$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.19+0.05+0.00=0.25$
Verifica ZZ: $0.19+0.04+0.00=0.24$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/59101)

Asta n. 40233 (-830 -832) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=0.62$ - Classe 1
Sollecitazioni: $T_z=-105.61$
 $V,Ed=-105.61$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.02$

- Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_1=0.31$ - Classe 1
Sollecitazioni: $N=-4687.53$ $T_z=-102.69$
Verifica a compressione [4.2.9]
 $N,Ed=-4687.53$ $N_c,Rd=-24200.00$ $N,Ed/N_c,Rd=0.19$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N,Ed=-4687.53$ $M_y,Ed=32.75$ $M_z,Ed=-0.29$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.19+0.05+0.00=0.25$
Verifica ZZ: $0.19+0.04+0.00=0.24$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ $f_{z,G}=0.00$

Relazione di calcolo

Asta n. 40233 (-828 -830) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=107.96$
 $V, Ed=107.96$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.02$
 - Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-4685.97$ $T_z=104.54$
Verifica a compressione [4.2.9]
 $N, Ed=-4685.97$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.19$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-4685.97$ $M_y, Ed=33.41$ $M_z, Ed=0.19$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.19+0.05+0.00=0.25$
Verifica ZZ: $0.19+0.04+0.00=0.24$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,l}=0.00$
 - Verifica freccia massima carichi totali - CC 31
 $f_{z,l}=0.00$

Asta n. 40233 (-826 -828) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-103.49$
 $V, Ed=-103.49$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$
 - Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-4595.77$ $T_z=-100.57$
Verifica a compressione [4.2.9]
 $N, Ed=-4595.77$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.19$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-4595.77$ $M_y, Ed=32.34$ $M_z, Ed=-0.34$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.19+0.05+0.00=0.24$
Verifica ZZ: $0.19+0.04+0.00=0.23$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.00$
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,l}=0.00$

Asta n. 40233 (-824 -826) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=108.87$
 $V, Ed=108.87$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.02$
 - Verifica a compressione (4.2.4.1.2.2) - CC 27 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $N=-4590.87$ $T_z=105.56$
Verifica a compressione [4.2.9]
 $N, Ed=-4590.87$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.19$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-4590.87$ $M_y, Ed=33.98$ $M_z, Ed=-0.21$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda_y^*=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda_z^*=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.19+0.06+0.00=0.25$
Verifica ZZ: $0.19+0.04+0.00=0.23$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,l}=0.00$
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.00$ (L/54176)

Asta n. 40233 (54 -824) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU $X_l=0.52$ - Classe 1
Sollecitazioni: $T_y=-2.28$ $M_x=-1.53$
 $V, Ed=-2.28$ $V_c, Rd, Red=6966.32$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU $X_l=0.52$ - Classe 1
Sollecitazioni: $T_z=-89.75$ $M_x=-1.53$
 $V, Ed=-89.75$ $V_c, Rd, Red=6966.32$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=0.62$ - Classe 3
Sollecitazioni: $N=-4383.17$ $T_z=-90.72$ $M_y=29.78$ $T_y=-2.28$ $M_z=-1.03$ $M_x=-1.53$
Tensioni: $\sigma_N=-474.37$ $\sigma_{m,d}=-134.77$ $\tau=4.29$ $\sigma_{max}=-609.14$ (sfrut=0.23)
Tensioni: $\sigma_N=-474.37$ $\sigma_{m,d}=-4.18$ $\tau=26.36$ $\tau_{max}=26.36$ (sfrut=0.02)
Tensioni: $\sigma_N=-474.37$ $\sigma_{m,d}=-134.77$ $\tau=4.29$ $\sigma_{ID,max}=609.18$ (sfrut=0.23)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-4383.17$ $M_y, Ed=29.78$ $M_z, Ed=-1.03$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.18+0.05+0.00=0.23$
Verifica ZZ: $0.18+0.04+0.00=0.22$
 - Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$
- Asta n. 40233 (19 54) - Sez. 6 (RC80x80x3) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV $X_l=0.30$ - Classe 1
Sollecitazioni: $T_y=-2.31$ $M_x=-6.97$
 $V, Ed=-2.31$ $V_c, Rd, Red=6895.60$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.30$ - Classe 1
Sollecitazioni: $T_z=285.86$ $M_x=-6.97$
 $V, Ed=285.86$ $V_c, Rd, Red=6895.60$ $V, Ed/V_c, Rd, Red=0.04$
 - Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.30$ - Classe 3
Sollecitazioni: $N=-4211.73$ $T_z=182.12$ $M_y=26.77$ $T_y=-3.78$ $M_z=1.07$ $M_x=-6.66$
Tensioni: $\sigma_N=-455.81$ $\sigma_{m,d}=-121.77$ $\tau=18.71$ $\sigma_{max}=-577.58$ (sfrut=0.22)
Tensioni: $\sigma_N=-455.81$ $\sigma_{m,d}=-4.31$ $\tau=63.01$ $\tau_{max}=63.01$ (sfrut=0.04)
Tensioni: $\sigma_N=-455.81$ $\sigma_{m,d}=-121.77$ $\tau=18.71$ $\sigma_{ID,max}=578.49$ (sfrut=0.22)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-4338.95$ $M_y, Ed=-32.48$ $M_z, Ed=0.92$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.18+0.05+0.00=0.23$
Verifica ZZ: $0.18+0.04+0.00=0.22$
 - Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$ (L/25811)
 - Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/13981)
- Asta n. 40233 (-822 19) - Sez. 6 (RC80x80x3) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=6.30$ $M_x=9.15$
 $V, Ed=6.30$ $V_c, Rd, Red=6867.34$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=255.10$ $M_x=9.15$
 $V, Ed=255.10$ $V_c, Rd, Red=6867.34$ $V, Ed/V_c, Rd, Red=0.04$
 - Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.27$ - Classe 3
Sollecitazioni: $N=-4004.64$ $T_z=64.36$ $M_y=-21.67$ $T_y=6.26$ $M_z=2.12$ $M_x=8.31$
Tensioni: $\sigma_N=-433.40$ $\sigma_{m,d}=-104.04$ $\tau=23.35$ $\sigma_{max}=-537.44$ (sfrut=0.21)
Tensioni: $\sigma_N=-433.40$ $\sigma_{m,d}=8.58$ $\tau=39.01$ $\tau_{max}=39.01$ (sfrut=0.03)
Tensioni: $\sigma_N=-433.40$ $\sigma_{m,d}=-104.04$ $\tau=23.35$ $\sigma_{ID,max}=538.96$ (sfrut=0.21)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-4004.64$ $M_y, Ed=-21.67$ $M_z, Ed=2.12$ $L=0.27$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$

$\lambda_y=8.58$ Ncr,y=2600080.00 $\lambda'_y=0.10$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=8.58$ Ncr,z=2600080.00 $\lambda'_z=0.10$ Curva a: $\Phi_z=0.00$ $\chi_z=1.00$
Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
Verifica YY: 0.17+0.03+0.00=0.20
Verifica ZZ: 0.17+0.03+0.00=0.20

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40233 (-820 -822) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l=0.21$ - Classe 1
Sollecitazioni: $T_y=3.85$ $M_x=2.05$
 $V,Ed=3.85$ $V_c,Rd,Red=6959.52$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l=0.21$ - Classe 1
Sollecitazioni: $T_z=45.58$ $M_x=2.05$
 $V,Ed=45.58$ $V_c,Rd,Red=6959.52$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-4020.70$ $T_z=47.53$ $M_y=18.51$ $T_y=3.85$ $M_z=-1.55$ $M_x=2.05$
Tensioni: $\sigma_N=-435.14$ $\sigma_{m,d}=-87.74$ $\tau=5.76$ $\sigma_{max}=-522.88$ (sfrut=0.20)
Tensioni: $\sigma_N=-435.14$ $\sigma_{m,d}=-6.26$ $\tau=17.33$ $\tau_{max}=17.33$ (sfrut=0.01)
Tensioni: $\sigma_N=-435.14$ $\sigma_{m,d}=-87.74$ $\tau=5.76$ $\sigma_{ID,max}=522.97$ (sfrut=0.20)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-4020.70$ $M_y,Ed=18.51$ $M_z,Ed=-1.55$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda'_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda'_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
Verifica YY: 0.17+0.03+0.00=0.20
Verifica ZZ: 0.17+0.02+0.00=0.19

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$ (L/54176)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/59101)

Asta n. 40233 (-818 -820) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-87.10$
 $V,Ed=-87.10$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 9 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=1613.30$ $T_z=-11.06$
Verifica a trazione [4.2.5]
 $N,Ed=1613.30$ $N_{pl,Rd}=24200.00$ $N_u,Rd=28607.00$ $N,Ed/N_t,Rd=0.07$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-4248.39$ $M_y,Ed=-27.01$ $M_z,Ed=-0.35$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda'_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda'_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
Verifica YY: 0.18+0.04+0.00=0.22
Verifica ZZ: 0.18+0.04+0.00=0.21

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40233 (-816 -818) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=81.58$
 $V,Ed=81.58$ $V_c,Rd=6986.14$ $V,Ed/V_c,Rd=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 9 SLV $X_l=0.10$ - Classe 1
Sollecitazioni: $N=1583.21$ $T_z=3.69$
Verifica a trazione [4.2.5]
 $N,Ed=1583.21$ $N_{pl,Rd}=24200.00$ $N_u,Rd=28607.00$ $N,Ed/N_t,Rd=0.07$

Relazione di calcolo

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed = -4254.21 \text{ My}, Ed = -25.32 \text{ Mz}, Ed = -0.51 \text{ L} = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71 \text{ Ncr}, y = 493055.00 \lambda_y^* = 0.23 \text{ Curva a: } \Phi_y = 0.53 \chi_y = 0.99$
 $\lambda_z = 19.71 \text{ Ncr}, z = 493055.00 \lambda_z^* = 0.23 \text{ Curva a: } \Phi_z = 0.53 \chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.18 + 0.04 + 0.00 = 0.22$
Verifica ZZ: $0.18 + 0.03 + 0.00 = 0.21$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L} = 0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L} = 0.00$

Asta n. 40233 (-814 -816) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1 = 0.62$ - Classe 1
Sollecitazioni: $T_z = -87.86$
 $V, Ed = -87.86 \text{ Vc}, Rd = 6986.14 \text{ V}, Ed/Vc, Rd = 0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU $X_1 = 0.00$ - Classe 1
Sollecitazioni: $N = -4340.99 \text{ T}_z = -82.01 \text{ M}_y = -27.36$
 $My, Ed = -27.36 \text{ My}, V, c, Rd = 699.13$
 $N, Ed = -4340.99 \text{ Nc}, Rd = -24200.00 \text{ YY } n = N, Ed/Nc, Rd = 0.18 \text{ MNy}, c, Rd = 699.13 \text{ My}, Ed/MNy, c, Rd = 0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed = -4377.50 \text{ My}, Ed = -27.29 \text{ Mz}, Ed = -0.28 \text{ L} = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71 \text{ Ncr}, y = 493055.00 \lambda_y^* = 0.23 \text{ Curva a: } \Phi_y = 0.53 \chi_y = 0.99$
 $\lambda_z = 19.71 \text{ Ncr}, z = 493055.00 \lambda_z^* = 0.23 \text{ Curva a: } \Phi_z = 0.53 \chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.18 + 0.04 + 0.00 = 0.23$
Verifica ZZ: $0.18 + 0.04 + 0.00 = 0.22$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L} = 0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L} = 0.00 \text{ (L/59101)}$

Asta n. 40233 (-812 -814) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1 = 0.00$ - Classe 1
Sollecitazioni: $T_z = 83.94$
 $V, Ed = 83.94 \text{ Vc}, Rd = 6986.14 \text{ V}, Ed/Vc, Rd = 0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 17 SLU $X_1 = 0.62$ - Classe 1
Sollecitazioni: $N = -4380.22 \text{ T}_z = 78.09 \text{ M}_y = -26.44$
 $My, Ed = -26.44 \text{ My}, V, c, Rd = 699.13$
 $N, Ed = -4380.22 \text{ Nc}, Rd = -24200.00 \text{ YY } n = N, Ed/Nc, Rd = 0.18 \text{ MNy}, c, Rd = 699.13 \text{ My}, Ed/MNy, c, Rd = 0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed = -4380.22 \text{ My}, Ed = -26.44 \text{ Mz}, Ed = -0.39 \text{ L} = 0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT} = 0.95, 0.95, 0.95$
 $\lambda_y = 19.71 \text{ Ncr}, y = 493055.00 \lambda_y^* = 0.23 \text{ Curva a: } \Phi_y = 0.53 \chi_y = 0.99$
 $\lambda_z = 19.71 \text{ Ncr}, z = 493055.00 \lambda_z^* = 0.23 \text{ Curva a: } \Phi_z = 0.53 \chi_z = 0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz} = 0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.18 + 0.04 + 0.00 = 0.22$
Verifica ZZ: $0.18 + 0.03 + 0.00 = 0.22$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L} = 0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L} = 0.00$

Asta n. 40233 (-810 -812) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1 = 0.62$ - Classe 1
Sollecitazioni: $T_z = -86.01$
 $V, Ed = -86.01 \text{ Vc}, Rd = 6986.14 \text{ V}, Ed/Vc, Rd = 0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU $X_1 = 0.00$ - Classe 1
Sollecitazioni: $N = -4410.94 \text{ T}_z = -80.16 \text{ M}_y = -27.09$
 $My, Ed = -27.09 \text{ My}, V, c, Rd = 699.13$
 $N, Ed = -4410.94 \text{ Nc}, Rd = -24200.00 \text{ YY } n = N, Ed/Nc, Rd = 0.18 \text{ MNy}, c, Rd = 699.13 \text{ My}, Ed/MNy, c, Rd = 0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed = -4410.94 \text{ My}, Ed = -27.09 \text{ Mz}, Ed = 0.23 \text{ L} = 0.62$

$\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
 Verifica YY: $0.18+0.04+0.00=0.23$
 Verifica ZZ: $0.18+0.04+0.00=0.22$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40233 (-808 -810) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=85.83$
 $V, Ed=85.83$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 17 SLU $X_1=0.62$ - Classe 1
 Sollecitazioni: $N=-4412.58$ $T_z=79.98$ $M_y=-27.05$
 $M_y, Ed=-27.05$ $M_y, V, c, Rd=699.13$
 $N, Ed=-4412.58$ $N_c, Rd=-24200.00$ YY $n=N, Ed/N_c, Rd=0.18$ $MN_y, c, Rd=699.13$ $M_y, Ed/MN_y, c, Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-4412.58$ $M_y, Ed=-27.05$ $M_z, Ed=-0.30$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
 Verifica YY: $0.18+0.04+0.00=0.23$
 Verifica ZZ: $0.18+0.04+0.00=0.22$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40233 (-806 -808) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=0.62$ - Classe 1
 Sollecitazioni: $T_z=-84.12$
 $V, Ed=-84.12$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 27 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $N=-4387.36$ $T_z=-78.28$ $M_y=-26.51$
 $M_y, Ed=-26.51$ $M_y, V, c, Rd=699.13$
 $N, Ed=-4387.36$ $N_c, Rd=-24200.00$ YY $n=N, Ed/N_c, Rd=0.18$ $MN_y, c, Rd=699.13$ $M_y, Ed/MN_y, c, Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-4387.36$ $M_y, Ed=-26.51$ $M_z, Ed=0.31$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
 Verifica YY: $0.18+0.04+0.00=0.22$
 Verifica ZZ: $0.18+0.03+0.00=0.22$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40233 (-804 -806) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=87.69$
 $V, Ed=87.69$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica a presso o tenso-flessione retta YY (4.2.4.1.2.7) - CC 17 SLU $X_1=0.62$ - Classe 1
 Sollecitazioni: $N=-4351.41$ $T_z=81.84$ $M_y=-27.35$
 $M_y, Ed=-27.35$ $M_y, V, c, Rd=699.13$
 $N, Ed=-4351.41$ $N_c, Rd=-24200.00$ YY $n=N, Ed/N_c, Rd=0.18$ $MN_y, c, Rd=699.13$ $M_y, Ed/MN_y, c, Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-4384.94$ $M_y, Ed=-27.27$ $M_z, Ed=-0.21$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$

$\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.18+0.04+0.00=0.23$
 Verifica ZZ: $0.18+0.04+0.00=0.22$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40233 (-802 -804) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=0.62$ - Classe 1
 Sollecitazioni: $T_z=-81.89$
 $V, Ed=-81.89$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 1 SLV $X_1=0.41$ - Classe 1
 Sollecitazioni: $N=1605.12$ $T_z=-6.19$
 Verifica a trazione [4.2.5]
 $N, Ed=1605.12$ $N_{pl}, Rd=24200.00$ $N_u, Rd=28607.00$ $N, Ed/N_t, Rd=0.07$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-4270.04$ $M_y, Ed=-25.48$ $M_z, Ed=0.38$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.18+0.04+0.00=0.22$
 Verifica ZZ: $0.18+0.03+0.00=0.21$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40233 (-800 -802) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=87.92$
 $V, Ed=87.92$ $V_c, Rd=6986.14$ $V, Ed/V_c, Rd=0.01$

- Verifica a trazione (4.2.4.1.2.1) - CC 1 SLV $X_1=0.62$ - Classe 1
 Sollecitazioni: $N=1635.83$ $T_z=4.84$
 Verifica a trazione [4.2.5]
 $N, Ed=1635.83$ $N_{pl}, Rd=24200.00$ $N_u, Rd=28607.00$ $N, Ed/N_t, Rd=0.07$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-4264.33$ $M_y, Ed=-27.16$ $M_z, Ed=0.29$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.18+0.04+0.00=0.22$
 Verifica ZZ: $0.18+0.04+0.00=0.21$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40233 (-798 -800) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=74.96$ $M_x=-1.16$
 $V, Ed=74.96$ $V_c, Rd, Red=6971.02$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica a compressione (4.2.4.1.2.2) - CC 28 SLU $X_1=0.31$ - Classe 1
 Sollecitazioni: $N=-2353.11$ $T_z=-24.84$
 Verifica a compressione [4.2.9]
 $N, Ed=-2353.11$ $N_c, Rd=-24200.00$ $N, Ed/N_c, Rd=0.10$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N, Ed=-4032.14$ $M_y, Ed=19.82$ $M_z, Ed=-0.11$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$

Relazione di calcolo

Verifica YY: $0.17+0.03+0.00=0.20$
Verifica ZZ: $0.17+0.03+0.00=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40233 (18 -798) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l=0.62$ - Classe 1
Sollecitazioni: $T_z=-295.46$ $M_x=-5.89$
 $V, Ed=-295.46$ $V_c, Rd, Red=6909.63$ $V, Ed/V_c, Rd, Red=0.04$

- Verifica in termini tensionali [4.2.4] - CC 5 SLV $X_l=0.30$ - Classe 3
Sollecitazioni: $N=1188.01$ $T_z=-131.77$ $M_y=-26.37$ $T_y=-3.45$ $M_z=1.03$ $M_x=-10.62$
Tensioni: $\sigma_N=128.57$ $\sigma_{m,d}=119.86$ $\tau=29.86$ $\sigma_{max}=248.43$ (sfrut=0.09)
Tensioni: $\sigma_N=128.57$ $\sigma_{m,d}=4.18$ $\tau=61.91$ $\tau_{max}=61.91$ (sfrut=0.04)
Tensioni: $\sigma_N=128.57$ $\sigma_{m,d}=111.21$ $\tau=52.05$ $\sigma_{ID,max}=256.17$ (sfrut=0.10)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-3991.78$ $M_y, Ed=-19.78$ $M_z, Ed=0.25$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
Verifica YY: $0.16+0.03+0.00=0.20$
Verifica ZZ: $0.16+0.03+0.00=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.00$ (L/25811)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40233 (52 18) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=10.02$ $M_x=8.78$
 $V, Ed=10.02$ $V_c, Rd, Red=6872.13$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=-622.62$ $M_x=8.78$
 $V, Ed=-622.62$ $V_c, Rd, Red=6872.13$ $V, Ed/V_c, Rd, Red=0.09$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.17$ - Classe 3
Sollecitazioni: $N=4219.45$ $T_z=603.98$ $M_y=-61.70$ $T_y=9.57$ $M_z=1.84$ $M_x=10.57$
Tensioni: $\sigma_N=456.65$ $\sigma_{m,d}=277.94$ $\tau=29.70$ $\sigma_{max}=734.59$ (sfrut=0.28)
Tensioni: $\sigma_N=456.65$ $\sigma_{m,d}=7.44$ $\tau=176.62$ $\tau_{max}=176.62$ (sfrut=0.12)
Tensioni: $\sigma_N=456.65$ $\sigma_{m,d}=257.70$ $\tau=131.41$ $\sigma_{ID,max}=749.73$ (sfrut=0.29)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed=-2203.13$ $M_y, Ed=71.63$ $M_z, Ed=2.03$ $L=0.47$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=14.94$ $N_{cr,y}=857996.00$ $\lambda^*_y=0.17$ Curva a: $\Phi_y=0.00$ $\chi_y=1.00$
 $\lambda_z=14.94$ $N_{cr,z}=857996.00$ $\lambda^*_z=0.17$ Curva a: $\Phi_z=0.00$ $\chi_z=1.00$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.09+0.11+0.00=0.21$
Verifica ZZ: $0.09+0.09+0.00=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 32
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 21
 $f_{z,L}=0.00$

Asta n. 40233 (49 52) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV $X_l=0.52$ - Classe 1
Sollecitazioni: $T_y=7.58$ $M_x=3.50$
 $V, Ed=7.58$ $V_c, Rd, Red=6940.65$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.52$ - Classe 1
Sollecitazioni: $T_z=-97.64$ $M_x=3.50$
 $V, Ed=-97.64$ $V_c, Rd, Red=6940.65$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.62$ - Classe 3
Sollecitazioni: $N=4138.88$ $T_z=-98.39$ $M_y=47.89$ $T_y=7.58$ $M_z=1.49$ $M_x=3.50$
Tensioni: $\sigma_N=447.93$ $\sigma_{m,d}=215.99$ $\tau=9.85$ $\sigma_{max}=663.92$ (sfrut=0.25)

Tensioni: $\sigma_N=447.93$ $\sigma_{m,d}=-6.03$ $\tau=33.78$ $\tau_{max}=33.78$ (sfrut=0.02)
Tensioni: $\sigma_N=447.93$ $\sigma_{m,d}=215.99$ $\tau=9.85$ $\sigma_{ID,max}=664.14$ (sfrut=0.25)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N_{Ed}=-2200.43$ $M_{y,Ed}=41.65$ $M_{z,Ed}=-3.09$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493058.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493058.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
Verifica YY: $0.09+0.07+0.00=0.16$
Verifica ZZ: $0.09+0.05+0.00=0.15$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.00$ (L/59101)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/50008)

Asta n. 40233 (48 49) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU $X_l=0.52$ - Classe 1
Sollecitazioni: $T_y=4.38$ $M_x=2.44$
 $V_{Ed}=4.38$ $V_{c,Rd,Red}=6954.39$ $V_{Ed/V_{c,Rd,Red}}=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU $X_l=0.52$ - Classe 1
Sollecitazioni: $T_z=-93.45$ $M_x=2.44$
 $V_{Ed}=-93.45$ $V_{c,Rd,Red}=6954.39$ $V_{Ed/V_{c,Rd,Red}}=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.62$ - Classe 3
Sollecitazioni: $N=-3584.01$ $T_z=-94.00$ $M_y=29.50$ $T_y=4.52$ $M_z=1.04$ $M_x=2.55$
Tensioni: $\sigma_N=-387.88$ $\sigma_{m,d}=-133.59$ $\tau=7.17$ $\sigma_{max}=-521.47$ (sfrut=0.20)
Tensioni: $\sigma_N=-387.88$ $\sigma_{m,d}=-4.20$ $\tau=30.03$ $\tau_{max}=30.03$ (sfrut=0.02)
Tensioni: $\sigma_N=-387.88$ $\sigma_{m,d}=-133.59$ $\tau=7.17$ $\sigma_{ID,max}=521.61$ (sfrut=0.20)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N_{Ed}=-3584.01$ $M_{y,Ed}=29.50$ $M_{z,Ed}=-1.76$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
Verifica YY: $0.15+0.05+0.00=0.20$
Verifica ZZ: $0.15+0.04+0.00=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.00$

Asta n. 40233 (45 48) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $T_y=4.46$ $M_x=2.40$
 $V_{Ed}=4.46$ $V_{c,Rd,Red}=6954.98$ $V_{Ed/V_{c,Rd,Red}}=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l=0.31$ - Classe 1
Sollecitazioni: $T_z=69.62$ $M_x=2.40$
 $V_{Ed}=69.62$ $V_{c,Rd,Red}=6954.98$ $V_{Ed/V_{c,Rd,Red}}=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-3603.71$ $T_z=72.54$ $M_y=22.24$ $T_y=4.46$ $M_z=-2.51$ $M_x=2.40$
Tensioni: $\sigma_N=-390.01$ $\sigma_{m,d}=-108.25$ $\tau=6.75$ $\sigma_{max}=-498.26$ (sfrut=0.19)
Tensioni: $\sigma_N=-390.01$ $\sigma_{m,d}=-10.14$ $\tau=24.39$ $\tau_{max}=24.39$ (sfrut=0.02)
Tensioni: $\sigma_N=-390.01$ $\sigma_{m,d}=-108.25$ $\tau=6.75$ $\sigma_{ID,max}=498.40$ (sfrut=0.19)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N_{Ed}=-3603.71$ $M_{y,Ed}=22.24$ $M_{z,Ed}=-2.51$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ Ncr,y=493055.00 $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
Verifica YY: $0.15+0.04+0.00=0.19$
Verifica ZZ: $0.15+0.03+0.00=0.18$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40233 (44 45) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU $X_l=0.52$ - Classe 1
 Sollecitazioni: $T_y=4.19$ $M_x=2.28$
 $V, Ed=4.19$ $V_c, Rd, Red=6956.53$ $V, Ed/V_c, Rd, Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU $X_l=0.52$ - Classe 1
 Sollecitazioni: $T_z=-94.22$ $M_x=2.28$
 $V, Ed=-94.22$ $V_c, Rd, Red=6956.53$ $V, Ed/V_c, Rd, Red=0.01$
- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-4122.61$ $T_z=-88.79$ $M_y=-28.55$ $T_y=4.32$ $M_z=-1.25$ $M_x=2.35$
 Tensioni: $\sigma_N=-446.17$ $\sigma_{m,d}=-130.34$ $\tau=6.61$ $\sigma_{max}=-576.51$ (sfrut=0.22)
 Tensioni: $\sigma_N=-446.17$ $\sigma_{m,d}=5.05$ $\tau=28.20$ $\tau_{max}=28.20$ (sfrut=0.02)
 Tensioni: $\sigma_N=-446.17$ $\sigma_{m,d}=-130.34$ $\tau=6.61$ $\sigma_{ID,max}=576.62$ (sfrut=0.22)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-4122.61$ $M_y, Ed=-28.55$ $M_z, Ed=1.43$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.17+0.05+0.00=0.22$
 Verifica ZZ: $0.17+0.04+0.00=0.21$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40233 (41 44) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_l=0.31$ - Classe 1
 Sollecitazioni: $T_y=4.34$ $M_x=2.35$
 $V, Ed=4.34$ $V_c, Rd, Red=6955.64$ $V, Ed/V_c, Rd, Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_l=0.31$ - Classe 1
 Sollecitazioni: $T_z=72.00$ $M_x=2.35$
 $V, Ed=72.00$ $V_c, Rd, Red=6955.64$ $V, Ed/V_c, Rd, Red=0.01$
- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-4139.10$ $T_z=74.92$ $M_y=21.28$ $T_y=4.34$ $M_z=-1.92$ $M_x=2.35$
 Tensioni: $\sigma_N=-447.95$ $\sigma_{m,d}=-101.46$ $\tau=6.60$ $\sigma_{max}=-549.41$ (sfrut=0.21)
 Tensioni: $\sigma_N=-447.95$ $\sigma_{m,d}=-7.77$ $\tau=24.83$ $\tau_{max}=24.83$ (sfrut=0.02)
 Tensioni: $\sigma_N=-447.95$ $\sigma_{m,d}=-101.46$ $\tau=6.60$ $\sigma_{ID,max}=549.53$ (sfrut=0.21)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N, Ed=-4139.10$ $M_y, Ed=-23.36$ $M_z, Ed=-1.92$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493058.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493058.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.17+0.04+0.00=0.21$
 Verifica ZZ: $0.17+0.03+0.00=0.20$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.00$
- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$

Asta n. 40233 (40 41) - Sez. 6 (RC80x80x3) - Crit. 1

-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU $X_l=0.31$ - Classe 1
 Sollecitazioni: $T_y=4.21$ $M_x=2.28$
 $V, Ed=4.21$ $V_c, Rd, Red=6956.55$ $V, Ed/V_c, Rd, Red=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU $X_l=0.31$ - Classe 1
 Sollecitazioni: $T_z=-90.43$ $M_x=2.28$
 $V, Ed=-90.43$ $V_c, Rd, Red=6956.55$ $V, Ed/V_c, Rd, Red=0.01$
- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=0.62$ - Classe 3
 Sollecitazioni: $N=-4594.00$ $T_z=-93.35$ $M_y=26.26$ $T_y=4.21$ $M_z=1.92$ $M_x=2.28$
 Tensioni: $\sigma_N=-497.19$ $\sigma_{m,d}=-123.25$ $\tau=6.41$ $\sigma_{max}=-620.43$ (sfrut=0.24)
 Tensioni: $\sigma_N=-497.19$ $\sigma_{m,d}=-7.77$ $\tau=29.11$ $\tau_{max}=29.11$ (sfrut=0.02)
 Tensioni: $\sigma_N=-497.19$ $\sigma_{m,d}=-123.25$ $\tau=6.41$ $\sigma_{ID,max}=620.53$ (sfrut=0.24)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N_{Ed}=-4594.00$ $M_{y,Ed}=-29.81$ $M_{z,Ed}=1.92$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.19+0.05+0.00=0.24$
 Verifica ZZ: $0.19+0.04+0.00=0.23$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/54176)

Asta n. 40233 (37 40) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU $X_L=0.10$ - Classe 1
 Sollecitazioni: $T_y=4.31$ $M_x=2.34$
 $V_{Ed}=4.31$ $V_{c,Rd,Red}=6955.76$ $V_{Ed}/V_{c,Rd,Red}=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU $X_L=0.10$ - Classe 1
 Sollecitazioni: $T_z=75.81$ $M_x=2.34$
 $V_{Ed}=75.81$ $V_{c,Rd,Red}=6955.76$ $V_{Ed}/V_{c,Rd,Red}=0.01$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_L=0.62$ - Classe 3
 Sollecitazioni: $N=-4609.87$ $T_z=68.48$ $M_y=-24.81$ $T_y=4.19$ $M_z=1.27$ $M_x=2.27$
 Tensioni: $\sigma_N=-498.90$ $\sigma_{m,d}=-114.09$ $\tau=6.39$ $\sigma_{max}=-612.99$ (sfrut=0.23)
 Tensioni: $\sigma_N=-498.90$ $\sigma_{m,d}=5.13$ $\tau=23.05$ $\tau_{max}=23.05$ (sfrut=0.02)
 Tensioni: $\sigma_N=-498.90$ $\sigma_{m,d}=-114.09$ $\tau=6.39$ $\sigma_{ID,max}=613.09$ (sfrut=0.23)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N_{Ed}=-4609.87$ $M_{y,Ed}=-24.81$ $M_{z,Ed}=-1.33$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493058.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493058.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.97, 0.97, 0.78, 0.97$
 Verifica YY: $0.19+0.04+0.00=0.23$
 Verifica ZZ: $0.19+0.03+0.00=0.22$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$

Asta n. 40233 (36 37) - Sez. 6 (RC80x80x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 27 SLU $X_L=0.21$ - Classe 1
 Sollecitazioni: $T_y=4.27$ $M_x=2.28$
 $V_{Ed}=4.27$ $V_{c,Rd,Red}=6956.58$ $V_{Ed}/V_{c,Rd,Red}=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 27 SLU $X_L=0.21$ - Classe 1
 Sollecitazioni: $T_z=-87.23$ $M_x=2.28$
 $V_{Ed}=-87.23$ $V_{c,Rd,Red}=6956.58$ $V_{Ed}/V_{c,Rd,Red}=0.01$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_L=0.62$ - Classe 3
 Sollecitazioni: $N=-5020.12$ $T_z=-91.13$ $M_y=24.17$ $T_y=4.27$ $M_z=2.46$ $M_x=2.28$
 Tensioni: $\sigma_N=-543.30$ $\sigma_{m,d}=-116.51$ $\tau=6.40$ $\sigma_{max}=-659.81$ (sfrut=0.25)
 Tensioni: $\sigma_N=-543.30$ $\sigma_{m,d}=-9.96$ $\tau=28.57$ $\tau_{max}=28.57$ (sfrut=0.02)
 Tensioni: $\sigma_N=-543.30$ $\sigma_{m,d}=-116.51$ $\tau=6.40$ $\sigma_{ID,max}=659.90$ (sfrut=0.25)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N_{Ed}=-5020.12$ $M_{y,Ed}=-30.51$ $M_{z,Ed}=2.46$ $L=0.62$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
 Verifica YY: $0.21+0.05+0.00=0.26$
 Verifica ZZ: $0.21+0.04+0.00=0.25$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/46437)

Asta n. 40233 (33 36) - Sez. 6 (RC80x80x3) - Crit. 1

Relazione di calcolo

-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 17 SLU Xl=0.00 - Classe 1
Sollecitazioni: $T_y=4.47$ $M_x=2.19$
 $V, Ed=4.47$ $V_c, Rd, Red=6957.64$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 17 SLU Xl=0.00 - Classe 1
Sollecitazioni: $T_z=77.11$ $M_x=2.19$
 $V, Ed=77.11$ $V_c, Rd, Red=6957.64$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 27 SLU Xl=0.62 - Classe 3
Sollecitazioni: $N=-5032.69$ $T_z=68.87$ $M_y=-26.44$ $T_y=4.36$ $M_z=1.77$ $M_x=2.20$
Tensioni: $\sigma_N=-544.66$ $\sigma_{m,d}=-123.41$ $\tau=6.20$ $\sigma_{max}=-668.07$ (sfrut=0.26)
Tensioni: $\sigma_N=-544.66$ $\sigma_{m,d}=7.16$ $\tau=22.95$ $\tau_{max}=22.95$ (sfrut=0.02)
Tensioni: $\sigma_N=-544.66$ $\sigma_{m,d}=-123.41$ $\tau=6.20$ $\sigma_{ID,max}=668.16$ (sfrut=0.26)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-5032.69$ $M_y, Ed=-26.44$ $M_z, Ed=1.77$ $L=0.62$
 $\alpha_y, \alpha_z, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493058.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493058.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.21+0.04+0.00=0.25$
Verifica ZZ: $0.21+0.03+0.00=0.25$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,c}=0.00$ $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 31
 $f_{z,L}=0.00$ (L/54176)
- Asta n. 40233 (32 33) - Sez. 6 (RC80x80x3) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV Xl=0.10 - Classe 1
Sollecitazioni: $T_y=4.36$ $M_x=2.11$
 $V, Ed=4.36$ $V_c, Rd, Red=6958.73$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV Xl=0.10 - Classe 1
Sollecitazioni: $T_z=91.56$ $M_x=2.11$
 $V, Ed=91.56$ $V_c, Rd, Red=6958.73$ $V, Ed/V_c, Rd, Red=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 27 SLU Xl=0.62 - Classe 3
Sollecitazioni: $N=-5343.75$ $T_z=-54.61$ $M_y=19.01$ $T_y=7.18$ $M_z=2.77$ $M_x=1.65$
Tensioni: $\sigma_N=-578.33$ $\sigma_{m,d}=-95.25$ $\tau=4.65$ $\sigma_{max}=-673.58$ (sfrut=0.26)
Tensioni: $\sigma_N=-578.33$ $\sigma_{m,d}=-11.21$ $\tau=17.94$ $\tau_{max}=17.94$ (sfrut=0.01)
Tensioni: $\sigma_N=-578.33$ $\sigma_{m,d}=-95.25$ $\tau=4.65$ $\sigma_{ID,max}=673.63$ (sfrut=0.26)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-5343.75$ $M_y, Ed=19.01$ $M_z, Ed=2.77$ $L=0.62$
 $\alpha_y, \alpha_z, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=19.71$ $N_{cr,y}=493055.00$ $\lambda^*_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ $N_{cr,z}=493055.00$ $\lambda^*_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.98, 0.98, 0.78, 0.98$
Verifica YY: $0.22+0.03+0.00=0.26$
Verifica ZZ: $0.22+0.02+0.00=0.25$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$
- Asta n. 40233 (17 32) - Sez. 6 (RC80x80x3) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV Xl=0.62 - Classe 1
Sollecitazioni: $T_y=6.26$ $M_x=-4.11$
 $V, Ed=6.26$ $V_c, Rd, Red=6932.75$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV Xl=0.62 - Classe 1
Sollecitazioni: $T_z=-2623.43$ $M_x=-4.11$
 $V, Ed=-2623.43$ $V_c, Rd, Red=6932.75$ $V, Ed/V_c, Rd, Red=0.38$
 - Verifica in termini tensionali [4.2.4] - CC 1 SLV Xl=0.60 - Classe 3
Sollecitazioni: $N=-3127.41$ $T_z=-2623.29$ $M_y=22.76$ $T_y=10.48$ $M_z=-1.15$ $M_x=-4.11$
Tensioni: $\sigma_N=-338.46$ $\sigma_{m,d}=-104.61$ $\tau=11.56$ $\sigma_{max}=-443.08$ (sfrut=0.17)
Tensioni: $\sigma_N=-338.46$ $\sigma_{m,d}=-5.05$ $\tau=649.70$ $\tau_{max}=649.70$ (sfrut=0.43)
Tensioni: $\sigma_N=-338.46$ $\sigma_{m,d}=-5.05$ $\tau=649.70$ $\sigma_{ID,max}=1176.58$ (sfrut=0.45)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-3657.18$ $M_y, Ed=64.52$ $M_z, Ed=-0.81$ $L=0.62$
 $\alpha_y, \alpha_z, \alpha_{LT}=0.95, 0.95, 0.95$

$\lambda_y=19.71$ Ncr,y=493055.00 $\lambda'_y=0.23$ Curva a: $\Phi_y=0.53$ $\chi_y=0.99$
 $\lambda_z=19.71$ Ncr,z=493055.00 $\lambda'_z=0.23$ Curva a: $\Phi_z=0.53$ $\chi_z=0.99$
 Kyy, Kyz, Kzy, Kzz=0.97, 0.97, 0.78, 0.97
 Verifica YY: 0.15+0.10+0.00=0.26
 Verifica ZZ: 0.15+0.08+0.00=0.24

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,L}=0.00$ (L/487)

Asta n. 40235 (-917 -918) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_L=0.00$ - Classe 1
 Sollecitazioni: $T_z=24.49$
 $V,Ed=24.49$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a trazione (4.2.4.1.2.1) - CC 5 SLV $X_L=0.11$ - Classe 1
 Sollecitazioni: $N=786.95$ $T_z=2.75$
 Verifica a trazione [4.2.5]
 $N,Ed=786.95$ $N_{pl,Rd}=17914.30$ $N_u,Rd=21176.60$ $N,Ed/N_t,Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-235.17$ $M_y,Ed=-9.92$ $M_z,Ed=0.43$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda'_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda'_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.01+0.03+0.00=0.04
 Verifica ZZ: 0.01+0.02+0.00=0.04

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10447) $f_{z,L}=0.00$ (L/65671)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/76617)

Asta n. 40241 (19 53) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV $X_L=0.77$ - Classe 1
 Sollecitazioni: $T_y=9.86$ $M_x=-1.86$
 $V,Ed=9.86$ $V_c,Rd,Red=5138.91$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_L=0.77$ - Classe 1
 Sollecitazioni: $T_z=-63.23$ $M_x=-1.86$
 $V,Ed=-63.23$ $V_c,Rd,Red=5138.91$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_L=0.21$ - Classe 3
 Sollecitazioni: $N=-417.70$ $T_z=57.99$ $M_y=19.35$ $T_y=22.97$ $M_z=-10.59$ $M_x=-1.85$
 Tensioni: $\sigma_N=-61.07$ $\sigma_{m,d}=-241.77$ $\tau=9.51$ $\sigma_{max}=-302.84$ (sfrut=0.12)
 Tensioni: $\sigma_N=-61.07$ $\sigma_{m,d}=76.96$ $\tau=28.56$ $\tau_{max}=28.56$ (sfrut=0.02)
 Tensioni: $\sigma_N=-61.07$ $\sigma_{m,d}=-241.77$ $\tau=9.51$ $\sigma_{ID,max}=303.29$ (sfrut=0.12)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N,Ed=-366.44$ $M_y,Ed=24.00$ $M_z,Ed=-11.05$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda'_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda'_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.76, 0.96
 Verifica YY: 0.02+0.07+0.03=0.12
 Verifica ZZ: 0.02+0.06+0.03=0.11

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10560) $f_{z,L}=0.00$ (L/29658)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/11425) $f_{z,L}=0.00$ (L/17644)

Asta n. 40242 (-791 64) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV $X_L=0.77$ - Classe 1
 Sollecitazioni: $T_y=-10.28$ $M_x=1.92$
 $V,Ed=-10.28$ $V_c,Rd,Red=5137.91$ $V,Ed/V_c,Rd,Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_L=0.77$ - Classe 1
 Sollecitazioni: $T_z=-64.14$ $M_x=1.92$
 $V,Ed=-64.14$ $V_c,Rd,Red=5137.91$ $V,Ed/V_c,Rd,Red=0.01$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_L=0.21$ - Classe 3

Relazione di calcolo

Sollecitazioni: $N=-433.57$ $T_z=58.76$ $M_y=19.68$ $T_y=-23.91$ $M_z=10.98$ $M_x=1.91$
Tensioni: $\sigma_N=-63.39$ $\sigma_{m,d}=-247.68$ $\tau=9.80$ $\sigma_{max}=-311.06$ (sfrut=0.12)
Tensioni: $\sigma_N=-63.39$ $\sigma_{m,d}=79.82$ $\tau=29.10$ $\tau_{max}=29.10$ (sfrut=0.02)
Tensioni: $\sigma_N=-63.39$ $\sigma_{m,d}=-247.68$ $\tau=9.80$ $\sigma_{ID,max}=311.53$ (sfrut=0.12)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-380.12$ $M_y, Ed=24.27$ $M_z, Ed=11.45$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.07+0.03=0.13$
Verifica ZZ: $0.02+0.06+0.03=0.11$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10722) $f_{z,L}=0.00$ (L/28447)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/11425) $f_{z,L}=0.00$ (L/16594)

Asta n. 40243 (-918 -921) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
Sollecitazioni: $T_z=-24.53$
 $V, Ed=-24.53$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica a compressione (4.2.4.1.2.2) - CC 5 SLV $X_l=0.00$ - Classe 1
Sollecitazioni: $N=-674.55$
Verifica a compressione [4.2.9]
 $N, Ed=-674.55$ $N_c, Rd=-17914.30$ $N, Ed/N_c, Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-366.90$ $M_y, Ed=-10.07$ $M_z, Ed=-0.53$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.03+0.00=0.05$
Verifica ZZ: $0.02+0.02+0.00=0.05$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/9993) $f_{z,L}=0.00$ (L/63407)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/70723)

Asta n. 40249 (-823 19) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV $X_l=0.11$ - Classe 1
Sollecitazioni: $T_y=-36.34$ $M_x=1.37$
 $V, Ed=-36.34$ $V_c, Rd, Red=5147.58$ $V, Ed/V_c, Rd, Red=0.01$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.11$ - Classe 1
Sollecitazioni: $T_z=89.62$ $M_x=1.37$
 $V, Ed=89.62$ $V_c, Rd, Red=5147.58$ $V, Ed/V_c, Rd, Red=0.02$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.56$ - Classe 3
Sollecitazioni: $N=-404.39$ $T_z=88.67$ $M_y=-25.16$ $T_y=-36.34$ $M_z=-15.54$ $M_x=1.37$
Tensioni: $\sigma_N=-59.12$ $\sigma_{m,d}=-328.72$ $\tau=7.01$ $\sigma_{max}=-387.85$ (sfrut=0.15)
Tensioni: $\sigma_N=-59.12$ $\sigma_{m,d}=-112.96$ $\tau=36.14$ $\tau_{max}=36.14$ (sfrut=0.02)
Tensioni: $\sigma_N=-59.12$ $\sigma_{m,d}=-328.72$ $\tau=7.01$ $\sigma_{ID,max}=388.04$ (sfrut=0.15)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: $N, Ed=-407.13$ $M_y, Ed=-25.16$ $M_z, Ed=-15.54$ $L=0.68$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=29.02$ $N_{cr,y}=168337.00$ $\lambda^*_y=0.33$ Curva a: $\Phi_y=0.57$ $\chi_y=0.97$
 $\lambda_z=29.02$ $N_{cr,z}=168337.00$ $\lambda^*_z=0.33$ Curva a: $\Phi_z=0.57$ $\chi_z=0.97$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.02+0.07+0.05=0.14$
Verifica ZZ: $0.02+0.06+0.05=0.13$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/7480) $f_{z,L}=0.00$

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/8218) $f_{z,L}=0.00$

Asta n. 40250 (-980 -791) - Sez. 7 (RC60x60x3) - Crit. 1

Relazione di calcolo

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV $X_l=0.11$ - Classe 1
Sollecitazioni: $T_y=15.66$ $M_x=-1.41$
 $V, Ed=15.66$ $V_c, Rd, Red=5146.79$ $V, Ed/V_c, Rd, Red=0.00$
 - Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l=0.11$ - Classe 1
Sollecitazioni: $T_z=91.34$ $M_x=-1.41$
 $V, Ed=91.34$ $V_c, Rd, Red=5146.79$ $V, Ed/V_c, Rd, Red=0.02$
 - Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.56$ - Classe 3
Sollecitazioni: $N=-416.80$ $T_z=90.38$ $M_y=-25.69$ $T_y=37.85$ $M_z=16.11$ $M_x=-1.41$
Tensioni: $\sigma_N=-60.94$ $\sigma_{m,d}=-337.65$ $\tau=7.24$ $\sigma_{max}=-398.59$ (sfrut=0.15)
Tensioni: $\sigma_N=-60.94$ $\sigma_{m,d}=-117.14$ $\tau=36.93$ $\tau_{max}=36.93$ (sfrut=0.02)
Tensioni: $\sigma_N=-60.94$ $\sigma_{m,d}=-337.65$ $\tau=7.24$ $\sigma_{TD,max}=398.79$ (sfrut=0.15)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N, Ed=-419.54$ $M_y, Ed=-25.69$ $M_z, Ed=16.11$ $L=0.68$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=29.02$ $N_{cr,y}=168337.00$ $\lambda^*_y=0.33$ Curva a: $\Phi_y=0.57$ $\chi_y=0.97$
 $\lambda_z=29.02$ $N_{cr,z}=168337.00$ $\lambda^*_z=0.33$ Curva a: $\Phi_z=0.57$ $\chi_z=0.97$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.02+0.08+0.05=0.15$
Verifica ZZ: $0.02+0.06+0.05=0.13$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/7480) $f_{z,L}=0.00$
 - Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/8218) $f_{z,L}=0.00$
- Asta n. 40251 (-921 -922) - Sez. 7 (RC60x60x3) - Crit. 1
-
- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=24.55$
 $V, Ed=24.55$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$
 - Verifica a trazione (4.2.4.1.2.1) - CC 5 SLV $X_l=0.33$ - Classe 1
Sollecitazioni: $N=738.71$ $T_z=1.96$
Verifica a trazione [4.2.5]
 $N, Ed=738.71$ $N_{pl}, Rd=17914.30$ $N_u, Rd=21176.60$ $N, Ed/N_t, Rd=0.04$
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-296.81$ $M_y, Ed=-9.95$ $M_z, Ed=0.42$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.02+0.03+0.00=0.05$
Verifica ZZ: $0.02+0.02+0.00=0.04$
 - Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/57462)
 - Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/9780) $f_{z,L}=0.00$ (L/51078)
- Asta n. 40257 (-820 -823) - Sez. 7 (RC60x60x3) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_y=-3.19$
 $V, Ed=-3.19$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$
 - Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=35.07$
 $V, Ed=35.07$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.01$
 - Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=0.88$ - Classe 3
Sollecitazioni: $N=-456.78$ $T_z=30.74$ $M_y=-15.73$ $T_y=-3.19$ $M_z=-1.93$
Tensioni: $\sigma_N=-66.78$ $\sigma_{m,d}=-142.70$ $\tau=0.00$ $\sigma_{max}=-209.48$ (sfrut=0.08)
Tensioni: $\sigma_N=-66.78$ $\sigma_{m,d}=-14.04$ $\tau=10.09$ $\tau_{max}=10.09$ (sfrut=0.01)
Tensioni: $\sigma_N=-66.78$ $\sigma_{m,d}=-142.70$ $\tau=0.00$ $\sigma_{TD,max}=209.48$ (sfrut=0.08)
 - Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-456.78$ $M_y, Ed=-15.73$ $M_z, Ed=-1.93$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.03+0.05+0.01=0.08$
Verifica ZZ: $0.03+0.04+0.01=0.07$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/65671)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/30144)

Asta n. 40258 (-983 -980) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=3.69$
 $V,Ed=3.69$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=34.77$
 $V,Ed=34.77$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=0.88$ - Classe 3
 Sollecitazioni: $N=-455.61$ $T_z=30.80$ $M_y=-15.77$ $T_y=4.11$ $M_z=2.52$
 Tensioni: $\sigma_N=-66.61$ $\sigma_{m,d}=-147.73$ $\tau=0.00$ $\sigma_{max}=-214.34$ (sfrut=0.08)
 Tensioni: $\sigma_N=-66.61$ $\sigma_{m,d}=18.33$ $\tau=10.11$ $\tau_{max}=10.11$ (sfrut=0.01)
 Tensioni: $\sigma_N=-66.61$ $\sigma_{m,d}=-147.73$ $\tau=0.00$ $\sigma_{ID,max}=214.34$ (sfrut=0.08)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-455.61$ $M_y,Ed=-15.77$ $M_z,Ed=2.52$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.03+0.05+0.01=0.08$
 Verifica ZZ: $0.03+0.04+0.01=0.07$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/9993) $f_{z,L}=0.00$ (L/65671)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/9993) $f_{z,L}=0.00$ (L/30144)

Asta n. 40259 (-922 -925) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
 Sollecitazioni: $T_z=-24.47$
 $V,Ed=-24.47$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a compressione (4.2.4.1.2.2) - CC 5 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-627.09$
 Verifica a compressione [4.2.9]
 $N,Ed=-627.09$ $N_c,Rd=-17914.30$ $N,Ed/N_c,Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-305.29$ $M_y,Ed=-10.15$ $M_z,Ed=-0.56$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.02+0.03+0.00=0.05$
 Verifica ZZ: $0.02+0.02+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/73552)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/10567) $f_{z,L}=0.00$ (L/49697)

Asta n. 40265 (-819 -820) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
 Sollecitazioni: $T_z=-22.71$
 $V,Ed=-22.71$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a trazione (4.2.4.1.2.1) - CC 9 SLV $X_l=0.88$ - Classe 1
 Sollecitazioni: $N=610.05$
 Verifica a trazione [4.2.5]
 $N,Ed=610.05$ $N_{pl,Rd}=17914.30$ $N_u,Rd=21176.60$ $N,Ed/N_t,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-127.99$ $M_y,Ed=-9.07$ $M_z,Ed=-0.67$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$

Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.01+0.03+0.00=0.04
 Verifica ZZ: 0.01+0.02+0.00=0.03

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/57462)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/9677) $f_{z,L}=0.00$ (L/65671)

Asta n. 40266 (-984 -983) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
 Sollecitazioni: $T_z=-22.72$
 $V,Ed=-22.72$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a trazione (4.2.4.1.2.1) - CC 1 SLV $X_l=0.88$ - Classe 1
 Sollecitazioni: $N=616.48$
 Verifica a trazione [4.2.5]
 $N,Ed=616.48$ $N_{pl,Rd}=17914.30$ $N_u,Rd=21176.60$ $N,Ed/N_t,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-128.11$ $M_y,Ed=-9.07$ $M_z,Ed=0.69$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.01+0.03+0.00=0.04
 Verifica ZZ: 0.01+0.02+0.00=0.03

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/76617)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/9886) $f_{z,L}=0.00$ (L/76617)

Asta n. 40267 (-925 -926) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=24.76$
 $V,Ed=24.76$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a trazione (4.2.4.1.2.1) - CC 5 SLV $X_l=0.77$ - Classe 1
 Sollecitazioni: $N=689.91$
 Verifica a trazione [4.2.5]
 $N,Ed=689.91$ $N_{pl,Rd}=17914.30$ $N_u,Rd=21176.60$ $N,Ed/N_t,Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
 Sollecitazioni: $N,Ed=-688.30$ $M_y,Ed=-3.79$ $M_z,Ed=0.70$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.04+0.01+0.00=0.05
 Verifica ZZ: 0.04+0.01+0.00=0.05

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/65671)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/51078)

Asta n. 40273 (-816 -819) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=23.91$
 $V,Ed=23.91$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a compressione (4.2.4.1.2.2) - CC 9 SLV $X_l=0.88$ - Classe 1
 Sollecitazioni: $N=-561.84$ $T_z=-2.32$
 Verifica a compressione [4.2.9]
 $N,Ed=-561.84$ $N_c,Rd=17914.30$ $N,Ed/N_c,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-377.68$ $M_y,Ed=-9.55$ $M_z,Ed=0.22$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.76, 0.96
 Verifica YY: 0.02+0.03+0.00=0.05

Relazione di calcolo

Verifica ZZ: $0.02+0.02+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/73552)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/65671)

Asta n. 40274 (-987 -984) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
Sollecitazioni: $T_z=23.91$
 $V,Ed=23.91$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a compressione (4.2.4.1.2.2) - CC 1 SLV $X_l=0.88$ - Classe 1
Sollecitazioni: $N=-568.15$ $T_z=-2.32$
Verifica a compressione [4.2.9]
 $N,Ed=-568.15$ $N_c,Rd=-17914.30$ $N,Ed/N_c,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N,Ed=-376.33$ $M_y,Ed=-9.55$ $M_z,Ed=-0.24$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.03+0.00=0.05$
Verifica ZZ: $0.02+0.02+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/76617)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/10567) $f_{z,L}=0.00$ (L/68104)

Asta n. 40275 (-926 -929) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
Sollecitazioni: $T_z=-23.63$
 $V,Ed=-23.63$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 13 SLV $X_l=0.88$ - Classe 3
Sollecitazioni: $N=663.33$ $T_z=-1.26$ $M_y=-3.34$ $M_z=-1.02$
Tensioni: $\sigma_N=96.98$ $\sigma_{m,d}=35.27$ $\tau=0.00$ $\sigma_{max}=132.24$ (sfrut=0.05)
Tensioni: $\sigma_N=96.98$ $\sigma_{m,d}=-8.26$ $\tau=0.42$ $\tau_{max}=0.42$ (sfrut=0.00)
Tensioni: $\sigma_N=96.98$ $\sigma_{m,d}=35.27$ $\tau=0.00$ $\sigma_{ID,max}=132.24$ (sfrut=0.05)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 5 SLV - Classe 3
Sollecitazioni: $N,Ed=-574.12$ $M_y,Ed=-4.00$ $M_z,Ed=-1.06$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
Verifica YY: $0.03+0.01+0.00=0.05$
Verifica ZZ: $0.03+0.01+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/68104)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/59316)

Asta n. 40281 (-815 -816) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
Sollecitazioni: $T_z=-23.60$
 $V,Ed=-23.60$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a trazione (4.2.4.1.2.1) - CC 9 SLV $X_l=0.88$ - Classe 1
Sollecitazioni: $N=566.01$
Verifica a trazione [4.2.5]
 $N,Ed=566.01$ $N_{pl,Rd}=17914.30$ $N_u,Rd=21176.60$ $N,Ed/N_t,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-186.90$ $M_y,Ed=-9.51$ $M_z,Ed=-0.28$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.03+0.00=0.04$
Verifica ZZ: $0.01+0.02+0.00=0.03$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10447) $f_{z,L}=0.00$ (L/57462)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/51078)

Asta n. 40282 (-988 -987) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
 Sollecitazioni: $T_z=-23.61$
 $V,Ed=-23.61$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a trazione (4.2.4.1.2.1) - CC 1 SLV $X_l=0.88$ - Classe 1
 Sollecitazioni: $N=572.49$
 Verifica a trazione [4.2.5]
 $N,Ed=572.49$ $N_{pl,Rd}=17914.30$ $N_u,Rd=21176.60$ $N,Ed/N_t,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-187.01$ $M_y,Ed=-9.51$ $M_z,Ed=0.29$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.03+0.00=0.04$
 Verifica ZZ: $0.01+0.02+0.00=0.03$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.01$ (L/10447) $f_{z,L}=0.00$ (L/65671)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/57462)

Asta n. 40283 (-929 -930) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_y=-2.24$
 $V,Ed=-2.24$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=37.99$
 $V,Ed=37.99$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 13 SLV $X_l=0.88$ - Classe 3
 Sollecitazioni: $N=-775.96$ $T_z=26.18$ $M_y=-12.61$ $T_y=-2.59$ $M_z=-1.09$
 Tensioni: $\sigma_N=-113.44$ $\sigma_{m,d}=-110.67$ $\tau=0.00$ $\sigma_{max}=-224.12$ (sfrut=0.09)
 Tensioni: $\sigma_N=-113.44$ $\sigma_{m,d}=-7.92$ $\tau=8.60$ $\tau_{max}=8.60$ (sfrut=0.01)
 Tensioni: $\sigma_N=-113.44$ $\sigma_{m,d}=-110.67$ $\tau=0.00$ $\sigma_{ID,max}=224.12$ (sfrut=0.09)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
 Sollecitazioni: $N,Ed=-775.96$ $M_y,Ed=-12.61$ $M_z,Ed=1.18$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.04+0.04+0.00=0.08$
 Verifica ZZ: $0.04+0.03+0.00=0.08$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/51078)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/9886) $f_{z,L}=0.00$ (L/30646)

Asta n. 40289 (-812 -815) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=23.72$
 $V,Ed=23.72$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a compressione (4.2.4.1.2.2) - CC 9 SLV $X_l=0.88$ - Classe 1
 Sollecitazioni: $N=-514.20$ $T_z=-2.43$
 Verifica a compressione [4.2.9]
 $N,Ed=-514.20$ $N_c,Rd=-17914.30$ $N,Ed/N_c,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-315.95$ $M_y,Ed=-9.57$ $M_z,Ed=0.21$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$

Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.02+0.03+0.00=0.05
 Verifica ZZ: 0.02+0.02+0.00=0.04

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/76617)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/9886) $f_{z,L}=0.00$ (L/57462)

Asta n. 40290 (-991 -988) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=23.73$
 $V,Ed=23.73$ $Vc,Rd=5171.56$ $V,Ed/Vc,Rd=0.00$

- Verifica a compressione (4.2.4.1.2.2) - CC 1 SLV $X_l=0.88$ - Classe 1
 Sollecitazioni: $N=-520.51$ $T_z=-2.44$
 Verifica a compressione [4.2.9]
 $N,Ed=-520.51$ $Nc,Rd=-17914.30$ $N,Ed/Nc,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-314.59$ $My,Ed=-9.58$ $Mz,Ed=-0.23$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $Ncr,y=100129.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $Ncr,z=100129.00$ $\lambda_z^*=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.02+0.03+0.00=0.05
 Verifica ZZ: 0.02+0.02+0.00=0.04

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/65671)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/9886) $f_{z,L}=0.00$ (L/70723)

Asta n. 40291 (-930 29) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 13 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=158.60$ $M_x=1.30$
 $V,Ed=158.60$ $Vc,Rd,Red=5148.78$ $V,Ed/Vc,Rd,Red=0.03$

- Verifica in termini tensionali [4.2.4] - CC 13 SLV $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-248.78$ $T_z=158.60$ $M_y=49.13$ $T_y=-24.62$ $M_z=4.17$ $M_x=1.30$
 Tensioni: $\sigma_N=-36.37$ $\sigma_{m,d}=-430.55$ $\tau=6.66$ $\sigma_{max}=-466.92$ (sfrut=0.18)
 Tensioni: $\sigma_N=-36.37$ $\sigma_{m,d}=30.31$ $\tau=58.74$ $\tau_{max}=58.74$ (sfrut=0.04)
 Tensioni: $\sigma_N=-36.37$ $\sigma_{m,d}=-430.55$ $\tau=6.66$ $\sigma_{TD,max}=467.06$ (sfrut=0.18)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 13 SLV - Classe 3
 Sollecitazioni: $N,Ed=-248.78$ $My,Ed=49.13$ $Mz,Ed=-8.61$ $L=0.87$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.33$ $Ncr,y=101757.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.33$ $Ncr,z=101757.00$ $\lambda_z^*=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
 Verifica YY: 0.01+0.14+0.03=0.18
 Verifica ZZ: 0.01+0.12+0.03=0.15

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/8374) $f_{z,L}=0.00$ (L/20160)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/10270) $f_{z,L}=0.00$ (L/45360)

Asta n. 40297 (-811 -812) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
 Sollecitazioni: $T_z=-23.66$
 $V,Ed=-23.66$ $Vc,Rd=5171.56$ $V,Ed/Vc,Rd=0.00$

- Verifica a trazione (4.2.4.1.2.1) - CC 9 SLV $X_l=0.88$ - Classe 1
 Sollecitazioni: $N=518.63$
 Verifica a trazione [4.2.5]
 $N,Ed=518.63$ $Npl,Rd=17914.30$ $Nu,Rd=21176.60$ $N,Ed/Nt,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-248.51$ $My,Ed=-9.59$ $Mz,Ed=-0.25$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $Ncr,y=100129.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $Ncr,z=100129.00$ $\lambda_z^*=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95

Relazione di calcolo

Verifica YY: $0.01+0.03+0.00=0.04$
Verifica ZZ: $0.01+0.02+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/57462)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/10447) $f_{z,L}=0.00$ (L/45970)

Asta n. 40298 (-992 -991) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=0.88$ - Classe 1
Sollecitazioni: $T_z=-23.67$
 $V,Ed=-23.67$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a trazione (4.2.4.1.2.1) - CC 1 SLV $X_1=0.88$ - Classe 1
Sollecitazioni: $N=525.11$
Verifica a trazione [4.2.5]
 $N,Ed=525.11$ $N_{pl},Rd=17914.30$ $N_u,Rd=21176.60$ $N,Ed/N_t,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N,Ed=-248.62$ $M_y,Ed=-9.59$ $M_z,Ed=0.26$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.03+0.00=0.04$
Verifica ZZ: $0.01+0.02+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10447) $f_{z,L}=0.00$ (L/57462)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/45970)

Asta n. 40305 (-808 -811) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=23.67$
 $V,Ed=23.67$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a trazione (4.2.4.1.2.1) - CC 1 SLV $X_1=0.00$ - Classe 1
Sollecitazioni: $N=545.27$
Verifica a trazione [4.2.5]
 $N,Ed=545.27$ $N_{pl},Rd=17914.30$ $N_u,Rd=21176.60$ $N,Ed/N_t,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N,Ed=-254.31$ $M_y,Ed=-9.59$ $M_z,Ed=0.23$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.03+0.00=0.04$
Verifica ZZ: $0.01+0.02+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/9993) $f_{z,L}=0.00$ (L/76617)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/9677) $f_{z,L}=0.00$ (L/57462)

Asta n. 40306 (-995 -992) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=23.68$
 $V,Ed=23.68$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a trazione (4.2.4.1.2.1) - CC 9 SLV $X_1=0.00$ - Classe 1
Sollecitazioni: $N=551.46$
Verifica a trazione [4.2.5]
 $N,Ed=551.46$ $N_{pl},Rd=17914.30$ $N_u,Rd=21176.60$ $N,Ed/N_t,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N,Ed=-252.95$ $M_y,Ed=-9.59$ $M_z,Ed=-0.25$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.03+0.00=0.04$
Verifica ZZ: $0.01+0.02+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/70723)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/9677) $f_{z,L}=0.00$ (L/76617)

Asta n. 40313 (-807 -808) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
 Sollecitazioni: $T_z=-23.72$
 $V,Ed=-23.72$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a compressione (4.2.4.1.2.2) - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-517.07$ $T_z=3.23$
 Verifica a compressione [4.2.9]
 $N,Ed=-517.07$ $N_c,Rd=-17914.30$ $N,Ed/N_c,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-310.14$ $M_y,Ed=-9.58$ $M_z,Ed=-0.23$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.02+0.03+0.00=0.05$
 Verifica ZZ: $0.02+0.02+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.01$ (L/9993) $f_{z,L}=0.00$ (L/57462)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/9993) $f_{z,L}=0.00$ (L/57462)

Asta n. 40314 (-996 -995) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
 Sollecitazioni: $T_z=-23.72$
 $V,Ed=-23.72$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a compressione (4.2.4.1.2.2) - CC 9 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=-523.64$ $T_z=3.24$
 Verifica a compressione [4.2.9]
 $N,Ed=-523.64$ $N_c,Rd=-17914.30$ $N,Ed/N_c,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-310.26$ $M_y,Ed=-9.58$ $M_z,Ed=0.24$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.02+0.03+0.00=0.05$
 Verifica ZZ: $0.02+0.02+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.01$ (L/9993) $f_{z,L}=0.00$ (L/76617)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/9993) $f_{z,L}=0.00$ (L/76617)

Asta n. 40321 (-804 -807) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.00$ - Classe 1
 Sollecitazioni: $T_z=23.61$
 $V,Ed=23.61$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a trazione (4.2.4.1.2.1) - CC 1 SLV $X_l=0.00$ - Classe 1
 Sollecitazioni: $N=592.64$
 Verifica a trazione [4.2.5]
 $N,Ed=592.64$ $N_{pl,Rd}=17914.30$ $N_u,Rd=21176.60$ $N,Ed/N_t,Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-192.71$ $M_y,Ed=-9.52$ $M_z,Ed=0.24$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.03+0.00=0.04$
 Verifica ZZ: $0.01+0.02+0.00=0.03$

- Verifica freccia massima per soli carichi accidentali - CC 20

Relazione di calcolo

$f_{z,g}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/70723)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.01$ (L/9886) $f_{z,L}=0.00$ (L/61293)

Asta n. 40322 (-999 -996) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=0.00$ - Classe 1
Sollecitazioni: $T_z=23.62$
 $V, Ed=23.62$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica a trazione (4.2.4.1.2.1) - CC 9 SLV $X_1=0.00$ - Classe 1
Sollecitazioni: $N=598.82$
Verifica a trazione [4.2.5]
 $N, Ed=598.82$ $N_{pl}, Rd=17914.30$ $N_u, Rd=21176.60$ $N, Ed/N_t, Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
Sollecitazioni: $N, Ed=-191.35$ $M_y, Ed=-9.52$ $M_z, Ed=-0.26$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
Verifica YY: $0.01+0.03+0.00=0.04$
Verifica ZZ: $0.01+0.02+0.00=0.03$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10567) $f_{z,L}=0.00$ (L/76617)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/9993) $f_{z,L}=0.00$ (L/65671)

Asta n. 40329 (-803 -804) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=0.88$ - Classe 1
Sollecitazioni: $T_z=-23.90$
 $V, Ed=-23.90$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica a compressione (4.2.4.1.2.2) - CC 1 SLV $X_1=0.00$ - Classe 1
Sollecitazioni: $N=-564.71$ $T_z=3.19$
Verifica a compressione [4.2.9]
 $N, Ed=-564.71$ $N_c, Rd=-17914.30$ $N, Ed/N_c, Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-372.04$ $M_y, Ed=-9.56$ $M_z, Ed=-0.25$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.03+0.00=0.05$
Verifica ZZ: $0.02+0.02+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10567) $f_{z,L}=0.00$ (L/65671)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/10945) $f_{z,L}=0.00$ (L/51078)

Asta n. 40330 (-1000 -999) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=0.88$ - Classe 1
Sollecitazioni: $T_z=-23.91$
 $V, Ed=-23.91$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica a compressione (4.2.4.1.2.2) - CC 9 SLV $X_1=0.00$ - Classe 1
Sollecitazioni: $N=-571.27$ $T_z=3.17$
Verifica a compressione [4.2.9]
 $N, Ed=-571.27$ $N_c, Rd=-17914.30$ $N, Ed/N_c, Rd=0.03$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N, Ed=-372.15$ $M_y, Ed=-9.56$ $M_z, Ed=0.26$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.76, 0.96$
Verifica YY: $0.02+0.03+0.00=0.05$
Verifica ZZ: $0.02+0.02+0.00=0.04$

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,g}=0.01$ (L/10690) $f_{z,L}=0.00$ (L/51078)

Relazione di calcolo

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/11350) $f_{z,L}=0.00$ (L/45970)

Asta n. 40337 (-800 -803) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=23.02$
 $V,Ed=23.02$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a trazione (4.2.4.1.2.1) - CC 1 SLV $X_1=0.00$ - Classe 1
 Sollecitazioni: $N=635.10$ $T_z=1.10$
 Verifica a trazione [4.2.5]
 $N,Ed=635.10$ $N_{pl,Rd}=17914.30$ $Nu,Rd=21176.60$ $N,Ed/Nt,Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-135.46$ $My,Ed=-9.17$ $Mz,Ed=0.33$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $Ncr,y=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $Ncr,z=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.03+0.00=0.04$
 Verifica ZZ: $0.01+0.02+0.00=0.03$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10447) $f_{z,L}=0.00$ (L/70723)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/70723)

Asta n. 40338 (-1003 -1000) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_1=0.00$ - Classe 1
 Sollecitazioni: $T_z=23.02$
 $V,Ed=23.02$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a trazione (4.2.4.1.2.1) - CC 9 SLV $X_1=0.00$ - Classe 1
 Sollecitazioni: $N=641.30$ $T_z=1.11$
 Verifica a trazione [4.2.5]
 $N,Ed=641.30$ $N_{pl,Rd}=17914.30$ $Nu,Rd=21176.60$ $N,Ed/Nt,Rd=0.04$

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-134.13$ $My,Ed=-9.17$ $Mz,Ed=-0.38$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $Ncr,y=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $Ncr,z=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.95, 0.95, 0.76, 0.95$
 Verifica YY: $0.01+0.03+0.00=0.04$
 Verifica ZZ: $0.01+0.02+0.00=0.03$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/65671)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/9780) $f_{z,L}=0.00$ (L/70723)

Asta n. 40345 (-799 -800) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_1=0.88$ - Classe 1
 Sollecitazioni: $T_y=1.92$
 $V,Ed=1.92$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_1=0.88$ - Classe 1
 Sollecitazioni: $T_z=-35.55$
 $V,Ed=-35.55$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_1=0.00$ - Classe 3
 Sollecitazioni: $N=-471.70$ $T_z=-31.22$ $M_y=-16.16$ $T_y=1.92$ $M_z=-1.44$
 Tensioni: $\sigma_N=-68.96$ $\sigma_{m,d}=-142.15$ $\tau=0.00$ $\sigma_{max}=-211.11$ (sfrut=0.08)
 Tensioni: $\sigma_N=-68.96$ $\sigma_{m,d}=-10.44$ $\tau=10.25$ $\tau_{max}=10.25$ (sfrut=0.01)
 Tensioni: $\sigma_N=-68.96$ $\sigma_{m,d}=-142.15$ $\tau=0.00$ $\sigma_{ID,max}=211.11$ (sfrut=0.08)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
 Sollecitazioni: $N,Ed=-471.70$ $My,Ed=-16.16$ $Mz,Ed=-1.44$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $Ncr,y=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $Ncr,z=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.03+0.05+0.00=0.08$
 Verifica ZZ: $0.03+0.04+0.00=0.07$

Relazione di calcolo

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10567) $f_{z,L}=0.00$ (L/45970)
- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/11638) $f_{z,L}=0.00$ (L/30646)
- Asta n. 40346 (-1004 -1003) - Sez. 7 (RC60x60x3) - Crit. 1
-
- Verifica a taglio Dir. Y [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
Sollecitazioni: $T_y=-1.96$
 $V_{Ed}=-1.96$ $V_{c,Rd}=5171.56$ $V_{Ed}/V_{c,Rd}=0.00$
- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.88$ - Classe 1
Sollecitazioni: $T_z=-35.60$
 $V_{Ed}=-35.60$ $V_{c,Rd}=5171.56$ $V_{Ed}/V_{c,Rd}=0.01$
- Verifica in termini tensionali [4.2.4] - CC 17 SLU $X_l=0.00$ - Classe 3
Sollecitazioni: $N=-471.80$ $T_z=-31.27$ $M_y=-16.19$ $T_y=-1.96$ $M_z=1.48$
Tensioni: $\sigma_N=-68.98$ $\sigma_{m,d}=-142.68$ $\tau=0.00$ $\sigma_{max}=-211.66$ (sfrut=0.08)
Tensioni: $\sigma_N=-68.98$ $\sigma_{m,d}=10.74$ $\tau=10.27$ $\tau_{max}=10.27$ (sfrut=0.01)
Tensioni: $\sigma_N=-68.98$ $\sigma_{m,d}=-142.68$ $\tau=0.00$ $\sigma_{ID,max}=211.66$ (sfrut=0.08)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 17 SLU - Classe 3
Sollecitazioni: $N_{Ed}=-471.80$ $M_{y,Ed}=-16.19$ $M_{z,Ed}=1.48$ $L=0.88$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda_z^*=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.96$, 0.96 , 0.77 , 0.96
Verifica YY: $0.03+0.05+0.00=0.08$
Verifica ZZ: $0.03+0.04+0.00=0.07$
- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.01$ (L/10447) $f_{z,L}=0.00$ (L/57462)
- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/11638) $f_{z,L}=0.00$ (L/28731)
- Asta n. 40353 (18 -799) - Sez. 7 (RC60x60x3) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV $X_l=0.77$ - Classe 1
Sollecitazioni: $T_y=6.39$ $M_x=-1.57$
 $V_{Ed}=6.39$ $V_{c,Rd,Red}=5144.06$ $V_{Ed}/V_{c,Rd,Red}=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l=0.77$ - Classe 1
Sollecitazioni: $T_z=-77.69$ $M_x=-1.57$
 $V_{Ed}=-77.69$ $V_{c,Rd,Red}=5144.06$ $V_{Ed}/V_{c,Rd,Red}=0.02$
- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.88$ - Classe 3
Sollecitazioni: $N=299.08$ $T_z=-78.11$ $M_y=28.22$ $T_y=20.03$ $M_z=4.18$ $M_x=-1.57$
Tensioni: $\sigma_N=43.72$ $\sigma_{m,d}=261.69$ $\tau=8.04$ $\sigma_{max}=305.42$ (sfrut=0.12)
Tensioni: $\sigma_N=43.72$ $\sigma_{m,d}=30.41$ $\tau=33.69$ $\tau_{max}=33.69$ (sfrut=0.02)
Tensioni: $\sigma_N=43.72$ $\sigma_{m,d}=261.69$ $\tau=8.04$ $\sigma_{ID,max}=305.74$ (sfrut=0.12)
- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: $N_{Ed}=-276.50$ $M_{y,Ed}=28.22$ $M_{z,Ed}=-9.13$ $L=0.88$
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95 , 0.95
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda_z^*=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 K_{yy} , K_{yz} , K_{zy} , $K_{zz}=0.95$, 0.95 , 0.76 , 0.95
Verifica YY: $0.02+0.08+0.03=0.13$
Verifica ZZ: $0.02+0.07+0.03=0.11$
- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/11063) $f_{z,L}=0.00$ (L/30303)
- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/11241) $f_{z,L}=0.00$ (L/36682)
- Asta n. 40354 (-792 -1004) - Sez. 7 (RC60x60x3) - Crit. 1
-
- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV $X_l=0.77$ - Classe 1
Sollecitazioni: $T_y=-6.72$ $M_x=1.63$
 $V_{Ed}=-6.72$ $V_{c,Rd,Red}=5142.95$ $V_{Ed}/V_{c,Rd,Red}=0.00$
- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.77$ - Classe 1
Sollecitazioni: $T_z=-79.57$ $M_x=1.63$
 $V_{Ed}=-79.57$ $V_{c,Rd,Red}=5142.95$ $V_{Ed}/V_{c,Rd,Red}=0.02$
- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.88$ - Classe 3
Sollecitazioni: $N=316.20$ $T_z=-79.99$ $M_y=28.77$ $T_y=-21.13$ $M_z=-4.46$ $M_x=1.63$

Tensioni: $\sigma_N=46.23$ $\sigma_{m,d}=268.46$ $\tau=8.37$ $\sigma_{max}=314.69$ (sfrut=0.12)
Tensioni: $\sigma_N=46.23$ $\sigma_{m,d}=32.46$ $\tau=34.64$ $\tau_{max}=34.64$ (sfrut=0.02)
Tensioni: $\sigma_N=46.23$ $\sigma_{m,d}=268.46$ $\tau=8.37$ $\sigma_{ID,max}=315.03$ (sfrut=0.12)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: N,Ed=-296.10 My,Ed=28.77 Mz,Ed=9.58 L=0.88
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95, 0.95
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.02+0.08+0.03=0.13
Verifica ZZ: 0.02+0.07+0.03=0.11

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/11241) $f_{z,L}=0.00$ (L/27878)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/11425) $f_{z,L}=0.00$ (L/38720)

Asta n. 40361 (51 18) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV Xl=0.00 - Classe 1
Sollecitazioni: $T_y=-9.57$ $M_x=1.67$
V,Ed=-9.57 Vc,Rd,Red=5142.19 V,Ed/Vc,Rd,Red=0.00

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV Xl=0.00 - Classe 1
Sollecitazioni: $T_z=102.17$ $M_x=1.67$
V,Ed=102.17 Vc,Rd,Red=5142.19 V,Ed/Vc,Rd,Red=0.02

- Verifica in termini tensionali [4.2.4] - CC 9 SLV Xl=0.00 - Classe 3
Sollecitazioni: N=-365.24 $T_z=102.17$ $M_y=35.15$ $T_y=-27.25$ $M_z=3.59$ $M_x=1.67$
Tensioni: $\sigma_N=-53.40$ $\sigma_{m,d}=-312.96$ $\tau=8.59$ $\sigma_{max}=-366.36$ (sfrut=0.14)
Tensioni: $\sigma_N=-53.40$ $\sigma_{m,d}=26.13$ $\tau=42.14$ $\tau_{max}=42.14$ (sfrut=0.03)
Tensioni: $\sigma_N=-53.40$ $\sigma_{m,d}=-312.96$ $\tau=8.59$ $\sigma_{ID,max}=366.66$ (sfrut=0.14)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: N,Ed=-365.24 My,Ed=35.15 Mz,Ed=-12.67 L=0.78
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95, 0.95
 $\lambda_y=33.39$ Ncr,y=127176.00 $\lambda^*_y=0.38$ Curva a: $\Phi_y=0.59$ $\chi_y=0.96$
 $\lambda_z=33.39$ Ncr,z=127176.00 $\lambda^*_z=0.38$ Curva a: $\Phi_z=0.59$ $\chi_z=0.96$
Kyy, Kyz, Kzy, Kzz=0.95, 0.95, 0.76, 0.95
Verifica YY: 0.02+0.10+0.04=0.16
Verifica ZZ: 0.02+0.08+0.04=0.14

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/8813) $f_{z,L}=0.00$ (L/34764)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/9481) $f_{z,L}=0.00$ (L/22348)

Asta n. 40362 (66 -792) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV Xl=0.00 - Classe 1
Sollecitazioni: $T_y=10.18$ $M_x=-1.74$
V,Ed=10.18 Vc,Rd,Red=5141.00 V,Ed/Vc,Rd,Red=0.00

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV Xl=0.00 - Classe 1
Sollecitazioni: $T_z=104.42$ $M_x=-1.74$
V,Ed=104.42 Vc,Rd,Red=5141.00 V,Ed/Vc,Rd,Red=0.02

- Verifica in termini tensionali [4.2.4] - CC 1 SLV Xl=0.00 - Classe 3
Sollecitazioni: N=-402.29 $T_z=104.42$ $M_y=35.79$ $T_y=28.90$ $M_z=-3.92$ $M_x=-1.74$
Tensioni: $\sigma_N=-58.81$ $\sigma_{m,d}=-320.79$ $\tau=8.93$ $\sigma_{max}=-379.61$ (sfrut=0.14)
Tensioni: $\sigma_N=-58.81$ $\sigma_{m,d}=28.51$ $\tau=43.23$ $\tau_{max}=43.23$ (sfrut=0.03)
Tensioni: $\sigma_N=-58.81$ $\sigma_{m,d}=-320.79$ $\tau=8.93$ $\sigma_{ID,max}=379.92$ (sfrut=0.15)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: N,Ed=-402.29 My,Ed=35.79 Mz,Ed=13.33 L=0.78
 α_{my} , α_{mz} , $\alpha_{LT}=0.95$, 0.95, 0.95
 $\lambda_y=33.39$ Ncr,y=127176.00 $\lambda^*_y=0.38$ Curva a: $\Phi_y=0.59$ $\chi_y=0.96$
 $\lambda_z=33.39$ Ncr,z=127176.00 $\lambda^*_z=0.38$ Curva a: $\Phi_z=0.59$ $\chi_z=0.96$
Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.76, 0.96
Verifica YY: 0.02+0.11+0.04=0.17
Verifica ZZ: 0.02+0.08+0.04=0.15

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/8939) $f_{z,L}=0.00$ (L/44697)

- Verifica freccia massima carichi totali - CC 20

$f_{z,g}=0.01$ (L/9777) $f_{z,L}=0.00$ (L/19555)

Asta n. 40369 (49 51) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.33$ - Classe 1
 Sollecitazioni: $T_y=-3.62$
 $V,Ed=-3.62$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.33$ - Classe 1
 Sollecitazioni: $T_z=36.37$
 $V,Ed=36.37$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=0.88$ - Classe 3
 Sollecitazioni: $N=-767.63$ $T_z=33.67$ $M_y=-16.64$ $T_y=-3.62$ $M_z=-1.25$
 Tensioni: $\sigma_N=-112.23$ $\sigma_{m,d}=-144.51$ $\tau=0.00$ $\sigma_{max}=-256.73$ (sfrut=0.10)
 Tensioni: $\sigma_N=-112.23$ $\sigma_{m,d}=-9.07$ $\tau=11.05$ $\tau_{max}=11.05$ (sfrut=0.01)
 Tensioni: $\sigma_N=-112.23$ $\sigma_{m,d}=-144.51$ $\tau=0.00$ $\sigma_{ID,max}=256.73$ (sfrut=0.10)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-767.63$ $M_y,Ed=-16.64$ $M_z,Ed=1.93$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda_z^*=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.04+0.05+0.01=0.10$
 Verifica ZZ: $0.04+0.04+0.01=0.09$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/61293)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/10690) $f_{z,L}=0.00$ (L/30646)

Asta n. 40370 (68 66) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Y [4.2.16] - CC 27 SLU $X_l=0.33$ - Classe 1
 Sollecitazioni: $T_y=4.66$
 $V,Ed=4.66$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.33$ - Classe 1
 Sollecitazioni: $T_z=36.41$
 $V,Ed=36.41$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.01$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=0.88$ - Classe 3
 Sollecitazioni: $N=-762.74$ $T_z=33.71$ $M_y=-16.68$ $T_y=4.66$ $M_z=1.81$
 Tensioni: $\sigma_N=-111.51$ $\sigma_{m,d}=-149.33$ $\tau=0.00$ $\sigma_{max}=-260.84$ (sfrut=0.10)
 Tensioni: $\sigma_N=-111.51$ $\sigma_{m,d}=13.15$ $\tau=11.07$ $\tau_{max}=11.07$ (sfrut=0.01)
 Tensioni: $\sigma_N=-111.51$ $\sigma_{m,d}=-149.33$ $\tau=0.00$ $\sigma_{ID,max}=260.84$ (sfrut=0.10)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-762.74$ $M_y,Ed=-16.68$ $M_z,Ed=-2.28$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda_y^*=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda_z^*=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.04+0.05+0.01=0.10$
 Verifica ZZ: $0.04+0.04+0.01=0.09$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/9780) $f_{z,L}=0.00$ (L/51078)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/10447) $f_{z,L}=0.00$ (L/28731)

Asta n. 40377 (47 49) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLV $X_l=0.44$ - Classe 1
 Sollecitazioni: $T_z=-20.13$
 $V,Ed=-20.13$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 11 SLV $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=1131.50$ $T_z=6.95$ $M_y=4.50$ $M_z=-1.27$
 Tensioni: $\sigma_N=165.42$ $\sigma_{m,d}=46.67$ $\tau=0.00$ $\sigma_{max}=212.09$ (sfrut=0.08)
 Tensioni: $\sigma_N=165.42$ $\sigma_{m,d}=-10.29$ $\tau=2.28$ $\tau_{max}=2.28$ (sfrut=0.00)
 Tensioni: $\sigma_N=165.42$ $\sigma_{m,d}=46.67$ $\tau=0.00$ $\sigma_{ID,max}=212.09$ (sfrut=0.08)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N,Ed=-545.97$ $M_y,Ed=4.03$ $M_z,Ed=-1.53$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$

$\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.03+0.01+0.00=0.05
 Verifica ZZ: 0.03+0.01+0.00=0.04

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10447) $f_{z,L}=0.00$ (L/57462)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/9103) $f_{z,L}=0.00$ (L/65671)

Asta n. 40378 (70 68) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.44$ - Classe 1
 Sollecitazioni: $T_z=-20.15$
 $V,Ed=-20.15$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=1148.44$ $T_z=7.01$ $M_y=4.56$ $M_z=1.35$
 Tensioni: $\sigma_N=167.90$ $\sigma_{m,d}=47.73$ $\tau=0.00$ $\sigma_{max}=215.63$ (sfrut=0.08)
 Tensioni: $\sigma_N=167.90$ $\sigma_{m,d}=10.87$ $\tau=2.30$ $\tau_{max}=2.30$ (sfrut=0.00)
 Tensioni: $\sigma_N=167.90$ $\sigma_{m,d}=47.73$ $\tau=0.00$ $\sigma_{ID,max}=215.63$ (sfrut=0.08)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N,Ed=-563.31$ $M_y,Ed=4.06$ $M_z,Ed=1.59$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.03+0.01+0.00=0.05
 Verifica ZZ: 0.03+0.01+0.00=0.05

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/57462)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/8840) $f_{z,L}=0.00$ (L/51078)

Asta n. 40385 (45 47) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.44$ - Classe 1
 Sollecitazioni: $T_z=21.76$
 $V,Ed=21.76$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-664.63$ $T_z=23.73$ $M_y=9.91$ $M_z=1.35$
 Tensioni: $\sigma_N=-97.17$ $\sigma_{m,d}=-90.89$ $\tau=0.00$ $\sigma_{max}=-188.06$ (sfrut=0.07)
 Tensioni: $\sigma_N=-97.17$ $\sigma_{m,d}=10.88$ $\tau=7.79$ $\tau_{max}=7.79$ (sfrut=0.01)
 Tensioni: $\sigma_N=-97.17$ $\sigma_{m,d}=-90.89$ $\tau=0.00$ $\sigma_{ID,max}=188.06$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: $N,Ed=-668.96$ $M_y,Ed=9.91$ $M_z,Ed=1.35$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.04+0.03+0.00=0.07
 Verifica ZZ: 0.04+0.02+0.00=0.06

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10690) $f_{z,L}=0.00$ (L/65671)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/12258) $f_{z,L}=0.00$ (L/76617)

Asta n. 40386 (72 70) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU $X_l=0.44$ - Classe 1
 Sollecitazioni: $T_z=21.77$
 $V,Ed=21.77$ $V_c,Rd=5171.56$ $V,Ed/V_c,Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 27 SLU $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-659.53$ $T_z=23.74$ $M_y=9.91$ $M_z=-1.49$
 Tensioni: $\sigma_N=-96.42$ $\sigma_{m,d}=-92.07$ $\tau=0.00$ $\sigma_{max}=-188.49$ (sfrut=0.07)
 Tensioni: $\sigma_N=-96.42$ $\sigma_{m,d}=-12.06$ $\tau=7.80$ $\tau_{max}=7.80$ (sfrut=0.01)
 Tensioni: $\sigma_N=-96.42$ $\sigma_{m,d}=-92.07$ $\tau=0.00$ $\sigma_{ID,max}=188.49$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3

Sollecitazioni: N,Ed=-663.85 My,Ed=9.91 Mz,Ed=-1.49 L=0.88
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.04+0.03+0.00=0.07
 Verifica ZZ: 0.04+0.02+0.00=0.06

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10567) $f_{z,L}=0.00$ (L/61293)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/11940) $f_{z,L}=0.00$ (L/76617)

Asta n. 40393 (43 45) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU Xl=0.44 - Classe 1
 Sollecitazioni: Tz=-21.02
 V,Ed=-21.02 Vc,Rd=5171.56 V,Ed/Vc,Rd=0.00

- Verifica in termini tensionali [4.2.4] - CC 9 SLV Xl=0.00 - Classe 3
 Sollecitazioni: N=1097.66 Tz=5.90 My=2.63 Mz=-1.13
 Tensioni: $\sigma_N=160.48$ $\sigma_{m,d}=30.38$ $\tau=0.00$ $\sigma_{max}=190.86$ (sfrut=0.07)
 Tensioni: $\sigma_N=160.48$ $\sigma_{m,d}=-9.16$ $\tau=1.94$ $\tau_{max}=1.94$ (sfrut=0.00)
 Tensioni: $\sigma_N=160.48$ $\sigma_{m,d}=30.38$ $\tau=0.00$ $\sigma_{ID,max}=190.86$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: N,Ed=-595.05 My,Ed=2.38 Mz,Ed=-1.22 L=0.88
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.03+0.01+0.00=0.04
 Verifica ZZ: 0.03+0.01+0.00=0.04

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/76617)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/9194) $f_{z,L}=0.00$ (L/51078)

Asta n. 40394 (74 72) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU Xl=0.44 - Classe 1
 Sollecitazioni: Tz=-21.03
 V,Ed=-21.03 Vc,Rd=5171.56 V,Ed/Vc,Rd=0.00

- Verifica in termini tensionali [4.2.4] - CC 1 SLV Xl=0.00 - Classe 3
 Sollecitazioni: N=1108.66 Tz=5.92 My=2.65 Mz=1.30
 Tensioni: $\sigma_N=162.08$ $\sigma_{m,d}=31.88$ $\tau=0.00$ $\sigma_{max}=193.96$ (sfrut=0.07)
 Tensioni: $\sigma_N=162.08$ $\sigma_{m,d}=10.51$ $\tau=1.95$ $\tau_{max}=1.95$ (sfrut=0.00)
 Tensioni: $\sigma_N=162.08$ $\sigma_{m,d}=31.88$ $\tau=0.00$ $\sigma_{ID,max}=193.96$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: N,Ed=-612.34 My,Ed=2.39 Mz,Ed=1.29 L=0.88
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.03+0.01+0.00=0.05
 Verifica ZZ: 0.03+0.01+0.00=0.04

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10447) $f_{z,L}=0.00$ (L/65671)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/9013) $f_{z,L}=0.00$ (L/65671)

Asta n. 40401 (41 43) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU Xl=0.44 - Classe 1
 Sollecitazioni: Tz=21.55
 V,Ed=21.55 Vc,Rd=5171.56 V,Ed/Vc,Rd=0.00

- Verifica in termini tensionali [4.2.4] - CC 27 SLU Xl=0.88 - Classe 3
 Sollecitazioni: N=-607.10 Tz=19.18 My=-9.42 Mz=1.37
 Tensioni: $\sigma_N=-88.76$ $\sigma_{m,d}=-87.14$ $\tau=0.00$ $\sigma_{max}=-175.90$ (sfrut=0.07)
 Tensioni: $\sigma_N=-88.76$ $\sigma_{m,d}=11.03$ $\tau=6.30$ $\tau_{max}=6.30$ (sfrut=0.00)
 Tensioni: $\sigma_N=-88.76$ $\sigma_{m,d}=-87.14$ $\tau=0.00$ $\sigma_{ID,max}=175.90$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: N,Ed=-607.10 My,Ed=-9.42 Mz,Ed=1.43 L=0.88
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.03+0.03+0.00=0.07
 Verifica ZZ: 0.03+0.02+0.00=0.06

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10690) $f_{z,L}=0.00$ (L/70723)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/11638) $f_{z,L}=0.00$ (L/65671)

Asta n. 40402 (76 74) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU Xl=0.44 - Classe 1
 Sollecitazioni: Tz=21.56
 V,Ed=21.56 Vc,Rd=5171.56 V,Ed/Vc,Rd=0.00

- Verifica in termini tensionali [4.2.4] - CC 27 SLU Xl=0.88 - Classe 3
 Sollecitazioni: N=-601.99 Tz=19.19 My=-9.43 Mz=-1.51
 Tensioni: $\sigma_N=-88.01$ $\sigma_{m,d}=-88.34$ $\tau=0.00$ $\sigma_{max}=-176.35$ (sfrut=0.07)
 Tensioni: $\sigma_N=-88.01$ $\sigma_{m,d}=-12.19$ $\tau=6.30$ $\tau_{max}=6.30$ (sfrut=0.00)
 Tensioni: $\sigma_N=-88.01$ $\sigma_{m,d}=-88.34$ $\tau=0.00$ $\sigma_{ID,max}=176.35$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 27 SLU - Classe 3
 Sollecitazioni: N,Ed=-601.99 My,Ed=-9.43 Mz,Ed=-1.58 L=0.88
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.03+0.03+0.00=0.07
 Verifica ZZ: 0.03+0.02+0.00=0.06

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10447) $f_{z,L}=0.00$ (L/70723)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/11787) $f_{z,L}=0.00$ (L/83582)

Asta n. 40409 (39 41) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU Xl=0.44 - Classe 1
 Sollecitazioni: Tz=-21.08
 V,Ed=-21.08 Vc,Rd=5171.56 V,Ed/Vc,Rd=0.00

- Verifica in termini tensionali [4.2.4] - CC 9 SLV Xl=0.88 - Classe 3
 Sollecitazioni: N=1053.64 Tz=2.52 My=-2.50 Mz=-1.11
 Tensioni: $\sigma_N=154.04$ $\sigma_{m,d}=29.18$ $\tau=0.00$ $\sigma_{max}=183.22$ (sfrut=0.07)
 Tensioni: $\sigma_N=154.04$ $\sigma_{m,d}=-8.95$ $\tau=0.83$ $\tau_{max}=0.83$ (sfrut=0.00)
 Tensioni: $\sigma_N=154.04$ $\sigma_{m,d}=29.18$ $\tau=0.00$ $\sigma_{ID,max}=183.22$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: N,Ed=-642.49 My,Ed=-2.29 Mz,Ed=-1.13 L=0.88
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.04+0.01+0.00=0.05
 Verifica ZZ: 0.04+0.01+0.00=0.04

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10447) $f_{z,L}=0.00$ (L/65671)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,G}=0.01$ (L/9780) $f_{z,L}=0.00$ (L/57462)

Asta n. 40410 (78 76) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU Xl=0.44 - Classe 1
 Sollecitazioni: Tz=-21.10
 V,Ed=-21.10 Vc,Rd=5171.56 V,Ed/Vc,Rd=0.00

- Verifica in termini tensionali [4.2.4] - CC 1 SLV Xl=0.88 - Classe 3
 Sollecitazioni: N=1064.64 Tz=2.54 My=-2.52 Mz=1.27
 Tensioni: $\sigma_N=155.65$ $\sigma_{m,d}=30.60$ $\tau=0.00$ $\sigma_{max}=186.25$ (sfrut=0.07)

Tensioni: $\sigma_N=155.65$ $\sigma_{m,d}=10.25$ $\tau=0.83$ $\tau_{max}=0.83$ (sfrut=0.00)
Tensioni: $\sigma_N=155.65$ $\sigma_{m,d}=30.60$ $\tau=0.00$ $\sigma_{ID,max}=186.25$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: N,Ed=-659.77 My,Ed=-2.30 Mz,Ed=1.20 L=0.88
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
Verifica YY: 0.04+0.01+0.00=0.05
Verifica ZZ: 0.04+0.01+0.00=0.05

- Verifica freccia massima per soli carichi accidentali - CC 31
 $f_{z,G}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/57462)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/9478) $f_{z,L}=0.00$ (L/51078)

Asta n. 40417 (37 39) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU X1=0.44 - Classe 1
Sollecitazioni: Tz=21.49
V,Ed=21.49 Vc,Rd=5171.56 V,Ed/Vc,Rd=0.00

- Verifica in termini tensionali [4.2.4] - CC 27 SLU X1=0.88 - Classe 3
Sollecitazioni: N=-545.49 Tz=19.12 My=-9.85 Mz=1.47
Tensioni: $\sigma_N=-79.75$ $\sigma_{m,d}=-91.43$ $\tau=0.00$ $\sigma_{max}=-171.18$ (sfrut=0.07)
Tensioni: $\sigma_N=-79.75$ $\sigma_{m,d}=11.87$ $\tau=6.28$ $\tau_{max}=6.28$ (sfrut=0.00)
Tensioni: $\sigma_N=-79.75$ $\sigma_{m,d}=-91.43$ $\tau=0.00$ $\sigma_{ID,max}=171.18$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
Sollecitazioni: N,Ed=-950.52 My,Ed=-2.49 Mz,Ed=1.30 L=0.88
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
Verifica YY: 0.05+0.01+0.00=0.06
Verifica ZZ: 0.05+0.01+0.00=0.06

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/57462)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/10215) $f_{z,L}=0.00$ (L/41791)

Asta n. 40418 (80 78) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU X1=0.44 - Classe 1
Sollecitazioni: Tz=21.50
V,Ed=21.50 Vc,Rd=5171.56 V,Ed/Vc,Rd=0.00

- Verifica in termini tensionali [4.2.4] - CC 27 SLU X1=0.88 - Classe 3
Sollecitazioni: N=-540.39 Tz=19.13 My=-9.85 Mz=-1.63
Tensioni: $\sigma_N=-79.00$ $\sigma_{m,d}=-92.68$ $\tau=0.00$ $\sigma_{max}=-171.69$ (sfrut=0.07)
Tensioni: $\sigma_N=-79.00$ $\sigma_{m,d}=-13.14$ $\tau=6.28$ $\tau_{max}=6.28$ (sfrut=0.00)
Tensioni: $\sigma_N=-79.00$ $\sigma_{m,d}=-92.68$ $\tau=0.00$ $\sigma_{ID,max}=171.69$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
Sollecitazioni: N,Ed=-961.24 My,Ed=-2.51 Mz,Ed=-1.36 L=0.88
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
Kyy, Kyz, Kzy, Kzz=0.96, 0.96, 0.77, 0.96
Verifica YY: 0.05+0.01+0.00=0.07
Verifica ZZ: 0.05+0.01+0.00=0.06

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,G}=0.01$ (L/9993) $f_{z,L}=0.00$ (L/57462)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,G}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/51078)

Asta n. 40425 (35 37) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 19 SLU X1=0.55 - Classe 1
Sollecitazioni: Tz=-12.32
V,Ed=-12.32 Vc,Rd=5171.56 V,Ed/Vc,Rd=0.00

- Verifica in termini tensionali [4.2.4] - CC 9 SLV X1=0.88 - Classe 3

Sollecitazioni: $N=1006.72$ $T_z=2.64$ $M_y=-3.91$ $M_z=-1.02$
 Tensioni: $\sigma_N=147.18$ $\sigma_{m,d}=39.82$ $\tau=0.00$ $\sigma_{max}=187.00$ (sfrut=0.07)
 Tensioni: $\sigma_N=147.18$ $\sigma_{m,d}=-8.24$ $\tau=0.87$ $\tau_{max}=0.87$ (sfrut=0.00)
 Tensioni: $\sigma_N=147.18$ $\sigma_{m,d}=39.82$ $\tau=0.00$ $\sigma_{ID,max}=187.00$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed=-690.88$ $M_y, Ed=-3.49$ $M_z, Ed=-1.06$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.04+0.01+0.00=0.05$
 Verifica ZZ: $0.04+0.01+0.00=0.05$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10567) $f_{z,L}=0.00$ (L/76617)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/9886) $f_{z,L}=0.00$ (L/51078)

Asta n. 40426 (82 80) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 19 SLU $X_l=0.55$ - Classe 1
 Sollecitazioni: $T_z=-12.33$
 $V, Ed=-12.33$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.88$ - Classe 3
 Sollecitazioni: $N=1017.72$ $T_z=2.66$ $M_y=-3.94$ $M_z=1.20$
 Tensioni: $\sigma_N=148.79$ $\sigma_{m,d}=41.48$ $\tau=0.00$ $\sigma_{max}=190.27$ (sfrut=0.07)
 Tensioni: $\sigma_N=148.79$ $\sigma_{m,d}=9.66$ $\tau=0.87$ $\tau_{max}=0.87$ (sfrut=0.00)
 Tensioni: $\sigma_N=148.79$ $\sigma_{m,d}=41.48$ $\tau=0.00$ $\sigma_{ID,max}=190.27$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N, Ed=-708.19$ $M_y, Ed=-3.51$ $M_z, Ed=1.12$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.04+0.01+0.00=0.05$
 Verifica ZZ: $0.04+0.01+0.00=0.05$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10567) $f_{z,L}=0.00$ (L/76617)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/10103) $f_{z,L}=0.00$ (L/45970)

Asta n. 40433 (33 35) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.33$ - Classe 1
 Sollecitazioni: $T_z=21.25$
 $V, Ed=21.25$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.00$ - Classe 3
 Sollecitazioni: $N=-892.72$ $M_y=-3.68$ $M_z=1.31$
 Tensioni: $\sigma_N=-130.51$ $\sigma_{m,d}=-40.26$ $\tau=0.00$ $\sigma_{max}=-170.77$ (sfrut=0.07)
 Tensioni: $\sigma_N=0.00$ $\sigma_{m,d}=0.00$ $\tau=0.00$ $\tau_{max}=0.00$ (sfrut=0.00)
 Tensioni: $\sigma_N=-130.51$ $\sigma_{m,d}=-40.26$ $\tau=0.00$ $\sigma_{ID,max}=170.77$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N, Ed=-896.05$ $M_y, Ed=-3.68$ $M_z, Ed=1.38$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.05+0.01+0.00=0.07$
 Verifica ZZ: $0.05+0.01+0.00=0.06$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.01$ (L/10330) $f_{z,L}=0.00$ (L/65671)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.01$ (L/10690) $f_{z,L}=0.00$ (L/45970)

Asta n. 40434 (84 82) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 27 SLU $X_l=0.33$ - Classe 1
 Sollecitazioni: $T_z=21.27$
 $V, Ed=21.27$ $V_c, Rd=5171.56$ $V, Ed/V_c, Rd=0.00$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV Xl=0.00 - Classe 3
 Sollecitazioni: N=-903.32 M_y=-3.71 M_z=-1.38
 Tensioni: $\sigma_N=-132.06$ $\sigma_{m,d}=-41.13$ $\tau=0.00$ $\sigma_{max}=-173.20$ (sfrut=0.07)
 Tensioni: $\sigma_N=0.00$ $\sigma_{m,d}=0.00$ $\tau=0.00$ $\tau_{max}=0.00$ (sfrut=0.00)
 Tensioni: $\sigma_N=-132.06$ $\sigma_{m,d}=-41.13$ $\tau=0.00$ $\sigma_{ID,max}=173.20$ (sfrut=0.07)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: N,Ed=-906.65 M_y,Ed=-3.71 M_z,Ed=-1.43 L=0.88
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.05+0.01+0.00=0.07
 Verifica ZZ: 0.05+0.01+0.00=0.06

- Verifica freccia massima per soli carichi accidentali - CC 20
 f_{z,g}=0.01 (L/10447) f_{z,L}=0.00 (L/65671)

- Verifica freccia massima carichi totali - CC 31
 f_{z,g}=0.01 (L/10690) f_{z,L}=0.00 (L/41791)

- Asta n. 40441 (31 33) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU Xl=0.55 - Classe 1
 Sollecitazioni: T_z=-32.97
 V,Ed=-32.97 V_c,Rd=5171.56 V,Ed/V_c,Rd=0.01

- Verifica in termini tensionali [4.2.4] - CC 9 SLV Xl=0.00 - Classe 3
 Sollecitazioni: N=980.34 T_z=-19.74 M_y=-10.91 T_y=1.86 M_z=-2.08
 Tensioni: $\sigma_N=143.32$ $\sigma_{m,d}=104.89$ $\tau=0.00$ $\sigma_{max}=248.22$ (sfrut=0.09)
 Tensioni: $\sigma_N=143.32$ $\sigma_{m,d}=-15.09$ $\tau=6.48$ $\tau_{max}=6.48$ (sfrut=0.00)
 Tensioni: $\sigma_N=143.32$ $\sigma_{m,d}=104.89$ $\tau=0.00$ $\sigma_{ID,max}=248.22$ (sfrut=0.09)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: N,Ed=-794.01 M_y,Ed=-12.55 M_z,Ed=-1.47 L=0.88
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.04+0.04+0.00=0.09
 Verifica ZZ: 0.04+0.03+0.00=0.08

- Verifica freccia massima per soli carichi accidentali - CC 31
 f_{z,g}=0.01 (L/10215) f_{z,L}=0.00 (L/57462)

- Verifica freccia massima carichi totali - CC 31
 f_{z,g}=0.01 (L/9993) f_{z,L}=0.00 (L/25539)

- Asta n. 40442 (86 84) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio Dir. Z [4.2.16] - CC 17 SLU Xl=0.55 - Classe 1
 Sollecitazioni: T_z=-32.86
 V,Ed=-32.86 V_c,Rd=5171.56 V,Ed/V_c,Rd=0.01

- Verifica in termini tensionali [4.2.4] - CC 1 SLV Xl=0.00 - Classe 3
 Sollecitazioni: N=991.50 T_z=-20.01 M_y=-11.02 T_y=-1.77 M_z=2.06
 Tensioni: $\sigma_N=144.96$ $\sigma_{m,d}=105.66$ $\tau=0.00$ $\sigma_{max}=250.61$ (sfrut=0.10)
 Tensioni: $\sigma_N=144.96$ $\sigma_{m,d}=14.97$ $\tau=6.57$ $\tau_{max}=6.57$ (sfrut=0.00)
 Tensioni: $\sigma_N=144.96$ $\sigma_{m,d}=105.66$ $\tau=0.00$ $\sigma_{ID,max}=250.61$ (sfrut=0.10)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: N,Ed=-811.89 M_y,Ed=-12.68 M_z,Ed=1.56 L=0.88
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ Ncr,y=100129.00 $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ Ncr,z=100129.00 $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96
 Verifica YY: 0.05+0.04+0.00=0.09
 Verifica ZZ: 0.05+0.03+0.00=0.08

- Verifica freccia massima per soli carichi accidentali - CC 31
 f_{z,g}=0.01 (L/10447) f_{z,L}=0.00 (L/45970)

- Verifica freccia massima carichi totali - CC 31
 f_{z,g}=0.01 (L/10215) f_{z,L}=0.00 (L/22985)

- Asta n. 40449 (17 31) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 1 SLV Xl=0.76 - Classe 1

Sollecitazioni: $T_y=-12.90$ $M_x=-1.03$
 $V, Ed=-12.90$ $V_c, Rd, Red=5153.47$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 1 SLV $X_l=0.76$ - Classe 1
 Sollecitazioni: $T_z=-216.69$ $M_x=-1.03$
 $V, Ed=-216.69$ $V_c, Rd, Red=5153.47$ $V, Ed/V_c, Rd, Red=0.04$

- Verifica in termini tensionali [4.2.4] - CC 1 SLV $X_l=0.88$ - Classe 3
 Sollecitazioni: $N=-637.45$ $T_z=-217.12$ $M_y=60.42$ $T_y=22.16$ $M_z=4.21$ $M_x=-1.03$
 Tensioni: $\sigma_N=-93.19$ $\sigma_{m,d}=-522.02$ $\tau=5.29$ $\sigma_{max}=-615.21$ (sfrut=0.23)
 Tensioni: $\sigma_N=-93.19$ $\sigma_{m,d}=30.61$ $\tau=76.58$ $\tau_{max}=76.58$ (sfrut=0.05)
 Tensioni: $\sigma_N=-93.19$ $\sigma_{m,d}=-522.02$ $\tau=5.29$ $\sigma_{ID,max}=615.28$ (sfrut=0.23)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 1 SLV - Classe 3
 Sollecitazioni: $N, Ed=-637.45$ $M_y, Ed=60.42$ $M_z, Ed=-5.82$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.04+0.18+0.02=0.23$
 Verifica ZZ: $0.04+0.14+0.02=0.20$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.00$ (L/11035) $f_{z,L}=0.00$ (L/14829)

- Verifica freccia massima carichi totali - CC 31
 $f_{z,g}=0.00$ (L/13181) $f_{z,L}=0.00$

Asta n. 40450 (-793 86) - Sez. 7 (RC60x60x3) - Crit. 1

- Verifica a taglio e torsione Dir. Y [4.2.25] - CC 9 SLV $X_l=0.76$ - Classe 1
 Sollecitazioni: $T_y=15.27$ $M_x=1.01$
 $V, Ed=15.27$ $V_c, Rd, Red=5153.79$ $V, Ed/V_c, Rd, Red=0.00$

- Verifica a taglio e torsione Dir. Z [4.2.25] - CC 9 SLV $X_l=0.76$ - Classe 1
 Sollecitazioni: $T_z=-221.89$ $M_x=1.01$
 $V, Ed=-221.89$ $V_c, Rd, Red=5153.79$ $V, Ed/V_c, Rd, Red=0.04$

- Verifica in termini tensionali [4.2.4] - CC 9 SLV $X_l=0.88$ - Classe 3
 Sollecitazioni: $N=-573.11$ $T_z=-222.32$ $M_y=61.67$ $T_y=-22.32$ $M_z=-4.30$ $M_x=1.01$
 Tensioni: $\sigma_N=-83.79$ $\sigma_{m,d}=-532.92$ $\tau=5.20$ $\sigma_{max}=-616.71$ (sfrut=0.24)
 Tensioni: $\sigma_N=-83.79$ $\sigma_{m,d}=31.28$ $\tau=78.19$ $\tau_{max}=78.19$ (sfrut=0.05)
 Tensioni: $\sigma_N=-83.79$ $\sigma_{m,d}=-532.92$ $\tau=5.20$ $\sigma_{ID,max}=616.78$ (sfrut=0.24)

- Verifica di stabilità aste presso-inflesse (C4.2.4.1.3.3.2) - CC 9 SLV - Classe 3
 Sollecitazioni: $N, Ed=-573.11$ $M_y, Ed=61.67$ $M_z, Ed=5.80$ $L=0.88$
 $\alpha_{my}, \alpha_{mz}, \alpha_{LT}=0.95, 0.95, 0.95$
 $\lambda_y=37.63$ $N_{cr,y}=100129.00$ $\lambda^*_y=0.43$ Curva a: $\Phi_y=0.62$ $\chi_y=0.94$
 $\lambda_z=37.63$ $N_{cr,z}=100129.00$ $\lambda^*_z=0.43$ Curva a: $\Phi_z=0.62$ $\chi_z=0.94$
 $K_{yy}, K_{yz}, K_{zy}, K_{zz}=0.96, 0.96, 0.77, 0.96$
 Verifica YY: $0.03+0.18+0.02=0.23$
 Verifica ZZ: $0.03+0.15+0.02=0.19$

- Verifica freccia massima per soli carichi accidentali - CC 20
 $f_{z,g}=0.00$ (L/11035) $f_{z,L}=0.00$ (L/15817)

- Verifica freccia massima carichi totali - CC 20
 $f_{z,g}=0.00$ (L/12825) $f_{z,L}=0.00$

FONDAZIONI PALESTRA

Sommario

Introduzione.....	2
Sistemi di riferimento	2
Rotazioni e momenti	2
Normativa di riferimento	2
Unità di misura	3
Verifiche e armature travi.....	3
Travata n. 401	4
Travata n. 402	5
Travata n. 403	6
Travata n. 404	7
Travata n. 405	8
Travata n. 406	9
Travata n. 407	9
Travata n. 408	10
Verifiche e armature solette/platee.....	11
Armatura platea a quota 0.00	12
Fondazioni superficiali.....	13
Verifiche capacità portante	13
Cedimenti	19

Introduzione

Sistemi di riferimento

Le coordinate, i carichi concentrati, i cedimenti, le reazioni vincolari e gli spostamenti dei NODI sono riferiti ad una terna destra cartesiana globale con l'asse Z verticale rivolto verso l'alto.

I carichi in coordinate locali e le sollecitazioni delle ASTE sono riferite ad una terna destra cartesiana locale così definita:

- origine nel nodo iniziale dell'asta;
- asse X coincidente con l'asse dell'asta e con verso dal nodo iniziale al nodo finale;
- immaginando la trave a sezione rettangolare l'asse Y è parallelo alla base e l'asse Z è parallelo all'altezza. La rotazione dell'asta comporta quindi una rotazione di tutta la terna locale.

Si può immaginare la terna locale di un'asta comunque disposta nello spazio come derivante da quella globale dopo una serie di trasformazioni:

- una rotazione intorno all'asse Z che porti l'asse X a coincidere con la proiezione dell'asse dell'asta sul piano orizzontale;
- una traslazione lungo il nuovo asse X così definito in modo da portare l'origine a coincidere con la proiezione del nodo iniziale dell'asta sul piano orizzontale;
- una traslazione lungo l'asse Z che porti l'origine a coincidere con il nodo iniziale dell'asta;
- una rotazione intorno all'asse Y così definito che porti l'asse X a coincidere con l'asse dell'asta;
- una rotazione intorno all'asse X così definito pari alla rotazione dell'asta.

In pratica le travi prive di rotazione avranno sempre l'asse Z rivolto verso l'alto e l'asse Y nel piano del solaio, mentre i pilastri privi di rotazione avranno l'asse Y parallelo all'asse Y globale e l'asse Z parallelo ma controverso all'asse X globale. Da notare quindi che per i pilastri la "base" è il lato parallelo a Y.

Le sollecitazioni ed i carichi in coordinate locali negli ELEMENTI BIDIMENSIONALI e nei MURI sono riferiti ad una terna destra cartesiana locale così definita:

- origine nel primo nodo dell'elemento;
- asse X coincidente con la congiungente il primo ed il secondo nodo dell'elemento;
- asse Y definito come prodotto vettoriale fra il versore dell'asse X e il versore della congiungente il primo e il quarto nodo. Asse Z a formare con gli altri due una terna destrorsa.

Praticamente un elemento verticale con l'asse X locale coincidente con l'asse X globale ha anche gli altri assi locali coincidenti con quelli globali.

Rotazioni e momenti

Seguendo il principio adottato per tutti i carichi che sono positivi se CONTROVERSI agli assi, anche i momenti concentrati e le rotazioni impresse in coordinate globali risultano positivi se CONTROVERSI al segno positivo delle rotazioni. Il segno positivo dei momenti e delle rotazioni è quello orario per l'osservatore posto nell'origine: X ruota su Y, Y ruota su Z, Z ruota su X. In pratica è sufficiente adottare la regola della mano destra: col pollice rivolto nella direzione dell'asse, la rotazione che porta a chiudere il palmo della mano corrisponde al segno positivo.

Normativa di riferimento

La normativa di riferimento è la seguente:

- Legge n. 64 del 2/2/1974 - Provvedimenti per le costruzioni con particolari prescrizioni per le zone sismiche.
- D.M. del 24/1/1986 - Norme tecniche relative alle costruzioni sismiche.
- Legge n. 1086 del 5/11/1971 - Norme per la disciplina delle opere di conglomerato cementizio armato, normale e precompresso ed a struttura metallica.
- D.M. del 14/2/1992 - Norme tecniche per l'esecuzione delle opere in c.a. normale e precompresso e per le strutture metalliche.
- D.M. del 9/1/1996 - Norme tecniche per l'esecuzione delle opere in c.a. normale e precompresso e per le strutture metalliche.
- D.M. del 16/1/1996 - Norme tecniche per le costruzioni in zone sismiche.
- Circolare n. 21745 del 30/7/1981 - Legge n. 219 del 14/5/1981 - Art. 10 - Istruzioni relative al rafforzamento degli edifici in muratura danneggiati dal sisma.
- Regione Autonoma Friuli Venezia Giulia - Legge Regionale n. 30 del 20/6/1977 - Documentazione tecnica per la progettazione e direzione delle opere di riparazione degli edifici - Documento Tecnico n. 2 - Raccomandazioni per la riparazione strutturale degli edifici in muratura.
- D.M. del 20/11/1987 - Norme Tecniche per la progettazione, esecuzione e collaudo degli edifici in muratura e per il loro consolidamento.
- Norme Tecniche C.N.R. n. 10011-85 del 18/4/1985 - Costruzioni di acciaio - Istruzioni per il calcolo, l'esecuzione, il collaudo e la manutenzione.
- Norme Tecniche C.N.R. n. 10025-84 del 14/12/1984 - Istruzioni per il progetto, l'esecuzione ed il controllo delle strutture prefabbricate in conglomerato cementizio e per le strutture costruite con sistemi industrializzati di acciaio

Relazione di calcolo

- Istruzioni per il calcolo, l'esecuzione, il collaudo e la manutenzione.
- Circolare n. 65 del 10/4/1997 - Istruzioni per l'applicazione delle "Norme tecniche per le costruzioni in zone sismiche" di cui al D.M. del 16/1/1996.
- Eurocodice 5 - Progettazione delle strutture di legno.
- DIN 1052 - Metodi di verifica per il legno.
- D.M. del 17/1/2018 - Norme tecniche per le costruzioni.
- Circolare n. 7 del 21/1/2019 - Istruzioni per l'applicazione dell'«Aggiornamento delle "Norme tecniche per le costruzioni"» di cui al decreto ministeriale 17 gennaio 2018.
- Documento Tecnico CNR-DT 200 R1/2012 - Istruzioni per la Progettazione, l'Esecuzione ed il Controllo di Interventi di Consolidamento Statico mediante l'utilizzo di Compositi Fibrorinforzati.
- Eurocodice 3 - Progettazione delle strutture in acciaio.

Unità di misura

Le unità di misura adottate sono le seguenti:

- lunghezze : m
- forze : daN
- masse : kg
- temperature : gradi centigradi
- angoli : gradi sessadecimali o radianti

Verifiche e armature travi

Simbologia

Δ_{sm}	= Distanza media tra le fessure
Φ_{eq}	= Diametro equivalente delle barre
ϵ_{sm}	= Deformazione unitaria media dell'armatura (*1000)
σ_c	= Tensione nel calcestruzzo
$\sigma_f inf$	= Tensione nel ferro - inferiore
$\sigma_f sup$	= Tensione nel ferro - superiore
σ_s	= Tensione nell'acciaio nella sezione fessurata
$A_{c eff}$	= Area di calcestruzzo efficace
A_s	= Area complessiva dei ferri nell'area di calcestruzzo efficace
$A_{fe I}$	= Area di ferro effettiva totale presente nel punto di verifica, inferiore
$A_{fe S}$	= Area di ferro effettiva totale presente nel punto di verifica, superiore
$A_{fe St.}$	= Area di ferro effettiva della staffatura (d'anima per travi a T o L)
$A_{feP I}$	= Area di ferro effettiva parziale presente nella CC considerata, per la sollecitazione indicata, inferiore
$A_{feP S}$	= Area di ferro effettiva parziale presente nella CC considerata, per la sollecitazione indicata, superiore
B	= Base
CC	= Combinazione delle condizioni di carico elementari
c	= momento fittizio in campata
a	= momento fittizio agli appoggi
T	= momento traslato per taglio
e	= eccentricità aggiuntiva in caso di compressione o pressoflessione
TG	= taglio da gerarchia delle resistenze
TGND	= taglio non dissipativo limitante la gerarchia
TG (Li)	= taglio da gerarchia delle resistenze, limite inferiore
TG (Ls)	= taglio da gerarchia delle resistenze, limite superiore
Caso	= Caso di verifica
Cf inf	= Copriferro inferiore
Cf sup	= Copriferro superiore
Cls	= Tipo di calcestruzzo
El	= Elemento (asta) in cui viene effettuato il progetto/verifica (progressivo sul numero di aste)
Fcd	= Resistenza di calcolo a compressione del calcestruzzo
Fck	= Resistenza caratteristica cilindrica a compressione del calcestruzzo
Fctd	= Resistenza di calcolo a trazione del calcestruzzo
Fctk	= Resistenza caratteristica a trazione del calcestruzzo
Fyd	= Resistenza di calcolo dell'acciaio
Fyk	= Tensione caratteristica di snervamento dell'acciaio
H	= Altezza
K ₂	= Coefficiente per distribuzione deformazioni
Lung.	= Lunghezza del tratto di progettazione
M'ydy	= Momento resistente massimo in campo sostanzialmente elastico intorno all'asse Y
MRdy	= Momento resistente allo stato limite ultimo intorno all'asse Y
My	= Momento flettente intorno all'asse Y
Sez.	= Numero della sezione
Sic.	= Sicurezza
Staff.	= Staffatura adottata
TCC	= Tipo di combinazione di carico
SLU	= Stato limite ultimo
SLE R	= Stato limite d'esercizio, combinazione rara
SLE F	= Stato limite d'esercizio, combinazione frequente
SLE Q	= Stato limite d'esercizio, combinazione quasi permanente
SLD	= Stato limite di danno
SLV	= Stato limite di salvaguardia della vita
SLU I	= Stato limite di resistenza al fuoco
SND	= Stato limite di salvaguardia della vita (non dissipativo)
Tipo	= Tipologia
L	= Sezione a L
Ldx	= L destra
R	= Rettangolare
Tp	= Tipo di acciaio
VRcd	= Taglio ultimo lato calcestruzzo
VRsd	= Taglio ultimo lato armatura
Vrdu	= Taglio ultimo resistente
Vsdu	= Taglio agente nella direzione del momento ultimo
Wk	= Ampiezza caratteristica delle fessure
X	= Coordinata progressiva rispetto al nodo iniziale

Relazione di calcolo

X0	=	Coordinata progressiva (dal nodo iniziale) dell'inizio del tratto
X1	=	Coordinata progressiva (dal nodo iniziale) della fine del tratto
Xg	=	Coordinata progressiva (dal primo nodo) in cui viene effettuato il progetto/verifica
bw	=	Larghezza membratura resistente al taglio
c	=	Ricoprimento dell'armatura
ctgθ	=	Cotangente dell'angolo di inclinazione dei puntoni di calcestruzzo
s	=	Distanza massima tra le barre

Travata n. 401

Nodi: 1 -692 -693 -694 -695 -696 -697 -698 -699 -1 -497 -498 -499 -500 -501 -502 -503 -504 -3 -302 -303 -304 -305
-306 -307 -308 -309 -5 -108 -109 -110 -111 -112 -113 -114 3

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
6R		140.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cm²>	AfE I <cm²>	AfEP S <cm²>	AfEP I <cm²>	My <daNm>	MRdy <daNm>	Sic.
0.60	28	SLU	1	60.00	30.41	30.41	30.41	30.41	-34844.00	-76137.90	2.185
1.90	29	SLU	3	0.00	30.41	30.41	30.41	30.41	-66039.70	-76137.90	1.153
8.23	29	SLU	9	64.78	30.41	60.82	30.41	60.82	108089.00	150373.00	1.391
8.83	29	SLU	10	30.00	60.82	60.82	60.82	60.82	103359.00	151024.00	1.461
12.20	29	SLU	14	0.00	30.41	30.41	30.41	30.41	-45854.00	-76137.90	1.660
16.48	29	SLU	18	61.67	60.82	60.82	60.82	60.82	102546.00	151024.00	1.473
17.08	18	SLU	19	30.00	60.82	60.82	60.82	60.82	96886.90	151024.00	1.559
20.48	29	SLU	23	0.00	30.41	30.41	30.41	30.41	-48355.40	-76137.90	1.575
24.81	29	SLU	27	62.56	60.82	60.82	60.82	60.82	109863.00	151024.00	1.375
25.41	29	SLU	28	30.00	30.41	60.82	30.41	60.82	109848.00	150373.00	1.369
29.67	18	SLU	33	0.00	30.41	30.41	30.41	30.41	-53866.30	-76137.90	1.413
31.80	18	SLU	35	31.13	30.41	30.41	30.41	30.41	-24573.20	-76137.90	3.098

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cm²>	AfE I <cm²>	AfEP S <cm²>	AfEP I <cm²>	My <daNm>	M'ydy <daNm>	Sic.
0.60	9	SLV(E)	1	60.00	30.41	30.41	30.41	30.41	-55322.50	-73122.40	1.322
1.90	9	SLV(E)	3	0.00	30.41	30.41	30.41	30.41	-72117.20	-73122.40	1.014
8.23	9	SLV(E)	9	64.78	30.41	60.82	30.41	60.82	104155.00	141655.00	1.360
8.83	1	SLV(E)	10	30.00	60.82	60.82	60.82	60.82	105688.00	144476.00	1.367
12.20	5	SLV(E)	14	0.00	30.41	30.41	30.41	30.41	-37722.40	-73122.40	1.938
16.48	9	SLV(E)	18	61.67	60.82	60.82	60.82	60.82	101521.00	144476.00	1.423
17.08	1	SLV(E)	19	30.00	60.82	60.82	60.82	60.82	98614.70	144476.00	1.465
20.48	13	SLV(E)	23	0.00	30.41	30.41	30.41	30.41	-39858.40	-73122.40	1.835
24.81	9	SLV(E)	27	62.56	60.82	60.82	60.82	60.82	109336.00	144476.00	1.321
25.41	1	SLV(E)	28	30.00	30.41	60.82	30.41	60.82	105230.00	141655.00	1.346
29.67	1	SLV(E)	33	0.00	30.41	30.41	30.41	30.41	-65252.90	-73122.40	1.121
31.80	1	SLV(E)	35	31.13	30.41	30.41	30.41	30.41	-53016.90	-73122.40	1.379

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cm²>	AfE I <cm²>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.60	32	SLE R	1	60.00	30.41	30.41	-25442.10	1356.84	-329.62	28.22
0.60	26	SLE Q	1	60.00	30.41	30.41	-20301.30	1082.68	-263.02	22.52
1.90	33	SLE R	3	0.00	30.41	30.41	-49228.50	2625.39	-637.79	54.61
1.90	26	SLE Q	3	0.00	30.41	30.41	-45347.60	2418.42	-587.51	50.30
8.23	33	SLE R	9	64.78	30.41	60.82	81464.30	-900.00	2230.72	71.60
8.23	26	SLE Q	9	64.78	30.41	60.82	74485.70	-822.90	2039.63	65.46
8.83	33	SLE R	10	30.00	60.82	60.82	78251.80	-740.36	2110.06	59.91
8.83	26	SLE Q	10	30.00	60.82	60.82	72981.30	-690.49	1967.94	55.88
12.20	33	SLE R	14	0.00	30.41	30.41	-34345.10	1831.65	-444.96	38.10
12.20	26	SLE Q	14	0.00	30.41	30.41	-31885.80	1700.49	-413.10	35.37
16.48	33	SLE R	18	61.67	60.82	60.82	75876.80	-717.89	2046.02	58.10
16.48	26	SLE Q	18	61.67	60.82	60.82	70557.30	-667.56	1902.58	54.02
17.08	21	SLE R	19	30.00	60.82	60.82	72129.90	-682.44	1944.98	55.23
17.08	26	SLE Q	19	30.00	60.82	60.82	68349.20	-646.67	1843.04	52.33
20.48	33	SLE R	23	0.00	30.41	30.41	-35925.80	1915.95	-465.44	39.85
20.48	26	SLE Q	23	0.00	30.41	30.41	-33531.10	1788.24	-434.42	37.19
24.81	33	SLE R	27	62.56	60.82	60.82	81595.90	-772.00	2200.23	62.47
24.81	26	SLE Q	27	62.56	60.82	60.82	75657.40	-715.81	2040.10	57.93
25.41	33	SLE R	28	30.00	30.41	60.82	81580.00	-901.28	2233.89	71.70
25.41	26	SLE Q	28	30.00	30.41	60.82	76984.30	-850.50	2108.05	67.66
29.67	21	SLE R	33	0.00	30.41	30.41	-40737.40	2172.56	-527.78	45.19
29.67	26	SLE Q	33	0.00	30.41	30.41	-38703.60	2064.09	-501.43	42.93
31.80	21	SLE R	35	31.13	30.41	30.41	-18559.30	989.78	-240.45	20.59
31.80	26	SLE Q	35	31.13	30.41	30.41	-17676.20	942.68	-229.01	19.61

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cm²>	A _{c eff} <cm²>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
------	-----------	----	-----	----	------	-----------	--------------	-----------	-----------	----------------	-----------------	-------------------------	-------------------------	-----------------------------	-----------------------------	-----------------	------------

Relazione di calcolo

33	0.60	26	SLE Q	1	6	60.00	-20301.30	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	1082.68	0.32	0.22
39	0.60	36	SLE F	1	6	60.00	-21214.70	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	1131.40	0.33	0.23
72	1.90	26	SLE Q	3	6	0.00	-45347.60	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	2418.42	0.94	0.65
78	1.90	36	SLE F	3	6	0.00	-45844.00	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	2444.89	0.84	0.58
111	8.23	26	SLE Q	9	6	64.78	74485.70	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	2039.63	0.86	0.13
114	8.23	24	SLE F	9	6	64.78	75434.50	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	2065.61	0.80	0.13
150	8.83	26	SLE Q	10	6	30.00	72981.30	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	1967.94	0.82	0.13
153	8.83	24	SLE F	10	6	30.00	73925.50	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	1993.40	0.77	0.12
189	12.20	26	SLE Q	14	6	0.00	-31885.80	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	1700.49	0.59	0.41
192	12.20	24	SLE F	14	6	0.00	-32266.20	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	1720.78	0.50	0.35
228	16.48	26	SLE Q	18	6	61.67	70557.30	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	1902.58	0.79	0.12
231	16.48	24	SLE F	18	6	61.67	71310.30	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	1922.88	0.73	0.12
267	17.08	26	SLE Q	19	6	30.00	68349.20	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	1843.04	0.76	0.12
270	17.08	24	SLE F	19	6	30.00	69104.60	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	1863.40	0.71	0.11
306	20.48	26	SLE Q	23	6	0.00	-33531.10	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	1788.24	0.64	0.44
309	20.48	24	SLE F	23	6	0.00	-33900.70	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	1807.95	0.53	0.37
345	24.81	26	SLE Q	27	6	62.56	75657.40	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	2040.10	0.86	0.13
348	24.81	24	SLE F	27	6	62.56	76492.10	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	2062.61	0.80	0.13
384	25.41	26	SLE Q	28	6	30.00	76984.30	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	2108.05	0.89	0.14
387	25.41	24	SLE F	28	6	30.00	77825.90	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	2131.10	0.84	0.13
423	29.67	26	SLE Q	33	6	0.00	-38703.60	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	2064.09	0.77	0.53
426	29.67	24	SLE F	33	6	0.00	-39103.40	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	2085.41	0.66	0.46
464	31.80	26	SLE Q	35	6	31.13	-17676.20	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	942.68	0.27	0.19
467	31.80	24	SLE F	35	6	31.13	-17845.30	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	951.70	0.28	0.19

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
5 SLV	0.45	0.90	0.45	ø10/15 4 br.	20.94	1.40	45705.60	2.50	122625.00	203841.00	122625.00	2.683
29 SLU	0.90	7.85	6.95	ø10/15 4 br.	20.94	1.40	86379.40	2.50	122625.00	203841.00	122625.00	1.420
29 SLU	7.85	8.30	0.45	ø10/15 4 br.	20.94	1.40	91356.10	2.50	122625.00	203841.00	122625.00	1.342
29 SLU	8.76	9.21	0.45	ø10/15 4 br.	20.94	1.40	90909.10	2.50	122625.00	203841.00	122625.00	1.349
29 SLU	9.21	16.11	6.90	ø10/15 4 br.	20.94	1.40	86943.10	2.50	122625.00	203841.00	122625.00	1.410
29 SLU	16.11	16.55	0.45	ø10/15 4 br.	20.94	1.40	92298.60	2.50	122625.00	203841.00	122625.00	1.329
18 SLU	17.00	17.45	0.45	ø10/15 4 br.	20.94	1.40	89667.20	2.50	122625.00	203841.00	122625.00	1.368
29 SLU	17.45	24.43	6.98	ø10/15 4 br.	20.94	1.40	90776.50	2.50	122625.00	203841.00	122625.00	1.351
29 SLU	24.43	24.89	0.45	ø10/15 4 br.	20.94	1.40	96326.60	2.50	122625.00	203841.00	122625.00	1.273
18 SLU	25.34	25.79	0.45	ø10/15 4 br.	20.94	1.40	96848.40	2.50	122625.00	203841.00	122625.00	1.266
18 SLU	25.79	31.50	5.71	ø10/15 4 br.	20.94	1.40	91395.50	2.50	122625.00	203841.00	122625.00	1.342
13 SLV	31.50	31.95	0.45	ø10/15 4 br.	20.94	1.40	39988.50	2.50	122625.00	203841.00	122625.00	3.066

Travata n. 402

Nodi: 2 -610 -609 -608 -607 -606 -605 -604 -603 -2 -415 -414 -413 -412 -411 -410 -409 -408 -4 -220 -219 -218 -217 -216 -215 -214 -213 -6 -35 -34 -33 -32 -31 -30 -29 4

Caratteristiche delle sezioni e dei materiali utilizzati

Sez. Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
6R	140.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.60	28	SLU	1	34.78	30.41	30.41	30.41	30.41	-35656.20	-76137.90	2.135
1.90	28	SLU	3	94.78	30.41	30.41	30.41	30.41	-70395.00	-76137.90	1.082
8.23	28	SLU	9	30.00	30.41	60.82	30.41	60.82	113421.00	150373.00	1.326
8.83	29	SLU	10	61.67	60.82	60.82	60.82	60.82	107735.00	151024.00	1.402
12.20	28	SLU	14	91.67	30.41	30.41	30.41	30.41	-47275.00	-76137.90	1.611
16.48	28	SLU	18	30.00	60.82	60.82	60.82	60.82	107204.00	151024.00	1.409
17.08	29	SLU	19	62.56	30.41	60.82	30.41	60.82	100671.00	150373.00	1.494
20.48	28	SLU	23	92.56	30.41	30.41	30.41	30.41	-49866.10	-76137.90	1.527
24.81	28	SLU	27	30.00	60.82	60.82	60.82	60.82	115018.00	151024.00	1.313
25.41	29	SLU	28	61.13	30.41	60.82	30.41	60.82	113666.00	150373.00	1.323
29.67	29	SLU	33	91.12	30.41	30.41	30.41	30.41	-55680.30	-76137.90	1.367
31.80	18	SLU	35	60.00	30.41	30.41	30.41	30.41	-24804.40	-76137.90	3.070

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.60	1	SLV (E)	1	34.78	30.41	30.41	30.41	30.41	-55248.80	-73122.40	1.324
1.90	1	SLV (E)	3	94.78	30.41	30.41	30.41	30.41	-71636.50	-73122.40	1.021
8.23	1	SLV (E)	9	30.00	30.41	60.82	30.41	60.82	104044.00	141655.00	1.361
8.83	9	SLV (E)	10	61.67	60.82	60.82	60.82	60.82	105486.00	144476.00	1.370
12.20	13	SLV (E)	14	91.67	30.41	30.41	30.41	30.41	-37713.40	-73122.40	1.939
16.48	1	SLV (E)	18	30.00	60.82	60.82	60.82	60.82	101460.00	144476.00	1.424
17.08	9	SLV (E)	19	62.56	30.41	60.82	30.41	60.82	98559.80	141655.00	1.437
20.48	5	SLV (E)	23	92.56	30.41	30.41	30.41	30.41	-39834.60	-73122.40	1.836
24.81	1	SLV (E)	27	30.00	60.82	60.82	60.82	60.82	109159.00	144476.00	1.324

Relazione di calcolo

25.41	9	SLV(E)	28	61.13	30.41	60.82	30.41	60.82	105215.00	141655.00	1.346
29.67	9	SLV(E)	33	91.12	30.41	30.41	30.41	30.41	-64879.40	-73122.40	1.127
31.80	9	SLV(E)	35	60.00	30.41	30.41	30.41	30.41	-53025.90	-73122.40	1.379

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.60	32	SLE R	1	34.78	30.41	30.41	-25999.50	1386.57	-336.84	28.84
0.60	26	SLE Q	1	34.78	30.41	30.41	-20401.10	1088.00	-264.31	22.63
1.90	32	SLE R	3	94.78	30.41	30.41	-52078.00	2777.36	-674.71	57.77
1.90	26	SLE Q	3	94.78	30.41	30.41	-44913.40	2395.27	-581.88	49.82
8.23	32	SLE R	9	30.00	30.41	60.82	85025.70	-939.34	2328.25	74.73
8.23	26	SLE Q	9	30.00	30.41	60.82	74542.40	-823.53	2041.18	65.51
8.83	33	SLE R	10	61.67	60.82	60.82	81164.90	-767.92	2188.61	62.14
8.83	26	SLE Q	10	61.67	60.82	60.82	72954.40	-690.24	1967.22	55.86
12.20	32	SLE R	14	91.67	30.41	30.41	-35291.70	1882.13	-457.23	39.15
12.20	26	SLE Q	14	91.67	30.41	30.41	-31885.80	1700.49	-413.10	35.37
16.48	32	SLE R	18	30.00	60.82	60.82	78997.20	-747.41	2130.16	60.48
16.48	26	SLE Q	18	30.00	60.82	60.82	70681.40	-668.73	1905.92	54.12
17.08	33	SLE R	19	62.56	30.41	60.82	74667.80	-824.91	2044.62	65.62
17.08	26	SLE Q	19	62.56	30.41	60.82	68476.40	-756.51	1875.08	60.18
20.48	32	SLE R	23	92.56	30.41	30.41	-36930.90	1969.55	-478.46	40.96
20.48	26	SLE Q	23	92.56	30.41	30.41	-33517.30	1787.50	-434.24	37.18
24.81	32	SLE R	27	30.00	60.82	60.82	85031.90	-804.50	2292.88	65.11
24.81	26	SLE Q	27	30.00	60.82	60.82	75663.60	-715.87	2040.27	57.93
25.41	33	SLE R	28	61.13	30.41	60.82	84143.40	-929.60	2304.09	73.95
25.41	26	SLE Q	28	61.13	30.41	60.82	77134.10	-852.16	2112.15	67.79
29.67	33	SLE R	33	91.12	30.41	30.41	-41891.20	2234.09	-542.73	46.47
29.67	26	SLE Q	33	91.12	30.41	30.41	-38277.70	2041.38	-495.91	42.46
31.80	21	SLE R	35	60.00	30.41	30.41	-18734.60	999.13	-242.72	20.78
31.80	26	SLE Q	35	60.00	30.41	30.41	-17846.80	951.78	-231.22	19.80

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cmq>	ϵ_{sm}	Wk <mm>
33	0.60	26	SLE Q	1	6	34.78	-20401.10	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	1088.00	0.32	0.22
39	0.60	36	SLE F	1	6	34.78	-21406.20	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	1141.61	0.33	0.23
72	1.90	26	SLE Q	3	6	94.78	-44913.40	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	2395.27	0.93	0.64
78	1.90	36	SLE F	3	6	94.78	-46097.90	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	2458.44	0.84	0.58
111	8.23	26	SLE Q	9	6	30.00	74542.40	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	2041.18	0.86	0.13
117	8.23	36	SLE F	9	6	30.00	76155.50	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	2085.36	0.81	0.13
150	8.83	26	SLE Q	10	6	61.67	72954.40	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	1967.22	0.82	0.13
156	8.83	36	SLE F	10	6	61.67	74103.00	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	1998.19	0.77	0.12
189	12.20	26	SLE Q	14	6	91.67	-31885.80	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	1700.49	0.59	0.41
195	12.20	36	SLE F	14	6	91.67	-32373.20	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	1726.49	0.50	0.35
228	16.48	26	SLE Q	18	6	30.00	70681.40	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	1905.92	0.79	0.12
234	16.48	36	SLE F	18	6	30.00	71965.10	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	1940.54	0.74	0.12
267	17.08	26	SLE Q	19	6	62.56	68476.40	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	1875.08	0.78	0.12
273	17.08	36	SLE F	19	6	62.56	69274.70	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	1896.94	0.72	0.11
306	20.48	26	SLE Q	23	6	92.56	-33517.30	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	1787.50	0.64	0.44
312	20.48	36	SLE F	23	6	92.56	-34012.10	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	1813.89	0.53	0.37
345	24.81	26	SLE Q	27	6	30.00	75663.60	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	2040.27	0.86	0.13
351	24.81	36	SLE F	27	6	30.00	77113.70	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	2079.37	0.81	0.13
384	25.41	26	SLE Q	28	6	61.13	77134.10	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	2112.15	0.89	0.14
390	25.41	36	SLE F	28	6	61.13	78053.00	24.00	87.20	0.50	22.00	92.31	60.82	1225.00	2137.31	0.84	0.13
423	29.67	26	SLE Q	33	6	91.12	-38277.70	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	2041.38	0.76	0.52
429	29.67	36	SLE F	33	6	91.12	-38770.80	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	2067.67	0.65	0.45
464	31.80	26	SLE Q	35	6	60.00	-17846.80	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	951.78	0.28	0.19
467	31.80	24	SLE F	35	6	60.00	-18017.00	24.00	186.86	0.50	22.00	406.40	30.41	1225.00	960.86	0.28	0.19

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
28 SLU	0.45	0.90	0.45	ø10/15 4 br.	20.94	1.40	47367.90	2.50	122625.00	203841.00	122625.00	2.589
28 SLU	0.90	7.85	6.95	ø10/15 4 br.	20.94	1.40	92441.70	2.50	122625.00	203841.00	122625.00	1.327
28 SLU	7.85	8.30	0.45	ø10/15 4 br.	20.94	1.40	97793.50	2.50	122625.00	203841.00	122625.00	1.254
28 SLU	8.76	9.21	0.45	ø10/15 4 br.	20.94	1.40	96712.20	2.50	122625.00	203841.00	122625.00	1.268
28 SLU	9.21	16.11	6.90	ø10/15 4 br.	20.94	1.40	92438.50	2.50	122625.00	203841.00	122625.00	1.327
28 SLU	16.11	16.55	0.45	ø10/15 4 br.	20.94	1.40	98149.10	2.50	122625.00	203841.00	122625.00	1.249
28 SLU	17.00	17.45	0.45	ø10/15 4 br.	20.94	1.40	94740.70	2.50	122625.00	203841.00	122625.00	1.294
28 SLU	17.45	24.43	6.98	ø10/15 4 br.	20.94	1.40	96640.60	2.50	122625.00	203841.00	122625.00	1.269
28 SLU	24.43	24.89	0.45	ø10/15 4 br.	20.94	1.40	102576.00	2.50	122625.00	203841.00	122625.00	1.195
28 SLU	25.34	25.79	0.45	ø10/15 4 br.	20.94	1.40	102366.00	2.50	122625.00	203841.00	122625.00	1.198
28 SLU	25.79	31.50	5.71	ø10/15 4 br.	20.94	1.40	96499.90	2.50	122625.00	203841.00	122625.00	1.271
28 SLU	31.50	31.95	0.45	ø10/15 4 br.	20.94	1.40	41846.00	2.50	122625.00	203841.00	122625.00	2.930

Travata n. 403

Relazione di calcolo

Nodi: 1 -709 -708 -707 -706 -705 -704 -703 -702 -701 -700 -8 -619 -618 -617 -616 -615 -614 -613 -612 -611 2

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
1	R	90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/presoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.50	28	SLU	1	50.00	22.90	15.27	22.90	15.27	12770.60	38391.50	3.006
1.25	18	SLU	2	28.38	22.90	15.27	22.90	15.27	-30739.70	-57173.30	1.860
10.43	18	SLU	11	72.09	30.54	19.79	30.54	19.79	27028.50	49547.50	1.833
10.93	28	SLU	12	25.00	15.27	19.79	15.27	19.79	35609.80	49537.10	1.391
18.61	28	SLU	20	0.00	22.90	15.27	22.90	15.27	-39828.10	-57173.30	1.435
20.09	28	SLU	21	49.10	22.90	15.27	22.90	15.27	-25674.40	-57173.30	2.227

Stato limite elastico - Verifiche a flessione/presoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M' ydy <daNm>	Sic.
0.50	13	SLV (E)	1	50.00	22.90	15.27	22.90	15.27	27458.70	37096.20	1.351
1.25	5	SLV (E)	2	28.38	22.90	15.27	22.90	15.27	-42524.30	-54505.60	1.282
10.43	5	SLV (E)	11	72.09	30.54	19.79	30.54	19.79	42165.40	47925.70	1.137
10.93	13	SLV (E)	12	25.00	15.27	19.79	15.27	19.79	42018.90	47390.30	1.128
18.61	13	SLV (E)	20	0.00	22.90	15.27	22.90	15.27	-43037.90	-54505.60	1.266
20.09	5	SLV (E)	21	49.10	22.90	15.27	22.90	15.27	27173.60	37096.20	1.365

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cmq>	σ _f inf <daN/cmq>	σ _c <daN/cmq>
0.50	21	SLE R	1	50.00	22.90	15.27	-11155.50	796.84	-226.17	18.87
0.50	32	SLE R	1	50.00	22.90	15.27	8735.43	-179.25	919.44	16.02
0.50	26	SLE Q	1	50.00	22.90	15.27	-10890.90	777.94	-220.80	18.42
1.25	21	SLE R	2	28.38	22.90	15.27	-23021.40	1644.43	-466.74	38.93
1.25	26	SLE Q	2	28.38	22.90	15.27	-22151.00	1582.26	-449.09	37.46
10.43	21	SLE R	11	72.09	30.54	19.79	20753.00	-375.53	1690.54	32.69
10.43	26	SLE Q	11	72.09	30.54	19.79	20496.70	-370.89	1669.66	32.28
10.93	32	SLE R	12	25.00	15.27	19.79	26458.00	-555.17	2175.60	47.13
10.93	26	SLE Q	12	25.00	15.27	19.79	20376.20	-427.55	1675.50	36.29
18.61	32	SLE R	20	0.00	22.90	15.27	-29124.70	2080.40	-590.48	49.26
18.61	26	SLE Q	20	0.00	22.90	15.27	-22480.40	1605.79	-455.77	38.02
20.09	32	SLE R	21	49.10	22.90	15.27	-18331.80	1309.45	-371.66	31.00
20.09	26	SLE Q	21	49.10	22.90	15.27	-11370.30	812.19	-230.52	19.23

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cmq>	ε _{sm}	Wk <mm>
49	0.50	26	SLE Q	1	1	50.00	-10890.90	26.00	101.50	0.50	18.00	113.89	22.90	787.50	777.94	0.23	0.04
55	0.50	24	SLE F	1	1	50.00	-10935.10	26.00	101.50	0.50	18.00	113.89	22.90	787.50	781.10	0.23	0.04
101	1.25	26	SLE Q	2	1	28.38	-22151.00	26.00	101.50	0.50	18.00	113.89	22.90	787.50	1582.26	0.56	0.11
104	1.25	24	SLE F	2	1	28.38	-22316.50	26.00	101.50	0.50	18.00	113.89	22.90	787.50	1594.08	0.47	0.09
142	10.43	26	SLE Q	11	1	72.09	20496.70	25.57	135.33	0.50	19.09	127.10	19.79	787.50	1669.66	0.58	0.13
145	10.43	24	SLE F	11	1	72.09	20545.20	25.57	135.33	0.50	19.09	127.10	19.79	787.50	1673.61	0.49	0.11
183	10.93	26	SLE Q	12	1	25.00	20376.20	25.57	135.33	0.50	19.09	127.10	19.79	787.50	1675.50	0.58	0.13
189	10.93	36	SLE F	12	1	25.00	21560.10	25.57	135.33	0.50	19.09	127.10	19.79	787.50	1772.86	0.52	0.11
226	18.61	26	SLE Q	20	1	0.00	-22480.40	26.00	101.50	0.50	18.00	113.89	22.90	787.50	1605.79	0.58	0.11
232	18.61	36	SLE F	20	1	0.00	-23695.10	26.00	101.50	0.50	18.00	113.89	22.90	787.50	1692.56	0.52	0.10
275	20.09	26	SLE Q	21	1	49.10	-11370.30	26.00	101.50	0.50	18.00	113.89	22.90	787.50	812.19	0.24	0.05
281	20.09	36	SLE F	21	1	49.10	-12707.90	26.00	101.50	0.50	18.00	113.89	22.90	787.50	907.73	0.26	0.05

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
28 SLU	0.45	0.90	0.45	ø10/20 4 br.	15.71	0.90	39680.80	2.50	91968.40	131041.00	91968.40	2.318
28 SLU	0.90	10.01	9.10	ø10/20 4 br.	15.71	0.90	36635.50	2.50	91968.40	131041.00	91968.40	2.510
5 SLV	10.01	10.46	0.45	ø10/20 4 br.	15.71	0.90	25592.40	2.50	91968.40	131041.00	91968.40	3.594
28 SLU	10.90	11.36	0.45	ø10/20 4 br.	15.71	0.90	26454.90	2.50	91968.40	131041.00	91968.40	3.476
1 SLV	11.36	19.69	8.33	ø10/20 4 br.	15.71	0.90	34953.10	2.50	91968.40	131041.00	91968.40	2.631
1 SLV	19.69	20.14	0.45	ø10/20 4 br.	15.71	0.90	37835.20	2.50	91968.40	131041.00	91968.40	2.431

Travata n. 404

Nodi: -1 -514 -513 -512 -511 -510 -509 -508 -507 -506 -505 -11 -424 -423 -422 -421 -420 -419 -418 -417 -416 -2

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
1	R	90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cmq>	Afe I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.50	18	SLU	1	50.00	22.90	15.27	22.90	15.27	-23786.40	-57173.30	2.404
18.61	28	SLU	20	0.00	22.90	15.27	22.90	15.27	-47194.50	-57173.30	1.211
20.09	28	SLU	21	49.07	22.90	15.27	22.90	15.27	-32853.70	-57173.30	1.740

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cmq>	Afe I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.50	5	SLV(E)	1	50.00	22.90	15.27	22.90	15.27	-37147.20	-54505.60	1.467
18.61	13	SLV(E)	20	0.00	22.90	15.27	22.90	15.27	-42622.80	-54505.60	1.279
20.09	13	SLV(E)	21	49.07	22.90	15.27	22.90	15.27	-37212.00	-54505.60	1.465

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	Afe S <cmq>	Afe I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.50	21	SLE R	1	50.00	22.90	15.27	-17709.20	1264.98	-359.04	29.95
0.50	26	SLE Q	1	50.00	22.90	15.27	-17245.40	1231.85	-349.63	29.17
18.61	32	SLE R	20	0.00	22.90	15.27	-34665.40	2476.18	-702.81	58.63
18.61	26	SLE Q	20	0.00	22.90	15.27	-28958.90	2068.56	-587.11	48.98
20.09	32	SLE R	21	49.07	22.90	15.27	-23761.30	1697.29	-481.74	40.19
20.09	26	SLE Q	21	49.07	22.90	15.27	-17306.20	1236.20	-350.87	29.27

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cmq>	ϵ_{sm}	Wk <mm>
36	0.50	26	SLE Q	1	1	50.00	-17245.40	26.00	101.50	0.50	18.00	113.89	22.90	787.50	1231.85	0.39	0.08
39	0.50	24	SLE F	1	1	50.00	-17328.70	26.00	101.50	0.50	18.00	113.89	22.90	787.50	1237.80	0.36	0.07
75	18.61	26	SLE Q	20	1	0.00	-28958.90	26.00	101.50	0.50	18.00	113.89	22.90	787.50	2068.56	0.80	0.16
81	18.61	36	SLE F	20	1	0.00	-29944.70	26.00	101.50	0.50	18.00	113.89	22.90	787.50	2138.97	0.73	0.14
118	20.09	26	SLE Q	21	1	49.07	-17306.20	26.00	101.50	0.50	18.00	113.89	22.90	787.50	1236.20	0.40	0.08
124	20.09	36	SLE F	21	1	49.07	-18520.90	26.00	101.50	0.50	18.00	113.89	22.90	787.50	1322.96	0.39	0.07

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	Afe St. <cmq/m>	bw <m>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
28 SLU	0.45	0.90	0.45	ø10/20 4 br.	15.71	0.90	32501.00	2.50	91968.40	131041.00	91968.40	2.830
13 SLV	0.90	19.69	18.79	ø10/20 4 br.	15.71	0.90	29414.20	2.50	91968.40	131041.00	91968.40	3.127
5 SLV	19.69	20.14	0.45	ø10/20 4 br.	15.71	0.90	31532.50	2.50	91968.40	131041.00	91968.40	2.917

Travata n. 405

Nodi: -3 -319 -318 -317 -316 -315 -314 -313 -312 -311 -310 -12 -229 -228 -227 -226 -225 -224 -223 -222 -221 -4

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
1	R	90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cmq>	Afe I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.50	18	SLU	1	50.00	22.90	15.27	22.90	15.27	-26670.70	-57173.30	2.144
18.61	28	SLU	20	0.00	22.90	15.27	22.90	15.27	-49748.10	-57173.30	1.149
20.09	28	SLU	21	49.05	22.90	15.27	22.90	15.27	-35562.00	-57173.30	1.608

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	Afe S <cmq>	Afe I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.50	13	SLV(E)	1	50.00	22.90	15.27	22.90	15.27	-36982.20	-54505.60	1.474
18.61	5	SLV(E)	20	0.00	22.90	15.27	22.90	15.27	-43418.80	-54505.60	1.255
20.09	5	SLV(E)	21	49.05	22.90	15.27	22.90	15.27	-37113.30	-54505.60	1.469

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	Afe S <cmq>	Afe I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.50	21	SLE R	1	50.00	22.90	15.27	-19846.40	1417.64	-402.37	33.57
0.50	26	SLE Q	1	50.00	22.90	15.27	-19295.50	1378.29	-391.20	32.63
18.61	32	SLE R	20	0.00	22.90	15.27	-36328.40	2594.97	-736.52	61.44
18.61	26	SLE Q	20	0.00	22.90	15.27	-30931.60	2209.47	-627.11	52.31
20.09	32	SLE R	21	49.05	22.90	15.27	-25783.90	1841.76	-522.74	43.61
20.09	26	SLE Q	21	49.05	22.90	15.27	-19427.20	1387.70	-393.87	32.86

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cmq>	ϵ_{sm}	Wk <mm>
------	-----------	----	-----	----	------	-----------	--------------	-----------	-----------	----------------	-------------	-----------------------	-------------------------	-----------------------------	-------------------------	-----------------	------------

Relazione di calcolo

35	0.50	26	SLE Q	1	1	50.00	-19295.50	26.00	101.50	0.50	18.00	113.89	22.90	787.50	1378.29	0.47	0.09
38	0.50	24	SLE F	1	1	50.00	-19395.60	26.00	101.50	0.50	18.00	113.89	22.90	787.50	1385.44	0.40	0.08
74	18.61	26	SLE Q	20	1	0.00	-30931.60	26.00	101.50	0.50	18.00	113.89	22.90	787.50	2209.47	0.87	0.17
80	18.61	36	SLE F	20	1	0.00	-31859.20	26.00	101.50	0.50	18.00	113.89	22.90	787.50	2275.72	0.80	0.15
117	20.09	26	SLE Q	21	1	49.05	-19427.20	26.00	101.50	0.50	18.00	113.89	22.90	787.50	1387.70	0.47	0.09
123	20.09	36	SLE F	21	1	49.05	-20612.00	26.00	101.50	0.50	18.00	113.89	22.90	787.50	1472.33	0.43	0.08

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
28 SLU	0.45	0.90	0.45	ø10/20 4 br.	15.71	0.90	31397.50	2.50	91968.40	131041.00	91968.40	2.929
28 SLU	0.90	19.69	18.79	ø10/20 4 br.	15.71	0.90	27770.00	2.50	91968.40	131041.00	91968.40	3.312
13 SLV	19.69	20.14	0.45	ø10/20 4 br.	15.71	0.90	28950.50	2.50	91968.40	131041.00	91968.40	3.177

Travata n. 406

Nodi: -5 -134 -133 -132 -131 -130 -129 -128 -127 -126 -125 -9 -44 -43 -42 -41 -40 -39 -38 -37 -36 -6

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
1R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.50	18	SLU	1	50.00	22.90	15.27	22.90	15.27	-23966.70	-57173.30	2.386
18.61	28	SLU	20	0.00	22.90	15.27	22.90	15.27	-48945.50	-57173.30	1.168
20.09	28	SLU	21	49.02	22.90	15.27	22.90	15.27	-32831.50	-57173.30	1.741

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.50	13	SLV(E)	1	50.00	22.90	15.27	22.90	15.27	-37357.00	-54505.60	1.459
18.61	5	SLV(E)	20	0.00	22.90	15.27	22.90	15.27	-44649.30	-54505.60	1.221
20.09	5	SLV(E)	21	49.02	22.90	15.27	22.90	15.27	-37369.30	-54505.60	1.459

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ _f sup <daN/cm²>	σ _f inf <daN/cm²>	σ _c <daN/cm²>
0.50	21	SLE R	1	50.00	22.90	15.27	-17833.10	1273.83	-361.55	30.16
0.50	26	SLE Q	1	50.00	22.90	15.27	-17361.30	1240.13	-351.98	29.36
18.61	32	SLE R	20	0.00	22.90	15.27	-35713.80	2551.06	-724.06	60.40
18.61	26	SLE Q	20	0.00	22.90	15.27	-30162.60	2154.54	-611.52	51.01
20.09	32	SLE R	21	49.02	22.90	15.27	-23741.20	1695.85	-481.33	40.15
20.09	26	SLE Q	21	49.02	22.90	15.27	-17409.20	1243.55	-352.95	29.44

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ _{eq}	Δ _{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ _s <daN/cm²>	ε _{sm}	Wk <mm>
38	0.50	26	SLE Q	1	1	50.00	-17361.30	26.00	101.50	0.50	18.00	113.89	22.90	787.50	1240.13	0.40	0.08
41	0.50	24	SLE F	1	1	50.00	-17446.80	26.00	101.50	0.50	18.00	113.89	22.90	787.50	1246.24	0.36	0.07
77	18.61	26	SLE Q	20	1	0.00	-30162.60	26.00	101.50	0.50	18.00	113.89	22.90	787.50	2154.54	0.84	0.16
83	18.61	36	SLE F	20	1	0.00	-31125.60	26.00	101.50	0.50	18.00	113.89	22.90	787.50	2223.33	0.77	0.15
121	20.09	26	SLE Q	21	1	49.02	-17409.20	26.00	101.50	0.50	18.00	113.89	22.90	787.50	1243.55	0.40	0.08
127	20.09	36	SLE F	21	1	49.02	-18600.80	26.00	101.50	0.50	18.00	113.89	22.90	787.50	1328.67	0.39	0.07

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctgθ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
28 SLU	0.45	0.90	0.45	ø10/20 4 br.	15.71	0.90	36093.30	2.50	91968.40	131041.00	91968.40	2.548
28 SLU	0.90	19.69	18.79	ø10/20 4 br.	15.71	0.90	32326.10	2.50	91968.40	131041.00	91968.40	2.845
13 SLV	19.69	20.14	0.45	ø10/20 4 br.	15.71	0.90	34617.90	2.50	91968.40	131041.00	91968.40	2.657

Travata n. 407

Nodi: 3 -115 -116 -117 -118 -119 -120 -121 -122 -123 -124 -7 -20 -21 -22 -23 -24 -25 -26 -27 -28 4

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cm²>	Fctk <daN/cm²>	Fcd <daN/cm²>	Fctd <daN/cm²>	Tp	Fyk <daN/cm²>	Fyd <daN/cm²>
1R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.50	18	SLU	1	50.00	22.90	15.27	22.90	15.27	-18440.80	-57173.30	3.100
1.21	18	SLU	2	24.05	22.90	15.27	22.90	15.27	-31165.40	-57173.30	1.835
10.44	18	SLU	11	72.18	15.27	30.54	15.27	30.54	28190.50	75789.30	2.688

Relazione di calcolo

10.94	28	SLV	12	25.00	30.54	30.54	30.54	30.54	33576.80	76002.80	2.264
18.61	28	SLV	20	0.00	22.90	15.27	22.90	15.27	-38988.70	-57173.30	1.466
20.09	28	SLV	21	49.00	22.90	15.27	22.90	15.27	-28740.90	-57173.30	1.989

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.50	13	SLV(E)	1	50.00	22.90	15.27	22.90	15.27	-37183.90	-54505.60	1.466
1.21	13	SLV(E)	2	24.05	22.90	15.27	22.90	15.27	-43170.10	-54505.60	1.263
10.44	13	SLV(E)	11	72.18	15.27	30.54	15.27	30.54	43130.80	71688.80	1.662
10.94	5	SLV(E)	12	25.00	30.54	30.54	30.54	30.54	43062.20	72803.80	1.691
18.61	5	SLV(E)	20	0.00	22.90	15.27	22.90	15.27	-43639.60	-54505.60	1.249
20.09	5	SLV(E)	21	49.00	22.90	15.27	22.90	15.27	-37466.20	-54505.60	1.455

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.50	21	SLE R	1	50.00	22.90	15.27	-13618.80	972.80	-276.11	23.03
0.50	26	SLE Q	1	50.00	22.90	15.27	-13260.90	947.23	-268.85	22.43
1.21	21	SLE R	2	24.05	22.90	15.27	-23227.50	1659.16	-470.91	39.28
1.21	26	SLE Q	2	24.05	22.90	15.27	-22408.10	1600.62	-454.30	37.90
10.44	21	SLE R	11	72.18	15.27	30.54	21504.90	-406.91	1165.20	32.95
10.44	26	SLE Q	11	72.18	15.27	30.54	21273.20	-402.53	1152.65	32.60
10.94	32	SLE R	12	25.00	30.54	30.54	25089.10	-415.58	1342.86	34.22
10.94	26	SLE Q	12	25.00	30.54	30.54	21217.90	-351.46	1135.66	28.94
18.61	32	SLE R	20	0.00	22.90	15.27	-28479.70	2034.33	-577.40	48.17
18.61	26	SLE Q	20	0.00	22.90	15.27	-22678.10	1619.91	-459.78	38.35
20.09	32	SLE R	21	49.00	22.90	15.27	-20537.40	1467.00	-416.38	34.73
20.09	26	SLE Q	21	49.00	22.90	15.27	-13658.90	975.66	-276.92	23.10

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cmq>	ϵ_{sm}	Wk <mm>
41	0.50	26	SLE Q	1	1	50.00	-13260.90	26.00	101.50	0.50	18.00	113.89	22.90	787.50	947.23	0.28	0.05
44	0.50	24	SLE F	1	1	50.00	-13324.30	26.00	101.50	0.50	18.00	113.89	22.90	787.50	951.77	0.28	0.05
84	1.21	26	SLE Q	2	1	24.05	-22408.10	26.00	101.50	0.50	18.00	113.89	22.90	787.50	1600.62	0.57	0.11
87	1.21	24	SLE F	2	1	24.05	-22563.90	26.00	101.50	0.50	18.00	113.89	22.90	787.50	1611.75	0.48	0.09
124	10.44	26	SLE Q	11	1	72.18	21273.20	26.00	73.82	0.50	18.00	98.42	30.54	787.50	1152.65	0.40	0.07
127	10.44	24	SLE F	11	1	72.18	21316.90	26.00	73.82	0.50	18.00	98.42	30.54	787.50	1155.01	0.34	0.06
165	10.94	26	SLE Q	12	1	25.00	21217.90	26.00	73.82	0.50	18.00	98.42	30.54	787.50	1135.66	0.39	0.07
171	10.94	36	SLE F	12	1	25.00	21962.00	26.00	73.82	0.50	18.00	98.42	30.54	787.50	1175.48	0.34	0.06
206	18.61	26	SLE Q	20	1	0.00	-22678.10	26.00	101.50	0.50	18.00	113.89	22.90	787.50	1619.91	0.58	0.11
212	18.61	36	SLE F	20	1	0.00	-23731.30	26.00	101.50	0.50	18.00	113.89	22.90	787.50	1695.15	0.52	0.10
247	20.09	26	SLE Q	21	1	49.00	-13658.90	26.00	101.50	0.50	18.00	113.89	22.90	787.50	975.66	0.28	0.06
253	20.09	36	SLE F	21	1	49.00	-14973.00	26.00	101.50	0.50	18.00	113.89	22.90	787.50	1069.53	0.31	0.06

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
1 SLV	0.45	0.90	0.45	ø10/20 4 br.	15.71	0.90	34968.50	2.50	91968.40	131041.00	91968.40	2.630
1 SLV	0.90	10.02	9.11	ø10/20 4 br.	15.71	0.90	31600.40	2.50	91968.40	131041.00	91968.40	2.910
13 SLV	10.02	10.46	0.45	ø10/20 4 br.	15.71	0.90	26488.00	2.50	91968.40	131041.00	91968.40	3.472
5 SLV	10.91	11.37	0.45	ø10/20 4 br.	15.71	0.90	26552.20	2.50	91968.40	131041.00	91968.40	3.464
9 SLV	11.37	19.69	8.32	ø10/20 4 br.	15.71	0.90	30806.80	2.50	91968.40	131041.00	91968.40	2.985
9 SLV	19.69	20.14	0.45	ø10/20 4 br.	15.71	0.90	34108.70	2.50	91968.40	131041.00	91968.40	2.696

Travata n. 408

Nodi: -8 -595 -596 -597 -598 -599 -600 -601 -602 -11 -400 -401 -402 -403 -404 -405 -406 -407 -12 -205 -206 -207 -208 -209 -210 -211 -212 -9 -13 -14 -15 -16 -17 -18 -19 -7

Caratteristiche delle sezioni e dei materiali utilizzati

Sez.	Tipo	B <cm>	H <cm>	Cf sup <cm>	Cf inf <cm>	Cls	Fck <daN/cmq>	Fctk <daN/cmq>	Fcd <daN/cmq>	Fctd <daN/cmq>	Tp	Fyk <daN/cmq>	Fyd <daN/cmq>
1R		90.00	70.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	MRdy <daNm>	Sic.
0.60	28	SLV	1	34.77	15.27	15.27	15.27	15.27	-17483.40	-38395.00	2.196
31.80	18	SLV	35	60.01	15.27	15.27	15.27	15.27	-4270.86	-38395.00	8.990

Stato limite elastico - Verifiche a flessione/pressoflessione

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	AfEP S <cmq>	AfEP I <cmq>	My <daNm>	M'ydy <daNm>	Sic.
0.60	1	SLV(E)	1	34.77	15.27	15.27	15.27	15.27	-27053.00	-36907.60	1.364
31.80	9	SLV(E)	35	60.01	15.27	15.27	15.27	15.27	-22618.70	-36907.60	1.632

Stato limite d'esercizio - Verifiche tensionali

Xg <m>	CC	TCC	El	X <cm>	AfE S <cmq>	AfE I <cmq>	My <daNm>	σ_f sup <daN/cmq>	σ_f inf <daN/cmq>	σ_c <daN/cmq>
0.60	32	SLE R	1	34.77	15.27	15.27	-12346.10	1305.11	-274.85	24.18
0.60	26	SLE Q	1	34.77	15.27	15.27	-8069.18	852.99	-179.64	15.80
31.80	21	SLE R	35	60.01	15.27	15.27	-3388.96	358.25	-75.45	6.64
31.80	26	SLE Q	35	60.01	15.27	15.27	-3407.43	360.20	-75.86	6.67

Stato limite d'esercizio - Verifiche a fessurazione

Caso	Xg <m>	CC	TCC	El	Sez.	X <cm>	My <daNm>	c <mm>	s <mm>	K ₂	Φ_{eq}	Δ_{sm} <mm>	A _s <cmq>	A _{c eff} <cmq>	σ_s <daN/cmq>	ϵ_{sm}	Wk <mm>
35	0.60	26	SLE Q	1	1	34.77	-8069.18	26.00	162.40	0.50	18.00	144.84	15.27	787.50	852.99	0.25	0.06
41	0.60	36	SLE F	1	1	34.77	-8895.76	26.00	162.40	0.50	18.00	144.84	15.27	787.50	940.37	0.27	0.07
75	31.80	26	SLE Q	35	1	60.01	-3407.43	26.00	162.40	0.50	18.00	144.84	15.27	787.50	360.20	0.10	0.03
78	31.80	24	SLE F	35	1	60.01	-3395.85	26.00	162.40	0.50	18.00	144.84	15.27	787.50	358.98	0.10	0.03

Stato limite ultimo - Verifiche a taglio

CC	X0 <m>	X1 <m>	Lung. <m>	Staff.	AfE St. <cmq/m>	bw <m>	Vsdu <daN>	ctg θ	VRsd <daN>	VRcd <daN>	Vrdu <daN>	Sic.
9 SLV	0.45	0.90	0.45	ø10/20 4 br.	15.71	0.90	22711.50	2.50	91968.40	131041.00	91968.40	4.049
9 SLV	0.90	31.50	30.60	ø10/20 4 br.	15.71	0.90	22031.90	2.50	91968.40	131041.00	91968.40	4.174
1 SLV	31.50	31.95	0.45	ø10/20 4 br.	15.71	0.90	21212.00	2.50	91968.40	131041.00	91968.40	4.336

Verifiche e armature solette/platee

Simbologia

Δ_{sm} = Distanza media tra le fessure
 Φ_{eq} = Diametro equivalente delle barre
 ϵ_{sm} = Deformazione unitaria media dell'armatura (*1000)
 σ_c = Tensione nel calcestruzzo
 σ_f = Tensione nel ferro
 σ_s = Tensione nell'acciaio nella sezione fessurata
 $A_{c\ eff}$ = Area di calcestruzzo efficace
 A_s = Area complessiva dei ferri nell'area di calcestruzzo efficace
 $AfE\ I$ = Area di ferro effettiva totale presente nel punto di verifica, inferiore
 $AfE\ S$ = Area di ferro effettiva totale presente nel punto di verifica, superiore
 $AfE\ St.$ = Area di ferro effettiva della staffatura
 CC = Numero della combinazione delle condizioni di carico elementari
 $Cf\ inf$ = Copriferro inferiore
 $Cf\ sup$ = Copriferro superiore
 Cl_s = Tipo di calcestruzzo
 DV = Direzione di verifica
 XX = Verifica per momento Mxx
 YY = Verifica per momento Myy
 Fcd = Resistenza di calcolo a compressione del calcestruzzo
 Fck = Resistenza caratteristica cilindrica a compressione del calcestruzzo
 $Fctd$ = Resistenza di calcolo a trazione del calcestruzzo
 $Fctk$ = Resistenza caratteristica a trazione del calcestruzzo
 Fyd = Resistenza di calcolo dell'acciaio
 Fyk = Tensione caratteristica di snervamento dell'acciaio
 K_2 = Coefficiente per distribuzione deformazioni
 M'_{ydy} = Momento resistente massimo in campo sostanzialmente elastico intorno all'asse Y
 MR_{dy} = Momento resistente allo stato limite ultimo intorno all'asse Y
 Mom = Momento flettente
 My = Momento flettente intorno all'asse Y
 $Nodo$ = Numero del nodo
 $Sic.$ = Sicurezza
 $Spess.$ = Spessore
 TCC = Tipo di combinazione di carico
 SLU = Stato limite ultimo
 SLE R = Stato limite d'esercizio, combinazione rara
 SLE F = Stato limite d'esercizio, combinazione frequente
 SLE Q = Stato limite d'esercizio, combinazione quasi permanente
 SLD = Stato limite di danno
 SLV = Stato limite di salvaguardia della vita
 SLU I = Stato limite di resistenza al fuoco
 SND = Stato limite di salvaguardia della vita (non dissipativo)
 Tp = Tipo di acciaio
 $VRcd$ = Taglio ultimo lato calcestruzzo
 $VRsd$ = Taglio ultimo lato armatura
 $Vrdu$ = Taglio ultimo resistente
 $Vsdu$ = Taglio agente nella direzione del momento ultimo
 Wk = Ampiezza caratteristica delle fessure
 X = Coordinata X del nodo
 Y = Coordinata Y del nodo
 c = Ricoprimento dell'armatura

Relazione di calcolo

ctgθ = Cotangente dell'angolo di inclinazione dei puntoni di calcestruzzo
s = Distanza massima tra le barre

Armatura platea a quota 0.00

Caratteristiche delle sezioni e dei materiali utilizzati

Spess.	Cf sup	Cf inf	Cls	Fck	Fctk	Fcd	Fctd	Tp	Fyk	Fyd
<cm>	<cm>	<cm>		<daN/cm²>	<daN/cm²>	<daN/cm²>	<daN/cm²>		<daN/cm²>	<daN/cm²>
35.00	3.50	3.50	C25/30	249.00	17.91	141.10	11.94	B450C	4500.00	3913.04

Stato limite ultimo - Verifiche a flessione/pressoflessione

Nodo	X	Y	DV	CC	TCC	Afe S	Afe I	My	MRdy	Sic.
	<m>	<m>				<cmq>	<cmq>	<daNm>	<daNm>	
-133	25.11	1.94	XX	28	SLU	7.70	7.70	3370.34	9220.59	2.736
-719	1.90	1.94	XX	28	SLU	7.70	7.70	-4827.75	-9220.59	1.910
-7	32.40	10.69	YY	29	SLU	7.70	7.70	1998.84	9220.59	4.613
-292	23.26	18.61	YY	28	SLU	7.70	7.70	-6380.75	-9220.59	1.445

Stato limite elastico - Verifiche a flessione/pressoflessione

Nodo	X	Y	DV	CC	TCC	Afe S	Afe I	My	M'ydy	Sic.
	<m>	<m>				<cmq>	<cmq>	<daNm>	<daNm>	
-133	25.11	1.94	XX	1	SLV (E)	7.70	7.70	3103.20	8701.32	2.804
-719	1.90	1.94	XX	9	SLV (E)	7.70	7.70	-5320.83	-8701.32	1.635
-7	32.40	10.69	YY	5	SLV (E)	7.70	7.70	2970.07	8701.32	2.930
-292	23.26	18.61	YY	5	SLV (E)	7.70	7.70	-5619.21	-8701.32	1.548

Stato limite ultimo - Verifiche a taglio

Nodo	X	Y	DV	CC	TCC	Afe S	Afe I	Afe St.	Vsdu	ctgθ	VRcd	VRsd	Vrdu	Sic.
	<m>	<m>				<cmq>	<cmq>	<cmq/m>	<daN>		<daN>	<daN>	<daN>	
-7	32.40	10.69	XX	9	SLV (E)	7.70	7.70		7465.53				13250.60	1.775
-7	32.40	10.69	YY	13	SLV (E)	7.70	7.70		2920.46				13250.60	4.537

Stato limite d'esercizio - Verifiche tensionali

Nodo	X	Y	DV	CC	TCC	Afe S	Afe I	Mom	σ _c	σ _f
	<m>	<m>				<cmq>	<cmq>	<daNm>	<daN/cm²>	<daN/cm²>
-677	1.90	18.61	XX	32	SLE R	7.70	7.70	-3657.84	31.05	1638.22
-133	25.11	1.94	XX	32	SLE R	7.70	7.70	2479.21	21.04	1110.35
-719	1.90	1.94	XX	26	SLE Q	7.70	7.70	-3267.26	27.73	1463.29
-133	25.11	1.94	XX	26	SLE Q	7.70	7.70	2126.14	18.05	952.22
-7	32.40	10.69	YY	33	SLE R	7.70	7.70	1526.74	12.96	683.77
-7	32.40	10.69	YY	26	SLE Q	7.70	7.70	1508.87	12.81	675.77
-487	14.95	18.61	YY	32	SLE R	7.70	7.70	-4668.05	39.62	2090.65
-333	22.33	1.94	YY	26	SLE Q	7.70	7.70	-4099.30	34.79	1835.93

Stato limite d'esercizio - Verifiche a fessurazione

Nodo	X	Y	DV	CC	TCC	c	s	K ₂	Φ _{eq}	Δ _{sm}	A _s	A _{c eff}	σ _s	ε _{sm}	W _k
	<m>	<m>				<mm>	<mm>			<mm>	<cmq>	<cmq>	<daN/cm²>		<mm>
-719	1.90	1.94	XX	26	SLE Q	28.00	200.00	0.50	14.00	210.21	9.24	875.00	1463.29	0.43	0.15
-719	1.90	1.94	XX	36	SLE F	28.00	200.00	0.50	14.00	210.21	9.24	875.00	1482.12	0.43	0.15
-133	25.11	1.94	XX	26	SLE Q	28.00	200.00	0.50	14.00	210.21	9.24	875.00	952.22	0.28	0.10
-133	25.11	1.94	XX	36	SLE F	28.00	200.00	0.50	14.00	210.21	9.24	875.00	977.80	0.28	0.10
-7	32.40	10.69	YY	26	SLE Q	28.00	200.00	0.50	14.00	210.21	9.24	875.00	675.77	0.20	0.07
-7	32.40	10.69	YY	24	SLE F	28.00	200.00	0.50	14.00	210.21	9.24	875.00	676.01	0.20	0.07
-333	22.33	1.94	YY	26	SLE Q	28.00	200.00	0.50	14.00	210.21	9.24	875.00	1835.93	0.53	0.19
-287	18.63	18.61	YY	36	SLE F	28.00	200.00	0.50	14.00	210.21	9.24	875.00	1868.92	0.54	0.19

Le verifiche di fondazione sono state effettuate utilizzando l'approccio 2.

Coefficienti parziali per le azioni, per verifiche in condizioni statiche:

Permanenti strutturali, sicurezza a favore γ_A = 1.00;
 Permanenti strutturali, sicurezza a sfavore γ_A = 1.30;
 Permanenti non strutturali, sicurezza a favore γ_A = 0.00;
 Permanenti non strutturali, sicurezza a sfavore γ_A = 1.50;
 Variabili, sicurezza a favore γ_A = 0.00;
 Variabili, sicurezza a sfavore γ_A = 1.50.

I coefficienti parziali per le azioni sono posti pari all'unità per le verifiche in condizioni sismiche.

Tali coefficienti sono comunque desumibili dalla tabella delle combinazioni delle CCE (Parametri di calcolo).

Coefficienti parziali per i parametri geotecnici:

Tangente dell'angolo di attrito γ_M = 1.00;
 Coesione efficace γ_M = 1.00;
 Coesione non drenata γ_M = 1.00;

Coefficienti parziali per la resistenza delle fondazioni superficiali:

Capacità portante γ_R = 2.30;

Scorrimento $\gamma_R = 1.10;$

Fondazioni superficiali

Simbologia

- β =Inclinazione del piano di campagna
- γ_r =Peso specifico rappresentativo del terreno di fondazione
- η =Inclinazione del piano di posa della fondazione
- φ'_r =Angolo di attrito rappresentativo del terreno di fondazione
- $\sigma_{v0,f}$ =Pressione verticale alla profondità del piano di posa della fondazione
- B =Base della fondazione
- B' =Base della fondazione reagente
- CC =Numero della combinazione delle condizioni di carico elementari
- D =Profondità del piano di posa della fondazione
- L =Lunghezza della fondazione (L>B)
- L' =Lunghezza della fondazione reagente
- Mx =Momento intorno all'asse X
- My =Momento intorno all'asse Y
- N =Sforzo normale
- N_c =Coefficiente di capacità portante relativo alla coesione del terreno di fondazione
- N_g =Coefficiente di capacità portante relativo al peso del terreno di fondazione
- N_q =Coefficiente di capacità portante relativo al sovraccarico laterale
- R_d =Resistenza di progetto (Carico limite)
- Sic. =Sicurezza
- c'_r =Coesione efficace rappresentativa del terreno di fondazione
- q_{lim} =Pressione limite
- s_c =Fattore di forma relativo alla coesione
- s_g =Fattore di forma relativo al peso del terreno

Verifiche capacità portante

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Platea n. 402

B=20.59 <m> L=32.40 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =842.85 <daN/mc>
 $\sigma_{v0,f}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

φ'_r =26.00 <grad> c'_r=999.98 <daN/mq>
N_q=14.21 N_c=27.09 N_g=9.73 s_c=1.30 s_g=0.80

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	2403890.00	16543.10	515061.00	20.58	31.97	102700.00	29374500.00	12.22
18	2426130.00	16634.50	511708.00	20.58	31.98	102700.00	29380700.00	12.11
19	2403890.00	16543.10	515061.00	20.58	31.97	102700.00	29374500.00	12.22
27	2426210.00	-28725.30	512924.00	20.57	31.98	102667.00	29356300.00	12.10
28	2441080.00	-58904.20	511500.00	20.54	31.98	102587.00	29301600.00	12.00
29	2448440.00	-28633.80	509571.00	20.57	31.98	102668.00	29363000.00	11.99
30	2426210.00	-28725.30	512924.00	20.57	31.98	102667.00	29356300.00	12.10

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 401

B=1.40 <m> L=32.40 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,f}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

φ'_r =26.00 <grad> c'_r=1000.00 <daN/mq>
N_q=14.21 N_c=27.09 N_g=9.73 s_c=1.00 s_g=1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	596296.00	-35134.30	-106367.00	1.28	32.04	37063.60	662060.00	1.11
18	609117.00	-36037.00	-106819.00	1.28	32.05	37059.80	661867.00	1.09
19	596296.00	-35134.30	-106367.00	1.28	32.04	37063.60	662060.00	1.11
27	595312.00	-33675.20	-95671.10	1.29	32.08	37100.20	665881.00	1.12
28	594655.00	-32702.50	-88540.80	1.29	32.10	37124.70	668442.00	1.12
29	608133.00	-34578.00	-96123.80	1.29	32.08	37095.60	665607.00	1.09
30	595312.00	-33675.20	-95671.10	1.29	32.08	37100.20	665881.00	1.12

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 402

B=1.40 <m> L=32.40 <m> D=0.00 <m> $\beta=0.00$ <grad> $\eta=0.00$ <grad> $\gamma_r=1600.00$ <daN/mc>
 $\sigma_{v0,r}=0.00$ <daN/mq>

Verifiche in condizioni drenate

$\phi'_r=26.00$ <grad> $c'_r=1000.00$ <daN/mq>
 $N_q=14.21$ $N_c=27.09$ $N_g=9.73$ $s_c=1.00$ $s_g=1.00$

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	Q _{lim} <daN/mq>	R _d <daN>	Sic.
17	594001.00	-34932.60	-106271.00	1.28	32.04	37065.30	662185.00	1.11
18	606805.00	-35833.80	-106738.00	1.28	32.05	37061.50	661989.00	1.09
19	594001.00	-34932.60	-106271.00	1.28	32.04	37065.30	662185.00	1.11
27	622016.00	-38318.90	-100537.00	1.28	32.08	37021.80	659234.00	1.06
28	640692.00	-40576.40	-96714.60	1.27	32.10	36994.90	657410.00	1.03
29	634820.00	-39220.10	-101005.00	1.28	32.08	37019.00	659106.00	1.04
30	622016.00	-38318.90	-100537.00	1.28	32.08	37021.80	659234.00	1.06

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 403

B=0.90 <m> L=20.59 <m> D=0.00 <m> $\beta=0.00$ <grad> $\eta=0.00$ <grad> $\gamma_r=1600.00$ <daN/mc>
 $\sigma_{v0,r}=0.00$ <daN/mq>

Verifiche in condizioni drenate

$\phi'_r=26.00$ <grad> $c'_r=1000.00$ <daN/mq>
 $N_q=14.21$ $N_c=27.09$ $N_g=9.73$ $s_c=1.00$ $s_g=1.00$

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	Q _{lim} <daN/mq>	R _d <daN>	Sic.
17	155909.00	3402.56	-3511.04	0.86	20.55	33749.80	258167.00	1.66
18	157568.00	3459.47	-3531.17	0.86	20.55	33747.70	258075.00	1.64
19	155909.00	3402.56	-3511.04	0.86	20.55	33749.80	258167.00	1.66
27	160520.00	3637.77	-10522.30	0.85	20.46	33736.70	256483.00	1.60
28	163593.00	3794.59	-15196.60	0.85	20.40	33728.40	255416.00	1.56
29	162178.00	3694.68	-10542.50	0.85	20.46	33734.90	256411.00	1.58
30	160520.00	3637.77	-10522.30	0.85	20.46	33736.70	256483.00	1.60

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 404

B=0.90 <m> L=20.59 <m> D=0.00 <m> $\beta=0.00$ <grad> $\eta=0.00$ <grad> $\gamma_r=1600.00$ <daN/mc>
 $\sigma_{v0,r}=0.00$ <daN/mq>

Verifiche in condizioni drenate

$\phi'_r=26.00$ <grad> $c'_r=1000.00$ <daN/mq>
 $N_q=14.21$ $N_c=27.09$ $N_g=9.73$ $s_c=1.00$ $s_g=1.00$

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	Q _{lim} <daN/mq>	R _d <daN>	Sic.
17	70831.50	-134.25	193.93	0.90	20.58	34060.00	273191.00	3.86
18	71839.30	-136.95	195.55	0.90	20.58	34059.80	273183.00	3.80
19	70831.50	-134.25	193.93	0.90	20.58	34060.00	273191.00	3.86
27	71932.60	-133.29	5768.19	0.90	20.43	34060.60	271166.00	3.77
28	72666.70	-132.65	9484.37	0.90	20.33	34061.00	269850.00	3.71
29	72940.40	-136.00	5769.82	0.90	20.43	34060.40	271187.00	3.72
30	71932.60	-133.29	5768.19	0.90	20.43	34060.60	271166.00	3.77

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Relazione di calcolo

Travata 405

B=0.90 <m> L=20.59 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0, \epsilon}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

φ'_r =26.00 <grad> c'_i =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	72222.10	19.18	-215.84	0.90	20.58	34085.30	274382.00	3.80
18	73065.90	19.51	-218.04	0.90	20.58	34085.30	274381.00	3.76
19	72222.10	19.18	-215.84	0.90	20.58	34085.30	274382.00	3.80
27	73085.20	28.72	5483.11	0.90	20.44	34083.30	272369.00	3.73
28	73660.70	35.08	9282.42	0.90	20.34	34082.00	270949.00	3.68
29	73929.00	29.05	5480.91	0.90	20.44	34083.30	272392.00	3.68
30	73085.20	28.72	5483.11	0.90	20.44	34083.30	272369.00	3.73

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 406

B=0.90 <m> L=20.59 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0, \epsilon}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

φ'_r =26.00 <grad> c'_i =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	73619.30	57.11	237.33	0.90	20.58	34077.40	274001.00	3.72
18	74528.80	58.50	239.64	0.90	20.58	34077.20	273994.00	3.68
19	73619.30	57.11	237.33	0.90	20.58	34077.40	274001.00	3.72
27	74697.00	64.07	5666.86	0.90	20.44	34076.10	272007.00	3.64
28	75415.40	68.72	9286.54	0.90	20.34	34075.30	270710.00	3.59
29	75606.40	65.46	5669.17	0.90	20.44	34076.00	272025.00	3.60
30	74697.00	64.07	5666.86	0.90	20.44	34076.10	272007.00	3.64

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 407

B=0.90 <m> L=20.59 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0, \epsilon}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

φ'_r =26.00 <grad> c'_i =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	101422.00	-1652.60	-4281.66	0.87	20.51	33835.80	261665.00	2.58
18	102673.00	-1690.69	-4300.26	0.87	20.51	33833.20	261549.00	2.55
19	101422.00	-1652.60	-4281.66	0.87	20.51	33835.80	261665.00	2.58
27	101402.00	-1624.61	-11107.00	0.87	20.37	33840.10	260143.00	2.57
28	101390.00	-1605.96	-15657.30	0.87	20.28	33842.90	259127.00	2.56
29	102654.00	-1662.71	-11125.60	0.87	20.37	33837.30	260046.00	2.53
30	101402.00	-1624.61	-11107.00	0.87	20.37	33840.10	260143.00	2.57

Verifiche di capacità portante per rottura generale in condizioni statiche

Metodo utilizzato: Terzaghi

Travata 408

B=0.90 <m> L=32.40 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0, \epsilon}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

Relazione di calcolo

$\phi'_r=26.00$ <grad> $c'_r=1000.00$ <daN/mq>
 $N_q=14.21$ $N_c=27.09$ $N_g=9.73$ $s_c=1.00$ $s_g=1.00$

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
17	74773.00	65.22	41831.70	0.90	31.28	34075.90	416295.00	5.57
18	74748.10	66.93	41860.50	0.90	31.28	34075.50	416254.00	5.57
19	74773.00	65.22	41831.70	0.90	31.28	34075.90	416295.00	5.57
27	74507.40	23.54	38285.70	0.90	31.37	34084.50	418132.00	5.61
28	74330.30	-4.24	35921.60	0.90	31.43	34088.60	419238.00	5.64
29	74482.50	25.26	38314.40	0.90	31.37	34084.20	418091.00	5.61
30	74507.40	23.54	38285.70	0.90	31.37	34084.50	418132.00	5.61

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Platea n. 402

$B=20.59$ <m> $L=32.40$ <m> $D=0.00$ <m> $\beta=0.00$ <grad> $\eta=0.00$ <grad> $\gamma_r=842.85$ <daN/mc>
 $\sigma_{v0,r}=0.00$ <daN/mq>

Verifiche in condizioni drenate

$\phi'_r=26.00$ <grad> $c'_r=999.98$ <daN/mq>
 $N_q=14.21$ $N_c=27.09$ $N_g=9.73$ $s_c=1.30$ $s_g=0.80$

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
1	1797140.00	23981.40	590941.00	20.56	31.74	102657.00	29133600.00	16.21
3	1797140.00	9527.39	590912.00	20.58	31.74	102710.00	29171400.00	16.23
5	1796820.00	40823.70	427533.00	20.54	31.92	102596.00	29256200.00	16.28
7	1796540.00	40806.10	287440.00	20.54	32.08	102596.00	29399100.00	16.36
9	1797140.00	23688.80	591068.00	20.56	31.74	102658.00	29134300.00	16.21
11	1797140.00	9234.87	591039.00	20.58	31.74	102711.00	29172100.00	16.23
13	1796820.00	40531.20	427660.00	20.54	31.92	102597.00	29256800.00	16.28
15	1796540.00	40513.50	287568.00	20.54	32.08	102597.00	29399700.00	16.36

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 401

$B=1.40$ <m> $L=32.40$ <m> $D=0.00$ <m> $\beta=0.00$ <grad> $\eta=0.00$ <grad> $\gamma_r=1600.00$ <daN/mc>
 $\sigma_{v0,r}=0.00$ <daN/mq>

Verifiche in condizioni drenate

$\phi'_r=26.00$ <grad> $c'_r=1000.00$ <daN/mq>
 $N_q=14.21$ $N_c=27.09$ $N_g=9.73$ $s_c=1.00$ $s_g=1.00$

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q _{lim} <daN/mq>	R _d <daN>	Sic.
1	485061.00	-30653.70	-226305.00	1.27	31.47	36997.00	644657.00	1.33
3	456269.00	-26116.80	-217836.00	1.29	31.45	37089.70	651866.00	1.43
5	518552.00	-35918.00	-120494.00	1.26	31.94	36902.50	646361.00	1.25
7	518467.00	-35893.40	-21330.50	1.26	32.32	36903.10	654149.00	1.26
9	485086.00	-30648.60	-275206.00	1.27	31.27	36997.20	640546.00	1.32
11	456294.00	-26111.70	-266737.00	1.29	31.23	37089.90	647442.00	1.42
13	518577.00	-35912.90	-169395.00	1.26	31.75	36902.70	642562.00	1.24
15	518492.00	-35888.20	-70231.60	1.26	32.13	36903.30	650349.00	1.25

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 402

$B=1.40$ <m> $L=32.40$ <m> $D=0.00$ <m> $\beta=0.00$ <grad> $\eta=0.00$ <grad> $\gamma_r=1600.00$ <daN/mc>
 $\sigma_{v0,r}=0.00$ <daN/mq>

Verifiche in condizioni drenate

$\phi'_r=26.00$ <grad> $c'_r=1000.00$ <daN/mq>
 $N_q=14.21$ $N_c=27.09$ $N_g=9.73$ $s_c=1.00$ $s_g=1.00$

Relazione di calcolo

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	Q _{lim} <daN/mq>	R _d <daN>	Sic.
1	483249.00	-30485.70	-276544.00	1.27	31.26	36998.70	640467.00	1.33
3	454284.00	-25942.80	-268110.00	1.29	31.22	37091.80	647361.00	1.43
5	516937.00	-35755.50	-170190.00	1.26	31.74	36904.10	642566.00	1.24
7	516847.00	-35729.70	-70594.30	1.26	32.13	36904.60	650415.00	1.26
9	483222.00	-30490.90	-226181.00	1.27	31.46	36998.50	644719.00	1.33
11	454257.00	-25948.00	-217747.00	1.29	31.44	37091.60	651938.00	1.44
13	516910.00	-35760.70	-119827.00	1.26	31.94	36903.80	646493.00	1.25
15	516820.00	-35734.90	-20231.30	1.26	32.32	36904.40	654343.00	1.27

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 403

B=0.90 <m> L=20.59 <m> D=0.00 <m> β=0.00 <grad> η=0.00 <grad> γ_r=1600.00 <daN/mc>
σ_{v0,r}=0.00 <daN/mq>

Verifiche in condizioni drenate

φ'_r=26.00 <grad> c'_r=1000.00 <daN/mq>
N_q=14.21 N_c=27.09 N_g=9.73 s_c=1.00 s_g=1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	Q _{lim} <daN/mq>	R _d <daN>	Sic.
1	143584.00	3909.27	-23129.30	0.85	20.27	33665.70	250844.00	1.75
3	143550.00	3907.22	305.59	0.85	20.59	33665.80	254785.00	1.77
5	128161.00	3098.84	-49249.40	0.85	19.82	33713.10	247436.00	1.93
7	114907.00	2402.14	-48203.10	0.86	19.75	33764.10	248828.00	2.17
9	143550.00	3907.70	17149.20	0.85	20.35	33665.80	251878.00	1.75
11	143516.00	3905.64	-6285.68	0.85	20.50	33665.90	253757.00	1.77
13	128127.00	3097.27	43269.30	0.85	19.91	33713.20	248603.00	1.94
15	114873.00	2400.56	42223.00	0.86	19.85	33764.20	250142.00	2.18

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 404

B=0.90 <m> L=20.59 <m> D=0.00 <m> β=0.00 <grad> η=0.00 <grad> γ_r=1600.00 <daN/mc>
σ_{v0,r}=0.00 <daN/mq>

Verifiche in condizioni drenate

φ'_r=26.00 <grad> c'_r=1000.00 <daN/mq>
N_q=14.21 N_c=27.09 N_g=9.73 s_c=1.00 s_g=1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	Q _{lim} <daN/mq>	R _d <daN>	Sic.
1	54690.70	-233.23	-4271.85	0.89	20.43	34023.10	269465.00	4.93
3	54688.00	-233.20	3697.76	0.89	20.45	34023.10	269742.00	4.93
5	54015.70	-145.46	-13501.50	0.89	20.09	34047.50	266058.00	4.93
7	53434.50	-70.19	-13442.90	0.90	20.09	34069.00	267003.00	5.00
9	54692.30	-233.02	4468.46	0.89	20.43	34023.10	269373.00	4.93
11	54689.70	-232.99	-3501.15	0.89	20.46	34023.10	269839.00	4.93
13	54017.40	-145.24	13698.10	0.89	20.08	34047.60	265964.00	4.92
15	53436.10	-69.98	13639.50	0.90	20.08	34069.10	266908.00	4.99

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 405

B=0.90 <m> L=20.59 <m> D=0.00 <m> β=0.00 <grad> η=0.00 <grad> γ_r=1600.00 <daN/mc>
σ_{v0,r}=0.00 <daN/mq>

Verifiche in condizioni drenate

φ'_r=26.00 <grad> c'_r=1000.00 <daN/mq>
N_q=14.21 N_c=27.09 N_g=9.73 s_c=1.00 s_g=1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	Q _{lim} <daN/mq>	R _d <daN>	Sic.
1	54498.30	170.73	-4363.46	0.89	20.43	34040.70	270237.00	4.96

Relazione di calcolo

3	54496.50	170.71	3904.56	0.89	20.45	34040.70	270460.00	4.96
5	54480.20	61.47	-14008.30	0.90	20.08	34071.90	266988.00	4.90
7	54462.80	-32.20	-14007.30	0.90	20.08	34080.30	267372.00	4.91
9	54498.40	170.88	-4381.87	0.89	20.43	34040.60	270226.00	4.96
11	54496.60	170.87	3886.15	0.89	20.45	34040.70	270467.00	4.96
13	54480.30	61.62	-14026.70	0.90	20.08	34071.80	266977.00	4.90
15	54462.90	-32.04	-14025.70	0.90	20.07	34080.30	267365.00	4.91

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 406

B=0.90 <m> L=20.59 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q_{lim} <daN/mq>	R_d <daN>	Sic.
1	57499.20	145.74	-4359.04	0.89	20.44	34050.00	270785.00	4.71
3	57494.70	145.65	3761.12	0.89	20.46	34050.00	271062.00	4.71
5	56126.50	78.27	-13652.80	0.90	20.10	34067.80	267166.00	4.76
7	54945.30	20.34	-13498.70	0.90	20.10	34083.70	267837.00	4.87
9	57495.50	146.03	4643.07	0.89	20.43	34049.90	270651.00	4.71
11	57491.00	145.93	-3477.09	0.89	20.47	34049.90	271189.00	4.72
13	56122.80	78.55	13936.80	0.90	20.09	34067.70	267028.00	4.76
15	54941.60	20.62	13782.70	0.90	20.09	34083.60	267695.00	4.87

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 407

B=0.90 <m> L=20.59 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q_{lim} <daN/mq>	R_d <daN>	Sic.
1	103796.00	-2599.13	16948.80	0.85	20.26	33699.70	252341.00	2.43
3	103762.00	-2597.07	-5255.99	0.85	20.49	33699.90	255155.00	2.46
5	87692.90	-1780.51	41594.00	0.86	19.64	33773.40	247862.00	2.83
7	73855.70	-1076.78	40513.70	0.87	19.49	33862.50	249923.00	3.38
9	103832.00	-2600.79	-24107.30	0.85	20.13	33699.60	250620.00	2.41
11	103798.00	-2598.73	-1902.54	0.85	20.55	33699.80	255955.00	2.47
13	87728.70	-1782.17	-48752.50	0.86	19.48	33773.30	245800.00	2.80
15	73891.40	-1078.44	-47672.20	0.87	19.30	33862.30	247435.00	3.35

Verifiche di capacità portante per rottura generale in condizioni sismiche

Metodo utilizzato: Condizioni statiche

Travata 408

B=0.90 <m> L=32.40 <m> D=0.00 <m> β =0.00 <grad> η =0.00 <grad> γ_r =1600.00 <daN/mc>
 $\sigma_{v0,r}$ =0.00 <daN/mq>

Verifiche in condizioni drenate

ϕ'_r =26.00 <grad> c'_r =1000.00 <daN/mq>
 N_q =14.21 N_c =27.09 N_g =9.73 s_c =1.00 s_g =1.00

CC	N <daN>	Mx <daNm>	My <daNm>	B' <m>	L' <m>	q_{lim} <daN/mq>	R_d <daN>	Sic.
1	55670.00	111.48	50588.00	0.90	30.58	34058.30	405765.00	7.29
3	55593.70	-5.04	50518.70	0.90	30.58	34088.00	407853.00	7.34
5	55713.40	247.33	36593.90	0.89	31.09	34020.40	409749.00	7.35
7	55674.50	247.24	24529.70	0.89	31.52	34020.30	415447.00	7.46

Relazione di calcolo

9	55671.20	110.33	50352.70	0.90	30.59	34058.60	405900.00	7.29
11	55595.00	-6.19	50283.40	0.90	30.59	34087.70	407944.00	7.34
13	55714.60	246.18	36358.60	0.89	31.09	34020.70	409884.00	7.36
15	55675.70	246.09	24294.40	0.89	31.53	34020.70	415582.00	7.46

Cedimenti

Metodo utilizzato: Terzaghi (1955)

Simbologia

- B =Base della fondazione
- CC =Numero della combinazione delle condizioni di carico elementari
- Ced=Cedimento calcolato
- L =Lunghezza della fondazione (L>B)
- N =Sforzo normale
- k₁ =Costante di sottofondo standardizzata
- k_w =Costante di sottofondo
- q_{es} =Pressione di esercizio

Platea n. 402
 B=20.59 <m> L=32.40 <m> k₁=3000000.00 <daN/mc> k_w=772015.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	1797140.00	2693.90	0.35
1	1634050.00	2449.43	0.32
2	1633640.00	2448.80	0.32
3	1797140.00	2693.90	0.35
3	1634050.00	2449.42	0.32
4	1633640.00	2448.80	0.32
5	1796820.00	2693.41	0.35
5	1633560.00	2448.68	0.32
6	1633430.00	2448.50	0.32
7	1796540.00	2692.99	0.35
7	1633130.00	2448.05	0.32
8	1633250.00	2448.23	0.32
9	1797140.00	2693.90	0.35
9	1634050.00	2449.43	0.32
10	1633640.00	2448.80	0.32
11	1797140.00	2693.90	0.35
11	1634050.00	2449.42	0.32
12	1633640.00	2448.80	0.32
13	1796820.00	2693.41	0.35
13	1633560.00	2448.69	0.32
14	1633430.00	2448.50	0.32
15	1796540.00	2692.99	0.35
15	1633130.00	2448.05	0.32
16	1633250.00	2448.23	0.32
17	2403890.00	3603.41	0.47
18	2426130.00	3636.74	0.47
19	2403890.00	3603.41	0.47
20	1757250.00	2634.09	0.34
21	1772070.00	2656.32	0.34
22	1757250.00	2634.09	0.34
23	1660610.00	2489.24	0.32
24	1666540.00	2498.13	0.32
25	1660610.00	2489.24	0.32
26	1633340.00	2448.36	0.32
27	2426210.00	3636.86	0.47
28	2441080.00	3659.16	0.47
29	2448440.00	3670.19	0.48
30	2426210.00	3636.86	0.47
31	1772120.00	2656.39	0.34
32	1782040.00	2671.26	0.35
33	1786950.00	2678.62	0.35
34	1772120.00	2656.39	0.34
35	1660610.00	2489.24	0.32
36	1665570.00	2496.67	0.32
37	1666540.00	2498.13	0.32
38	1660610.00	2489.24	0.32
39	1633340.00	2448.36	0.32
40	1633340.00	2448.36	0.32

Travata 401
 B=1.40 <m> L=32.40 <m> k₁=3000000.00 <daN/mc> k_w=1105870.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	485061.00	10693.60	0.97

Relazione di calcolo

1	449768.00	9915.52	0.90
2	436891.00	9631.63	0.87
3	456269.00	10058.80	0.91
3	406143.00	8953.77	0.81
4	418790.00	9232.59	0.83
5	518552.00	11431.90	1.03
5	500512.00	11034.20	1.00
6	457945.00	10095.80	0.91
7	518467.00	11430.00	1.03
7	500383.00	11031.40	1.00
8	457891.00	10094.60	0.91
9	485086.00	10694.10	0.97
9	449806.00	9916.37	0.90
10	436907.00	9631.98	0.87
11	456294.00	10059.40	0.91
11	406182.00	8954.62	0.81
12	418806.00	9232.94	0.83
13	518577.00	11432.50	1.03
13	500551.00	11035.10	1.00
14	457961.00	10096.10	0.91
15	518492.00	11430.60	1.03
15	500421.00	11032.20	1.00
16	457907.00	10095.00	0.91
17	596296.00	13145.80	1.19
18	609117.00	13428.50	1.21
19	596296.00	13145.80	1.19
20	440597.00	9713.34	0.88
21	449145.00	9901.78	0.90
22	440597.00	9713.34	0.88
23	428832.00	9453.96	0.85
24	432251.00	9529.34	0.86
25	428832.00	9453.96	0.85
26	427759.00	9430.31	0.85
27	595312.00	13124.20	1.19
28	594655.00	13109.70	1.19
29	608133.00	13406.80	1.21
30	595312.00	13124.20	1.19
31	439941.00	9698.88	0.88
32	439504.00	9689.24	0.88
33	448489.00	9887.32	0.89
34	439941.00	9698.88	0.88
35	428832.00	9453.96	0.85
36	428613.00	9449.14	0.85
37	432251.00	9529.34	0.86
38	428832.00	9453.96	0.85
39	427759.00	9430.31	0.85
40	427759.00	9430.31	0.85

Travata 402

B=1.40 <m> L=32.40 <m> k₁=3000000.00 <daN/mc> k_w=1105870.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	483249.00	10653.60	0.96
1	448193.00	9880.80	0.89
2	435210.00	9594.57	0.87
3	454284.00	10015.10	0.91
3	404307.00	8913.28	0.81
4	417001.00	9193.14	0.83
5	516937.00	11396.30	1.03
5	499235.00	11006.10	1.00
6	456388.00	10061.50	0.91
7	516847.00	11394.30	1.03
7	499100.00	11003.10	0.99
8	456332.00	10060.20	0.91
9	483222.00	10653.00	0.96
9	448152.00	9879.89	0.89
10	435193.00	9594.20	0.87
11	454257.00	10014.50	0.91
11	404266.00	8912.38	0.81
12	416984.00	9192.76	0.83
13	516910.00	11395.70	1.03
13	499194.00	11005.20	1.00
14	456371.00	10061.10	0.91
15	516820.00	11393.70	1.03
15	499059.00	11002.20	0.99
16	456315.00	10059.80	0.91
17	594001.00	13095.30	1.18
18	606805.00	13377.50	1.21

Relazione di calcolo

19	594001.00	13095.30	1.18
20	438841.00	9674.62	0.87
21	447377.00	9862.81	0.89
22	438841.00	9674.62	0.87
23	427078.00	9415.31	0.85
24	430493.00	9490.58	0.86
25	427078.00	9415.31	0.85
26	426003.00	9391.60	0.85
27	622016.00	13712.90	1.24
28	640692.00	14124.60	1.28
29	634820.00	13995.10	1.27
30	622016.00	13712.90	1.24
31	457517.00	10086.40	0.91
32	469968.00	10360.80	0.94
33	466053.00	10274.50	0.93
34	457517.00	10086.40	0.91
35	427078.00	9415.31	0.85
36	433304.00	9552.55	0.86
37	430493.00	9490.58	0.86
38	427078.00	9415.31	0.85
39	426003.00	9391.60	0.85
40	426003.00	9391.60	0.85

Travata 403

B=0.90 <m> L=20.59 <m> k₁=3000000.00 <daN/mc> k_w=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	143584.00	7748.29	0.58
1	143938.00	7767.42	0.58
2	124327.00	6709.11	0.50
3	143550.00	7746.48	0.58
3	143887.00	7764.68	0.58
4	124305.00	6707.97	0.50
5	128161.00	6916.01	0.52
5	120570.00	6506.39	0.49
6	114631.00	6185.89	0.46
7	114907.00	6200.81	0.47
7	100489.00	5422.76	0.41
8	106299.00	5736.28	0.43
9	143550.00	7746.46	0.58
9	143887.00	7764.65	0.58
10	124305.00	6707.96	0.50
11	143516.00	7744.64	0.58
11	143836.00	7761.90	0.58
12	124284.00	6706.82	0.50
13	128127.00	6914.17	0.52
13	120518.00	6503.61	0.49
14	114609.00	6184.74	0.46
15	114873.00	6198.98	0.46
15	100438.00	5419.98	0.41
16	106278.00	5735.13	0.43
17	155909.00	8413.43	0.63
18	157568.00	8502.92	0.64
19	155909.00	8413.43	0.63
20	113640.00	6132.44	0.46
21	114746.00	6192.09	0.46
22	113640.00	6132.44	0.46
23	110948.00	5987.15	0.45
24	111390.00	6011.02	0.45
25	110948.00	5987.15	0.45
26	110419.00	5958.61	0.45
27	160520.00	8662.23	0.65
28	163593.00	8828.09	0.66
29	162178.00	8751.71	0.66
30	160520.00	8662.23	0.65
31	116714.00	6298.30	0.47
32	118763.00	6408.88	0.48
33	117819.00	6357.96	0.48
34	116714.00	6298.30	0.47
35	110948.00	5987.15	0.45
36	111972.00	6042.44	0.45
37	111390.00	6011.02	0.45
38	110948.00	5987.15	0.45
39	110419.00	5958.61	0.45
40	110419.00	5958.61	0.45

Travata 404

B=0.90 <m> L=20.59 <m> k₁=3000000.00 <daN/mc> k_w=1333330.00 <daN/mc>

Relazione di calcolo

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	54690.70	2951.31	0.22
1	50306.30	2714.71	0.20
2	49447.00	2668.34	0.20
3	54688.00	2951.17	0.22
3	50302.20	2714.49	0.20
4	49445.30	2668.25	0.20
5	54015.70	2914.89	0.22
5	49283.60	2659.52	0.20
6	49022.70	2645.44	0.20
7	53434.50	2883.52	0.22
7	48402.90	2612.00	0.20
8	48657.30	2625.72	0.20
9	54692.30	2951.40	0.22
9	50308.70	2714.84	0.20
10	49448.00	2668.40	0.20
11	54689.70	2951.25	0.22
11	50304.60	2714.62	0.20
12	49446.40	2668.30	0.20
13	54017.40	2914.97	0.22
13	49286.00	2659.65	0.20
14	49023.70	2645.50	0.20
15	53436.10	2883.61	0.22
15	48405.40	2612.13	0.20
16	48658.30	2625.78	0.20
17	70831.50	3822.32	0.29
18	71839.30	3876.71	0.29
19	70831.50	3822.32	0.29
20	52336.50	2824.27	0.21
21	53008.40	2860.52	0.21
22	52336.50	2824.27	0.21
23	49544.40	2673.60	0.20
24	49813.20	2688.10	0.20
25	49544.40	2673.60	0.20
26	48837.70	2635.46	0.20
27	71932.60	3881.74	0.29
28	72666.70	3921.36	0.29
29	72940.40	3936.13	0.30
30	71932.60	3881.74	0.29
31	53070.60	2863.88	0.21
32	53560.00	2890.29	0.22
33	53742.40	2900.14	0.22
34	53070.60	2863.88	0.21
35	49544.40	2673.60	0.20
36	49789.10	2686.80	0.20
37	49813.20	2688.10	0.20
38	49544.40	2673.60	0.20
39	48837.70	2635.46	0.20
40	48837.70	2635.46	0.20

Travata 405
 B=0.90 <m> L=20.59 <m> k_i=3000000.00 <daN/mc> k_w=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	54498.30	2940.93	0.22
1	49561.90	2674.54	0.20
2	49535.60	2673.12	0.20
3	54496.50	2940.83	0.22
3	49559.20	2674.39	0.20
4	49534.40	2673.06	0.20
5	54480.20	2939.95	0.22
5	49534.50	2673.06	0.20
6	49524.20	2672.50	0.20
7	54462.80	2939.01	0.22
7	49508.20	2671.64	0.20
8	49513.30	2671.92	0.20
9	54498.40	2940.93	0.22
9	49562.10	2674.55	0.20
10	49535.60	2673.12	0.20
11	54496.60	2940.83	0.22
11	49559.30	2674.40	0.20
12	49534.50	2673.06	0.20
13	54480.30	2939.95	0.22
13	49534.60	2673.07	0.20
14	49524.20	2672.51	0.20
15	54462.90	2939.02	0.22
15	49508.40	2671.65	0.20
16	49513.30	2671.92	0.20

Relazione di calcolo

17	72222.10	3897.37	0.29
18	73065.90	3942.90	0.30
19	72222.10	3897.37	0.29
20	52907.70	2855.09	0.21
21	53470.20	2885.45	0.22
22	52907.70	2855.09	0.21
23	50223.90	2710.27	0.20
24	50448.90	2722.41	0.20
25	50223.90	2710.27	0.20
26	49516.90	2672.11	0.20
27	73085.20	3943.94	0.30
28	73660.70	3975.00	0.30
29	73929.00	3989.48	0.30
30	73085.20	3943.94	0.30
31	53483.10	2886.14	0.22
32	53866.80	2906.85	0.22
33	54045.70	2916.50	0.22
34	53483.10	2886.14	0.22
35	50223.90	2710.27	0.20
36	50415.70	2720.62	0.20
37	50448.90	2722.41	0.20
38	50223.90	2710.27	0.20
39	49516.90	2672.11	0.20
40	49516.90	2672.11	0.20

Travata 406

B=0.90 <m> L=20.59 <m> k_i=3000000.00 <daN/mc> k_w=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	57499.20	3102.87	0.23
1	53467.70	2885.31	0.22
2	51718.80	2790.93	0.21
3	57494.70	3102.62	0.23
3	53460.80	2884.94	0.22
4	51715.90	2790.78	0.21
5	56126.50	3028.79	0.23
5	51387.80	2773.07	0.21
6	50855.80	2744.36	0.21
7	54945.30	2965.05	0.22
7	49598.10	2676.49	0.20
8	50113.20	2704.29	0.20
9	57495.50	3102.67	0.23
9	53462.00	2885.01	0.22
10	51716.50	2790.81	0.21
11	57491.00	3102.42	0.23
11	53455.10	2884.63	0.22
12	51713.60	2790.65	0.21
13	56122.80	3028.59	0.23
13	51382.10	2772.77	0.21
14	50853.50	2744.24	0.21
15	54941.60	2964.85	0.22
15	49592.40	2676.19	0.20
16	50110.90	2704.17	0.20
17	73619.30	3972.77	0.30
18	74528.80	4021.85	0.30
19	73619.30	3972.77	0.30
20	53927.60	2910.13	0.22
21	54533.90	2942.85	0.22
22	53927.60	2910.13	0.22
23	51189.30	2762.36	0.21
24	51431.80	2775.45	0.21
25	51189.30	2762.36	0.21
26	50478.60	2724.01	0.20
27	74697.00	4030.92	0.30
28	75415.40	4069.69	0.31
29	75606.40	4080.00	0.31
30	74697.00	4030.92	0.30
31	54646.00	2948.90	0.22
32	55124.90	2974.74	0.22
33	55252.30	2981.61	0.22
34	54646.00	2948.90	0.22
35	51189.30	2762.36	0.21
36	51428.70	2775.28	0.21
37	51431.80	2775.45	0.21
38	51189.30	2762.36	0.21
39	50478.60	2724.01	0.20
40	50478.60	2724.01	0.20

Travata 407

Relazione di calcolo

B=0.90 <m> L=20.59 <m> k_i=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	103796.00	5601.23	0.42
1	108337.00	5846.25	0.44
2	87893.00	4743.03	0.36
3	103762.00	5599.37	0.42
3	108285.00	5843.44	0.44
4	87871.40	4741.86	0.36
5	87692.90	4732.23	0.35
5	83937.80	4529.59	0.34
6	77769.60	4196.73	0.31
7	73855.70	3985.52	0.30
7	62972.30	3398.21	0.25
8	69070.70	3727.31	0.28
9	103832.00	5603.15	0.42
9	108391.00	5849.17	0.44
10	87915.50	4744.24	0.36
11	103798.00	5601.30	0.42
11	108339.00	5846.37	0.44
12	87893.90	4743.07	0.36
13	87728.70	4734.16	0.36
13	83991.90	4532.51	0.34
14	77792.00	4197.94	0.31
15	73891.40	3987.45	0.30
15	63026.40	3401.14	0.26
16	69093.20	3728.52	0.28
17	101422.00	5473.08	0.41
18	102673.00	5540.60	0.42
19	101422.00	5473.08	0.41
20	76364.50	4120.91	0.31
21	77198.70	4165.92	0.31
22	76364.50	4120.91	0.31
23	73929.10	3989.48	0.30
24	74262.80	4007.49	0.30
25	73929.10	3989.48	0.30
26	73395.40	3960.68	0.30
27	101402.00	5472.04	0.41
28	101390.00	5471.35	0.41
29	102654.00	5539.57	0.42
30	101402.00	5472.04	0.41
31	76351.70	4120.21	0.31
32	76343.20	4119.75	0.31
33	77185.90	4165.23	0.31
34	76351.70	4120.21	0.31
35	73929.10	3989.48	0.30
36	73924.90	3989.25	0.30
37	74262.80	4007.49	0.30
38	73929.10	3989.48	0.30
39	73395.40	3960.68	0.30
40	73395.40	3960.68	0.30

Travata 408

B=0.90 <m> L=32.40 <m> k_i=3000000.00 <daN/mc> kw=1333330.00 <daN/mc>

CC	N <daN>	q _{es} <daN/mq>	Ced <cm>
1	55670.00	1909.12	0.14
1	50671.20	1737.69	0.13
2	50580.30	1734.58	0.13
3	55593.70	1906.51	0.14
3	50555.70	1733.73	0.13
4	50532.40	1732.94	0.13
5	55713.40	1910.61	0.14
5	50737.00	1739.95	0.13
6	50607.70	1735.52	0.13
7	55674.50	1909.28	0.14
7	50678.00	1737.93	0.13
8	50583.20	1734.68	0.13
9	55671.20	1909.16	0.14
9	50673.00	1737.76	0.13
10	50581.10	1734.61	0.13
11	55595.00	1906.55	0.14
11	50557.50	1733.80	0.13
12	50533.20	1732.96	0.13
13	55714.60	1910.65	0.14
13	50738.80	1740.02	0.13
14	50608.40	1735.54	0.13
15	55675.70	1909.32	0.14

Relazione di calcolo

15	50679.80	1737.99	0.13
16	50583.90	1734.70	0.13
17	74773.00	2564.23	0.19
18	74748.10	2563.38	0.19
19	74773.00	2564.23	0.19
20	54902.90	1882.82	0.14
21	54886.30	1882.25	0.14
22	54902.90	1882.82	0.14
23	51616.80	1770.12	0.13
24	51610.20	1769.90	0.13
25	51616.80	1770.12	0.13
26	50515.90	1732.37	0.13
27	74507.40	2555.12	0.19
28	74330.30	2549.05	0.19
29	74482.50	2554.27	0.19
30	74507.40	2555.12	0.19
31	54725.80	1876.74	0.14
32	54607.80	1872.70	0.14
33	54709.20	1876.17	0.14
34	54725.80	1876.74	0.14
35	51616.80	1770.12	0.13
36	51557.80	1768.10	0.13
37	51610.20	1769.90	0.13
38	51616.80	1770.12	0.13
39	50515.90	1732.37	0.13
40	50515.90	1732.37	0.13