Finanziato dall'Unione europea
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MINISTERO DELL'AMBIENTE
E DELLA SICUREZZA ENERGETICA

CITTA' DI TORINO

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PROVINCIA DI TORINO
COMUNE DI TORINO

REALIZZAZIONE DI UN NUOVO CENTRO DI RACCOLTA IN TORINO, VIA REYCEND ANGOLO VIA MASSARI

CUP: C12F22000940005

PROGETTO ESECUTIVO

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16201	ESE	ST	RDC	04 di 01	B

Titolo

Progetto strutture

Relazione di calcolo delle strutture della guardiania

File: 16201_ESE-ST_b_Testalini.dwg

DATA AGG.	REV.	OGGETTO
marzo 2025	A	Prima emissione
aprile 2025	B	Emissione a seguito del rapporto di Verifica PE

Fase progetto: ESE

Progetto: Ecocentro

-

Formato (ISO): A4

Scala: -

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SOMMARIO

INDICE DELLE FIGURE

1. PREMESSA

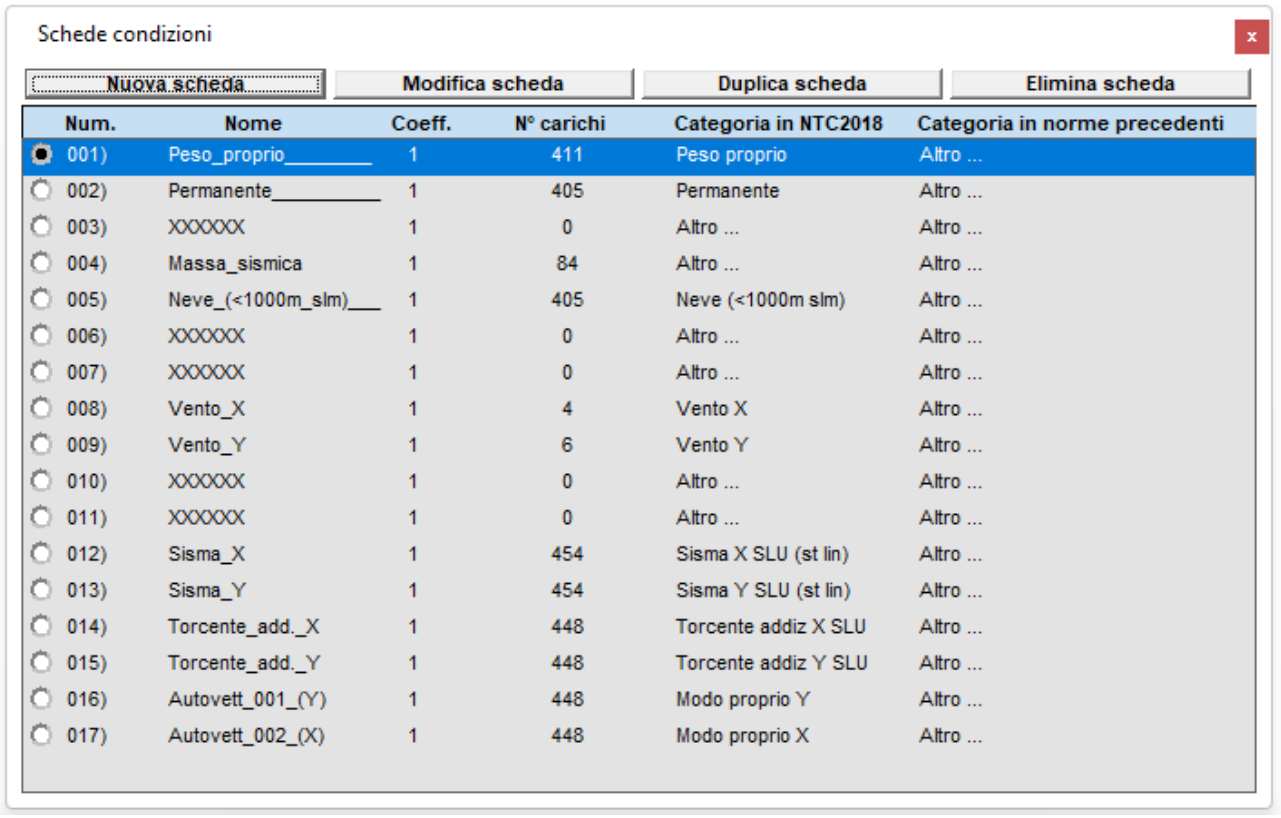
La presente relazione di calcolo espone i calcoli statici effettuati per il dimensionamento ed alla verifica delle opere strutturali della guardiania, prevista da realizzarsi nell'ambito dei lavori di costruzione del nuovo Ecocentro sito in via Giuseppe Massari angolo via Enrico Reycend, a Torino (TO), per conto di A.M.I.A.T. S.p.A., società a partecipazione mista (Città di Torino e IREN Ambiente), nell'ambito del P.N.R.R., Missione 2, Componente 1.1, Linea A: "Miglioramento e meccanizzazione della rete di raccolta differenziata dei rifiuti urbani" ai sensi del D.M. 396 del 28 settembre 2021 – finanziato dall' unione europea – Next Generation EU.

2. CONDIZIONI E CASI DI CARICO

Si riportano nel dettaglio le condizioni di carico relative al modello di calcolo che schematizza le strutture. Le singole condizioni inglobano i carichi applicati al modello di calcolo.

Le condizioni aventi numero di carichi uguale a 0 sono *condizioni vuote*, che non apportano sollecitazioni agli elementi strutturali in oggetto o comunque apportano sollecitazioni che ai fini delle verifiche non risultano essere le più sfavorevoli.

I coefficienti moltiplicativi introdotti nella terza colonna della tabella di *Fig. 1* permettono di giungere ad una più agevole definizione dei carichi agenti nelle diverse condizioni utilizzate nella modellazione.



Num.	Nome	Coeff.	N° carichi	Categoria in NTC2018	Categoria in norme precedenti
001)	Peso_proprio	1	411	Peso proprio	Altro ...
002)	Permanente	1	405	Permanente	Altro ...
003)	XXXXXX	1	0	Altro ...	Altro ...
004)	Massa_sismica	1	84	Altro ...	Altro ...
005)	Neve_(<1000m_slm)	1	405	Neve (<1000m slm)	Altro ...
006)	XXXXXX	1	0	Altro ...	Altro ...
007)	XXXXXX	1	0	Altro ...	Altro ...
008)	Vento_X	1	4	Vento X	Altro ...
009)	Vento_Y	1	6	Vento Y	Altro ...
010)	XXXXXX	1	0	Altro ...	Altro ...
011)	XXXXXX	1	0	Altro ...	Altro ...
012)	Sisma_X	1	454	Sisma X SLU (st lin)	Altro ...
013)	Sisma_Y	1	454	Sisma Y SLU (st lin)	Altro ...
014)	Torcente_add._X	1	448	Torcente addiz X SLU	Altro ...
015)	Torcente_add._Y	1	448	Torcente addiz Y SLU	Altro ...
016)	Autovett_001_(Y)	1	448	Modo proprio Y	Altro ...
017)	Autovett_002_(X)	1	448	Modo proprio X	Altro ...

Fig. 1: Pannello delle condizioni di carico definite su DOLMEN WIN.

Si riportano le risultanti delle singole condizioni di carico sopra elencate.

RISULTANTI DEI CARICHI (punto di applicazione nell'origine degli assi):

cond.	FX	FY	FZ	MX	MY	MZ
1	0.000000E+00	0.000000E+00	-1.701563E+04	-3.190430E+06	5.883984E+06	0.000000E+00
2	0.000000E+00	0.000000E+00	-3.881250E+03	-7.277344E+05	1.339031E+06	0.000000E+00
3	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00
4	0.000000E+00	0.000000E+00	-6.390000E+03	-1.198125E+06	2.204550E+06	0.000000E+00
5	0.000000E+00	0.000000E+00	-3.881250E+03	-7.277344E+05	1.339031E+06	0.000000E+00
6	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00
7	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00
8	1.957500E+03	0.000000E+00	0.000000E+00	0.000000E+00	4.257563E+05	-3.670313E+05
9	0.000000E+00	3.915000E+03	0.000000E+00	-8.515125E+05	0.000000E+00	1.370250E+06
10	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00
11	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00
12	5.075359E+03	0.000000E+00	0.000000E+00	0.000000E+00	2.207781E+06	-9.516298E+05
13	0.000000E+00	5.075359E+03	0.000000E+00	-2.207781E+06	0.000000E+00	1.752365E+06
14	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	-9.516298E+04
15	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	0.000000E+00	1.750991E+05

```
 16  0.000000E+00  2.776100E+03  0.000000E+00 -1.207604E+06  0.000000E+00  9.518297E+05
 17  2.997850E+03  0.000000E+00  0.000000E+00  0.000000E+00  1.304065E+06 -5.620345E+05
```

I casi di carico sono ricavati combinando le suddette condizioni, come riportato in seguito:

- casi 1 – 8: verifiche a SLU statiche,
- casi 9 – 10: casi di servizio per l'applicazione dell'azione sismica sulle strutture,
- casi 11 – 12: verifiche a SLU sismiche (SLV),
- casi 13 – 14: verifiche a SLE sismiche (SLD),
- casi 15 – 26: verifiche a SLE statiche.

NOM	DESCRIZIONE	VERIF.	TIPO	CONDIZIONI INSERITE				CASI INS.	
				Nro	Descrizione	Coef.	Somma	Nom	Coef.
1	SLU Max Var	SLU	somma	1	Peso_proprio	1.300	+		
				2	Permanente	1.500	+		
				5	Neve_(<1000m_slm)	.750	+		
2	SLU Max Neve	SLU	somma	1	Peso_proprio	1.300	+		
				2	Permanente	1.500	+		
				5	Neve_(<1000m_slm)	1.500	+		
3	SLU VENTOX 1	SLU	somma	1	Peso_proprio	1.300	+		
				2	Permanente	1.500	+		
				5	Neve_(<1000m_slm)	.750	+		
				8	Vento_X	.900	+/-		
4	SLU VENTOY 1	SLU	somma	1	Peso_proprio	1.300	+		
				2	Permanente	1.500	+		
				5	Neve_(<1000m_slm)	.750	+		
				9	Vento_Y	.900	+/-		
5	SLU VENTOX 2	SLU	somma	1	Peso_proprio	1.300	+		
				2	Permanente	1.500	+		
				5	Neve_(<1000m_slm)	1.500	+		
				8	Vento_X	.900	+/-		
6	SLU VENTOY 2	SLU	somma	1	Peso_proprio	1.300	+		
				2	Permanente	1.500	+		
				5	Neve_(<1000m_slm)	1.500	+		
				9	Vento_Y	.900	+/-		
7	SLU VENTOX 3	SLU	somma	1	Peso_proprio	1.300	+		
				2	Permanente	1.500	+		
				5	Neve_(<1000m_slm)	.750	+		
				8	Vento_X	1.500	+/-		
8	SLU VENTOY 3	SLU	somma	1	Peso_proprio	1.300	+		
				2	Permanente	1.500	+		
				5	Neve_(<1000m_slm)	.750	+		
				9	Vento_Y	1.500	+/-		
9	SISMAX SLU	NONUT	somma	14	Torcente_add._X	1.000	+/-		
				17	Autovett_002_(X)	1.000	quad		
10	SISMAY SLU	NONUT	somma	15	Torcente_add._Y	1.000	+/-		
				16	Autovett_001_(Y)	1.000	quad		
11	SLU con SISMAX PRINC	SLU	somma	1	Peso_proprio	1.000	+	9	1.000
				2	Permanente	1.000	+	10	.300
12	SLU con SISMAY PRINC	SLU	somma	1	Peso_proprio	1.000	+	10	1.000
				2	Permanente	1.000	+	9	.300
13	SLD con SISMAX PRINC	SLD	somma	1	Peso_proprio	1.000	+	9	.488
				2	Permanente	1.000	+	10	.146
14	SLD con SISMAY PRINC	SLD	somma	1	Peso_proprio	1.000	+	10	.488
				2	Permanente	1.000	+	9	.146
15	Rara	RARA	somma	1	Peso_proprio	1.000	+		
				2	Permanente	1.000	+		
				5	Neve_(<1000m_slm)	.500	+		
16	Rara VentoX 1	RARA	somma	1	Peso_proprio	1.000	+		
				2	Permanente	1.000	+		
				5	Neve_(<1000m_slm)	.500	+		
				8	Vento_X	.600	+/-		
17	Rara VentoY 1	RARA	somma	1	Peso_proprio	1.000	+		
				2	Permanente	1.000	+		
				5	Neve_(<1000m_slm)	.500	+		
				9	Vento_Y	.600	+/-		
18	Rara VentoX 2	RARA	somma	1	Peso_proprio	1.000	+		
				2	Permanente	1.000	+		
				5	Neve_(<1000m_slm)	1.000	+		
				8	Vento_X	.600	+/-		
19	Rara VentoY 2	RARA	somma	1	Peso_proprio	1.000	+		
				2	Permanente	1.000	+		
				5	Neve_(<1000m_slm)	1.000	+		
				9	Vento_Y	.600	+/-		
20	Rara VentoX 3	RARA	somma	1	Peso_proprio	1.000	+		
				2	Permanente	1.000	+		
				5	Neve_(<1000m_slm)	.500	+		
				8	Vento_X	1.000	+/-		
21	Rara VentoY 3	RARA	somma	1	Peso_proprio	1.000	+		
				2	Permanente	1.000	+		
				5	Neve_(<1000m_slm)	.500	+		
				9	Vento_Y	1.000	+/-		
22	Frequente 1	FREQ	somma	1	Peso_proprio	1.000	+		
				2	Permanente	1.000	+		
23	Frequente 2	FREQ	somma	1	Peso_proprio	1.000	+		
				2	Permanente	1.000	+		
				5	Neve_(<1000m_slm)	.200	+		
24	Frequente VentoX 3	FREQ	somma	1	Peso_proprio	1.000	+		
				2	Permanente	1.000	+		
				8	Vento_X	.200	+/-		
25	Frequente VentoY 3	FREQ	somma	1	Peso_proprio	1.000	+		

				2	Permanente	1.000	+			
				9	Vento_Y	.200	+/-			
26	Quasi Perm	QPERM	somma	1	Peso_proprio	1.000	+			
				2	Permanente	1.000	+			

3. IMMAGINI DELLA MODELLAZIONE

Si riportano le immagini del modello di calcolo delle strutture, ricavate dal software di calcolo DOLMEN 2024.

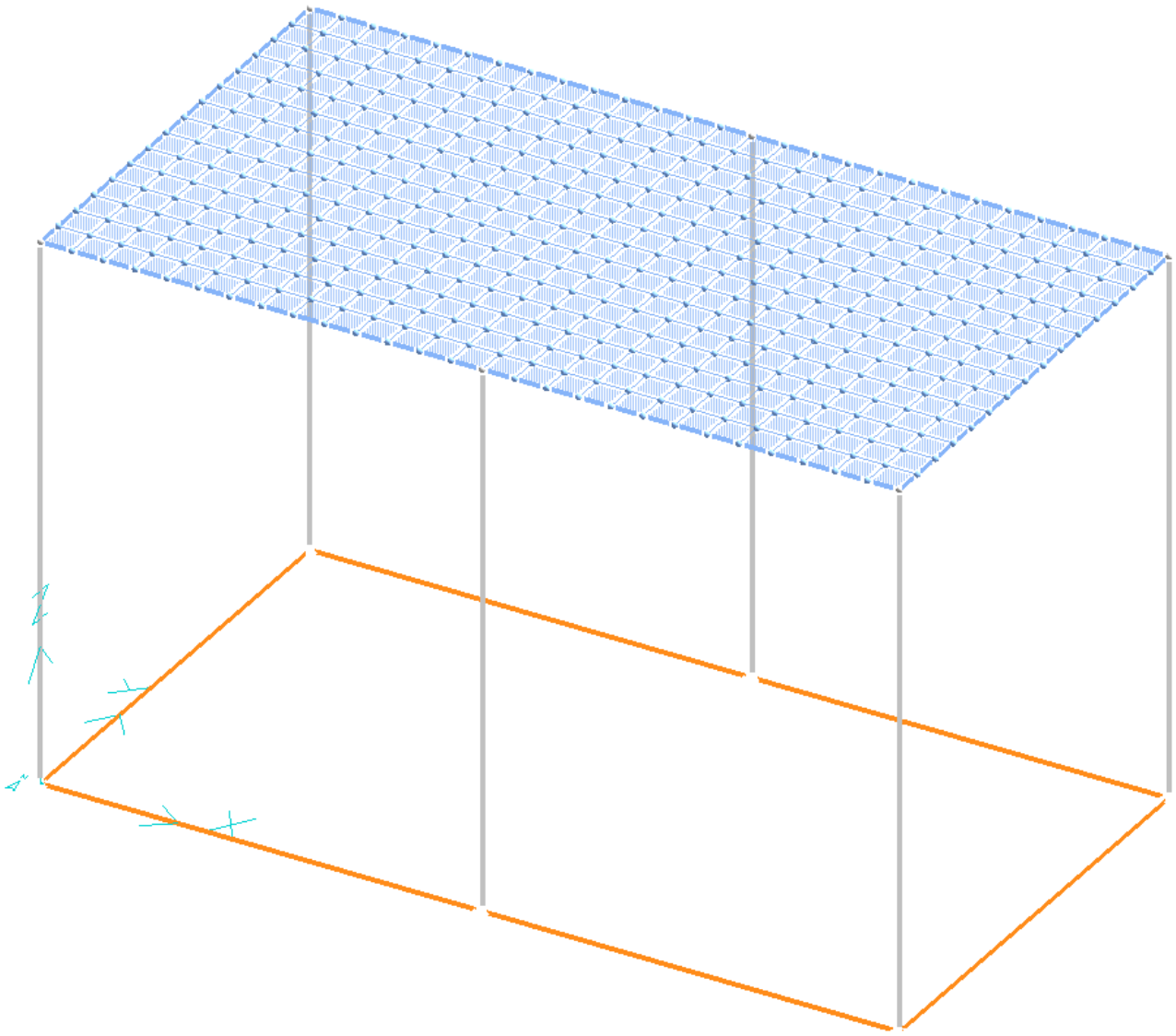


Fig. 2: Vista assonometria del modello matematico di calcolo della struttura.

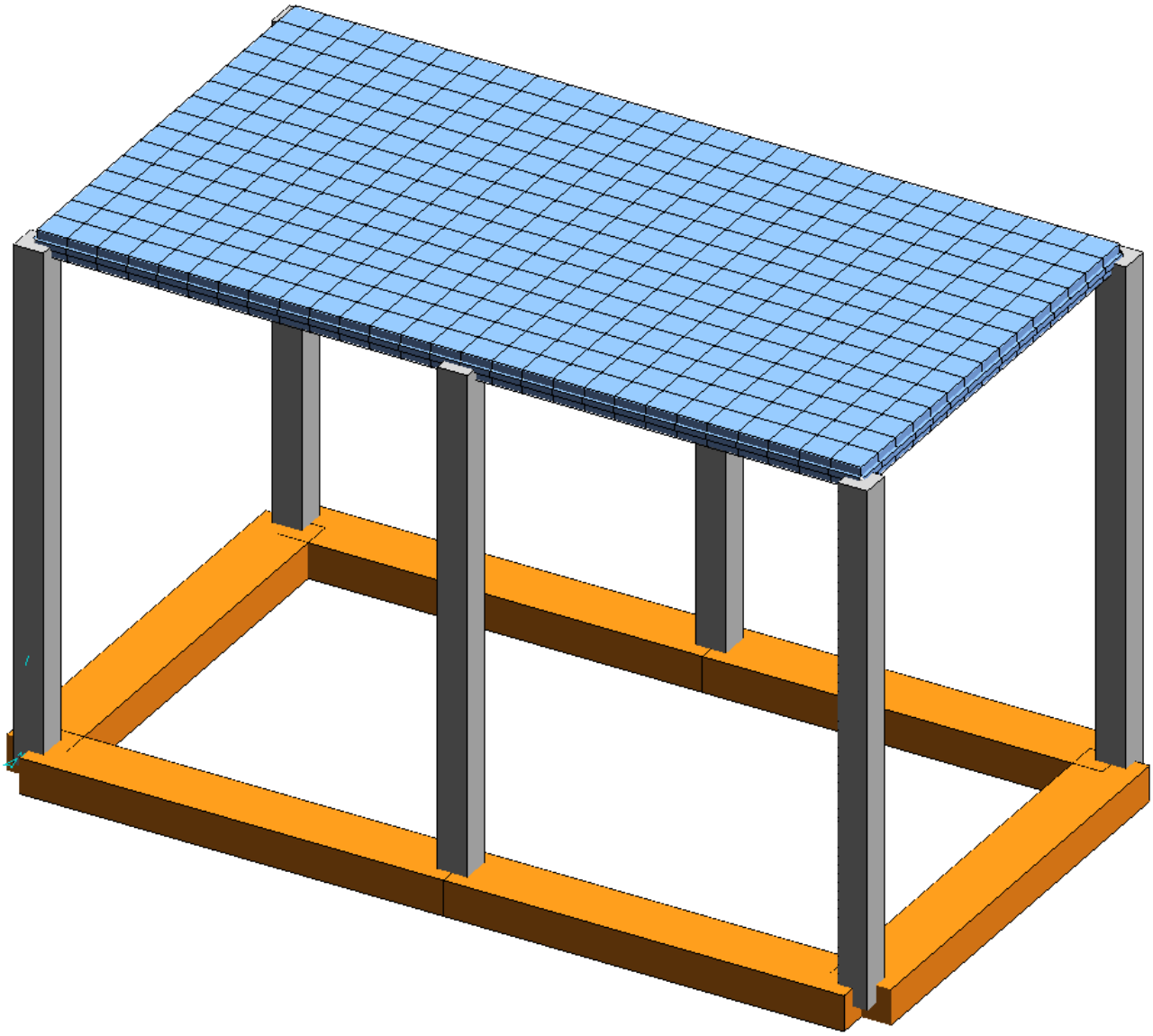


Fig. 3: Vista assonometria con ingombri del modello matematico di calcolo della struttura.

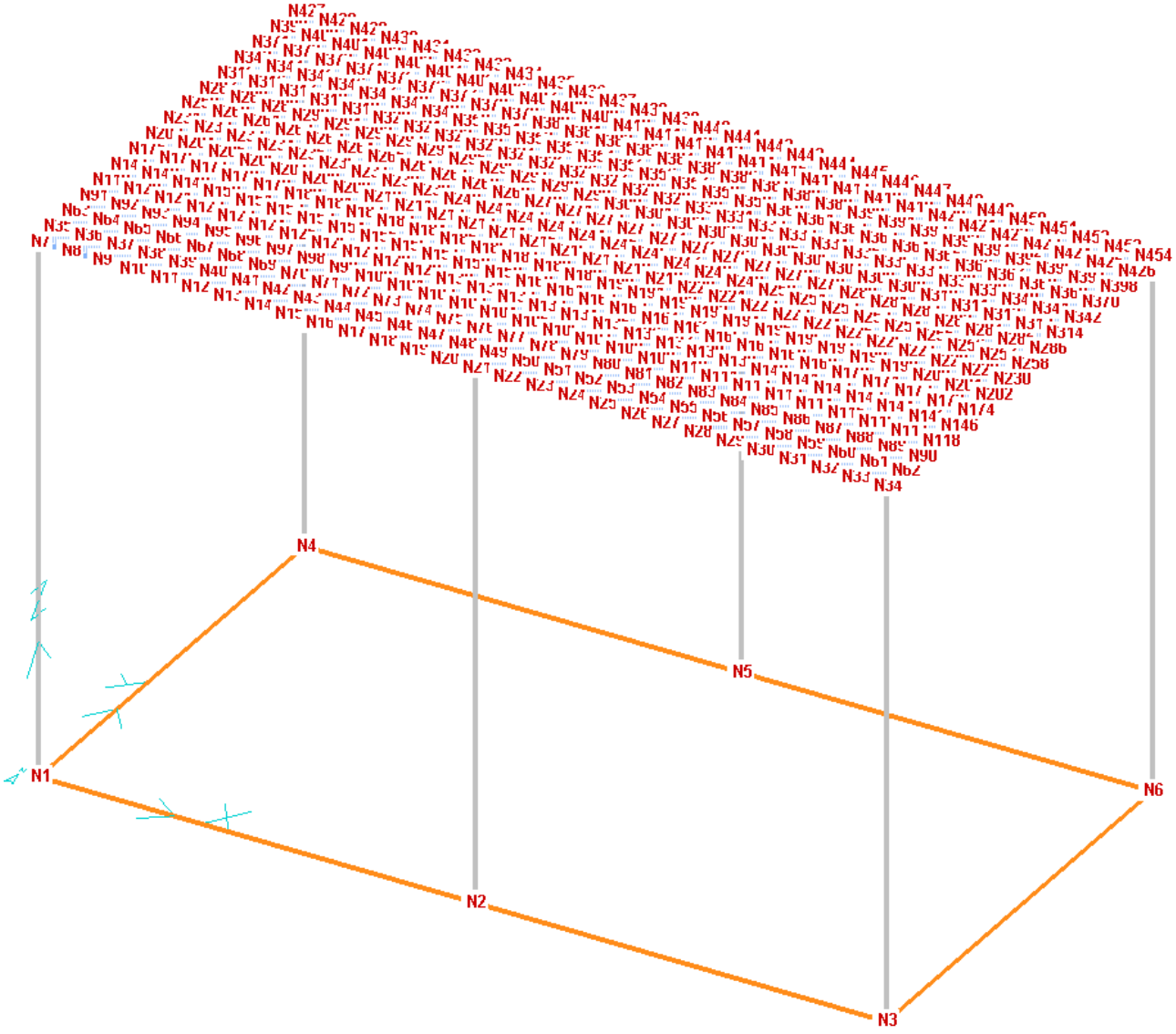


Fig. 4: Numerazione dei nodi del modello matematico di calcolo della struttura.

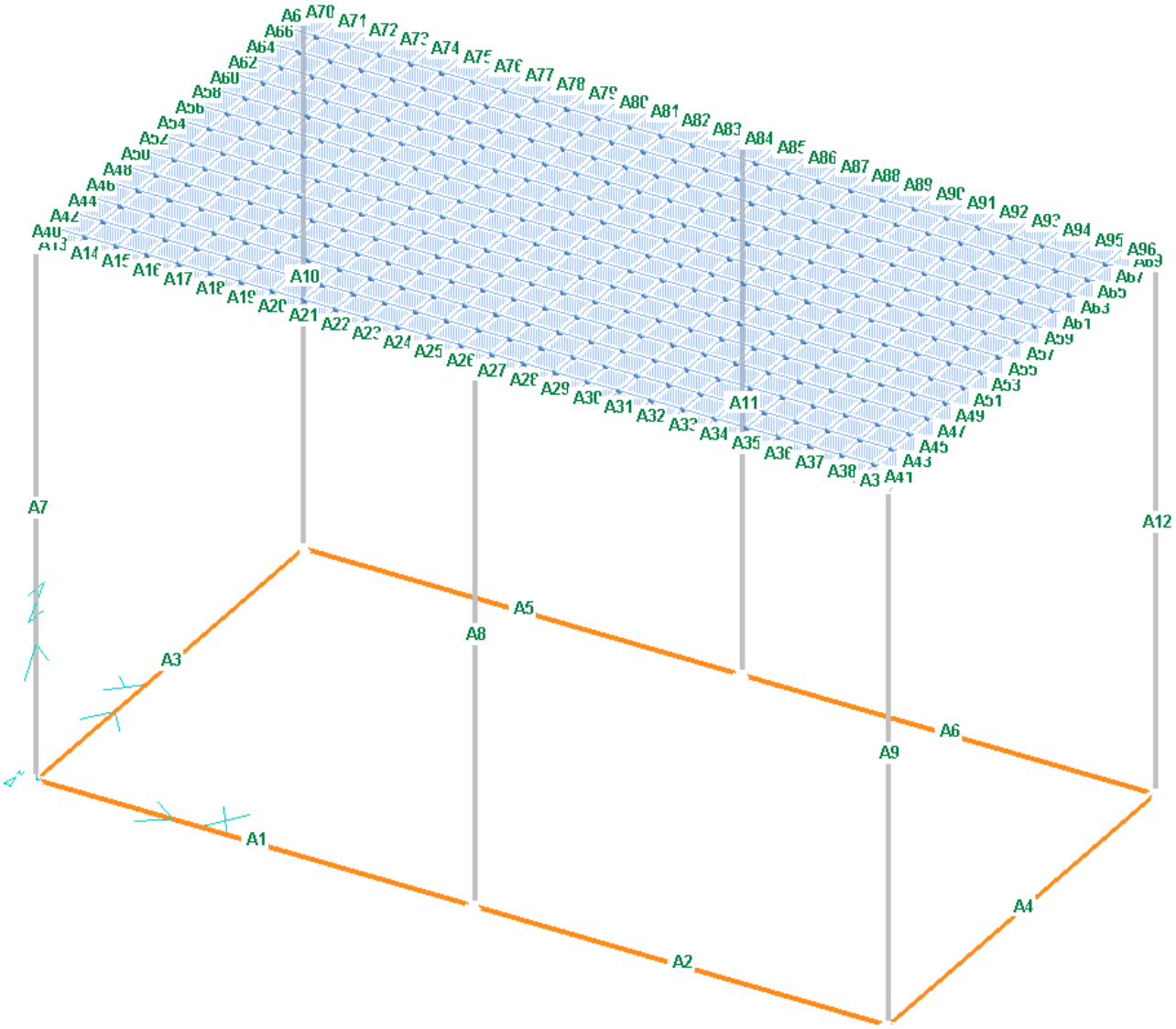


Fig. 5: Numerazione delle aste del modello matematico di calcolo della struttura.

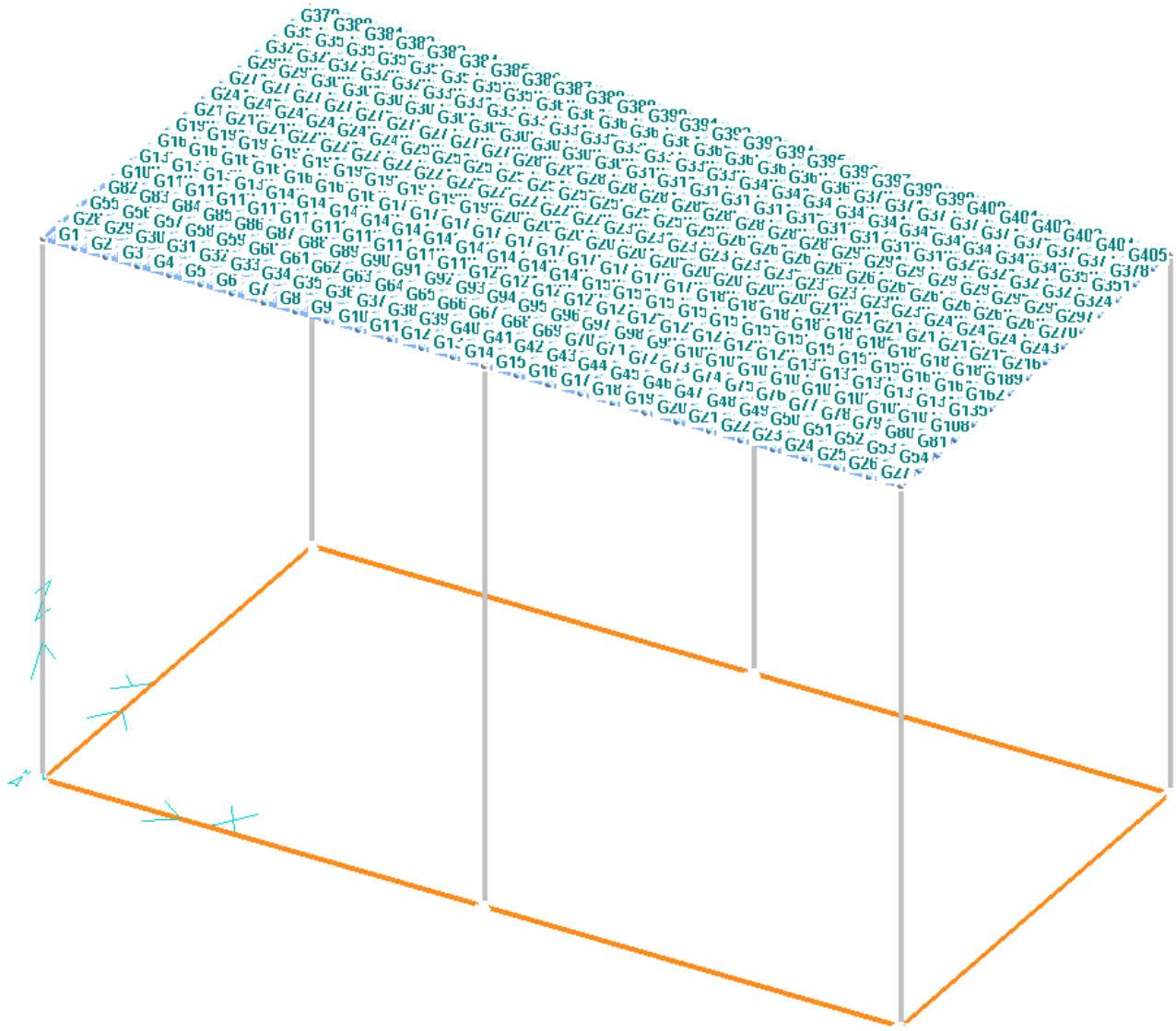


Fig. 6: Numerazione dei gusci del modello matematico di calcolo della struttura.

4. ANALISI DEI CARICHI

Si riporta l'analisi dei carichi relativa alle strutture in progetto. In base a quanto indicato nel D.M. 17/01/2018 tutti i carichi ed i sovraccarichi di esercizio saranno considerati agire staticamente.

4.1 *PESI PROPRI (G1)*

Si assumono i seguenti pesi per unità di volume per i materiali costituenti le strutture:

- Cemento armato	**2500**	**daN/m^3**

Il peso proprio degli elementi strutturali è assegnato automaticamente dai software di calcolo, una volta noti la geometria ed i materiali utilizzati.

4.2 *CARICHI PERMANENTI NON STRUTTURALI (G2)*

4.2.1 *Carichi permanenti copertura*

Si assume un carico permanente di superficie uniformemente distribuito, che tiene conto della stratigrafia presente sulla soletta di copertura e della presenza di impianti appesi o posati su di essa.

$G_{2,cop}$	- Carico permanente portato copertura	**150**	**daN/m^2**

Tali carichi sono applicati all'interno del modello di calcolo tramite la funzione *Carichi gusci*.

4.2.2 *Carichi permanenti tamponamenti perimetrali*

Si assume un carico permanente di linea uniformemente distribuito, che tiene conto della stratigrafia del tamponamento perimetrale.

$G_{2,cop}$	- Carico permanente portato tamponamento	**200**	**daN/m^2**

Tali carichi sono applicati all'interno del modello di calcolo tramite la funzione *Carichi aste*.

A favore di sicurezza, tale carico non viene applicato sulle travi di fondazione, in modo da massimizzarne il momento in campata, ma viene assegnato sul perimetro della soletta di copertura, in modo da tener conto della corrispondente massa sismica.

4.3 *CARICHI VARIABILI (Q)*

4.3.1 *Carichi variabili neve*

Il carico neve sulle coperture è valutato con la seguente espressione, in accordo con il par 3.4 delle NTC2018, con riferimento alla trattazione proposta per *copertura a una falda*:

$$q_s = \mu_i \cdot q_{sk} \cdot C_E \cdot C_t$$

dove:

- q_s è il carico neve sulla copertura;
- μ_i è il coefficiente di forma della copertura;
- q_{sk} è il valore di riferimento del carico neve al suolo.
- C_E è il coefficiente di esposizione;
- C_t è il coefficiente termico;

Il carico agisce in direzione verticale ed è riferito alla proiezione orizzontale della superficie di interesse. Il carico neve al suolo q_{sk} dipende dalle condizioni locali di clima e di esposizione, considerata la variabilità delle precipitazioni nevose da zona a zona.

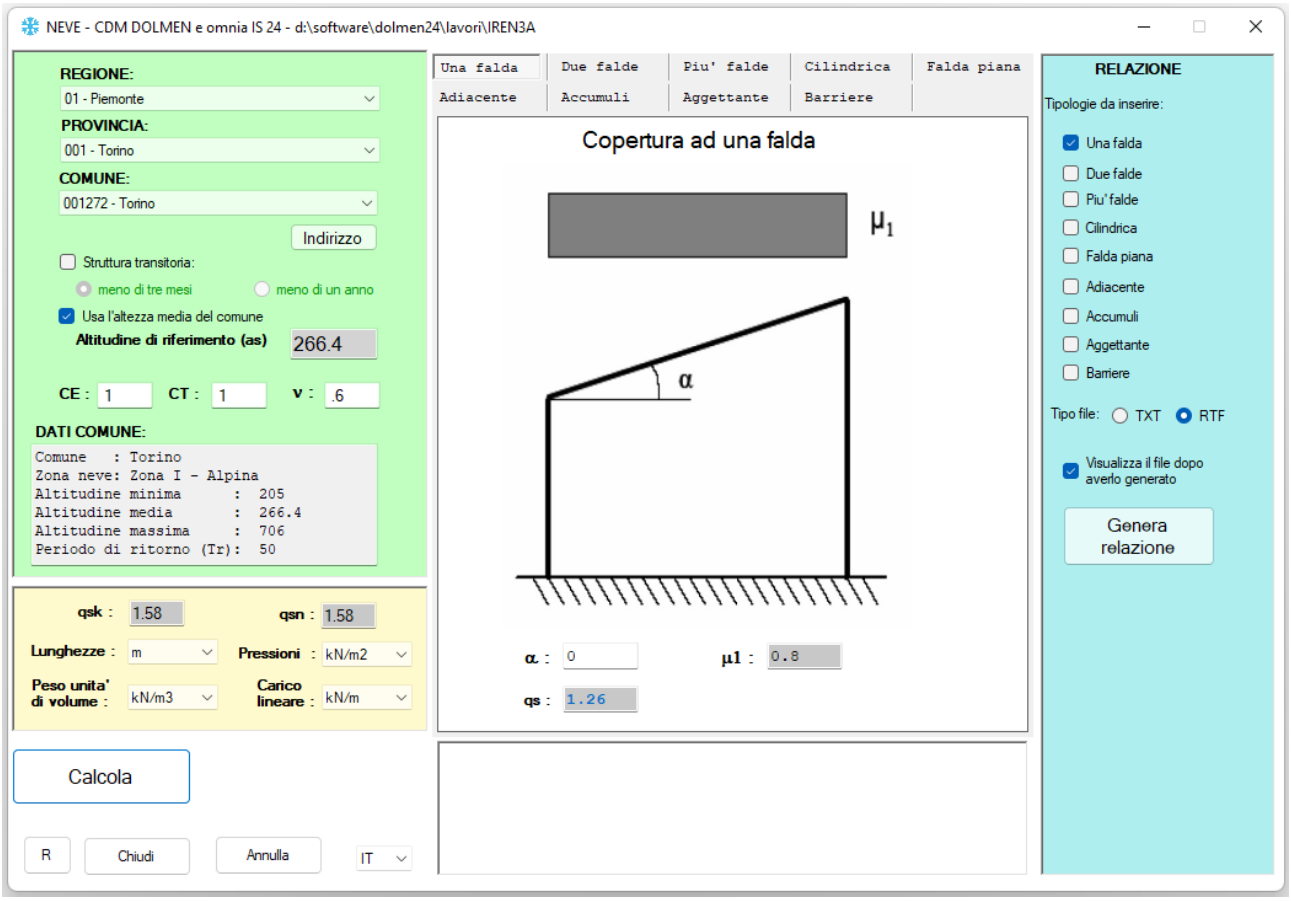


Fig. 7: Pannello dei carichi neve definiti su DOLMEN WIN – caso generale.

Si ricava quanto segue:

- Comune di Torino (TO),
- Zona climatica: Zona 1 Alpina,
- Altitudine: 266.4 m s.l.m.,
- Periodo di ritorno: 50 anni,

- Carico neve al suolo: q_{sk} = 150 daN/m^2,
- Copertura: a due falde,
- Inclinazione rispetto al piano orizzontale: circa 0°,
- Carico neve su copertura (fattore di forma pari a 0.80): q_s = 0.80x150= 120 daN/m^2.

```
Unita' di misura : m ; kN/m2 ; kN/m ; kN/m3 ; gradi sessadecimali
Regione          : Piemonte
Provincia        : Torino
Comune           : Torino
Zona neve        : Zona I - Alpina
Tipo struttura   : non transitoria (Tr=50)

Altitudine di riferimento                  as : 266.4  m
Coefficiente di esposizione [NTC18 3.4.4]   CE : 1
Coefficiente termico        [NTC18 3.4.5]   Ct : 1
Coefficiente di variazione  [NTC18 C3.4.2]   v : 0.6
Carico della neve al suolo non transitorio  qsk : 1.58   kN/m2
Carico della neve al suolo transitorio      qsn : 1.58   kN/m2

2.1 - Copertura ad una falda [3.4.3.2]

Angolo formato dalla falda con l'orizzontale            alfa : 0
Valore del coefficiente di forma                         mu1 : 0.8
Carico della neve sulla copertura                         qs : 1.26   kN/m2
```

Per tener conto di un eventuale accumulo, si assume un carico neve pari a:

Q_{nev}	- Carico variabile neve	**150**	**daN/m^2**

Tali carichi sono applicati all'interno del modello di calcolo tramite la funzione *Carichi gusci*.

4.3.2 *Carichi variabili vento*

Il carico vento massimo di progetto agente sulle pareti di tamponamento è valutato con la seguente espressione, in accordo con il par 3.3 delle NTC2018, con riferimento alla trattazione proposta per *edifici a pianta rettangolare non stagni*:

$$q_{vento} = q_{ref} \cdot c_e \cdot c_d \cdot c_p$$

dove:

- q_{ref} è la pressione cinetica di riferimento;
- c_e è il coefficiente di esposizione;
- c_d è il coefficiente dinamico con il quale si tiene conto degli effetti riduttivi associati alla non contemporaneità delle massime pressioni locali e degli effetti amplificativi dovuti alle vibrazioni strutturali;
- c_p è il coefficiente di forma (o coefficiente aerodinamico), che risulta funzione della tipologia e della geometria della costruzione e del suo orientamento rispetto alla direzione del vento.

Si ricava quanto segue:

Comune di Torino (TO),

Zona Climatica: Zona 1,

Altitudine: 239 m s.l.m.,

Periodo di Ritorno [anni]: 50,

Classe di rugosità del terreno: B,

Distanza dalla costa [km]: 100,

Tipologia di costruzione: Edifici a pianta rettangolare, non stagne,

v_{ref} (velocità di riferimento) = 25 m/s,

q_{ref} (pressione cinetica di riferimento) = 390.625 N/m^2 = 0.00390625 daN/cm^2,

c_d (coefficiente dinamico) = 1.

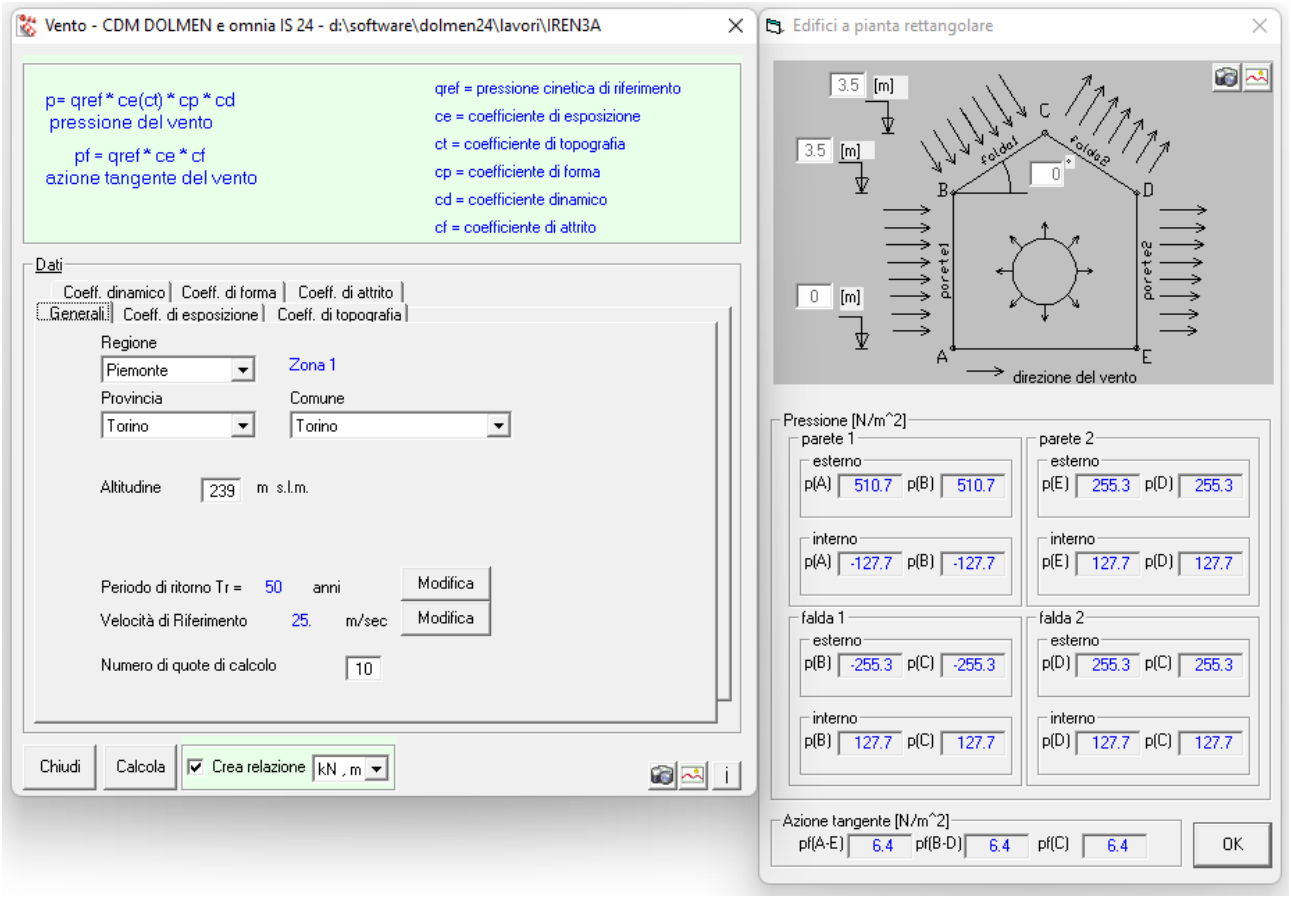


Fig. 8: Pannello dei carichi vento definiti su DOLMEN WIN.

```
VENTO                    lavoro : IREN3A
Unità di misura :  m ; KN/mq ; m/s

Convenzione di segno:
(+) compressione
(-) decompressione

Zona 1
Altitudine: 239
Periodo di Ritorno [anni]: 50
Classe di rugosità del terreno:B
Distanza dalla costa [km]: 100
Categoria di esposizione del sito: 4
Tipologia di costruzione:Edifici a pianta rettangolare con coperture piane a falde inclinate o curve

vref (velocità di riferimento) =    25.
qref (pressione cinetica di riferimento) =    .3906
cd (coefficiente dinamico) =  1.
cf (coefficiente d' attrito) =   .01

   |P.to|  z    | ct(z)| ce(z)| par.1 esterno   | par.1 interno  |
                                | cp    | p(z)    | cp    | p(z)   |
 1|A   |   0.  |1.    |1.6342|  .8   |   .5107| -.2   |  -.1277|
 2|    |    .39|1.    |1.6342|  .8   |   .5107| -.2   |  -.1277|
 3|    |    .78|1.    |1.6342|  .8   |   .5107| -.2   |  -.1277|
 4|    |   1.17|1.    |1.6342|  .8   |   .5107| -.2   |  -.1277|
 5|    |   1.56|1.    |1.6342|  .8   |   .5107| -.2   |  -.1277|
 6|    |   1.94|1.    |1.6342|  .8   |   .5107| -.2   |  -.1277|
 7|    |   2.33|1.    |1.6342|  .8   |   .5107| -.2   |  -.1277|
```

8		2.72	1.	1.6342	.8	.5107	-.2	-.1277
9		3.11	1.	1.6342	.8	.5107	-.2	-.1277
10	B	3.5	1.	1.6342	.8	.5107	-.2	-.1277

	P.to	z	ct(z)	ce(z)	par.2 esterno		par.2 interno	
					cp	p(z)	cp	p(z)
1	E	0.	1.	1.6342	-.4	-.2553	.2	.1277
2		.39	1.	1.6342	-.4	-.2553	.2	.1277
3		.78	1.	1.6342	-.4	-.2553	.2	.1277
4		1.17	1.	1.6342	-.4	-.2553	.2	.1277
5		1.56	1.	1.6342	-.4	-.2553	.2	.1277
6		1.94	1.	1.6342	-.4	-.2553	.2	.1277
7		2.33	1.	1.6342	-.4	-.2553	.2	.1277
8		2.72	1.	1.6342	-.4	-.2553	.2	.1277
9		3.11	1.	1.6342	-.4	-.2553	.2	.1277
10	D	3.5	1.	1.6342	-.4	-.2553	.2	.1277

	P.to	z	ct(z)	ce(z)	fal.1 esterno		fal.1 interno	
					cp	p(z)	cp	p(z)
10	B	3.5	0.	1.6342	-.4	-.2553	.2	.1277
11		3.5	0.	1.6342	-.4	-.2553	.2	.1277
12		3.5	0.	1.6342	-.4	-.2553	.2	.1277
13		3.5	0.	1.6342	-.4	-.2553	.2	.1277
14		3.5	0.	1.6342	-.4	-.2553	.2	.1277
15		3.5	0.	1.6342	-.4	-.2553	.2	.1277
16		3.5	0.	1.6342	-.4	-.2553	.2	.1277
17		3.5	0.	1.6342	-.4	-.2553	.2	.1277
18		3.5	0.	1.6342	-.4	-.2553	.2	.1277
19	C	3.5	0.	1.6342	-.4	-.2553	.2	.1277

	P.to	z	ct(z)	ce(z)	fal.2 esterno		fal.2 interno	
					cp	p(z)	cp	p(z)
10	D	3.5	0.	1.6342	-.4	-.2553	.2	.1277
11		3.5	0.	1.6342	-.4	-.2553	.2	.1277
12		3.5	0.	1.6342	-.4	-.2553	.2	.1277
13		3.5	0.	1.6342	-.4	-.2553	.2	.1277
14		3.5	0.	1.6342	-.4	-.2553	.2	.1277
15		3.5	0.	1.6342	-.4	-.2553	.2	.1277
16		3.5	0.	1.6342	-.4	-.2553	.2	.1277
17		3.5	0.	1.6342	-.4	-.2553	.2	.1277
18		3.5	0.	1.6342	-.4	-.2553	.2	.1277
19	C	3.5	0.	1.6342	-.4	-.2553	.2	.1277

	P.to	z	pf(z)
1	A-E	0.	.0064
2		.39	.0064
3		.78	.0064
4		1.17	.0064
5		1.56	.0064
6		1.94	.0064
7		2.33	.0064
8		2.72	.0064
9		3.11	.0064
10	B-D	3.5	.0064
11		3.5	.0064
12		3.5	.0064
13		3.5	.0064
14		3.5	.0064
15		3.5	.0064
16		3.5	.0064
17		3.5	.0064
18		3.5	.0064
19	C	3.5	.0064

Nei calcoli di verifica, si farà cautelativamente riferimento ad un carico vento pari a:

$Q_{par,vsp}$	- Carico variabile vento copertura	**+65 / -39**	**daN/m^2**

I valori di segno "+" e "–" sono riferiti alla condizione di esposizione sopravento o sottovento della superficie considerata. Il segno "–" nelle tabelle precedenti sta a significare in particolare che il carico risulta applicato con verso uscente dalle superfici suddette, cioè dall'interno del fabbricato verso l'esterno.

Tali carichi sono applicati all'interno del modello di calcolo tramite la funzione *Carichi aste*.

4.4 *CARICHI SISMICI (E)*

L'analisi sismica è eseguita individuando prima di tutto le condizioni di carico da utilizzare per la definizione delle masse, che corrispondono a quelle individuate nella combinazione quasi permanente delle azioni.

4.4.1 *Analisi dinamica modale*

Si riporta il tabulato di calcolo, fornito da *DOLMEN WIN* per l'analisi dinamica eseguita. Il software restituisce coordinate del sito lievemente differenti da quelle esplicitate nella relazione tecnica, ma ai fini dell'analisi sismica le differenze in termini di spettro di risposta si possono ritenere trascurabili.

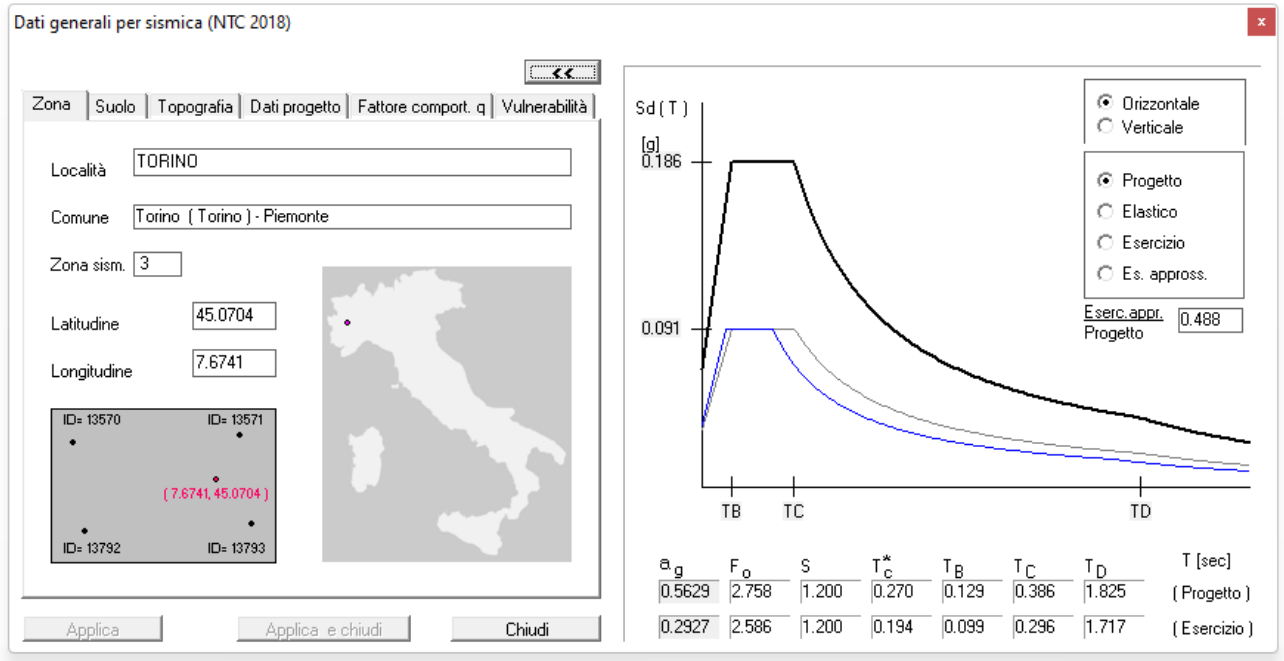


Fig. 9: Spettro di risposta di progetto definiti su DOLMEN WIN.

```
ANALISI DINAMICA                          lavoro :\IREN3A

PARAMETRI DI CALCOLO:

Modello generale
Assi di vibrazione:   X   Y
Combinazione quadratica completa (CQC)

DATI PROGETTO

Edificio  sito in località  TORINO ( long. 7.674100   lat. 45.070400 )

Categoria del suolo di fondazione  = B

Coeff. di amplificazione stratigrafica Ss = 1.200

Coeff. di amplificazione topografica   ST = 1.000

S   =  1.200

Vita nominale dell'opera VN     = 50  anni

Coefficiente d'uso CU           = 1.0

Periodo di riferimento VR       = 50.0

PVR : probabilita' di superamento  in VR   = 10 %

Tempo di ritorno                = 474

Coeff. di smorzamento viscoso   = 5.0

Valori risultanti per :
ag  0.563  [g/10]
Fo  2.758
TC* 0.270

Fattore di comportamento q         = 1.000

Rapporto spettro di esercizio / spettro di progetto   = 0.488

CONDIZIONI DI RIFERIMENTO   COEFFICIENTE       PESO RISULTANTE
```

```
                                                    [daN]
                1.                1.000             17015.6
                2.                1.000              3881.2
                4.                1.000              6390.0

                  ***  TABELLA AUTOVETTORI  ***

 n | PERIODO  |      MASSA ATTIVATA     |        COEFFICIENTI DI CORRELAZIONE
   |  [sec]   |    %X      %Y     %Z    |   n+1    n+2    n+3    n+4    n+5    n+6    n+7
 1 | 0.657420 |   0.000  99.984   0.000 |  0.680
 2 | 0.613872 | 100.000   0.000   0.000 |
-----------------------------------------
   MASSA TOTALE 100.000  99.984   0.000 |
-----------------------------------------
```

Si riporta in seguito il tabulato dell'ellisse delle rigidezze.

```
CONTROLLO RIGIDEZZE STRUTTURALI

Quota del piano       |    435.0 |[cm]

Rigidezza KX (/1000)  |    2.697 |[daN/cm]
Rigidezza KY (/1000)  |    2.351 |[daN/cm]

Rigidezza Ktors (/1e6)|      320 |[daNcm]

Xk (centro rigidezze) |    348.6 |[cm]
Yk (centro rigidezze) |    187.5 |[cm]

Xg (baricentro)       |    345.3 |[cm]
Yg (baricentro)       |    187.5 |[cm]

dimensione X          |      690 |[cm]
dimensione Y          |      375 |[cm]
raggio rigidezza (rx) |      369 |[cm]
raggio rigidezza (ry) |      344 |[cm]
raggio giratorio (ls) |      227 |[cm]

MIN(rx , ry) / ls     |   1.5185 | ok (> 1)

(Xg - Xk) / rx        |   0.0088 | ok (< 0.3)
(Yg - Yk) / ry        |   0.0000 | ok (< 0.3)

2° ordine (theta X)   |     2.15 |[%] ok (< 10%)
2° ordine (theta Y)   |     2.47 |[%] ok (< 10%)

Percentuale dinamica X|   100.00 |[%]

Percentuale dinamica Y|   100.00 |[%]
```

Le linee riportate in grassetto evidenziano che la struttura si può considerare non deformabile dal punto di vista torsionale, regolare in pianta e con effetti del 2° ordine trascurabili.

5. RISULTATI DELL'ANALISI ESEGUITA CON IL CODICE DI CALCOLO

5.1 *INVILUPPI RESTITUITI DAL SOFTWARE DI CALCOLO*

I dimensionamenti e le verifiche degli elementi costituenti le strutture in esame, di cui al cap. 6, sono condotti a partire dagli inviluppi delle sollecitazioni agenti e degli spostamenti, ricavati dall'analisi eseguita sulla modellazione di calcolo combinando le condizioni di carico definite in precedenza, nel rispetto delle indicazioni riportate nei paragrafi 4 e 7 delle NTC2018.

Per quanto riguarda le aste presenti, si riportano i diagrammi di inviluppo a SLU di momento flettente, taglio e sforzo normale, in condizioni statiche ed in presenza di sisma. Si fa riferimento alle convezioni di rappresentazione delle aste del software di calcolo *DOLMEN*, in cui gli elementi asta sono identificati definendo una terna locale x,y,z, dove la retta x individua l'asse dell'elemento, la retta z rappresenta l'asse giacente sul piano orizzontale e la retta y completa la terna destrorsa. Ai fini della lettura delle sollecitazioni agenti, con Mi si intende il momento flettente che agisce sul piano locale ortogonale all'asse i e con Ti il taglio agente lungo la direzione i.

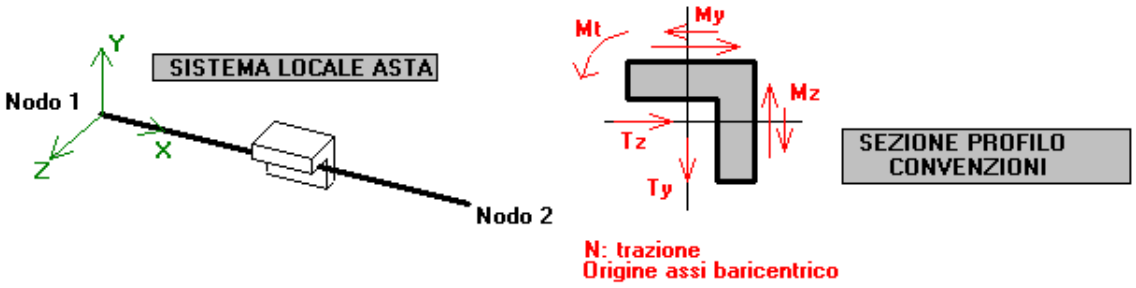


Fig. 10: Convenzione assi aste.

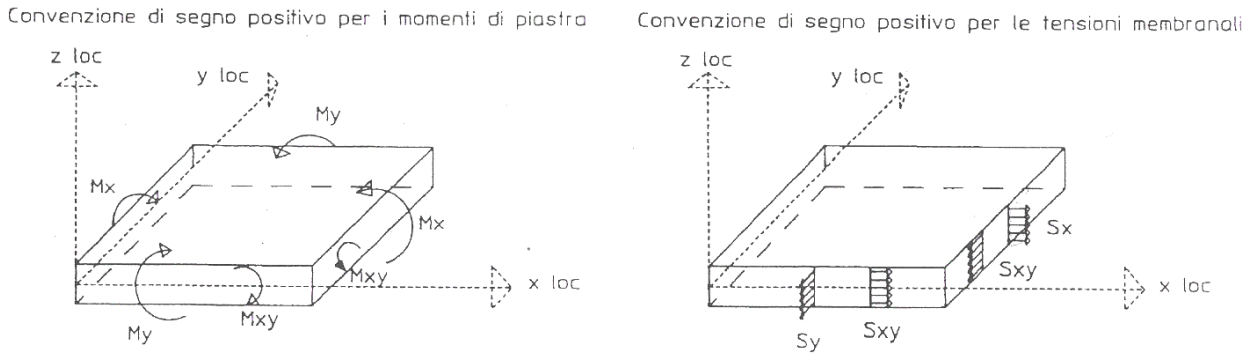


Fig. 11: Convenzione assi gusci.

Per quanto riguarda i gusci presenti nel modello, si riportano i diagrammi di inviluppo a SLU delle sollecitazioni di momento flettente, in condizioni statiche ed in presenza di sisma. Si definisce anche in tal caso una terna locale x,y,z, in cui la retta z è ortogonale al piano del guscio, la retta x è collocata sul piano orizzontale XY e la retta y completa la terna destrorsa. Ai fini della lettura delle

sollecitazioni agenti, con Mii si intende il momento flettente che sollecita le fibre lungo l'asse i.

Si riportano, inoltre, i diagrammi di inviluppo a SLE degli spostamenti verticali e orizzontali, in condizioni statiche, ricavati tenendo conto dei cedimenti subiti dalle strutture di fondazione.

5.2 *RISULTATI DELL'ANALISI*

5.2.1 *Inviluppo delle sollecitazioni agli S.L.U. statici (casi S.L.U. 1 – 8)*

Si riportano i diagrammi di inviluppo delle sollecitazioni agenti ricavate dalla modellazione di calcolo per le diverse combinazioni di carico a SLU considerate.

5.2.1.1 Momento flettente

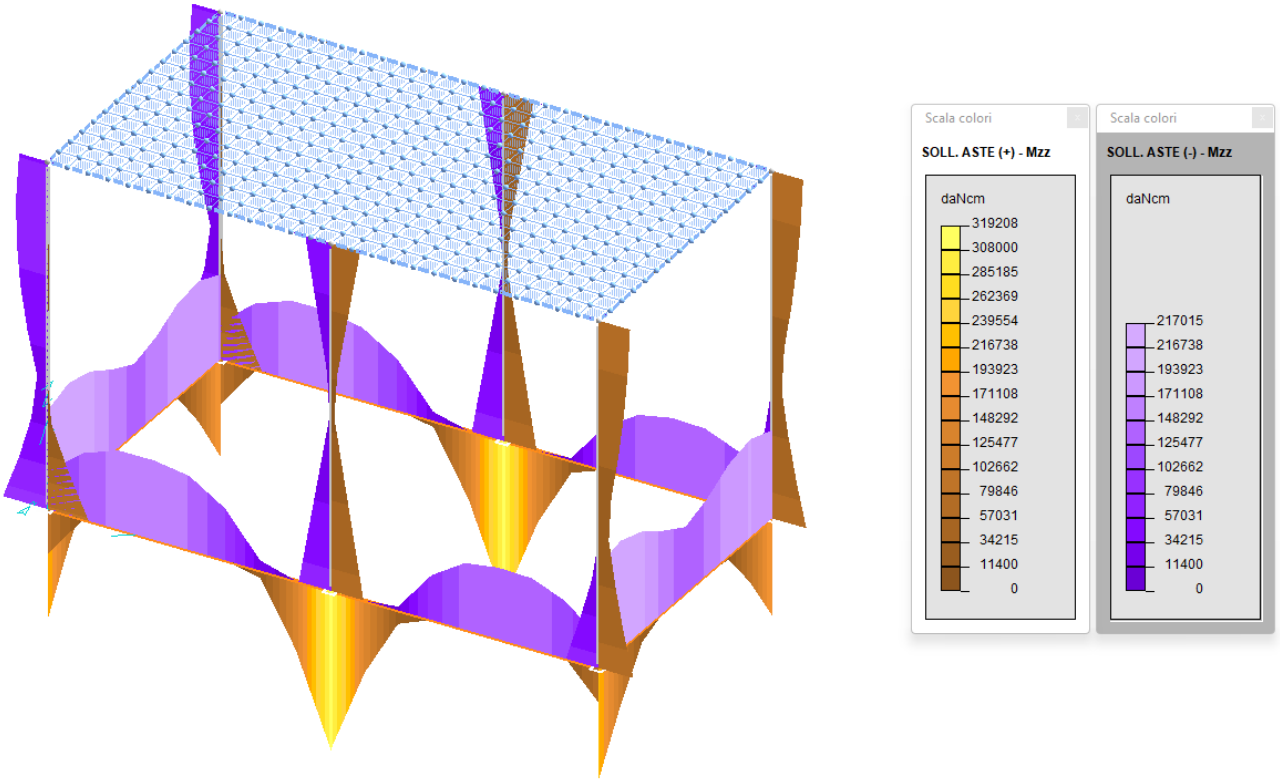


Fig. 12: Inviluppo diagrammi momento flettente Mzz (valori in daNcm).

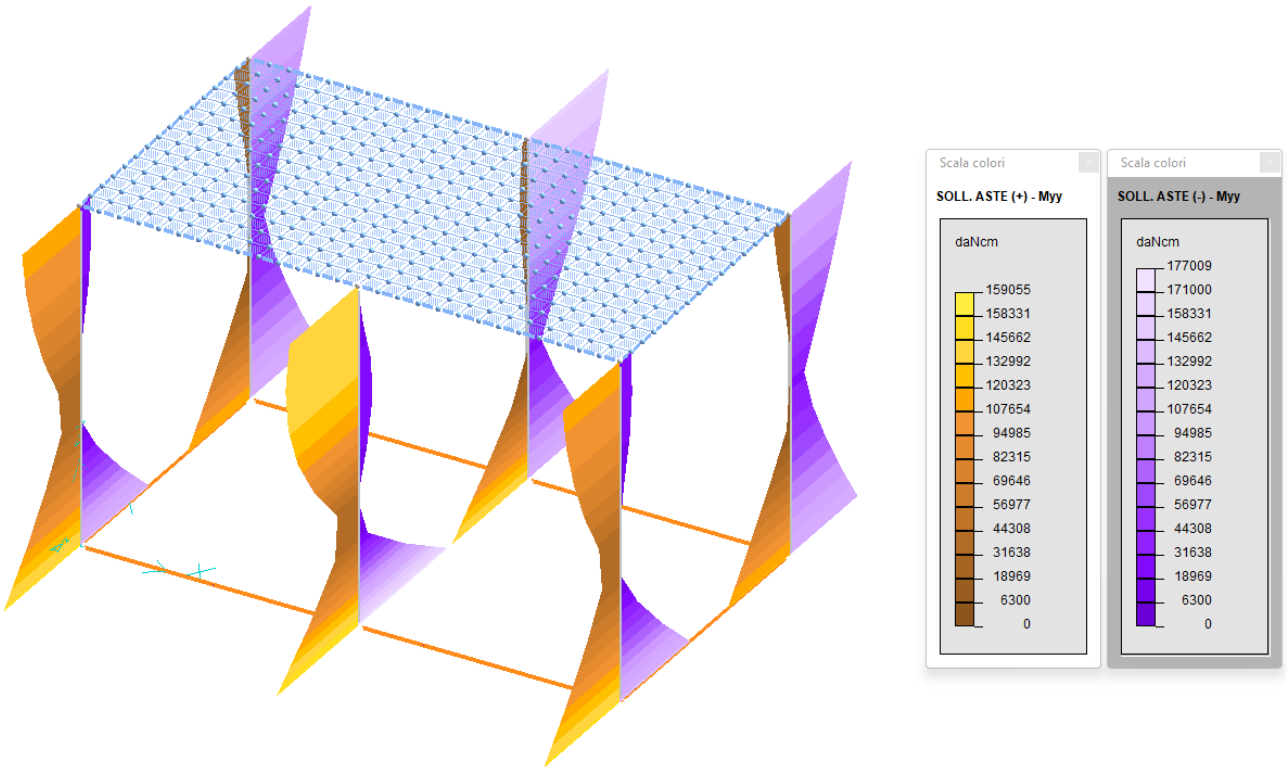


Fig. 13: Inviluppo diagrammi momento flettente Myy (valori in daNcm).

5.2.1.2 Taglio

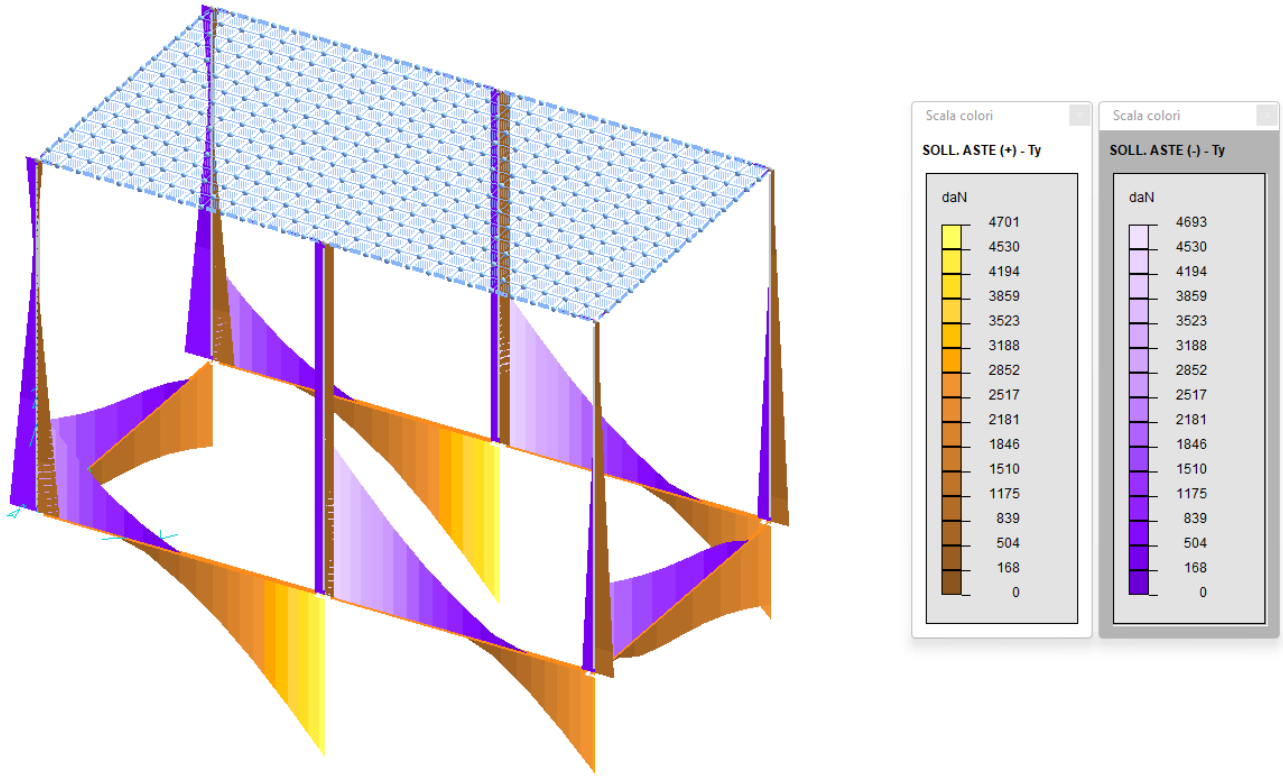


Fig. 14: Inviluppo diagrammi taglio Ty (valori in daN).

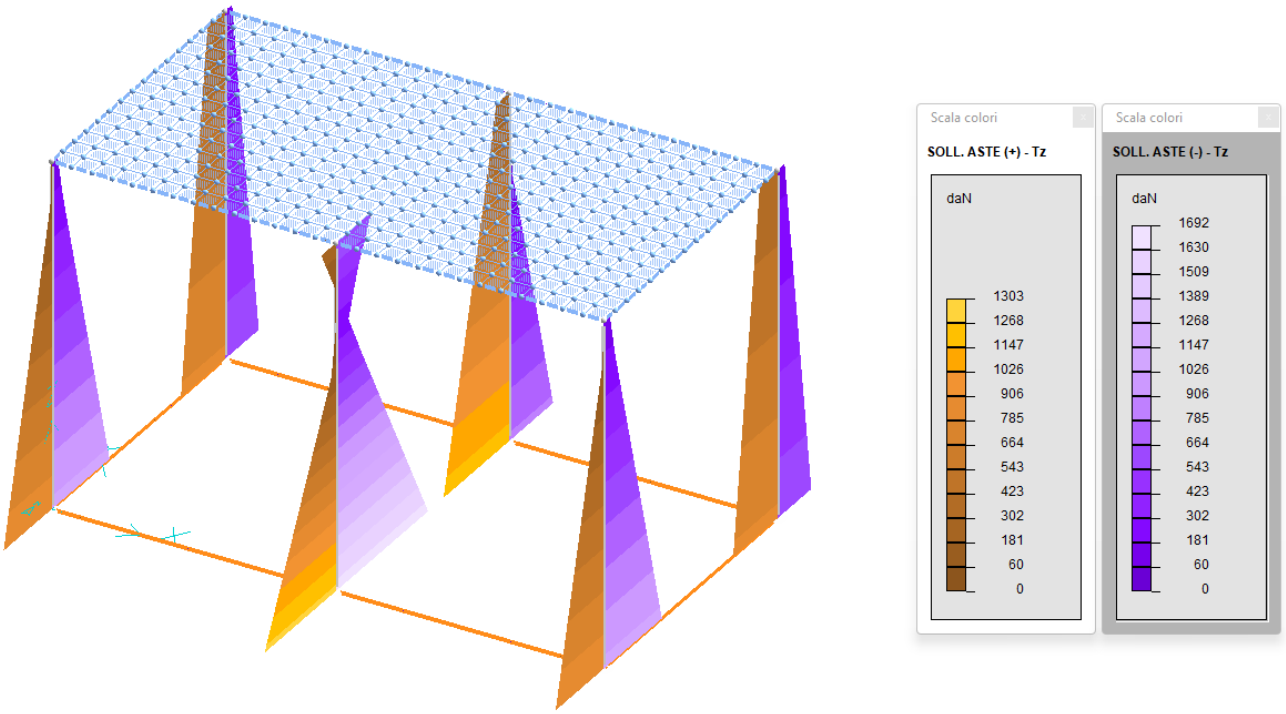


Fig. 15: Inviluppo diagrammi taglio Tz (valori in daN).

5.2.1.3 Sforzo normale

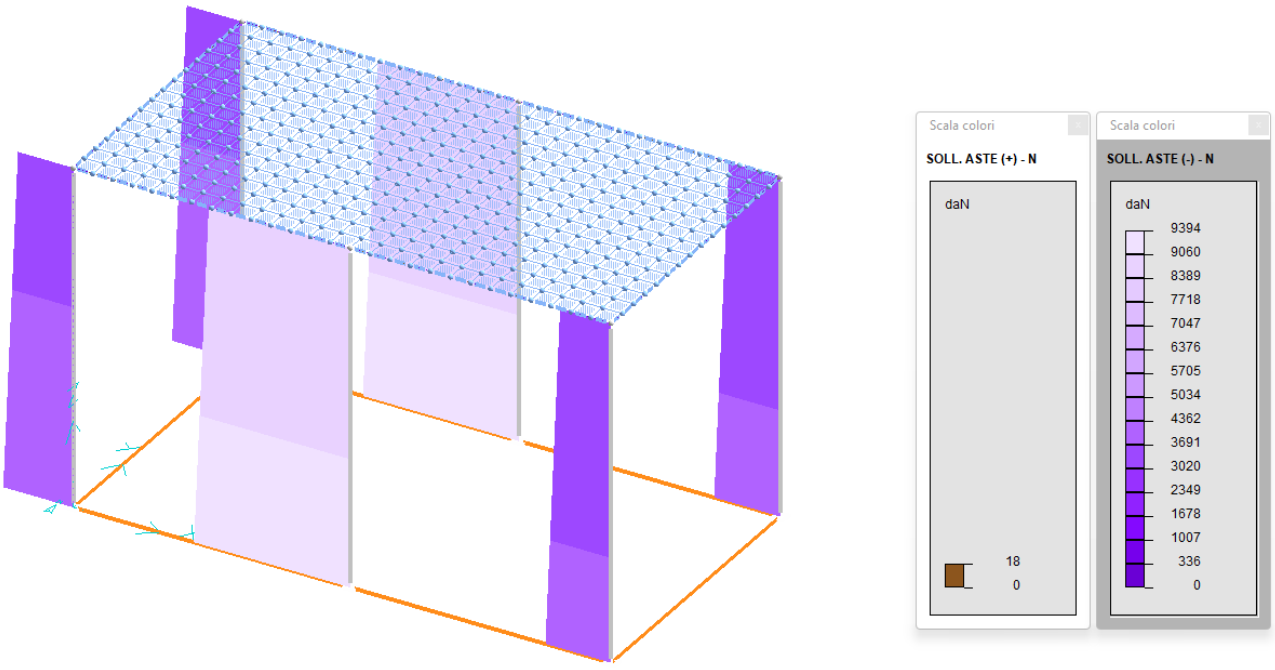


Fig. 16: Inviluppo diagrammi sforzo normale N (valori in daN).

5.2.1.4 Momento flettente gusci

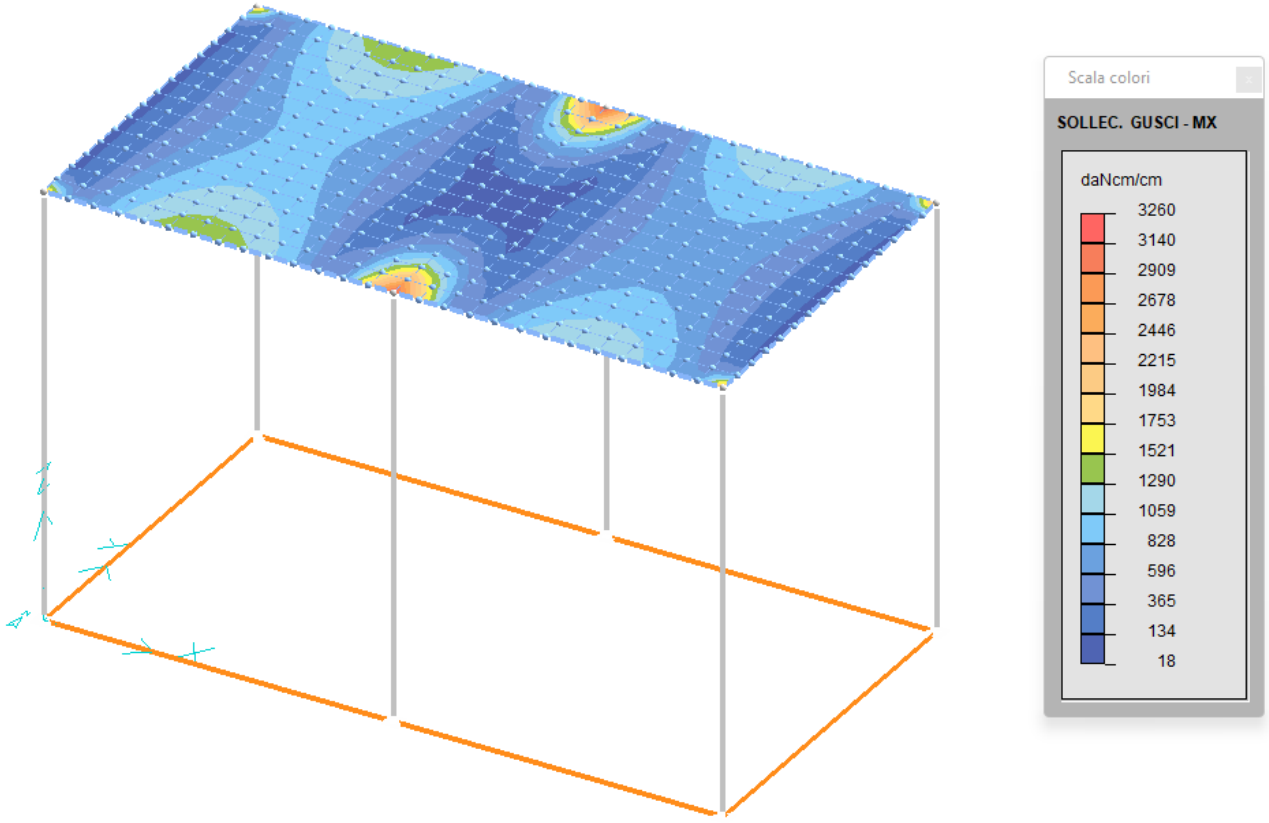


Fig. 17: Inviluppo diagrammi momento flettente Mxx (valori in daNcm/cm).

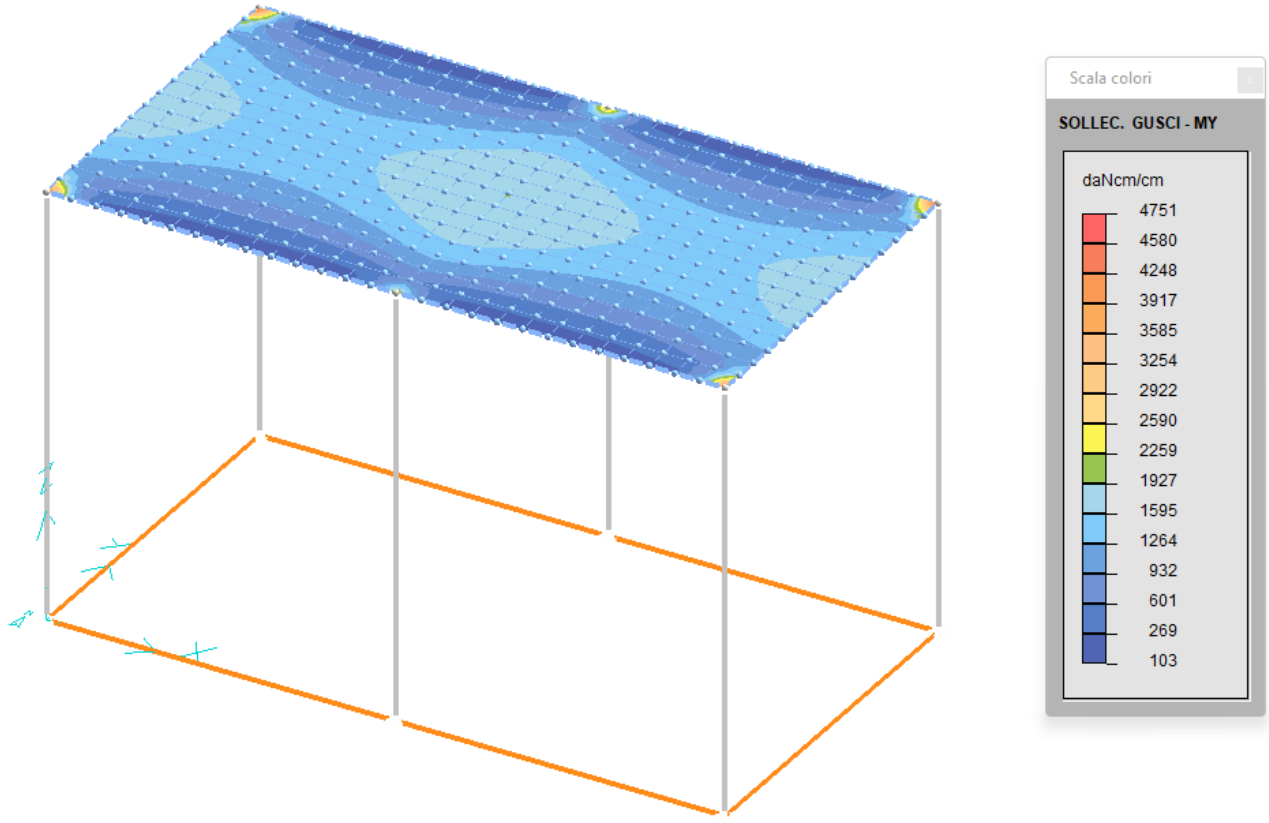


Fig. 18: Inviluppo diagrammi momento flettente Myy (valori in daNcm/cm).

5.2.2 *Inviluppo delle sollecitazioni agli S.L.U. sismici (casi S.L.V. 12 – 13)*

Si riportano i diagrammi di inviluppo delle sollecitazioni agenti ricavate dalla modellazione di calcolo per le diverse combinazioni di carico a SLV considerate.

5.2.2.1 Momento flettente

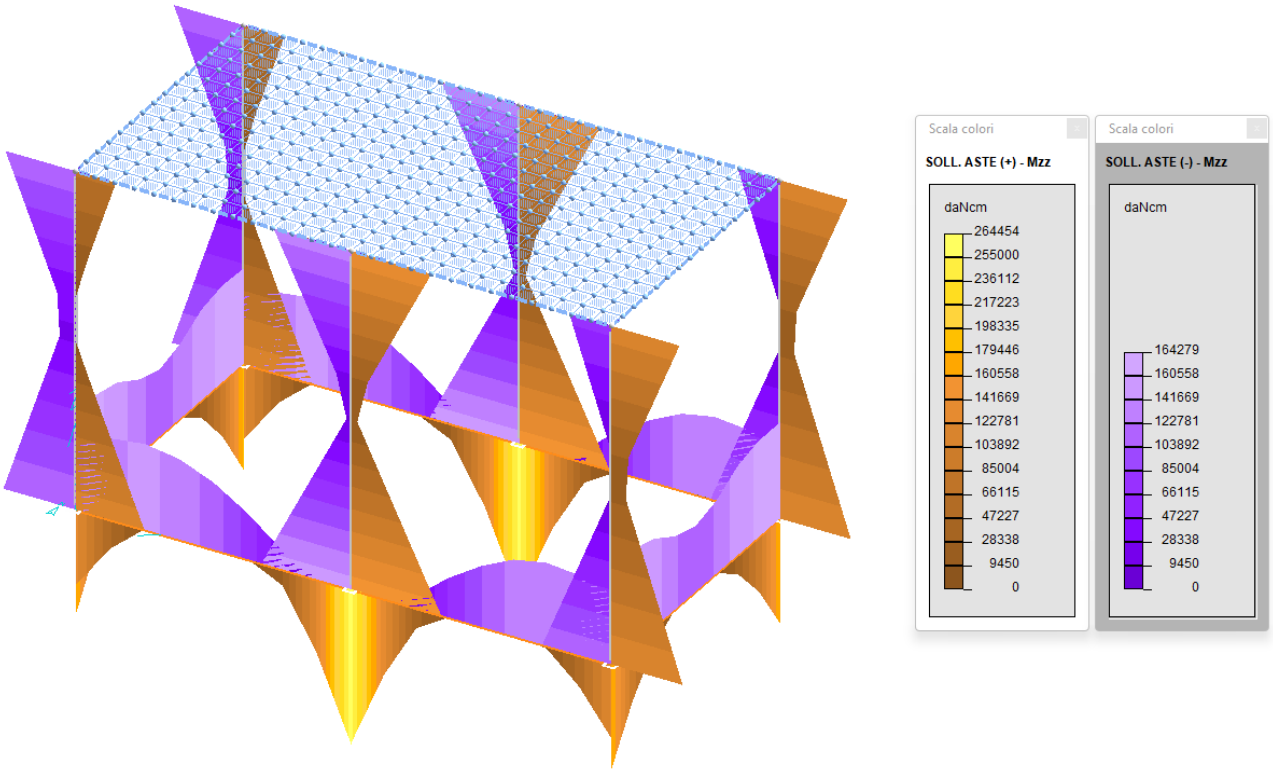


Fig. 19: Inviluppo diagrammi momento flettente Mzz (valori in daNcm).

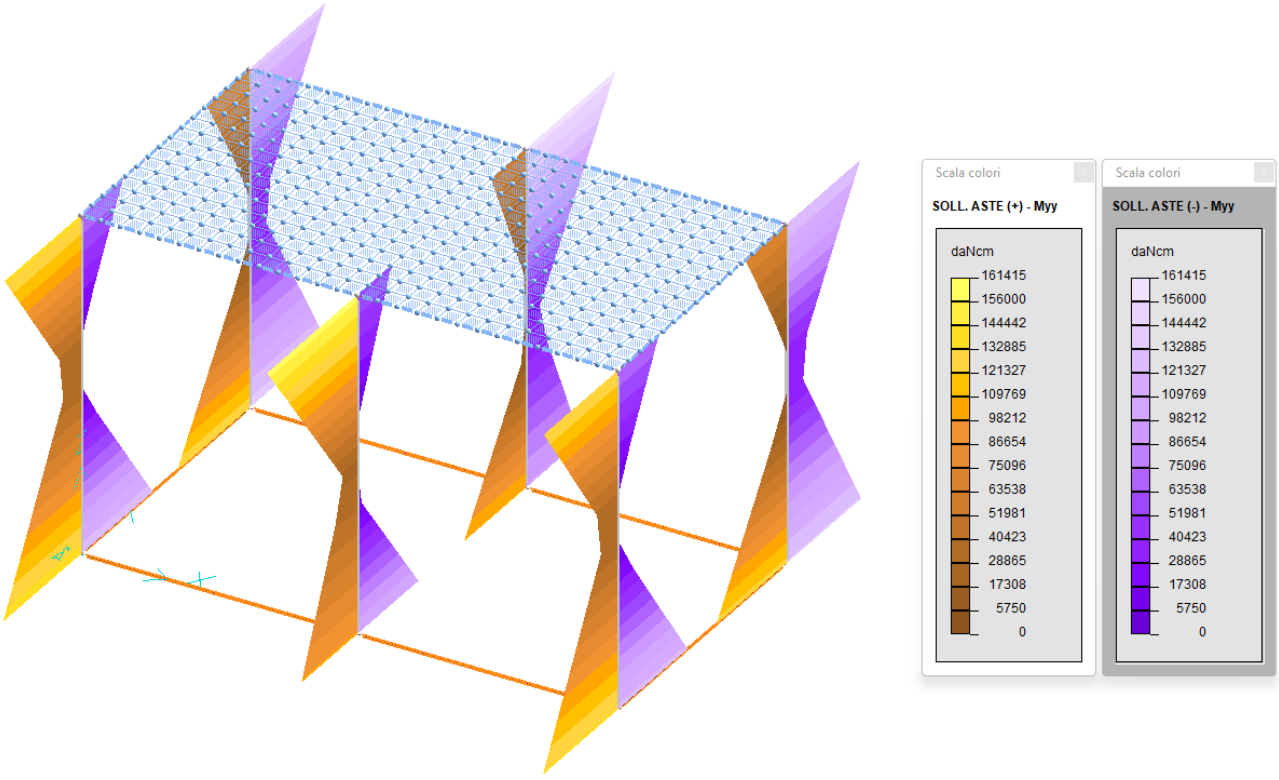


Fig. 20: Inviluppo diagrammi momento flettente Myy (valori in daNcm).

5.2.2.2 Taglio

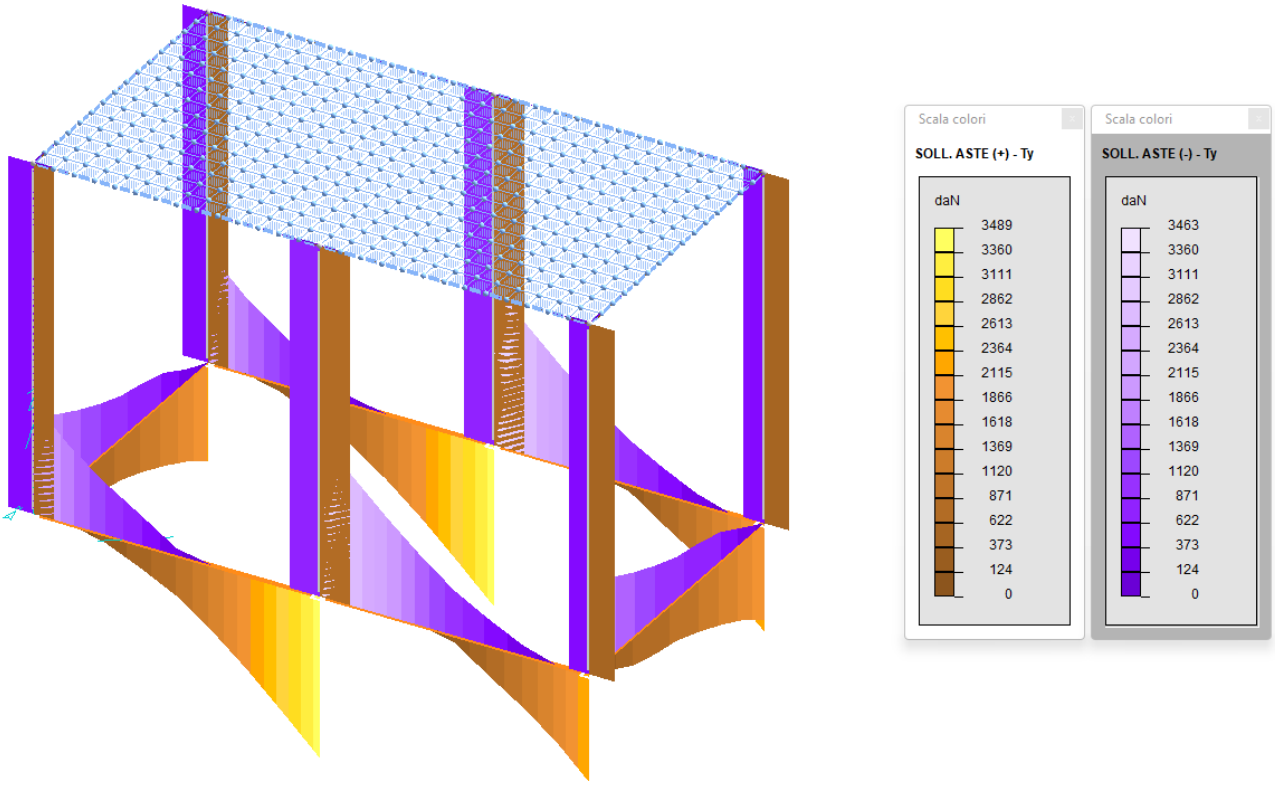


Fig. 21: Inviluppo diagrammi taglio Ty (valori in daN).

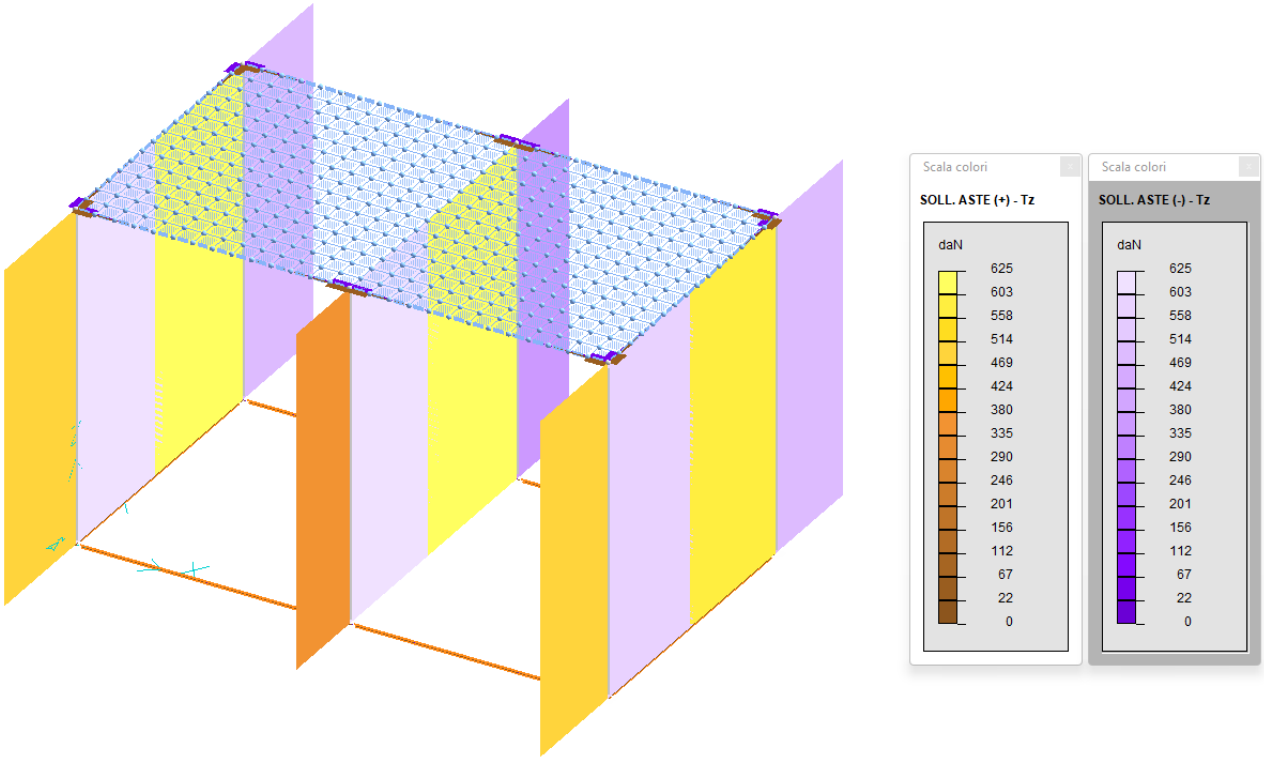


Fig. 22: Inviluppo diagrammi taglio Tz (valori in daN).

5.2.2.3 *Sforzo normale*

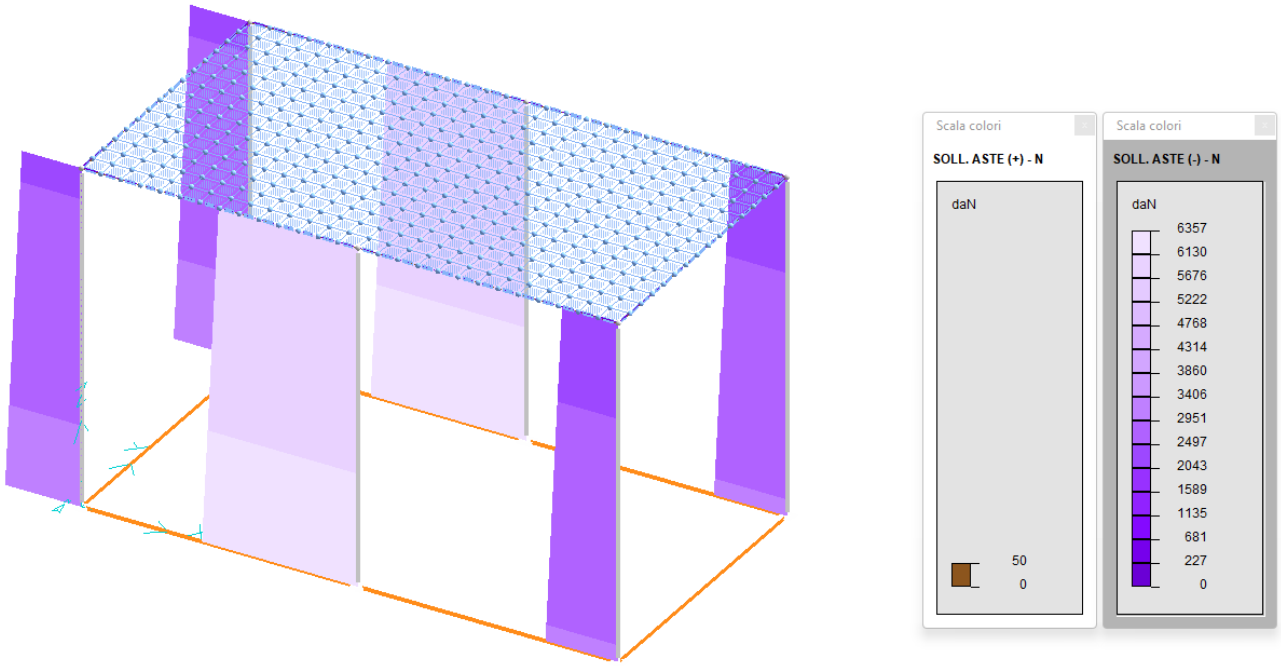


Fig. 23: Inviluppo diagrammi sforzo normale N (valori in daN).

5.2.2.4 *Momento flettente gusci*

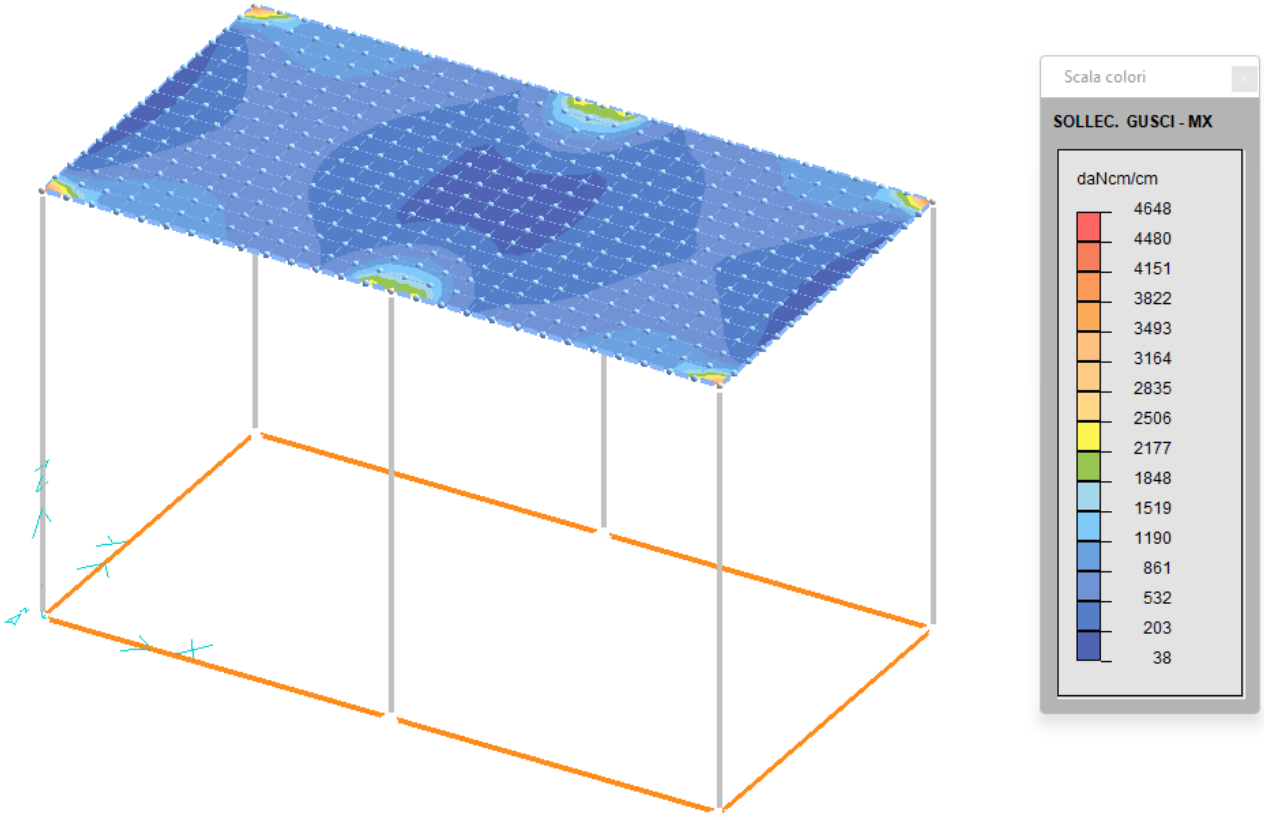


Fig. 24: Inviluppo diagrammi momento flettente Mxx (valori in daNcm/cm).

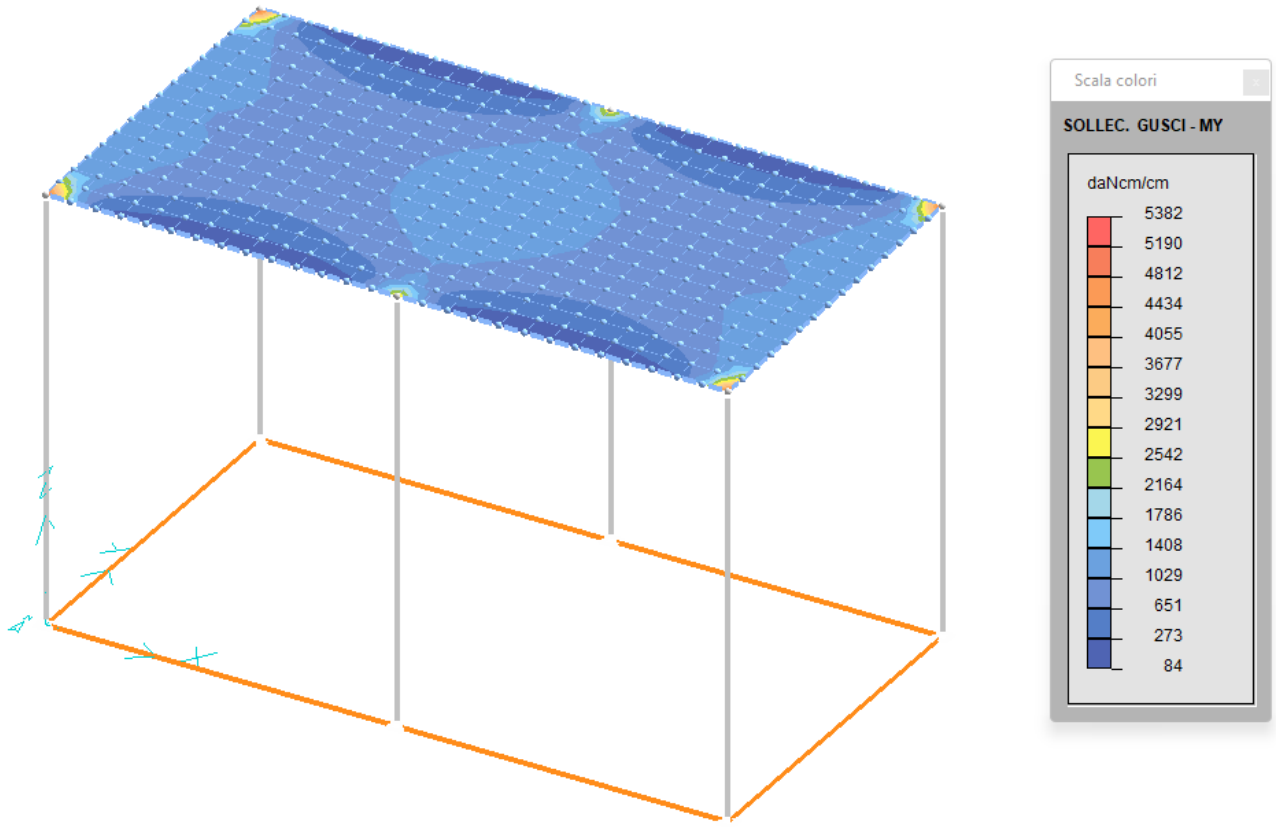


Fig. 25: Inviluppo diagrammi momento flettente Myy (valori in daNcm/cm).

5.2.3 *Inviluppo degli spostamenti agli S.L.E. statici (casi S.L.E. 15 – 26)*

Si riportano i diagrammi di inviluppo degli spostamenti ricavati dalla modellazione di calcolo per le diverse combinazioni di carico a SLE considerate.

5.2.3.1 *Spostamenti verticali assoluti*

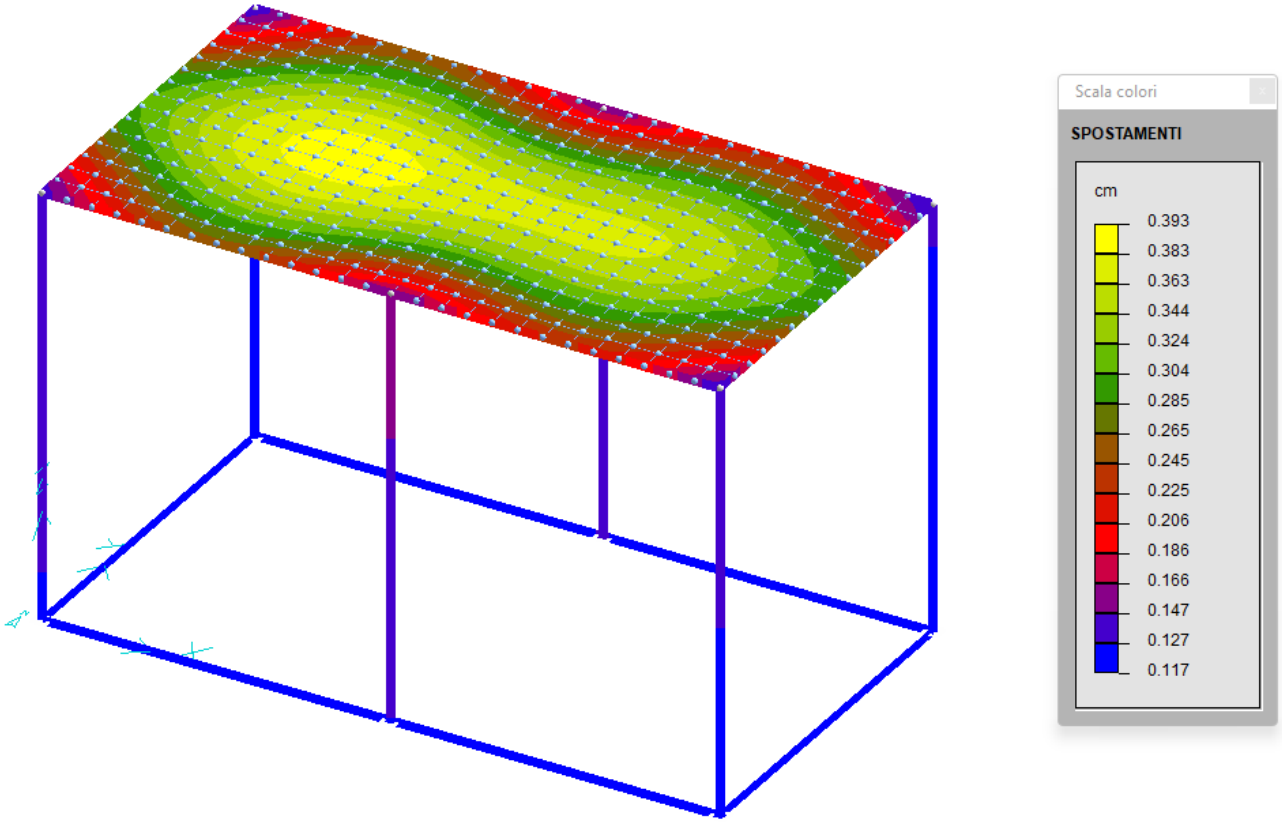


Fig. 26: Inviluppo diagrammi spostamenti verticali assoluti (valori in cm).

5.2.3.2 *Cedimenti strutture di fondazione*

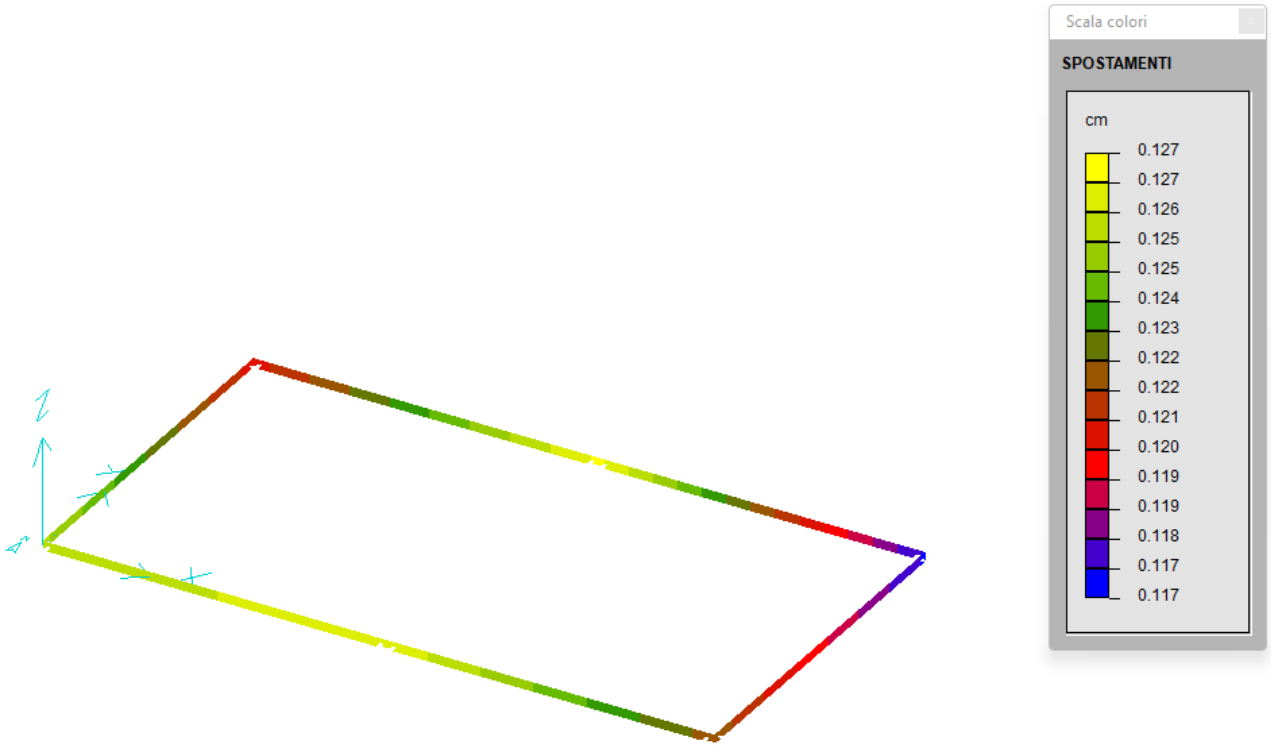


Fig. 27: Inviluppo diagrammi cedimenti strutture di fondazione (valori in cm).

5.2.3.3 Spostamenti orizzontali

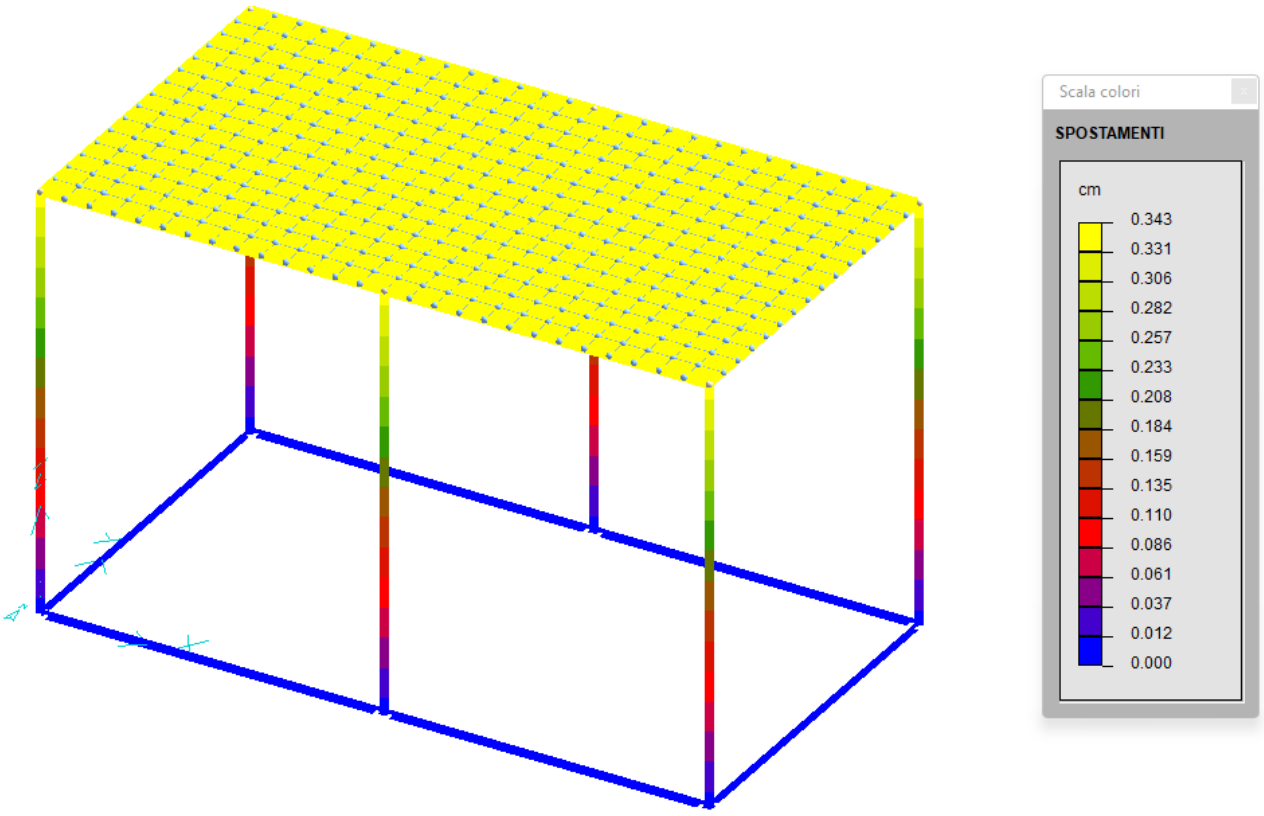


Fig. 28: Inviluppo diagrammi spostamenti orizzontali lungo X (valori in cm).

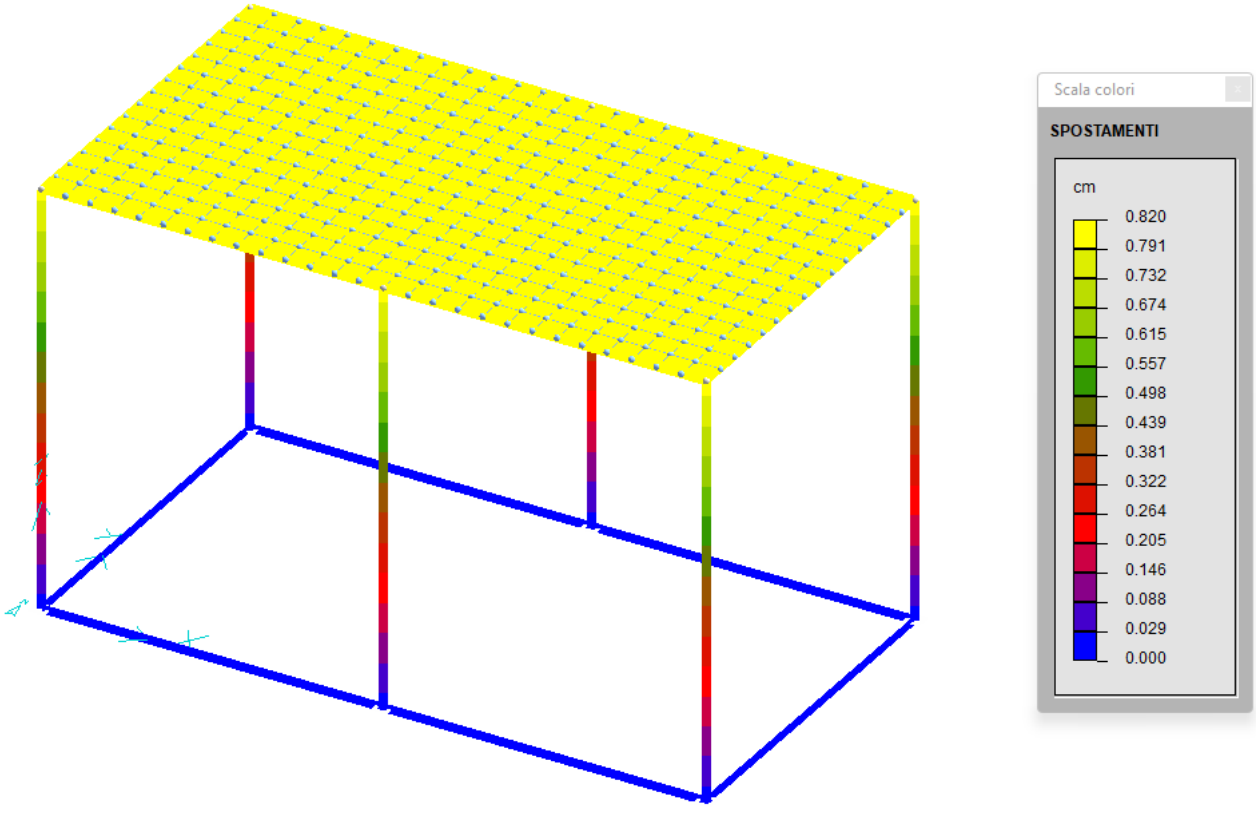


Fig. 29: Inviluppo diagrammi spostamenti orizzontali lungo Y (valori in cm).

6. DIMENSIONAMENTO E VERIFICA STRUTTURE

I dimensionamenti e le verifiche degli elementi costituenti le strutture in esame sono condotti a partire dagli inviluppi delle sollecitazioni agenti e degli spostamenti, riportati al cap. 5, nel rispetto delle indicazioni riportate nei paragrafi 4 e 7 delle NTC2018.

6.1 *VERIFICHE GEOTECNICHE*

6.1.1 *Verifiche a SLU e a SLV della capacità portante*

Si riporta il diagramma delle pressioni sul terreno di fondazione a SLU, dato dall'inviluppo di tutti i casi di carico statici e sismici.

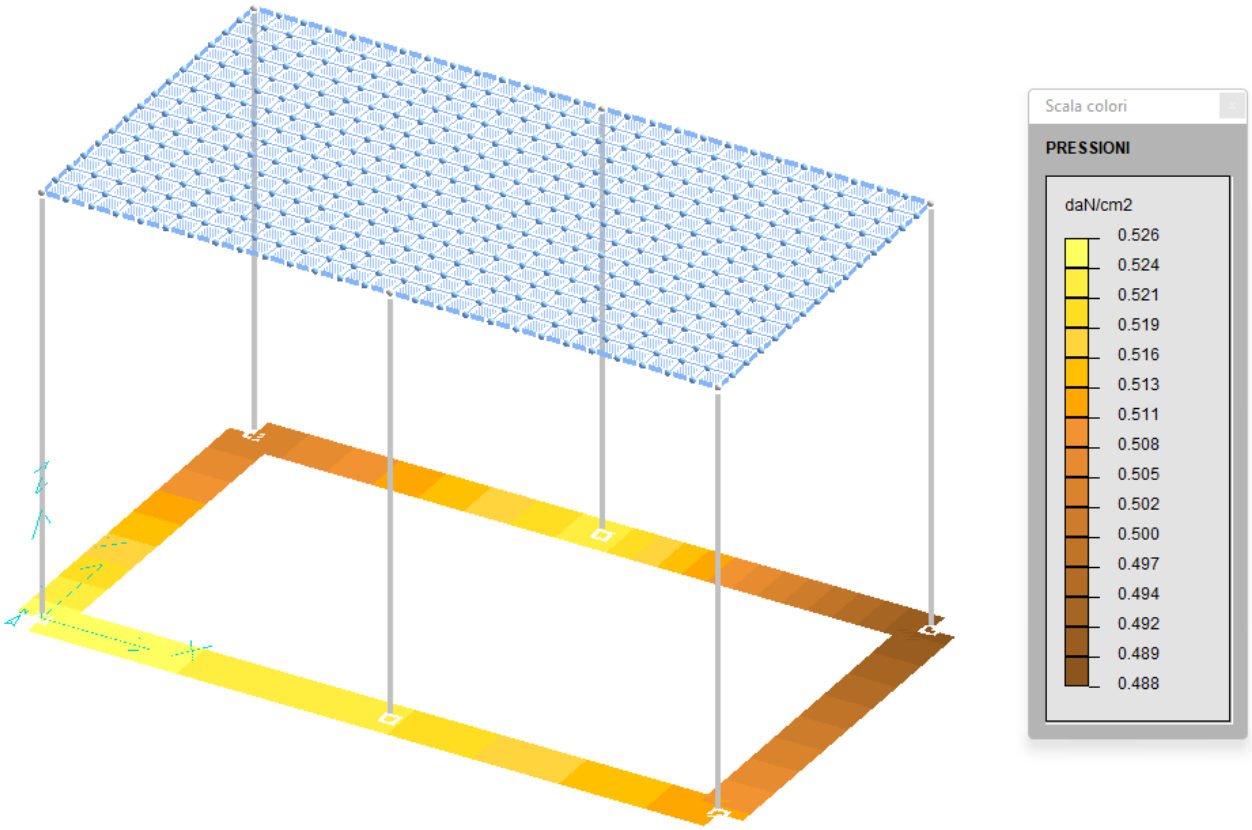


Fig. 30: Diagrammi pressioni sul terreno a SLU.

Il valore massimo della pressione è pari a 0.526 daN/cm^2 e risulta inferiore al limite ricavato eseguendo il calcolo della capacità portante, riportato nella relazione tecnica.

6.1.2 *Verifiche a SLE dei cedimenti*

Con riferimento ai cedimenti in fondazione, dati dall'inviluppo di tutti i casi di carico di SLE (ved. *Fig. 27*), si ricava un valore assoluto massimo pari a 0.127 cm, che risulta inferiore al limite riportato nella relazione tecnica.

6.2 *VERIFICHE TRAVI DI FONDAZIONE IN C.A.*

Si riporta la verifica, effettuata tramite il modulo "*Trave Continua*" del software di calcolo *DOLMEN 2024*, con riferimento all'inviluppo delle sollecitazioni agenti ricavate da tutti i casi di carico statici e sismici.

Il modulo permette di evidenziare l'inviluppo delle sollecitazioni agenti di momento flettente e taglio, tenendo conto anche della possibile presenza di effetti dovuti alle permutazioni dei carichi applicati. Una volta scelta l'armatura e soddisfatte le verifiche a SLU e a SLE, si ottiene un tabulato numerico che riporta i risultati delle medesime, esprimendo lo stato deformativo e tensionale dei materiali e l'apertura delle fessure.

Le travi presentano sezione pari a 50x30cm, armata con (4+4) ϕ 12 longitudinali e con staffe a 2 braccia ϕ 10/20, infittite nelle zone alla base dei pilastri. Si rimanda alle tavole di progetto per avere un'indicazione esaustiva delle armature disposte.

A favore di sicurezza, si trascura la sovrapposizione delle barre in corrispondenza della base dei pilastri, che incrementerebbe il momento resistente della sezione.

6.2.1 *Verifiche a SLU e a SLE*

6.2.1.1 Travata G01 – G03

```
              VERIFICA TRAVATA IN CEMENTO ARMATO

Nome travata       : 1 - Travata T001 (fondazione)
Metodo di verifica : stati limite (NTC18). ->
Duttilita'         : calcolo completo.
                   : struttura dissipativa in bassa duttilita'.
                   : dettagli costruttivi del capitolo 7 attivi.
                   : dettagli costruttivi del capitolo 4 attivi.
Unita' di misura   : cm; daN; daN/cm; daNcm; daN/cm2; deform. %.
Unita' particolari : fessure [Wk]:mm - ferri:mm e cm2 - sezioni:cm e derivate.
Copriferri (assi)  : longitudinali= 5.5 ; staffe= 4.5

              MATERIALI

CLS     : Rck =300. ; fck=249. ; fctk= 17.9; fctm= 25.6; Ec= 314472. ;
          gc =1.5 ; fcd=141.1; fbd= 26.9; fctd= 11.9; Ecud=.2% (limit.elastico)
ACCIAIO : B450C; ftk=5175. ; fyk=4500. ; Es=2100000. ;
          gs =1.15; fyd=3913. ; ftd(k*fyd)=4500. ; fud=4439.8; Eud=.19% (limit.elastico)

              TENSIONI E FESSURE MASSIME IN ESERCIZIO

GRUPPO  : ordinario.
CLS     : Scls(rara)=149.4; Scls(quasi permanente)=112. ; fbd(esercizio)= 26.9
ACCIAIO : Sacc(rara)=3600.; Coeff.Omogeneizzazione= 15
FESSURE : Wdmax(fre.)=.4  ; Wdmax(q.p.)=.3  [4.1.2.2.4.5];
          kt=.4 [EN 1992-1 7.3.4].

              CASI DI CARICO DA MODELLO 3D

           SLU          |
Nome   Descrizione    Sest|
 1.|SLU Max Var         1.|
 2.|SLU Max Neve        1.|
 3.|SLU VENTOX 1        2.|
 4.|SLU VENTOY 1        2.|
 5.|SLU VENTOX 2        2.|
 6.|SLU VENTOY 2        2.|
 7.|SLU VENTOX 3        2.|
 8.|SLU VENTOY 3        2.|
11.|SLU con SISMAX PRINC16|
12.|SLU con SISMAY PRINC16|

           RARE          |         FREQUENTI         |    QUASI PERMANENTI       |
Nome   Descrizione    Sest|Nome   Descrizione    Sest|Nome   Descrizione    Sest|
15.|Rara               1.|22.|Frequente 1         1.|26.|Quasi Perm          1.|
16.|Rara VentoX 1       2.|23.|Frequente 2         1.|                           |
17.|Rara VentoY 1       2.|24.|Frequente VentoX 3  2.|                           |
18.|Rara VentoX 2       2.|25.|Frequente VentoY 3  2.|                           |
19.|Rara VentoY 2       2.|                          |                           |
20.|Rara VentoX 3       2.|                          |                           |
21.|Rara VentoY 3       2.|                          |                           |
<-
              SEZIONI UTILIZZATE
```

```
 3) Rettangolare: 50x30; A=1500.; Jg=112500.; E=314471.6

              DESCRIZIONE CAMPATE

Cam.| Descriz. |S.ini|Sez. |S.fin|Incl.|L.assi|L.net.|lambda | K |r.Ar.|lam.max|
   1|A1        |    3|    3|    3|    0|  355.|  330.| 11.833|1.3|1.21 | 30.041|
   2|A2        |    3|    3|    3|    0|  335.|  310.| 11.167|1.3|1.225| 30.421|

              VERIFICHE ALLO STATO LIMITE ULTIMO

FLESSIONE:

Progressive|SE|Ar|  Msd     Epscl Epsac|   Mrd    Epscl Epsac Cam x/d |Mr/Ms|VE|
>    0.|  0.|3.|1.| -122987.|-.023| .059| -386154.!-.075| .186|2.| .286!3.14 |SI|
     0.|  0.|3.|1.|  129207.|-.024| .062|  386154.!-.075| .186|2.| .286|2.989|SI|
   104.|104.|3.|1.| -158160.!-.029| .076| -386154.|-.075| .186|2.| .286|2.442|SI|
   288.|288.|3.|1.|  -19640.|-.004| .009| -386154.|-.075| .186|2.| .286|19.66!SI|
   344.|344.|3.|1.|  319208.!-.061! .154!  386154.|-.075| .186|2.| .286|1.21 !SI|
   355.|355.|3.|1.|  319208.|-.061| .154|  386154.|-.075| .186|2.| .286|1.21 |SI|
> 355.|  0.|3.|1.|  315221.!-.06 ! .152!  386154.!-.075| .186|2.| .286|1.225!SI|
   424.| 69.|3.|1.|  -20108.|-.004| .01 | -386154.|-.075| .186|2.| .286|19.2 !SI|
   581.|226.|3.|1.| -142116.!-.026| .068| -386154.|-.075| .186|2.| .286|2.717|SI|
   690.|335.|3.|1.| -123344.|-.023| .059| -386154.!-.075| .186|2.| .286!3.131|SI|
   690.|335.|3.|1.|  126437.|-.023| .061|  386154.|-.075| .186|2.| .286|3.054|SI|

TAGLIO:

Progressive|Se|  Vsd  |  VRd  |  VRcd |  VRsd   Asw    s  ctgT|Ve|
>    0.|  0.|3.| -3050.!  5619.| 29301.! 29817.! 1.57|10. |2.2 |SI|
    30.| 30.|3.| -2338.|  5862.! 29301.| 29817.| 1.57|10. |2.2 |SI|
   355.|355.|3.|  4701.!  5862.| 29301.| 29817.| 1.57|10. |2.2 |SI|
> 355.|  0.|3.| -4693.!  5862.! 29301.! 29817.! 1.57|10. |2.2 |SI|
   690.|335.|3.|  2944.!  5619.| 29301.| 29817.| 1.57|10. |2.2 |SI|

              VERIFICHE ALLO STATO LIMITE DI ESERCIZIO

TENSIONI DI ESERCIZIO E FESSURAZIONE - RARE:

Progressive|Se|Ar Momento     Scls   Sacc | As   hc,ef   Eps%  Sr,max   Wd  |Ve|
>    0.|  0.|3.|1.|    -49709.| -12.6| 498.3| 4.52| 7.76|  .0142| 34.16|  .049|SI|
   104.|104.|3.|1.|  -113855.! -28.8|1141.3| 4.52| 7.76|  .0326| 34.16|  .111|SI|
   355.|355.|3.|1.|    232023.! -58.6|2325.9! 4.52| 7.76|  .0665| 34.16|  .227!SI|
> 355.|  0.|3.|1.|    229353.! -57.9|2299.1! 4.52| 7.76|  .0657| 34.16|  .224!SI|
   581.|226.|3.|1.|  -102757.! -26. |1030.1| 4.52| 7.76|  .0294| 34.16|  .101|SI|
   690.|335.|3.|1.|    -39831.| -10.1|  399.3| 4.52| 7.76|  .0114| 34.16|  .039|SI|
   690.|335.|3.|1.|     46964.| -11.9| 470.8| 4.52| 7.76|  .0135| 34.16|  .046|SI|

TENSIONI DI ESERCIZIO E FESSURAZIONE - FREQUENTI:

Progressive|Se|Ar Momento     Scls   Sacc | As   hc,ef   Eps%  Sr,max   Wd  |Ve|
>    0.|  0.|3.|1.|     -5502.|  -1.4|  55.2| 4.52| 7.76|  .0016| 34.16|  .005|SI|
   141.|141.|3.|1.|    -89080.! -22.5| 893. | 4.52| 7.76|  .0255| 34.16|  .087|SI|
   355.|355.|3.|1.|    188318.! -47.6!1887.8! 4.52| 7.76|  .0539| 34.16|  .184!SI|
> 355.|  0.|3.|1.|    188274.! -47.6!1887.3! 4.52| 7.76|  .0539| 34.16|  .184!SI|
   581.|226.|3.|1.|    -78415.! -19.8| 786.1| 4.52| 7.76|  .0225| 34.16|  .077|SI|
   690.|335.|3.|1.|     -4961.|  -1.3|  49.7| 4.52| 7.76|  .0014| 34.16|  .005|SI|
   690.|335.|3.|1.|     12398.|  -3.1| 124.3| 4.52| 7.76|  .0036| 34.16|  .012|SI|

TENSIONI DI ESERCIZIO E FESSURAZIONE - QUASI PERMANENTI:

Progressive|Se|Ar Momento     Scls   Sacc | As   hc,ef   Eps%  Sr,max   Wd  |Ve|
>    0.|  0.|3.|1.|      5555.|  -1.4|  55.7| 4.52| 7.76|  .0016| 34.16|  .005|SI|
   141.|141.|3.|1.|    -84948.! -21.5| 851.6| 4.52| 7.76|  .0243| 34.16|  .083|SI|
   355.|355.|3.|1.|    180954.! -45.7!1814. ! 4.52| 7.76|  .0518| 34.16|  .177!SI|
> 355.|  0.|3.|1.|    180902.! -45.7!1813.4! 4.52| 7.76|  .0518| 34.16|  .177!SI|
   542.|187.|3.|1.|    -74290.! -18.8| 744.7| 4.52| 7.76|  .0213| 34.16|  .073|SI|
   690.|335.|3.|1.|     3719.|   -.9|  37.3| 4.52| 7.76|  .0011| 34.16|  .004|SI|

          ARMATURE LONGITUDINALI (%=100*Af/Acls - Acls=area intera sezione)

Nro|Totale   % |Super.   %        Barre        |Infer.   %        Barre        |
  1| 9.05| .603| 4.52| .302|4d12               | 4.52| .302|4d12               |
```

Tutte le verifiche a SLU ed a SLE risultano soddisfatte.

6.2.1.2 Travata G04 – G06

```
              VERIFICA TRAVATA IN CEMENTO ARMATO

Nome travata       : 4 - Travata T004 (fondazione)
Metodo di verifica : stati limite (NTC18). ->
Duttilita'         : calcolo completo.
                   : struttura dissipativa in bassa duttilita'.
                   : dettagli costruttivi del capitolo 7 attivi.
                   : dettagli costruttivi del capitolo 4 attivi.
Unita' di misura   : cm; daN; daN/cm; daNcm; daN/cm2; deform. %.
Unita' particolari : fessure [Wk]:mm - ferri:mm e cm2 - sezioni:cm e derivate.
Copriferri (assi)  : longitudinali= 5.5 ; staffe= 4.5

              MATERIALI

CLS     : Rck =300. ; fck=249. ; fctk= 17.9; fctm= 25.6; Ec= 314472. ;
          gc =1.5 ; fcd=141.1; fbd= 26.9; fctd= 11.9; Ecud=.2% (limit.elastico)
ACCIAIO : B450C; ftk=5175. ; fyk=4500. ; Es=2100000. ;
          gs =1.15; fyd=3913. ; ftd(k*fyd)=4500. ; fud=4439.8; Eud=.19% (limit.elastico)

              TENSIONI E FESSURE MASSIME IN ESERCIZIO

GRUPPO  : ordinario.
CLS     : Scls(rara)=149.4; Scls(quasi permanente)=112. ; fbd(esercizio)= 26.9
```

```
ACCIAIO : Sacc(rara)=3600.; Coeff.Omogeneizzazione= 15
FESSURE : Wdmax(fre.)=.4  ; Wdmax(q.p.)=.3  [4.1.2.2.4.5];
          kt=.4 [EN 1992-1 7.3.4].

              CASI DI CARICO DA MODELLO 3D

             SLU           |
Nome   Descrizione    Sest|
 1.|SLU Max Var          1.|
 2.|SLU Max Neve         1.|
 3.|SLU VENTOX 1         2.|
 4.|SLU VENTOY 1         2.|
 5.|SLU VENTOX 2         2.|
 6.|SLU VENTOY 2         2.|
 7.|SLU VENTOX 3         2.|
 8.|SLU VENTOY 3         2.|
11.|SLU con SISMAX PRINC16|
12.|SLU con SISMAY PRINC16|

             RARE          |         FREQUENTI         |    QUASI PERMANENTI       |
Nome   Descrizione    Sest|Nome   Descrizione    Sest|Nome   Descrizione    Sest|
15.|Rara                1.|22.|Frequente 1         1.|26.|Quasi Perm          1.|
16.|Rara VentoX 1       2.|23.|Frequente 2         1.|                           |
17.|Rara VentoY 1       2.|24.|Frequente VentoX 3  2.|                           |
18.|Rara VentoX 2       2.|25.|Frequente VentoY 3  2.|                           |
19.|Rara VentoY 2       2.|                         |                           |
20.|Rara VentoX 3       2.|                         |                           |
21.|Rara VentoY 3       2.|                         |                           |
<-
              SEZIONI UTILIZZATE

 3) Rettangolare: 50X30; A=1500.; Jg=112500.; E=314471.6

              DESCRIZIONE CAMPATE

Cam.| Descriz. |S.ini|Sez. |S.fin|Incl.|L.assi|L.net.|lambda | K |r.Ar.|lam.max|
   1|A5        |    3|    3|    3|    0|  355.|  330.| 11.833|1.3|1.21 | 30.041|
   2|A6        |    3|    3|    3|    0|  335.|  310.| 11.167|1.3|1.225| 30.421|

              VERIFICHE ALLO STATO LIMITE ULTIMO

FLESSIONE:

Progressive|SE|Ar|  Msd     Epscl Epsac|   Mrd    Epscl Epsac Cam x/d |Mr/Ms|VE|
>   0.|  0.|3.|1.| -122982.|-.023| .059| -386154.!-.075| .186|2.| .286!3.14 |SI|
    0.|  0.|3.|1.|  129200.|-.024| .062|  386154.!-.075| .186|2.| .286|2.989|SI|
  104.|104.|3.|1.| -158160.!-.029| .076| -386154.|-.075| .186|2.| .286|2.442|SI|
  288.|288.|3.|1.|  -19346.|-.003| .009| -386154.|-.075| .186|2.| .286|19.96|SI|
  344.|344.|3.|1.|  319208.!-.061! .154!  386154.|-.075| .186|2.| .286|1.21 !SI|
  355.|355.|3.|1.|  319208.|-.061| .154|  386154.|-.075| .186|2.| .286|1.21 |SI|
> 355.|  0.|3.|1.|  315221.!-.06 ! .152!  386154.!-.075| .186|2.| .286|1.225|SI|
  424.| 69.|3.|1.|  -19601.|-.004| .009| -386154.|-.075| .186|2.| .286|19.7 !SI|
  581.|226.|3.|1.| -142116.!-.026| .068| -386154.|-.075| .186|2.| .286|2.717|SI|
  690.|335.|3.|1.| -123338.|-.023| .059| -386154.!-.075| .186|2.| .286!3.131|SI|
  690.|335.|3.|1.|  126430.|-.023| .061|  386154.|-.075| .186|2.| .286|3.054|SI|

TAGLIO:

Progressive|Se|  Vsd  |  VRd  |  VRcd |  VRsd   Asw    s  ctgT|Ve|
>   0.|  0.|3.| -2948.!  5619.| 29301.! 29817.! 1.57|10. |2.2 |SI|
   30.| 30.|3.| -2266.|  5862.! 29301.| 29817.| 1.57|10. |2.2 |SI|
  355.|355.|3.|  4698.!  5862.| 29301.| 29817.| 1.57|10. |2.2 |SI|
> 355.|  0.|3.| -4689.!  5862.! 29301.! 29817.! 1.57|10. |2.2 |SI|
  690.|335.|3.|  2841.!  5619.| 29301.| 29817.| 1.57|10. |2.2 |SI|

              VERIFICHE ALLO STATO LIMITE DI ESERCIZIO

TENSIONI DI ESERCIZIO E FESSURAZIONE - RARE:

Progressive|Se|Ar Momento     Scls   Sacc | As   hc,ef   Eps%  Sr,max   Wd  |Ve|
>   0.|  0.|3.|1.|    -49709.| -12.6| 498.3| 4.52| 7.76|  .0142| 34.16|  .049|SI|
  104.|104.|3.|1.|   -113855.! -28.8|1141.3| 4.52| 7.76|  .0326| 34.16|  .111|SI|
  355.|355.|3.|1.|    232023.! -58.6!2325.9! 4.52| 7.76|  .0665| 34.16|  .227!SI|
> 355.|  0.|3.|1.|    229353.! -57.9!2299.1! 4.52| 7.76|  .0657| 34.16|  .224!SI|
  581.|226.|3.|1.|   -102757.! -26. |1030.1| 4.52| 7.76|  .0294| 34.16|  .101|SI|
  690.|335.|3.|1.|    -39831.| -10.1| 399.3| 4.52| 7.76|  .0114| 34.16|  .039|SI|
  690.|335.|3.|1.|     46964.| -11.9| 470.8| 4.52| 7.76|  .0135| 34.16|  .046|SI|

TENSIONI DI ESERCIZIO E FESSURAZIONE - FREQUENTI:

Progressive|Se|Ar Momento     Scls   Sacc | As   hc,ef   Eps%  Sr,max   Wd  |Ve|
>   0.|  0.|3.|1.|     -5502.|  -1.4|  55.2| 4.52| 7.76|  .0016| 34.16|  .005|SI|
  141.|141.|3.|1.|    -89002.! -22.5| 892.2| 4.52| 7.76|  .0255| 34.16|  .087|SI|
  355.|355.|3.|1.|    188318.! -47.6!1887.8! 4.52| 7.76|  .0539| 34.16|  .184!SI|
> 355.|  0.|3.|1.|    188274.! -47.6!1887.3! 4.52| 7.76|  .0539| 34.16|  .184!SI|
  581.|226.|3.|1.|    -78415.! -19.8| 786.1| 4.52| 7.76|  .0225| 34.16|  .077|SI|
  690.|335.|3.|1.|     -4961.|  -1.3|  49.7| 4.52| 7.76|  .0014| 34.16|  .005|SI|
  690.|335.|3.|1.|     12398.|  -3.1| 124.3| 4.52| 7.76|  .0036| 34.16|  .012|SI|

TENSIONI DI ESERCIZIO E FESSURAZIONE - QUASI PERMANENTI:

Progressive|Se|Ar Momento     Scls   Sacc | As   hc,ef   Eps%  Sr,max   Wd  |Ve|
>   0.|  0.|3.|1.|     5555.|  -1.4|  55.7| 4.52| 7.76|  .0016| 34.16|  .005|SI|
  141.|141.|3.|1.|    -84948.! -21.5| 851.6| 4.52| 7.76|  .0243| 34.16|  .083|SI|
  355.|355.|3.|1.|    180954.! -45.7!1814. ! 4.52| 7.76|  .0518| 34.16|  .177!SI|
> 355.|  0.|3.|1.|    180902.! -45.7!1813.4! 4.52| 7.76|  .0518| 34.16|  .177!SI|
  542.|187.|3.|1.|    -74290.! -18.8| 744.7| 4.52| 7.76|  .0213| 34.16|  .073|SI|
  690.|335.|3.|1.|     3719.|   -.9|  37.3| 4.52| 7.76|  .0011| 34.16|  .004|SI|

          ARMATURE LONGITUDINALI (%=100*Af/Acls - Acls=area intera sezione)

Nro|Totale   % |Super.   %        Barre        |Infer.   %        Barre        |
  1| 9.05| .603| 4.52| .302|4d12               | 4.52| .302|4d12               |
```

Tutte le verifiche a SLU ed a SLE risultano soddisfatte.

6.2.1.3 Travata G01 – G04

```
              VERIFICA TRAVATA IN CEMENTO ARMATO

Nome travata       : 3 - Travata T003 (fondazione)
Metodo di verifica : stati limite (NTC18). ->
Duttilita'         : calcolo completo.
                   : struttura dissipativa in bassa duttilita'.
                   : dettagli costruttivi del capitolo 7 attivi.
                   : dettagli costruttivi del capitolo 4 attivi.
Unita' di misura   : cm; daN; daN/cm; daNcm; daN/cm2; deform. %.
Unita' particolari : fessure [Wk]:mm - ferri:mm e cm2 - sezioni:cm e derivate.
Copriferri (assi)  : longitudinali= 5.5 ; staffe= 4.5

              MATERIALI

CLS     : Rck =300. ; fck=249. ; fctk= 17.9; fctm= 25.6; Ec= 314472. ;
          gc =1.5 ; fcd=141.1; fbd= 26.9; fctd= 11.9; Ecud=.2% (limit.elastico)
ACCIAIO : B450C; ftk=5175. ; fyk=4500. ; Es=2100000. ;
          gs =1.15; fyd=3913. ; ftd(k*fyd)=4500. ; fud=4439.8; Eud=.19% (limit.elastico)

              TENSIONI E FESSURE MASSIME IN ESERCIZIO

GRUPPO  : ordinario.
CLS     : Scls(rara)=149.4; Scls(quasi permanente)=112. ; fbd(esercizio)= 26.9
ACCIAIO : Sacc(rara)=3600.; Coeff.Omogeneizzazione= 15
FESSURE : Wdmax(fre.)=.4  ; Wdmax(q.p.)=.3  [4.1.2.2.4.5];
          kt=.4 [EN 1992-1 7.3.4].

              CASI DI CARICO DA MODELLO 3D

            SLU           |
Nome   Descrizione    Sest|
 1.|SLU Max Var          1.|
 2.|SLU Max Neve         1.|
 3.|SLU VENTOX 1         2.|
 4.|SLU VENTOY 1         2.|
 5.|SLU VENTOX 2         2.|
 6.|SLU VENTOY 2         2.|
 7.|SLU VENTOX 3         2.|
 8.|SLU VENTOY 3         2.|
11.|SLU con SISMAX PRINC16|
12.|SLU con SISMAY PRINC16|

            RARE          |          FREQUENTI          |     QUASI PERMANENTI       |
Nome   Descrizione    Sest|Nome   Descrizione    Sest|Nome   Descrizione    Sest|
15.|Rara                1.|22.|Frequente 1         1.|26.|Quasi Perm          1.|
16.|Rara VentoX 1       2.|23.|Frequente 2         1.|                             |
17.|Rara VentoY 1       2.|24.|Frequente VentoX 3  2.|                             |
18.|Rara VentoX 2       2.|25.|Frequente VentoY 3  2.|                             |
19.|Rara VentoY 2       2.|                          |                             |
20.|Rara VentoX 3       2.|                          |                             |
21.|Rara VentoY 3       2.|                          |                             |
<-
              SEZIONI UTILIZZATE

 3) Rettangolare: 50x30; A=1500.; Jg=112500.; E=314471.6

              DESCRIZIONE CAMPATE

Cam.| Descriz. |S.ini|Sez. |S.fin|Incl.|L.assi|L.net.|lambda | K |r.Ar.|lam.max|
   1|A4        |    3|    3|    3|    0|  375.|  350.| 12.5  |1. |1.744| 33.319|

              VERIFICHE ALLO STATO LIMITE ULTIMO

FLESSIONE:

Progressive|SE|Ar|  Msd     Epscl Epsac|   Mrd    Epscl Epsac Cam x/d |Mr/Ms|VE|
>   0.|  0.|3.|1.| -206699.|-.038| .099| -386154.|-.075| .186|2.| .286|1.868|SI|
    0.|  0.|3.|1.|  221388.!-.041! .106!  386154.!-.075| .186|2.| .286|1.744!SI|
   30.| 30.|3.|1.| -212159.!-.04 | .102| -386154.|-.075| .186|2.| .286|1.82 |SI|
  266.|266.|3.|1.|   29139.|-.005| .014|  386154.|-.075| .186|2.| .286|13.25!SI|
  375.|375.|3.|1.| -180442.|-.033| .087| -386154.!-.075| .186|2.| .286!2.14 |SI|
  375.|375.|3.|1.|  193739.|-.036| .093|  386154.|-.075| .186|2.| .286|1.993|SI|

TAGLIO:

Progressive|Se|  Vsd  |  VRd  |  VRcd |  VRsd   Asw    s  ctgT|Ve|
>   0.|  0.|3.| -2517.!  5619.| 29301.! 29817.! 1.57|10. |2.2 |SI|
   30.| 30.|3.| -2261.|  5862.! 29301.| 29817.| 1.57|10. |2.2 |SI|
  375.|375.|3.|  2408.!  5619.| 29301.| 29817.| 1.57|10. |2.2 |SI|

              VERIFICHE ALLO STATO LIMITE DI ESERCIZIO

TENSIONI DI ESERCIZIO E FESSURAZIONE - RARE:

Progressive|Se|Ar Momento     Scls   Sacc | As   hc,ef   Eps%  Sr,max   Wd  |Ve|
>   0.|  0.|3.|1.|  -134716.| -34. |1350.5| 4.52| 7.76|  .0386| 34.16|  .132|SI|
    0.|  0.|3.|1.|   148560.! -37.5!1489.2! 4.52| 7.76|  .0425| 34.16|  .145!SI|
   69.| 69.|3.|1.|  -143813.! -36.3|1441.6| 4.52| 7.76|  .0412| 34.16|  .141|SI|
  375.|375.|3.|1.|  -116284.| -29.4|1165.7| 4.52| 7.76|  .0333| 34.16|  .114|SI|
  375.|375.|3.|1.|   130128.| -32.9|1304.5| 4.52| 7.76|  .0373| 34.16|  .127|SI|

TENSIONI DI ESERCIZIO E FESSURAZIONE - FREQUENTI:

Progressive|Se|Ar Momento     Scls   Sacc | As   hc,ef   Eps%  Sr,max   Wd  |Ve|
>   0.|  0.|3.|1.|   -21293.|  -5.4| 213.4| 4.52| 7.76|  .0061| 34.16|  .021|SI|
    0.|  0.|3.|1.|    35363.!  -8.9| 354.5| 4.52| 7.76|  .0101| 34.16|  .035|SI|
  148.|148.|3.|1.|   -79635.! -20.1! 798.3! 4.52| 7.76|  .0228| 34.16|  .078!SI|
  375.|375.|3.|1.|   -17606.|  -4.4| 176.5| 4.52| 7.76|  .005 | 34.16|  .017|SI|
  375.|375.|3.|1.|    31676.|  -8. | 317.5| 4.52| 7.76|  .0091| 34.16|  .031|SI|

TENSIONI DI ESERCIZIO E FESSURAZIONE - QUASI PERMANENTI:

Progressive|Se|Ar Momento     Scls   Sacc | As   hc,ef   Eps%  Sr,max   Wd  |Ve|
```

```
>   0.|  0.|3.|1.|     7035.|  -1.8|  70.5| 4.52| 7.76|  .002 | 34.16|  .007|SI|
  188.|188.|3.|1.|   -76071.! -19.2! 762.6! 4.52| 7.76|  .0218| 34.16|  .074!SI|
  375.|375.|3.|1.|     7035.!  -1.8|  70.5| 4.52| 7.76|  .002 | 34.16|  .007|SI|

          ARMATURE LONGITUDINALI (%=100*Af/Acls - Acls=area intera sezione)

Nro|Totale   % |Super.   %        Barre        |Infer.   %        Barre        |
  1| 9.05| .603| 4.52| .302|4d12               | 4.52| .302|4d12               |
```

Tutte le verifiche a SLU ed a SLE risultano soddisfatte.

6.2.1.4 Travata G03 – G06

```
              VERIFICA TRAVATA IN CEMENTO ARMATO

Nome travata       : 2 - Travata T002 (fondazione)
Metodo di verifica : stati limite (NTC18). ->
Duttilita'         : calcolo completo.
                   : struttura dissipativa in bassa duttilita'.
                   : dettagli costruttivi del capitolo 7 attivi.
                   : dettagli costruttivi del capitolo 4 attivi.
Unita' di misura   : cm; daN; daN/cm; daNcm; daN/cm2; deform. %.
Unita' particolari : fessure [Wk]:mm - ferri:mm e cm2 - sezioni:cm e derivate.
Copriferri (assi)  : longitudinali= 5.5 ; staffe= 4.5

              MATERIALI

CLS     : Rck =300. ; fck=249. ; fctk= 17.9; fctm= 25.6; Ec= 314472. ;
          gc =1.5 ; fcd=141.1; fbd= 26.9; fctd= 11.9; Ecud=.2% (limit.elastico)
ACCIAIO : B450C; ftk=5175. ; fyk=4500. ; Es=2100000. ;
          gs =1.15; fyd=3913. ; ftd(k*fyd)=4500. ; fud=4439.8; Eud=.19% (limit.elastico)

              TENSIONI E FESSURE MASSIME IN ESERCIZIO

GRUPPO  : ordinario.
CLS     : Scls(rara)=149.4; Scls(quasi permanente)=112. ; fbd(esercizio)= 26.9
ACCIAIO : Sacc(rara)=3600.; Coeff.Omogeneizzazione= 15
FESSURE : Wdmax(fre.)=.4  ; Wdmax(q.p.)=.3  [4.1.2.2.4.5];
          kt=.4 [EN 1992-1 7.3.4].

              CASI DI CARICO DA MODELLO 3D

            SLU           |
Nome   Descrizione    Sest|
 1.|SLU Max Var          1.|
 2.|SLU Max Neve         1.|
 3.|SLU VENTOX 1         2.|
 4.|SLU VENTOY 1         2.|
 5.|SLU VENTOX 2         2.|
 6.|SLU VENTOY 2         2.|
 7.|SLU VENTOX 3         2.|
 8.|SLU VENTOY 3         2.|
11.|SLU con SISMAX PRINC16|
12.|SLU con SISMAY PRINC16|

            RARE          |         FREQUENTI         |    QUASI PERMANENTI       |
Nome   Descrizione    Sest|Nome   Descrizione    Sest|Nome   Descrizione    Sest|
15.|Rara                1.|22.|Frequente 1         1.|26.|Quasi Perm          1.|
16.|Rara VentoX 1       2.|23.|Frequente 2         1.|                           |
17.|Rara VentoY 1       2.|24.|Frequente VentoX 3  2.|                           |
18.|Rara VentoX 2       2.|25.|Frequente VentoY 3  2.|                           |
19.|Rara VentoY 2       2.|                          |                           |
20.|Rara VentoX 3       2.|                          |                           |
21.|Rara VentoY 3       2.|                          |                           |
<-
              SEZIONI UTILIZZATE

 3) Rettangolare: 50X30; A=1500.; Jg=112500.; E=314471.6

              DESCRIZIONE CAMPATE

Cam.| Descriz. |S.ini|Sez. |S.fin|Incl.|L.assi|L.net.|lambda | K |r.Ar.|lam.max|
   1|A3        |    3|    3|    3|    0|  375.|  350.| 12.5  |1. |1.74 | 33.238|

              VERIFICHE ALLO STATO LIMITE ULTIMO

FLESSIONE:

Progressive|SE|Ar|  Msd     Epscl Epsac|   Mrd    Epscl Epsac Cam x/d |Mr/Ms|VE|
>   0.|  0.|3.|1.| -200930.|-.037| .096| -386154.|-.075| .186|2.| .286|1.922|SI|
    0.|  0.|3.|1.|  221925.!-.041! .107!  386154.!-.075| .186|2.| .286|1.74 !SI|
   30.| 30.|3.|1.| -208420.!-.039| .1   | -386154.|-.075| .186|2.| .286|1.853|SI|
  266.|266.|3.|1.|   27122.|-.005| .013|  386154.|-.075| .186|2.| .286|14.24!SI|
  375.|375.|3.|1.| -175065.|-.032| .084| -386154.!-.075| .186|2.| .286!2.206|SI|
  375.|375.|3.|1.|  194688.|-.036| .093|  386154.|-.075| .186|2.| .286|1.983|SI|

TAGLIO:

Progressive|Se|  Vsd  |  VRd  |  VRcd |  VRsd   Asw    s  ctgT|Ve|
>   0.|  0.|3.| -2614.!  5619.| 29301.! 29817.! 1.57|10. |2.2 |SI|
   30.| 30.|3.| -2333.|  5862.! 29301.| 29817.| 1.57|10. |2.2 |SI|
  375.|375.|3.|  2507.!  5619.| 29301.| 29817.| 1.57|10. |2.2 |SI|

              VERIFICHE ALLO STATO LIMITE DI ESERCIZIO

TENSIONI DI ESERCIZIO E FESSURAZIONE - RARE:

Progressive|Se|Ar Momento     Scls   Sacc | As   hc,ef   Eps%  Sr,max   Wd  |Ve|
>   0.|  0.|3.|1.|  -129837.| -32.8|1301.5| 4.52| 7.76|  .0372| 34.16|  .127|SI|
    0.|  0.|3.|1.|   149165.! -37.7!1495.3! 4.52| 7.76|  .0427| 34.16|  .146!SI|
   69.| 69.|3.|1.|  -143807.! -36.3|1441.6| 4.52| 7.76|  .0412| 34.16|  .141|SI|
```

```
  375.|375.|3.|1.|  -111679.| -28.2|1119.5| 4.52| 7.76|  .032 | 34.16|  .109|SI|
  375.|375.|3.|1.|   131007.| -33.1|1313.3| 4.52| 7.76|  .0375| 34.16|  .128|SI|

TENSIONI DI ESERCIZIO E FESSURAZIONE - FREQUENTI:

Progressive|Se|Ar Momento     Scls   Sacc | As   hc,ef   Eps%  Sr,max   Wd  |Ve|
>   0.|  0.|3.|1.|    -18421.|  -4.7| 184.7| 4.52| 7.76|  .0053| 34.16|  .018|SI|
    0.|  0.|3.|1.|     37380.!  -9.4| 374.7| 4.52| 7.76|  .0107| 34.16|  .037|SI|
  148.|148.|3.|1.|    -82849.! -20.9! 830.5! 4.52| 7.76|  .0237| 34.16|  .081!SI|
  375.|375.|3.|1.|    -14789.|  -3.7| 148.3| 4.52| 7.76|  .0042| 34.16|  .014|SI|
  375.|375.|3.|1.|     33748.|  -8.5| 338.3| 4.52| 7.76|  .0097| 34.16|  .033|SI|

TENSIONI DI ESERCIZIO E FESSURAZIONE - QUASI PERMANENTI:

Progressive|Se|Ar Momento     Scls   Sacc | As   hc,ef   Eps%  Sr,max   Wd  |Ve|
>   0.|  0.|3.|1.|      9480.!  -2.4|  95. | 4.52| 7.76|  .0027| 34.16|  .009|SI|
  188.|188.|3.|1.|    -79623.! -20.1! 798.2! 4.52| 7.76|  .0228| 34.16|  .078!SI|
  375.|375.|3.|1.|      9480.|  -2.4|  95. | 4.52| 7.76|  .0027| 34.16|  .009|SI|

          ARMATURE LONGITUDINALI (%=100*Af/Acls - Acls=area intera sezione)

Nro|Totale   % |Super.   %        Barre        |Infer.   %        Barre        |
  1| 9.05| .603| 4.52| .302|4d12               | 4.52| .302|4d12               |
```

Tutte le verifiche a SLU ed a SLE risultano soddisfatte.

6.3 *VERIFICHE PILASTRI IN C.A.*

Si riporta la verifica, effettuata tramite il modulo "*Pilastri*" del software di calcolo *DOLMEN 2024*, con riferimento all'inviluppo delle sollecitazioni agenti ricavate da tutti i casi di carico statici e sismici.

Il modulo permette di evidenziare l'inviluppo delle sollecitazioni agenti di momento flettente e taglio. Una volta scelta l'armatura e soddisfatte le verifiche a SLU e a SLE, si ottiene un tabulato numerico che riporta i risultati delle medesime, esprimendo lo stato deformativo e tensionale dei materiali e l'apertura delle fessure.

I pilastri presentano sezione pari a 25x25cm, armata con 4 ϕ 16 verticali e con staffe ϕ 8/19, infittite alle estremità con passo 10cm. Si rimanda alle tavole di progetto per avere un'indicazione esaustiva delle armature disposte.

6.3.1 *Verifiche a SLU e a SLE*

6.3.1.1 Pilastro G01

```
                        VERIFICA PILASTRO IN CEMENTO ARMATO

Nome pilastro      : P003  (ID=7)
Aste               : 9
Metodo di verifica : stati limite - NTC18 (q=1 ; muphi=1.2) ->
Duttilita'         : calcolo completo.
                   : struttura dissipativa in bassa duttilita'.
                   : dettagli costruttivi del capito 7 attivi.
                   : dettagli costruttivi del capito 4 attivi.
Unita' di misura   : cm; daN; daN/cm; daNcm; daN/cm2; deform. %; 1/r ‰(permille)
Unita' particolari : fessure [Wk]:mm - ferri:mm e cm2 - sezioni:cm e derivate.
Copriferri (assi)  : longitudinali= 4.6 ; staffe= 3.4
Imperfezioni       : M minimo = N * e0 ; M aggiunto = N * ei
Instabilita'       : rigidezza nominale [EC2 5.8.7]; fief=3
Duttilita'richiesta: verifica attiva (7.4.29) - coefficiente moltipl. = 1

                                    MATERIALI

CLS    : C30/37; Rck=370; fck=307.1; fctk=20.59; fctm=29.42; Ecm=330194;
         gc=1.5; fcd=174; fbd=30.89; fctd=13.73; Ec2=0.2%; Ecu=0.35%
ACCIAIO: B450C; ftk=5175; fyk=4500; Es=2100000; gs=1.15; fyd=3913;
         ftd=4500; fud=4439.8; Eyd=0.1863%; Eud=6.75%

                           TENSIONI MASSIME IN ESERCIZIO

GRUPPO : aggressivo.
CLS    : Scls(rara)=184.3; Scls(quasi permanente)=138.2; fbd(esercizio)=30.89
ACCIAIO: Sacc(rara)=3600; Coeff.Omogeneizzazione=15
FESSURE: Wdmax(fre.)=0.3; Wdmax(q.p.)=0.2; St(tens.aper.fess.)=24.52 [4.1.2.2.4]

                                  CASI DI CARICO
```

Nome	Descrizione	Tipo	Ses
1	SLU Max Var	SLU (statico)	1
2	SLU Max Neve	SLU (statico)	1
3	SLU VENTOX 1	SLU (statico)	2
4	SLU VENTOY 1	SLU (statico)	2
5	SLU VENTOX 2	SLU (statico)	2
6	SLU VENTOY 2	SLU (statico)	2
7	SLU VENTOX 3	SLU (statico)	2
8	SLU VENTOY 3	SLU (statico)	2
11	SLU con SISMAX PRINC	SLU (sismico)	16
12	SLU con SISMAY PRINC	SLU (sismico)	16
15	Rara	RARA	1
16	Rara VentoX 1	RARA	2
17	Rara VentoY 1	RARA	2
18	Rara VentoX 2	RARA	2
19	Rara VentoY 2	RARA	2
20	Rara VentoX 3	RARA	2
21	Rara VentoY 3	RARA	2
22	Frequente 1	FREQUENTE	1
23	Frequente 2	FREQUENTE	1
24	Frequente VentoX 3	FREQUENTE	2
25	Frequente VentoY 3	FREQUENTE	2
26	Quasi Perm	QUASI PERMAN.	1

<-

SEZIONI UTILIZZATE

1) Rettangolare: base=25; alt.=25; Acls=625; iy=7.22; iz=7.22

DESCRIZIONE ASTE E ARMATURA LONGITUDINALE

As	Se	e0z	e0y	eiz	eiy	Lassi	Lnet	Lcr.I	Lcr.S	Af	% arm	
1	1	2.17	2.17	1.45	1.45	435.	415.	70.	70.	8.04	1.287	4Ø16

GERARCHIA DELLE RESISTENZE

MOMENTI ULTIMI MINIMI (CASI SISMICI):

Asta	caso	Myu- min	caso	Myu+ min	caso	Mzu- min	caso	Mzu+ min
1 I	11-10	-300115.	11-10	300115.	12- 4	-297225.	12- 4	297230.
1 S	11- 5	-301200.	11- 5	301200.	12-15	-296240.	12-15	296240.

TAGLI GERARCHIA:

As	Lp	caso	VEyd-	caso	VEyd+	caso	VEzd-	caso	VEzd+
1	415.	11- 7	-1688.1	11- 7	1688.1	12-13	-1687.6	12-13	1687.6

VERIFICHE ALLO STATO LIMITE ULTIMO

PRESSO-FLESSIONE (inclusi imperfezioni e second'ordine):

Asta	Caso	NEd	MEyd	MEzd	eCls%	sig	eAccMin%	sig	eAccMax%	sig	VE
> 1	12- 2	-2224.	143353.	1.07	-55610.	1.11	-.076	-107.1	-.037	-774.3	.102	2145.2	SI
1	8- 2	-3291.	43607.	1.07	21086.	1.07	-.022	-36.2	-.013	-281.8	.017	362.2	SI
1	11- 4	-2305.	74628.	1.11	108574.	1.09	-.071	-101.8	-.036	-764.	.087	1833.	SI

INSTABILITA' - RIGIDEZZA NOMINALE Y [EC2 5.8.7]:

Asta	Caso	NB	l0	Jn	Jcls/Jn	Mcal	MOEd	MEd	nu
1 I	12- 2	-56612.7	435.	3287.2	9.9027	134496.	137721.	143353.	.02

INSTABILITA' - RIGIDEZZA NOMINALE Z [EC2 5.8.7]:

Asta	Caso	NB	l0	Jn	Jcls/Jn	Mcal	MOEd	MEd	nu
1 I	12- 2	-56612.7	435.	3287.2	9.9027	-50200.	-53425.	-55610.	.02

TAGLIO Y:

Asta	Caso	VEd	VEd ger.	VRd	VRsd	VRcd	Asw	s	ctgT	VE
1 I	11- 7	524.6	-1688.1	15528.4	15528.4	15684.	1.01	10.	2.15	SI
1 C	11- 7	524.6	-1688.1	9503.3	9503.3	14100.3	1.01	19.	2.5	SI
1 S	11- 7	524.6	-1688.1	15528.4	15528.4	15588.6	1.01	10.	2.15	SI

TAGLIO Z:

Asta	Caso	VEd	VEd ger.	VRd	VRsd	VRcd	Asw	s	ctgT	VE
1 I	12-13	-584.2	1687.6	15528.4	15528.4	15679.1	1.01	10.	2.15	SI
1 C	12-13	-584.2	1687.6	9503.3	9503.3	14095.8	1.01	19.	2.5	SI
1 S	12-13	-584.2	1687.6	15528.4	15528.4	15583.7	1.01	10.	2.15	SI

NEd LIMITE (NEd < Nmax , Nmax=65% di Ncls ; Ncls=fcd*Ac) [7.4.4.2.1]:

Asta	Caso	NEd	Nmax	Ncls	% Ncls	VE
1	11- 4	-2984.5	-70697.	-108764.6	2.74	SI

VERIFICHE ALLO STATO LIMITE DI FESSURAZIONE

Asta	ferri distanza	Ø	Sacc massime consentite rare	freq.	q.p.
1	16.	16	no limit	2400.0	1920.0

Frequenti:

Asta	Caso	Sacc	St cls	VE
1 I	25- 1	80.2	4.3	SI
1 C	25- 2	124.	6.9	SI
1 S	25- 2	483.	16.3	SI

Quasi permanenti:

Asta	Caso	Sacc	St cls	VE
1 I	26- 1	-30.8	-1.4	SI
1 C	26- 1	102.6	6.2	SI
1 S	26- 1	376.1	13.7	SI

VERIFICHE ALLO STATO LIMITE DI ESERCIZIO

Rare:

Asta	Caso	NEd	MEyd	MEzd	Scls	SaccMin	SaccMax	St cls	VE
1 I	21- 1	-2509.8	99949.2	-5415.7	-55.7	-403.1	1133.9	29.7	SI
1 C	21- 2	-2418.	28958.6	14369.7	-22.9	-217.8	230.9	10.3	SI
1 S	21- 2	-2078.1	77833.8	20799.9	-54.2	-418.1	986.3	28.2	SI

Frequenti:

Asta	Caso	NEd	MEyd	MEzd	Scls	SaccMin	SaccMax	St cls	VE
1 I	25- 1	-2404.9	23650.3	255.4	-12.6	-129.5	80.2	4.3	SI
1 C	25- 2	-2114.6	19057.3	11988.	-16.	-159.9	124.	6.9	SI
1 S	25- 2	-1774.8	38437.6	21049.6	-33.	-280.4	483.	16.3	SI

Quasi permanenti:

Asta	Caso	NEd	MEyd	MEzd	Scls	SaccMin	SaccMax	St cls	VE
1 I	26- 1	-2429.7	4567.7	1591.	-5.2	-68.	-30.8	-1.4	SI
1 C	26- 1	-2089.8	17023.9	11695.4	-14.6	-148.9	102.6	6.2	SI
1 S	26- 1	-1750.	29480.1	21799.9	-28.3	-248.9	376.1	13.7	SI

Tutte le verifiche a SLU ed a SLE risultano soddisfatte.

6.3.1.2 Pilastro G02

```
                      VERIFICA PILASTRO IN CEMENTO ARMATO

Nome pilastro      : P002  (ID=6)
Aste               : 8
Metodo di verifica : stati limite - NTC18 (q=1 ; muphi=1.2) ->
Duttilita'         : calcolo completo.
                   : struttura dissipativa in bassa duttilita'.
                   : dettagli costruttivi del capito 7 attivi.
                   : dettagli costruttivi del capito 4 attivi.
Unita' di misura   : cm; daN; daN/cm; daNcm; daN/cm2; deform. %; 1/r ‰(permille)
Unita' particolari : fessure [Wk]:mm - ferri:mm e cm2 - sezioni:cm e derivate.
Copriferri (assi)  : longitudinali= 4.6 ; staffe= 3.4
Imperfezioni       : M minimo = N * e0 ; M aggiunto = N * ei
Instabilita'       : rigidezza nominale [EC2 5.8.7]; fief=3
Duttilita'richiesta: verifica attiva (7.4.29) - coefficiente moltipl. = 1

                                  MATERIALI

CLS    : C30/37; Rck=370; fck=307.1; fctk=20.59; fctm=29.42; Ecm=330194;
         gc=1.5; fcd=174; fbd=30.89; fctd=13.73; Ec2=0.2%; Ecu=0.35%
ACCIAIO: B450C; ftk=5175; fyk=4500; Es=2100000; gs=1.15; fyd=3913;
         ftd=4500; fud=4439.8; Eyd=0.1863%; Eud=6.75%

                          TENSIONI MASSIME IN ESERCIZIO

GRUPPO : aggressivo.
CLS    : Scls(rara)=184.3; Scls(quasi permanente)=138.2; fbd(esercizio)=30.89
ACCIAIO: Sacc(rara)=3600; Coeff.Omogeneizzazione=15
FESSURE: Wdmax(fre.)=0.3; Wdmax(q.p.)=0.2; St(tens.aper.fess.)=24.52 [4.1.2.2.4]

                                CASI DI CARICO

Nome|   Descrizione       |Tipo          |Ses|
   1|SLU Max Var          |SLU (statico) |  1|
   2|SLU Max Neve         |SLU (statico) |  1|
   3|SLU VENTOX 1         |SLU (statico) |  2|
   4|SLU VENTOY 1         |SLU (statico) |  2|
   5|SLU VENTOX 2         |SLU (statico) |  2|
   6|SLU VENTOY 2         |SLU (statico) |  2|
   7|SLU VENTOX 3         |SLU (statico) |  2|
   8|SLU VENTOY 3         |SLU (statico) |  2|
  11|SLU con SISMAX PRINC |SLU (sismico) | 16|
  12|SLU con SISMAY PRINC |SLU (sismico) | 16|
  15|Rara                 |RARA          |  1|
  16|Rara VentoX 1        |RARA          |  2|
  17|Rara VentoY 1        |RARA          |  2|
  18|Rara VentoX 2        |RARA          |  2|
  19|Rara VentoY 2        |RARA          |  2|
  20|Rara VentoX 3        |RARA          |  2|
  21|Rara VentoY 3        |RARA          |  2|
  22|Frequente 1          |FREQUENTE     |  1|
  23|Frequente 2          |FREQUENTE     |  1|
  24|Frequente VentoX 3   |FREQUENTE     |  2|
  25|Frequente VentoY 3   |FREQUENTE     |  2|
  26|Quasi Perm           |QUASI PERMAN. |  1|
<-
                             SEZIONI UTILIZZATE

 1) Rettangolare: base=25; alt.=25; Acls=625; iy=7.22; iz=7.22

                    DESCRIZIONE ASTE E ARMATURA LONGITUDINALE

As Se|e0z |e0y |eiz |eiy |Lassi Lnet  Lcr.I Lcr.S| Af    % arm                 |
 1| 1|2.17|2.17|1.45|1.45|435. |415. | 70. | 70. |  8.04|1.287|4Ø16                 |

                           GERARCHIA DELLE RESISTENZE

MOMENTI ULTIMI MINIMI (CASI SISMICI):
Asta  | caso   Myu- min | caso   Myu+ min | caso   Mzu- min | caso   Mzu+ min |
 1 I  | 11- 5| -308380. | 11- 5|  308380. | 12- 2| -320330. | 12- 2|  320330. |
 1 S  | 11- 5| -309355. | 11- 5|  309355. | 12-13| -306445. | 12-13|  306445. |

TAGLI GERARCHIA:
As| Lp  | caso   VEyd-   | caso   VEyd+   | caso   VEzd-   | caso   VEzd+   |
 1|415. | 11-10|  -1773.9| 11-10|   1773.9| 12-12|  -1819.6| 12-12|   1819.6|

                       VERIFICHE ALLO STATO LIMITE ULTIMO

PRESSO-FLESSIONE (inclusi imperfezioni e second'ordine):
Asta Caso |  NEd   |  MEyd       |  MEzd       |eCls%   sig |eAccMin% sig|eAccMax% sig|VE|
> 1|  8- 2|  -8879.| -225729.|1.28|   38262.|38.6|-.101 -131.2|-.052 -1100.| .114 2386.2|SI|
  1|  8- 2|  -8437.|  100613.|1.19|    2014.|1.19|-.035  -55.7|-.022 -461.3| .023  484.4|SI|
  1| 11- 7|  -5015.|  100286.|1.21|  160230.|1.17|-.104 -133.7|-.054 -1136.| .116 2440.7|SI|

INSTABILITA' - RIGIDEZZA NOMINALE Y [EC2 5.8.7]:
Asta| Caso |   NB    | l0  |  Jn    |Jcls/Jn|  Mcal   |  MOEd   |  MEd    | nu |
 1 S| 11- 7| -55578.2|435. |  3227.1|10.0871|   82739.|   90011.|  100286.|.052|

INSTABILITA' - RIGIDEZZA NOMINALE Z [EC2 5.8.7]:
Asta| Caso |   NB    | l0  |  Jn    |Jcls/Jn|  Mcal   |  MOEd   |  MEd    | nu |
 1 S| 11- 7| -55578.2|435. |  3227.1|10.0871|  136541.|  143813.|  160230.|.052|

TAGLIO Y:
Asta| Caso | VEd    VEd ger. | VRd      VRsd     VRcd   | Asw | s  |ctgT|VE|
 1 I| 11-10|  -655.8| -1773.9| 15764.6| 15889.5| 15764.6| 1.01|10. |2.2 |SI|
 1 C| 11-10|  -655.8| -1773.9|  9503.3|  9503.3| 14387.3| 1.01|19. |2.5 |SI|
 1 S| 11-10|  -655.8| -1773.9| 15670.6| 15889.5| 15670.6| 1.01|10. |2.2 |SI|
```

```
TAGLIO Z:
Asta| Caso | VEd    VEd ger. | VRd      VRsd     VRcd   | Asw | s  |ctgT|VE|
 1 I| 12-12|  -621.4|  1819.6| 15889.5| 15889.5| 15923.5| 1.01|10. |2.2 |SI|
 1 C| 12-12|  -621.4|  1819.6|  9503.3|  9503.3| 14532.7| 1.01|19. |2.5 |SI|
 1 S| 12-12|  -621.4|  1819.6| 15829.5| 15889.5| 15829.5| 1.01|10. |2.2 |SI|

NEd LIMITE (NEd < Nmax , Nmax=65% di Ncls ; Ncls=fcd*Ac) [7.4.4.2.1]:
Asta  | Caso |  NEd     |  Nmax    |  Ncls    |% Ncls|VE|
     1| 12-15|   -6356.5|  -70697. | -108764.6|  5.84|SI|

                  VERIFICHE ALLO STATO LIMITE DI FESSURAZIONE

    |ferri          | Sacc massime consentite  |
Asta|distanza   | Ø | rare   |freq.   | q.p.   |
 1  |      15.8 | 16|no limit|  2400.0|  1936.0|

Frequenti:                          Quasi permanenti:
Asta| Caso | Sacc  |St cls|VE|      Asta| Caso | Sacc  |St cls|VE|
 1 I| 25- 2|  -27.2|   1.3|SI|       1 I| 26- 1|  -94.6|  -5.7|SI|
 1 C| 25- 2|   -9.1|   2.4|SI|       1 C| 26- 1|  -34.3|    .4|SI|
 1 S| 25- 2|  281.9|  12.1|SI|       1 S| 26- 1|  199.2|   9.9|SI|

                    VERIFICHE ALLO STATO LIMITE DI ESERCIZIO

Rare:
Asta| Caso |  NEd     |  MEyd    |  MEzd    | Scls |SaccMin|SaccMax|St cls|VE|
 1 I| 21- 2|   -6500.1| -118437.2|     673.1| -63.4| -530.4|  913.5|  28.8|SI|
 1 C| 21- 2|   -6160.3|   58743. |    1237.3| -31.7| -325.8|  189.3|  10.6|SI|
 1 S| 21- 2|   -5820.4|   94004.4|    1801.4| -51. | -443.6|  662.5|  22.4|SI|

Frequenti:
Asta| Caso |  NEd     |  MEyd    |  MEzd    | Scls |SaccMin|SaccMax|St cls|VE|
 1 I| 25- 2|   -5548.8|  -27759.3|     179.7| -16.4| -197.1|  -27.2|   1.3|SI|
 1 C| 25- 2|   -5208.9|   29017.3|    1054.3| -16.9| -198. |   -9.1|   2.4|SI|
 1 S| 25- 2|   -4869.1|   57410.2|    1929. | -31.5| -302. |  281.9|  12.1|SI|

Quasi permanenti:
Asta| Caso |  NEd     |  MEyd    |  MEzd    | Scls |SaccMin|SaccMax|St cls|VE|
 1 I| 26- 1|   -5447.4|   -5355. |      51.6|  -9.1| -127. |  -94.6|  -5.7|SI|
 1 C| 26- 1|   -5107.6|   22184.8|    1037.1| -14.3| -173.4|  -34.3|    .4|SI|
 1 S| 26- 1|   -4767.7|   49724.5|    2022.6| -27.4| -272.9|  199.2|   9.9|SI|
```

Tutte le verifiche a SLU ed a SLE risultano soddisfatte.

6.3.1.3 Pilastro G03

```
                      VERIFICA PILASTRO IN CEMENTO ARMATO

Nome pilastro      : P001  (ID=5)
Aste               : 7
Metodo di verifica : stati limite - NTC18 (q=1 ; muphi=1.2) ->
Duttilita'         : calcolo completo.
                   : struttura dissipativa in bassa duttilita'.
                   : dettagli costruttivi del capito 7 attivi.
                   : dettagli costruttivi del capito 4 attivi.
Unita' di misura   : cm; daN; daN/cm; daNcm; daN/cm2; deform. %; 1/r %(permille)
Unita' particolari : fessure [Wk]:mm - ferri:mm e cm2 - sezioni:cm e derivate.
Copriferri (assi)  : longitudinali= 4.6 ; staffe= 3.4
Imperfezioni       : M minimo = N * e0 ; M aggiunto = N * ei
Instabilita'       : rigidezza nominale [EC2 5.8.7]; fief=3
Duttilita'richiesta: verifica attiva (7.4.29) - coefficiente moltipl. = 1

                                    MATERIALI

CLS    : C30/37; Rck=370; fck=307.1; fctk=20.59; fctm=29.42; Ecm=330194;
         gc=1.5; fcd=174; fbd=30.89; fctd=13.73; Ec2=0.2%; Ecu=0.35%
ACCIAIO: B450C; ftk=5175; fyk=4500; Es=2100000; gs=1.15; fyd=3913;
         ftd=4500; fud=4439.8; Eyd=0.1863%; Eud=6.75%

                            TENSIONI MASSIME IN ESERCIZIO

GRUPPO : aggressivo.
CLS    : Scls(rara)=184.3; Scls(quasi permanente)=138.2; fbd(esercizio)=30.89
ACCIAIO: Sacc(rara)=3600; Coeff.Omogeneizzazione=15
FESSURE: Wdmax(fre.)=0.3; Wdmax(q.p.)=0.2; St(tens.aper.fess.)=24.52 [4.1.2.2.4]

                                    CASI DI CARICO

Nome|   Descrizione       |Tipo          |Ses|
   1|SLU Max Var          |SLU (statico) |  1|
   2|SLU Max Neve         |SLU (statico) |  1|
   3|SLU VENTOX 1         |SLU (statico) |  2|
   4|SLU VENTOY 1         |SLU (statico) |  2|
   5|SLU VENTOX 2         |SLU (statico) |  2|
   6|SLU VENTOY 2         |SLU (statico) |  2|
   7|SLU VENTOX 3         |SLU (statico) |  2|
   8|SLU VENTOY 3         |SLU (statico) |  2|
  11|SLU con SISMAX PRINC |SLU (sismico) | 16|
  12|SLU con SISMAY PRINC |SLU (sismico) | 16|
  15|Rara                 |RARA          |  1|
  16|Rara VentoX 1        |RARA          |  2|
  17|Rara VentoY 1        |RARA          |  2|
  18|Rara VentoX 2        |RARA          |  2|
  19|Rara VentoY 2        |RARA          |  2|
  20|Rara VentoX 3        |RARA          |  2|
  21|Rara VentoY 3        |RARA          |  2|
  22|Frequente 1          |FREQUENTE     |  1|
  23|Frequente 2          |FREQUENTE     |  1|
  24|Frequente VentoX 3   |FREQUENTE     |  2|
  25|Frequente VentoY 3   |FREQUENTE     |  2|
  26|Quasi Perm           |QUASI PERMAN. |  1|
```

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<-
                              SEZIONI UTILIZZATE

 1) Rettangolare: base=25; alt.=25; Acls=625; iy=7.22; iz=7.22

                    DESCRIZIONE ASTE E ARMATURA LONGITUDINALE

As Se|e0z |e0y |eiz |eiy |Lassi Lnet  Lcr.I Lcr.S| Af    % arm                 |
 1| 1|2.17|2.17|1.45|1.45|435. |415. | 70. | 70. |  8.04|1.287|4ø16             |

                             GERARCHIA DELLE RESISTENZE

MOMENTI ULTIMI MINIMI (CASI SISMICI):
Asta  | caso   Myu- min | caso   Myu+ min | caso   Mzu- min | caso   Mzu+ min |
 1 I  | 11- 5| -298950. | 11- 5|  298950. | 12- 5| -294585. | 12- 5|  294585. |
 1 S  | 11-10| -298985. | 11-10|  298985. | 12-10| -294005. | 12-10|  294005. |

TAGLI GERARCHIA:
As| Lp  | caso   VEyd-   | caso   VEyd+   | caso   VEzd-   | caso   VEzd+   |
 1|415. | 11-12|  -1683.1| 11-12|   1683.1| 12-12|  -1684.6| 12-12|   1684.6|

                          VERIFICHE ALLO STATO LIMITE ULTIMO

PRESSO-FLESSIONE (inclusi imperfezioni e second'ordine):
Asta Caso |  NEd    |  MEyd        |  MEzd        |eCls%   sig |eAccMin% sig|eAccMax% sig|VE|
> 1| 12-10|  -2805.| -140711.|1.09|  -64187.|1.13|-.08  -111.1|-.039 -818.9| .101 2117.7|SI|
  1|  7- 2|  -3441.|   29988.|1.08|  -43309.|1.08|-.025  -41.4|-.015 -319.5| .02   416.9|SI|
  1| 11-15|  -2435.|   77126.|1.11| -112074.|1.1 |-.074 -105.5|-.037 -784. | .09  1895.8|SI|

INSTABILITA' - RIGIDEZZA NOMINALE Y [EC2 5.8.7]:
Asta| Caso |   NB    | l0  |  Jn    |Jcls/Jn|  Mcal   |  M0Ed   |  MEd    | nu |
 1 I| 12-10| -55273.3|435. |  3209.4|10.1427| -129504.| -133571.| -140711.|.026|

INSTABILITA' - RIGIDEZZA NOMINALE Z [EC2 5.8.7]:
Asta| Caso |   NB    | l0  |  Jn    |Jcls/Jn|  Mcal   |  M0Ed   |  MEd    | nu |
 1 I| 12-10| -55273.3|435. |  3209.4|10.1427|  -56863.|  -60930.|  -64187.|.026|

TAGLIO Y:
Asta| Caso | VEd    VEd ger. | VRd      VRsd     VRcd    | Asw | s  |ctgT|VE|
 1 I| 11-12|  -526.2| -1683.1| 15528.4| 15528.4| 15701.6| 1.01|10. |2.15|SI|
 1 C| 11-12|  -526.2| -1683.1|  9503.3|  9503.3| 14116.1| 1.01|19. |2.5 |SI|
 1 S| 11-12|  -526.2| -1683.1| 15528.4| 15528.4| 15606.1| 1.01|10. |2.15|SI|

TAGLIO Z:
Asta| Caso | VEd    VEd ger. | VRd      VRsd     VRcd    | Asw | s  |ctgT|VE|
 1 I| 12-12|  -603.3| -1684.6| 15528.4| 15528.4| 15701.2| 1.01|10. |2.15|SI|
 1 C| 12-12|  -603.3| -1684.6|  9503.3|  9503.3| 14115.8| 1.01|19. |2.5 |SI|
 1 S| 12-12|  -603.3| -1684.6| 15528.4| 15528.4| 15605.8| 1.01|10. |2.15|SI|

NEd LIMITE (NEd < Nmax , Nmax=65% di Ncls ; Ncls=fcd*Ac) [7.4.4.2.1]:
Asta  | Caso |  NEd    |  Nmax    |  Ncls    |% Ncls|VE|
     1| 11-15|   -3114.3|  -70697. | -108764.6|  2.86|SI|

                    VERIFICHE ALLO STATO LIMITE DI FESSURAZIONE

    |ferri          | Sacc massime consentite  |
Asta|distanza   | ø | rare   |freq.   | q.p.   |
 1  |      15.8 | 16|no limit|  2400.0|  1936.0|

Frequenti:                          Quasi permanenti:
Asta| Caso | Sacc  |St cls|VE|      Asta| Caso | Sacc  |St cls|VE|
 1 I| 25- 1|   78.5|   4.6|SI|       1 I| 26- 1|  -29.4|  -1.1|SI|
 1 C| 24- 2|  138.6|   7.8|SI|       1 C| 26- 1|  115.1|   6.9|SI|
 1 S| 25- 2|  507. |  17.5|SI|       1 S| 26- 1|  402.9|  14.9|SI|

                       VERIFICHE ALLO STATO LIMITE DI ESERCIZIO

Rare:
Asta| Caso |  NEd    |  MEyd    |  MEzd    | Scls |SaccMin|SaccMax|St cls|VE|
 1 I| 21- 1|   -2658.3|   99906.3|    3690.8| -55.2| -390.4| 1111.2|  29.1|SI|
 1 C| 20- 2|   -2532.7|   20440. |  -28318.7| -26.1| -243.8|  263.7|  12. |SI|
 1 S| 21- 2|   -2245.4|   78290. |  -24871.7| -57.6| -442.2| 1008.7|  29.5|SI|

Frequenti:
Asta| Caso |  NEd    |  MEyd    |  MEzd    | Scls |SaccMin|SaccMax|St cls|VE|
 1 I| 25- 1|   -2544.7|   23826.6|   -1582.8| -13.4| -137.7|   78.5|   4.6|SI|
 1 C| 24- 2|   -2247.7|   17742.1|  -16522. | -17.8| -175. |  138.6|   7.8|SI|
 1 S| 25- 2|   -1918.4|   39120.8|  -24369.9| -35.6| -299.8|  507. |  17.5|SI|

Quasi permanenti:
Asta| Caso |  NEd    |  MEyd    |  MEzd    | Scls |SaccMin|SaccMax|St cls|VE|
 1 I| 26- 1|   -2571.4|    4806.1|   -2846.5|  -5.9|  -75.2|  -29.4|  -1.1|SI|
 1 C| 26- 1|   -2231.5|   17523.9|  -13936.5| -16.2| -161.9|  115.1|   6.9|SI|
 1 S| 26- 1|   -1891.7|   30241.8|  -25026.4| -30.8| -267.4|  402.9|  14.9|SI|
```

Tutte le verifiche a SLU ed a SLE risultano soddisfatte.

6.3.1.4 Pilastro G04

```
                       VERIFICA PILASTRO IN CEMENTO ARMATO

Nome pilastro      : P006  (ID=10)
Aste               : 12
Metodo di verifica : stati limite - NTC18 (q=1 ; muphi=1.2) ->
Duttilita'         : calcolo completo.
                   : struttura dissipativa in bassa duttilita'.
                   : dettagli costruttivi del capito 7 attivi.
                   : dettagli costruttivi del capito 4 attivi.
Unita' di misura   : cm; daN; daN/cm; daNcm; daN/cm2; deform. %; 1/r ‰(permille)
Unita' particolari : fessure [Wk]:mm - ferri:mm e cm2 - sezioni:cm e derivate.
Copriferri (assi)  : longitudinali= 4.6 ; staffe= 3.4
```

```
Imperfezioni       : M minimo = N * e0 ; M aggiunto = N * ei
Instabilita'       : rigidezza nominale [EC2 5.8.7]; fief=3
Duttilita'richiesta: verifica attiva (7.4.29) - coefficiente moltipl. = 1

                                    MATERIALI

CLS    : C30/37; Rck=370; fck=307.1; fctk=20.59; fctm=29.42; Ecm=330194;
         gc=1.5; fcd=174; fbd=30.89; fctd=13.73; Ec2=0.2%; Ecu=0.35%
ACCIAIO: B450C; ftk=5175; fyk=4500; Es=2100000; gs=1.15; fyd=3913;
         ftd=4500; fud=4439.8; Eyd=0.1863%; Eud=6.75%

                           TENSIONI MASSIME IN ESERCIZIO

GRUPPO : aggressivo.
CLS    : Scls(rara)=184.3; Scls(quasi permanente)=138.2; fbd(esercizio)=30.89
ACCIAIO: Sacc(rara)=3600; Coeff.Omogeneizzazione=15
FESSURE: Wdmax(fre.)=0.3; Wdmax(q.p.)=0.2; St(tens.aper.fess.)=24.52 [4.1.2.2.4]

                                  CASI DI CARICO

Nome|   Descrizione       |Tipo          |Ses|
   1|SLU Max Var          |SLU (statico) |  1|
   2|SLU Max Neve         |SLU (statico) |  1|
   3|SLU VENTOX 1         |SLU (statico) |  2|
   4|SLU VENTOY 1         |SLU (statico) |  2|
   5|SLU VENTOX 2         |SLU (statico) |  2|
   6|SLU VENTOY 2         |SLU (statico) |  2|
   7|SLU VENTOX 3         |SLU (statico) |  2|
   8|SLU VENTOY 3         |SLU (statico) |  2|
  11|SLU con SISMAX PRINC |SLU (sismico) | 16|
  12|SLU con SISMAY PRINC |SLU (sismico) | 16|
  15|Rara                 |RARA          |  1|
  16|Rara VentoX 1        |RARA          |  2|
  17|Rara VentoY 1        |RARA          |  2|
  18|Rara VentoX 2        |RARA          |  2|
  19|Rara VentoY 2        |RARA          |  2|
  20|Rara VentoX 3        |RARA          |  2|
  21|Rara VentoY 3        |RARA          |  2|
  22|Frequente 1          |FREQUENTE     |  1|
  23|Frequente 2          |FREQUENTE     |  1|
  24|Frequente VentoX 3   |FREQUENTE     |  2|
  25|Frequente VentoY 3   |FREQUENTE     |  2|
  26|Quasi Perm           |QUASI PERMAN. |  1|
<-
                                SEZIONI UTILIZZATE

 1) Rettangolare: base=25; alt.=25; Acls=625; iy=7.22; iz=7.22

                     DESCRIZIONE ASTE E ARMATURA LONGITUDINALE

As Se|e0z |e0y |eiz |eiy |Lassi Lnet  Lcr.I Lcr.S| Af    % arm                |
 1| 1|2.17|2.17|1.45|1.45|435. |415. | 70. | 70. |  8.04|1.287|4ø16            |

                            GERARCHIA DELLE RESISTENZE

MOMENTI ULTIMI MINIMI (CASI SISMICI):
Asta  | caso   Myu- min | caso   Myu+ min | caso   Mzu- min | caso   Mzu+ min |
 1 I  | 11-15| -297950. | 11-15|  297955. | 12-15| -294970. | 12-15|  294970. |
 1 S  | 11- 4| -299015. | 11- 4|  299015. | 12- 4| -293945. | 12- 4|  293945. |

TAGLI GERARCHIA:
As| Lp  | caso   VEyd-   | caso   VEyd+   | caso   VEzd-   | caso   VEzd+   |
 1|415. | 11- 2|  -1678.4| 11- 2|   1678.4| 12- 2|  -1677.9| 12- 2|   1678. |

                         VERIFICHE ALLO STATO LIMITE ULTIMO

PRESSO-FLESSIONE (inclusi imperfezioni e second'ordine):
Asta Caso |  NEd    |  MEyd        |  MEzd        |eCls%   sig |eAccMin% sig|eAccMax% sig|VE|
> 1| 12-13|  -2224.| -143498.|1.07|  -55665.|1.11|-.077 -108.2|-.036 -765.6| .103 2158.9|SI|
  1|  5- 1|  -3516.|  -31262.|1.08|   25519.|1.08|-.019  -31. |-.012 -251.1| .011  233.2|SI|
  1| 11- 5|  -2305.|  -74745.|1.11|  108721.|1.09|-.072 -102.9|-.036 -757.3| .088 1844.5|SI|

INSTABILITA' - RIGIDEZZA NOMINALE Y [EC2 5.8.7]:
Asta| Caso |   NB    | lO  |  Jn    |Jcls/Jn|  Mcal   |  MOEd   |  MEd    | nu |
 1 I| 12-13| -55212.1|435. |  3205.9|10.154 | -134492.| -137717.| -143498.|.02 |

INSTABILITA' - RIGIDEZZA NOMINALE Z [EC2 5.8.7]:
Asta| Caso |   NB    | lO  |  Jn    |Jcls/Jn|  Mcal   |  MOEd   |  MEd    | nu |
 1 I| 12-13| -55212.1|435. |  3205.9|10.154 |  -50198.|  -53423.|  -55665.|.02 |

TAGLIO Y:
Asta| Caso | VEd    VEd ger. | VRd      VRsd     VRcd   | Asw | s  |ctgT|VE|
 1 I| 11- 2|   524.6|  1678.4| 15528.4| 15528.4| 15684. | 1.01|10. |2.15|SI|
 1 C| 11- 2|   524.6|  1678.4|  9503.3|  9503.3| 14100.3| 1.01|19. |2.5 |SI|
 1 S| 11- 2|   524.6|  1678.4| 15528.4| 15528.4| 15588.6| 1.01|10. |2.15|SI|

TAGLIO Z:
Asta| Caso | VEd    VEd ger. | VRd      VRsd     VRcd   | Asw | s  |ctgT|VE|
 1 I| 12- 2|   584.2|  1678. | 15528.4| 15528.4| 15679.1| 1.01|10. |2.15|SI|
 1 C| 12- 2|   584.2|  1678. |  9503.3|  9503.3| 14095.8| 1.01|19. |2.5 |SI|
 1 S| 12- 2|   584.2|  1678. | 15528.4| 15528.4| 15583.7| 1.01|10. |2.15|SI|

NEd LIMITE (NEd < Nmax , Nmax=65% di Ncls ; Ncls=fcd*Ac) [7.4.4.2.1]:
Asta  | Caso |  NEd     |  Nmax    |  Ncls    |% Ncls|VE|
     1| 11- 5|   -2984.5|  -70697. | -108764.6|  2.74|SI|

                    VERIFICHE ALLO STATO LIMITE DI FESSURAZIONE

    |ferri          | Sacc massime consentite  |
Asta|distanza   | ø | rare   |freq.   | q.p.   |
 1  |      15.8 | 16|no limit|  2400.0|  1936.0|

Frequenti:                          Quasi permanenti:
Asta| Caso | Sacc  |St cls|VE|      Asta| Caso | Sacc  |St cls|VE|
 1 I| 25- 2|   60.1|   3.7|SI|       1 I| 26- 1|  -31. |  -1.3|SI|
 1 C| 24- 1|  110.8|   6.6|SI|       1 C| 26- 1|  102.9|   6.2|SI|
 1 S| 25- 1|  504.2|  16.8|SI|       1 S| 26- 1|  377.9|  13.8|SI|
```

VERIFICHE ALLO STATO LIMITE DI ESERCIZIO

Rare:

Asta	Caso	NEd	MEyd	MEzd	Scls	SaccMin	SaccMax	St cls	VE
1 I	21- 2	-2506.1	-89690.	-4089.5	-50.1	-358.8	988.4	26.2	SI
1 C	18- 1	-2568.	-21150.6	17033.4	-19.7	-195.4	150.7	8.6	SI
1 S	21- 1	-2081.8	-84461.5	21375.2	-58.8	-437.1	1088.7	30.6	SI

Frequenti:

Asta	Caso	NEd	MEyd	MEzd	Scls	SaccMin	SaccMax	St cls	VE
1 I	25- 2	-2404.1	-21598.4	520.7	-11.7	-122.3	60.1	3.7	SI
1 C	24- 1	-2113.2	-17221.1	12667.2	-15.4	-153.8	110.8	6.6	SI
1 S	25- 1	-1775.5	-39763.1	21164.6	-34.2	-283.5	504.2	16.8	SI

Quasi permanenti:

Asta	Caso	NEd	MEyd	MEzd	Scls	SaccMin	SaccMax	St cls	VE
1 I	26- 1	-2429.7	-4567.7	1591.	-5.2	-67.9	-31.	-1.3	SI
1 C	26- 1	-2089.8	-17023.9	11695.4	-14.8	-148.2	102.9	6.2	SI
1 S	26- 1	-1750.	-29480.1	21799.9	-28.6	-247.1	377.9	13.8	SI

Tutte le verifiche a SLU ed a SLE risultano soddisfatte.

6.3.1.5 Pilastro G05

VERIFICA PILASTRO IN CEMENTO ARMATO

```
Nome pilastro      : P005  (ID=9)
Aste               : 11
Metodo di verifica : stati limite - NTC18 (q=1 ; muphi=1.2) ->
Duttilita'         : calcolo completo.
                   : struttura dissipativa in bassa duttilita'.
                   : dettagli costruttivi del capito 7 attivi.
                   : dettagli costruttivi del capito 4 attivi.
Unita' di misura   : cm; daN; daN/cm; daNcm; daN/cm2; deform. %; 1/r ‰(permille)
Unita' particolari : fessure [Wk]:mm - ferri:mm e cm2 - sezioni:cm e derivate.
Copriferri (assi)  : longitudinali= 4.6 ; staffe= 3.4
Imperfezioni       : M minimo = N * e0 ; M aggiunto = N * ei
Instabilita'       : rigidezza nominale [EC2 5.8.7]; fief=3
Duttilita'richiesta: verifica attiva (7.4.29) - coefficiente moltipl. = 1
```

MATERIALI

```
CLS    : C30/37; Rck=370; fck=307.1; fctk=20.59; fctm=29.42; Ecm=330194;
         gc=1.5; fcd=174; fbd=30.89; fctd=13.73; Ec2=0.2%; Ecu=0.35%
ACCIAIO: B450C; ftk=5175; fyk=4500; Es=2100000; gs=1.15; fyd=3913;
         ftd=4500; fud=4439.8; Eyd=0.1863%; Eud=6.75%
```

TENSIONI MASSIME IN ESERCIZIO

```
GRUPPO : aggressivo.
CLS    : Scls(rara)=184.3; Scls(quasi permanente)=138.2; fbd(esercizio)=30.89
ACCIAIO: Sacc(rara)=3600; Coeff.Omogeneizzazione=15
FESSURE: Wdmax(fre.)=0.3; Wdmax(q.p.)=0.2; St(tens.aper.fess.)=24.52 [4.1.2.2.4]
```

CASI DI CARICO

Nome	Descrizione	Tipo	Ses
1	SLU Max Var	SLU (statico)	1
2	SLU Max Neve	SLU (statico)	1
3	SLU VENTOX 1	SLU (statico)	2
4	SLU VENTOY 1	SLU (statico)	2
5	SLU VENTOX 2	SLU (statico)	2
6	SLU VENTOY 2	SLU (statico)	2
7	SLU VENTOX 3	SLU (statico)	2
8	SLU VENTOY 3	SLU (statico)	2
11	SLU con SISMAX PRINC	SLU (sismico)	16
12	SLU con SISMAY PRINC	SLU (sismico)	16
15	Rara	RARA	1
16	Rara VentoX 1	RARA	2
17	Rara VentoY 1	RARA	2
18	Rara VentoX 2	RARA	2
19	Rara VentoY 2	RARA	2
20	Rara VentoX 3	RARA	2
21	Rara VentoY 3	RARA	2
22	Frequente 1	FREQUENTE	1
23	Frequente 2	FREQUENTE	1
24	Frequente VentoX 3	FREQUENTE	2
25	Frequente VentoY 3	FREQUENTE	2
26	Quasi Perm	QUASI PERMAN.	1

<-

SEZIONI UTILIZZATE

```
 1) Rettangolare: base=25; alt.=25; Acls=625; iy=7.22; iz=7.22
```

DESCRIZIONE ASTE E ARMATURA LONGITUDINALE

As	Se	e0z	e0y	eiz	eiy	Lassi	Lnet	Lcr.I	Lcr.S	Af	% arm		
1	1	2.17	2.17	1.45	1.45	435.	415.	70.	70.	8.04	1.287	4Ø16	

GERARCHIA DELLE RESISTENZE

MOMENTI ULTIMI MINIMI (CASI SISMICI):

Asta	caso	Myu- min	caso	Myu+ min	caso	Mzu- min	caso	Mzu+ min
1 I	11- 4	-308385.	11- 4	308385.	12-13	-320330.	12-13	320330.
1 S	11- 4	-309360.	11- 4	309360.	12- 2	-306445.	12- 2	306445.

TAGLI GERARCHIA:

As	Lp	caso	VEyd-	caso	VEyd+	caso	VEzd-	caso	VEzd+
1	415.	11-15	-1773.9	11-15	1773.9	12- 7	-1819.6	12- 7	1819.6

VERIFICHE ALLO STATO LIMITE ULTIMO

```
PRESSO-FLESSIONE (inclusi imperfezioni e second'ordine):
Asta Caso |  NEd    |  MEyd        |  MEzd        |eCls%   sig |eAccMin% sig|eAccMax% sig|VE|
> 1| 11-13|  -5740.|   50901.|1.36|  179184.|1.18|-.088 -119.3|-.045 -936.8| .104 2184.9|SI|
  1|  8- 1|  -8426.|  -70877.|1.19|    2004.|1.19|-.024  -39.6|-.017 -358. | .008  157.7|SI|
  1| 11- 2|  -5015.| -100287.|1.21|  160220.|1.17|-.104 -133.7|-.054 -1136.| .116 2440.5|SI|

INSTABILITA' - RIGIDEZZA NOMINALE Y [EC2 5.8.7]:
Asta| Caso |   NB    | l0  |  Jn    |Jcls/Jn|  Mcal   |  M0Ed   |  MEd    | nu |
 1 S| 11- 2| -55578.2|435. |  3227.1|10.0871|  -82740.|  -90011.| -100287.|.052|

INSTABILITA' - RIGIDEZZA NOMINALE Z [EC2 5.8.7]:
Asta| Caso |   NB    | l0  |  Jn    |Jcls/Jn|  Mcal   |  M0Ed   |  MEd    | nu |
 1 S| 11- 2| -55578.2|435. |  3227.1|10.0871|  136532.|  143804.|  160220.|.052|

TAGLIO Y:
Asta| Caso | VEd    VEd ger. | VRd      VRsd     VRcd   | Asw | s  |ctgT|VE|
 1 I| 11-15|  -655.7| -1773.9| 15764.6| 15889.5| 15764.6| 1.01|10. |2.2 |SI|
 1 C| 11-15|  -655.7| -1773.9|  9503.3|  9503.3| 14387.3| 1.01|19. |2.5 |SI|
 1 S| 11-15|  -655.7| -1773.9| 15670.6| 15889.5| 15670.6| 1.01|10. |2.2 |SI|

TAGLIO Z:
Asta| Caso | VEd    VEd ger. | VRd      VRsd     VRcd   | Asw | s  |ctgT|VE|
 1 I| 12- 7|   621.4|  1819.6| 15889.5| 15889.5| 15923.5| 1.01|10. |2.2 |SI|
 1 C| 12- 7|   621.4|  1819.6|  9503.3|  9503.3| 14532.7| 1.01|19. |2.5 |SI|
 1 S| 12- 7|   621.4|  1819.6| 15829.5| 15889.5| 15829.5| 1.01|10. |2.2 |SI|

NEd LIMITE (NEd < Nmax , Nmax=65% di Ncls ; Ncls=fcd*Ac) [7.4.4.2.1]:
Asta  | Caso |  NEd    |  Nmax    |  Ncls    |% Ncls|VE|
     1| 12- 4|   -6356.5|  -70697. | -108764.6|  5.84|SI|

                  VERIFICHE ALLO STATO LIMITE DI FESSURAZIONE

    |ferri          | Sacc massime consentite  |
Asta|distanza   | Ø | rare   |freq.   | q.p.   |
 1  |      15.8 | 16|no limit|  2400.0|  1936.0|

Frequenti:                          Quasi permanenti:
Asta| Caso | Sacc  |St cls|VE|      Asta| Caso | Sacc  |St cls|VE|
 1 I| 25- 1|  -40.9|    .1|SI|       1 I| 26- 1|  -94.6|  -5.7|SI|
 1 C| 25- 1|  -24.1|   1.4|SI|       1 C| 26- 1|  -34.3|    .4|SI|
 1 S| 25- 1|  327. |  13.3|SI|       1 S| 26- 1|  199.2|   9.9|SI|

                   VERIFICHE ALLO STATO LIMITE DI ESERCIZIO

Rare:
Asta| Caso |  NEd     |  MEyd    |  MEzd    | Scls |SaccMin|SaccMax|St cls|VE|
 1 I| 21- 1|   -6492.9|   98876.7|     664.6| -53. | -468.1|  652. |  22.6|SI|
 1 C| 21- 1|   -6153.1|  -42076. |    1231.9| -23.3| -262.4|   36.9|   5.3|SI|
 1 S| 21- 1|   -5813.2| -112069.3|    1799.2| -60.7| -500.2|  907.5|  28.1|SI|

Frequenti:
Asta| Caso |  NEd     |  MEyd    |  MEzd    | Scls |SaccMin|SaccMax|St cls|VE|
 1 I| 25- 1|   -5547.3|   23847.2|     178. | -15.1| -184.7|  -40.9|    .1|SI|
 1 C| 25- 1|   -5207.5|  -25683.9|    1053.2| -15.6| -186.6|  -24.1|   1.4|SI|
 1 S| 25- 1|   -4867.6|  -61023.1|    1928.5| -33.4| -314.6|  327. |  13.3|SI|

Quasi permanenti:
Asta| Caso |  NEd     |  MEyd    |  MEzd    | Scls |SaccMin|SaccMax|St cls|VE|
 1 I| 26- 1|   -5447.4|    5355. |      51.6|  -9.1| -127. |  -94.6|  -5.7|SI|
 1 C| 26- 1|   -5107.6|  -22184.8|    1037.1| -14.3| -173.4|  -34.3|    .4|SI|
 1 S| 26- 1|   -4767.7|  -49724.5|    2022.6| -27.4| -272.9|  199.2|   9.9|SI|
```

Tutte le verifiche a SLU ed a SLE risultano soddisfatte.

6.3.1.6 Pilastro G06

```
                     VERIFICA PILASTRO IN CEMENTO ARMATO

Nome pilastro      : P004  (ID=8)
Aste               : 10
Metodo di verifica : stati limite - NTC18 (q=1 ; muphi=1.2) ->
Duttilita'         : calcolo completo.
                   : struttura dissipativa in bassa duttilita'.
                   : dettagli costruttivi del capito 7 attivi.
                   : dettagli costruttivi del capito 4 attivi.
Unita' di misura   : cm; daN; daN/cm; daNcm; daN/cm2; deform. %; 1/r ‰(permille)
Unita' particolari : fessure [Wk]:mm - ferri:mm e cm2 - sezioni:cm e derivate.
Copriferri (assi)  : longitudinali= 4.6 ; staffe= 3.4
Imperfezioni       : M minimo = N * e0 ; M aggiunto = N * ei
Instabilita'       : rigidezza nominale [EC2 5.8.7]; fief=3
Duttilita'richiesta: verifica attiva (7.4.29) - coefficiente moltipl. = 1

                                  MATERIALI

CLS    : C30/37; Rck=370; fck=307.1; fctk=20.59; fctm=29.42; Ecm=330194;
         gc=1.5; fcd=174; fbd=30.89; fctd=13.73; Ec2=0.2%; Ecu=0.35%
ACCIAIO: B450C; ftk=5175; fyk=4500; Es=2100000; gs=1.15; fyd=3913;
         ftd=4500; fud=4439.8; Eyd=0.1863%; Eud=6.75%

                          TENSIONI MASSIME IN ESERCIZIO

GRUPPO : aggressivo.
CLS    : Scls(rara)=184.3; Scls(quasi permanente)=138.2; fbd(esercizio)=30.89
ACCIAIO: Sacc(rara)=3600; Coeff.Omogeneizzazione=15
FESSURE: Wdmax(fre.)=0.3; Wdmax(q.p.)=0.2; St(tens.aper.fess.)=24.52 [4.1.2.2.4]

                                CASI DI CARICO

Nome|   Descrizione       |Tipo          |Ses|
   1|SLU Max Var          |SLU (statico) |  1|
```

```
   2|SLU Max Neve         |SLU (statico) |  1|
   3|SLU VENTOX 1         |SLU (statico) |  2|
   4|SLU VENTOY 1         |SLU (statico) |  2|
   5|SLU VENTOX 2         |SLU (statico) |  2|
   6|SLU VENTOY 2         |SLU (statico) |  2|
   7|SLU VENTOX 3         |SLU (statico) |  2|
   8|SLU VENTOY 3         |SLU (statico) |  2|
  11|SLU con SISMAX PRINC |SLU (sismico) | 16|
  12|SLU con SISMAY PRINC |SLU (sismico) | 16|
  15|Rara                 |RARA          |  1|
  16|Rara VentoX 1        |RARA          |  2|
  17|Rara VentoY 1        |RARA          |  2|
  18|Rara VentoX 2        |RARA          |  2|
  19|Rara VentoY 2        |RARA          |  2|
  20|Rara VentoX 3        |RARA          |  2|
  21|Rara VentoY 3        |RARA          |  2|
  22|Frequente 1          |FREQUENTE     |  1|
  23|Frequente 2          |FREQUENTE     |  1|
  24|Frequente VentoX 3   |FREQUENTE     |  2|
  25|Frequente VentoY 3   |FREQUENTE     |  2|
  26|Quasi Perm           |QUASI PERMAN. |  1|
<-
                              SEZIONI UTILIZZATE

 1) Rettangolare: base=25; alt.=25; Acls=625; iy=7.22; iz=7.22

                    DESCRIZIONE ASTE E ARMATURA LONGITUDINALE

As Se|e0z |e0y |eiz |eiy |Lassi Lnet  Lcr.I Lcr.S| Af    % arm                 |
 1| 1|2.17|2.17|1.45|1.45|435. |415. | 70. | 70. |  8.04|1.287|4ø16             |

                              GERARCHIA DELLE RESISTENZE

MOMENTI ULTIMI MINIMI (CASI SISMICI):
Asta  | caso   Myu- min | caso   Myu+ min | caso   Mzu- min | caso   Mzu+ min |
 1 I  | 11- 4| -298950. | 11- 4|  298950. | 12-10| -294585. | 12-10|  294585. |
 1 S  | 11-15| -298985. | 11-15|  298990. | 12- 5| -294005. | 12- 5|  294005. |

TAGLI GERARCHIA:
As| Lp  | caso   VEyd-   | caso   VEyd+   | caso   VEzd-   | caso   VEzd+   |
 1|415. | 11-13|  -1683.1| 11-13|   1683.1| 12- 7|  -1684.6| 12- 7|   1684.6|

                         VERIFICHE ALLO STATO LIMITE ULTIMO

PRESSO-FLESSIONE (inclusi imperfezioni e second'ordine):
Asta Caso |  NEd    |  MEyd        |  MEzd        |eCls%   sig |eAccMin% sig|eAccMax% sig|VE|
> 1| 12- 5|  -2805.|  140706.|1.09|  -64184.|1.13|-.08  -111.1|-.039 -818.9| .101 2117.7|SI|
  1|  7- 2|  -3441.|  -29988.|1.08|  -43309.|1.08|-.025  -41.4|-.015 -319.5| .02   416.9|SI|
  1| 11-10|  -2435.|  -77137.|1.11| -112068.|1.1 |-.074 -105.5|-.037 -784.1| .09  1895.9|SI|

INSTABILITA' - RIGIDEZZA NOMINALE Y [EC2 5.8.7]:
Asta| Caso |   NB    | l0  |  Jn    |Jcls/Jn|  Mcal   |  M0Ed   |  MEd    | nu |
 1 I| 12- 5| -55273.3|435. |  3209.4|10.1427|  129500.|  133567.|  140706.|.026|

INSTABILITA' - RIGIDEZZA NOMINALE Z [EC2 5.8.7]:
Asta| Caso |   NB    | l0  |  Jn    |Jcls/Jn|  Mcal   |  M0Ed   |  MEd    | nu |
 1 I| 12- 5| -55273.3|435. |  3209.4|10.1427|  -56860.|  -60927.|  -64184.|.026|

TAGLIO Y:
Asta| Caso | VEd    VEd ger. | VRd      VRsd     VRcd   | Asw | s  |ctgT|VE|
 1 I| 11-13|  -526.1|  1683.1| 15528.4| 15528.4| 15701.6| 1.01|10. |2.15|SI|
 1 C| 11-13|  -526.1|  1683.1|  9503.3|  9503.3| 14116.1| 1.01|19. |2.5 |SI|
 1 S| 11-13|  -526.1|  1683.1| 15528.4| 15528.4| 15606.1| 1.01|10. |2.15|SI|

TAGLIO Z:
Asta| Caso | VEd    VEd ger. | VRd      VRsd     VRcd   | Asw | s  |ctgT|VE|
 1 I| 12- 7|   603.4|  1684.6| 15528.4| 15528.4| 15701.2| 1.01|10. |2.15|SI|
 1 C| 12- 7|   603.4|  1684.6|  9503.3|  9503.3| 14115.8| 1.01|19. |2.5 |SI|
 1 S| 12- 7|   603.4|  1684.6| 15528.4| 15528.4| 15605.8| 1.01|10. |2.15|SI|

NEd LIMITE (NEd < Nmax , Nmax=65% di Ncls ; Ncls=fcd*Ac) [7.4.4.2.1]:
Asta  | Caso |  NEd    |  Nmax    |  Ncls    |% Ncls|VE|
     1| 11-10|   -3114.3|  -70697. | -108764.6|  2.86|SI|

                    VERIFICHE ALLO STATO LIMITE DI FESSURAZIONE

    |ferri          | Sacc massime consentite  |
Asta|distanza   | Ø | rare   |freq.   | q.p.   |
 1  |      15.8 | 16|no limit|  2400.0|  1936.0|

Frequenti:                          Quasi permanenti:
Asta| Caso | Sacc  |St cls|VE|      Asta| Caso | Sacc  |St cls|VE|
 1 I| 25- 2|   58.6|   4. |SI|       1 I| 26- 1|  -29.4|  -1.1|SI|
 1 C| 24- 2|  138.6|   7.8|SI|       1 C| 26- 1|  115.1|   6.9|SI|
 1 S| 25- 1|  525.5|  17.9|SI|       1 S| 26- 1|  402.9|  14.9|SI|

                      VERIFICHE ALLO STATO LIMITE DI ESERCIZIO

Rare:
Asta| Caso |  NEd    |  MEyd    |  MEzd    | Scls |SaccMin|SaccMax|St cls|VE|
 1 I| 21- 2|   -2654.8|  -89595.7|    2346.9| -48.9| -351.9|  958.1|  25.4|SI|
 1 C| 20- 2|   -2532.7|  -20440. |  -28318.7| -26.1| -243.8|  263.7|  12. |SI|
 1 S| 21- 1|   -2248.8|  -84945.5|  -25435.5| -61.6| -466.4| 1105.8|  31.8|SI|

Frequenti:
Asta| Caso |  NEd    |  MEyd    |  MEzd    | Scls |SaccMin|SaccMax|St cls|VE|
 1 I| 25- 2|   -2544. |  -21764.5|   -1851.5| -12.4| -130.8|   58.6|   4. |SI|
 1 C| 24- 2|   -2247.7|  -17742.1|  -16522. | -17.8| -175. |  138.6|   7.8|SI|
 1 S| 25- 1|   -1919. |  -40451.9|  -24482.7| -36.5| -305.4|  525.5|  17.9|SI|

Quasi permanenti:
Asta| Caso |  NEd    |  MEyd    |  MEzd    | Scls |SaccMin|SaccMax|St cls|VE|
 1 I| 26- 1|   -2571.4|   -4806.1|   -2846.5|  -5.9|  -75.2|  -29.4|  -1.1|SI|
 1 C| 26- 1|   -2231.5|  -17523.9|  -13936.5| -16.2| -161.9|  115.1|   6.9|SI|
 1 S| 26- 1|   -1891.7|  -30241.8|  -25026.4| -30.8| -267.4|  402.9|  14.9|SI|
```

Tutte le verifiche a SLU ed a SLE risultano soddisfatte.

6.4 *VERIFICHE SOLETTA IN C.A.*

Si riporta la verifica, effettuata tramite il modulo "*Verifica Gusci*" del software di calcolo *DOLMEN 2024*, con riferimento all'inviluppo delle sollecitazioni agenti ricavate da tutti i casi di carico statici e sismici.

Il modulo permette di evidenziare per ogni guscio considerato la quantità minima di armatura, espressa in cm^2/m, da disporre per garantire l'ottemperanza di tutte le verifiche a SLU o a SLE. Una volta definita l'armatura e soddisfatte le medesime, si ottiene un tabulato numerico che riporta per ogni elemento i risultati delle verifiche, esprimendo lo stato deformativo e tensionale dei materiali e l'apertura delle fessure.

La sezione resistente della soletta presenta spessore pari a 20cm ed è armata tramite l'impiego di barre ϕ 12 disposte con passo 20cm. Si rimanda alle tavole di progetto per avere un'indicazione esaustiva delle armature disposte.

Si rimanda alla *Fig. 6*, per la numerazione assegnata ai gusci.

6.4.1 *Verifiche a SLU e a SLV per flessione e taglio*

Si riportano i risultati ottenuti dalle verifiche eseguite a SLU.

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MACROGUSCIO soletta

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->
    Nome  Descrizione
    1     SLU Max Var
    2     SLU Max Neve
    3     SLU VENTOX 1
    4     SLU VENTOY 1
    5     SLU VENTOX 2
    6     SLU VENTOY 2
    7     SLU VENTOX 3
    8     SLU VENTOY 3
    11    SLU con SISMAX PRINC
    12    SLU con SISMAY PRINC

DATI:
   tensione di snervamento acciaio (fyk): 4500    daN/cm2
   coefficiente sicurezza acciaio       : 1.15
   deformazione ultima acciaio          : 67.5    per mille
   deformazione ultima cls              :  3.5    per mille
   rapporto rottura/snervamento     (k): 1.15
   resistenza cilindrica cls       (fck): 307.1   daN/cm2
   coefficiente sicurezza cls           : 1.5
   coefficiente riduttivo         (alfa): 0.85
   copriferro inferiore  (asse armatura):  5      cm
   copriferro superiore  (asse armatura):  5      cm
   moltiplicatore sollecitazioni        :  1

LEGENDA:
   spess = spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
   Af    = area disposta al lembo teso, in cm2 al metro
   Afc   = area disposta al lembo compresso, in cm2 al metro
   Mom   = momento flettente [daNcm/cm]
   Nor   = sforzo normale [daN]
   epsC  = deformazione cls [per mille]
   epsF  = deformazione acciaio [per mille]
<-
   L'armatura   sufficiente se le deformazioni dei materiali sono ovunque minori delle
corrispondenti deformazioni ultime.

          |              INFERIORE ORIZZONTALE          |            INFERIORE VERTICALE              |COEF.|
GUSCI|spess|  Af    Afc     Mom      Nor   epsC  epsF | Af    Afc     Mom      Nor   epsC  epsF |MAX %|
1    |  20 | 5.65  5.65    2108.       6.  0.46  1.30 | 5.65  5.65    2511.       7.  0.55  1.54 |  79 |
2    |  20 | 5.65  5.65    1541.       7.  0.33  0.96 | 5.65  5.65    1775.       5.  0.38  1.09 |  56 |
3    |  20 | 5.65  5.65    1323.       6.  0.29  0.82 | 5.65  5.65    1226.       2.  0.27  0.75 |  42 |
4    |  20 | 5.65  5.65    1510.      -1.  0.33  0.91 | 5.65  5.65     608.       0.  0.13  0.37 |  46 |
5    |  20 | 5.65  5.65    1553.      -1.  0.34  0.93 | 5.65  5.65     287.       0.  0.06  0.17 |  48 |
6    |  20 | 5.65  5.65    1504.      -1.  0.33  0.90 | 5.65  5.65     233.       0.  0.05  0.14 |  46 |
```

7	20	5.65	5.65	1510.	1.	0.33	0.91	5.65	5.65	271.	0.	0.06	0.16	47
8	20	5.65	5.65	1561.	1.	0.34	0.94	5.65	5.65	396.	0.	0.09	0.24	48
9	20	5.65	5.65	1523.	1.	0.34	0.92	5.65	5.65	517.	0.	0.11	0.31	47
10	20	5.65	5.65	1399.	1.	0.31	0.85	5.65	5.65	615.	0.	0.14	0.37	43
11	20	5.65	5.65	1174.	1.	0.26	0.71	5.65	5.65	685.	0.	0.15	0.41	36
12	20	5.65	5.65	684.	0.	0.15	0.41	5.65	5.65	883.	2.	0.19	0.54	28
13	20	5.65	5.65	0.	4.	0.00	0.02	5.65	5.65	1035.	3.	0.22	0.63	32
14	20	5.65	5.65	0.	6.	0.00	0.03	5.65	5.65	756.	4.	0.16	0.47	24
15	20	5.65	5.65	0.	6.	0.00	0.03	5.65	5.65	783.	4.	0.16	0.49	25
16	20	5.65	5.65	0.	4.	0.00	0.02	5.65	5.65	1040.	3.	0.22	0.64	33
17	20	5.65	5.65	602.	0.	0.13	0.36	5.65	5.65	860.	2.	0.19	0.53	27
18	20	5.65	5.65	1058.	0.	0.23	0.64	5.65	5.65	649.	0.	0.14	0.39	33
19	20	5.65	5.65	1281.	1.	0.28	0.78	5.65	5.65	576.	0.	0.13	0.35	40
20	20	5.65	5.65	1390.	1.	0.31	0.84	5.65	5.65	474.	0.	0.11	0.29	43
21	20	5.65	5.65	1396.	1.	0.31	0.84	5.65	5.65	354.	0.	0.08	0.21	43
22	20	5.65	5.65	1311.	1.	0.29	0.79	5.65	5.65	225.	0.	0.05	0.14	40
23	20	5.65	5.65	1360.	-1.	0.30	0.82	5.65	5.65	338.	0.	0.07	0.20	42
24	20	5.65	5.65	1359.	-1.	0.30	0.82	5.65	5.65	659.	0.	0.15	0.40	42
25	20	5.65	5.65	1241.	5.	0.27	0.77	5.65	5.65	1264.	2.	0.28	0.77	39
26	20	5.65	5.65	1494.	7.	0.32	0.93	5.65	5.65	1788.	4.	0.39	1.10	56
27	20	5.65	5.65	2151.	6.	0.47	1.32	5.65	5.65	2435.	7.	0.54	1.50	77
28	20	5.65	5.65	1471.	5.	0.32	0.91	5.65	5.65	1733.	8.	0.37	1.08	55
29	20	5.65	5.65	1401.	4.	0.30	0.86	5.65	5.65	1572.	6.	0.34	0.97	50
30	20	5.65	5.65	1265.	3.	0.28	0.78	5.65	5.65	1362.	3.	0.29	0.83	43
31	20	5.65	5.65	1433.	-1.	0.32	0.86	5.65	5.65	1045.	0.	0.23	0.63	44
32	20	5.65	5.65	1479.	-1.	0.33	0.89	5.65	5.65	786.	0.	0.17	0.47	45
33	20	5.65	5.65	1436.	-1.	0.32	0.86	5.65	5.65	566.	0.	0.13	0.34	44
34	20	5.65	5.65	1452.	1.	0.32	0.88	5.65	5.65	529.	0.	0.12	0.32	45
35	20	5.65	5.65	1501.	1.	0.33	0.91	5.65	5.65	662.	0.	0.15	0.40	46
36	20	5.65	5.65	1461.	1.	0.32	0.88	5.65	5.65	817.	0.	0.18	0.49	45
37	20	5.65	5.65	1334.	1.	0.29	0.81	5.65	5.65	966.	0.	0.21	0.58	41
38	20	5.65	5.65	1082.	1.	0.24	0.65	5.65	5.65	1093.	0.	0.24	0.66	34
39	20	5.65	5.65	636.	0.	0.14	0.38	5.65	5.65	1206.	0.	0.27	0.73	37
40	20	5.65	5.65	0.	4.	0.00	0.02	5.65	5.65	1172.	1.	0.26	0.71	36
41	20	5.65	5.65	0.	5.	0.00	0.02	5.65	5.65	879.	2.	0.19	0.54	27
42	20	5.65	5.65	0.	5.	0.00	0.02	5.65	5.65	1022.	2.	0.22	0.62	32
43	20	5.65	5.65	0.	4.	0.00	0.02	5.65	5.65	1196.	1.	0.26	0.72	37
44	20	5.65	5.65	565.	0.	0.13	0.34	5.65	5.65	1167.	0.	0.26	0.70	36
45	20	5.65	5.65	979.	0.	0.22	0.59	5.65	5.65	1059.	0.	0.23	0.64	33
46	20	5.65	5.65	1221.	1.	0.27	0.74	5.65	5.65	927.	0.	0.21	0.56	38
47	20	5.65	5.65	1329.	1.	0.29	0.80	5.65	5.65	777.	0.	0.17	0.47	41
48	20	5.65	5.65	1336.	1.	0.29	0.81	5.65	5.65	621.	0.	0.14	0.37	41
49	20	5.65	5.65	1253.	1.	0.28	0.76	5.65	5.65	484.	0.	0.11	0.29	39
50	20	5.65	5.65	1290.	-1.	0.29	0.77	5.65	5.65	706.	0.	0.16	0.43	40
51	20	5.65	5.65	1289.	-1.	0.29	0.77	5.65	5.65	969.	0.	0.21	0.58	40
52	20	5.65	5.65	1185.	3.	0.25	0.73	5.65	5.65	1288.	3.	0.28	0.79	40
53	20	5.65	5.65	1158.	5.	0.24	0.72	5.65	5.65	1502.	6.	0.32	0.93	47
54	20	5.65	5.65	1500.	5.	0.32	0.93	5.65	5.65	1666.	8.	0.36	1.04	53
55	20	5.65	5.65	950.	3.	0.20	0.58	5.65	5.65	1604.	2.	0.35	0.98	50
56	20	5.65	5.65	1230.	2.	0.27	0.75	5.65	5.65	1546.	1.	0.34	0.94	48
57	20	5.65	5.65	1190.	2.	0.26	0.73	5.65	5.65	1466.	0.	0.32	0.88	45
58	20	5.65	5.65	1350.	-1.	0.30	0.81	5.65	5.65	1325.	0.	0.29	0.80	42
59	20	5.65	5.65	1395.	-1.	0.31	0.84	5.65	5.65	1138.	0.	0.25	0.68	43
60	20	5.65	5.65	1362.	0.	0.30	0.82	5.65	5.65	941.	0.	0.21	0.57	42
61	20	5.65	5.65	1386.	1.	0.31	0.84	5.65	5.65	835.	0.	0.19	0.50	43
62	20	5.65	5.65	1430.	1.	0.32	0.86	5.65	5.65	979.	0.	0.22	0.59	44
63	20	5.65	5.65	1389.	1.	0.31	0.84	5.65	5.65	1141.	0.	0.25	0.69	43
64	20	5.65	5.65	1259.	1.	0.28	0.76	5.65	5.65	1289.	0.	0.29	0.78	40
65	20	5.65	5.65	986.	0.	0.22	0.60	5.65	5.65	1402.	0.	0.31	0.84	43
66	20	5.65	5.65	584.	0.	0.13	0.35	5.65	5.65	1471.	-1.	0.33	0.88	45
67	20	5.65	5.65	0.	4.	0.00	0.01	5.65	5.65	1483.	-2.	0.33	0.89	45
68	20	5.65	5.65	0.	4.	0.00	0.02	5.65	5.65	1249.	-3.	0.28	0.75	38
69	20	5.65	5.65	0.	4.	0.00	0.02	5.65	5.65	1234.	-3.	0.27	0.74	38
70	20	5.65	5.65	0.	4.	0.00	0.01	5.65	5.65	1417.	-2.	0.31	0.85	43
71	20	5.65	5.65	527.	0.	0.12	0.32	5.65	5.65	1448.	-1.	0.32	0.87	45
72	20	5.65	5.65	892.	0.	0.20	0.54	5.65	5.65	1373.	0.	0.30	0.83	42
73	20	5.65	5.65	1129.	1.	0.25	0.68	5.65	5.65	1258.	0.	0.28	0.76	39
74	20	5.65	5.65	1258.	1.	0.28	0.76	5.65	5.65	1110.	0.	0.25	0.67	39
75	20	5.65	5.65	1267.	1.	0.28	0.77	5.65	5.65	946.	0.	0.21	0.57	39
76	20	5.65	5.65	1188.	1.	0.26	0.72	5.65	5.65	849.	0.	0.19	0.51	37
77	20	5.65	5.65	1212.	-1.	0.27	0.73	5.65	5.65	1043.	0.	0.23	0.63	37
78	20	5.65	5.65	1211.	-1.	0.27	0.73	5.65	5.65	1255.	0.	0.28	0.75	39
79	20	5.65	5.65	1094.	2.	0.24	0.67	5.65	5.65	1406.	0.	0.31	0.85	43
80	20	5.65	5.65	927.	3.	0.20	0.57	5.65	5.65	1488.	1.	0.33	0.90	46
81	20	5.65	5.65	1002.	3.	0.22	0.61	5.65	5.65	1548.	2.	0.34	0.94	48
82	20	5.65	5.65	537.	0.	0.12	0.32	5.65	5.65	1781.	-1.	0.39	1.07	55
83	20	5.65	5.65	972.	0.	0.22	0.58	5.65	5.65	1719.	-1.	0.38	1.03	53
84	20	5.65	5.65	1043.	0.	0.23	0.63	5.65	5.65	1641.	-1.	0.36	0.99	50
85	20	5.65	5.65	1213.	0.	0.27	0.73	5.65	5.65	1509.	-1.	0.33	0.91	46
86	20	5.65	5.65	1263.	0.	0.28	0.76	5.65	5.65	1374.	-1.	0.30	0.83	42
87	20	5.65	5.65	1245.	0.	0.28	0.75	5.65	5.65	1228.	0.	0.27	0.74	38
88	20	5.65	5.65	1279.	1.	0.28	0.77	5.65	5.65	1139.	0.	0.25	0.69	39
89	20	5.65	5.65	1314.	1.	0.29	0.79	5.65	5.65	1260.	0.	0.28	0.76	41
90	20	5.65	5.65	1268.	1.	0.28	0.77	5.65	5.65	1390.	-1.	0.31	0.84	43
91	20	5.65	5.65	1114.	1.	0.25	0.67	5.65	5.65	1512.	-1.	0.34	0.91	46
92	20	5.65	5.65	844.	0.	0.19	0.51	5.65	5.65	1613.	-1.	0.36	0.97	50
93	20	5.65	5.65	485.	0.	0.11	0.29	5.65	5.65	1664.	-1.	0.37	1.00	51
94	20	5.65	5.65	0.	3.	0.00	0.01	5.65	5.65	1668.	-1.	0.37	1.00	51
95	20	5.65	5.65	0.	3.	0.00	0.01	5.65	5.65	1520.	-2.	0.34	0.91	47
96	20	5.65	5.65	0.	3.	0.00	0.01	5.65	5.65	1487.	-2.	0.33	0.89	46
97	20	5.65	5.65	0.	3.	0.00	0.01	5.65	5.65	1639.	-2.	0.36	0.98	50
98	20	5.65	5.65	441.	0.	0.10	0.27	5.65	5.65	1643.	-1.	0.36	0.99	50
99	20	5.65	5.65	755.	0.	0.17	0.45	5.65	5.65	1595.	0.	0.35	0.96	49
100	20	5.65	5.65	981.	0.	0.22	0.59	5.65	5.65	1490.	0.	0.33	0.90	46
101	20	5.65	5.65	1116.	1.	0.25	0.67	5.65	5.65	1365.	0.	0.30	0.82	42
102	20	5.65	5.65	1129.	1.	0.25	0.68	5.65	5.65	1237.	0.	0.27	0.74	38
103	20	5.65	5.65	1060.	0.	0.23	0.64	5.65	5.65	1139.	0.	0.25	0.68	35
104	20	5.65	5.65	1073.	-1.	0.24	0.65	5.65	5.65	1295.	0.	0.29	0.78	40
105	20	5.65	5.65	1065.	0.	0.24	0.64	5.65	5.65	1447.	-1.	0.32	0.87	44
106	20	5.65	5.65	949.	0.	0.21	0.57	5.65	5.65	1576.	-1.	0.35	0.95	48
107	20	5.65	5.65	668.	0.	0.15	0.40	5.65	5.65	1655.	-1.	0.37	0.99	51
108	20	5.65	5.65	574.	0.	0.13	0.35	5.65	5.65	1716.	-1.	0.38	1.03	53
109	20	5.65	5.65	278.	0.	0.06	0.17	5.65	5.65	1887.	-1.	0.42	1.13	58
110	20	5.65	5.65	762.	0.	0.17	0.46	5.65	5.65	1829.	-1.	0.41	1.10	56
111	20	5.65	5.65	905.	0.	0.20	0.55	5.65	5.65	1758.	-1.	0.39	1.06	54
112	20	5.65	5.65	1073.	0.	0.24	0.65	5.65	5.65	1641.	-1.	0.36	0.99	50
113	20	5.65	5.65	1143.	0.	0.25	0.69	5.65	5.65	1526.	-1.	0.34	0.92	47
114	20	5.65	5.65	1145.	0.	0.25	0.69	5.65	5.65	1407.	0.	0.31	0.85	43

115	20	5.65	5.65	1181.	1.	0.26	0.71	5.65	5.65	1344.	-1.	0.30	0.81	41
116	20	5.65	5.65	1205.	1.	0.27	0.73	5.65	5.65	1446.	-1.	0.32	0.87	44
117	20	5.65	5.65	1129.	0.	0.25	0.68	5.65	5.65	1560.	-1.	0.35	0.94	48
118	20	5.65	5.65	966.	0.	0.21	0.58	5.65	5.65	1668.	-1.	0.37	1.00	51
119	20	5.65	5.65	709.	0.	0.16	0.43	5.65	5.65	1756.	-1.	0.39	1.06	54
120	20	5.65	5.65	431.	0.	0.10	0.26	5.65	5.65	1805.	-1.	0.40	1.08	55
121	20	5.65	5.65	6.	2.	0.00	0.01	5.65	5.65	1811.	-1.	0.40	1.09	56
122	20	5.65	5.65	0.	2.	0.00	0.01	5.65	5.65	1731.	-2.	0.38	1.04	53
123	20	5.65	5.65	0.	2.	0.00	0.01	5.65	5.65	1699.	-2.	0.38	1.02	52
124	20	5.65	5.65	0.	2.	0.00	0.01	5.65	5.65	1796.	-1.	0.40	1.08	55
125	20	5.65	5.65	388.	0.	0.09	0.23	5.65	5.65	1794.	-1.	0.40	1.08	55
126	20	5.65	5.65	643.	0.	0.14	0.39	5.65	5.65	1748.	-1.	0.39	1.05	54
127	20	5.65	5.65	840.	0.	0.19	0.51	5.65	5.65	1657.	0.	0.37	1.00	51
128	20	5.65	5.65	971.	0.	0.21	0.59	5.65	5.65	1545.	0.	0.34	0.93	48
129	20	5.65	5.65	991.	0.	0.22	0.60	5.65	5.65	1433.	0.	0.32	0.86	44
130	20	5.65	5.65	936.	0.	0.21	0.56	5.65	5.65	1345.	0.	0.30	0.81	41
131	20	5.65	5.65	944.	0.	0.21	0.57	5.65	5.65	1466.	-1.	0.33	0.88	45
132	20	5.65	5.65	927.	0.	0.21	0.56	5.65	5.65	1590.	-1.	0.35	0.96	49
133	20	5.65	5.65	810.	0.	0.18	0.49	5.65	5.65	1702.	-1.	0.38	1.02	52
134	20	5.65	5.65	459.	0.	0.10	0.28	5.65	5.65	1772.	-1.	0.39	1.06	54
135	20	5.65	5.65	309.	0.	0.07	0.19	5.65	5.65	1828.	-1.	0.41	1.10	56
136	20	5.65	5.65	297.	0.	0.07	0.18	5.65	5.65	1918.	-1.	0.43	1.15	59
137	20	5.65	5.65	593.	0.	0.13	0.36	5.65	5.65	1866.	-1.	0.41	1.12	57
138	20	5.65	5.65	771.	0.	0.17	0.46	5.65	5.65	1804.	-1.	0.40	1.08	55
139	20	5.65	5.65	941.	0.	0.21	0.57	5.65	5.65	1704.	-1.	0.38	1.02	52
140	20	5.65	5.65	1020.	0.	0.23	0.62	5.65	5.65	1613.	0.	0.36	0.97	50
141	20	5.65	5.65	1050.	0.	0.23	0.63	5.65	5.65	1518.	0.	0.34	0.91	47
142	20	5.65	5.65	1100.	1.	0.24	0.66	5.65	5.65	1488.	0.	0.33	0.90	46
143	20	5.65	5.65	1086.	0.	0.24	0.66	5.65	5.65	1572.	0.	0.35	0.95	48
144	20	5.65	5.65	989.	0.	0.22	0.60	5.65	5.65	1672.	0.	0.37	1.01	52
145	20	5.65	5.65	828.	0.	0.18	0.50	5.65	5.65	1770.	0.	0.39	1.07	55
146	20	5.65	5.65	608.	0.	0.13	0.37	5.65	5.65	1851.	0.	0.41	1.12	57
147	20	5.65	5.65	382.	0.	0.08	0.23	5.65	5.65	1900.	0.	0.42	1.14	58
148	20	5.65	5.65	73.	1.	0.01	0.05	5.65	5.65	1909.	0.	0.42	1.15	59
149	20	5.65	5.65	0.	2.	0.00	0.01	5.65	5.65	1870.	-1.	0.41	1.12	57
150	20	5.65	5.65	0.	1.	0.00	0.01	5.65	5.65	1835.	-1.	0.41	1.10	56
151	20	5.65	5.65	55.	1.	0.01	0.04	5.65	5.65	1891.	0.	0.42	1.14	58
152	20	5.65	5.65	339.	0.	0.08	0.20	5.65	5.65	1887.	0.	0.42	1.14	58
153	20	5.65	5.65	544.	0.	0.12	0.33	5.65	5.65	1841.	0.	0.41	1.11	57
154	20	5.65	5.65	707.	0.	0.16	0.43	5.65	5.65	1757.	0.	0.39	1.06	54
155	20	5.65	5.65	837.	0.	0.19	0.50	5.65	5.65	1658.	0.	0.37	1.00	51
156	20	5.65	5.65	869.	0.	0.19	0.52	5.65	5.65	1565.	0.	0.35	0.94	48
157	20	5.65	5.65	834.	0.	0.18	0.50	5.65	5.65	1490.	0.	0.33	0.90	46
158	20	5.65	5.65	837.	0.	0.19	0.50	5.65	5.65	1575.	0.	0.35	0.95	48
159	20	5.65	5.65	805.	0.	0.18	0.48	5.65	5.65	1668.	-1.	0.37	1.00	51
160	20	5.65	5.65	679.	0.	0.15	0.41	5.65	5.65	1760.	-1.	0.39	1.06	54
161	20	5.65	5.65	463.	0.	0.10	0.28	5.65	5.65	1819.	-1.	0.40	1.09	56
162	20	5.65	5.65	295.	0.	0.06	0.18	5.65	5.65	1868.	-1.	0.41	1.12	57
163	20	5.65	5.65	285.	0.	0.06	0.17	5.65	5.65	1892.	0.	0.42	1.14	58
164	20	5.65	5.65	479.	0.	0.11	0.29	5.65	5.65	1844.	0.	0.41	1.11	57
165	20	5.65	5.65	651.	0.	0.14	0.39	5.65	5.65	1789.	0.	0.40	1.08	55
166	20	5.65	5.65	824.	0.	0.18	0.50	5.65	5.65	1704.	0.	0.38	1.03	52
167	20	5.65	5.65	921.	0.	0.20	0.55	5.65	5.65	1635.	0.	0.36	0.98	50
168	20	5.65	5.65	968.	0.	0.21	0.58	5.65	5.65	1575.	0.	0.35	0.95	48
169	20	5.65	5.65	1033.	0.	0.23	0.62	5.65	5.65	1574.	0.	0.35	0.95	48
170	20	5.65	5.65	973.	0.	0.22	0.59	5.65	5.65	1643.	0.	0.36	0.99	51
171	20	5.65	5.65	863.	0.	0.19	0.52	5.65	5.65	1727.	0.	0.38	1.04	53
172	20	5.65	5.65	701.	0.	0.16	0.42	5.65	5.65	1811.	0.	0.40	1.09	56
173	20	5.65	5.65	523.	0.	0.12	0.31	5.65	5.65	1886.	0.	0.42	1.14	58
174	20	5.65	5.65	328.	0.	0.07	0.20	5.65	5.65	1940.	0.	0.43	1.17	60
175	20	5.65	5.65	95.	0.	0.02	0.06	5.65	5.65	1959.	0.	0.43	1.18	60
176	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	1946.	0.	0.43	1.17	60
177	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	1934.	0.	0.43	1.16	60
178	20	5.65	5.65	73.	0.	0.02	0.04	5.65	5.65	1955.	0.	0.43	1.18	60
179	20	5.65	5.65	285.	0.	0.06	0.17	5.65	5.65	1937.	0.	0.43	1.17	60
180	20	5.65	5.65	461.	0.	0.10	0.28	5.65	5.65	1883.	0.	0.42	1.14	58
181	20	5.65	5.65	607.	0.	0.13	0.37	5.65	5.65	1807.	0.	0.40	1.09	56
182	20	5.65	5.65	720.	0.	0.16	0.43	5.65	5.65	1724.	0.	0.38	1.04	53
183	20	5.65	5.65	768.	0.	0.17	0.46	5.65	5.65	1646.	0.	0.36	0.99	51
184	20	5.65	5.65	757.	0.	0.17	0.46	5.65	5.65	1587.	0.	0.35	0.95	49
185	20	5.65	5.65	752.	0.	0.17	0.45	5.65	5.65	1618.	0.	0.36	0.97	50
186	20	5.65	5.65	699.	0.	0.15	0.42	5.65	5.65	1684.	0.	0.37	1.01	52
187	20	5.65	5.65	583.	0.	0.13	0.35	5.65	5.65	1757.	0.	0.39	1.06	54
188	20	5.65	5.65	435.	0.	0.10	0.26	5.65	5.65	1807.	0.	0.40	1.09	56
189	20	5.65	5.65	261.	0.	0.06	0.16	5.65	5.65	1850.	0.	0.41	1.11	57
190	20	5.65	5.65	187.	0.	0.04	0.11	5.65	5.65	1860.	1.	0.41	1.12	57
191	20	5.65	5.65	386.	0.	0.09	0.23	5.65	5.65	1815.	1.	0.40	1.10	56
192	20	5.65	5.65	565.	0.	0.13	0.34	5.65	5.65	1765.	1.	0.39	1.07	54
193	20	5.65	5.65	722.	0.	0.16	0.43	5.65	5.65	1688.	0.	0.37	1.02	52
194	20	5.65	5.65	838.	0.	0.19	0.50	5.65	5.65	1627.	0.	0.36	0.98	50
195	20	5.65	5.65	918.	0.	0.20	0.55	5.65	5.65	1605.	0.	0.35	0.97	50
196	20	5.65	5.65	986.	0.	0.22	0.59	5.65	5.65	1619.	0.	0.36	0.98	50
197	20	5.65	5.65	893.	0.	0.20	0.54	5.65	5.65	1656.	0.	0.37	1.00	51
198	20	5.65	5.65	754.	0.	0.17	0.45	5.65	5.65	1712.	0.	0.38	1.03	53
199	20	5.65	5.65	604.	0.	0.13	0.36	5.65	5.65	1781.	0.	0.39	1.07	55
200	20	5.65	5.65	437.	0.	0.10	0.26	5.65	5.65	1854.	0.	0.41	1.12	57
201	20	5.65	5.65	259.	0.	0.06	0.16	5.65	5.65	1918.	0.	0.43	1.15	59
202	20	5.65	5.65	92.	0.	0.02	0.06	5.65	5.65	1961.	0.	0.43	1.18	60
203	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	1972.	0.	0.44	1.19	61
204	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	1972.	0.	0.44	1.19	61
205	20	5.65	5.65	69.	0.	0.02	0.04	5.65	5.65	1965.	0.	0.44	1.18	60
206	20	5.65	5.65	219.	0.	0.05	0.13	5.65	5.65	1922.	0.	0.43	1.16	59
207	20	5.65	5.65	379.	0.	0.08	0.23	5.65	5.65	1858.	0.	0.41	1.12	57
208	20	5.65	5.65	528.	0.	0.12	0.32	5.65	5.65	1787.	0.	0.40	1.08	55
209	20	5.65	5.65	643.	0.	0.14	0.39	5.65	5.65	1721.	0.	0.38	1.04	53
210	20	5.65	5.65	712.	0.	0.16	0.43	5.65	5.65	1669.	0.	0.37	1.01	51
211	20	5.65	5.65	727.	0.	0.16	0.44	5.65	5.65	1638.	0.	0.36	0.99	51
212	20	5.65	5.65	704.	0.	0.16	0.42	5.65	5.65	1636.	0.	0.36	0.99	50
213	20	5.65	5.65	629.	0.	0.14	0.38	5.65	5.65	1676.	1.	0.37	1.01	52
214	20	5.65	5.65	508.	0.	0.11	0.31	5.65	5.65	1742.	1.	0.39	1.05	54
215	20	5.65	5.65	352.	0.	0.08	0.21	5.65	5.65	1788.	1.	0.40	1.08	55
216	20	5.65	5.65	173.	0.	0.04	0.10	5.65	5.65	1828.	1.	0.40	1.10	56
217	20	5.65	5.65	285.	0.	0.06	0.17	5.65	5.65	1920.	1.	0.42	1.16	59
218	20	5.65	5.65	479.	0.	0.11	0.29	5.65	5.65	1874.	1.	0.41	1.13	58
219	20	5.65	5.65	651.	0.	0.14	0.39	5.65	5.65	1821.	1.	0.40	1.10	56
220	20	5.65	5.65	824.	0.	0.18	0.50	5.65	5.65	1740.	1.	0.38	1.05	54
221	20	5.65	5.65	908.	0.	0.20	0.55	5.65	5.65	1673.	0.	0.37	1.01	52
222	20	5.65	5.65	967.	0.	0.21	0.58	5.65	5.65	1622.	0.	0.36	0.98	50

223	20	5.65	5.65	1033.	0.	0.23	0.62	5.65	5.65	1592.	0.	0.35	0.96	49
224	20	5.65	5.65	974.	0.	0.22	0.59	5.65	5.65	1629.	0.	0.36	0.98	50
225	20	5.65	5.65	863.	0.	0.19	0.52	5.65	5.65	1700.	0.	0.38	1.02	52
226	20	5.65	5.65	700.	0.	0.16	0.42	5.65	5.65	1781.	0.	0.39	1.07	55
227	20	5.65	5.65	523.	0.	0.12	0.31	5.65	5.65	1863.	0.	0.41	1.12	57
228	20	5.65	5.65	328.	0.	0.07	0.20	5.65	5.65	1928.	0.	0.43	1.16	59
229	20	5.65	5.65	95.	0.	0.02	0.06	5.65	5.65	1966.	0.	0.44	1.18	60
230	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	1969.	0.	0.44	1.18	61
231	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	1958.	-1.	0.43	1.18	60
232	20	5.65	5.65	73.	0.	0.02	0.04	5.65	5.65	1959.	0.	0.43	1.18	60
233	20	5.65	5.65	285.	0.	0.06	0.17	5.65	5.65	1926.	-1.	0.43	1.16	59
234	20	5.65	5.65	461.	0.	0.10	0.28	5.65	5.65	1863.	-1.	0.41	1.12	57
235	20	5.65	5.65	607.	0.	0.13	0.37	5.65	5.65	1783.	0.	0.40	1.07	55
236	20	5.65	5.65	720.	0.	0.16	0.43	5.65	5.65	1705.	0.	0.38	1.03	52
237	20	5.65	5.65	768.	0.	0.17	0.46	5.65	5.65	1640.	0.	0.36	0.99	51
238	20	5.65	5.65	757.	0.	0.17	0.46	5.65	5.65	1629.	0.	0.36	0.98	50
239	20	5.65	5.65	752.	0.	0.17	0.45	5.65	5.65	1666.	0.	0.37	1.00	51
240	20	5.65	5.65	699.	0.	0.15	0.42	5.65	5.65	1722.	1.	0.38	1.04	53
241	20	5.65	5.65	583.	0.	0.13	0.35	5.65	5.65	1792.	1.	0.40	1.08	55
242	20	5.65	5.65	435.	0.	0.10	0.26	5.65	5.65	1841.	1.	0.41	1.11	57
243	20	5.65	5.65	261.	0.	0.06	0.16	5.65	5.65	1882.	1.	0.42	1.14	58
244	20	5.65	5.65	297.	0.	0.07	0.18	5.65	5.65	1959.	1.	0.43	1.18	61
245	20	5.65	5.65	593.	0.	0.13	0.36	5.65	5.65	1907.	1.	0.42	1.15	59
246	20	5.65	5.65	771.	0.	0.17	0.46	5.65	5.65	1844.	1.	0.41	1.11	57
247	20	5.65	5.65	941.	0.	0.21	0.57	5.65	5.65	1743.	0.	0.39	1.05	54
248	20	5.65	5.65	1010.	0.	0.22	0.61	5.65	5.65	1651.	0.	0.37	1.00	51
249	20	5.65	5.65	1049.	0.	0.23	0.63	5.65	5.65	1572.	0.	0.35	0.95	48
250	20	5.65	5.65	1101.	0.	0.24	0.66	5.65	5.65	1511.	0.	0.33	0.91	47
251	20	5.65	5.65	1085.	0.	0.24	0.65	5.65	5.65	1584.	0.	0.35	0.95	49
252	20	5.65	5.65	988.	0.	0.22	0.59	5.65	5.65	1675.	0.	0.37	1.01	52
253	20	5.65	5.65	827.	0.	0.18	0.50	5.65	5.65	1771.	0.	0.39	1.07	55
254	20	5.65	5.65	608.	0.	0.13	0.37	5.65	5.65	1858.	0.	0.41	1.12	57
255	20	5.65	5.65	382.	0.	0.08	0.23	5.65	5.65	1918.	0.	0.43	1.15	59
256	20	5.65	5.65	73.	1.	0.01	0.05	5.65	5.65	1938.	-1.	0.43	1.17	60
257	20	5.65	5.65	0.	2.	0.00	0.01	5.65	5.65	1918.	-1.	0.43	1.15	59
258	20	5.65	5.65	0.	1.	0.00	0.01	5.65	5.65	1891.	-1.	0.42	1.14	58
259	20	5.65	5.65	55.	1.	0.01	0.04	5.65	5.65	1918.	0.	0.43	1.15	59
260	20	5.65	5.65	339.	0.	0.08	0.20	5.65	5.65	1908.	0.	0.42	1.15	59
261	20	5.65	5.65	544.	0.	0.12	0.33	5.65	5.65	1850.	0.	0.41	1.11	57
262	20	5.65	5.65	707.	0.	0.16	0.43	5.65	5.65	1763.	0.	0.39	1.06	54
263	20	5.65	5.65	836.	0.	0.19	0.50	5.65	5.65	1670.	0.	0.37	1.01	51
264	20	5.65	5.65	869.	0.	0.19	0.52	5.65	5.65	1586.	0.	0.35	0.96	49
265	20	5.65	5.65	834.	0.	0.18	0.50	5.65	5.65	1559.	0.	0.35	0.94	48
266	20	5.65	5.65	838.	0.	0.19	0.50	5.65	5.65	1626.	0.	0.36	0.98	50
267	20	5.65	5.65	805.	0.	0.18	0.48	5.65	5.65	1709.	0.	0.38	1.03	53
268	20	5.65	5.65	679.	0.	0.15	0.41	5.65	5.65	1802.	1.	0.40	1.09	56
269	20	5.65	5.65	463.	0.	0.10	0.28	5.65	5.65	1862.	1.	0.41	1.13	58
270	20	5.65	5.65	295.	0.	0.06	0.18	5.65	5.65	1911.	1.	0.42	1.16	59
271	20	5.65	5.65	278.	0.	0.06	0.17	5.65	5.65	1931.	1.	0.43	1.17	60
272	20	5.65	5.65	762.	0.	0.17	0.46	5.65	5.65	1872.	1.	0.41	1.13	58
273	20	5.65	5.65	905.	0.	0.20	0.55	5.65	5.65	1799.	1.	0.40	1.09	56
274	20	5.65	5.65	1074.	0.	0.24	0.65	5.65	5.65	1680.	0.	0.37	1.01	52
275	20	5.65	5.65	1134.	0.	0.25	0.68	5.65	5.65	1564.	0.	0.35	0.94	48
276	20	5.65	5.65	1145.	0.	0.25	0.69	5.65	5.65	1456.	0.	0.32	0.88	45
277	20	5.65	5.65	1181.	0.	0.26	0.71	5.65	5.65	1370.	0.	0.30	0.82	42
278	20	5.65	5.65	1203.	0.	0.27	0.73	5.65	5.65	1467.	0.	0.33	0.88	45
279	20	5.65	5.65	1126.	0.	0.25	0.68	5.65	5.65	1580.	0.	0.35	0.95	49
280	20	5.65	5.65	965.	0.	0.21	0.58	5.65	5.65	1694.	0.	0.38	1.02	52
281	20	5.65	5.65	709.	0.	0.16	0.43	5.65	5.65	1791.	0.	0.40	1.08	55
282	20	5.65	5.65	431.	0.	0.10	0.26	5.65	5.65	1849.	0.	0.41	1.11	57
283	20	5.65	5.65	6.	2.	0.00	0.01	5.65	5.65	1858.	0.	0.41	1.12	57
284	20	5.65	5.65	0.	2.	0.00	0.01	5.65	5.65	1786.	-1.	0.40	1.07	55
285	20	5.65	5.65	0.	2.	0.00	0.01	5.65	5.65	1756.	-1.	0.39	1.06	54
286	20	5.65	5.65	0.	2.	0.00	0.01	5.65	5.65	1836.	0.	0.41	1.10	56
287	20	5.65	5.65	388.	0.	0.09	0.23	5.65	5.65	1831.	0.	0.41	1.10	56
288	20	5.65	5.65	643.	0.	0.14	0.39	5.65	5.65	1775.	0.	0.39	1.07	55
289	20	5.65	5.65	837.	0.	0.19	0.50	5.65	5.65	1676.	0.	0.37	1.01	52
290	20	5.65	5.65	968.	0.	0.21	0.58	5.65	5.65	1564.	0.	0.35	0.94	48
291	20	5.65	5.65	989.	0.	0.22	0.60	5.65	5.65	1458.	0.	0.32	0.88	45
292	20	5.65	5.65	936.	0.	0.21	0.56	5.65	5.65	1422.	0.	0.32	0.86	44
293	20	5.65	5.65	946.	0.	0.21	0.57	5.65	5.65	1521.	0.	0.34	0.92	47
294	20	5.65	5.65	927.	0.	0.21	0.56	5.65	5.65	1631.	0.	0.36	0.98	50
295	20	5.65	5.65	810.	0.	0.18	0.49	5.65	5.65	1745.	1.	0.39	1.05	54
296	20	5.65	5.65	459.	0.	0.10	0.28	5.65	5.65	1816.	1.	0.40	1.10	56
297	20	5.65	5.65	309.	0.	0.07	0.19	5.65	5.65	1873.	1.	0.41	1.13	58
298	20	5.65	5.65	537.	0.	0.12	0.32	5.65	5.65	1830.	1.	0.40	1.11	57
299	20	5.65	5.65	972.	0.	0.22	0.58	5.65	5.65	1767.	1.	0.39	1.07	55
300	20	5.65	5.65	1047.	0.	0.23	0.63	5.65	5.65	1686.	1.	0.37	1.02	52
301	20	5.65	5.65	1217.	0.	0.27	0.73	5.65	5.65	1551.	0.	0.34	0.93	48
302	20	5.65	5.65	1270.	-1.	0.28	0.76	5.65	5.65	1412.	0.	0.31	0.85	43
303	20	5.65	5.65	1247.	0.	0.28	0.75	5.65	5.65	1278.	0.	0.28	0.77	39
304	20	5.65	5.65	1276.	0.	0.28	0.77	5.65	5.65	1163.	0.	0.26	0.70	39
305	20	5.65	5.65	1310.	0.	0.29	0.79	5.65	5.65	1281.	0.	0.28	0.77	40
306	20	5.65	5.65	1262.	0.	0.28	0.76	5.65	5.65	1414.	0.	0.31	0.85	44
307	20	5.65	5.65	1113.	0.	0.25	0.67	5.65	5.65	1545.	0.	0.34	0.93	48
308	20	5.65	5.65	844.	0.	0.19	0.51	5.65	5.65	1657.	0.	0.37	1.00	51
309	20	5.65	5.65	485.	0.	0.11	0.29	5.65	5.65	1718.	0.	0.38	1.03	53
310	20	5.65	5.65	0.	3.	0.00	0.01	5.65	5.65	1725.	-1.	0.38	1.04	53
311	20	5.65	5.65	0.	3.	0.00	0.01	5.65	5.65	1580.	-1.	0.35	0.95	49
312	20	5.65	5.65	0.	3.	0.00	0.01	5.65	5.65	1551.	-1.	0.34	0.93	48
313	20	5.65	5.65	0.	3.	0.00	0.01	5.65	5.65	1690.	0.	0.37	1.02	52
314	20	5.65	5.65	441.	0.	0.10	0.27	5.65	5.65	1691.	0.	0.37	1.02	52
315	20	5.65	5.65	755.	0.	0.17	0.45	5.65	5.65	1633.	0.	0.36	0.98	50
316	20	5.65	5.65	977.	0.	0.22	0.59	5.65	5.65	1517.	0.	0.34	0.91	47
317	20	5.65	5.65	1111.	0.	0.25	0.67	5.65	5.65	1386.	0.	0.31	0.83	43
318	20	5.65	5.65	1126.	0.	0.25	0.68	5.65	5.65	1259.	0.	0.28	0.76	39
319	20	5.65	5.65	1059.	0.	0.23	0.64	5.65	5.65	1223.	0.	0.27	0.74	38
320	20	5.65	5.65	1077.	-1.	0.24	0.65	5.65	5.65	1352.	0.	0.30	0.81	42
321	20	5.65	5.65	1069.	0.	0.24	0.64	5.65	5.65	1489.	0.	0.33	0.90	46
322	20	5.65	5.65	949.	0.	0.21	0.57	5.65	5.65	1622.	1.	0.36	0.98	50
323	20	5.65	5.65	668.	0.	0.15	0.40	5.65	5.65	1703.	1.	0.38	1.03	53
324	20	5.65	5.65	574.	0.	0.13	0.35	5.65	5.65	1766.	1.	0.39	1.07	55
325	20	5.65	5.65	950.	3.	0.20	0.58	5.65	5.65	1724.	4.	0.38	1.05	54
326	20	5.65	5.65	1230.	2.	0.27	0.75	5.65	5.65	1652.	3.	0.36	1.01	51
327	20	5.65	5.65	1205.	0.	0.27	0.73	5.65	5.65	1558.	2.	0.34	0.95	48
328	20	5.65	5.65	1361.	-1.	0.30	0.82	5.65	5.65	1397.	0.	0.31	0.84	43
329	20	5.65	5.65	1407.	-1.	0.31	0.84	5.65	5.65	1189.	0.	0.26	0.72	43
330	20	5.65	5.65	1367.	-1.	0.30	0.82	5.65	5.65	973.	0.	0.22	0.59	42

331	20	5.65	5.65	1381.	1.	0.30	0.83	5.65	5.65	836.	0.	0.19	0.50	43
332	20	5.65	5.65	1422.	1.	0.31	0.86	5.65	5.65	988.	0.	0.22	0.60	44
333	20	5.65	5.65	1379.	1.	0.30	0.83	5.65	5.65	1163.	0.	0.26	0.70	43
334	20	5.65	5.65	1259.	1.	0.28	0.76	5.65	5.65	1326.	0.	0.29	0.80	41
335	20	5.65	5.65	991.	0.	0.22	0.60	5.65	5.65	1453.	0.	0.32	0.88	45
336	20	5.65	5.65	588.	0.	0.13	0.35	5.65	5.65	1525.	0.	0.34	0.92	47
337	20	5.65	5.65	0.	4.	0.00	0.02	5.65	5.65	1544.	-1.	0.34	0.93	47
338	20	5.65	5.65	0.	4.	0.00	0.02	5.65	5.65	1313.	-1.	0.29	0.79	40
339	20	5.65	5.65	0.	4.	0.00	0.02	5.65	5.65	1298.	-1.	0.29	0.78	40
340	20	5.65	5.65	0.	4.	0.00	0.02	5.65	5.65	1511.	-1.	0.33	0.91	46
341	20	5.65	5.65	527.	0.	0.12	0.32	5.65	5.65	1497.	0.	0.33	0.90	46
342	20	5.65	5.65	897.	0.	0.20	0.54	5.65	5.65	1419.	0.	0.31	0.85	44
343	20	5.65	5.65	1127.	0.	0.25	0.68	5.65	5.65	1288.	0.	0.29	0.78	40
344	20	5.65	5.65	1248.	1.	0.27	0.76	5.65	5.65	1124.	0.	0.25	0.68	39
345	20	5.65	5.65	1260.	1.	0.28	0.76	5.65	5.65	961.	0.	0.21	0.58	39
346	20	5.65	5.65	1185.	1.	0.26	0.72	5.65	5.65	915.	0.	0.20	0.55	37
347	20	5.65	5.65	1221.	-1.	0.27	0.73	5.65	5.65	1125.	0.	0.25	0.68	37
348	20	5.65	5.65	1221.	-1.	0.27	0.73	5.65	5.65	1335.	0.	0.30	0.80	41
349	20	5.65	5.65	1105.	0.	0.24	0.67	5.65	5.65	1499.	2.	0.33	0.91	46
350	20	5.65	5.65	927.	3.	0.20	0.57	5.65	5.65	1597.	3.	0.35	0.97	50
351	20	5.65	5.65	1002.	3.	0.22	0.61	5.65	5.65	1670.	4.	0.36	1.02	52
352	20	5.65	5.65	1470.	5.	0.32	0.91	5.65	5.65	1740.	10.	0.37	1.09	56
353	20	5.65	5.65	1400.	4.	0.30	0.86	5.65	5.65	1607.	6.	0.34	1.00	51
354	20	5.65	5.65	1292.	0.	0.29	0.78	5.65	5.65	1453.	4.	0.31	0.89	45
355	20	5.65	5.65	1449.	-1.	0.32	0.87	5.65	5.65	1168.	0.	0.26	0.70	44
356	20	5.65	5.65	1492.	-1.	0.33	0.90	5.65	5.65	897.	0.	0.20	0.54	46
357	20	5.65	5.65	1443.	-1.	0.32	0.87	5.65	5.65	660.	0.	0.15	0.40	44
358	20	5.65	5.65	1446.	1.	0.32	0.87	5.65	5.65	529.	0.	0.12	0.32	45
359	20	5.65	5.65	1490.	1.	0.33	0.90	5.65	5.65	665.	0.	0.15	0.40	46
360	20	5.65	5.65	1449.	1.	0.32	0.88	5.65	5.65	832.	0.	0.18	0.50	45
361	20	5.65	5.65	1334.	1.	0.29	0.81	5.65	5.65	998.	0.	0.22	0.60	41
362	20	5.65	5.65	1090.	0.	0.24	0.66	5.65	5.65	1161.	0.	0.26	0.70	36
363	20	5.65	5.65	645.	0.	0.14	0.39	5.65	5.65	1284.	0.	0.28	0.77	40
364	20	5.65	5.65	0.	4.	0.00	0.02	5.65	5.65	1284.	0.	0.28	0.77	40
365	20	5.65	5.65	0.	5.	0.00	0.02	5.65	5.65	987.	0.	0.22	0.59	30
366	20	5.65	5.65	0.	5.	0.00	0.02	5.65	5.65	1059.	2.	0.23	0.65	33
367	20	5.65	5.65	0.	4.	0.00	0.02	5.65	5.65	1309.	0.	0.29	0.79	40
368	20	5.65	5.65	565.	0.	0.13	0.34	5.65	5.65	1241.	0.	0.28	0.75	38
369	20	5.65	5.65	987.	0.	0.22	0.59	5.65	5.65	1121.	0.	0.25	0.67	34
370	20	5.65	5.65	1220.	0.	0.27	0.74	5.65	5.65	955.	0.	0.21	0.57	38
371	20	5.65	5.65	1316.	1.	0.29	0.80	5.65	5.65	787.	0.	0.17	0.47	41
372	20	5.65	5.65	1327.	1.	0.29	0.80	5.65	5.65	622.	0.	0.14	0.37	41
373	20	5.65	5.65	1249.	1.	0.27	0.76	5.65	5.65	487.	0.	0.11	0.29	39
374	20	5.65	5.65	1301.	-1.	0.29	0.78	5.65	5.65	730.	0.	0.16	0.44	40
375	20	5.65	5.65	1303.	-1.	0.29	0.78	5.65	5.65	1006.	0.	0.22	0.61	40
376	20	5.65	5.65	1206.	1.	0.27	0.73	5.65	5.65	1326.	3.	0.29	0.81	41
377	20	5.65	5.65	1158.	5.	0.24	0.72	5.65	5.65	1540.	6.	0.33	0.95	49
378	20	5.65	5.65	1500.	5.	0.32	0.93	5.65	5.65	1676.	8.	0.36	1.05	53
379	20	5.65	5.65	2108.	6.	0.46	1.30	5.65	5.65	2511.	7.	0.55	1.54	79
380	20	5.65	5.65	1541.	7.	0.33	0.96	5.65	5.65	1775.	5.	0.38	1.09	56
381	20	5.65	5.65	1361.	1.	0.30	0.82	5.65	5.65	1226.	2.	0.27	0.75	42
382	20	5.65	5.65	1531.	-2.	0.34	0.92	5.65	5.65	608.	0.	0.13	0.37	47
383	20	5.65	5.65	1569.	-2.	0.35	0.94	5.65	5.65	287.	0.	0.06	0.17	48
384	20	5.65	5.65	1514.	-2.	0.34	0.91	5.65	5.65	233.	0.	0.05	0.14	46
385	20	5.65	5.65	1502.	1.	0.33	0.91	5.65	5.65	271.	0.	0.06	0.16	46
386	20	5.65	5.65	1548.	1.	0.34	0.94	5.65	5.65	396.	0.	0.09	0.24	48
387	20	5.65	5.65	1509.	1.	0.33	0.91	5.65	5.65	517.	0.	0.11	0.31	47
388	20	5.65	5.65	1399.	1.	0.31	0.85	5.65	5.65	637.	0.	0.14	0.38	43
389	20	5.65	5.65	1182.	0.	0.26	0.71	5.65	5.65	792.	0.	0.18	0.48	36
390	20	5.65	5.65	697.	-1.	0.15	0.42	5.65	5.65	1045.	3.	0.22	0.64	33
391	20	5.65	5.65	0.	4.	0.00	0.02	5.65	5.65	1249.	3.	0.27	0.77	39
392	20	5.65	5.65	0.	6.	0.00	0.03	5.65	5.65	967.	4.	0.20	0.60	31
393	20	5.65	5.65	0.	6.	0.00	0.03	5.65	5.65	824.	4.	0.17	0.51	26
394	20	5.65	5.65	0.	4.	0.00	0.02	5.65	5.65	1205.	3.	0.26	0.74	38
395	20	5.65	5.65	602.	0.	0.13	0.36	5.65	5.65	893.	2.	0.20	0.55	28
396	20	5.65	5.65	1066.	0.	0.24	0.64	5.65	5.65	698.	0.	0.15	0.42	33
397	20	5.65	5.65	1283.	0.	0.28	0.77	5.65	5.65	595.	0.	0.13	0.36	39
398	20	5.65	5.65	1374.	1.	0.30	0.83	5.65	5.65	474.	0.	0.11	0.29	43
399	20	5.65	5.65	1385.	1.	0.30	0.84	5.65	5.65	354.	0.	0.08	0.21	43
400	20	5.65	5.65	1305.	1.	0.29	0.79	5.65	5.65	225.	0.	0.05	0.14	40
401	20	5.65	5.65	1375.	-2.	0.30	0.82	5.65	5.65	338.	0.	0.07	0.20	42
402	20	5.65	5.65	1379.	-2.	0.31	0.83	5.65	5.65	659.	0.	0.15	0.40	42
403	20	5.65	5.65	1272.	1.	0.28	0.77	5.65	5.65	1264.	2.	0.28	0.77	39
404	20	5.65	5.65	1494.	7.	0.32	0.93	5.65	5.65	1789.	4.	0.39	1.10	56
405	20	5.65	5.65	2151.	6.	0.47	1.32	5.65	5.65	2435.	7.	0.54	1.50	77

		SUPERIORE ORIZZONTALE						SUPERIORE VERTICALE						COEF.
GUSCI	spess	Af	Afc	Mom	Nor	epsC	epsF	Af	Afc	Mom	Nor	epsC	epsF	MAX %
1	20	5.65	5.65	2196.	6.	0.48	1.35	5.65	5.65	2726.	7.	0.60	1.67	86
2	20	5.65	5.65	686.	8.	0.13	0.45	5.65	5.65	1869.	5.	0.41	1.15	59
3	20	5.65	5.65	0.	6.	0.00	0.03	5.65	5.65	831.	2.	0.18	0.51	26
4	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	41.	0.	0.01	0.02	1
5	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
6	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
7	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
8	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
9	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	23.	0.	0.01	0.01	1
10	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	150.	0.	0.03	0.09	5
11	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	445.	0.	0.10	0.27	14
12	20	5.65	5.65	679.	2.	0.14	0.42	5.65	5.65	665.	2.	0.14	0.41	21
13	20	5.65	5.65	1718.	4.	0.37	1.05	5.65	5.65	1206.	3.	0.26	0.74	54
14	20	5.65	5.65	3052.	6.	0.68	1.86	5.65	5.65	1406.	3.	0.30	0.86	83
15	20	5.65	5.65	2860.	6.	0.63	1.75	5.65	5.65	1518.	3.	0.33	0.93	89
16	20	5.65	5.65	1688.	4.	0.37	1.03	5.65	5.65	1397.	4.	0.30	0.86	53
17	20	5.65	5.65	659.	2.	0.14	0.41	5.65	5.65	719.	2.	0.15	0.44	23
18	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	410.	0.	0.09	0.25	13
19	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	132.	0.	0.03	0.08	4
20	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	19.	0.	0.00	0.01	1
21	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
22	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
23	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
24	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	24.	0.	0.01	0.01	1
25	20	5.65	5.65	0.	5.	0.00	0.02	5.65	5.65	738.	2.	0.16	0.45	23
26	20	5.65	5.65	601.	8.	0.11	0.40	5.65	5.65	1848.	5.	0.40	1.14	58
27	20	5.65	5.65	2146.	6.	0.47	1.32	5.65	5.65	2663.	7.	0.59	1.64	84
28	20	5.65	5.65	1473.	5.	0.32	0.91	5.65	5.65	674.	10.	0.12	0.45	46
29	20	5.65	5.65	360.	4.	0.06	0.24	5.65	5.65	352.	6.	0.06	0.24	12
30	20	5.65	5.65	0.	4.	0.00	0.02	5.65	5.65	78.	3.	0.00	0.06	3

31	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
32	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
33	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
34	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
35	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
36	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
37	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
38	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	20.	0.	0.00	0.01	1
39	20	5.65	5.65	569.	2.	0.12	0.35	5.65	5.65	20.	0.	0.00	0.01	18
40	20	5.65	5.65	1478.	4.	0.32	0.91	5.65	5.65	0.	2.	0.00	0.01	46
41	20	5.65	5.65	2384.	5.	0.52	1.46	5.65	5.65	0.	2.	0.00	0.01	75
42	20	5.65	5.65	2272.	5.	0.50	1.39	5.65	5.65	0.	2.	0.00	0.01	71
43	20	5.65	5.65	1456.	4.	0.32	0.89	5.65	5.65	0.	2.	0.00	0.01	46
44	20	5.65	5.65	557.	2.	0.12	0.34	5.65	5.65	0.	1.	0.00	0.00	18
45	20	5.65	5.65	4.	0.	0.00	0.00	5.65	5.65	34.	0.	0.01	0.02	1
46	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
47	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
48	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
49	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
50	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
51	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
52	20	5.65	5.65	0.	4.	0.00	0.02	5.65	5.65	58.	3.	0.00	0.05	2
53	20	5.65	5.65	299.	5.	0.05	0.20	5.65	5.65	338.	6.	0.05	0.23	11
54	20	5.65	5.65	1446.	5.	0.31	0.89	5.65	5.65	716.	9.	0.13	0.47	46
55	20	5.65	5.65	607.	3.	0.13	0.38	5.65	5.65	0.	3.	0.00	0.01	19
56	20	5.65	5.65	134.	2.	0.02	0.09	5.65	5.65	0.	2.	0.00	0.01	4
57	20	5.65	5.65	0.	2.	0.00	0.01	5.65	5.65	0.	-1.	0.00	0.00	0
58	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
59	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
60	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
61	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
62	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
63	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
64	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
65	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
66	20	5.65	5.65	311.	2.	0.06	0.19	5.65	5.65	0.	-1.	0.00	0.00	10
67	20	5.65	5.65	1047.	3.	0.22	0.64	5.65	5.65	0.	-2.	0.00	0.00	33
68	20	5.65	5.65	1591.	4.	0.34	0.98	5.65	5.65	0.	-3.	0.00	0.00	50
69	20	5.65	5.65	1573.	4.	0.34	0.97	5.65	5.65	0.	-3.	0.00	0.00	49
70	20	5.65	5.65	1017.	3.	0.22	0.63	5.65	5.65	0.	-2.	0.00	0.00	32
71	20	5.65	5.65	303.	2.	0.06	0.19	5.65	5.65	0.	-1.	0.00	0.00	10
72	20	5.65	5.65	13.	0.	0.00	0.01	5.65	5.65	0.	0.	0.00	0.00	0
73	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
74	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
75	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
76	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
77	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
78	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
79	20	5.65	5.65	0.	2.	0.00	0.01	5.65	5.65	0.	-1.	0.00	0.00	0
80	20	5.65	5.65	114.	3.	0.01	0.08	5.65	5.65	0.	2.	0.00	0.01	4
81	20	5.65	5.65	604.	3.	0.13	0.37	5.65	5.65	0.	3.	0.00	0.01	19
82	20	5.65	5.65	68.	0.	0.01	0.04	5.65	5.65	0.	-1.	0.00	0.00	2
83	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
84	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
85	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
86	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
87	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
88	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
89	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
90	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
91	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
92	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
93	20	5.65	5.65	90.	1.	0.02	0.06	5.65	5.65	0.	-1.	0.00	0.00	3
94	20	5.65	5.65	501.	3.	0.10	0.31	5.65	5.65	0.	-2.	0.00	0.00	16
95	20	5.65	5.65	818.	3.	0.17	0.50	5.65	5.65	0.	-3.	0.00	0.00	26
96	20	5.65	5.65	818.	3.	0.17	0.50	5.65	5.65	0.	-2.	0.00	0.00	26
97	20	5.65	5.65	510.	3.	0.10	0.32	5.65	5.65	0.	-2.	0.00	0.00	16
98	20	5.65	5.65	102.	1.	0.02	0.07	5.65	5.65	0.	-1.	0.00	0.00	3
99	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
100	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
101	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
102	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
103	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
104	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
105	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
106	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
107	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
108	20	5.65	5.65	60.	0.	0.01	0.04	5.65	5.65	0.	-1.	0.00	0.00	2
109	20	5.65	5.65	26.	1.	0.00	0.02	5.65	5.65	0.	-1.	0.00	0.00	1
110	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
111	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
112	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
113	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
114	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
115	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
116	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
117	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
118	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
119	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
120	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
121	20	5.65	5.65	219.	2.	0.04	0.14	5.65	5.65	0.	-1.	0.00	0.00	7
122	20	5.65	5.65	383.	2.	0.08	0.24	5.65	5.65	0.	-2.	0.00	0.00	12
123	20	5.65	5.65	385.	2.	0.08	0.24	5.65	5.65	0.	-2.	0.00	0.00	12
124	20	5.65	5.65	254.	2.	0.05	0.16	5.65	5.65	0.	-2.	0.00	0.00	8
125	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
126	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
127	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
128	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
129	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
130	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
131	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
132	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
133	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
134	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
135	20	5.65	5.65	26.	1.	0.00	0.02	5.65	5.65	0.	-1.	0.00	0.00	1
136	20	5.65	5.65	2.	1.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
137	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
138	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0

139	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
140	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
141	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
142	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
143	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
144	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
145	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
146	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
147	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
148	20	5.65	5.65	62.	1.	0.01	0.04	5.65	5.65	0.	-1.	0.00	0.00	2
149	20	5.65	5.65	195.	1.	0.04	0.12	5.65	5.65	0.	-1.	0.00	0.00	6
150	20	5.65	5.65	198.	1.	0.04	0.12	5.65	5.65	0.	-1.	0.00	0.00	6
151	20	5.65	5.65	113.	1.	0.02	0.07	5.65	5.65	0.	-1.	0.00	0.00	4
152	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
153	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
154	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
155	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
156	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
157	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
158	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
159	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
160	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
161	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
162	20	5.65	5.65	8.	1.	0.00	0.01	5.65	5.65	0.	-1.	0.00	0.00	0
163	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
164	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
165	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
166	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
167	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
168	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
169	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
170	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
171	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
172	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
173	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
174	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
175	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
176	20	5.65	5.65	105.	1.	0.02	0.07	5.65	5.65	0.	0.	0.00	0.00	3
177	20	5.65	5.65	108.	1.	0.02	0.07	5.65	5.65	0.	0.	0.00	0.00	3
178	20	5.65	5.65	61.	1.	0.01	0.04	5.65	5.65	0.	0.	0.00	0.00	2
179	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
180	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
181	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
182	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
183	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
184	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
185	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
186	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
187	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
188	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
189	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
190	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
191	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
192	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
193	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
194	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
195	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
196	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
197	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
198	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
199	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
200	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
201	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
202	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
203	20	5.65	5.65	85.	0.	0.02	0.05	5.65	5.65	0.	0.	0.00	0.00	3
204	20	5.65	5.65	88.	0.	0.02	0.05	5.65	5.65	0.	0.	0.00	0.00	3
205	20	5.65	5.65	48.	0.	0.01	0.03	5.65	5.65	0.	0.	0.00	0.00	1
206	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
207	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
208	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
209	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
210	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
211	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
212	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
213	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
214	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
215	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
216	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
217	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
218	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
219	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
220	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
221	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
222	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
223	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
224	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
225	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
226	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
227	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
228	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
229	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
230	20	5.65	5.65	105.	1.	0.02	0.07	5.65	5.65	0.	-1.	0.00	0.00	3
231	20	5.65	5.65	108.	1.	0.02	0.07	5.65	5.65	0.	-1.	0.00	0.00	3
232	20	5.65	5.65	61.	0.	0.01	0.04	5.65	5.65	0.	-1.	0.00	0.00	2
233	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
234	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
235	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	-1.	0.00	0.00	0
236	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
237	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
238	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
239	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
240	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
241	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
242	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
243	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
244	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
245	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
246	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0

247	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
248	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
249	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
250	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
251	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
252	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
253	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
254	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
255	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
256	20	5.65	5.65	63.	2.	0.01	0.04	5.65	5.65	0.	-1.	0.00	0.00	2
257	20	5.65	5.65	195.	1.	0.04	0.12	5.65	5.65	0.	-1.	0.00	0.00	6
258	20	5.65	5.65	198.	1.	0.04	0.12	5.65	5.65	0.	-1.	0.00	0.00	6
259	20	5.65	5.65	113.	1.	0.02	0.07	5.65	5.65	0.	0.	0.00	0.00	4
260	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
261	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
262	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
263	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
264	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
265	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
266	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
267	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
268	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
269	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
270	20	5.65	5.65	8.	1.	0.00	0.01	5.65	5.65	0.	1.	0.00	0.00	0
271	20	5.65	5.65	26.	1.	0.00	0.02	5.65	5.65	0.	1.	0.00	0.01	1
272	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
273	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
274	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
275	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
276	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
277	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
278	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
279	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
280	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
281	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
282	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
283	20	5.65	5.65	219.	2.	0.04	0.14	5.65	5.65	0.	-1.	0.00	0.00	7
284	20	5.65	5.65	384.	2.	0.08	0.24	5.65	5.65	0.	-1.	0.00	0.00	12
285	20	5.65	5.65	385.	2.	0.08	0.24	5.65	5.65	0.	-1.	0.00	0.00	12
286	20	5.65	5.65	253.	2.	0.05	0.16	5.65	5.65	0.	-1.	0.00	0.00	8
287	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
288	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
289	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
290	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
291	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
292	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
293	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
294	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
295	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
296	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
297	20	5.65	5.65	26.	1.	0.00	0.02	5.65	5.65	0.	1.	0.00	0.01	1
298	20	5.65	5.65	68.	0.	0.01	0.04	5.65	5.65	0.	3.	0.00	0.01	2
299	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	2.	0.00	0.01	0
300	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.01	0
301	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
302	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
303	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
304	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
305	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
306	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
307	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
308	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
309	20	5.65	5.65	90.	1.	0.02	0.06	5.65	5.65	0.	0.	0.00	0.00	3
310	20	5.65	5.65	500.	3.	0.10	0.31	5.65	5.65	0.	-1.	0.00	0.00	16
311	20	5.65	5.65	814.	3.	0.17	0.50	5.65	5.65	0.	-1.	0.00	0.00	26
312	20	5.65	5.65	814.	3.	0.17	0.50	5.65	5.65	0.	-1.	0.00	0.00	26
313	20	5.65	5.65	508.	3.	0.10	0.32	5.65	5.65	0.	-1.	0.00	0.00	16
314	20	5.65	5.65	101.	1.	0.02	0.07	5.65	5.65	0.	0.	0.00	0.00	3
315	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
316	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
317	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
318	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
319	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
320	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
321	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.00	0
322	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	1.	0.00	0.01	0
323	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	2.	0.00	0.01	0
324	20	5.65	5.65	60.	0.	0.01	0.04	5.65	5.65	0.	3.	0.00	0.01	2
325	20	5.65	5.65	607.	3.	0.13	0.38	5.65	5.65	0.	4.	0.00	0.02	19
326	20	5.65	5.65	134.	2.	0.02	0.09	5.65	5.65	0.	3.	0.00	0.01	4
327	20	5.65	5.65	0.	2.	0.00	0.01	5.65	5.65	0.	2.	0.00	0.01	0
328	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
329	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
330	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
331	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
332	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
333	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
334	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
335	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
336	20	5.65	5.65	311.	2.	0.06	0.19	5.65	5.65	0.	0.	0.00	0.00	10
337	20	5.65	5.65	1054.	4.	0.22	0.65	5.65	5.65	0.	-1.	0.00	0.00	33
338	20	5.65	5.65	1589.	4.	0.34	0.98	5.65	5.65	0.	-1.	0.00	0.00	50
339	20	5.65	5.65	1572.	4.	0.34	0.97	5.65	5.65	0.	-1.	0.00	0.00	49
340	20	5.65	5.65	1022.	4.	0.22	0.63	5.65	5.65	0.	-1.	0.00	0.00	32
341	20	5.65	5.65	303.	2.	0.06	0.19	5.65	5.65	0.	0.	0.00	0.00	10
342	20	5.65	5.65	13.	0.	0.00	0.01	5.65	5.65	0.	0.	0.00	0.00	0
343	20	5.65	5.65	0.	0.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
344	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
345	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
346	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
347	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
348	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
349	20	5.65	5.65	0.	2.	0.00	0.01	5.65	5.65	0.	2.	0.00	0.01	0
350	20	5.65	5.65	114.	3.	0.01	0.08	5.65	5.65	0.	3.	0.00	0.01	4
351	20	5.65	5.65	604.	3.	0.13	0.37	5.65	5.65	0.	4.	0.00	0.02	19
352	20	5.65	5.65	1473.	5.	0.32	0.91	5.65	5.65	673.	10.	0.12	0.45	46
353	20	5.65	5.65	360.	4.	0.06	0.24	5.65	5.65	352.	6.	0.05	0.24	12
354	20	5.65	5.65	0.	3.	0.00	0.01	5.65	5.65	78.	4.	0.00	0.06	3

355	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
356	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
357	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
358	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
359	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
360	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
361	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
362	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	20.	0.	0.00	0.01	1
363	20	5.65	5.65	569.	2.	0.12	0.35	5.65	5.65	20.	0.	0.00	0.01	18
364	20	5.65	5.65	1468.	4.	0.32	0.90	5.65	5.65	0.	2.	0.00	0.01	46
365	20	5.65	5.65	2405.	5.	0.53	1.47	5.65	5.65	0.	2.	0.00	0.01	75
366	20	5.65	5.65	2290.	5.	0.50	1.40	5.65	5.65	0.	2.	0.00	0.01	72
367	20	5.65	5.65	1445.	4.	0.31	0.89	5.65	5.65	0.	2.	0.00	0.01	45
368	20	5.65	5.65	557.	2.	0.12	0.34	5.65	5.65	0.	0.	0.00	0.00	18
369	20	5.65	5.65	4.	0.	0.00	0.00	5.65	5.65	34.	0.	0.01	0.02	1
370	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
371	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
372	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
373	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
374	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
375	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
376	20	5.65	5.65	0.	3.	0.00	0.01	5.65	5.65	58.	3.	0.00	0.05	2
377	20	5.65	5.65	299.	5.	0.05	0.20	5.65	5.65	338.	6.	0.05	0.23	11
378	20	5.65	5.65	1446.	5.	0.31	0.89	5.65	5.65	716.	9.	0.13	0.47	46
379	20	5.65	5.65	2196.	6.	0.48	1.35	5.65	5.65	2726.	7.	0.60	1.67	86
380	20	5.65	5.65	686.	8.	0.13	0.45	5.65	5.65	1869.	5.	0.41	1.15	59
381	20	5.65	5.65	0.	4.	0.00	0.02	5.65	5.65	831.	2.	0.18	0.51	26
382	20	5.65	5.65	0.	-2.	0.00	0.00	5.65	5.65	41.	0.	0.01	0.02	1
383	20	5.65	5.65	0.	-2.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
384	20	5.65	5.65	0.	-2.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
385	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
386	20	5.65	5.65	0.	1.	0.00	0.01	5.65	5.65	0.	0.	0.00	0.00	0
387	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	23.	0.	0.01	0.01	1
388	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	150.	0.	0.03	0.09	5
389	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	445.	0.	0.10	0.27	14
390	20	5.65	5.65	679.	2.	0.14	0.42	5.65	5.65	665.	3.	0.14	0.41	21
391	20	5.65	5.65	1706.	4.	0.37	1.04	5.65	5.65	1206.	3.	0.26	0.74	53
392	20	5.65	5.65	3081.	6.	0.68	1.89	5.65	5.65	1406.	3.	0.30	0.86	83
393	20	5.65	5.65	2883.	6.	0.64	1.76	5.65	5.65	1518.	3.	0.33	0.93	90
394	20	5.65	5.65	1675.	4.	0.36	1.03	5.65	5.65	1397.	4.	0.30	0.86	52
395	20	5.65	5.65	659.	2.	0.14	0.41	5.65	5.65	719.	2.	0.15	0.44	23
396	20	5.65	5.65	0.	-1.	0.00	0.00	5.65	5.65	410.	0.	0.09	0.25	13
397	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	132.	0.	0.03	0.08	4
398	20	5.65	5.65	0.	1.	0.00	0.01	5.65	5.65	19.	0.	0.00	0.01	1
399	20	5.65	5.65	0.	1.	0.00	0.01	5.65	5.65	0.	0.	0.00	0.00	0
400	20	5.65	5.65	0.	1.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
401	20	5.65	5.65	0.	-2.	0.00	0.00	5.65	5.65	0.	0.	0.00	0.00	0
402	20	5.65	5.65	0.	-2.	0.00	0.00	5.65	5.65	24.	0.	0.01	0.01	1
403	20	5.65	5.65	0.	4.	0.00	0.02	5.65	5.65	738.	2.	0.16	0.45	23
404	20	5.65	5.65	601.	8.	0.11	0.40	5.65	5.65	1848.	5.	0.40	1.14	58
405	20	5.65	5.65	2146.	6.	0.47	1.32	5.65	5.65	2663.	7.	0.59	1.64	84

L'ARMATURA OVUNQUE > DELLA QUANTIT RICHIESTA: IL PUNTO 2.3 DELLE NTC VERIFICATO (Rd > Ed)

********** TAGLIO PERPENDICOLARE

GUSCI	tauX	tauY	tauT	GUSCI	tauX	tauY	tauT	GUSCI	tauX	tauY	tauT
1	8.2	9.4	7.9	2	1.8	0.7	1.5	3	0.7	0.4	0.7
4	0.4	0.3	0.5	5	0.2	0.4	0.4	6	0.1	0.4	0.4
7	0.0	0.3	0.3	8	0.2	0.4	0.4	9	0.3	0.3	0.4
10	0.5	0.3	0.6	11	0.8	0.3	0.8	12	1.2	0.4	1.2
13	2.3	1.0	2.2	14	6.5	9.4	7.7	15	6.8	8.5	7.3
16	2.0	0.8	1.9	17	1.0	0.4	1.1	18	0.7	0.3	0.7
19	0.4	0.3	0.5	20	0.2	0.3	0.4	21	0.1	0.4	0.4
22	0.1	0.3	0.3	23	0.2	0.4	0.4	24	0.4	0.4	0.5
25	0.7	0.4	0.8	26	1.3	1.9	1.7	27	15.4	9.7	10.9
28	0.6	1.6	1.4	29	1.1	1.0	1.2	30	0.6	0.5	0.7
31	0.4	0.4	0.5	32	0.2	0.3	0.3	33	0.1	0.3	0.3
34	0.0	0.3	0.3	35	0.2	0.3	0.3	36	0.3	0.3	0.4
37	0.5	0.3	0.6	38	0.7	0.5	0.8	39	1.0	0.8	1.2
40	1.8	1.5	2.0	41	2.3	2.4	2.7	42	2.4	1.9	2.4
43	1.5	1.3	1.8	44	0.9	0.7	1.0	45	0.6	0.4	0.7
46	0.4	0.3	0.5	47	0.2	0.3	0.4	48	0.1	0.3	0.3
49	0.0	0.3	0.3	50	0.2	0.3	0.3	51	0.4	0.3	0.5
52	0.6	0.5	0.7	53	1.3	1.1	1.4	54	1.1	1.6	1.5
55	0.3	1.0	0.9	56	0.6	0.7	0.8	57	0.5	0.5	0.6
58	0.4	0.4	0.5	59	0.2	0.3	0.3	60	0.1	0.2	0.2
61	0.1	0.1	0.2	62	0.2	0.2	0.3	63	0.3	0.3	0.4
64	0.5	0.4	0.6	65	0.6	0.5	0.7	66	0.7	0.7	1.0
67	1.0	1.1	1.3	68	0.8	1.6	1.5	69	0.8	1.5	1.5
70	0.9	1.0	1.2	71	0.7	0.7	0.9	72	0.5	0.5	0.7
73	0.4	0.4	0.5	74	0.3	0.3	0.4	75	0.2	0.3	0.3
76	0.1	0.1	0.1	77	0.3	0.2	0.3	78	0.4	0.4	0.5
79	0.4	0.5	0.6	80	0.6	0.7	0.8	81	0.3	1.0	0.9
82	0.3	0.6	0.6	83	0.4	0.5	0.6	84	0.3	0.4	0.5
85	0.3	0.4	0.5	86	0.3	0.4	0.4	87	0.2	0.3	0.3
88	0.1	0.2	0.2	89	0.3	0.4	0.4	90	0.3	0.4	0.4
91	0.4	0.4	0.5	92	0.4	0.5	0.6	93	0.5	0.6	0.7
94	0.5	0.8	0.9	95	0.3	1.0	0.9	96	0.3	1.1	1.0
97	0.5	0.8	0.9	98	0.5	0.6	0.7	99	0.4	0.5	0.6
100	0.3	0.4	0.5	101	0.2	0.4	0.4	102	0.2	0.5	0.4
103	0.0	0.3	0.3	104	0.2	0.4	0.4	105	0.3	0.4	0.5
106	0.3	0.4	0.5	107	0.3	0.5	0.6	108	0.2	0.6	0.6
109	0.3	0.4	0.5	110	0.2	0.4	0.4	111	0.2	0.3	0.4
112	0.2	0.3	0.3	113	0.1	0.3	0.3	114	0.1	0.3	0.3
115	0.1	0.2	0.2	116	0.1	0.4	0.3	117	0.2	0.3	0.3
118	0.2	0.3	0.4	119	0.3	0.4	0.5	120	0.3	0.5	0.5
121	0.3	0.6	0.6	122	0.2	0.7	0.6	123	0.2	0.7	0.7
124	0.3	0.6	0.6	125	0.3	0.5	0.5	126	0.3	0.4	0.4
127	0.2	0.3	0.3	128	0.1	0.3	0.3	129	0.1	0.2	0.2
130	0.1	0.1	0.1	131	0.0	0.2	0.2	132	0.1	0.3	0.3
133	0.2	0.3	0.4	134	0.2	0.3	0.4	135	0.2	0.4	0.5
136	0.3	0.3	0.4	137	0.2	0.2	0.3	138	0.2	0.2	0.3
139	0.2	0.2	0.2	140	0.1	0.2	0.2	141	0.1	0.1	0.1
142	0.1	0.1	0.1	143	0.1	0.2	0.2	144	0.1	0.2	0.2
145	0.2	0.2	0.3	146	0.2	0.3	0.3	147	0.2	0.3	0.4
148	0.2	0.4	0.4	149	0.1	0.4	0.4	150	0.1	0.5	0.4
151	0.2	0.4	0.4	152	0.2	0.3	0.3	153	0.2	0.2	0.3

154	0.2	0.2	0.2	155	0.1	0.2	0.2	156	0.1	0.2	0.2	
157	0.1	0.1	0.1	158	0.1	0.1	0.1	159	0.1	0.2	0.2	
160	0.2	0.2	0.2	161	0.2	0.2	0.3	162	0.2	0.3	0.3	
163	0.3	0.1	0.3	164	0.2	0.1	0.2	165	0.2	0.1	0.2	
166	0.2	0.1	0.2	167	0.1	0.1	0.1	168	0.1	0.1	0.1	
169	0.0	0.1	0.1	170	0.1	0.1	0.1	171	0.2	0.1	0.2	
172	0.2	0.1	0.2	173	0.2	0.1	0.2	174	0.2	0.2	0.2	
175	0.2	0.2	0.2	176	0.1	0.2	0.2	177	0.1	0.2	0.2	
178	0.2	0.2	0.2	179	0.2	0.2	0.2	180	0.2	0.1	0.2	
181	0.2	0.1	0.2	182	0.1	0.1	0.1	183	0.1	0.1	0.1	
184	0.0	0.1	0.1	185	0.1	0.1	0.1	186	0.1	0.1	0.2	
187	0.2	0.1	0.2	188	0.2	0.1	0.2	189	0.3	0.1	0.3	
190	0.2	0.0	0.2	191	0.1	0.1	0.1	192	0.1	0.1	0.1	
193	0.1	0.1	0.1	194	0.0	0.1	0.1	195	0.1	0.1	0.1	
196	0.1	0.1	0.1	197	0.0	0.1	0.1	198	0.0	0.1	0.1	
199	0.1	0.1	0.1	200	0.1	0.1	0.1	201	0.1	0.1	0.1	
202	0.0	0.1	0.1	203	0.0	0.2	0.1	204	0.1	0.2	0.1	
205	0.0	0.1	0.1	206	0.0	0.1	0.1	207	0.1	0.1	0.1	
208	0.1	0.1	0.1	209	0.0	0.1	0.1	210	0.1	0.1	0.1	
211	0.2	0.1	0.1	212	0.1	0.1	0.1	213	0.0	0.1	0.1	
214	0.1	0.1	0.1	215	0.1	0.1	0.1	216	0.2	0.0	0.2	
217	0.3	0.2	0.3	218	0.2	0.2	0.3	219	0.2	0.2	0.2	
220	0.2	0.2	0.2	221	0.1	0.1	0.2	222	0.1	0.1	0.1	
223	0.0	0.1	0.1	224	0.1	0.1	0.1	225	0.2	0.1	0.2	
226	0.2	0.2	0.2	227	0.2	0.2	0.3	228	0.2	0.2	0.3	
229	0.2	0.3	0.3	230	0.1	0.3	0.3	231	0.1	0.3	0.3	
232	0.1	0.3	0.3	233	0.2	0.2	0.3	234	0.2	0.2	0.2	
235	0.2	0.2	0.2	236	0.1	0.1	0.2	237	0.1	0.1	0.1	
238	0.0	0.1	0.1	239	0.1	0.1	0.1	240	0.2	0.2	0.2	
241	0.2	0.2	0.2	242	0.2	0.2	0.3	243	0.3	0.2	0.3	
244	0.2	0.3	0.4	245	0.2	0.3	0.4	246	0.2	0.3	0.3	
247	0.2	0.2	0.3	248	0.1	0.2	0.2	249	0.0	0.1	0.1	
250	0.1	0.1	0.1	251	0.1	0.2	0.2	252	0.1	0.2	0.2	
253	0.2	0.2	0.3	254	0.2	0.3	0.4	255	0.3	0.4	0.4	
256	0.2	0.4	0.4	257	0.1	0.5	0.5	258	0.1	0.5	0.5	
259	0.2	0.4	0.4	260	0.2	0.3	0.4	261	0.2	0.3	0.3	
262	0.2	0.2	0.3	263	0.1	0.2	0.2	264	0.1	0.2	0.2	
265	0.0	0.2	0.2	266	0.1	0.2	0.2	267	0.2	0.2	0.2	
268	0.2	0.3	0.3	269	0.2	0.3	0.3	270	0.2	0.3	0.4	
271	0.3	0.5	0.5	272	0.3	0.4	0.5	273	0.3	0.4	0.4	
274	0.2	0.3	0.4	275	0.1	0.3	0.3	276	0.1	0.3	0.3	
277	0.1	0.3	0.2	278	0.1	0.3	0.3	279	0.2	0.3	0.3	
280	0.3	0.3	0.4	281	0.3	0.4	0.5	282	0.4	0.5	0.6	
283	0.4	0.6	0.7	284	0.2	0.7	0.7	285	0.2	0.8	0.7	
286	0.3	0.6	0.6	287	0.4	0.5	0.6	288	0.3	0.4	0.5	
289	0.2	0.3	0.4	290	0.1	0.3	0.3	291	0.0	0.2	0.2	
292	0.1	0.2	0.2	293	0.1	0.2	0.2	294	0.1	0.3	0.3	
295	0.2	0.4	0.4	296	0.3	0.4	0.5	297	0.2	0.5	0.5	
298	0.3	0.7	0.7	299	0.4	0.6	0.7	300	0.4	0.5	0.6	
301	0.3	0.4	0.5	302	0.3	0.4	0.4	303	0.2	0.3	0.3	
304	0.1	0.3	0.2	305	0.3	0.4	0.4	306	0.3	0.4	0.4	
307	0.4	0.4	0.5	308	0.5	0.5	0.6	309	0.6	0.7	0.8	
310	0.6	0.9	1.0	311	0.3	1.1	1.0	312	0.4	1.2	1.1	
313	0.6	0.9	0.9	314	0.5	0.6	0.8	315	0.4	0.5	0.6	
316	0.3	0.4	0.5	317	0.2	0.4	0.4	318	0.1	0.4	0.4	
319	0.0	0.4	0.4	320	0.2	0.4	0.4	321	0.3	0.4	0.5	
322	0.3	0.5	0.5	323	0.4	0.6	0.7	324	0.3	0.7	0.7	
325	0.4	1.2	1.1	326	0.7	0.8	1.0	327	0.6	0.6	0.7	
328	0.4	0.4	0.5	329	0.3	0.2	0.3	330	0.1	0.2	0.2	
331	0.1	0.2	0.2	332	0.2	0.2	0.3	333	0.3	0.3	0.4	
334	0.4	0.4	0.6	335	0.6	0.5	0.8	336	0.8	0.8	1.0	
337	1.1	1.1	1.4	338	0.9	1.7	1.6	339	0.8	1.6	1.6	
340	1.0	1.1	1.3	341	0.7	0.7	1.0	342	0.6	0.5	0.7	
343	0.4	0.4	0.5	344	0.3	0.3	0.4	345	0.2	0.2	0.3	
346	0.1	0.2	0.2	347	0.2	0.2	0.3	348	0.4	0.4	0.5	
349	0.5	0.5	0.7	350	0.7	0.8	1.0	351	0.4	1.1	1.1	
352	1.2	1.9	1.9	353	1.6	1.6	1.8	354	0.9	0.4	0.9	
355	0.5	0.3	0.5	356	0.3	0.3	0.3	357	0.1	0.3	0.3	
358	0.1	0.3	0.3	359	0.2	0.3	0.3	360	0.3	0.3	0.4	
361	0.5	0.4	0.6	362	0.7	0.4	0.8	363	1.1	0.7	1.2	
364	1.8	1.6	2.1	365	2.4	2.5	3.0	366	2.2	2.2	2.6	
367	1.7	1.6	2.0	368	1.0	0.7	1.1	369	0.7	0.4	0.8	
370	0.5	0.3	0.5	371	0.3	0.3	0.4	372	0.1	0.3	0.3	
373	0.1	0.3	0.3	374	0.2	0.3	0.3	375	0.4	0.3	0.5	
376	0.8	0.5	0.8	377	1.7	1.5	1.8	378	1.2	1.9	1.9	
379	11.5	18.3	13.9	380	1.8	0.6	1.4	381	0.9	0.3	0.8	
382	0.4	0.3	0.4	383	0.2	0.3	0.3	384	0.1	0.4	0.3	
385	0.1	0.3	0.3	386	0.2	0.3	0.3	387	0.3	0.3	0.4	
388	0.5	0.3	0.5	389	0.8	0.3	0.8	390	1.3	0.4	1.2	
391	2.1	0.8	2.0	392	7.3	12.5	9.2	393	7.5	12.2	9.1	
394	2.0	0.6	1.8	395	1.2	0.3	1.2	396	0.7	0.3	0.7	
397	0.5	0.3	0.5	398	0.2	0.3	0.4	399	0.1	0.3	0.3	
400	0.1	0.4	0.3	401	0.2	0.3	0.3	402	0.4	0.3	0.5	
403	0.8	0.3	0.8	404	1.7	1.0	1.6	405	17.9	20.4	16.5	

Le verifiche a SLU per flessione e taglio risultano soddisfatte.

6.4.2 *Verifiche a SLU e a SLV per punzonamento*

Non si riportano le verifiche a punzonamento a SLU, dal momento che la resistenza a taglio del solo calcestruzzo risulta già sufficiente a garantire il soddisfacimento della verifica senza dover predisporre armatura specifica a punzonamento, come esplicitato nel precedente tabulato di calcolo.

6.4.3 *Verifiche a SLE delle tensioni in esercizio e della fessurazione*

Si riporta la verifica a SLE, con riferimento all'inviluppo delle sollecitazioni agenti ricavate da tutti i casi di carico in esercizio.

La verifica di limitazione delle tensioni viene condotta confrontando i valori massimi delle tensioni agenti nei materiali con i limiti riportati in normativa per le verifiche a SLE.

La verifica a fessurazione viene condotta confrontando i valori massimi dell'apertura delle fessure con i limiti riportati in normativa per le verifiche a SLE.

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MACROGUSCIO soletta

VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->
    Nome  Descrizione
    15    Rara (RARA)
    16    Rara VentoX 1 (RARA)
    17    Rara VentoY 1 (RARA)
    18    Rara VentoX 2 (RARA)
    19    Rara VentoY 2 (RARA)
    20    Rara VentoX 3 (RARA)
    21    Rara VentoY 3 (RARA)
    22    Frequente 1 (FREQUENTE)
    23    Frequente 2 (FREQUENTE)
    24    Frequente VentoX 3 (FREQUENTE)
    25    Frequente VentoY 3 (FREQUENTE)
    26    Quasi Perm (QUASI PERMANENTE)

DATI:
   copriferro inferiore (asse armatura):   5     cm
   copriferro superiore (asse armatura):   5     cm

   Af    = area effettiva tesa (cm2 al metro)
   Afc   = area effettiva compressa (cm2 al metro)
   Mom   = momento flettente [daNcm/cm]
   Nor   = sforzo normale [daN]
   sigC  = tensione calcestruzzo [daN/cm2]
           valore max per combinazione rara             = 184.3 daN/cm2
             ''    ''  ''      ''          quasi permanente = 138.2 daN/cm2
   sigF  = tensione acciaio [daN/cm2]
           valore max per combinazione rara             = 3600 daN/cm2
   wkF   = apertura caratteristica per combinazione frequente (mm)       - valore max = 0.3 mm
   wkP   =     ''          ''      ''      ''        quasi permanente (mm) -   ''    '' = 0.2 mm

DATI FRC (calcestruzzo fibrorinforzato, verifica secondo Linee Guida maggio 2022):
   fFtsk = tensione di progetto in esercizio           = 0  daN/cm2
<-
                                    ARMATURA INFERIORE ORIZZONTALE

                    |      COMBINAZIONE RARA     |   COMB. FREQUENTE   |  COMB. QUASI PERMANENTE    |
GUSCI|   Af    Afc|    Mom    Nor   sigC  sigF|   Mom    Nor    wkF|    Mom    Nor   sigC   wkP|
1    |  5.65  5.65|     0.     0.   0.02    0.|     0.     0. 0.000|     0.     0.   0.02 0.000|
2    |  5.65  5.65|    669     0.  23.58  858.|    558     0. 0.007|    507     0.  17.85 0.007|
3    |  5.65  5.65|    913    -1  32.15 1168.|    726     0. 0.010|    728     0.  25.63 0.010|
4    |  5.65  5.65|   1018    -1  35.85 1303.|    812     0. 0.011|    835     0.  29.43 0.011|
5    |  5.65  5.65|   1040    -1  36.64 1331.|    864     0. 0.011|    868     0.  30.58 0.011|
6    |  5.65  5.65|   1015    -1  35.75 1298.|    882     0. 0.012|    843     0.  29.72 0.011|
7    |  5.65  5.65|    993    -1  34.95 1267.|    884     0. 0.012|    845     0.  29.78 0.011|
8    |  5.65  5.65|   1026    -1  36.11 1309.|    926     0. 0.012|    885     0.  31.19 0.012|
9    |  5.65  5.65|   1004    -1  35.34 1281.|    914     0. 0.012|    874     0.  30.79 0.011|
10   |  5.65  5.65|    934    -1  32.88 1192.|    839     0. 0.011|    802     0.  28.25 0.011|
11   |  5.65  5.65|    794    -1  27.95 1012.|    654     0. 0.009|    653     0.  23.01 0.009|
12   |  5.65  5.65|    351    -1  12.35  443.|    306     0. 0.004|    391     0.  13.79 0.005|
13   |  5.65  5.65|     0.    -1   0.03    0.|     0.     0. 0.000|     0.     0.   0.00 0.000|
14   |  5.65  5.65|     0.    -1   0.04   -1.|     0.     0. 0.000|     0.     0.   0.01 0.000|
15   |  5.65  5.65|     0.    -1   0.03    0.|     0.     0. 0.000|     0.     0.   0.01 0.000|
16   |  5.65  5.65|     0.    -1   0.03    0.|     0.     0. 0.000|     0.     0.   0.00 0.000|
17   |  5.65  5.65|    407    -1  14.31  514.|    311     0. 0.004|    367     0.  12.94 0.005|
18   |  5.65  5.65|    732    -1  25.77  933.|    606     0. 0.008|    608     0.  21.44 0.008|
19   |  5.65  5.65|    847    -1  29.83 1082.|    772     0. 0.010|    738     0.  25.99 0.010|
20   |  5.65  5.65|    885     0.  31.18 1134.|    826     0. 0.011|    789     0.  27.81 0.010|
21   |  5.65  5.65|    868     0.  30.57 1111.|    816     0. 0.011|    780     0.  27.49 0.010|
22   |  5.65  5.65|    852    -1  29.99 1088.|    751     0. 0.010|    718     0.  25.28 0.009|
23   |  5.65  5.65|    908    -1  31.98 1161.|    726     0. 0.010|    752     0.  26.49 0.010|
24   |  5.65  5.65|    902    -1  31.78 1155.|    721     0. 0.009|    745     0.  26.23 0.010|
25   |  5.65  5.65|    832    -1  29.31 1065.|    660     0. 0.009|    664     0.  23.40 0.009|
26   |  5.65  5.65|    630     0.  22.18  807.|    519     0. 0.007|    475     0.  16.75 0.006|
27   |  5.65  5.65|     0.     0.   0.01    0.|     0.     0. 0.000|     0.     0.   0.01 0.000|
28   |  5.65  5.65|     0.     0.   0.01    0.|     0.     0. 0.000|    76.     0.   2.66 0.001|
29   |  5.65  5.65|    647     0.  22.79  830.|    538     0. 0.007|    506     0.  17.83 0.007|
30   |  5.65  5.65|    863     0.  30.42 1106.|    694     0. 0.009|    700     0.  24.68 0.009|
31   |  5.65  5.65|    958    -1  33.76 1227.|    793     0. 0.010|    800     0.  28.21 0.011|
32   |  5.65  5.65|    990    -1  34.86 1266.|    840     0. 0.011|    832     0.  29.33 0.011|
33   |  5.65  5.65|    970    -1  34.16 1240.|    847     0. 0.011|    810     0.  28.54 0.011|
34   |  5.65  5.65|    952    -1  33.51 1215.|    848     0. 0.011|    810     0.  28.55 0.011|
35   |  5.65  5.65|    980    -1  34.52 1251.|    887     0. 0.012|    847     0.  29.86 0.011|
36   |  5.65  5.65|    959    -1  33.76 1223.|    872     0. 0.011|    834     0.  29.38 0.011|
37   |  5.65  5.65|    884    -1  31.13 1129.|    797     0. 0.010|    761     0.  26.83 0.010|
38   |  5.65  5.65|    747    -1  26.30  952.|    612     0. 0.008|    617     0.  21.72 0.008|
39   |  5.65  5.65|    332    -1  11.68  420.|    287     0. 0.004|    369     0.  13.01 0.005|
40   |  5.65  5.65|     0.    -1   0.02    0.|     0.     0. 0.000|     0.     0.   0.00 0.000|
41   |  5.65  5.65|     0.    -1   0.03    0.|     0.     0. 0.000|     0.     0.   0.01 0.000|
42   |  5.65  5.65|     0.    -1   0.03    0.|     0.     0. 0.000|     0.     0.   0.01 0.000|
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43	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.00	0.000
44	5.65	5.65	373	-1	13.11	472.	287	0.	0.004	344	0.	12.13	0.005
45	5.65	5.65	686	-1	24.14	874.	565	0.	0.007	572	0.	20.16	0.008
46	5.65	5.65	799	-1	28.13	1020.	731	0.	0.010	698	0.	24.60	0.009
47	5.65	5.65	836	0.	29.44	1070.	785	0.	0.010	750	0.	26.43	0.010
48	5.65	5.65	823	-1	29.00	1054.	778	0.	0.010	743	0.	26.19	0.010
49	5.65	5.65	810	-1	28.53	1035.	716	0.	0.009	684	0.	24.10	0.009
50	5.65	5.65	861	-1	30.31	1100.	708	0.	0.009	718	0.	25.31	0.009
51	5.65	5.65	849	-1	29.92	1087.	703	0.	0.009	711	0.	25.07	0.009
52	5.65	5.65	784	0.	27.63	1004.	629	0.	0.008	637	0.	22.46	0.008
53	5.65	5.65	604	0.	21.28	775.	498	0.	0.007	472	0.	16.64	0.006
54	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	83	0.	2.91	0.001
55	5.65	5.65	195	0.	6.88	251.	172	0.	0.002	293	0.	10.33	0.004
56	5.65	5.65	603	0.	21.27	775.	520	0.	0.007	511	0.	18.00	0.007
57	5.65	5.65	798	0.	28.13	1023.	660	0.	0.009	658	0.	23.19	0.009
58	5.65	5.65	880	0.	31.00	1127.	754	0.	0.010	747	0.	26.33	0.010
59	5.65	5.65	918	-1	32.34	1174.	801	0.	0.011	778	0.	27.43	0.010
60	5.65	5.65	907	-1	31.96	1160.	795	0.	0.010	760	0.	26.77	0.010
61	5.65	5.65	894	-1	31.48	1142.	794	0.	0.010	759	0.	26.74	0.010
62	5.65	5.65	916	-1	32.25	1169.	827	0.	0.011	790	0.	27.85	0.010
63	5.65	5.65	886	-1	31.18	1130.	809	0.	0.011	773	0.	27.24	0.010
64	5.65	5.65	814	-1	28.68	1040.	733	0.	0.010	700	0.	24.68	0.009
65	5.65	5.65	683	-1	24.06	872.	559	0.	0.007	562	0.	19.81	0.007
66	5.65	5.65	299	0.	10.52	380.	257	0.	0.003	338	0.	11.91	0.004
67	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	4	0.	0.13	0.000
68	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.00	0.000
69	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
70	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
71	5.65	5.65	327	-1	11.51	416.	253	0.	0.003	312	0.	10.99	0.004
72	5.65	5.65	627	-1	22.09	800.	513	0.	0.007	518	0.	18.26	0.007
73	5.65	5.65	735	-1	25.89	939.	668	0.	0.009	638	0.	22.48	0.008
74	5.65	5.65	770	-1	27.11	984.	723	0.	0.009	691	0.	24.35	0.009
75	5.65	5.65	762	-1	26.83	974.	720	0.	0.009	688	0.	24.25	0.009
76	5.65	5.65	754	-1	26.55	963.	664	0.	0.009	635	0.	22.38	0.008
77	5.65	5.65	795	-1	27.99	1015.	673	0.	0.009	668	0.	23.54	0.009
78	5.65	5.65	777	0.	27.36	994.	666	0.	0.009	661	0.	23.29	0.009
79	5.65	5.65	713	0.	25.10	913.	596	0.	0.008	596	0.	21.01	0.008
80	5.65	5.65	558	0.	19.67	717.	479	0.	0.006	473	0.	16.66	0.006
81	5.65	5.65	13	0.	0.46	16.	123	0.	0.002	274	0.	9.67	0.004
82	5.65	5.65	329	0.	11.58	422.	318	0.	0.004	324	0.	11.40	0.004
83	5.65	5.65	529	0.	18.65	680.	477	0.	0.006	471	0.	16.61	0.006
84	5.65	5.65	704	0.	24.82	903.	601	0.	0.008	597	0.	21.03	0.008
85	5.65	5.65	781	0.	27.50	999.	697	0.	0.009	679	0.	23.94	0.009
86	5.65	5.65	831	-1	29.27	1063.	746	0.	0.010	713	0.	25.14	0.009
87	5.65	5.65	825	-1	29.07	1055.	734	0.	0.010	702	0.	24.72	0.009
88	5.65	5.65	818	-1	28.81	1046.	732	0.	0.010	700	0.	24.66	0.009
89	5.65	5.65	830	-1	29.22	1060.	757	0.	0.010	723	0.	25.47	0.009
90	5.65	5.65	791	-1	27.83	1008.	732	0.	0.010	700	0.	24.66	0.009
91	5.65	5.65	717	-1	25.24	916.	656	0.	0.009	626	0.	22.06	0.008
92	5.65	5.65	588	-1	20.70	751.	497	0.	0.007	497	0.	17.50	0.007
93	5.65	5.65	270	0.	9.52	345.	250	0.	0.003	302	0.	10.64	0.004
94	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	38	0.	1.35	0.000
95	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
96	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
97	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	25	0.	0.88	0.000
98	5.65	5.65	277	0.	9.76	353.	234	0.	0.003	275	0.	9.68	0.004
99	5.65	5.65	543	-1	19.12	693.	452	0.	0.006	453	0.	15.97	0.006
100	5.65	5.65	642	-1	22.61	820.	592	0.	0.008	565	0.	19.92	0.007
101	5.65	5.65	685	-1	24.14	875.	649	0.	0.009	620	0.	21.84	0.008
102	5.65	5.65	684	-1	24.09	874.	653	0.	0.009	624	0.	21.98	0.008
103	5.65	5.65	680	-1	23.96	869.	607	0.	0.008	580	0.	20.44	0.008
104	5.65	5.65	708	-1	24.93	905.	624	0.	0.008	608	0.	21.44	0.008
105	5.65	5.65	685	0.	24.13	876.	612	0.	0.008	598	0.	21.06	0.008
106	5.65	5.65	617	0.	21.72	790.	540	0.	0.007	538	0.	18.95	0.007
107	5.65	5.65	483	0.	17.03	621.	436	0.	0.006	432	0.	15.23	0.006
108	5.65	5.65	302	0.	10.64	388.	293	0.	0.004	299	0.	10.52	0.004
109	5.65	5.65	277	0.	9.75	356.	283	0.	0.004	286	0.	10.09	0.004
110	5.65	5.65	484	0.	17.07	622.	426	0.	0.006	417	0.	14.69	0.005
111	5.65	5.65	618	0.	21.78	792.	544	0.	0.007	532	0.	18.74	0.007
112	5.65	5.65	691	0.	24.33	884.	641	0.	0.008	613	0.	21.60	0.008
113	5.65	5.65	754	0.	26.55	964.	683	0.	0.009	653	0.	23.01	0.009
114	5.65	5.65	760	0.	26.78	973.	681	0.	0.009	651	0.	22.94	0.009
115	5.65	5.65	752	-1	26.48	961.	680	0.	0.009	650	0.	22.90	0.009
116	5.65	5.65	757	-1	26.67	967.	693	0.	0.009	662	0.	23.32	0.009
117	5.65	5.65	708	-1	24.94	903.	661	0.	0.009	631	0.	22.24	0.008
118	5.65	5.65	634	-1	22.33	810.	582	0.	0.008	556	0.	19.59	0.007
119	5.65	5.65	506	0.	17.82	646.	446	0.	0.006	436	0.	15.35	0.006
120	5.65	5.65	248	0.	8.74	317.	240	0.	0.003	270	0.	9.52	0.004
121	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	70	0.	2.45	0.001
122	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
123	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
124	5.65	5.65	10	0.	0.33	11.	0.	0.	0.000	53	0.	1.87	0.001
125	5.65	5.65	249	0.	8.75	317.	218	0.	0.003	242	0.	8.52	0.003
126	5.65	5.65	472	0.	16.62	602.	401	0.	0.005	393	0.	13.84	0.005
127	5.65	5.65	563	-1	19.83	719.	521	0.	0.007	497	0.	17.52	0.007
128	5.65	5.65	618	-1	21.76	789.	580	0.	0.008	555	0.	19.53	0.007
129	5.65	5.65	623	-1	21.95	796.	593	0.	0.008	567	0.	19.97	0.007
130	5.65	5.65	622	0.	21.91	796.	560	0.	0.007	536	0.	18.87	0.007
131	5.65	5.65	638	0.	22.48	816.	581	0.	0.008	555	0.	19.56	0.007
132	5.65	5.65	607	0.	21.38	776.	562	0.	0.007	537	0.	18.93	0.007
133	5.65	5.65	529	0.	18.62	677.	487	0.	0.006	477	0.	16.80	0.006
134	5.65	5.65	436	0.	15.35	559.	387	0.	0.005	380	0.	13.38	0.005
135	5.65	5.65	249	0.	8.77	320.	259	0.	0.003	262	0.	9.25	0.003
136	5.65	5.65	217	0.	7.65	279.	231	0.	0.003	229	0.	8.08	0.003
137	5.65	5.65	416	0.	14.67	534.	373	0.	0.005	356	0.	12.56	0.005
138	5.65	5.65	546	0.	19.25	701.	489	0.	0.006	468	0.	16.49	0.006
139	5.65	5.65	626	0.	22.04	802.	577	0.	0.008	552	0.	19.45	0.007
140	5.65	5.65	693	0.	24.42	888.	628	0.	0.008	600	0.	21.16	0.008
141	5.65	5.65	709	0.	24.97	908.	639	0.	0.008	611	0.	21.52	0.008
142	5.65	5.65	697	-1	24.55	890.	639	0.	0.008	611	0.	21.52	0.008
143	5.65	5.65	690	-1	24.30	881.	638	0.	0.008	610	0.	21.48	0.008
144	5.65	5.65	625	-1	22.02	798.	596	0.	0.008	570	0.	20.07	0.007
145	5.65	5.65	553	0.	19.47	706.	514	0.	0.007	491	0.	17.30	0.006
146	5.65	5.65	425	0.	14.97	543.	397	0.	0.005	379	0.	13.34	0.005
147	5.65	5.65	220	0.	7.75	281.	229	0.	0.003	239	0.	8.40	0.003
148	5.65	5.65	8	0.	0.28	8.	21	0.	0.000	87	0.	3.06	0.001
149	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.00	0.000
150	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000

151	5.65	5.65	37	0.	1.28	44.	12	0.	0.000	69	0.	2.44	0.001
152	5.65	5.65	226	0.	7.95	287.	203	0.	0.003	210	0.	7.39	0.003
153	5.65	5.65	409	0.	14.40	521.	353	0.	0.005	337	0.	11.87	0.004
154	5.65	5.65	483	0.	17.01	617.	455	0.	0.006	435	0.	15.32	0.006
155	5.65	5.65	553	0.	19.46	706.	520	0.	0.007	497	0.	17.49	0.006
156	5.65	5.65	573	0.	20.17	732.	544	0.	0.007	520	0.	18.30	0.007
157	5.65	5.65	581	0.	20.47	744.	526	0.	0.007	503	0.	17.71	0.007
158	5.65	5.65	582	0.	20.51	746.	534	0.	0.007	511	0.	17.99	0.007
159	5.65	5.65	542	0.	19.09	694.	505	0.	0.007	483	0.	17.02	0.006
160	5.65	5.65	454	0.	15.98	582.	438	0.	0.006	418	0.	14.74	0.005
161	5.65	5.65	362	0.	12.77	465.	338	0.	0.004	323	0.	11.40	0.004
162	5.65	5.65	186	0.	6.56	239.	211	0.	0.003	210	0.	7.39	0.003
163	5.65	5.65	138	0.	4.86	177.	174	0.	0.002	166	0.	5.86	0.002
164	5.65	5.65	342	0.	12.05	439.	308	0.	0.004	295	0.	10.39	0.004
165	5.65	5.65	478	0.	16.86	614.	427	0.	0.006	408	0.	14.39	0.005
166	5.65	5.65	571	0.	20.14	733.	522	0.	0.007	499	0.	17.57	0.007
167	5.65	5.65	647	0.	22.81	830.	584	0.	0.008	558	0.	19.65	0.007
168	5.65	5.65	674	0.	23.76	865.	609	0.	0.008	582	0.	20.51	0.008
169	5.65	5.65	659	0.	23.21	843.	611	0.	0.008	584	0.	20.58	0.008
170	5.65	5.65	640	-1	22.54	818.	594	0.	0.008	568	0.	20.01	0.007
171	5.65	5.65	566	0.	19.94	724.	540	0.	0.007	516	0.	18.18	0.007
172	5.65	5.65	479	0.	16.88	613.	452	0.	0.006	432	0.	15.21	0.006
173	5.65	5.65	354	0.	12.48	453.	339	0.	0.004	323	0.	11.38	0.004
174	5.65	5.65	189	0.	6.66	241.	211	0.	0.003	201	0.	7.07	0.003
175	5.65	5.65	25	0.	0.86	29.	40	0.	0.001	84	0.	2.94	0.001
176	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.00	0.000
177	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.00	0.000
178	5.65	5.65	36	0.	1.27	44.	17	0.	0.000	66	0.	2.34	0.001
179	5.65	5.65	190	0.	6.70	242.	182	0.	0.002	173	0.	6.10	0.002
180	5.65	5.65	337	0.	11.87	429.	297	0.	0.004	283	0.	9.98	0.004
181	5.65	5.65	416	0.	14.65	531.	397	0.	0.005	379	0.	13.34	0.005
182	5.65	5.65	495	0.	17.44	633.	469	0.	0.006	448	0.	15.76	0.006
183	5.65	5.65	534	0.	18.82	684.	506	0.	0.007	483	0.	17.02	0.006
184	5.65	5.65	554	0.	19.53	711.	505	0.	0.007	482	0.	17.00	0.006
185	5.65	5.65	543	0.	19.13	696.	499	0.	0.007	477	0.	16.81	0.006
186	5.65	5.65	490	0.	17.26	628.	458	0.	0.006	437	0.	15.41	0.006
187	5.65	5.65	396	0.	13.96	509.	382	0.	0.005	365	0.	12.87	0.005
188	5.65	5.65	294	0.	10.35	377.	280	0.	0.004	268	0.	9.43	0.004
189	5.65	5.65	115	0.	4.04	147.	159	0.	0.002	152	0.	5.37	0.002
190	5.65	5.65	59	0.	2.07	76.	105	0.	0.001	101	0.	3.55	0.001
191	5.65	5.65	271	0.	9.54	348.	244	0.	0.003	234	0.	8.23	0.003
192	5.65	5.65	414	0.	14.59	532.	370	0.	0.005	353	0.	12.45	0.005
193	5.65	5.65	524	0.	18.46	673.	474	0.	0.006	454	0.	15.98	0.006
194	5.65	5.65	603	0.	21.26	774.	550	0.	0.007	526	0.	18.53	0.007
195	5.65	5.65	651	0.	22.95	836.	592	0.	0.008	566	0.	19.95	0.007
196	5.65	5.65	653	0.	23.01	837.	596	0.	0.008	570	0.	20.08	0.007
197	5.65	5.65	610	0.	21.47	780.	563	0.	0.007	538	0.	18.93	0.007
198	5.65	5.65	530	0.	18.65	677.	494	0.	0.006	472	0.	16.61	0.006
199	5.65	5.65	443	0.	15.60	566.	395	0.	0.005	377	0.	13.29	0.005
200	5.65	5.65	306	0.	10.79	391.	279	0.	0.004	266	0.	9.35	0.003
201	5.65	5.65	167	0.	5.87	212.	159	0.	0.002	151	0.	5.33	0.002
202	5.65	5.65	6	0.	0.18	4.	20	0.	0.000	55	0.	1.94	0.001
203	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
204	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
205	5.65	5.65	5	0.	0.15	3.	0.	0.	0.000	39	0.	1.38	0.001
206	5.65	5.65	150	0.	5.26	188.	132	0.	0.002	126	0.	4.42	0.002
207	5.65	5.65	274	0.	9.65	348.	240	0.	0.003	229	0.	8.06	0.003
208	5.65	5.65	368	0.	12.97	470.	344	0.	0.004	328	0.	11.56	0.004
209	5.65	5.65	458	0.	16.14	586.	427	0.	0.006	408	0.	14.37	0.005
210	5.65	5.65	515	0.	18.15	659.	480	0.	0.006	459	0.	16.16	0.006
211	5.65	5.65	539	0.	18.97	690.	497	0.	0.007	475	0.	16.73	0.006
212	5.65	5.65	510	0.	17.96	654.	476	0.	0.006	455	0.	16.04	0.006
213	5.65	5.65	444	0.	15.65	570.	420	0.	0.006	401	0.	14.14	0.005
214	5.65	5.65	345	0.	12.17	444.	333	0.	0.004	318	0.	11.21	0.004
215	5.65	5.65	237	0.	8.37	305.	223	0.	0.003	213	0.	7.52	0.003
216	5.65	5.65	52	0.	1.84	67.	98	0.	0.001	94	0.	3.30	0.001
217	5.65	5.65	136	0.	4.78	174.	174	0.	0.002	166	0.	5.86	0.002
218	5.65	5.65	341	0.	12.01	438.	308	0.	0.004	295	0.	10.39	0.004
219	5.65	5.65	475	0.	16.74	610.	427	0.	0.006	408	0.	14.39	0.005
220	5.65	5.65	571	0.	20.13	734.	522	0.	0.007	499	0.	17.57	0.007
221	5.65	5.65	634	0.	22.36	814.	584	0.	0.008	558	0.	19.65	0.007
222	5.65	5.65	652	0.	22.97	836.	609	0.	0.008	582	0.	20.51	0.008
223	5.65	5.65	670	0.	23.62	859.	611	0.	0.008	584	0.	20.58	0.008
224	5.65	5.65	648	0.	22.83	830.	594	0.	0.008	568	0.	20.01	0.007
225	5.65	5.65	585	0.	20.61	749.	540	0.	0.007	516	0.	18.18	0.007
226	5.65	5.65	506	0.	17.83	647.	452	0.	0.006	432	0.	15.21	0.006
227	5.65	5.65	369	0.	12.99	471.	339	0.	0.004	323	0.	11.38	0.004
228	5.65	5.65	215	0.	7.58	273.	211	0.	0.003	201	0.	7.07	0.003
229	5.65	5.65	24	0.	0.83	27.	45	0.	0.001	84	0.	2.94	0.001
230	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
231	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
232	5.65	5.65	22	0.	0.76	26.	18	0.	0.000	66	0.	2.34	0.001
233	5.65	5.65	200	0.	7.04	253.	182	0.	0.002	173	0.	6.10	0.002
234	5.65	5.65	335	0.	11.80	427.	297	0.	0.004	283	0.	9.98	0.004
235	5.65	5.65	427	0.	15.05	546.	397	0.	0.005	379	0.	13.34	0.005
236	5.65	5.65	502	0.	17.69	643.	469	0.	0.006	448	0.	15.76	0.006
237	5.65	5.65	541	0.	19.05	693.	506	0.	0.007	483	0.	17.02	0.006
238	5.65	5.65	536	0.	18.88	687.	505	0.	0.007	482	0.	17.00	0.006
239	5.65	5.65	526	0.	18.54	675.	499	0.	0.007	477	0.	16.81	0.006
240	5.65	5.65	484	0.	17.07	622.	458	0.	0.006	437	0.	15.41	0.006
241	5.65	5.65	404	0.	14.25	520.	382	0.	0.005	365	0.	12.87	0.005
242	5.65	5.65	294	0.	10.34	377.	280	0.	0.004	268	0.	9.43	0.004
243	5.65	5.65	117	0.	4.13	150.	159	0.	0.002	152	0.	5.37	0.002
244	5.65	5.65	219	0.	7.70	281.	240	0.	0.003	229	0.	8.08	0.003
245	5.65	5.65	419	0.	14.77	539.	373	0.	0.005	356	0.	12.56	0.005
246	5.65	5.65	547	0.	19.29	703.	489	0.	0.006	468	0.	16.49	0.006
247	5.65	5.65	629	0.	22.16	807.	577	0.	0.008	552	0.	19.45	0.007
248	5.65	5.65	681	0.	23.98	874.	628	0.	0.008	600	0.	21.16	0.008
249	5.65	5.65	688	0.	24.24	882.	639	0.	0.008	611	0.	21.52	0.008
250	5.65	5.65	696	0.	24.52	891.	639	0.	0.008	611	0.	21.52	0.008
251	5.65	5.65	695	0.	24.47	889.	638	0.	0.008	610	0.	21.48	0.008
252	5.65	5.65	643	0.	22.63	822.	596	0.	0.008	570	0.	20.07	0.007
253	5.65	5.65	567	-1	19.96	724.	514	0.	0.007	491	0.	17.30	0.006
254	5.65	5.65	427	-1	15.02	544.	397	0.	0.005	379	0.	13.34	0.005
255	5.65	5.65	239	0.	8.40	303.	231	0.	0.003	239	0.	8.40	0.003
256	5.65	5.65	9	0.	0.32	9.	49	0.	0.001	87	0.	3.06	0.001
257	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
258	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000

259	5.65	5.65	11	0.	0.39	14.	21	0.	0.000	69	0.	2.44	0.001
260	5.65	5.65	237	0.	8.34	301.	203	0.	0.003	210	0.	7.39	0.003
261	5.65	5.65	403	0.	14.18	513.	353	0.	0.005	337	0.	11.87	0.004
262	5.65	5.65	488	0.	17.20	624.	455	0.	0.006	435	0.	15.32	0.006
263	5.65	5.65	554	0.	19.51	709.	520	0.	0.007	497	0.	17.49	0.006
264	5.65	5.65	577	0.	20.33	739.	544	0.	0.007	520	0.	18.30	0.007
265	5.65	5.65	562	0.	19.78	720.	526	0.	0.007	503	0.	17.71	0.007
266	5.65	5.65	567	0.	19.98	728.	534	0.	0.007	511	0.	17.99	0.007
267	5.65	5.65	527	0.	18.56	676.	505	0.	0.007	483	0.	17.02	0.006
268	5.65	5.65	457	0.	16.11	588.	438	0.	0.006	418	0.	14.74	0.005
269	5.65	5.65	348	0.	12.26	447.	338	0.	0.004	323	0.	11.40	0.004
270	5.65	5.65	178	0.	6.26	228.	219	0.	0.003	210	0.	7.39	0.003
271	5.65	5.65	301	0.	10.60	387.	294	0.	0.004	286	0.	10.09	0.004
272	5.65	5.65	493	0.	17.37	634.	428	0.	0.006	417	0.	14.69	0.005
273	5.65	5.65	622	0.	21.91	799.	556	0.	0.007	532	0.	18.74	0.007
274	5.65	5.65	696	0.	24.53	894.	641	0.	0.008	613	0.	21.60	0.008
275	5.65	5.65	735	0.	25.91	944.	683	0.	0.009	653	0.	23.01	0.009
276	5.65	5.65	736	0.	25.92	943.	681	0.	0.009	651	0.	22.94	0.009
277	5.65	5.65	744	0.	26.21	952.	680	0.	0.009	650	0.	22.90	0.009
278	5.65	5.65	748	-1	26.35	956.	693	0.	0.009	662	0.	23.32	0.009
279	5.65	5.65	702	-1	24.71	896.	661	0.	0.009	631	0.	22.24	0.008
280	5.65	5.65	630	-1	22.19	804.	582	0.	0.008	556	0.	19.59	0.007
281	5.65	5.65	488	-1	17.20	623.	456	0.	0.006	436	0.	15.35	0.006
282	5.65	5.65	251	0.	8.85	320.	244	0.	0.003	270	0.	9.52	0.004
283	5.65	5.65	0.	0.	0.01	0.	14	0.	0.000	70	0.	2.45	0.001
284	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
285	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.00	0.000
286	5.65	5.65	0.	0.	0.00	2.	2	0.	0.000	53	0.	1.87	0.001
287	5.65	5.65	265	0.	9.35	339.	218	0.	0.003	242	0.	8.52	0.003
288	5.65	5.65	469	0.	16.53	599.	412	0.	0.005	393	0.	13.84	0.005
289	5.65	5.65	555	0.	19.56	710.	521	0.	0.007	497	0.	17.52	0.007
290	5.65	5.65	616	0.	21.69	789.	580	0.	0.008	555	0.	19.53	0.007
291	5.65	5.65	637	0.	22.45	817.	593	0.	0.008	567	0.	19.97	0.007
292	5.65	5.65	603	0.	21.25	773.	560	0.	0.007	536	0.	18.87	0.007
293	5.65	5.65	615	0.	21.66	789.	581	0.	0.008	555	0.	19.56	0.007
294	5.65	5.65	580	0.	20.44	745.	562	0.	0.007	537	0.	18.93	0.007
295	5.65	5.65	518	0.	18.24	665.	498	0.	0.007	477	0.	16.80	0.006
296	5.65	5.65	401	0.	14.13	515.	397	0.	0.005	380	0.	13.38	0.005
297	5.65	5.65	229	0.	8.05	294.	259	0.	0.003	262	0.	9.25	0.003
298	5.65	5.65	326	0.	11.48	420.	332	0.	0.004	324	0.	11.40	0.004
299	5.65	5.65	575	0.	20.26	740.	481	0.	0.006	471	0.	16.61	0.006
300	5.65	5.65	709	0.	24.98	912.	615	0.	0.008	597	0.	21.03	0.008
301	5.65	5.65	779	0.	27.44	1000.	711	0.	0.009	679	0.	23.94	0.009
302	5.65	5.65	811	0.	28.57	1040.	746	0.	0.010	713	0.	25.14	0.009
303	5.65	5.65	798	0.	28.10	1021.	734	0.	0.010	702	0.	24.72	0.009
304	5.65	5.65	809	-1	28.51	1035.	732	0.	0.010	700	0.	24.66	0.009
305	5.65	5.65	822	-1	28.94	1049.	757	0.	0.010	723	0.	25.47	0.009
306	5.65	5.65	788	-1	27.74	1005.	732	0.	0.010	700	0.	24.66	0.009
307	5.65	5.65	713	-1	25.11	909.	656	0.	0.009	626	0.	22.06	0.008
308	5.65	5.65	562	-1	19.78	716.	512	0.	0.007	497	0.	17.50	0.007
309	5.65	5.65	268	0.	9.43	341.	254	0.	0.003	302	0.	10.64	0.004
310	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	38	0.	1.35	0.000
311	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000
312	5.65	5.65	0.	1	0.00	5.	0.	0.	0.000	0.	0.	0.00	0.000
313	5.65	5.65	0.	0.	0.00	4.	0.	0.	0.000	25	0.	0.88	0.000
314	5.65	5.65	293	0.	10.32	376.	233	0.	0.003	275	0.	9.68	0.004
315	5.65	5.65	551	0.	19.41	705.	469	0.	0.006	453	0.	15.97	0.006
316	5.65	5.65	646	0.	22.77	828.	592	0.	0.008	565	0.	19.92	0.007
317	5.65	5.65	695	0.	24.50	892.	649	0.	0.009	620	0.	21.84	0.008
318	5.65	5.65	719	0.	25.35	924.	653	0.	0.009	624	0.	21.98	0.008
319	5.65	5.65	647	0.	22.81	832.	607	0.	0.008	580	0.	20.44	0.008
320	5.65	5.65	682	0.	24.03	876.	637	0.	0.008	608	0.	21.44	0.008
321	5.65	5.65	652	0.	22.98	838.	625	0.	0.008	598	0.	21.06	0.008
322	5.65	5.65	588	0.	20.74	757.	562	0.	0.007	538	0.	18.95	0.007
323	5.65	5.65	458	0.	16.13	588.	443	0.	0.006	432	0.	15.23	0.006
324	5.65	5.65	243	0.	8.56	313.	291	0.	0.004	299	0.	10.52	0.004
325	5.65	5.65	0.	0.	0.00	4.	130	0.	0.002	293	0.	10.33	0.004
326	5.65	5.65	606	0.	21.36	779.	515	0.	0.007	511	0.	18.00	0.007
327	5.65	5.65	796	0.	28.03	1020.	672	0.	0.009	658	0.	23.19	0.009
328	5.65	5.65	871	0.	30.69	1116.	781	0.	0.010	747	0.	26.33	0.010
329	5.65	5.65	893	-1	31.45	1143.	814	0.	0.011	778	0.	27.43	0.010
330	5.65	5.65	870	-1	30.64	1112.	795	0.	0.010	760	0.	26.77	0.010
331	5.65	5.65	890	-1	31.35	1139.	794	0.	0.010	759	0.	26.74	0.010
332	5.65	5.65	911	-1	32.09	1165.	827	0.	0.011	790	0.	27.85	0.010
333	5.65	5.65	886	-1	31.19	1129.	809	0.	0.011	773	0.	27.24	0.010
334	5.65	5.65	808	-1	28.46	1030.	733	0.	0.010	700	0.	24.68	0.009
335	5.65	5.65	648	-1	22.82	826.	575	0.	0.008	562	0.	19.81	0.007
336	5.65	5.65	285	-1	10.04	362.	263	0.	0.003	338	0.	11.91	0.004
337	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	4	0.	0.13	0.000
338	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.00	0.000
339	5.65	5.65	0.	1	0.00	5.	0.	0.	0.000	0.	0.	0.00	0.000
340	5.65	5.65	0.	1	0.00	5.	0.	0.	0.000	0.	0.	0.00	0.000
341	5.65	5.65	318	0.	11.23	410.	250	0.	0.003	312	0.	10.99	0.004
342	5.65	5.65	639	0.	22.53	820.	532	0.	0.007	518	0.	18.26	0.007
343	5.65	5.65	744	0.	26.22	955.	668	0.	0.009	638	0.	22.48	0.008
344	5.65	5.65	792	0.	27.90	1018.	723	0.	0.009	691	0.	24.35	0.009
345	5.65	5.65	811	0.	28.59	1045.	720	0.	0.009	688	0.	24.25	0.009
346	5.65	5.65	739	0.	26.04	952.	654	0.	0.009	635	0.	22.38	0.008
347	5.65	5.65	757	0.	26.69	973.	699	0.	0.009	668	0.	23.54	0.009
348	5.65	5.65	735	0.	25.89	944.	691	0.	0.009	661	0.	23.29	0.009
349	5.65	5.65	660	0.	23.25	848.	614	0.	0.008	596	0.	21.01	0.008
350	5.65	5.65	482	0.	16.99	619.	472	0.	0.006	473	0.	16.66	0.006
351	5.65	5.65	0.	0.	0.00	4.	102	0.	0.001	274	0.	9.67	0.004
352	5.65	5.65	0.	1	0.00	7.	0.	0.	0.000	76	0.	2.66	0.001
353	5.65	5.65	646	0.	22.76	826.	537	0.	0.007	506	0.	17.83	0.007
354	5.65	5.65	859	-1	30.26	1098.	711	0.	0.009	700	0.	24.68	0.009
355	5.65	5.65	940	-1	33.11	1201.	837	0.	0.011	800	0.	28.21	0.011
356	5.65	5.65	952	-1	33.54	1217.	871	0.	0.011	832	0.	29.33	0.011
357	5.65	5.65	926	-1	32.60	1182.	847	0.	0.011	810	0.	28.54	0.011
358	5.65	5.65	953	0.	33.59	1223.	848	0.	0.011	810	0.	28.55	0.011
359	5.65	5.65	976	-1	34.39	1249.	887	0.	0.012	847	0.	29.86	0.011
360	5.65	5.65	961	-1	33.84	1225.	872	0.	0.011	834	0.	29.38	0.011
361	5.65	5.65	883	-1	31.09	1126.	797	0.	0.010	761	0.	26.83	0.010
362	5.65	5.65	721	-1	25.39	918.	624	0.	0.008	617	0.	21.72	0.008
363	5.65	5.65	298	-1	10.47	376.	275	0.	0.004	369	0.	13.01	0.005
364	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.00	0.000
365	5.65	5.65	0.	1	0.00	5.	0.	0.	0.000	0.	0.	0.01	0.000
366	5.65	5.65	0.	1	0.00	7.	0.	0.	0.000	0.	0.	0.01	0.000

367	5.65	5.65	0.	1	0.00	5.	0.	0.	0.000	0.	0.	0.00	0.000
368	5.65	5.65	385	0.	13.59	497.	261	0.	0.003	344	0.	12.13	0.005
369	5.65	5.65	711	0.	25.07	914.	583	0.	0.008	572	0.	20.16	0.008
370	5.65	5.65	821	0.	28.94	1056.	731	0.	0.010	698	0.	24.60	0.009
371	5.65	5.65	864	0.	30.45	1113.	785	0.	0.010	750	0.	26.43	0.010
372	5.65	5.65	883	0.	31.14	1140.	778	0.	0.010	743	0.	26.19	0.010
373	5.65	5.65	815	0.	28.74	1052.	692	0.	0.009	684	0.	24.10	0.009
374	5.65	5.65	814	0.	28.68	1045.	752	0.	0.010	718	0.	25.31	0.009
375	5.65	5.65	798	0.	28.11	1025.	744	0.	0.010	711	0.	25.07	0.009
376	5.65	5.65	715	0.	25.18	918.	649	0.	0.009	637	0.	22.46	0.008
377	5.65	5.65	380	0.	13.38	488.	488	0.	0.006	472	0.	16.64	0.006
378	5.65	5.65	0.	1	0.00	7.	0.	0.	0.000	83	0.	2.91	0.001
379	5.65	5.65	0.	1	0.00	9.	0.	0.	0.000	0.	0.	0.02	0.000
380	5.65	5.65	657	-1	23.12	837.	553	0.	0.007	507	0.	17.85	0.007
381	5.65	5.65	902	-1	31.74	1148.	731	0.	0.010	728	0.	25.63	0.010
382	5.65	5.65	984	-1	34.64	1254.	873	0.	0.011	835	0.	29.43	0.011
383	5.65	5.65	994	-1	34.99	1268.	908	0.	0.012	868	0.	30.58	0.011
384	5.65	5.65	965	-1	33.99	1231.	882	0.	0.012	843	0.	29.72	0.011
385	5.65	5.65	999	0.	35.20	1282.	884	0.	0.012	845	0.	29.78	0.011
386	5.65	5.65	1023	-1	36.03	1309.	926	0.	0.012	885	0.	31.19	0.012
387	5.65	5.65	1010	-1	35.54	1287.	914	0.	0.012	874	0.	30.79	0.011
388	5.65	5.65	934	-1	32.88	1191.	839	0.	0.011	802	0.	28.25	0.011
389	5.65	5.65	770	-1	27.12	981.	653	0.	0.009	653	0.	23.01	0.009
390	5.65	5.65	312	-1	10.95	392.	286	0.	0.004	391	0.	13.79	0.005
391	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.00	0.000
392	5.65	5.65	0.	1	0.00	8.	0.	0.	0.000	0.	0.	0.01	0.000
393	5.65	5.65	0.	1	0.00	10.	0.	0.	0.000	0.	0.	0.01	0.000
394	5.65	5.65	0.	1	0.00	6.	0.	0.	0.000	0.	0.	0.00	0.000
395	5.65	5.65	422	0.	14.88	545.	275	0.	0.004	367	0.	12.94	0.005
396	5.65	5.65	760	0.	26.78	978.	614	0.	0.008	608	0.	21.44	0.008
397	5.65	5.65	869	0.	30.65	1119.	772	0.	0.010	738	0.	25.99	0.010
398	5.65	5.65	915	0.	32.28	1182.	826	0.	0.011	789	0.	27.81	0.010
399	5.65	5.65	933	1	32.90	1206.	816	0.	0.011	780	0.	27.49	0.010
400	5.65	5.65	887	1	31.27	1146.	718	0.	0.009	718	0.	25.28	0.009
401	5.65	5.65	853	0.	30.07	1096.	786	0.	0.010	752	0.	26.49	0.010
402	5.65	5.65	843	0.	29.71	1083.	779	0.	0.010	745	0.	26.23	0.010
403	5.65	5.65	750	0.	26.44	963.	670	0.	0.009	664	0.	23.40	0.009
404	5.65	5.65	335	0.	11.79	430.	489	0.	0.006	475	0.	16.75	0.006
405	5.65	5.65	0.	1	0.00	10.	0.	0.	0.000	0.	0.	0.01	0.000

ARMATURA INFERIORE VERTICALE

			COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
GUSCI	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1	5.65	5.65	0.	-1	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
2	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	11	0.	0.38	0.000
3	5.65	5.65	0.	0.	0.00	0.	33	0.	0.000	246	0.	8.66	0.003
4	5.65	5.65	258	0.	9.09	333.	275	0.	0.004	272	0.	9.57	0.004
5	5.65	5.65	271	0.	9.55	350.	218	0.	0.003	227	0.	7.99	0.003
6	5.65	5.65	165	0.	5.81	213.	148	0.	0.002	154	0.	5.44	0.002
7	5.65	5.65	194	0.	6.84	250.	168	0.	0.002	150	0.	5.28	0.002
8	5.65	5.65	301	0.	10.61	388.	256	0.	0.003	234	0.	8.24	0.003
9	5.65	5.65	385	0.	13.56	495.	325	0.	0.004	317	0.	11.16	0.004
10	5.65	5.65	454	0.	16.01	585.	392	0.	0.005	387	0.	13.63	0.005
11	5.65	5.65	475	0.	16.73	611.	423	0.	0.006	435	0.	15.33	0.006
12	5.65	5.65	196	1	6.93	261.	229	0.	0.003	425	0.	14.96	0.006
13	5.65	5.65	0.	2	0.00	19.	0.	-1	0.000	0.	-1	0.04	0.000
14	5.65	5.65	0.	2	0.00	19.	0.	-1	0.000	0.	-1	0.05	0.000
15	5.65	5.65	0.	2	0.00	21.	0.	-1	0.000	0.	-1	0.06	0.000
16	5.65	5.65	0.	1	0.00	11.	0.	-1	0.000	0.	-1	0.04	0.000
17	5.65	5.65	211	0.	7.45	273.	265	0.	0.003	408	0.	14.36	0.005
18	5.65	5.65	515	0.	18.14	662.	413	0.	0.005	412	0.	14.52	0.005
19	5.65	5.65	460	0.	16.22	592.	359	0.	0.005	360	0.	12.69	0.005
20	5.65	5.65	381	0.	13.44	490.	291	0.	0.004	287	0.	10.12	0.004
21	5.65	5.65	281	0.	9.89	361.	214	0.	0.003	205	0.	7.23	0.003
22	5.65	5.65	181	0.	6.37	233.	125	0.	0.002	119	0.	4.21	0.002
23	5.65	5.65	165	0.	5.81	212.	172	0.	0.002	170	0.	5.98	0.002
24	5.65	5.65	245	0.	8.63	315.	225	0.	0.003	222	0.	7.83	0.003
25	5.65	5.65	0.	0.	0.01	0.	7	0.	0.000	206	0.	7.25	0.003
26	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.00	0.000
27	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
28	5.65	5.65	222	0.	7.82	281.	536	0.	0.007	498	0.	17.56	0.007
29	5.65	5.65	337	0.	11.88	430.	532	0.	0.007	498	0.	17.56	0.007
30	5.65	5.65	469	0.	16.52	601.	516	0.	0.007	501	0.	17.67	0.007
31	5.65	5.65	576	0.	20.31	743.	472	0.	0.006	459	0.	16.17	0.006
32	5.65	5.65	484	0.	17.06	625.	405	0.	0.005	400	0.	14.09	0.005
33	5.65	5.65	372	0.	13.13	480.	329	0.	0.004	328	0.	11.55	0.004
34	5.65	5.65	391	0.	13.80	504.	345	0.	0.005	321	0.	11.32	0.004
35	5.65	5.65	490	0.	17.28	631.	430	0.	0.006	403	0.	14.20	0.005
36	5.65	5.65	575	0.	20.26	740.	498	0.	0.007	484	0.	17.06	0.006
37	5.65	5.65	655	0.	23.07	843.	568	0.	0.007	556	0.	19.60	0.007
38	5.65	5.65	717	0.	25.27	922.	627	0.	0.008	615	0.	21.68	0.008
39	5.65	5.65	699	0.	24.65	900.	610	0.	0.008	646	0.	22.76	0.008
40	5.65	5.65	439	0.	15.47	564.	400	-1	0.005	446	-1	15.69	0.006
41	5.65	5.65	300	0.	10.56	382.	280	-1	0.004	312	-1	10.96	0.004
42	5.65	5.65	332	0.	11.70	423.	299	-1	0.004	322	-1	11.32	0.004
43	5.65	5.65	440	0.	15.49	561.	389	-1	0.005	482	-1	16.98	0.006
44	5.65	5.65	772	0.	27.19	990.	626	0.	0.008	627	0.	22.11	0.008
45	5.65	5.65	764	0.	26.93	982.	616	0.	0.008	593	0.	20.91	0.008
46	5.65	5.65	675	0.	23.78	867.	541	0.	0.007	532	0.	18.74	0.007
47	5.65	5.65	583	0.	20.55	749.	467	0.	0.006	457	0.	16.10	0.006
48	5.65	5.65	479	0.	16.88	615.	393	0.	0.005	376	0.	13.24	0.005
49	5.65	5.65	380	0.	13.39	488.	304	0.	0.004	291	0.	10.25	0.004
50	5.65	5.65	396	0.	13.94	508.	362	0.	0.005	346	0.	12.20	0.005
51	5.65	5.65	479	0.	16.89	616.	425	0.	0.006	409	0.	14.43	0.005
52	5.65	5.65	443	0.	15.60	568.	470	0.	0.006	455	0.	16.03	0.006
53	5.65	5.65	273	0.	9.62	349.	504	0.	0.007	456	0.	16.08	0.006
54	5.65	5.65	171	0.	6.00	215.	518	0.	0.007	459	0.	16.15	0.006
55	5.65	5.65	952	-1	33.54	1218.	806	0.	0.011	785	0.	27.65	0.010
56	5.65	5.65	918	0.	32.33	1175.	779	0.	0.010	755	0.	26.61	0.010
57	5.65	5.65	874	0.	30.78	1120.	731	0.	0.010	708	0.	24.96	0.009
58	5.65	5.65	796	0.	28.07	1024.	670	0.	0.009	641	0.	22.59	0.008
59	5.65	5.65	695	0.	24.50	895.	597	0.	0.008	571	0.	20.11	0.008
60	5.65	5.65	584	0.	20.60	752.	520	0.	0.007	497	0.	17.52	0.007
61	5.65	5.65	586	0.	20.66	755.	509	0.	0.007	487	0.	17.16	0.006
62	5.65	5.65	677	0.	23.87	872.	591	0.	0.008	565	0.	19.91	0.007
63	5.65	5.65	762	0.	26.85	981.	675	0.	0.009	646	0.	22.76	0.008
64	5.65	5.65	853	0.	30.06	1097.	748	0.	0.010	722	0.	25.45	0.009

65	5.65	5.65	932	0.	32.87	1199.	817	0.	0.011	790	0.	27.83	0.010
66	5.65	5.65	995	0.	35.05	1277.	862	0.	0.011	833	0.	29.35	0.011
67	5.65	5.65	887	0.	31.26	1137.	775	-1	0.010	773	-1	27.22	0.010
68	5.65	5.65	739	0.	26.04	946.	656	-1	0.009	642	-1	22.59	0.008
69	5.65	5.65	716	-1	25.21	915.	649	-1	0.008	629	-1	22.16	0.008
70	5.65	5.65	772	0.	27.19	989.	716	-1	0.009	721	-1	25.40	0.009
71	5.65	5.65	982	0.	34.60	1261.	831	0.	0.011	818	0.	28.81	0.011
72	5.65	5.65	949	0.	33.43	1219.	801	0.	0.011	770	0.	27.15	0.010
73	5.65	5.65	870	0.	30.65	1118.	723	0.	0.009	700	0.	24.68	0.009
74	5.65	5.65	776	0.	27.35	997.	650	0.	0.009	622	0.	21.92	0.008
75	5.65	5.65	674	0.	23.77	866.	566	0.	0.007	541	0.	19.08	0.007
76	5.65	5.65	581	0.	20.47	746.	483	0.	0.006	462	0.	16.27	0.006
77	5.65	5.65	608	0.	21.43	782.	547	0.	0.007	523	0.	18.43	0.007
78	5.65	5.65	699	0.	24.63	898.	613	0.	0.008	595	0.	20.96	0.008
79	5.65	5.65	786	0.	27.69	1009.	678	0.	0.009	663	0.	23.35	0.009
80	5.65	5.65	864	0.	30.45	1108.	727	0.	0.010	711	0.	25.05	0.009
81	5.65	5.65	914	0.	32.21	1171.	754	0.	0.010	741	0.	26.12	0.010
82	5.65	5.65	1151	-1	40.55	1472.	1001	0.	0.013	957	0.	33.72	0.013
83	5.65	5.65	1106	-1	38.97	1416.	962	0.	0.013	920	0.	32.43	0.012
84	5.65	5.65	1044	0.	36.77	1338.	903	0.	0.012	863	0.	30.41	0.011
85	5.65	5.65	963	0.	33.93	1237.	826	0.	0.011	790	0.	27.83	0.010
86	5.65	5.65	866	0.	30.53	1114.	751	0.	0.010	718	0.	25.32	0.009
87	5.65	5.65	767	0.	27.02	987.	679	0.	0.009	649	0.	22.88	0.009
88	5.65	5.65	773	0.	27.24	995.	667	0.	0.009	638	0.	22.49	0.008
89	5.65	5.65	855	0.	30.13	1101.	741	0.	0.010	708	0.	24.96	0.009
90	5.65	5.65	934	0.	32.92	1202.	820	0.	0.011	785	0.	27.65	0.010
91	5.65	5.65	1024	0.	36.10	1317.	887	0.	0.012	859	0.	30.28	0.011
92	5.65	5.65	1103	0.	38.89	1419.	954	0.	0.013	926	0.	32.63	0.012
93	5.65	5.65	1148	0.	40.47	1475.	999	0.	0.013	969	0.	34.13	0.013
94	5.65	5.65	1128	0.	39.75	1448.	967	-1	0.013	962	-1	33.88	0.013
95	5.65	5.65	984	0.	34.68	1262.	889	-1	0.012	850	-1	29.93	0.011
96	5.65	5.65	954	-1	33.62	1222.	879	-1	0.011	841	-1	29.60	0.011
97	5.65	5.65	1024	0.	36.09	1313.	958	-1	0.013	916	0.	32.26	0.012
98	5.65	5.65	1141	0.	40.22	1464.	1001	0.	0.013	957	0.	33.72	0.013
99	5.65	5.65	1112	0.	39.18	1427.	952	0.	0.013	911	0.	32.09	0.012
100	5.65	5.65	1037	0.	36.56	1332.	880	0.	0.012	842	0.	29.67	0.011
101	5.65	5.65	950	0.	33.48	1220.	801	0.	0.011	766	0.	26.99	0.010
102	5.65	5.65	858	0.	30.23	1101.	723	0.	0.009	691	0.	24.35	0.009
103	5.65	5.65	763	0.	26.87	979.	650	0.	0.009	622	0.	21.91	0.008
104	5.65	5.65	805	0.	28.35	1033.	710	0.	0.009	679	0.	23.93	0.009
105	5.65	5.65	890	0.	31.37	1143.	784	0.	0.010	750	0.	26.42	0.010
106	5.65	5.65	976	0.	34.40	1253.	847	0.	0.011	821	0.	28.95	0.011
107	5.65	5.65	1042	0.	36.72	1336.	906	0.	0.012	879	0.	30.96	0.012
108	5.65	5.65	1092	0.	38.48	1400.	938	0.	0.012	915	0.	32.23	0.012
109	5.65	5.65	1264	-1	44.53	1617.	1106	0.	0.015	1058	0.	37.28	0.014
110	5.65	5.65	1230	-1	43.31	1574.	1069	0.	0.014	1022	0.	36.00	0.013
111	5.65	5.65	1164	0.	41.02	1493.	1010	0.	0.013	966	0.	34.03	0.013
112	5.65	5.65	1090	0.	38.39	1399.	938	0.	0.012	897	0.	31.61	0.012
113	5.65	5.65	1006	0.	35.46	1293.	871	0.	0.011	833	0.	29.34	0.011
114	5.65	5.65	915	0.	32.24	1177.	809	0.	0.011	774	0.	27.27	0.010
115	5.65	5.65	925	0.	32.60	1191.	800	0.	0.011	765	0.	26.95	0.010
116	5.65	5.65	992	0.	34.96	1277.	861	0.	0.011	823	0.	29.01	0.011
117	5.65	5.65	1060	0.	37.36	1364.	931	0.	0.012	890	0.	31.38	0.012
118	5.65	5.65	1141	0.	40.20	1467.	1002	0.	0.013	958	0.	33.76	0.013
119	5.65	5.65	1209	0.	42.62	1554.	1062	0.	0.014	1019	0.	35.90	0.013
120	5.65	5.65	1256	0.	44.25	1613.	1104	0.	0.014	1059	0.	37.32	0.014
121	5.65	5.65	1246	0.	43.93	1601.	1113	-1	0.015	1068	-1	37.61	0.014
122	5.65	5.65	1144	0.	40.31	1470.	1037	-1	0.014	993	-1	34.98	0.013
123	5.65	5.65	1136	0.	40.03	1459.	1031	-1	0.013	986	-1	34.72	0.013
124	5.65	5.65	1237	0.	43.59	1589.	1101	-1	0.014	1053	0.	37.08	0.014
125	5.65	5.65	1243	0.	43.82	1598.	1099	0.	0.014	1051	0.	37.03	0.014
126	5.65	5.65	1209	0.	42.61	1555.	1054	0.	0.014	1008	0.	35.53	0.013
127	5.65	5.65	1141	0.	40.21	1468.	989	0.	0.013	946	0.	33.34	0.012
128	5.65	5.65	1066	0.	37.58	1372.	918	0.	0.012	878	0.	30.95	0.012
129	5.65	5.65	991	0.	34.93	1274.	851	0.	0.011	813	0.	28.67	0.011
130	5.65	5.65	917	0.	32.32	1177.	792	0.	0.010	757	0.	26.69	0.010
131	5.65	5.65	962	0.	33.90	1234.	841	0.	0.011	804	0.	28.33	0.011
132	5.65	5.65	1035	0.	36.46	1328.	905	0.	0.012	865	0.	30.49	0.011
133	5.65	5.65	1121	0.	39.50	1438.	974	0.	0.013	931	0.	32.80	0.012
134	5.65	5.65	1181	0.	41.62	1515.	1031	0.	0.014	985	0.	34.72	0.013
135	5.65	5.65	1219	0.	42.93	1563.	1067	0.	0.014	1020	0.	35.94	0.013
136	5.65	5.65	1315	-1	46.32	1682.	1157	0.	0.015	1106	0.	38.97	0.015
137	5.65	5.65	1282	-1	45.17	1641.	1122	0.	0.015	1073	0.	37.80	0.014
138	5.65	5.65	1221	-1	43.00	1564.	1069	0.	0.014	1022	0.	36.02	0.013
139	5.65	5.65	1156	0.	40.72	1483.	1007	0.	0.013	962	0.	33.91	0.013
140	5.65	5.65	1089	0.	38.39	1399.	951	0.	0.012	909	0.	32.04	0.012
141	5.65	5.65	1021	0.	35.98	1313.	904	0.	0.012	864	0.	30.45	0.011
142	5.65	5.65	1036	0.	36.50	1333.	897	0.	0.012	858	0.	30.24	0.011
143	5.65	5.65	1088	0.	38.37	1402.	944	0.	0.012	903	0.	31.81	0.012
144	5.65	5.65	1146	0.	40.40	1475.	1002	0.	0.013	958	0.	33.75	0.013
145	5.65	5.65	1208	0.	42.57	1554.	1062	0.	0.014	1016	0.	35.80	0.013
146	5.65	5.65	1267	0.	44.64	1628.	1116	0.	0.015	1070	0.	37.71	0.014
147	5.65	5.65	1314	0.	46.31	1688.	1157	0.	0.015	1110	0.	39.10	0.015
148	5.65	5.65	1321	0.	46.56	1697.	1174	-1	0.015	1126	-1	39.66	0.015
149	5.65	5.65	1277	0.	45.00	1640.	1135	-1	0.015	1088	-1	38.31	0.014
150	5.65	5.65	1284	0.	45.24	1649.	1132	-1	0.015	1082	-1	38.13	0.014
151	5.65	5.65	1321	0.	46.57	1699.	1168	-1	0.015	1117	0.	39.35	0.015
152	5.65	5.65	1321	0.	46.58	1700.	1156	0.	0.015	1105	0.	38.93	0.014
153	5.65	5.65	1284	0.	45.28	1653.	1113	0.	0.015	1064	0.	37.50	0.014
154	5.65	5.65	1224	0.	43.15	1576.	1056	0.	0.014	1010	0.	35.58	0.013
155	5.65	5.65	1159	0.	40.87	1493.	996	0.	0.013	952	0.	33.56	0.012
156	5.65	5.65	1088	0.	38.34	1399.	942	0.	0.012	900	0.	31.73	0.012
157	5.65	5.65	1031	0.	36.35	1325.	899	0.	0.012	859	0.	30.28	0.011
158	5.65	5.65	1060	0.	37.34	1360.	933	0.	0.012	892	0.	31.43	0.012
159	5.65	5.65	1117	0.	39.37	1433.	983	0.	0.013	940	0.	33.13	0.012
160	5.65	5.65	1188	0.	41.87	1524.	1041	0.	0.014	995	0.	35.07	0.013
161	5.65	5.65	1237	0.	43.57	1586.	1091	0.	0.014	1043	0.	36.76	0.014
162	5.65	5.65	1267	0.	44.65	1625.	1124	0.	0.015	1074	0.	37.85	0.014
163	5.65	5.65	1315	0.	46.34	1692.	1159	0.	0.015	1108	0.	39.05	0.015
164	5.65	5.65	1277	0.	45.00	1642.	1129	0.	0.015	1079	0.	38.03	0.014
165	5.65	5.65	1220	0.	42.99	1568.	1083	0.	0.014	1036	0.	36.49	0.014
166	5.65	5.65	1164	0.	41.03	1496.	1032	0.	0.014	986	0.	34.75	0.013
167	5.65	5.65	1117	0.	39.36	1435.	989	0.	0.013	946	0.	33.33	0.012
168	5.65	5.65	1080	0.	38.06	1389.	958	0.	0.013	916	0.	32.28	0.012
169	5.65	5.65	1092	0.	38.48	1405.	955	0.	0.013	913	0.	32.17	0.012
170	5.65	5.65	1133	0.	39.94	1459.	986	0.	0.013	943	0.	33.22	0.012
171	5.65	5.65	1179	0.	41.56	1518.	1029	0.	0.014	984	0.	34.68	0.013
172	5.65	5.65	1231	0.	43.40	1584.	1080	0.	0.014	1032	0.	36.37	0.014

173	5.65	5.65	1290	0.	45.45	1659.	1129	0.	0.015	1081	0.	38.09	0.014
174	5.65	5.65	1342	0.	47.28	1725.	1171	0.	0.015	1122	0.	39.54	0.015
175	5.65	5.65	1367	0.	48.18	1756.	1198	-1	0.016	1148	-1	40.43	0.015
176	5.65	5.65	1369	0.	48.24	1758.	1189	-1	0.016	1139	-1	40.14	0.015
177	5.65	5.65	1368	0.	48.21	1757.	1189	-1	0.016	1137	-1	40.05	0.015
178	5.65	5.65	1365	0.	48.09	1754.	1196	-1	0.016	1144	-1	40.30	0.015
179	5.65	5.65	1349	0.	47.54	1734.	1172	0.	0.015	1121	0.	39.48	0.015
180	5.65	5.65	1301	0.	45.87	1675.	1129	0.	0.015	1079	0.	38.03	0.014
181	5.65	5.65	1247	0.	43.97	1606.	1079	0.	0.014	1031	0.	36.34	0.014
182	5.65	5.65	1195	0.	42.13	1539.	1030	0.	0.014	985	0.	34.71	0.013
183	5.65	5.65	1141	0.	40.22	1469.	991	0.	0.013	947	0.	33.38	0.012
184	5.65	5.65	1100	0.	38.78	1415.	964	0.	0.013	922	0.	32.48	0.012
185	5.65	5.65	1095	0.	38.60	1407.	984	0.	0.013	940	0.	33.13	0.012
186	5.65	5.65	1133	0.	39.92	1453.	1019	0.	0.013	974	0.	34.32	0.013
187	5.65	5.65	1190	0.	41.93	1527.	1064	0.	0.014	1017	0.	35.84	0.013
188	5.65	5.65	1234	0.	43.48	1583.	1106	0.	0.015	1057	0.	37.25	0.014
189	5.65	5.65	1270	0.	44.76	1630.	1133	0.	0.015	1084	0.	38.18	0.014
190	5.65	5.65	1298	0.	45.74	1671.	1117	0.	0.015	1068	0.	37.63	0.014
191	5.65	5.65	1261	0.	44.46	1625.	1091	0.	0.014	1043	0.	36.75	0.014
192	5.65	5.65	1204	0.	42.46	1551.	1053	0.	0.014	1006	0.	35.46	0.013
193	5.65	5.65	1151	0.	40.59	1483.	1013	0.	0.013	969	0.	34.13	0.013
194	5.65	5.65	1114	0.	39.28	1435.	985	0.	0.013	941	0.	33.17	0.012
195	5.65	5.65	1106	0.	39.01	1425.	970	0.	0.013	927	0.	32.67	0.012
196	5.65	5.65	1113	0.	39.24	1433.	969	0.	0.013	927	0.	32.66	0.012
197	5.65	5.65	1131	0.	39.87	1456.	984	0.	0.013	941	0.	33.15	0.012
198	5.65	5.65	1164	0.	41.02	1498.	1012	0.	0.013	968	0.	34.11	0.013
199	5.65	5.65	1213	0.	42.74	1560.	1052	0.	0.014	1006	0.	35.45	0.013
200	5.65	5.65	1273	0.	44.88	1637.	1099	0.	0.014	1051	0.	37.03	0.014
201	5.65	5.65	1329	0.	46.83	1708.	1146	0.	0.015	1096	0.	38.60	0.014
202	5.65	5.65	1371	0.	48.31	1761.	1184	-1	0.016	1133	-1	39.90	0.015
203	5.65	5.65	1394	0.	49.12	1790.	1206	-1	0.016	1154	-1	40.64	0.015
204	5.65	5.65	1385	0.	48.82	1779.	1207	-1	0.016	1154	-1	40.65	0.015
205	5.65	5.65	1367	0.	48.18	1756.	1185	-1	0.016	1133	-1	39.93	0.015
206	5.65	5.65	1326	0.	46.73	1704.	1147	0.	0.015	1097	0.	38.65	0.014
207	5.65	5.65	1278	0.	45.03	1643.	1101	0.	0.014	1053	0.	37.10	0.014
208	5.65	5.65	1231	0.	43.40	1585.	1056	0.	0.014	1010	0.	35.58	0.013
209	5.65	5.65	1189	0.	41.91	1530.	1019	0.	0.013	975	0.	34.34	0.013
210	5.65	5.65	1157	0.	40.80	1490.	995	0.	0.013	951	0.	33.51	0.012
211	5.65	5.65	1135	0.	40.00	1462.	985	0.	0.013	942	0.	33.18	0.012
212	5.65	5.65	1131	0.	39.88	1457.	990	0.	0.013	947	0.	33.36	0.012
213	5.65	5.65	1141	0.	40.22	1470.	1010	0.	0.013	966	0.	34.03	0.013
214	5.65	5.65	1192	0.	42.03	1536.	1043	0.	0.014	997	0.	35.12	0.013
215	5.65	5.65	1231	0.	43.38	1585.	1076	0.	0.014	1029	0.	36.24	0.013
216	5.65	5.65	1263	0.	44.53	1627.	1099	0.	0.014	1050	0.	37.01	0.014
217	5.65	5.65	1341	0.	47.26	1728.	1159	0.	0.015	1108	0.	39.05	0.015
218	5.65	5.65	1303	0.	45.93	1679.	1129	0.	0.015	1079	0.	38.03	0.014
219	5.65	5.65	1243	0.	43.82	1602.	1083	0.	0.014	1036	0.	36.49	0.014
220	5.65	5.65	1189	0.	41.91	1531.	1032	0.	0.014	986	0.	34.75	0.013
221	5.65	5.65	1144	0.	40.33	1473.	989	0.	0.013	946	0.	33.33	0.012
222	5.65	5.65	1110	0.	39.12	1429.	958	0.	0.013	916	0.	32.28	0.012
223	5.65	5.65	1087	0.	38.31	1399.	955	0.	0.013	913	0.	32.17	0.012
224	5.65	5.65	1109	0.	39.08	1426.	986	0.	0.013	943	0.	33.22	0.012
225	5.65	5.65	1152	0.	40.60	1482.	1029	0.	0.014	984	0.	34.68	0.013
226	5.65	5.65	1205	0.	42.46	1549.	1080	0.	0.014	1032	0.	36.37	0.014
227	5.65	5.65	1267	0.	44.65	1629.	1129	0.	0.015	1081	0.	38.09	0.014
228	5.65	5.65	1328	0.	46.81	1706.	1171	0.	0.015	1122	0.	39.54	0.015
229	5.65	5.65	1375	0.	48.44	1765.	1198	-1	0.016	1148	-1	40.43	0.015
230	5.65	5.65	1389	0.	48.96	1782.	1190	-1	0.016	1139	-1	40.14	0.015
231	5.65	5.65	1381	0.	48.64	1771.	1189	-1	0.016	1137	-1	40.05	0.015
232	5.65	5.65	1372	0.	48.33	1761.	1196	-1	0.016	1144	-1	40.30	0.015
233	5.65	5.65	1341	0.	47.27	1723.	1172	0.	0.015	1121	0.	39.48	0.015
234	5.65	5.65	1292	0.	45.52	1660.	1129	0.	0.015	1079	0.	38.03	0.014
235	5.65	5.65	1240	0.	43.69	1594.	1079	0.	0.014	1031	0.	36.34	0.014
236	5.65	5.65	1179	0.	41.55	1517.	1030	0.	0.014	985	0.	34.71	0.013
237	5.65	5.65	1134	0.	39.96	1459.	991	0.	0.013	947	0.	33.38	0.012
238	5.65	5.65	1119	0.	39.44	1441.	964	0.	0.013	922	0.	32.48	0.012
239	5.65	5.65	1140	0.	40.19	1468.	984	0.	0.013	940	0.	33.13	0.012
240	5.65	5.65	1175	0.	41.43	1514.	1019	0.	0.013	974	0.	34.32	0.013
241	5.65	5.65	1227	0.	43.27	1582.	1064	0.	0.014	1017	0.	35.84	0.013
242	5.65	5.65	1269	0.	44.75	1636.	1106	0.	0.015	1057	0.	37.25	0.014
243	5.65	5.65	1302	0.	45.91	1679.	1133	0.	0.015	1084	0.	38.18	0.014
244	5.65	5.65	1358	1	47.89	1752.	1157	0.	0.015	1106	0.	38.97	0.015
245	5.65	5.65	1324	0.	46.67	1707.	1122	0.	0.015	1073	0.	37.80	0.014
246	5.65	5.65	1259	0.	44.39	1623.	1069	0.	0.014	1022	0.	36.02	0.013
247	5.65	5.65	1192	0.	42.01	1534.	1007	0.	0.013	962	0.	33.91	0.013
248	5.65	5.65	1136	0.	40.03	1461.	951	0.	0.012	909	0.	32.04	0.012
249	5.65	5.65	1080	0.	38.07	1390.	904	0.	0.012	864	0.	30.45	0.011
250	5.65	5.65	1043	0.	36.77	1342.	897	0.	0.012	858	0.	30.24	0.011
251	5.65	5.65	1086	0.	38.27	1396.	944	0.	0.012	903	0.	31.81	0.012
252	5.65	5.65	1142	0.	40.23	1467.	1002	0.	0.013	958	0.	33.75	0.013
253	5.65	5.65	1203	0.	42.39	1545.	1062	0.	0.014	1016	0.	35.80	0.013
254	5.65	5.65	1267	0.	44.66	1629.	1117	0.	0.015	1070	0.	37.71	0.014
255	5.65	5.65	1328	0.	46.78	1705.	1158	0.	0.015	1110	0.	39.10	0.015
256	5.65	5.65	1352	0.	47.63	1734.	1175	-1	0.015	1126	-1	39.66	0.015
257	5.65	5.65	1313	-1	46.27	1683.	1136	-1	0.015	1088	-1	38.31	0.014
258	5.65	5.65	1308	-1	46.09	1676.	1132	-1	0.015	1082	-1	38.13	0.014
259	5.65	5.65	1326	0.	46.71	1701.	1168	-1	0.015	1117	0.	39.35	0.015
260	5.65	5.65	1319	0.	46.48	1694.	1156	0.	0.015	1105	0.	38.93	0.014
261	5.65	5.65	1282	0.	45.17	1648.	1113	0.	0.015	1064	0.	37.50	0.014
262	5.65	5.65	1222	0.	43.07	1570.	1056	0.	0.014	1010	0.	35.58	0.013
263	5.65	5.65	1159	0.	40.86	1491.	996	0.	0.013	952	0.	33.56	0.012
264	5.65	5.65	1098	0.	38.70	1412.	942	0.	0.012	900	0.	31.73	0.012
265	5.65	5.65	1086	0.	38.27	1397.	899	0.	0.012	859	0.	30.28	0.011
266	5.65	5.65	1129	0.	39.79	1453.	933	0.	0.012	892	0.	31.43	0.012
267	5.65	5.65	1176	0.	41.46	1515.	983	0.	0.013	940	0.	33.13	0.012
268	5.65	5.65	1240	0.	43.73	1599.	1041	0.	0.014	995	0.	35.07	0.013
269	5.65	5.65	1282	1	45.20	1654.	1091	0.	0.014	1043	0.	36.76	0.014
270	5.65	5.65	1311	1	46.21	1691.	1124	0.	0.015	1074	0.	37.85	0.014
271	5.65	5.65	1358	1	47.88	1753.	1106	0.	0.015	1058	0.	37.28	0.014
272	5.65	5.65	1317	1	46.43	1698.	1069	0.	0.014	1022	0.	36.00	0.013
273	5.65	5.65	1246	0.	43.91	1605.	1010	0.	0.013	966	0.	34.03	0.013
274	5.65	5.65	1168	0.	41.16	1503.	938	0.	0.012	897	0.	31.61	0.012
275	5.65	5.65	1083	0.	38.17	1392.	871	0.	0.011	833	0.	29.34	0.011
276	5.65	5.65	1003	0.	35.36	1289.	809	0.	0.011	774	0.	27.27	0.010
277	5.65	5.65	948	0.	33.42	1219.	800	0.	0.011	765	0.	26.95	0.010
278	5.65	5.65	1008	0.	35.52	1295.	861	0.	0.011	823	0.	29.01	0.011
279	5.65	5.65	1083	0.	38.17	1391.	931	0.	0.012	890	0.	31.38	0.012
280	5.65	5.65	1157	0.	40.79	1487.	1002	0.	0.013	958	0.	33.76	0.013

281	5.65	5.65	1231	0.	43.40	1583.	1064	0.	0.014	1019	0.	35.90	0.013
282	5.65	5.65	1271	0.	44.80	1632.	1106	0.	0.015	1059	0.	37.32	0.014
283	5.65	5.65	1282	0.	45.18	1644.	1115	-1	0.015	1068	-1	37.61	0.014
284	5.65	5.65	1192	-1	41.99	1525.	1039	-1	0.014	993	-1	34.98	0.013
285	5.65	5.65	1158	-1	40.77	1480.	1031	-1	0.013	986	-1	34.72	0.013
286	5.65	5.65	1213	-1	42.74	1554.	1101	-1	0.014	1053	0.	37.08	0.014
287	5.65	5.65	1262	0.	44.48	1620.	1099	0.	0.014	1051	0.	37.03	0.014
288	5.65	5.65	1233	0.	43.44	1583.	1054	0.	0.014	1008	0.	35.53	0.013
289	5.65	5.65	1167	0.	41.14	1501.	989	0.	0.013	946	0.	33.34	0.012
290	5.65	5.65	1089	0.	38.39	1399.	918	0.	0.012	878	0.	30.95	0.012
291	5.65	5.65	1009	0.	35.57	1298.	851	0.	0.011	813	0.	28.67	0.011
292	5.65	5.65	988	0.	34.82	1270.	792	0.	0.010	757	0.	26.69	0.010
293	5.65	5.65	1059	0.	37.32	1361.	841	0.	0.011	804	0.	28.33	0.011
294	5.65	5.65	1127	0.	39.72	1450.	905	0.	0.012	865	0.	30.49	0.011
295	5.65	5.65	1208	0.	42.60	1557.	974	0.	0.013	931	0.	32.80	0.012
296	5.65	5.65	1262	1	44.50	1628.	1031	0.	0.014	985	0.	34.72	0.013
297	5.65	5.65	1295	1	45.65	1671.	1067	0.	0.014	1020	0.	35.94	0.013
298	5.65	5.65	1272	1	44.86	1642.	993	0.	0.013	957	0.	33.72	0.013
299	5.65	5.65	1233	0.	43.48	1590.	957	0.	0.013	920	0.	32.43	0.012
300	5.65	5.65	1159	0.	40.84	1491.	897	0.	0.012	863	0.	30.41	0.011
301	5.65	5.65	1068	0.	37.64	1373.	828	0.	0.011	790	0.	27.83	0.010
302	5.65	5.65	979	0.	34.49	1257.	751	0.	0.010	718	0.	25.32	0.009
303	5.65	5.65	877	0.	30.89	1125.	679	0.	0.009	649	0.	22.88	0.009
304	5.65	5.65	801	0.	28.22	1029.	667	0.	0.009	638	0.	22.49	0.008
305	5.65	5.65	878	0.	30.93	1128.	741	0.	0.010	708	0.	24.96	0.009
306	5.65	5.65	968	0.	34.12	1243.	820	0.	0.011	785	0.	27.65	0.010
307	5.65	5.65	1066	0.	37.56	1370.	892	0.	0.012	859	0.	30.28	0.011
308	5.65	5.65	1153	0.	40.64	1482.	962	0.	0.013	926	0.	32.63	0.012
309	5.65	5.65	1192	0.	42.00	1530.	1007	0.	0.013	969	0.	34.13	0.013
310	5.65	5.65	1171	-1	41.24	1500.	976	-1	0.013	962	-1	33.88	0.013
311	5.65	5.65	1031	-1	36.29	1316.	893	-1	0.012	850	-1	29.93	0.011
312	5.65	5.65	982	-1	34.58	1254.	879	-1	0.011	841	-1	29.60	0.011
313	5.65	5.65	1038	-1	36.57	1328.	955	-1	0.013	916	0.	32.26	0.012
314	5.65	5.65	1150	0.	40.52	1475.	1000	0.	0.013	957	0.	33.72	0.013
315	5.65	5.65	1122	0.	39.53	1441.	952	0.	0.013	911	0.	32.09	0.012
316	5.65	5.65	1049	0.	36.97	1349.	880	0.	0.012	842	0.	29.67	0.011
317	5.65	5.65	956	0.	33.68	1229.	801	0.	0.011	766	0.	26.99	0.010
318	5.65	5.65	870	0.	30.65	1118.	723	0.	0.009	691	0.	24.35	0.009
319	5.65	5.65	845	0.	29.78	1085.	650	0.	0.009	622	0.	21.91	0.008
320	5.65	5.65	941	0.	33.15	1208.	710	0.	0.009	679	0.	23.93	0.009
321	5.65	5.65	1028	0.	36.21	1321.	776	0.	0.010	750	0.	26.42	0.010
322	5.65	5.65	1124	0.	39.63	1448.	852	0.	0.011	821	0.	28.95	0.011
323	5.65	5.65	1189	1	41.91	1533.	905	0.	0.012	879	0.	30.96	0.012
324	5.65	5.65	1226	1	43.25	1584.	939	0.	0.012	915	0.	32.23	0.012
325	5.65	5.65	1160	2	40.94	1507.	837	0.	0.011	785	0.	27.65	0.010
326	5.65	5.65	1117	1	39.42	1446.	801	0.	0.011	755	0.	26.61	0.010
327	5.65	5.65	1035	0.	36.49	1333.	750	0.	0.010	708	0.	24.96	0.009
328	5.65	5.65	933	0.	32.89	1199.	674	0.	0.009	641	0.	22.59	0.008
329	5.65	5.65	830	0.	29.26	1067.	597	0.	0.008	571	0.	20.11	0.008
330	5.65	5.65	709	0.	25.00	911.	520	0.	0.007	497	0.	17.52	0.007
331	5.65	5.65	611	0.	21.55	785.	509	0.	0.007	487	0.	17.16	0.006
332	5.65	5.65	703	0.	24.79	904.	591	0.	0.008	565	0.	19.91	0.007
333	5.65	5.65	806	0.	28.42	1036.	675	0.	0.009	646	0.	22.76	0.008
334	5.65	5.65	915	0.	32.25	1175.	755	0.	0.010	722	0.	25.45	0.009
335	5.65	5.65	1016	0.	35.81	1306.	830	0.	0.011	790	0.	27.83	0.010
336	5.65	5.65	1065	0.	37.54	1367.	876	0.	0.011	833	0.	29.35	0.011
337	5.65	5.65	996	-1	35.07	1274.	790	-1	0.010	773	-1	27.22	0.010
338	5.65	5.65	826	-1	29.06	1051.	672	-1	0.009	642	-1	22.59	0.008
339	5.65	5.65	756	-1	26.62	962.	658	-1	0.009	629	-1	22.16	0.008
340	5.65	5.65	840	-1	29.58	1074.	727	-1	0.009	721	-1	25.40	0.009
341	5.65	5.65	1013	0.	35.69	1300.	838	0.	0.011	818	0.	28.81	0.011
342	5.65	5.65	970	0.	34.20	1247.	802	0.	0.011	770	0.	27.15	0.010
343	5.65	5.65	892	0.	31.45	1147.	723	0.	0.010	700	0.	24.68	0.009
344	5.65	5.65	786	0.	27.69	1010.	650	0.	0.009	622	0.	21.92	0.008
345	5.65	5.65	685	0.	24.14	879.	561	0.	0.007	541	0.	19.08	0.007
346	5.65	5.65	637	0.	22.43	817.	481	0.	0.006	462	0.	16.27	0.006
347	5.65	5.65	755	0.	26.61	970.	553	0.	0.007	523	0.	18.43	0.007
348	5.65	5.65	886	0.	31.23	1139.	631	0.	0.008	595	0.	20.96	0.008
349	5.65	5.65	1007	1	35.52	1302.	699	0.	0.009	663	0.	23.35	0.009
350	5.65	5.65	1087	2	38.35	1412.	758	0.	0.010	711	0.	25.05	0.009
351	5.65	5.65	1160	2	40.95	1513.	800	0.	0.011	741	0.	26.12	0.010
352	5.65	5.65	1140	1	40.22	1477.	638	0.	0.008	498	0.	17.56	0.007
353	5.65	5.65	1051	1	37.07	1358.	601	0.	0.008	498	0.	17.56	0.007
354	5.65	5.65	947	0.	33.40	1222.	561	0.	0.007	501	0.	17.67	0.007
355	5.65	5.65	792	0.	27.92	1018.	492	0.	0.006	459	0.	16.17	0.006
356	5.65	5.65	636	0.	22.43	817.	419	0.	0.006	400	0.	14.09	0.005
357	5.65	5.65	508	0.	17.90	652.	346	0.	0.005	328	0.	11.55	0.004
358	5.65	5.65	390	0.	13.75	501.	329	0.	0.004	321	0.	11.32	0.004
359	5.65	5.65	485	0.	17.10	624.	415	0.	0.005	403	0.	14.20	0.005
360	5.65	5.65	596	0.	21.02	767.	500	0.	0.007	484	0.	17.06	0.006
361	5.65	5.65	709	0.	24.98	911.	580	0.	0.008	556	0.	19.60	0.007
362	5.65	5.65	826	0.	29.13	1063.	650	0.	0.009	615	0.	21.68	0.008
363	5.65	5.65	870	0.	30.66	1116.	649	0.	0.009	646	0.	22.76	0.008
364	5.65	5.65	693	-1	24.41	884.	449	-1	0.006	446	-1	15.69	0.006
365	5.65	5.65	547	-1	19.24	690.	326	-1	0.004	312	-1	10.96	0.004
366	5.65	5.65	539	-1	18.94	680.	338	-1	0.004	322	-1	11.32	0.004
367	5.65	5.65	601	-1	21.16	766.	418	-1	0.005	482	-1	16.98	0.006
368	5.65	5.65	835	0.	29.42	1072.	640	0.	0.008	627	0.	22.11	0.008
369	5.65	5.65	778	0.	27.41	1000.	617	0.	0.008	593	0.	20.91	0.008
370	5.65	5.65	688	0.	24.25	884.	542	0.	0.007	532	0.	18.74	0.007
371	5.65	5.65	583	0.	20.55	749.	467	0.	0.006	457	0.	16.10	0.006
372	5.65	5.65	472	0.	16.62	606.	385	0.	0.005	376	0.	13.24	0.005
373	5.65	5.65	432	0.	15.21	554.	296	0.	0.004	291	0.	10.25	0.004
374	5.65	5.65	591	0.	20.82	759.	379	0.	0.005	346	0.	12.20	0.005
375	5.65	5.65	763	0.	26.88	981.	460	0.	0.006	409	0.	14.43	0.005
376	5.65	5.65	918	1	32.39	1187.	521	0.	0.007	455	0.	16.03	0.006
377	5.65	5.65	1020	1	36.01	1326.	575	0.	0.008	456	0.	16.08	0.006
378	5.65	5.65	1092	2	38.56	1425.	605	0.	0.008	459	0.	16.15	0.006
379	5.65	5.65	0.	-2	0.07	-1.	0.	-1	0.000	0.	0.	0.01	0.000
380	5.65	5.65	18	-1	0.59	14.	0.	0.	0.000	11	0.	0.38	0.000
381	5.65	5.65	380	0.	13.38	487.	121	0.	0.002	246	0.	8.66	0.003
382	5.65	5.65	565	0.	19.92	725.	287	0.	0.004	272	0.	9.57	0.004
383	5.65	5.65	417	0.	14.68	535.	240	0.	0.003	227	0.	7.99	0.003
384	5.65	5.65	275	0.	9.70	354.	166	0.	0.002	154	0.	5.44	0.002
385	5.65	5.65	148	0.	5.23	191.	150	0.	0.002	150	0.	5.28	0.002
386	5.65	5.65	260	0.	9.15	334.	238	0.	0.003	234	0.	8.24	0.003
387	5.65	5.65	377	0.	13.27	484.	326	0.	0.004	317	0.	11.16	0.004
388	5.65	5.65	485	0.	17.11	624.	403	0.	0.005	387	0.	13.63	0.005

389	5.65	5.65	589	0.	20.74	756.	451	0.	0.006	435	0.	15.33	0.006
390	5.65	5.65	487	-1	17.15	621.	309	0.	0.004	425	0.	14.96	0.006
391	5.65	5.65	0.	-2	0.09	-1.	0.	-2	0.000	0.	-1	0.04	0.000
392	5.65	5.65	0.	-2	0.08	-1.	0.	-2	0.000	0.	-1	0.05	0.000
393	5.65	5.65	0.	-1	0.07	-1.	0.	-2	0.000	0.	-1	0.06	0.000
394	5.65	5.65	0.	-1	0.03	0.	0.	-1	0.000	0.	-1	0.04	0.000
395	5.65	5.65	340	0.	11.99	437.	280	0.	0.004	408	0.	14.36	0.005
396	5.65	5.65	511	0.	18.01	657.	412	0.	0.005	412	0.	14.52	0.005
397	5.65	5.65	456	0.	16.08	586.	358	0.	0.005	360	0.	12.69	0.005
398	5.65	5.65	359	0.	12.67	462.	290	0.	0.004	287	0.	10.12	0.004
399	5.65	5.65	241	0.	8.49	310.	206	0.	0.003	205	0.	7.23	0.003
400	5.65	5.65	192	0.	6.78	247.	113	0.	0.001	119	0.	4.21	0.002
401	5.65	5.65	345	0.	12.17	443.	200	0.	0.003	170	0.	5.98	0.002
402	5.65	5.65	502	0.	17.69	644.	276	0.	0.004	222	0.	7.83	0.003
403	5.65	5.65	706	1	24.89	914.	145	0.	0.002	206	0.	7.25	0.003
404	5.65	5.65	922	1	32.56	1200.	0.	0.	0.000	0.	0.	0.00	0.000
405	5.65	5.65	1077	2	38.02	1405.	0.	-1	0.000	0.	0.	0.01	0.000

ARMATURA SUPERIORE ORIZZONTALE

			COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
GUSCI	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	wkF	Mom	Nor	sigC	wkP
1	5.65	5.65	489	0.	17.23	626.	406	0.	0.005	323	0.	11.39	0.004
2	5.65	5.65	266	0.	9.37	339.	84	0.	0.001	98	0.	3.46	0.001
3	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
4	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
5	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
6	5.65	5.65	0.	-1	0.03	-1.	0.	0.	0.000	0.	0.	0.01	0.000
7	5.65	5.65	0.	-1	0.05	-1.	0.	0.	0.000	0.	0.	0.01	0.000
8	5.65	5.65	0.	-1	0.05	-1.	0.	0.	0.000	0.	0.	0.01	0.000
9	5.65	5.65	0.	-1	0.05	-1.	0.	0.	0.000	0.	0.	0.01	0.000
10	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.01	0.000
11	5.65	5.65	0.	-1	0.04	-1.	24	0.	0.000	48	0.	1.67	0.001
12	5.65	5.65	609	-1	21.44	775.	476	0.	0.006	412	0.	14.53	0.005
13	5.65	5.65	1214	-1	42.76	1554.	954	0.	0.013	872	0.	30.73	0.011
14	5.65	5.65	1927	-1	67.89	2470.	1445	0.	0.019	1332	0.	46.93	0.017
15	5.65	5.65	1773	-1	62.47	2273.	1442	0.	0.019	1303	0.	45.91	0.017
16	5.65	5.65	975	-1	34.32	1246.	901	0.	0.012	846	0.	29.81	0.011
17	5.65	5.65	499	-1	17.55	632.	432	0.	0.006	399	0.	14.05	0.005
18	5.65	5.65	0.	-1	0.04	-1.	26	0.	0.000	47	0.	1.67	0.001
19	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.01	0.000
20	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
21	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
22	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
23	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
24	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
25	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
26	5.65	5.65	202	0.	7.10	257.	47	0.	0.001	51	0.	1.78	0.001
27	5.65	5.65	645	0.	22.74	828.	380	0.	0.005	268	0.	9.45	0.003
28	5.65	5.65	395	0.	13.93	506.	345	0.	0.005	290	0.	10.21	0.004
29	5.65	5.65	101	0.	3.54	127.	18	0.	0.000	81	0.	2.84	0.001
30	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
31	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
32	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
33	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
34	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.01	0.000
35	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.01	0.000
36	5.65	5.65	0.	-1	0.05	-1.	0.	0.	0.000	0.	0.	0.01	0.000
37	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.01	0.000
38	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	42	0.	1.47	0.001
39	5.65	5.65	492	-1	17.31	626.	396	0.	0.005	374	0.	13.18	0.005
40	5.65	5.65	1020	-1	35.92	1306.	820	0.	0.011	763	0.	26.91	0.010
41	5.65	5.65	1500	-1	52.84	1922.	1151	0.	0.015	1032	0.	36.36	0.014
42	5.65	5.65	1426	-1	50.24	1828.	1167	0.	0.015	1011	0.	35.63	0.013
43	5.65	5.65	763	0.	26.86	976.	769	0.	0.010	741	0.	26.10	0.010
44	5.65	5.65	366	-1	12.87	463.	342	0.	0.004	365	0.	12.86	0.005
45	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	45	0.	1.58	0.001
46	5.65	5.65	0.	-1	0.03	-1.	0.	0.	0.000	0.	0.	0.01	0.000
47	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
48	5.65	5.65	0.	-1	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
49	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
50	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
51	5.65	5.65	0.	-1	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
52	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
53	5.65	5.65	58	0.	2.03	72.	0.	0.	0.000	41	0.	1.45	0.001
54	5.65	5.65	450	0.	15.85	577.	320	0.	0.004	244	0.	8.60	0.003
55	5.65	5.65	192	0.	6.76	246.	159	0.	0.002	124	0.	4.36	0.002
56	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
57	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.00	0.000
58	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
59	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
60	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
61	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.01	0.000
62	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.01	0.000
63	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.01	0.000
64	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
65	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
66	5.65	5.65	283	0.	9.96	359.	229	0.	0.003	208	0.	7.32	0.003
67	5.65	5.65	698	0.	24.59	895.	558	0.	0.007	479	0.	16.90	0.006
68	5.65	5.65	1048	-1	36.90	1341.	824	0.	0.011	708	0.	24.94	0.009
69	5.65	5.65	966	0.	34.03	1240.	806	0.	0.011	703	0.	24.78	0.009
70	5.65	5.65	549	0.	19.34	704.	523	0.	0.007	470	0.	16.56	0.006
71	5.65	5.65	211	-1	7.40	266.	203	0.	0.003	202	0.	7.10	0.003
72	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
73	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
74	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
75	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
76	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
77	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
78	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
79	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.00	0.000
80	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
81	5.65	5.65	202	0.	7.13	260.	140	0.	0.002	100	0.	3.51	0.001
82	5.65	5.65	37	0.	1.31	47.	0.	0.	0.000	16	0.	0.56	0.000
83	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
84	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
85	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.00	0.000
86	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000

87	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
88	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
89	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.01	0.000
90	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.01	0.000
91	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
92	5.65	5.65	0.	-1	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
93	5.65	5.65	103	0.	3.63	130.	78	0.	0.001	55	0.	1.93	0.001
94	5.65	5.65	414	0.	14.57	530.	332	0.	0.004	255	0.	8.99	0.003
95	5.65	5.65	574	0.	20.22	736.	433	0.	0.006	390	0.	13.75	0.005
96	5.65	5.65	554	0.	19.53	711.	432	0.	0.006	392	0.	13.80	0.005
97	5.65	5.65	324	0.	11.40	415.	330	0.	0.004	259	0.	9.12	0.003
98	5.65	5.65	75	0.	2.63	93.	76	0.	0.001	64	0.	2.25	0.001
99	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
100	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
101	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
102	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
103	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
104	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
105	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.00	0.000
106	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
107	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
108	5.65	5.65	27	0.	0.94	34.	0.	0.	0.000	5	0.	0.17	0.000
109	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
110	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
111	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
112	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.00	0.000
113	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
114	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
115	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
116	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
117	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.01	0.000
118	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
119	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
120	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
121	5.65	5.65	214	0.	7.52	273.	174	0.	0.002	107	0.	3.78	0.001
122	5.65	5.65	306	0.	10.79	391.	246	0.	0.003	200	0.	7.06	0.003
123	5.65	5.65	294	0.	10.37	376.	248	0.	0.003	204	0.	7.20	0.003
124	5.65	5.65	179	0.	6.30	228.	182	0.	0.002	117	0.	4.14	0.002
125	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
126	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
127	5.65	5.65	0.	-1	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
128	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
129	5.65	5.65	0.	-1	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
130	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
131	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
132	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.00	0.000
133	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
134	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
135	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
136	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
137	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
138	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
139	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
140	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
141	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
142	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
143	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
144	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
145	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
146	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
147	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
148	5.65	5.65	86	0.	3.03	108.	71	0.	0.001	14	0.	0.48	0.000
149	5.65	5.65	159	0.	5.59	201.	138	0.	0.002	85	0.	3.01	0.001
150	5.65	5.65	152	0.	5.35	193.	141	0.	0.002	90	0.	3.19	0.001
151	5.65	5.65	73	0.	2.56	91.	85	0.	0.001	27	0.	0.96	0.000
152	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
153	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
154	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
155	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
156	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
157	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
158	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
159	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
160	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
161	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
162	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
163	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
164	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
165	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
166	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
167	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
168	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
169	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
170	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
171	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
172	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
173	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
174	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
175	5.65	5.65	13	0.	0.45	14.	0.	0.	0.000	0.	0.	0.01	0.000
176	5.65	5.65	77	0.	2.71	96.	71	0.	0.001	23	0.	0.80	0.000
177	5.65	5.65	73	0.	2.57	91.	72	0.	0.001	28	0.	1.00	0.000
178	5.65	5.65	11	0.	0.39	12.	29	0.	0.000	0.	0.	0.01	0.000
179	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
180	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
181	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
182	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
183	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
184	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
185	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
186	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
187	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
188	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
189	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
190	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
191	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
192	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
193	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
194	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000

195	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
196	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
197	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
198	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
199	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
200	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
201	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
202	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
203	5.65	5.65	62	0.	2.17	76.	47	0.	0.001	3	0.	0.10	0.000
204	5.65	5.65	61	0.	2.13	75.	47	0.	0.001	9	0.	0.30	0.000
205	5.65	5.65	0.	0.	0.01	0.	7	0.	0.000	0.	0.	0.01	0.000
206	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
207	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
208	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
209	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
210	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
211	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
212	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
213	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
214	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
215	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
216	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
217	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
218	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
219	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
220	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
221	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
222	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
223	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
224	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
225	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
226	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
227	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
228	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
229	5.65	5.65	26	0.	0.90	30.	0.	0.	0.000	0.	0.	0.01	0.000
230	5.65	5.65	105	0.	3.69	133.	58	0.	0.001	23	0.	0.80	0.000
231	5.65	5.65	109	0.	3.84	139.	60	0.	0.001	28	0.	1.00	0.000
232	5.65	5.65	35	0.	1.21	43.	19	0.	0.000	0.	0.	0.01	0.000
233	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
234	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
235	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
236	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
237	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
238	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
239	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
240	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
241	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
242	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
243	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
244	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
245	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
246	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
247	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
248	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
249	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
250	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
251	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
252	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
253	5.65	5.65	0.	-1	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
254	5.65	5.65	0.	-1	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
255	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
256	5.65	5.65	100	0.	3.52	126.	38	0.	0.000	14	0.	0.48	0.000
257	5.65	5.65	202	0.	7.10	259.	107	0.	0.001	85	0.	3.01	0.001
258	5.65	5.65	211	0.	7.45	272.	111	0.	0.001	90	0.	3.19	0.001
259	5.65	5.65	119	0.	4.20	153.	64	0.	0.001	27	0.	0.96	0.000
260	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
261	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
262	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
263	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
264	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
265	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
266	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
267	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
268	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
269	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
270	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
271	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
272	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000
273	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
274	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
275	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
276	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
277	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
278	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
279	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
280	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
281	5.65	5.65	0.	-1	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
282	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.00	0.000
283	5.65	5.65	231	0.	8.15	295.	136	0.	0.002	107	0.	3.78	0.001
284	5.65	5.65	367	0.	12.93	471.	251	0.	0.003	200	0.	7.06	0.003
285	5.65	5.65	376	0.	13.26	485.	252	0.	0.003	204	0.	7.20	0.003
286	5.65	5.65	237	0.	8.36	307.	149	0.	0.002	117	0.	4.14	0.002
287	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
288	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
289	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
290	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
291	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
292	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
293	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
294	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
295	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
296	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
297	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
298	5.65	5.65	37	0.	1.29	49.	10	0.	0.000	16	0.	0.56	0.000
299	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000
300	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
301	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
302	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000

303	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
304	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
305	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.01	0.000
306	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.01	0.000
307	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.01	0.000
308	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
309	5.65	5.65	120	0.	4.22	151.	81	0.	0.001	55	0.	1.93	0.001
310	5.65	5.65	407	0.	14.33	521.	271	0.	0.004	255	0.	8.99	0.003
311	5.65	5.65	630	0.	22.22	812.	442	0.	0.006	390	0.	13.75	0.005
312	5.65	5.65	654	1	23.06	846.	443	0.	0.006	392	0.	13.80	0.005
313	5.65	5.65	420	0.	14.82	545.	282	0.	0.004	259	0.	9.12	0.003
314	5.65	5.65	99	0.	3.49	127.	94	0.	0.001	64	0.	2.25	0.001
315	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
316	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
317	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
318	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
319	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
320	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
321	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
322	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
323	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
324	5.65	5.65	32	0.	1.14	42.	10	0.	0.000	5	0.	0.17	0.000
325	5.65	5.65	82	0.	2.90	110.	145	0.	0.002	124	0.	4.36	0.002
326	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
327	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
328	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
329	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
330	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
331	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
332	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
333	5.65	5.65	0.	-1	0.05	-1.	0.	0.	0.000	0.	0.	0.01	0.000
334	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.01	0.000
335	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.01	0.000
336	5.65	5.65	306	-1	10.78	389.	232	0.	0.003	208	0.	7.32	0.003
337	5.65	5.65	685	0.	24.14	878.	493	0.	0.006	479	0.	16.90	0.006
338	5.65	5.65	968	0.	34.14	1247.	806	0.	0.011	708	0.	24.94	0.009
339	5.65	5.65	976	1	34.43	1261.	793	0.	0.010	703	0.	24.78	0.009
340	5.65	5.65	663	1	23.38	858.	485	0.	0.006	470	0.	16.56	0.006
341	5.65	5.65	271	0.	9.56	349.	234	0.	0.003	202	0.	7.10	0.003
342	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
343	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
344	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
345	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
346	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
347	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
348	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
349	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
350	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
351	5.65	5.65	61	0.	2.17	83.	115	0.	0.002	100	0.	3.51	0.001
352	5.65	5.65	333	1	11.76	436.	305	0.	0.004	290	0.	10.21	0.004
353	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	81	0.	2.84	0.001
354	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.01	0.000
355	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.01	0.000
356	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.01	0.000
357	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.01	0.000
358	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
359	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
360	5.65	5.65	0.	-1	0.05	-1.	0.	0.	0.000	0.	0.	0.01	0.000
361	5.65	5.65	0.	-1	0.05	-1.	0.	0.	0.000	0.	0.	0.01	0.000
362	5.65	5.65	23	-1	0.77	21.	5	0.	0.000	42	0.	1.47	0.001
363	5.65	5.65	548	-1	19.27	697.	426	0.	0.006	374	0.	13.18	0.005
364	5.65	5.65	989	0.	34.82	1266.	744	0.	0.010	763	0.	26.91	0.010
365	5.65	5.65	1379	1	48.62	1778.	1200	0.	0.016	1032	0.	36.36	0.014
366	5.65	5.65	1356	1	47.83	1752.	1218	0.	0.016	1011	0.	35.63	0.013
367	5.65	5.65	928	1	32.73	1199.	719	0.	0.009	741	0.	26.10	0.010
368	5.65	5.65	430	0.	15.17	555.	415	0.	0.005	365	0.	12.86	0.005
369	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	45	0.	1.58	0.001
370	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
371	5.65	5.65	0.	0.	0.00	3.	0.	0.	0.000	0.	0.	0.01	0.000
372	5.65	5.65	0.	0.	0.00	4.	0.	0.	0.000	0.	0.	0.01	0.000
373	5.65	5.65	0.	0.	0.00	4.	0.	0.	0.000	0.	0.	0.01	0.000
374	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
375	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
376	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
377	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	41	0.	1.45	0.001
378	5.65	5.65	343	1	12.12	449.	266	0.	0.003	244	0.	8.60	0.003
379	5.65	5.65	646	1	22.81	841.	345	0.	0.005	323	0.	11.39	0.004
380	5.65	5.65	0.	-1	0.04	-1.	9	0.	0.000	98	0.	3.46	0.001
381	5.65	5.65	0.	-1	0.05	-1.	0.	0.	0.000	0.	0.	0.01	0.000
382	5.65	5.65	0.	-1	0.05	-1.	0.	0.	0.000	0.	0.	0.01	0.000
383	5.65	5.65	0.	-1	0.05	-1.	0.	0.	0.000	0.	0.	0.01	0.000
384	5.65	5.65	0.	-1	0.05	-1.	0.	0.	0.000	0.	0.	0.01	0.000
385	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
386	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
387	5.65	5.65	0.	-1	0.05	-1.	0.	0.	0.000	0.	0.	0.01	0.000
388	5.65	5.65	0.	-1	0.05	-1.	0.	0.	0.000	0.	0.	0.01	0.000
389	5.65	5.65	67	-1	2.32	76.	26	0.	0.000	48	0.	1.67	0.001
390	5.65	5.65	665	-1	23.41	847.	512	0.	0.007	412	0.	14.53	0.005
391	5.65	5.65	1203	-1	42.39	1541.	948	0.	0.012	872	0.	30.73	0.011
392	5.65	5.65	1719	1	60.62	2219.	1394	0.	0.018	1332	0.	46.93	0.017
393	5.65	5.65	1629	1	57.45	2105.	1419	0.	0.019	1303	0.	45.91	0.017
394	5.65	5.65	1101	1	38.81	1422.	899	0.	0.012	846	0.	29.81	0.011
395	5.65	5.65	473	0.	16.67	610.	488	0.	0.006	399	0.	14.05	0.005
396	5.65	5.65	0.	0.	0.00	1.	7	0.	0.000	47	0.	1.67	0.001
397	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.01	0.000
398	5.65	5.65	0.	0.	0.00	4.	0.	0.	0.000	0.	0.	0.01	0.000
399	5.65	5.65	0.	1	0.00	6.	0.	0.	0.000	0.	0.	0.01	0.000
400	5.65	5.65	0.	1	0.00	5.	0.	0.	0.000	0.	0.	0.01	0.000
401	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
402	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
403	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
404	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	51	0.	1.78	0.001
405	5.65	5.65	603	1	21.29	787.	282	0.	0.004	268	0.	9.45	0.003

ARMATURA SUPERIORE VERTICALE

			COMBINAZIONE RARA				COMB. FREQUENTE			COMB. QUASI PERMANENTE			
GUSCI	Af	Afc	Mom	Nor	sigC	sigF	Mom	Nor	WkF	Mom	Nor	sigC	WkP

1	5.65	5.65	1544	-1	54.39	1980.	568	0.	0.007	377	0.	13.28	0.005
2	5.65	5.65	980	0.	34.52	1256.	412	0.	0.005	312	0.	10.98	0.004
3	5.65	5.65	301	0.	10.62	387.	142	0.	0.002	72	0.	2.55	0.001
4	5.65	5.65	3	0.	0.12	6.	0.	0.	0.000	0.	0.	0.00	0.000
5	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.00	0.000
6	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000
7	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
8	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
9	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000
10	5.65	5.65	79	0.	2.77	102.	69	0.	0.001	76	0.	2.67	0.001
11	5.65	5.65	312	0.	10.99	401.	267	0.	0.004	274	0.	9.66	0.004
12	5.65	5.65	522	1	18.44	681.	374	0.	0.005	343	0.	12.10	0.005
13	5.65	5.65	784	2	27.69	1028.	493	-1	0.006	430	-1	15.13	0.006
14	5.65	5.65	905	2	31.96	1185.	506	-1	0.007	279	-1	9.79	0.004
15	5.65	5.65	964	2	34.06	1263.	594	-1	0.008	353	-1	12.38	0.005
16	5.65	5.65	846	1	29.85	1100.	565	-1	0.007	495	-1	17.41	0.006
17	5.65	5.65	428	0.	15.08	552.	358	0.	0.005	322	0.	11.36	0.004
18	5.65	5.65	294	0.	10.35	378.	250	0.	0.003	250	0.	8.82	0.003
19	5.65	5.65	85	0.	3.00	109.	37	0.	0.000	57	0.	2.02	0.001
20	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
21	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000
22	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000
23	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
24	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
25	5.65	5.65	372	0.	13.09	476.	171	0.	0.002	30	0.	1.07	0.000
26	5.65	5.65	995	0.	35.06	1276.	393	0.	0.005	264	0.	9.29	0.003
27	5.65	5.65	1579	-1	55.62	2025.	613	0.	0.008	348	0.	12.26	0.005
28	5.65	5.65	390	0.	13.74	497.	56	0.	0.001	132	0.	4.64	0.002
29	5.65	5.65	242	0.	8.51	307.	25	0.	0.000	88	0.	3.09	0.001
30	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
31	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.00	0.000
32	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.00	0.000
33	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000
34	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000
35	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000
36	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000
37	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000
38	5.65	5.65	46	0.	1.62	59.	35	0.	0.000	51	0.	1.78	0.001
39	5.65	5.65	31	0.	1.09	41.	10	0.	0.000	74	0.	2.62	0.001
40	5.65	5.65	15	0.	0.52	19.	0.	-1	0.000	0.	-1	0.03	0.000
41	5.65	5.65	0.	0.	0.02	0.	0.	-1	0.000	0.	-1	0.05	0.000
42	5.65	5.65	0.	0.	0.02	0.	0.	-1	0.000	0.	-1	0.05	0.000
43	5.65	5.65	0.	0.	0.02	0.	0.	-1	0.000	0.	-1	0.03	0.000
44	5.65	5.65	16	0.	0.55	19.	30	0.	0.000	62	0.	2.19	0.001
45	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	31	0.	1.08	0.000
46	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
47	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
48	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
49	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
50	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
51	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
52	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
53	5.65	5.65	156	0.	5.50	198.	0.	0.	0.000	56	0.	1.98	0.001
54	5.65	5.65	376	0.	13.22	478.	41	0.	0.001	105	0.	3.68	0.001
55	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.02	0.000
56	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
57	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
58	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
59	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000
60	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000
61	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000
62	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000
63	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000
64	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000
65	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
66	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
67	5.65	5.65	0.	0.	0.02	0.	0.	-1	0.000	0.	-1	0.02	0.000
68	5.65	5.65	0.	0.	0.02	0.	0.	-1	0.000	0.	-1	0.04	0.000
69	5.65	5.65	0.	-1	0.02	0.	0.	-1	0.000	0.	-1	0.04	0.000
70	5.65	5.65	0.	0.	0.02	0.	0.	-1	0.000	0.	-1	0.02	0.000
71	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
72	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
73	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
74	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
75	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
76	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
77	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
78	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
79	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
80	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
81	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.02	0.000
82	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.02	0.000
83	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
84	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
85	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
86	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
87	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000
88	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000
89	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.00	0.000
90	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000
91	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
92	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
93	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
94	5.65	5.65	0.	0.	0.01	0.	0.	-1	0.000	0.	-1	0.02	0.000
95	5.65	5.65	0.	0.	0.02	0.	0.	-1	0.000	0.	-1	0.03	0.000
96	5.65	5.65	0.	-1	0.02	0.	0.	-1	0.000	0.	-1	0.03	0.000
97	5.65	5.65	0.	0.	0.02	0.	0.	-1	0.000	0.	0.	0.02	0.000
98	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
99	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
100	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
101	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
102	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
103	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
104	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
105	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
106	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
107	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
108	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.02	0.000

109	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.02	0.000
110	5.65	5.65	0.	-1	0.03	0.	0.	0.	0.000	0.	0.	0.01	0.000
111	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
112	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
113	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
114	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.00	0.000
115	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.00	0.000
116	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
117	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.01	0.000
118	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
119	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
120	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.02	0.000
121	5.65	5.65	0.	0.	0.01	0.	0.	-1	0.000	0.	-1	0.02	0.000
122	5.65	5.65	0.	0.	0.01	0.	0.	-1	0.000	0.	-1	0.03	0.000
123	5.65	5.65	0.	0.	0.01	0.	0.	-1	0.000	0.	-1	0.03	0.000
124	5.65	5.65	0.	0.	0.00	0.	0.	-1	0.000	0.	0.	0.02	0.000
125	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.02	0.000
126	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
127	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
128	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
129	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
130	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
131	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
132	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
133	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
134	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
135	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.02	0.000
136	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.01	0.000
137	5.65	5.65	0.	-1	0.04	-1.	0.	0.	0.000	0.	0.	0.01	0.000
138	5.65	5.65	0.	-1	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
139	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
140	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
141	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
142	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
143	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
144	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
145	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.01	0.000
146	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
147	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.02	0.000
148	5.65	5.65	0.	0.	0.01	0.	0.	-1	0.000	0.	-1	0.02	0.000
149	5.65	5.65	0.	0.	0.01	0.	0.	-1	0.000	0.	-1	0.03	0.000
150	5.65	5.65	0.	0.	0.01	0.	0.	-1	0.000	0.	-1	0.03	0.000
151	5.65	5.65	0.	0.	0.00	0.	0.	-1	0.000	0.	0.	0.02	0.000
152	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.02	0.000
153	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
154	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
155	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
156	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.01	0.000
157	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
158	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
159	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
160	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
161	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
162	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
163	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
164	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
165	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
166	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
167	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
168	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
169	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.01	0.000
170	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
171	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
172	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.01	0.000
173	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.02	0.000
174	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.02	0.000
175	5.65	5.65	0.	0.	0.01	0.	0.	-1	0.000	0.	-1	0.02	0.000
176	5.65	5.65	0.	0.	0.01	0.	0.	-1	0.000	0.	-1	0.03	0.000
177	5.65	5.65	0.	0.	0.01	0.	0.	-1	0.000	0.	-1	0.03	0.000
178	5.65	5.65	0.	0.	0.01	0.	0.	-1	0.000	0.	-1	0.02	0.000
179	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.02	0.000
180	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.02	0.000
181	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
182	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
183	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
184	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
185	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
186	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
187	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
188	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
189	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
190	5.65	5.65	0.	0.	0.00	3.	0.	0.	0.000	0.	0.	0.02	0.000
191	5.65	5.65	0.	0.	0.00	3.	0.	0.	0.000	0.	0.	0.02	0.000
192	5.65	5.65	0.	0.	0.00	3.	0.	0.	0.000	0.	0.	0.02	0.000
193	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
194	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
195	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
196	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
197	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
198	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.01	0.000
199	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.01	0.000
200	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.02	0.000
201	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.02	0.000
202	5.65	5.65	0.	0.	0.01	0.	0.	-1	0.000	0.	-1	0.02	0.000
203	5.65	5.65	0.	0.	0.01	0.	0.	-1	0.000	0.	-1	0.03	0.000
204	5.65	5.65	0.	0.	0.01	0.	0.	-1	0.000	0.	-1	0.03	0.000
205	5.65	5.65	0.	0.	0.01	0.	0.	-1	0.000	0.	-1	0.02	0.000
206	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.02	0.000
207	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.02	0.000
208	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.01	0.000
209	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
210	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
211	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
212	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
213	5.65	5.65	0.	0.	0.00	3.	0.	0.	0.000	0.	0.	0.01	0.000
214	5.65	5.65	0.	0.	0.00	3.	0.	0.	0.000	0.	0.	0.02	0.000
215	5.65	5.65	0.	0.	0.00	3.	0.	0.	0.000	0.	0.	0.02	0.000
216	5.65	5.65	0.	0.	0.00	3.	0.	0.	0.000	0.	0.	0.02	0.000

217	5.65	5.65	0.	0.	0.00	4.	0.	0.	0.000	0.	0.	0.01	0.000
218	5.65	5.65	0.	0.	0.00	4.	0.	0.	0.000	0.	0.	0.01	0.000
219	5.65	5.65	0.	0.	0.00	3.	0.	0.	0.000	0.	0.	0.01	0.000
220	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
221	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
222	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
223	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.01	0.000
224	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.01	0.000
225	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
226	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
227	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.02	0.000
228	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.02	0.000
229	5.65	5.65	0.	0.	0.01	0.	0.	-1	0.000	0.	-1	0.02	0.000
230	5.65	5.65	0.	0.	0.02	0.	0.	-1	0.000	0.	-1	0.03	0.000
231	5.65	5.65	0.	0.	0.02	0.	0.	-1	0.000	0.	-1	0.03	0.000
232	5.65	5.65	0.	0.	0.01	0.	0.	-1	0.000	0.	-1	0.02	0.000
233	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.02	0.000
234	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.02	0.000
235	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
236	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.01	0.000
237	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.01	0.000
238	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
239	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
240	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
241	5.65	5.65	0.	0.	0.00	3.	0.	0.	0.000	0.	0.	0.01	0.000
242	5.65	5.65	0.	0.	0.00	4.	0.	0.	0.000	0.	0.	0.01	0.000
243	5.65	5.65	0.	0.	0.00	4.	0.	0.	0.000	0.	0.	0.01	0.000
244	5.65	5.65	0.	1	0.00	5.	0.	0.	0.000	0.	0.	0.01	0.000
245	5.65	5.65	0.	0.	0.00	4.	0.	0.	0.000	0.	0.	0.01	0.000
246	5.65	5.65	0.	0.	0.00	3.	0.	0.	0.000	0.	0.	0.01	0.000
247	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
248	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.01	0.000
249	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.01	0.000
250	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
251	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
252	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
253	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
254	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
255	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.02	0.000
256	5.65	5.65	0.	0.	0.02	0.	0.	-1	0.000	0.	-1	0.02	0.000
257	5.65	5.65	0.	-1	0.03	0.	0.	-1	0.000	0.	-1	0.03	0.000
258	5.65	5.65	0.	-1	0.03	0.	0.	-1	0.000	0.	-1	0.03	0.000
259	5.65	5.65	0.	0.	0.02	0.	0.	-1	0.000	0.	0.	0.02	0.000
260	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.02	0.000
261	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
262	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
263	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
264	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
265	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.01	0.000
266	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.01	0.000
267	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
268	5.65	5.65	0.	0.	0.00	4.	0.	0.	0.000	0.	0.	0.01	0.000
269	5.65	5.65	0.	1	0.00	5.	0.	0.	0.000	0.	0.	0.01	0.000
270	5.65	5.65	0.	1	0.00	5.	0.	0.	0.000	0.	0.	0.01	0.000
271	5.65	5.65	0.	1	0.00	6.	0.	0.	0.000	0.	0.	0.02	0.000
272	5.65	5.65	0.	1	0.00	5.	0.	0.	0.000	0.	0.	0.01	0.000
273	5.65	5.65	0.	0.	0.00	3.	0.	0.	0.000	0.	0.	0.01	0.000
274	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.01	0.000
275	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
276	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
277	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
278	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
279	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
280	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
281	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
282	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.02	0.000
283	5.65	5.65	0.	0.	0.02	0.	0.	-1	0.000	0.	-1	0.02	0.000
284	5.65	5.65	0.	-1	0.04	-1.	0.	-1	0.000	0.	-1	0.03	0.000
285	5.65	5.65	0.	-1	0.04	-1.	0.	-1	0.000	0.	-1	0.03	0.000
286	5.65	5.65	0.	-1	0.03	0.	0.	-1	0.000	0.	0.	0.02	0.000
287	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.02	0.000
288	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
289	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
290	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
291	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
292	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
293	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
294	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.01	0.000
295	5.65	5.65	0.	0.	0.00	3.	0.	0.	0.000	0.	0.	0.01	0.000
296	5.65	5.65	0.	1	0.00	5.	0.	0.	0.000	0.	0.	0.01	0.000
297	5.65	5.65	0.	1	0.00	6.	0.	0.	0.000	0.	0.	0.02	0.000
298	5.65	5.65	0.	1	0.00	6.	0.	0.	0.000	0.	0.	0.02	0.000
299	5.65	5.65	0.	0.	0.00	4.	0.	0.	0.000	0.	0.	0.01	0.000
300	5.65	5.65	0.	0.	0.00	1.	0.	0.	0.000	0.	0.	0.01	0.000
301	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
302	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
303	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
304	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
305	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
306	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
307	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
308	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
309	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
310	5.65	5.65	0.	-1	0.03	0.	0.	-1	0.000	0.	-1	0.02	0.000
311	5.65	5.65	0.	-1	0.04	-1.	0.	-1	0.000	0.	-1	0.03	0.000
312	5.65	5.65	0.	-1	0.04	-1.	0.	-1	0.000	0.	-1	0.03	0.000
313	5.65	5.65	0.	-1	0.03	0.	0.	-1	0.000	0.	0.	0.02	0.000
314	5.65	5.65	0.	0.	0.02	0.	0.	0.	0.000	0.	0.	0.01	0.000
315	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
316	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
317	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.01	0.000
318	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
319	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
320	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
321	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
322	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.01	0.000
323	5.65	5.65	0.	1	0.00	5.	0.	0.	0.000	0.	0.	0.01	0.000
324	5.65	5.65	0.	1	0.00	6.	0.	0.	0.000	0.	0.	0.02	0.000

325	5.65	5.65	0.	2	0.00	14.	0.	0.	0.000	0.	0.	0.02	0.000
326	5.65	5.65	0.	1	0.00	8.	0.	0.	0.000	0.	0.	0.01	0.000
327	5.65	5.65	0.	0.	0.00	2.	0.	0.	0.000	0.	0.	0.00	0.000
328	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
329	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
330	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
331	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
332	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
333	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
334	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
335	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
336	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
337	5.65	5.65	0.	-1	0.03	0.	0.	-1	0.000	0.	-1	0.02	0.000
338	5.65	5.65	0.	-1	0.05	-1.	0.	-1	0.000	0.	-1	0.04	0.000
339	5.65	5.65	0.	-1	0.05	-1.	0.	-1	0.000	0.	-1	0.04	0.000
340	5.65	5.65	0.	-1	0.03	0.	0.	-1	0.000	0.	-1	0.02	0.000
341	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.01	0.000
342	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
343	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
344	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
345	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
346	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
347	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
348	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
349	5.65	5.65	0.	1	0.00	6.	0.	0.	0.000	0.	0.	0.00	0.000
350	5.65	5.65	0.	2	0.00	13.	0.	0.	0.000	0.	0.	0.01	0.000
351	5.65	5.65	0.	2	0.00	20.	0.	0.	0.000	0.	0.	0.02	0.000
352	5.65	5.65	0.	1	0.00	10.	0.	0.	0.000	132	0.	4.64	0.002
353	5.65	5.65	0.	1	0.00	6.	0.	0.	0.000	88	0.	3.09	0.001
354	5.65	5.65	0.	0.	0.00	4.	0.	0.	0.000	0.	0.	0.00	0.000
355	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
356	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
357	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
358	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
359	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
360	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
361	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
362	5.65	5.65	0.	0.	0.00	0.	13	0.	0.000	51	0.	1.78	0.001
363	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	74	0.	2.62	0.001
364	5.65	5.65	0.	-1	0.04	-1.	0.	-1	0.000	0.	-1	0.03	0.000
365	5.65	5.65	0.	-1	0.06	-1.	0.	-1	0.000	0.	-1	0.05	0.000
366	5.65	5.65	0.	-1	0.06	-1.	0.	-1	0.000	0.	-1	0.05	0.000
367	5.65	5.65	0.	-1	0.03	-1.	0.	-1	0.000	0.	-1	0.03	0.000
368	5.65	5.65	0.	0.	0.01	0.	20	0.	0.000	62	0.	2.19	0.001
369	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	31	0.	1.08	0.000
370	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
371	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
372	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
373	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
374	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
375	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
376	5.65	5.65	0.	1	0.00	6.	0.	0.	0.000	0.	0.	0.00	0.000
377	5.65	5.65	0.	1	0.00	12.	0.	0.	0.000	56	0.	1.98	0.001
378	5.65	5.65	0.	2	0.00	19.	0.	0.	0.000	105	0.	3.68	0.001
379	5.65	5.65	574	-2	20.16	723.	460	-1	0.006	377	0.	13.28	0.005
380	5.65	5.65	472	-1	16.60	597.	368	0.	0.005	312	0.	10.98	0.004
381	5.65	5.65	330	0.	11.63	423.	139	0.	0.002	72	0.	2.55	0.001
382	5.65	5.65	1	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
383	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
384	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
385	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
386	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
387	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
388	5.65	5.65	44	0.	1.55	56.	68	0.	0.001	76	0.	2.67	0.001
389	5.65	5.65	285	0.	10.04	366.	266	0.	0.003	274	0.	9.66	0.004
390	5.65	5.65	415	-1	14.62	529.	358	0.	0.005	343	0.	12.10	0.005
391	5.65	5.65	577	-2	20.27	724.	458	-2	0.006	430	-1	15.13	0.006
392	5.65	5.65	577	-2	20.29	726.	453	-2	0.006	279	-1	9.79	0.004
393	5.65	5.65	521	-1	18.31	655.	542	-2	0.007	353	-1	12.38	0.005
394	5.65	5.65	576	-1	20.29	735.	545	-1	0.007	495	-1	17.41	0.006
395	5.65	5.65	404	0.	14.24	518.	352	0.	0.005	322	0.	11.36	0.004
396	5.65	5.65	265	0.	9.32	340.	245	0.	0.003	250	0.	8.82	0.003
397	5.65	5.65	35	0.	1.22	44.	31	0.	0.000	57	0.	2.02	0.001
398	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
399	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
400	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
401	5.65	5.65	0.	0.	0.00	0.	0.	0.	0.000	0.	0.	0.00	0.000
402	5.65	5.65	0.	0.	0.01	0.	0.	0.	0.000	0.	0.	0.00	0.000
403	5.65	5.65	61	1	2.16	84.	149	0.	0.002	30	0.	1.07	0.000
404	5.65	5.65	83	1	2.98	121.	416	0.	0.005	264	0.	9.29	0.003
405	5.65	5.65	36	2	1.29	66.	540	-1	0.007	348	0.	12.26	0.005

Le verifiche a SLE risultano soddisfatte.

6.5 *VERIFICHE SPOSTAMENTI*

Si riporta la verifica, effettuata con riferimento all'inviluppo degli spostamenti ricavati da tutti i casi di carico statici.

6.5.1 *Verifiche a SLE degli spostamenti verticali*

Le verifiche degli spostamenti verticali a SLE si eseguono a partire dai diagrammi di *Fig. 26* e *Fig. 27*, che riportano rispettivamente gli inviluppi degli spostamenti assoluti delle strutture e dei cedimenti in fondazione.

Il valore massimo dello spostamento, pari a 0.393cm, ricavato al centro della soletta, risulta contenuto entro il limite se confrontato con la lunghezza della medesima (L = 375cm):

$d_{z,tot} = 0.393$ cm $< L / 250 = 375 / 250 = 1.500$ cm

$L / d_{z,tot} = 375 / 0.393 = 954 > 250$ $d_{z,tot} < L / 250$

Gli spostamenti verticali sono contenuti in quanto rispettano i limiti indicati nella relazione tecnica, pertanto le verifiche a SLE risultano soddisfatte.

6.5.2 *Verifiche a SLE degli spostamenti orizzontali*

Le verifiche degli spostamenti orizzontali a SLE si eseguono a partire dai diagrammi di *Fig. 28* e *Fig. 29*, che riportano rispettivamente gli inviluppi degli spostamenti orizzontali lungo le direzioni ortogonali X e Y.

Il valore massimo dello spostamento orizzontale è pari a 0.820cm. Con riferimento all'altezza del livello più alto presente nella modellazione, pari a H = 435cm, si ricava quanto segue:

$\Delta = 0.820$ cm $< H / 300 = 435 / 300 = 1.450$ cm

$H / \Delta = 435 / 0.820 = 530 > 300$ $\Delta < H / 300$

Gli spostamenti orizzontali risultano contenuti in quanto rispettano i limiti indicati nella relazione tecnica, pertanto le verifiche a SLE risultano soddisfatte.

6.5.3 *Verifiche a SLE delle vibrazioni*

Le verifiche delle vibrazioni si eseguono a partire dalla combinazione frequente delle azioni in presenza della quale si analizza il modo di vibrare fondamentale delle strutture.

A favore di sicurezza, si considera lo spostamento massimo ricavato in combinazione rara e si ricava la frequenza fondamentale applicando la formula semplificata:

$f_1 = 18 / (f_z[mm])^{0.5} = 18 / (3.93)^{0.5} = 9.079$ Hz.

Tale valore risulta decisamente maggiore rispetto ai valori minimi richiesti, riportati nella relazione tecnica, per le verifiche allo stato limite di vibrazione.

6.6 *VERIFICHE A SLD*

Si riporta la verifica, effettuata con riferimento all'inviluppo degli spostamenti ricavati da tutti i casi di carico sismici. La verifica è condotta in accordo con quanto richiesto al par. 7.3.6.1 delle NTC2018.

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           VERIFICA SPOSTAMENTI SISMICI DI ESERCIZIO (NTC 7.3.6.1)

spostamento limite interpiano = 0.5% dell'altezza

CASO n.  13  - SLD con SISMAX PRINC:

     Zinf |     Zsup |      h   | spost.max |     %h  |   nodo |   sest.| ver.
     [cm]       [cm]       [cm]       [cm]
     0.00 |   435.00 |   435.00 |  0.640880 |   0.147 |      7 |     10 | SI

CASO n.  14  - SLD con SISMAY PRINC:

     Zinf |     Zsup |      h   | spost.max |     %h  |   nodo |   sest.| ver.
     [cm]       [cm]       [cm]       [cm]
     0.00 |   435.00 |   435.00 |  0.728860 |   0.168 |      7 |      7 | SI


           VERIFICA SPOSTAMENTI SISMICI DI S.L.V. (NTC 7.3.3.3)

    Fattore Mud  =   1.000

    Quota |   DX max  |   nodo |   DY max  |   nodo |
      [cm]       [cm]              [cm]
   435.00 |  1.204021 |     27 |  1.419467 |    231 |
```

La verifica è soddisfatta, poiché gli spostamenti relativi di piano risultano sempre inferiori al valore limite 0.005 x h.

7. CONCLUSIONI

Alla luce delle valutazioni innanzi espresse, si ritiene che le strutture in oggetto siano idonee dal punto vista statico all'utilizzo per le quali sono destinate.