

REGIONE
SICILIANA



COMUNE DI
CAMMARATA



COMUNE DI
VILLALBA



COMUNE DI
MUSSOMELI



Il Committente:

NP Sicilia 4

NP Sicilia 4 S.r.l.

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Il Progettista:



dott. ing. VITTORIO RANDAZZO



dott. ing. VINCENZO DI MARCO



Titolo del progetto:

PARCO EOLICO "SCRUDATO"
POTENZA NOMINALE 39,6 MW

Elaborato:

PROGETTO DEFINITIVO

Codice Elaborato:

NPS4_CAM_D10_REL

TITOLO ELABORATO:

RELAZIONE DI PREDIMENSIONAMENTO DELLE FONDAZIONI

FOGLIO:

SCALA:

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RELAZIONE TECNICA

OGGETTO: Predimensionamento opere di fondazione per il parco eolico "Scrudato" sito nel comune di Cammarata (AG) in C.da Macinella.

1. GENERALITA'.

La seguente relazione di calcolo preliminare si riferisce al plinto di fondazione della torre-aerogeneratore del tipo SG 6.6-170 da installarsi in agro del comune di Cammarata della provincia di Agrigento.

Tutte le calcolazioni sono state eseguite nel rispetto dei metodi della Scienza delle Costruzioni ed in ossequio alle normative attualmente vigenti. In particolare, il criterio di progettazione e verifica adottato è quello degli stati limite.

Il pre-dimensionamento geometrico delle opere in calcestruzzo armato e il progetto delle relative armature, ha come supporto le sollecitazioni al piede della torre fornite dal produttore dell'aerogeneratore.

Sulla scorta dei risultati delle prove sui terreni oggetto dell'intervento di che trattasi di cui alla relazione geologica redatta dal Dott. Geol. Giuseppe Massimo Volo si sono individuate le caratteristiche geotecniche degli stessi nonché la scelta della tipologia fondale da porre in essere. La quantificazione delle opere sarà eseguita in fase di progettazione esecutiva, a valle di una più dettagliata indagine geologica e geotecnica come previsto dalle normative vigenti.

Il rotore dell'aerogeneratore Siemens Gamesa SG 6.6-170 ha un diametro di 170 m, cui corrisponde un'area spazzata di circa 22.697,00 m².

Esso è costituito da tre pale rotoriche che sviluppano la potenza nominale effettiva di 6600 KW.

La turbina eolica è installata in sommità di una torre tubolare costituita da n. 4 elementi tronco-conici in acciaio di differenti dimensioni, che raggiungono un'altezza al mozzo di 115 ml o 135 ml ed un'altezza complessiva di 200 o 220 ml dal piano campagna.

2. DESCRIZIONE.

Il plinto calcolato è costituito da un prisma regolare a base circolare sormontato da un cilindro di cui di seguito si riportano le caratteristiche geometriche.

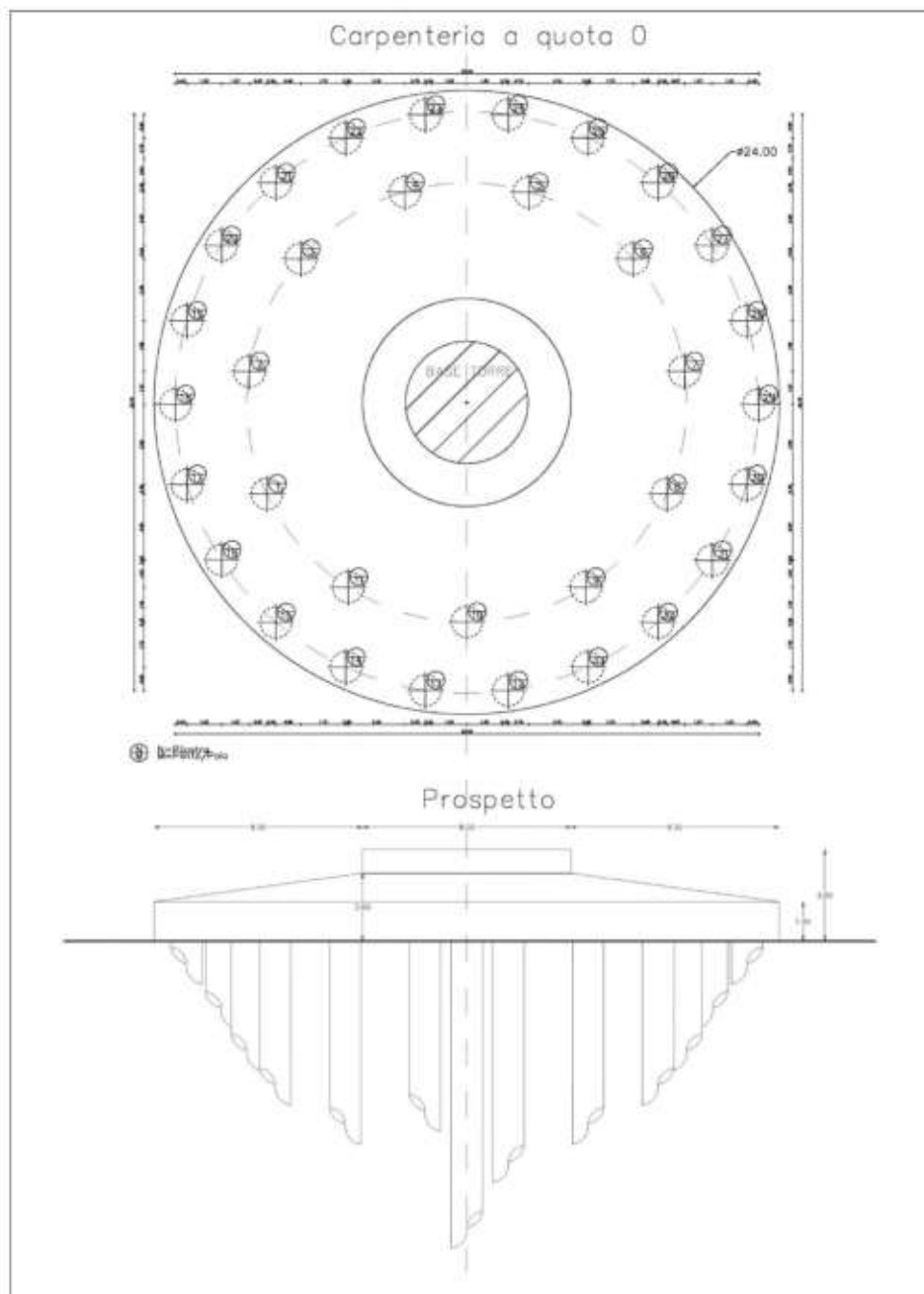


Figura 1

| | | | | |
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Sulla base delle caratteristiche dei terreni interessati, evidenziate dai risultati delle prove di cui alla relazione geologica a firma del dott. Volo, si ritiene opportuno porre il plinto di fondazione su fondazione indiretta costituita da n.33 pali dello $\Phi = 120$ cm disposti su due file concentriche, disposti secondo la figura, ammorsati nei terreni fondali per 25,00 mt. La distanza fra i pali della fila esterna e il centro della fondazione (Dext) è di 11,20 mt, mentre quella fra i pali della fila interna e il centro della fondazione (Dint) è di 8,44 mt. L'interasse tra i pali è pari a 3.20 mt. per la fila esterna e a 4.82 mt. per la fila interna.

Nell'esecuzione del progetto, nel calcolo strutturale, e nelle modalità di posa in opera si è fatto riferimento alla seguente normativa:

Legge 5 Novembre 1971 n.1086 (G.U. 21 dicembre 1971 n.321) "Norme per la disciplina delle opere di conglomerato cementizio armato, normale e precompresso ed a struttura metallica";

D.M. del 24/1/1986 - Norme tecniche relative alle costruzioni sismiche;

Legge 2 febbraio 1974 n.64 (G.U. 21 marzo 1974 n.76) "Provvedimenti per le costruzioni con particolari prescrizioni per le zone sismiche" Indicazioni progettive per le nuove costruzioni in zone sismiche a cura del Ministero per la Ricerca scientifica - Roma 1981;

D.M. Infrastrutture Trasporti 14 gennaio 2008 (G.U. 4 febbraio 2008 n.29 - Suppl. Ord.) "Norme tecniche per le costruzioni" Inoltre, in mancanza di specifiche indicazioni, ad indicazione della norma precedente e per quanto con esse non in contrasto, sono state utilizzate le indicazioni contenute nella Circolare 2 febbraio 2009 n.617 del Ministero delle Infrastrutture e dei Trasporti (G.U. 26 febbraio 2009 n. 27 - Suppl. Ord.) "Istruzioni per l'applicazione delle 'Norme Tecniche per le costruzioni' di cui al D.M. 14 gennaio 2008" e successive modifiche ed integrazioni di cui al DM del 17/01/2018;

Circolare 2 febbraio 2009 n.617 del Ministero delle Infrastrutture e dei Trasporti (G.U. 26 febbraio 2009 n. 27 – Suppl. Ord.) "Istruzioni per l'applicazione delle 'Norme Tecniche per le costruzioni' di cui al D.M. 14 gennaio 2008" e successive modifiche ed integrazioni con la Circolare n.7 del 21/01/2019;

IEC 61400-1, 2° Edition, February 1999. Wind turbine generator system – Part 1:

Safety requirements ;

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UNI 9858. Concrete. Performance, production, placing and compliance criteria.

UNI ENV 1992-1-1 del 31-01-1993 Eurocodice 2. Progettazione delle strutture di calcestruzzo.

Inoltre per il calcolo di progetto della torre di sostegno dell'aerogeneratore, eseguito dal produttore, le sollecitazioni massime sono state determinate sulla scorta di quanto previsto dalle:

1. EC_Ed3_NCV_00_08010000_A_10_07_17p0 per l'azione FXTB;
2. IEC_Ed3_NCV_60_01030000_A_05_12p0 per l'azione FYZTB;
3. EC_Ed3_NCV_60_01040000_B_02_01_01_11p0 per il momento MXTB;
4. IEC_Ed3_NCV_60_01030000_A_05_12p0 per il momento MYTB.

Per la struttura in esame, in riferimento ai carichi "Extreme Loads" inclusi l'azione sismica e la sicurezza, per analogia si sono utilizzati i carichi provenienti da strutture con analoghe caratteristiche, realizzate in siti con caratteristiche similari in termini di azioni (vento, sismica, ecc). In dettaglio:

Tabella 1

| Load case | DLC Type | Load factor | F_{xy} (kN) | F_z (kN) | M_{xy} (kNm) | $M_{xy} + \Delta M_{xy}$ (kNm) | M_z (kNm) |
|------------------------|----------|------------------|---------------|----------------|----------------|--------------------------------|--------------|
| ULS without Psf | A | 1.0 | 1498 | 6566 | 179651 | 185069 | 2231 |
| ULS with Psf | A | 1.1 0.9 | 1648 | 7222 5909 | 197616 | 203034 | 2454 |
| ULS with Psf (Torsion) | N | 1.35/1.1* 0.9 | 441 | 6985 * 5715 | 49389 | 54806 | 18061 |

Table 2 SG 6.6-170 T115-58B Factored/Unfactored Extreme loads at base of the tower

Il carico prodotto dal vento non sarà mai statico su una sola direzione, ma potrà variare su 360 gradi, per tale motivo nella progettazione delle armature si prende in considerazione la zona più sollecitata per il calcolo delle armature all'interno del plinto, armando in modo omogeneo (in senso radiale e concentrica) tutti i 360 gradi che compongono il plinto di fondazione.

Ai carichi verticali, oltre al peso della torre, della navicella e del rotore contemplati nella ipotesi di carico precedente, va sommato il peso del plinto di fondazione di entità non trascurabile.

Il software strutturale utilizzato, in automatico genera il peso proprio della struttura di fondazione, in base al materiale impiegato e alla geometria del plinto stabilita dal progettista.

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In questa relazione di calcolo, avente come finalità il pre-dimensionamento delle strutture, è stata analizzata la condizione più gravosa.

I dati inseriti nel software strutturale, derivano dalla combinazione della condizione Extreme 6.1 con il peso proprio $G1$ moltiplicati per il coefficiente parziale 1.35, così come previsto dalla IEC 61400-1.

3. OPERE DI FONDAZIONE.

Come anticipato nei paragrafi precedenti le fondazioni saranno di tipo indiretto con pali dello Φ 120 cm ammorsati, superato il primo strato di terreno agrario dello spessore di circa 1,00 mt, nelle argille brecciate di colore nocciola per circa 4,50 mt e successivamente nelle argille brecciate grigio-azzurre fino a fondo foro.

La testa dei pali sarà ammorsata ad una plinto di fondazione di spessore variabile al cui culmine verrà collocata la torre-aerogeneratore. Detto plinto è stato discretizzato con elementi tipo shell di sezione variabile.

Per i terreni interessati dall'ammorsamento dei pali si sono utilizzati i seguenti valori:

1. Strato n.1 - Terreno agrario da mt 0,00 a mt. 1,00 ;
2. Strato n.2 - Argille brecciate di colore nocciola da mt 1,00 a mt. 4,50 :
 - Peso per unità di volume (γ_a) = 1.947 [daN/m³];
 - Peso di volume saturo (γ_s) = 2.030 [daN/m³];
 - Angolo di attrito interno (φ')= 19,18°;
 - Coesione non drenata (C_u)= 0,611 [daN/cm²];
 - Coesione drenata (C')= 0,319 [daN/cm²];
3. Strato n.2 - Argille brecciate grigio-azzurre da mt 4,50 a mt. 20,00 :
 - Peso per unità di volume (γ_a) = 1.997 [daN/m³];
 - Peso di volume saturo (γ_s) = 2.130 [daN/m³];
 - Angolo di attrito interno (φ')= 22,23°;
 - Coesione non drenata (C_u)= 1,309 [daN/cm²];
 - Coesione drenata (C')= 0,471 [daN/cm²];

Materiali utilizzati :

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1. Plinto di fondazione.

Calcestruzzo classe C40/50 :

- $P < \text{daN/mc} > 2500$;
- $E < \text{daN/cm}^2 > 355471.00$;
- $G < \text{daN/cm}^2 > 161578.00$;
- $\nu = 0.1$;
- $\alpha = 1.00E-05$.

Tipo di acciaio B450C:

- $E < \text{daN/cm}^2 > 2060000.00$;
- $F_{yk} < \text{daN/cm}^2 > 4500$

2. Pali di fondazione.

Calcestruzzo classe C30/37 :

- $P < \text{daN/mc} > 2500$;
- $E < \text{daN/cm}^2 > 330194.00$;
- $G < \text{daN/cm}^2 > 159036.00$;
- $\nu = 0.1$;
- $\alpha = 1.00E-05$.

Tipo di acciaio B450C:

- $E < \text{daN/cm}^2 > 2060000.00$;
- $F_{yk} < \text{daN/cm}^2 > 4500$

Per i dettagli vedasi la relazione geologica e la relazione di calcolo allegate.

4. CARATTERISTICHE DEL PROGRAMMA DI CALCOLO E PROGETTO DELLE ARMATURE.

4.1 Programma di calcolo

Si tratta di una procedura volta alla progettazione di strutture in c.a. in zona sismica e non, che si avvale come solutori dei programmi agli elementi finiti (F.E.M.) . Il plinto di fondazione è stato modellato con elementi di tipo bidimensionale (Shell), di spessore variabile, a comportamento flessionale-membranale.

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La colonna stratigrafica inserita per il calcolo dello stato tensionale e deformativo dei pali di fondazione è dedotta dai valori riportati nella relazione geologica.

Il programma è rappresentato da un pre-processore per la generazione dei file di input del solutore agli elementi finiti e da un post-processore per il calcolo delle sezioni e la generazione delle armature secondo la legislazione vigente.

Le figure seguenti mostrano la struttura discretizzata secondo il modello di calcolo adottato:

VISTA ASSONOMETRICA

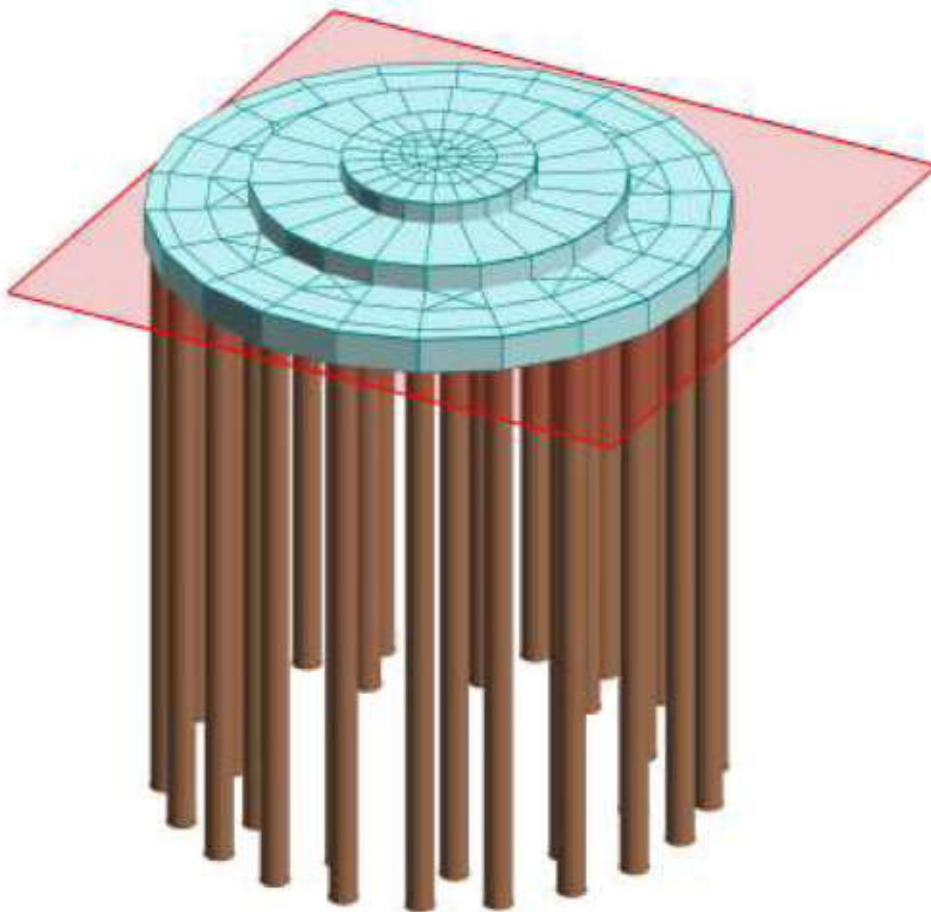


Figura 2

PLANIMETRIA

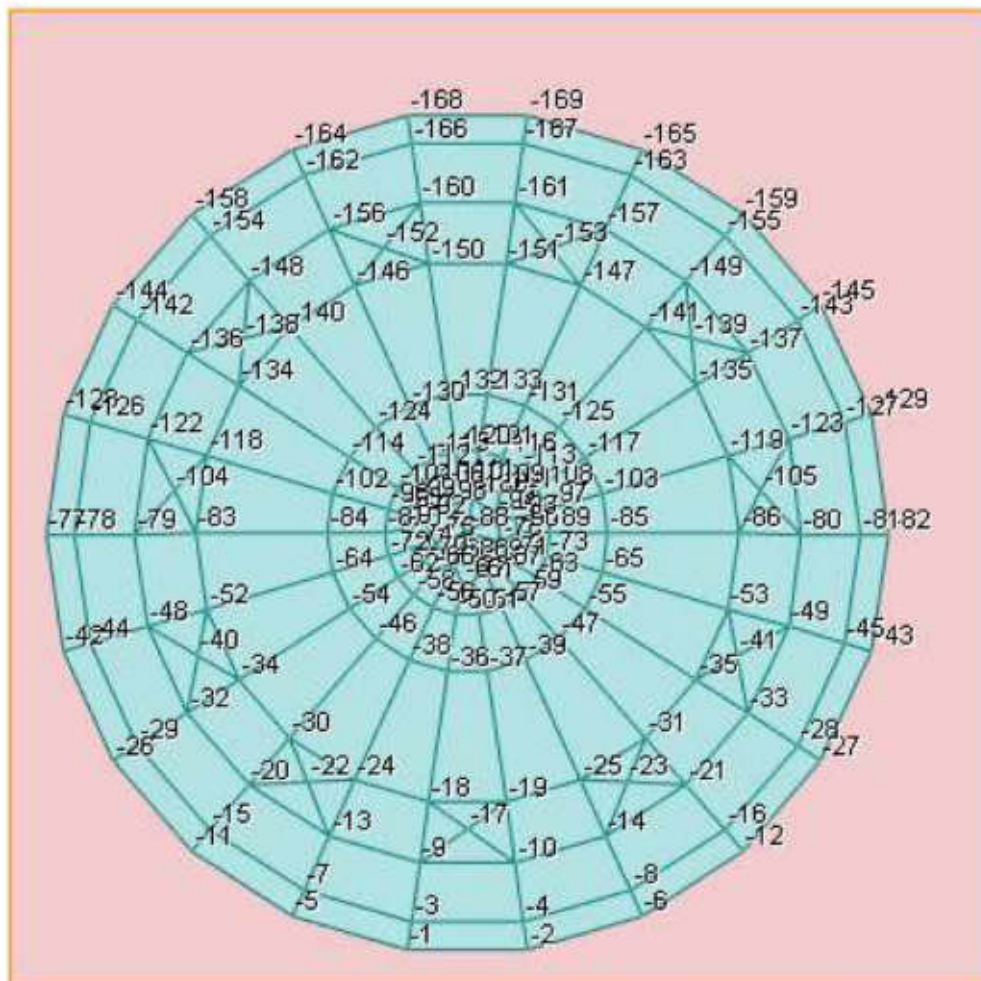


Figura 3

Le dimensioni dell'armatura superiore o inferiore della platea vengono determinate seguendo l'approccio Wood Armer-Armer per trovare i momenti di progetto sui quali dimensionare l'armatura. In questo modo infatti non si trascura il contributo del momento torcente m_{xy} che agisce sui lati dell'elemento shell.

Nella figura successiva si riportano i diagrammi di Wood Armer, utilizzati per il calcolo delle armature, dei momenti M_x ed M_{zz} :

PARTICOLARE DEL DIAGRAMMA DI WOOD ARMER RELATIVO A M_{xx} .

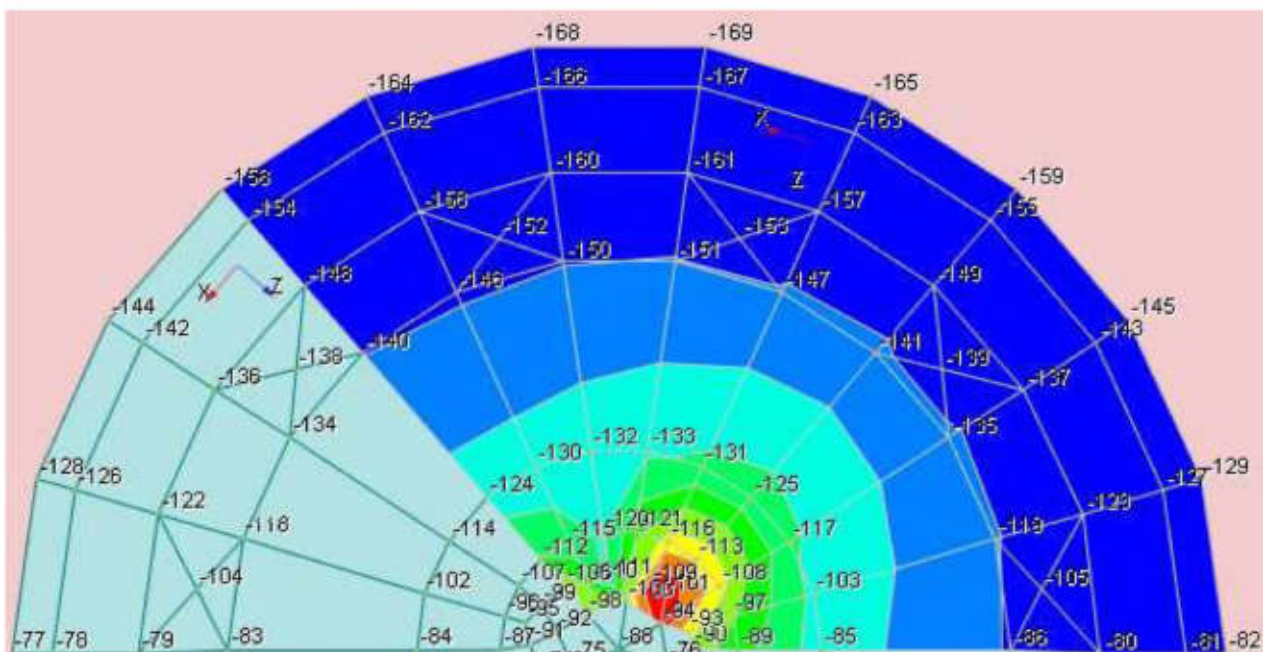
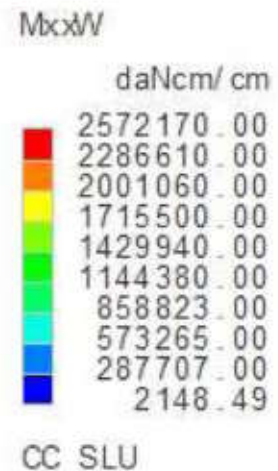


Figura 4



PARTICOLARE DEL DIAGRAMMA DI WOOD ARMER RELATIVO A MZZ .

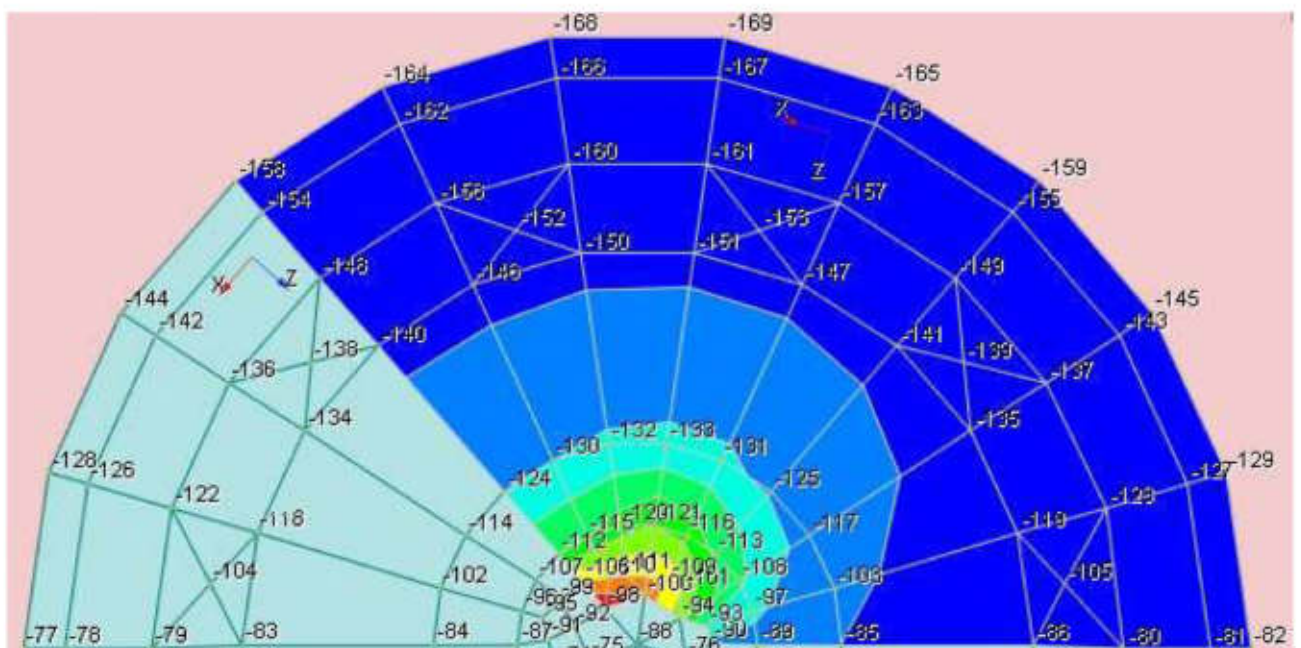
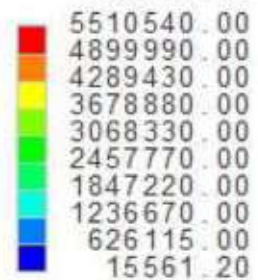


Figura 5

MzzW

daNcm/ cm



CC SLU

| | | | | |
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4.2 Progetto delle armature.

Partendo dalle sollecitazioni valutate nella condizione di carico definita nel paragrafo 2 è stata calcolata l'armatura da adottare, riportata nelle Figure seguenti. Si rimanda ai tabulati di calcolo per i dettagli.

Dal progetto delle sezioni più sollecitate, in direzione x e z (vedi assi locali in figura) dei singoli elementi shell della fondazione, individuate in corrispondenza alla testa dei pali e alla sezione d'attacco al nucleo centrale, si evince quanto rappresentato di seguito:

ARMATURA RADIALE E CONCENTRICA

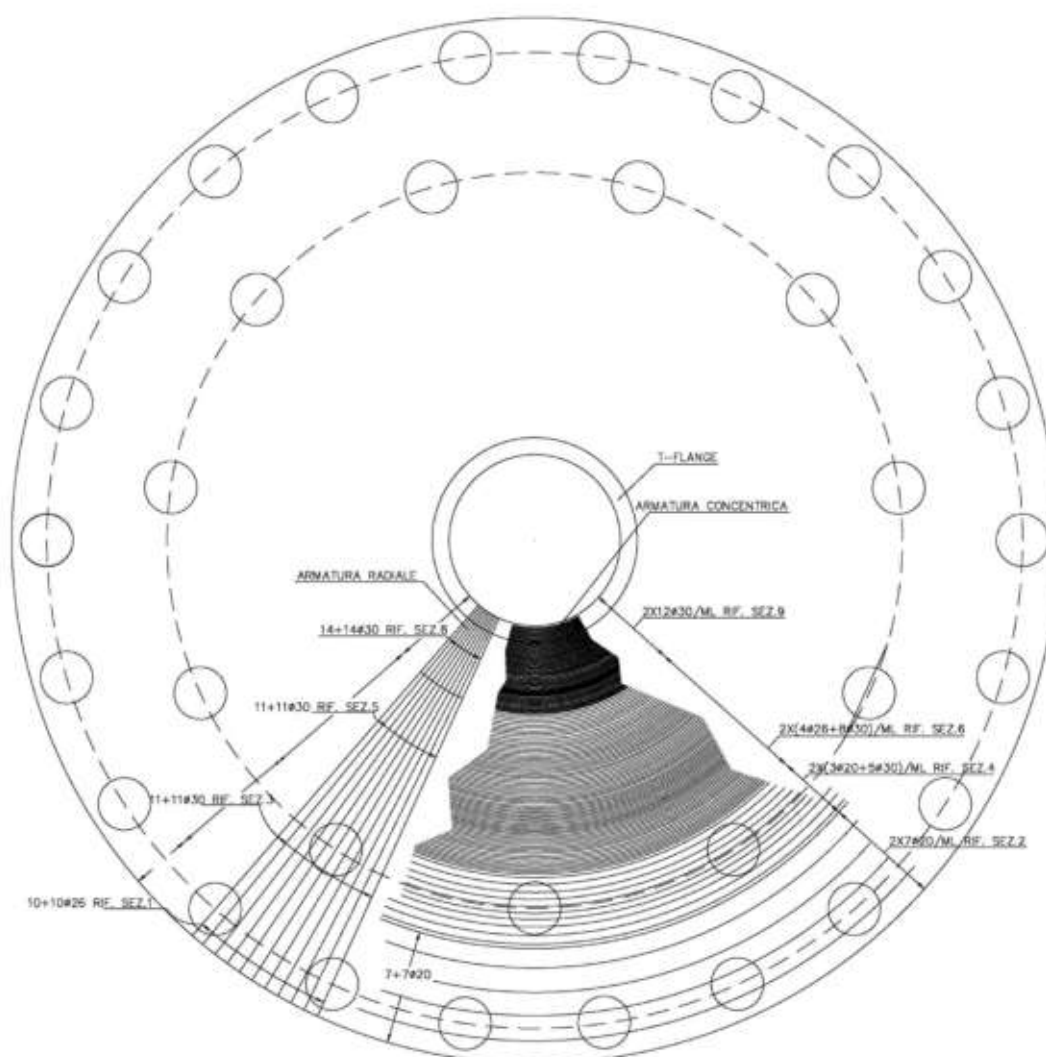
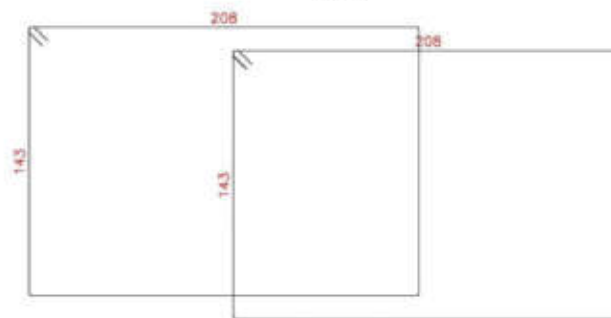
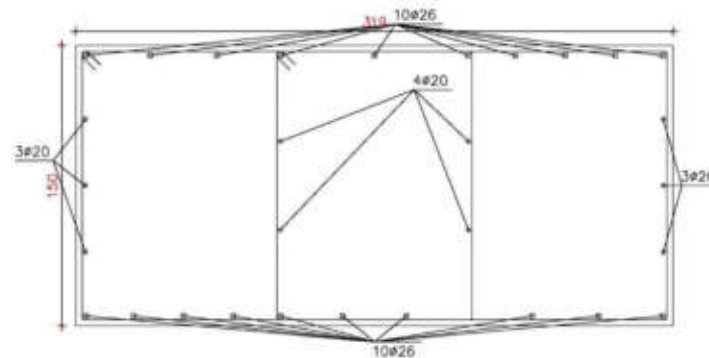


Figura 6

ARMATURA DELLE SEZIONI TIPO

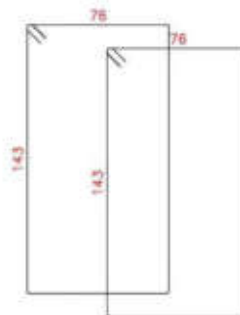
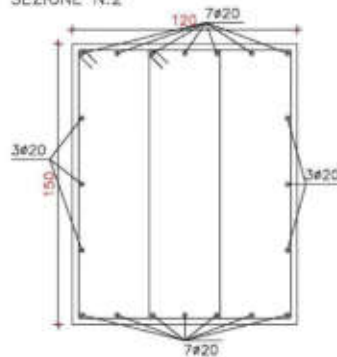
SEZIONE N.1



St.#16/20 a 4 br. L=729+729

| | | | |
|--|--------|-------|-------|
| Computo sezione 1 (sezione d'attacco pali ext radiale 319x150) | | | |
| m | Ø16 | Ø20 | Ø26 |
| 72,87 | 10,00 | 20,00 | |
| kg | 115,02 | 23,66 | 83,36 |
| Tot: kg 223,04 - mc 4,79 - kg/mc 46,61 | | | |

SEZIONE N.2

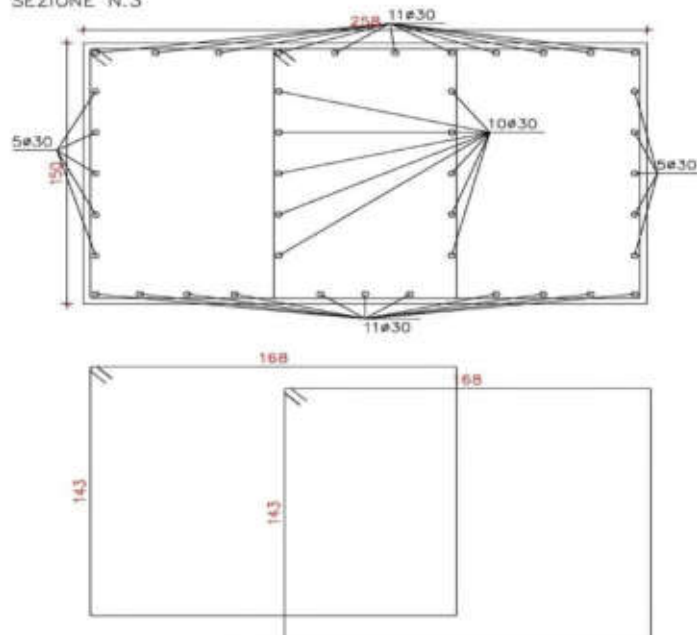


St.#16/20 a 4 br. L=463+463

| | | | |
|--|-------|-------|--|
| Computo sezione 2 (sezione attacco testa pali ext concentr. 120x150) | | | |
| m | Ø16 | Ø20 | |
| 46,34 | 20,00 | | |
| kg | 79,12 | 20,90 | |
| Tot: kg 122,46 - mc 1,80 - kg/mc 68,04 | | | |

Figura 7

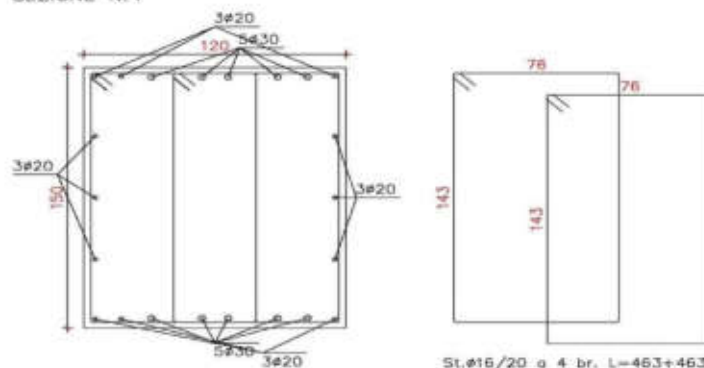
SEZIONE N.3



St.ø16/20 a 4 br. L=647+647

| | | |
|---|-------------------------------------|--------------------------------|
| Computo sezione 3 (sezione attacco pali int. radiale 258x150) | | |
| m | $\frac{\pi \cdot 16^2}{4} \cdot 11$ | 42,00 |
| kg | $102,16 \cdot 233,05$ | 23,805 |
| tot. | kg | 335,23 - mc 3,87 - kg/mc 86,62 |

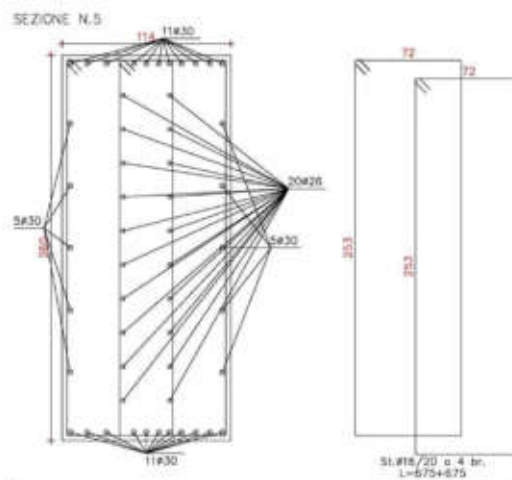
SEZIONE N.4



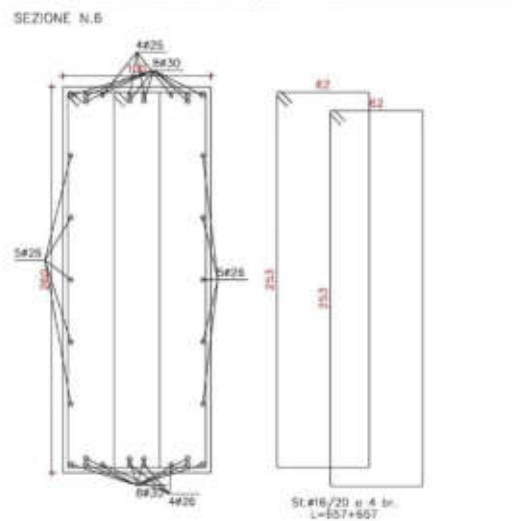
St.ø16/20 a 4 br. L=463+463

| | | |
|---|------------------------------------|--------------------------------|
| Computo sezione 4 (sezione attacco pali int. concentr. 120x150) | | |
| m | $\frac{\pi \cdot 16^2}{4} \cdot 3$ | 12,00 |
| kg | $48,14 \cdot 29,49$ | 14,20 |
| tot. | kg | 158,22 - mc 1,80 - kg/mc 87,90 |

Figura 8



| | | | |
|---|-----------|----------|--------------|
| Computo sezione 5 (sezione attacco al nucleo radiale 114x260) | | | |
| nl | #18 | #20 | #20 |
| kg | 67,84 | 23,40 | 32,50 |
| tot. | kg 124,74 | kg 55,90 | kg 177,64 |
| tot. | kg 367,52 | mc 2,98 | kg/mc 123,99 |

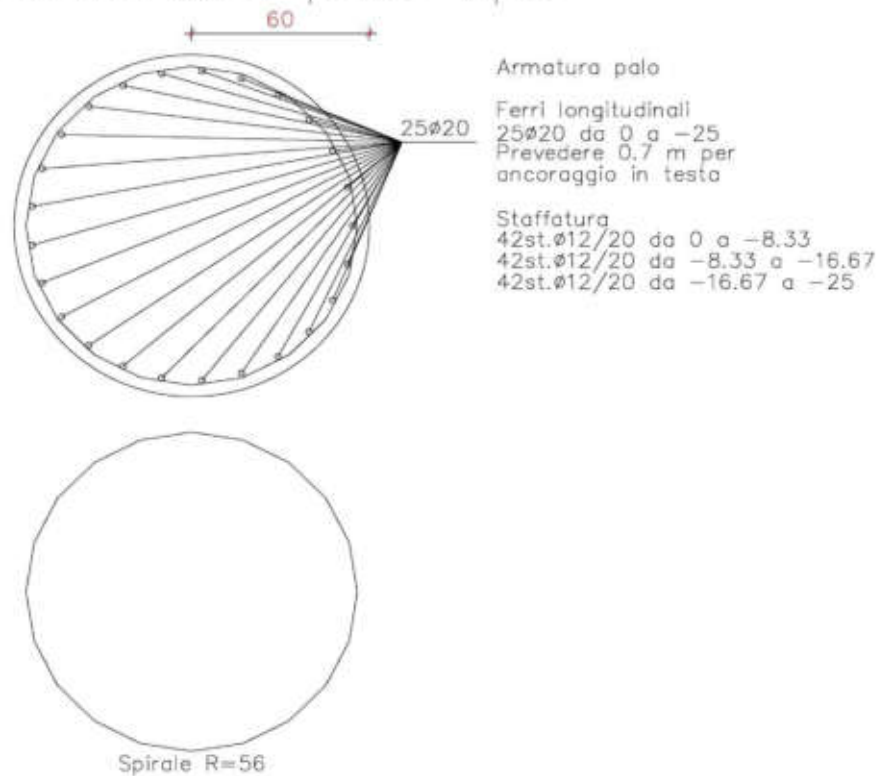


| | | | |
|---|-----------|----------|--------------|
| Computo sezione 6 (sezione attacco al nucleo concentrico 100x260) | | | |
| nl | #18 | #20 | #20 |
| kg | 43,82 | 15,00 | 18,78 |
| tot. | kg 77,46 | kg 33,78 | kg 111,24 |
| tot. | kg 207,46 | mc 2,60 | kg/mc 102,87 |

Figura 9

ARMATURA DEL PALO TIPO

Armatura palo tipo



| | | |
|-----------------|------------|--------------------------|
| Computo palo 14 | | |
| | Ø12 | Ø20 |
| m | 441.52 | 642.50 |
| kg | 391.99 | 1584.50 |
| Tot: | kg 1976.49 | - mc 28.27 - kg/mc 69.90 |

Figura 11

| | | | | |
|---|---|--|--------------|----------------|
|  | <p>PARCO EOLICO "SCRUDATO"</p> |   | | |
| | <p>RELAZIONE DI PREDIMENSIONAMENTO DELLE FONDAZIONI</p> | <p>26/05/2023</p> | <p>REV.1</p> | <p>Pag. 22</p> |

RELAZIONE DI CALCOLO

Relazione di calcolo
Sommario

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| Palo n. 1 | 30 |
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| Palo n. 2 | 33 |
| Da 0 a -25 | 34 |
| Palo n. 3 | 37 |
| Da 0 a -25 | 38 |
| Palo n. 4 | 40 |
| Da 0 a -25 | 41 |
| Palo n. 5 | 43 |
| Da 0 a -25 | 44 |
| Palo n. 6 | 46 |
| Da 0 a -25 | 47 |
| Palo n. 7 | 50 |
| Da 0 a -25 | 50 |
| Palo n. 8 | 53 |
| Da 0 a -25 | 54 |
| Palo n. 9 | 57 |
| Da 0 a -25 | 57 |
| Palo n. 10 | 61 |
| Da 0 a -25 | 61 |
| Palo n. 11 | 64 |
| Da 0 a -25 | 65 |
| Palo n. 12 | 68 |
| Da 0 a -25 | 69 |
| Palo n. 13 | 72 |
| Da 0 a -25 | 73 |
| Palo n. 14 | 76 |
| Da 0 a -25 | 76 |

Relazione di calcolo

| | |
|---|------------|
| Palo n. 15 | 80 |
| Da 0 a -25 | 80 |
| Palo n. 16 | 83 |
| Da 0 a -25 | 84 |
| Palo n. 17 | 87 |
| Da 0 a -25 | 88 |
| Palo n. 18 | 91 |
| Da 0 a -25 | 91 |
| Palo n. 19 | 95 |
| Da 0 a -25 | 95 |
| Palo n. 20 | 98 |
| Da 0 a -25 | 99 |
| Palo n. 21 | 101 |
| Da 0 a -25 | 102 |
| Palo n. 22 | 105 |
| Da 0 a -25 | 105 |
| Palo n. 23 | 108 |
| Da 0 a -25 | 108 |
| Palo n. 24 | 111 |
| Da 0 a -25 | 111 |
| Palo n. 25 | 114 |
| Da 0 a -25 | 114 |
| Palo n. 26 | 117 |
| Da 0 a -25 | 118 |
| Palo n. 27 | 120 |
| Da 0 a -25 | 121 |
| Palo n. 28 | 124 |
| Da 0 a -25 | 124 |
| Palo n. 29 | 127 |
| Da 0 a -25 | 128 |
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Relazione di calcolo

- Circolare n. 7 del 21/1/2019 - Istruzioni per l'applicazione dell'«Aggiornamento delle "Norme tecniche per le costruzioni"» di cui al decreto ministeriale 17 gennaio 2018.

- Documento Tecnico CNR-DT 200 R1/2012 - Istruzioni per la Progettazione, l'Esecuzione ed il Controllo di Interventi di Consolidamento Statico mediante l'utilizzo di Compositi Fibrorinforzati.

- Eurocodice 3 - Progettazione delle strutture in acciaio.

Unità di misura

Le unità di misura adottate sono le seguenti:

- lunghezze : m
- forze : daN
- masse : kg
- temperature : gradi centigradi
- angoli : gradi sessadecimali o radianti

Geometria

Elenco vincoli nodi

Simbologia

Comm. = Commento

Kt = Coeff. di sottofondo su suolo elastico alla Winkler

Ly = Lunghezza (dir. Y locale)

Lz = Larghezza (dir. Z locale)

RL = Rotazione libera

Rx = Rotazione intorno all'asse X (L=libera, B=bloccata, E=elastica)

Ry = Rotazione intorno all'asse Y (L=libera, B=bloccata, E=elastica)

Rz = Rotazione intorno all'asse Z (L=libera, B=bloccata, E=elastica)

Sx = Spostamento in dir. X (L=libero, B=bloccato, E=elastico)

Sy = Spostamento in dir. Y (L=libero, B=bloccato, E=elastico)

Sz = Spostamento in dir. Z (L=libero, B=bloccato, E=elastico)

TV = Tipo vincolo se valutato da stratigrafia

SP = Plinto senza pali

CP = Palo o plinto con pali

Vn = Numero del vincolo nodo

| Vn | Comm. | TV | Sx | Sy | Sz | Rx | Ry | Rz | RL | Ly <m> | Lz <m> | Kt <daN/cm> |
|----|--------|----|----|----|----|----|----|----|----|-----------|-----------|----------------|
| 1 | Libero | | L | L | L | L | L | L | | | | |
| 4 | palo | CP | E | E | E | E | E | B | | | | f{strat.} |
| 4 | palo | SP | B | B | E | B | B | B | | | | f{strat.} |

Elenco costanti elastiche nodali

Simbologia

KRx = Costante elastica intorno all'asse X

KRy = Costante elastica intorno all'asse Y

KRz = Costante elastica intorno all'asse Z

Kx = Costante elastica in dir. X

Ky = Costante elastica in dir. Y

Kz = Costante elastica in dir. Z

Nodo = Numero del nodo

| Nodo | Kx <daN/cm> | Ky <daN/cm> | Kz <daN/cm> | KRx <daNm/rad> | KRy <daNm/rad> | KRz <daNm/rad> |
|------|----------------|----------------|----------------|-------------------|-------------------|-------------------|
| -167 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -166 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -163 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -162 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -155 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -154 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -153 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -152 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -143 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -142 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -139 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -138 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -127 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -126 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -105 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -104 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -81 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -78 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -45 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -44 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -41 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -40 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -29 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |

Relazione di calcolo

| | | | | | | |
|-----|----------|----------|-----------|-------------|-------------|----|
| -28 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -23 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -22 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -17 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -16 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -15 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -8 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -7 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -4 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |
| -3 | 23177.10 | 23177.10 | 141442.00 | 53208800.00 | 53208800.00 | -- |

Elenco nodi

Simbologia

Imp. = Numero dell'impalcato

Nodo = Numero del nodo

Vn = Numero del vincolo nodo

X = Coordinata X del nodo

Y = Coordinata Y del nodo

Z = Coordinata Z del nodo

| Nodo | X <m> | Y <m> | Z <m> | Imp. | Vn |
|------|----------|----------|----------|------|----|
| -169 | 13.21 | 23.38 | 0.00 | 0 | 1 |
| -168 | 9.79 | 23.38 | 0.00 | 0 | 1 |
| -167 | 13.09 | 22.58 | 0.00 | 0 | 4 |
| -166 | 9.91 | 22.58 | 0.00 | 0 | 4 |
| -165 | 16.48 | 22.40 | 0.00 | 0 | 1 |
| -164 | 6.51 | 22.40 | 0.00 | 0 | 1 |
| -163 | 16.15 | 21.68 | 0.00 | 0 | 4 |
| -162 | 6.85 | 21.68 | 0.00 | 0 | 4 |
| -161 | 12.85 | 20.90 | 0.00 | 0 | 1 |
| -160 | 10.15 | 20.90 | 0.00 | 0 | 1 |
| -159 | 19.36 | 20.57 | 0.00 | 0 | 1 |
| -158 | 3.64 | 20.57 | 0.00 | 0 | 1 |
| -157 | 15.44 | 20.14 | 0.00 | 0 | 1 |
| -156 | 7.56 | 20.14 | 0.00 | 0 | 1 |
| -155 | 18.84 | 19.96 | 0.00 | 0 | 4 |
| -154 | 4.16 | 19.96 | 0.00 | 0 | 4 |
| -153 | 13.88 | 19.60 | 0.00 | 0 | 4 |
| -152 | 9.12 | 19.60 | 0.00 | 0 | 4 |
| -151 | 12.61 | 19.16 | 0.00 | 0 | 1 |
| -150 | 10.39 | 19.16 | 0.00 | 0 | 1 |
| -149 | 17.72 | 18.67 | 0.00 | 0 | 1 |
| -148 | 5.28 | 18.67 | 0.00 | 0 | 1 |
| -147 | 14.72 | 18.54 | 0.00 | 0 | 1 |
| -146 | 8.28 | 18.54 | 0.00 | 0 | 1 |
| -145 | 21.56 | 17.99 | 0.00 | 0 | 1 |
| -144 | 1.40 | 17.99 | 0.00 | 0 | 1 |
| -143 | 20.92 | 17.55 | 0.00 | 0 | 4 |
| -142 | 2.08 | 17.55 | 0.00 | 0 | 4 |
| -141 | 16.57 | 17.35 | 0.00 | 0 | 1 |
| -140 | 6.43 | 17.35 | 0.00 | 0 | 1 |
| -139 | 17.88 | 17.03 | 0.00 | 0 | 4 |
| -138 | 5.12 | 17.03 | 0.00 | 0 | 4 |
| -137 | 19.49 | 16.62 | 0.00 | 0 | 1 |
| -136 | 3.51 | 16.62 | 0.00 | 0 | 1 |
| -135 | 18.01 | 15.69 | 0.00 | 0 | 1 |
| -134 | 4.99 | 15.69 | 0.00 | 0 | 1 |
| -133 | 12.06 | 15.43 | 0.00 | 0 | 1 |
| -132 | 10.94 | 15.43 | 0.00 | 0 | 1 |
| -131 | 13.15 | 15.11 | 0.00 | 0 | 1 |
| -130 | 9.85 | 15.11 | 0.00 | 0 | 1 |
| -129 | 23.01 | 14.87 | 0.00 | 0 | 1 |
| -128 | -0.01 | 14.87 | 0.00 | 0 | 1 |
| -127 | 22.25 | 14.65 | 0.00 | 0 | 4 |
| -126 | 0.75 | 14.65 | 0.00 | 0 | 4 |
| -125 | 14.11 | 14.50 | 0.00 | 0 | 1 |
| -124 | 8.89 | 14.50 | 0.00 | 0 | 1 |
| -123 | 20.67 | 14.17 | 0.00 | 0 | 1 |
| -122 | 2.39 | 14.17 | 0.00 | 0 | 1 |
| -121 | 11.83 | 13.83 | 0.00 | 0 | 1 |
| -120 | 11.17 | 13.83 | 0.00 | 0 | 1 |
| -119 | 18.93 | 13.69 | 0.00 | 0 | 1 |
| -118 | 4.07 | 13.69 | 0.00 | 0 | 1 |
| -117 | 14.86 | 13.64 | 0.00 | 0 | 1 |
| -116 | 12.48 | 13.64 | 0.00 | 0 | 1 |

Relazione di calcolo

| | | | | | |
|------|-------|-------|------|---|---|
| -113 | 10.52 | 13.64 | 0.93 | 0 | 2 |
| -114 | 8.16 | 13.64 | 0.93 | 0 | 2 |
| -115 | 13.10 | 13.78 | 0.93 | 0 | 1 |
| -116 | 9.98 | 13.78 | 0.93 | 0 | 1 |
| -117 | 11.06 | 13.90 | 0.93 | 0 | 1 |
| -118 | 10.80 | 13.90 | 0.93 | 0 | 1 |
| -119 | 10.12 | 12.77 | 0.93 | 0 | 2 |
| -120 | 12.48 | 12.77 | 0.93 | 0 | 2 |
| -121 | 9.36 | 12.77 | 0.93 | 0 | 1 |
| -122 | 10.21 | 12.78 | 0.93 | 0 | 1 |
| -123 | 18.18 | 12.80 | 0.93 | 0 | 4 |
| -124 | 9.75 | 12.80 | 0.93 | 0 | 4 |
| -125 | 13.35 | 12.61 | 0.93 | 0 | 2 |
| -126 | 7.85 | 12.61 | 0.93 | 0 | 2 |
| -127 | 11.21 | 12.69 | 0.93 | 0 | 1 |
| -128 | 11.88 | 12.68 | 0.93 | 0 | 1 |
| -129 | 8.88 | 12.85 | 0.93 | 0 | 1 |
| -130 | 10.16 | 12.79 | 0.93 | 0 | 1 |
| -131 | 12.75 | 12.16 | 0.93 | 0 | 2 |
| -132 | 9.24 | 12.16 | 0.93 | 0 | 2 |
| -133 | 9.85 | 12.07 | 0.93 | 0 | 1 |
| -134 | 12.10 | 12.07 | 0.93 | 0 | 1 |
| -135 | 12.18 | 11.39 | 0.93 | 0 | 1 |
| -136 | 10.28 | 11.83 | 0.93 | 0 | 2 |
| -137 | 9.75 | 11.61 | 0.93 | 0 | 2 |
| -138 | 11.98 | 11.63 | 0.93 | 0 | 1 |
| -139 | 13.85 | 11.60 | 0.93 | 0 | 1 |
| -140 | 11.50 | 11.60 | 0.93 | 0 | 1 |
| -141 | 8.75 | 11.60 | 0.93 | 0 | 1 |
| -142 | 10.24 | 11.49 | 0.93 | 0 | 2 |
| -143 | 12.49 | 11.49 | 0.93 | 0 | 2 |
| -144 | 7.57 | 11.79 | 0.93 | 0 | 1 |
| -145 | 8.78 | 11.79 | 0.93 | 0 | 1 |
| -146 | 11.50 | 11.49 | 0.93 | 0 | 1 |
| -147 | 12.10 | 11.49 | 0.93 | 0 | 4 |
| -148 | 11.00 | 11.42 | 0.93 | 0 | 2 |
| -149 | 11.00 | 11.42 | 0.93 | 0 | 2 |
| -150 | 11.89 | 11.78 | 0.93 | 0 | 1 |
| -151 | 11.50 | 11.78 | 0.93 | 0 | 1 |
| -152 | 12.45 | 11.77 | 0.93 | 0 | 1 |
| -153 | 10.56 | 11.77 | 0.93 | 0 | 1 |
| -154 | 9.99 | 11.02 | 0.93 | 0 | 2 |
| -155 | 12.75 | 12.84 | 0.93 | 0 | 2 |
| -156 | 9.37 | 10.89 | 0.93 | 0 | 1 |
| -157 | 11.89 | 10.90 | 0.93 | 0 | 1 |
| -158 | 10.10 | 10.90 | 0.93 | 0 | 1 |
| -159 | 11.81 | 10.91 | 0.93 | 0 | 1 |
| -160 | 11.10 | 10.60 | 0.93 | 0 | 2 |
| -161 | 12.48 | 10.44 | 0.93 | 0 | 2 |
| -162 | 10.55 | 10.77 | 0.93 | 0 | 1 |
| -163 | 11.85 | 10.89 | 0.93 | 0 | 1 |
| -164 | 8.65 | 10.91 | 0.93 | 0 | 1 |
| -165 | 11.48 | 10.79 | 0.93 | 0 | 1 |
| -166 | 9.52 | 10.23 | 0.93 | 0 | 2 |
| -167 | 11.67 | 10.08 | 0.93 | 0 | 2 |
| -168 | 11.88 | 10.08 | 0.93 | 0 | 1 |
| -169 | 13.01 | 9.77 | 0.93 | 0 | 1 |
| -170 | 9.86 | 9.77 | 0.93 | 0 | 1 |
| -171 | 12.48 | 9.79 | 0.93 | 0 | 1 |
| -172 | 10.52 | 9.26 | 0.93 | 0 | 2 |
| -173 | 14.98 | 9.24 | 0.93 | 0 | 2 |
| -174 | 8.77 | 9.39 | 0.93 | 0 | 1 |
| -175 | 18.18 | 9.31 | 0.93 | 0 | 1 |
| -176 | 4.10 | 9.31 | 0.93 | 0 | 1 |
| -177 | 11.83 | 9.17 | 0.93 | 0 | 2 |
| -178 | 11.17 | 9.17 | 0.93 | 0 | 2 |
| -179 | 10.87 | 8.83 | 0.93 | 0 | 1 |
| -180 | 11.89 | 8.83 | 0.93 | 0 | 1 |
| -181 | 14.77 | 8.49 | 0.93 | 0 | 1 |
| -182 | 11.18 | 8.49 | 0.93 | 0 | 1 |
| -183 | 12.25 | 8.23 | 0.93 | 0 | 4 |
| -184 | 0.75 | 8.23 | 0.93 | 0 | 4 |
| -185 | 13.10 | 8.77 | 0.93 | 0 | 1 |
| -186 | 0.10 | 8.77 | 0.93 | 0 | 1 |
| -187 | 18.78 | 8.99 | 0.93 | 0 | 4 |
| -188 | 11.83 | 8.99 | 0.93 | 0 | 4 |

Relazione di calcolo

| | | | | | |
|-----|-------|-------|------|---|---|
| -39 | 13.15 | 7.87 | 0.00 | 0 | 1 |
| -38 | 9.85 | 7.87 | 0.00 | 0 | 1 |
| -37 | 12.06 | 7.55 | 0.00 | 0 | 1 |
| -36 | 10.94 | 7.55 | 0.00 | 0 | 1 |
| -35 | 18.01 | 7.31 | 0.00 | 0 | 1 |
| -34 | 4.99 | 7.31 | 0.00 | 0 | 1 |
| -33 | 19.49 | 6.37 | 0.00 | 0 | 1 |
| -32 | 3.51 | 6.37 | 0.00 | 0 | 1 |
| -31 | 16.57 | 5.65 | 0.00 | 0 | 1 |
| -30 | 6.43 | 5.65 | 0.00 | 0 | 1 |
| -29 | 2.08 | 5.45 | 0.00 | 0 | 4 |
| -28 | 20.92 | 5.43 | 0.00 | 0 | 4 |
| -27 | 21.56 | 5.01 | 0.00 | 0 | 1 |
| -26 | 1.40 | 5.01 | 0.00 | 0 | 1 |
| -25 | 14.72 | 4.46 | 0.00 | 0 | 1 |
| -24 | 8.28 | 4.46 | 0.00 | 0 | 1 |
| -23 | 16.06 | 4.40 | 0.00 | 0 | 4 |
| -22 | 6.94 | 4.40 | 0.00 | 0 | 4 |
| -21 | 17.72 | 4.32 | 0.00 | 0 | 1 |
| -20 | 5.28 | 4.32 | 0.00 | 0 | 1 |
| -19 | 12.61 | 3.84 | 0.00 | 0 | 1 |
| -18 | 10.39 | 3.84 | 0.00 | 0 | 1 |
| -17 | 11.50 | 3.06 | 0.00 | 0 | 4 |
| -16 | 18.84 | 3.04 | 0.00 | 0 | 4 |
| -15 | 4.16 | 3.04 | 0.00 | 0 | 4 |
| -14 | 15.44 | 2.86 | 0.00 | 0 | 1 |
| -13 | 7.56 | 2.86 | 0.00 | 0 | 1 |
| -12 | 19.36 | 2.43 | 0.00 | 0 | 1 |
| -11 | 3.64 | 2.43 | 0.00 | 0 | 1 |
| -10 | 12.85 | 2.10 | 0.00 | 0 | 1 |
| -9 | 10.15 | 2.10 | 0.00 | 0 | 1 |
| -8 | 16.15 | 1.32 | 0.00 | 0 | 4 |
| -7 | 6.85 | 1.32 | 0.00 | 0 | 4 |
| -6 | 16.48 | 0.58 | 0.00 | 0 | 1 |
| -5 | 6.51 | 0.58 | 0.00 | 0 | 1 |
| -4 | 13.09 | 0.42 | 0.00 | 0 | 4 |
| -3 | 9.91 | 0.42 | 0.00 | 0 | 4 |
| -2 | 13.21 | -0.38 | 0.00 | 0 | 1 |
| -1 | 9.79 | -0.38 | 0.00 | 0 | 1 |

Elenco materiali

Simbologia

α = Coeff. di dilatazione termica
 ν = Coeff. di Poisson
 Comm. = Commento
 E = Modulo elastico
 G = Modulo elastico tangenziale
 Mat. = Numero del materiale
 P = Peso specifico

| Mat. | Comm. | P <daN/mc> | E <daN/cm ² > | G <daN/cm ² > | ν | α |
|------|----------------------------|---------------|-----------------------------|-----------------------------|-------|----------|
| 10 | Calcestruzzo classe C40/50 | 2500 | 355471.00 | 161578.00 | 0.1 | 1.00E-05 |

Elenco sezioni aste

Simbologia

B = Base
 C = Numero del criterio di progetto
 Comm. = Commento
 Crit. C.F. = Criterio di progetto collegamento finale
 Crit. C.I. = Criterio di progetto collegamento iniziale
 H = Altezza
 Ma = Numero del materiale
 Mem. = Membratura
 G = Generica
 Sez. = Numero della sezione
 Tipo = Tipologia
 R = Rettangolare
 Ver. = Verifica prevista
 C = Cemento armato

| Sez. | Comm. | Tipo | Mem. | Ver. | B <cm> | H <cm> | Ma | C | Crit. C.I. | Crit. C.F. |
|------|--|------|------|------|-----------|-----------|----|---|------------|------------|
| 1 | Sezione d'attacco pali ext radiale 319x150 | R | G | C | 319.00 | 150.00 | 10 | 3 | | |
| 2 | Sezione attacco testa pali ext concentr. 120x150 | R | G | C | 120.00 | 150.00 | 10 | 3 | | |
| 3 | Sezione attacco pali int. radiale 258x150 | R | G | C | 258.00 | 150.00 | 10 | 3 | | |
| 4 | Sezione attacco pali int. concentr. 120x150 | R | G | C | 120.00 | 150.00 | 10 | 3 | | |
| 5 | Sezione attacco al nucleo radiale 114x260 | R | G | C | 114.00 | 260.00 | 10 | 3 | | |

Relazione di calcolo

| | | | | | | | | | | |
|----|---|---|---|---|--------|--------|----|---|--|--|
| 6 | Sezione attacco al nucleo concentrica 100x260 | R | G | C | 100.00 | 260.00 | 10 | 3 | | |
| 7 | Sezione attacco al nucleo concentrica H=350 114x350 | R | G | C | 114.00 | 350.00 | 10 | 3 | | |
| 8 | Sezione attacco al nucleo radiale H=350: 67x350 | R | G | C | 67.00 | 350.00 | 10 | 3 | | |
| 9 | Sezione attacco al nucleo, concentrica H=350: 100x350 | R | G | C | 100.00 | 350.00 | 10 | 3 | | |
| 10 | SEZIONE ATTACCO POST. DEL PALO POSTERIORE: 258X260 | R | G | C | 258.00 | 260.00 | 10 | 3 | | |

Elenco tipi elementi bidimensionali

Simbologia

Ang. att. = Angolo di attrito
 Ang. dil. = Angolo di dilatanza
 Coes. = Coesione
 Comm. = Commento
 Crit. = Numero del criterio di progetto
 DP = Drucker-Prager
 Kt = Coeff. di sottofondo su suolo elastico alla Winkler
 Mat. = Numero del materiale
 Spess. = Spessore
 Tb = Numero del tipo muro/elemento bidimensionale
 Tipo = Tipologia
 F = Membranale e Flessionale
 M = Membranale
 W-RC = Winkler resistente solo a compressione
 W-RTC = Winkler resistente a trazione e a compressione
 Uso = Utilizzo
 S = Soletta/Platea

| Tb | Comm. | Tipo | Uso | Spess. <cm> | Kt <daN/cm> | DP | Ang. att. <grad> | Coes. <daN/mq> | Ang. dil. <grad> | Crit. | Mat. |
|----|-------------------|------|-----|----------------|----------------|----|---------------------|-------------------|---------------------|-------|------|
| 1 | Platea h=1.50 mt | F | S | 150.00 | | N | 0.00 | 0.00 | 0.00 | 3 | 10 |
| 2 | Platea H=2.6 mt | F | S | 260.00 | | N | 0.00 | 0.00 | 0.00 | 3 | 10 |
| 3 | Platea H= 3.50 mt | F | S | 350.00 | | N | 0.00 | 0.00 | 0.00 | 3 | 10 |

Elenco elementi bidimensionali

Simbologia

Bid. = Numero del muro/elemento bidimensionale
 Dy1 = Scost. filo fisso Y1
 Dy2 = Scost. filo fisso Y2
 FF = Filo fisso
 Kt = Coeff. di sottofondo su suolo elastico alla Winkler
 NN = Nodi
 Tb = Numero del tipo muro/elemento bidimensionale

| Bid. | Tb | FF | Dy1 <cm> | Dy2 <cm> | Kt <daN/cm> | NN |
|------|----|----|-------------|-------------|----------------|---------------------|
| 2 | 2 | 33 | 0.00 | 0.00 | | -140 -134 -114 -124 |
| 2 | 2 | 33 | 0.00 | 0.00 | | -146 -140 -124 -130 |
| 2 | 2 | 33 | 0.00 | 0.00 | | -52 -34 -54 -64 |
| 2 | 2 | 33 | 0.00 | 0.00 | | -83 -52 -64 -84 |
| 2 | 2 | 33 | 0.00 | 0.00 | | -150 -146 -130 -132 |
| 2 | 2 | 33 | 0.00 | 0.00 | | -151 -150 -132 -133 |
| 2 | 2 | 33 | 0.00 | 0.00 | | -147 -151 -133 -131 |
| 2 | 2 | 33 | 0.00 | 0.00 | | -141 -147 -131 -125 |
| 2 | 2 | 33 | 0.00 | 0.00 | | -135 -141 -125 -117 |
| 2 | 2 | 33 | 0.00 | 0.00 | | -119 -135 -117 -103 |
| 2 | 2 | 33 | 0.00 | 0.00 | | -86 -119 -103 -85 |
| 2 | 2 | 33 | 0.00 | 0.00 | | -53 -86 -85 -65 |
| 2 | 2 | 33 | 0.00 | 0.00 | | -35 -53 -65 -55 |
| 2 | 2 | 33 | 0.00 | 0.00 | | -31 -35 -55 -47 |
| 2 | 2 | 33 | 0.00 | 0.00 | | -25 -31 -47 -39 |
| 2 | 2 | 33 | 0.00 | 0.00 | | -19 -25 -39 -37 |
| 2 | 2 | 33 | 0.00 | 0.00 | | -18 -19 -37 -36 |
| 2 | 2 | 33 | 0.00 | 0.00 | | -24 -18 -36 -38 |
| 2 | 1 | 33 | 0.00 | 0.00 | | -13 -9 -18 -24 |
| 2 | 1 | 33 | 0.00 | 0.00 | | -163 -167 -161 -157 |
| 2 | 1 | 33 | 0.00 | 0.00 | | -160 -152 -150 |
| 2 | 1 | 33 | 0.00 | 0.00 | | -169 -168 -166 -167 |
| 2 | 1 | 33 | 0.00 | 0.00 | | -32 -20 -30 -34 |
| 2 | 1 | 33 | 0.00 | 0.00 | | -155 -163 -157 -149 |
| 2 | 1 | 33 | 0.00 | 0.00 | | -152 -146 -150 |
| 2 | 1 | 33 | 0.00 | 0.00 | | -143 -155 -149 -137 |
| 2 | 1 | 33 | 0.00 | 0.00 | | -79 -48 -52 -83 |
| 2 | 1 | 33 | 0.00 | 0.00 | | -77 -42 -44 -78 |
| 2 | 1 | 33 | 0.00 | 0.00 | | -152 -156 -146 |
| 2 | 1 | 33 | 0.00 | 0.00 | | -128 -77 -78 -126 |
| 2 | 2 | 33 | 0.00 | 0.00 | | -118 -83 -84 -102 |
| 2 | 2 | 33 | 0.00 | 0.00 | | -134 -118 -102 -114 |
| 2 | 1 | 33 | 0.00 | 0.00 | | -136 -122 -118 -134 |
| 2 | 1 | 33 | 0.00 | 0.00 | | -144 -128 -126 -142 |

Relazione di calcolo

| | | | | | | | | | |
|---|----|------|------|------|------|------|------|------|------|
| 2 | 22 | 0,00 | 0,00 | | -102 | 103 | 107 | | |
| 2 | 22 | 0,00 | 0,00 | | -108 | 144 | 160 | 156 | |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 106 | 146 | 150 | 148 |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 107 | 106 | 104 | 106 |
| 2 | 1 | 33 | 0,00 | 0,00 | | -146 | -141 | -139 | |
| 2 | 1 | 33 | 0,00 | 0,00 | | -166 | -169 | -160 | -160 |
| 2 | 22 | 0,00 | 0,00 | | -102 | 100 | 100 | 100 | |
| 2 | 22 | 0,00 | 0,00 | | -100 | 100 | 100 | 100 | |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 109 | 106 | 109 | |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 110 | 106 | 106 | 108 |
| 2 | 1 | 33 | 0,00 | 0,00 | | -146 | -140 | -140 | -147 |
| 2 | 1 | 33 | 0,00 | 0,00 | | -160 | -164 | -160 | -166 |
| 2 | 22 | 0,00 | 0,00 | | -142 | 100 | 109 | | |
| 2 | 22 | 0,00 | 0,00 | | -100 | 140 | 160 | 127 | |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 123 | 107 | 106 | 119 |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 127 | 140 | 109 | 108 |
| 2 | 1 | 33 | 0,00 | 0,00 | | -143 | -140 | -150 | |
| 2 | 1 | 33 | 0,00 | 0,00 | | -80 | -109 | -107 | -80 |
| 2 | 22 | 0,00 | 0,00 | | -49 | 80 | 86 | 80 | |
| 2 | 22 | 0,00 | 0,00 | | -40 | 82 | 82 | 40 | |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 103 | 101 | 102 | |
| 2 | 1 | 33 | 0,00 | 0,00 | | -81 | -70 | -100 | -80 |
| 2 | 1 | 33 | 0,00 | 0,00 | | -81 | -100 | -100 | -81 |
| 2 | 22 | 0,00 | 0,00 | | -87 | 63 | 63 | 88 | |
| 2 | 22 | 0,00 | 0,00 | | -102 | 101 | 100 | | |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 40 | 87 | 80 | 40 |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 10 | 10 | 10 | 10 |
| 2 | 1 | 33 | 0,00 | 0,00 | | -88 | -85 | -80 | -80 |
| 2 | 1 | 33 | 0,00 | 0,00 | | -160 | -106 | -100 | |
| 2 | 22 | 0,00 | 0,00 | | -10 | 27 | 28 | 10 | |
| 2 | 22 | 0,00 | 0,00 | | -34 | 30 | 46 | 34 | |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 60 | 67 | 38 | 40 |
| ✓ | 3 | 33 | 0,00 | 0,00 | | 40 | 88 | 86 | 80 |
| 2 | 3 | 33 | 0,00 | 0,00 | | -84 | -86 | -80 | -80 |
| 2 | 3 | 33 | 0,00 | 0,00 | | -84 | -84 | -70 | -80 |
| 2 | 22 | 0,00 | 0,00 | | -100 | 84 | 87 | 86 | |
| ✓ | 3 | 33 | 0,00 | 0,00 | | 110 | 100 | 96 | 100 |
| ✓ | 3 | 33 | 0,00 | 0,00 | | 100 | 114 | 100 | 110 |
| 2 | 3 | 33 | 0,00 | 0,00 | | -100 | -104 | -110 | -115 |
| 2 | 3 | 33 | 0,00 | 0,00 | | -100 | -100 | -110 | -100 |
| 2 | 22 | 0,00 | 0,00 | | -100 | 100 | 120 | 120 | |
| 2 | 22 | 0,00 | 0,00 | | -102 | 100 | 121 | 100 | |
| ✓ | 3 | 33 | 0,00 | 0,00 | | 100 | 101 | 110 | 110 |
| ✓ | 3 | 33 | 0,00 | 0,00 | | 110 | 100 | 110 | 100 |
| 2 | 3 | 33 | 0,00 | 0,00 | | -100 | -110 | -100 | -80 |
| 2 | 3 | 33 | 0,00 | 0,00 | | -80 | -100 | -80 | -80 |
| 2 | 22 | 0,00 | 0,00 | | -80 | 80 | 80 | 70 | |
| 2 | 22 | 0,00 | 0,00 | | -80 | 80 | 70 | 80 | |
| ✓ | 3 | 33 | 0,00 | 0,00 | | 40 | 50 | 60 | 80 |
| ✓ | 3 | 33 | 0,00 | 0,00 | | 60 | 67 | 69 | 80 |
| 2 | 3 | 33 | 0,00 | 0,00 | | -80 | -78 | -80 | -81 |
| 2 | 3 | 33 | 0,00 | 0,00 | | -80 | -80 | -80 | -80 |
| 2 | 22 | 0,00 | 0,00 | | -80 | -80 | -80 | -80 | |
| 2 | 22 | 0,00 | 0,00 | | -80 | 80 | 80 | 80 | |
| ✓ | 3 | 33 | 0,00 | 0,00 | | 80 | 88 | 80 | |
| 2 | 3 | 33 | 0,00 | 0,00 | | -80 | -80 | -80 | -80 |
| 2 | 3 | 33 | 0,00 | 0,00 | | -80 | -80 | -80 | -80 |
| 2 | 22 | 0,00 | 0,00 | | -80 | 80 | 80 | | |
| 2 | 22 | 0,00 | 0,00 | | -80 | 80 | 80 | 80 | |
| ✓ | 3 | 33 | 0,00 | 0,00 | | 80 | 87 | 87 | 80 |
| ✓ | 3 | 33 | 0,00 | 0,00 | | 80 | 80 | 87 | 80 |
| 2 | 3 | 33 | 0,00 | 0,00 | | -80 | -87 | -80 | -80 |
| 2 | 22 | 0,00 | 0,00 | | -80 | 80 | 76 | | |
| 2 | 22 | 0,00 | 0,00 | | -80 | 76 | 84 | | |
| ✓ | 3 | 33 | 0,00 | 0,00 | | 100 | 80 | 80 | |
| ✓ | 3 | 33 | 0,00 | 0,00 | | 80 | 88 | 100 | |
| 2 | 3 | 33 | 0,00 | 0,00 | | -84 | -85 | -80 | -80 |
| 2 | 3 | 33 | 0,00 | 0,00 | | -100 | -110 | -100 | -80 |
| 2 | 22 | 0,00 | 0,00 | | -110 | 110 | 109 | 100 | |
| 2 | 22 | 0,00 | 0,00 | | -84 | 101 | 100 | 100 | |
| ✓ | 3 | 33 | 0,00 | 0,00 | | 110 | 101 | 100 | 109 |
| ✓ | 3 | 33 | 0,00 | 0,00 | | 100 | 100 | 111 | 100 |
| 2 | 3 | 33 | 0,00 | 0,00 | | -100 | -110 | -110 | -110 |
| 2 | 3 | 33 | 0,00 | 0,00 | | -100 | -111 | -110 | -80 |

Relazione di calcolo

| | | | | | | | | | |
|---|---|----|------|------|--|------|------|------|------|
| 2 | 3 | 22 | 0,00 | 0,00 | | -106 | 81 | 110 | |
| 2 | 3 | 22 | 0,00 | 0,00 | | -70 | 73 | 83 | 90 |
| ✓ | 3 | 33 | 0,00 | 0,00 | | 84 | 97 | 93 | 80 |
| ✓ | 3 | 33 | 0,00 | 0,00 | | 76 | 90 | 93 | 81 |
| 2 | 3 | 33 | 0,00 | 0,00 | | -84 | -80 | -87 | -100 |
| 2 | 3 | 33 | 0,00 | 0,00 | | -68 | -57 | -68 | -60 |
| 2 | 3 | 22 | 0,00 | 0,00 | | -19 | 63 | 71 | 87 |
| 2 | 3 | 22 | 0,00 | 0,00 | | -69 | 67 | 71 | 70 |
| ✓ | 3 | 33 | 0,00 | 0,00 | | 76 | 77 | 63 | 70 |
| ✓ | 3 | 33 | 0,00 | 0,00 | | 80 | 70 | 77 | 81 |
| 2 | 3 | 33 | 0,00 | 0,00 | | -67 | -68 | -68 | -80 |
| 2 | 3 | 33 | 0,00 | 0,00 | | -107 | -86 | -85 | -88 |
| 2 | 3 | 22 | 0,00 | 0,00 | | -80 | 87 | 81 | 90 |
| 2 | 3 | 22 | 0,00 | 0,00 | | -81 | 100 | 98 | 90 |
| ✓ | 3 | 33 | 0,00 | 0,00 | | 117 | 107 | 99 | 108 |
| ✓ | 3 | 33 | 0,00 | 0,00 | | 88 | 95 | 87 | 87 |
| 2 | 3 | 33 | 0,00 | 0,00 | | -110 | -110 | -106 | -110 |
| 2 | 3 | 33 | 0,00 | 0,00 | | -60 | -60 | -60 | -64 |
| 2 | - | 22 | 0,00 | 0,00 | | -10 | 28 | 22 | 21 |
| 2 | - | 22 | 0,00 | 0,00 | | -8 | 16 | 21 | 14 |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 1 | 8 | 11 | 10 |
| 2 | - | 33 | 0,00 | 0,00 | | -8 | -4 | -10 | -8 |
| 2 | - | 33 | 0,00 | 0,00 | | -8 | -8 | -8 | -10 |
| 2 | - | 22 | 0,00 | 0,00 | | -10 | 7 | 10 | 20 |
| 2 | - | 22 | 0,00 | 0,00 | | -107 | 100 | 101 | 101 |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 14 | 15 | 10 | 12 |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 11 | 19 | 37 | 18 |
| 2 | - | 33 | 0,00 | 0,00 | | -6 | -10 | -10 | -8 |
| 2 | - | 33 | 0,00 | 0,00 | | -68 | -44 | -48 | -58 |
| 2 | - | 22 | 0,00 | 0,00 | | -106 | 71 | 78 | 102 |
| 2 | - | 22 | 0,00 | 0,00 | | -8 | 6 | 1 | 4 |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 117 | 126 | 107 | 108 |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 7 | 11 | 4 | 8 |
| 2 | - | 33 | 0,00 | 0,00 | | -104 | -140 | -106 | -148 |
| 2 | - | 33 | 0,00 | 0,00 | | -8 | -8 | -8 | -8 |
| 2 | - | 22 | 0,00 | 0,00 | | -11 | 5 | 7 | 15 |
| 2 | - | 22 | 0,00 | 0,00 | | -100 | 104 | 101 | 106 |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 16 | 11 | 10 | 12 |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 12 | 18 | 18 | 11 |
| 2 | - | 33 | 0,00 | 0,00 | | -104 | -100 | -106 | -100 |
| 2 | - | 33 | 0,00 | 0,00 | | -148 | -109 | -110 | |
| 2 | - | 22 | 0,00 | 0,00 | | -119 | 80 | 105 | |
| 2 | - | 22 | 0,00 | 0,00 | | -100 | 119 | 100 | |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 100 | 86 | 80 | |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 128 | 100 | 80 | |
| 2 | - | 33 | 0,00 | 0,00 | | -80 | -85 | -87 | |
| 2 | - | 33 | 0,00 | 0,00 | | -80 | -87 | -88 | |
| 2 | - | 22 | 0,00 | 0,00 | | -41 | 35 | 22 | |
| 2 | - | 22 | 0,00 | 0,00 | | -41 | 33 | 49 | |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 10 | 10 | 18 | |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 16 | 10 | 14 | |
| 2 | - | 33 | 0,00 | 0,00 | | -80 | -74 | -87 | |
| 2 | - | 33 | 0,00 | 0,00 | | -81 | -80 | -87 | |
| 2 | - | 22 | 0,00 | 0,00 | | -11 | 17 | 19 | |
| 2 | - | 22 | 0,00 | 0,00 | | -11 | 8 | 17 | |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 10 | 9 | 16 | |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 14 | 17 | 16 | |
| 2 | - | 33 | 0,00 | 0,00 | | -80 | -80 | -87 | |
| 2 | - | 33 | 0,00 | 0,00 | | -80 | -80 | -88 | |
| 2 | - | 22 | 0,00 | 0,00 | | -22 | 13 | 24 | |
| 2 | - | 22 | 0,00 | 0,00 | | -20 | 22 | 24 | |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 12 | 18 | 16 | |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 18 | 16 | 16 | |
| 2 | - | 33 | 0,00 | 0,00 | | -40 | -40 | -44 | |
| 2 | - | 22 | 0,00 | 0,00 | | -20 | 40 | 24 | |
| 2 | - | 22 | 0,00 | 0,00 | | -100 | 104 | 101 | |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 127 | 74 | 104 | |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 107 | 74 | 84 | |
| 2 | - | 33 | 0,00 | 0,00 | | -118 | -104 | -80 | |
| 2 | - | 33 | 0,00 | 0,00 | | -148 | -109 | -140 | |
| 2 | - | 22 | 0,00 | 0,00 | | -148 | 100 | 131 | |
| 2 | - | 22 | 0,00 | 0,00 | | -138 | 100 | 134 | |
| ✓ | 1 | 33 | 0,00 | 0,00 | | 108 | 104 | 100 | |

Elenco tipi plinti/pali

Relazione di calcolo

Simbologia

Comm. = Commento
 Crit. = Numero del criterio di progetto
 Dp = Diametro pali
 Ip = Lunghezza pali
 R = Rotazione testa
 B = Bloccata
 L = Libera
 Tipo = Tipologia
 P = Palo
 Tl = Numero del tipo plinto/palo
 Tp = Tipo palo
 T = Trivellato

| Tl | Tipo | Tp | Comm. | Ip <m> | R | Dp <m> | Crit. |
|----|------|----|--------------|-----------|---|-----------|-------|
| 1 | P | T | Palo singolo | 25.00 | L | 1.20 | 3 |

Elenco plinti/pali

Simbologia

Kt = Coeff. di sottofondo su suolo elastico alla Winkler
 Nodo = Nodo plinto/palo
 PL = Plinto/Palo
 Tl = Numero del tipo plinto/palo

| PL | Tl | Nodo | Kt <daN/cm²> |
|----|----|------|-----------------|
| 1 | 1 | -40 | --- |
| 2 | 1 | -104 | --- |
| 3 | 1 | -138 | --- |
| 4 | 1 | -152 | --- |
| 5 | 1 | -153 | --- |
| 6 | 1 | -139 | --- |
| 7 | 1 | -105 | --- |
| 8 | 1 | -41 | --- |
| 9 | 1 | -23 | --- |
| 10 | 1 | -17 | --- |
| 11 | 1 | -22 | --- |
| 12 | 1 | -4 | --- |
| 13 | 1 | -3 | --- |
| 14 | 1 | -7 | --- |
| 15 | 1 | -15 | --- |
| 16 | 1 | -29 | --- |
| 17 | 1 | -44 | --- |
| 18 | 1 | -78 | --- |
| 19 | 1 | -126 | --- |
| 20 | 1 | -142 | --- |
| 21 | 1 | -154 | --- |
| 22 | 1 | -162 | --- |
| 23 | 1 | -166 | --- |
| 24 | 1 | -167 | --- |
| 25 | 1 | -163 | --- |
| 26 | 1 | -155 | --- |
| 27 | 1 | -143 | --- |
| 28 | 1 | -127 | --- |
| 29 | 1 | -81 | --- |
| 30 | 1 | -45 | --- |
| 31 | 1 | -28 | --- |
| 32 | 1 | -16 | --- |
| 33 | 1 | -8 | --- |

Carichi

Elenco tipi CCE

Simbologia

γ_{max} = Coeff. γ_{max}
 γ_{min} = Coeff. γ_{min}
 ψ_0 = Coeff. ψ_0
 $\psi_{0,s}$ = Coeff. ψ_0 sismico (D.M. 96)
 ψ_1 = Coeff. ψ_1
 ψ_2 = Coeff. ψ_2
 Comm. = Commento
 Durata = Durata del carico
 P = Permanente
 Tipo = Tipologia
 G = Permanente
 Qv = Variabile vento

Relazione di calcolo

Tipo CCE = Tipo condizione di carico elementare

| Tipo CCE | Comm. | Tipo | Durata | γ min. | γ max. | ψ_0 | ψ_1 | ψ_2 | $\psi_{0,s}$ |
|----------|--------------------------------|------|--------|---------------|---------------|----------|----------|----------|--------------|
| 1 | D.M. 18 Permanenti strutturali | G | P | 1.00 | 1.35 | | | | |

Condizioni di carico elementari

Simbologia

CCE = Numero della condizione di carico elementare
 Comm. = Commento
 Dir. = Direzione del vento
 Jpx = Moltiplicatore del momento d'inerzia intorno all'asse X
 Jpy = Moltiplicatore del momento d'inerzia intorno all'asse Y
 Jpz = Moltiplicatore del momento d'inerzia intorno all'asse Z
 Mx = Moltiplicatore della massa in dir. X
 My = Moltiplicatore della massa in dir. Y
 Mz = Moltiplicatore della massa in dir. Z
 Sic. = Contributo alla sicurezza
 S = a sfavore
 Tipo = Tipologia di pressione vento
 M = Massimizzata
 E = Esterna
 I = Interna
 Tipo CCE = Tipo di CCE per calcolo agli stati limite
 Var. = Tipo di variabilità
 B = di base
 s = Coeff. di riduzione (T.A. o S.L. D.M. 96)

| CCE | Comm. | Tipo CCE | Sic. | Var. | s | Dir. <grad> | Tipo | Mx | My | Mz | Jpx | Jpy | Jpz |
|-----|-------|----------|------|------|----|----------------|------|------|------|------|------|------|------|
| 1 | | 1 S | -- | 1.00 | -- | -- | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 |

Elenco carichi nodi Condizione di carico n. 1: Carichi concentrati

Simbologia

Fx = Componente X della forza applicata
 Fy = Componente Y della forza applicata
 Fz = Componente Z della forza applicata
 Mx = Momento intorno all'asse X
 My = Momento intorno all'asse Y
 Mz = Momento intorno all'asse Z
 Nodo = Numero del nodo

| Nodo | Fx <daN> | Fy <daN> | Fz <daN> | Mx <daNm> | My <daNm> | Mz <daNm> |
|------|-------------|-------------|-------------|--------------|--------------|--------------|
| -88 | 164800.00 | 0.00 | 722200.00 | 20303400.00 | 0.00 | 1806100.00 |

Elenco carichi elementi bidimensionali Condizione di carico n. 1: Carichi uniformi

Simbologia

Bid. = Numero del muro/elemento bidimensionale
 DC = Direzione del carico
 G = secondo gli assi globali
 L = secondo gli assi locali
 N1 = Nodo1
 N2 = Nodo2
 N3 = Nodo3
 N4 = Nodo4
 Qx = Carico in dir. X
 Qy = Carico in dir. Y
 Qz = Carico in dir. Z
 T = Tipo di carico
 PP = Peso proprio
 M = Manuale

| Bid. | N1 | N2 | N3 | N4 | T | DC | Qx <daN/mq> | Qy <daN/mq> | Qz <daN/mq> |
|------|----|----|----|----|---|----|----------------|----------------|----------------|
| 2 | -- | -- | -- | -- | M | G | 0.00 | 0.00 | 2730.00 |

Elenco peso proprio elementi bidimensionali

Simbologia

Comm. = Commento
 Mat. = Materiale
 P = Peso specifico
 PQ = Peso specifico per unità di superficie
 Spess. = Spessore
 Tb = Numero del tipo muro/elemento bidimensionale

| Tb | Comm. | Spess. <cm> | Mat. | P <daN/mc> | PQ <daN/mq> |
|----|-------|----------------|------|---------------|----------------|
|----|-------|----------------|------|---------------|----------------|

Relazione di calcolo

| | | | | | |
|---|-------------------|--------|----------------------------|---------|---------|
| 1 | Platea h=1.50 mt | 150.00 | Calcestruzzo classe C40/50 | 2500.00 | 3750.00 |
| 2 | Platea H=2.6 mt | 260.00 | Calcestruzzo classe C40/50 | 2500.00 | 6500.00 |
| 3 | Platea H= 3.50 mt | 350.00 | Calcestruzzo classe C40/50 | 2500.00 | 8750.00 |

Risultati del calcolo

Parametri di calcolo

La modellazione della struttura e la rielaborazione dei risultati del calcolo sono stati effettuati con:
 ModeSt ver. 8.26, licenza n. 7116, prodotto da Tecnisoft s.a.s. - Prato
 La struttura è stata calcolata utilizzando come solutore agli elementi finiti:
 Xfinest ver. 9.4.3, prodotto da Ce.A.S. S.r.l. - Milano

Tipo di normativa: stati limite D.M. 18
 Tipo di calcolo: statico
 Vincoli esterni: Considera sempre vincoli assegnati in modellazione
 Schematizzazione piani rigidi: nessun impalcato rigido
 Modalità di recupero masse secondarie: mantenere sul nodo masse e forze relative

Generazione combinazioni

- Lineari: Sì
 - Valuta spostamenti e non sollecitazioni: No
 - Buckling: No

Opzioni di calcolo

- Sono state considerate infinitamente rigide le zone di connessione fra travi, pilastri ed elementi bidimensionali con una riduzione del 20%
 - Calcolo con offset rigidi dai nodi: No
 - Uniformare i carichi variabili: No
 - Massimizzare i carichi variabili: No
 - Recupero carichi zone rigide: taglio e momento flettente

Opzioni del solutore

- Tipo di elemento bidimensionale: QF46
 - Calcolo sforzo nei nodi: No
 - Trascura deformabilità a taglio delle aste: No
 - Analisi dinamica con metodo di Lanczos: Sì
 - Check sequenza di Sturm: Sì
 - Analisi non lineare con Newton modificato: No
 - Usa formulazione secante per buckling: No
 - Trascura buckling torsionale: No

Dati struttura

- Edificio esistente: No
 - Tipo di opera: Grande opera
 - Vita nominale V_N : 100.00
 - Classe d'uso: Classe III
 - Forze orizzontali convenzionali per stati limite non sismici: No
 - Genera stati limite per verifiche di resistenza al fuoco: No

Ambienti di carico Simbologia

N = Numero
 Comm. = Commento
 1 =
 F = azioni orizzontali convenzionali
 SLU = Stato limite ultimo
 SLR = Stato limite per combinazioni rare
 SLF = Stato limite per combinazioni frequenti
 SLQ/D = Stato limite per combinazioni quasi permanenti o di danno
 S = Sì
 N = No

| N | Comm. | 1 | SLU | SLR | SLF | SLQ |
|---|-----------------|---|-----|-----|-----|-----|
| 1 | Calcolo statico | S | S | S | S | S |

Elenco combinazioni di carico simboliche

Simbologia

CC = Numero della combinazione delle condizioni di carico elementari
 Comm. = Commento
 TCC = Tipo di combinazione di carico
 SLU = Stato limite ultimo
 SLE R = Stato limite d'esercizio, combinazione rara
 SLE F = Stato limite d'esercizio, combinazione frequente
 SLE Q = Stato limite d'esercizio, combinazione quasi permanente

| CC | Comm. | TCC | 1 |
|----|----------------|-------|-------|
| 1 | Amb. 1 (SLU) | SLU | γ max |
| 2 | Amb. 1 (SLE R) | SLE R | 1 |
| 3 | Amb. 1 (SLE F) | SLE F | 1 |
| 4 | Amb. 1 (SLE Q) | SLE Q | 1 |

Genera le combinazioni con un solo carico di tipo variabile come di base: No

Considera sollecitazioni dinamiche con segno dei modi principali: No

Combinazioni delle CCE

Relazione di calcolo

Simbologia

An. = Tipo di analisi
 L = Lineare
 NL = Non lineare
 Bk = Buckling
 S = Sì
 N = No
 CC = Numero della combinazione delle condizioni di carico elementari
 Comm. = Commento
 TCC = Tipo di combinazione di carico
 SLU = Stato limite ultimo
 SLE R = Stato limite d'esercizio, combinazione rara
 SLE F = Stato limite d'esercizio, combinazione frequente
 SLE Q = Stato limite d'esercizio, combinazione quasi permanente

| CC | Comm. | TCC | An. | Bk | 1 |
|----|----------------|-------|-----|----|------|
| 1 | Amb. 1 (SLU) | SLU | L | N | 1.35 |
| 2 | Amb. 1 (SLE R) | SLE R | L | N | 1.00 |
| 3 | Amb. 1 (SLE F) | SLE F | L | N | 1.00 |
| 4 | Amb. 1 (SLE Q) | SLE Q | L | N | 1.00 |

Spostamenti dei nodi

Simbologia

CC = Numero della combinazione delle condizioni di carico elementari
 Nodo = Numero del nodo
 Rx = Rotazione intorno all'asse X
 Ry = Rotazione intorno all'asse Y
 Rz = Rotazione intorno all'asse Z
 Sx = Spostamento in dir. X
 Sy = Spostamento in dir. Y
 Sz = Spostamento in dir. Z
 TCC = Tipo di combinazione di carico
 SLU = Stato limite ultimo
 SLE R = Stato limite d'esercizio, combinazione rara
 SLE F = Stato limite d'esercizio, combinazione frequente
 SLE Q = Stato limite d'esercizio, combinazione quasi permanente

I valori degli spostamenti nodali per CC di tipo sismico sono amplificati come da normativa

| Nodo | | Sx <cm> | CC | TCC | Sy <cm> | CC | TCC | Sz <cm> | CC | TCC | Rx <rad> | CC | TCC | Ry <rad> | CC | TCC | Rz <rad> | CC | TCC |
|------|------|------------|----|-------|------------|----|-------|------------|----|-------|-------------|----|-------|-------------|----|-------|-------------|----|-------|
| -169 | Max | -0.18 | 2 | SLE R | -0.00 | 2 | SLE R | -1.71 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 2 | SLE R |
| -169 | Min. | -0.25 | 1 | SLU | -0.01 | 1 | SLU | -2.31 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 1 | SLU |
| -168 | Max | -0.18 | 2 | SLE R | 0.01 | 1 | SLU | -1.71 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 1 | SLU | 0.00 | 2 | SLE R |
| -168 | Min. | -0.25 | 1 | SLU | 0.00 | 2 | SLE R | -2.31 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 2 | SLE R | 0.00 | 1 | SLU |
| -167 | Max | -0.18 | 2 | SLE R | -0.00 | 2 | SLE R | -1.70 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 1 | SLU |
| -167 | Min. | -0.25 | 1 | SLU | -0.01 | 1 | SLU | -2.30 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 1 | SLU |
| -166 | Max | -0.18 | 2 | SLE R | 0.01 | 1 | SLU | -1.70 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 1 | SLU | 0.00 | 1 | SLU |
| -166 | Min. | -0.25 | 1 | SLU | 0.00 | 2 | SLE R | -2.30 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 2 | SLE R | 0.00 | 1 | SLU |
| -165 | Max | -0.19 | 2 | SLE R | -0.01 | 2 | SLE R | -1.64 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 2 | SLE R |
| -165 | Min. | -0.25 | 1 | SLU | -0.02 | 1 | SLU | -2.21 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 1 | SLU |
| -164 | Max | -0.19 | 2 | SLE R | 0.02 | 1 | SLU | -1.64 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 1 | SLU | 0.00 | 2 | SLE R |
| -164 | Min. | -0.25 | 1 | SLU | 0.01 | 2 | SLE R | -2.21 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 2 | SLE R | 0.00 | 1 | SLU |
| -163 | Max | -0.19 | 2 | SLE R | -0.01 | 2 | SLE R | -1.64 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 1 | SLU |
| -163 | Min. | -0.25 | 1 | SLU | -0.02 | 1 | SLU | -2.21 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 1 | SLU |
| -162 | Max | -0.19 | 2 | SLE R | 0.02 | 1 | SLU | -1.64 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 1 | SLU | 0.00 | 1 | SLU |
| -162 | Min. | -0.25 | 1 | SLU | 0.01 | 2 | SLE R | -2.21 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 2 | SLE R | 0.00 | 1 | SLU |
| -161 | Max | -0.19 | 2 | SLE R | -0.00 | 2 | SLE R | -1.69 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 2 | SLE R |
| -161 | Min. | -0.26 | 1 | SLU | -0.01 | 1 | SLU | -2.29 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 1 | SLU |
| -160 | Max | -0.19 | 2 | SLE R | 0.00 | 1 | SLU | -1.70 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 1 | SLU | 0.00 | 2 | SLE R |
| -160 | Min. | -0.26 | 1 | SLU | 0.00 | 2 | SLE R | -2.29 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 2 | SLE R | 0.00 | 1 | SLU |
| -159 | Max | -0.19 | 2 | SLE R | -0.02 | 2 | SLE R | -1.50 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 2 | SLE R |
| -159 | Min. | -0.26 | 1 | SLU | -0.03 | 1 | SLU | -2.03 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 1 | SLU |
| -158 | Max | -0.19 | 2 | SLE R | 0.03 | 1 | SLU | -1.51 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 1 | SLU | 0.00 | 2 | SLE R |
| -158 | Min. | -0.26 | 1 | SLU | 0.02 | 2 | SLE R | -2.03 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 2 | SLE R | 0.00 | 1 | SLU |
| -157 | Max | -0.19 | 2 | SLE R | -0.01 | 2 | SLE R | -1.63 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 2 | SLE R |
| -157 | Min. | -0.26 | 1 | SLU | -0.02 | 1 | SLU | -2.20 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 1 | SLU |
| -156 | Max | -0.19 | 2 | SLE R | 0.02 | 1 | SLU | -1.63 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 1 | SLU | 0.00 | 2 | SLE R |
| -156 | Min. | -0.26 | 1 | SLU | 0.01 | 2 | SLE R | -2.21 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 2 | SLE R | 0.00 | 1 | SLU |
| -155 | Max | -0.19 | 2 | SLE R | -0.02 | 2 | SLE R | -1.51 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 1 | SLU |
| -155 | Min. | -0.26 | 1 | SLU | -0.03 | 1 | SLU | -2.03 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 1 | SLU |
| -154 | Max | -0.19 | 2 | SLE R | 0.03 | 1 | SLU | -1.51 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 1 | SLU | 0.00 | 1 | SLU |
| -154 | Min. | -0.26 | 1 | SLU | 0.02 | 2 | SLE R | -2.04 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 2 | SLE R | 0.00 | 1 | SLU |
| -153 | Max | -0.19 | 2 | SLE R | -0.01 | 2 | SLE R | -1.65 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 1 | SLU |
| -153 | Min. | -0.26 | 1 | SLU | -0.01 | 1 | SLU | -2.23 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 1 | SLU |
| -152 | Max | -0.19 | 2 | SLE R | 0.01 | 1 | SLU | -1.65 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 1 | SLU | 0.00 | 1 | SLU |
| -152 | Min. | -0.26 | 1 | SLU | 0.01 | 2 | SLE R | -2.23 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 2 | SLE R | 0.00 | 1 | SLU |
| -151 | Max | -0.19 | 2 | SLE R | -0.00 | 2 | SLE R | -1.66 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 2 | SLE R |
| -151 | Min. | -0.26 | 1 | SLU | -0.00 | 1 | SLU | -2.24 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 1 | SLU | 0.00 | 1 | SLU |
| -150 | Max | -0.19 | 2 | SLE R | 0.00 | 1 | SLU | -1.66 | 2 | SLE R | 0.00 | 2 | SLE R | 0.00 | 1 | SLU | 0.00 | 2 | SLE R |

Relazione di calcolo

| | | | | | | | | | | | | | | | | |
|------|------|-------|---|-----|-------|---|-----|-------|---|-----|------|---|-----|------|---|-----|
| -140 | Min. | -0,26 | 1 | SLL | 0,00 | 2 | SLE | -2,24 | 1 | SLL | 0,00 | 2 | SLE | 0,00 | 1 | SLL |
| -149 | Max | -0,20 | 2 | SLE | -0,92 | 2 | SLE | -1,20 | 2 | SLE | 0,00 | 2 | SLE | 0,00 | 2 | SLE |
| -141 | Min. | 0,26 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC |
| -142 | Max | 0,20 | 2 | STC | 0,00 | 1 | STC | 0,00 | 2 | STC | 0,00 | 1 | STC | 0,00 | 2 | STC |
| -143 | Min. | -0,20 | 1 | STF | 0,00 | 2 | STF | -0,60 | 1 | STF | 0,00 | 1 | STF | 0,00 | 1 | STF |
| -140 | Max | -0,20 | 2 | STF | -0,92 | 2 | STF | -1,20 | 2 | STF | 0,00 | 2 | STF | 0,00 | 2 | STF |
| -147 | Min. | -0,26 | 1 | SLL | -0,92 | 1 | SLL | -2,17 | 1 | SLL | 0,00 | 1 | SLL | 0,00 | 1 | SLL |
| -149 | Max | -0,20 | 2 | SLE | 0,00 | 1 | SLE | -1,92 | 2 | SLE | 0,00 | 2 | SLE | 0,00 | 2 | SLE |
| -146 | Min. | 0,26 | 1 | STC | 0,00 | 2 | STF | 0,14 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC |
| -148 | Max | 0,20 | 2 | STC | 0,00 | 2 | STF | 0,60 | 1 | STC | 0,00 | 2 | STC | 0,00 | 2 | STC |
| -145 | Min. | -0,20 | 1 | STC | -0,94 | 1 | STC | -1,90 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC |
| -144 | Max | -0,20 | 2 | STF | 0,00 | 1 | STC | -1,92 | 2 | STF | 0,00 | 2 | STF | 0,00 | 2 | STF |
| -144 | Min. | -0,27 | 1 | SLL | 0,00 | 2 | SLE | -1,78 | 1 | SLL | 0,00 | 2 | SLE | 0,00 | 2 | SLE |
| -143 | Max | -0,20 | 2 | SLE | -0,93 | 2 | SLE | -1,20 | 2 | SLE | 0,00 | 2 | SLE | 0,00 | 2 | SLE |
| -146 | Min. | 0,20 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC |
| -147 | Max | 0,20 | 2 | STC | 0,00 | 1 | STC | 0,00 | 2 | STC | 0,00 | 1 | STC | 0,00 | 2 | STC |
| -140 | Min. | -0,20 | 1 | STF | 0,00 | 2 | STF | -1,94 | 1 | STF | 0,00 | 1 | STF | 0,00 | 1 | STF |
| -141 | Max | -0,20 | 2 | STF | -0,92 | 2 | STF | -1,20 | 2 | STF | 0,00 | 2 | STF | 0,00 | 2 | STF |
| -141 | Min. | -0,27 | 1 | SLL | -0,92 | 1 | SLL | -2,50 | 1 | SLL | 0,00 | 1 | SLL | 0,00 | 1 | SLL |
| -140 | Max | -0,20 | 2 | SLE | 0,00 | 1 | SLE | -1,20 | 2 | SLE | 0,00 | 2 | SLE | 0,00 | 2 | SLE |
| -140 | Min. | 0,20 | 1 | STC | 0,00 | 2 | STF | 0,60 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC |
| -139 | Max | -0,20 | 2 | STF | -0,92 | 2 | STF | -1,44 | 2 | STF | 0,00 | 2 | STF | 0,00 | 2 | STF |
| -139 | Min. | -0,20 | 1 | STC | -0,92 | 1 | STC | -1,94 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC |
| -133 | Max | -0,20 | 2 | SLE | 0,00 | 1 | SLE | -1,44 | 2 | SLE | 0,00 | 2 | SLE | 0,00 | 2 | SLE |
| -133 | Min. | -0,27 | 1 | SLL | 0,00 | 2 | SLE | -1,94 | 1 | SLL | 0,00 | 2 | SLE | 0,00 | 2 | SLE |
| -130 | Max | 0,20 | 2 | STC | 0,00 | 2 | STF | 0,60 | 1 | STC | 0,00 | 2 | STC | 0,00 | 2 | STC |
| -130 | Min. | 0,20 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC |
| -136 | Max | -0,20 | 2 | STF | 0,00 | 1 | STC | -1,94 | 2 | STF | 0,00 | 2 | STF | 0,00 | 2 | STF |
| -136 | Min. | -0,20 | 1 | STC | 0,00 | 2 | STF | 0,60 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC |
| -132 | Max | -0,20 | 2 | SLE | -0,92 | 2 | SLE | -1,36 | 2 | SLE | 0,00 | 2 | SLE | 0,00 | 2 | SLE |
| -132 | Min. | -0,28 | 1 | SLL | -0,92 | 1 | SLL | -2,52 | 1 | SLL | 0,00 | 1 | SLL | 0,00 | 1 | SLL |
| -131 | Max | 0,20 | 2 | STC | 0,00 | 1 | STC | 0,00 | 2 | STC | 0,00 | 1 | STC | 0,00 | 2 | STC |
| -131 | Min. | 0,28 | 1 | STC | 0,00 | 2 | STF | 0,60 | 1 | STC | 0,00 | 2 | STC | 0,00 | 2 | STC |
| -133 | Max | -0,20 | 2 | STF | -0,92 | 2 | STF | -1,44 | 2 | STF | 0,00 | 2 | STF | 0,00 | 2 | STF |
| -130 | Min. | -0,20 | 1 | STC | -0,92 | 1 | STC | -1,94 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC |
| -130 | Max | -0,20 | 2 | SLE | 0,00 | 1 | SLE | -1,44 | 2 | SLE | 0,00 | 2 | SLE | 0,00 | 2 | SLE |
| -132 | Min. | -0,28 | 1 | SLL | 0,00 | 2 | SLE | -1,94 | 1 | SLL | 0,00 | 2 | SLE | 0,00 | 2 | SLE |
| -131 | Max | 0,20 | 2 | STC | 0,00 | 1 | STC | 0,00 | 2 | STC | 0,00 | 1 | STC | 0,00 | 2 | STC |
| -130 | Min. | -0,20 | 1 | STF | 0,00 | 2 | STF | -1,94 | 1 | STF | 0,00 | 1 | STF | 0,00 | 1 | STF |
| -129 | Max | -0,20 | 2 | SLE | -0,93 | 2 | SLE | -1,39 | 2 | SLE | 0,00 | 2 | SLE | 0,00 | 2 | SLE |
| -129 | Min. | -0,28 | 1 | SLL | -0,94 | 1 | SLL | -2,48 | 1 | SLL | 0,00 | 1 | SLL | 0,00 | 1 | SLL |
| -128 | Max | 0,20 | 2 | STC | 0,00 | 1 | STC | 0,00 | 2 | STC | 0,00 | 1 | STC | 0,00 | 2 | STC |
| -128 | Min. | 0,28 | 1 | STC | 0,00 | 2 | STF | 0,60 | 1 | STC | 0,00 | 2 | STC | 0,00 | 2 | STC |
| -129 | Max | -0,20 | 2 | STF | -0,92 | 2 | STF | -1,44 | 2 | STF | 0,00 | 2 | STF | 0,00 | 2 | STF |
| -129 | Min. | -0,20 | 1 | STC | -0,92 | 1 | STC | -1,94 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC |
| -123 | Max | -0,20 | 2 | SLE | 0,00 | 1 | SLE | -1,44 | 2 | SLE | 0,00 | 2 | SLE | 0,00 | 2 | SLE |
| -123 | Min. | -0,28 | 1 | SLL | -0,94 | 1 | SLL | -2,48 | 1 | SLL | 0,00 | 1 | SLL | 0,00 | 1 | SLL |
| -122 | Max | 0,20 | 2 | STC | 0,00 | 1 | STC | 0,00 | 2 | STC | 0,00 | 1 | STC | 0,00 | 2 | STC |
| -122 | Min. | 0,28 | 1 | STC | 0,00 | 2 | STF | 0,60 | 1 | STC | 0,00 | 2 | STC | 0,00 | 2 | STC |
| -124 | Max | -0,20 | 2 | STF | -0,92 | 2 | STF | -1,36 | 2 | STF | 0,00 | 2 | STF | 0,00 | 2 | STF |
| -124 | Min. | -0,20 | 1 | STC | -0,92 | 1 | STC | -1,94 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC |
| -123 | Max | -0,20 | 2 | SLE | -0,93 | 2 | SLE | -1,17 | 2 | SLE | 0,00 | 2 | SLE | 0,00 | 2 | SLE |
| -123 | Min. | -0,28 | 1 | SLL | -0,93 | 1 | SLL | -2,55 | 1 | SLL | 0,00 | 1 | SLL | 0,00 | 1 | SLL |
| -122 | Max | 0,20 | 2 | STC | 0,00 | 1 | STC | 0,00 | 2 | STC | 0,00 | 1 | STC | 0,00 | 2 | STC |
| -122 | Min. | 0,28 | 1 | STC | 0,00 | 2 | STF | 0,60 | 1 | STC | 0,00 | 2 | STC | 0,00 | 2 | STC |
| -121 | Max | -0,20 | 2 | STF | -0,92 | 2 | STF | -1,36 | 2 | STF | 0,00 | 2 | STF | 0,00 | 2 | STF |
| -121 | Min. | -0,20 | 1 | STC | -0,92 | 1 | STC | -1,94 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC |
| -120 | Max | -0,20 | 2 | SLE | 0,00 | 1 | SLE | -1,32 | 2 | SLE | 0,00 | 2 | SLE | 0,00 | 2 | SLE |
| -120 | Min. | -0,28 | 1 | SLL | 0,00 | 2 | SLE | -1,79 | 1 | SLL | 0,00 | 2 | SLE | 0,00 | 2 | SLE |
| -119 | Max | 0,20 | 2 | STC | 0,00 | 1 | STC | 0,00 | 2 | STC | 0,00 | 1 | STC | 0,00 | 2 | STC |
| -119 | Min. | 0,28 | 1 | STC | 0,00 | 2 | STF | 0,60 | 1 | STC | 0,00 | 2 | STC | 0,00 | 2 | STC |
| -118 | Max | -0,20 | 2 | STF | -0,92 | 2 | STF | -1,36 | 2 | STF | 0,00 | 2 | STF | 0,00 | 2 | STF |
| -118 | Min. | -0,20 | 1 | STC | -0,92 | 1 | STC | -1,94 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC |
| -117 | Max | -0,20 | 2 | SLE | -0,92 | 2 | SLE | -1,27 | 2 | SLE | 0,00 | 2 | SLE | 0,00 | 2 | SLE |
| -119 | Min. | 0,28 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC |
| -118 | Max | 0,20 | 2 | STC | 0,00 | 1 | STC | 0,00 | 2 | STC | 0,00 | 1 | STC | 0,00 | 2 | STC |
| -116 | Min. | -0,20 | 1 | STC | -0,92 | 1 | STC | -1,94 | 1 | STC | 0,00 | 1 | STC | 0,00 | 1 | STC |
| -115 | Max | -0,20 | 2 | STF | 0,00 | 1 | STC | -1,92 | 2 | STF | 0,00 | 2 | STF | 0,00 | 2 | STF |
| -114 | Max | -0,20 | 2 | SLE | 0,00 | 1 | SLE | -1,28 | 2 | SLE | 0,00 | 2 | SLE | 0,00 | 2 | SLE |
| -114 | Min. | 0,28 | 1 | STC | 0,00 | 2 | STF | 0,60 | 1 | STC | 0,00 | 2 | STC | 0,00 | 2 | STC |
| -113 | Max | 0,20 | 2 | STC | 0,00 | 1 | STC | 0,00 | 2 | STC | 0,00 | 1 | STC | 0,00 | 2 | STC |
| -113 | Min. | -0,20 | 1 | STF | 0,00 | 2 | STF | -1,94 | 1 | STF | 0,00 | 1 | STF | 0,00 | 1 | STF |
| -112 | Max | -0,28 | 1 | SLL | 0,00 | 2 | SLE | -1,76 | 1 | SLL | 0,00 | 2 | SLE | 0,00 | 2 | SLE |
| -114 | Max | -0,20 | 2 | SLE | 0,00 | 1 | SLE | -1,28 | 2 | SLE | 0,00 | 2 | SLE | 0,00 | 2 | SLE |
| -114 | Min. | 0,28 | 1 | STC | 0,00 | 2 | STF | 0,60 | 1 | STC | 0,00 | 2 | STC | 0,00 | 2 | STC |
| -113 | Max | 0,20 | 2 | STC | 0,00 | 1 | STC | 0,00 | 2 | STC | 0,00 | 1 | STC | 0,00 | 2 | STC |
| -113 | Min. | -0,20 | 1 | STF | 0,00 | 2 | STF | -1,94 | 1 | STF | 0,00 | 1 | STF | 0,00 | 1 | STF |
| -112 | Max | -0,20 | 2 | STF | -0,92 | 2 | STF | -1,36 | 2 | STF | 0,00 | 2 | STF | 0,00 | 2 | STF |

Relazione di calcolo

Simbologia

CC = Numero della combinazione delle condizioni di carico elementari
 Fx = Reazione vincolare (forza) in dir. X
 Fy = Reazione vincolare (forza) in dir. Y
 Fz = Reazione vincolare (forza) in dir. Z
 Mx = Reazione vincolare (momento) intorno all'asse X
 My = Reazione vincolare (momento) intorno all'asse Y
 Mz = Reazione vincolare (momento) intorno all'asse Z
 Nodo = Numero del nodo
 TCC = Tipo di combinazione di carico
 SLU = Stato limite ultimo
 SLE R = Stato limite d'esercizio, combinazione rara
 SLE F = Stato limite d'esercizio, combinazione frequente
 SLE Q = Stato limite d'esercizio, combinazione quasi permanente

| Nodo | | CC | TCC | Fx <daN> | CC | TCC | Fy <daN> | CC | TCC | Fz <daN> | CC | TCC | Mx <daNm> | CC | TCC | My <daNm> | CC | TCC | Mz <daNm> |
|------|-----|----|-------|-------------|----|-------|-------------|----|-------|-------------|----|-------|--------------|----|-------|--------------|----|-----|--------------|
| -167 | Max | 1 | SLU | 5775.78 | 1 | SLU | 139.45 | 1 | SLU | 325212.00 | 1 | SLU | 4784.90 | 1 | SLU | 7112.64 | 1 | SLU | 21286.00 |
| -167 | Min | 2 | SLE R | 4278.35 | 2 | SLE R | 103.30 | 2 | SLE R | 240898.00 | 2 | SLE R | 3544.37 | 2 | SLE R | 5268.62 | 1 | SLU | 15767.40 |
| -166 | Max | 1 | SLU | 5774.99 | 2 | SLE R | -102.14 | 1 | SLU | 325273.00 | 1 | SLU | 4780.05 | 2 | SLE R | -5160.46 | 1 | SLU | 19014.00 |
| -166 | Min | 2 | SLE R | 4277.77 | 1 | SLU | -137.89 | 2 | SLE R | 240943.00 | 2 | SLE R | 3540.78 | 2 | SLE R | -6966.63 | 1 | SLU | 14084.40 |
| -163 | Max | 1 | SLU | 5857.57 | 1 | SLU | 408.31 | 1 | SLU | 312389.00 | 1 | SLU | 10679.60 | 1 | SLU | 19788.80 | 1 | SLU | 22122.90 |
| -163 | Min | 2 | SLE R | 4338.94 | 2 | SLE R | 302.46 | 2 | SLE R | 231400.00 | 2 | SLE R | 7910.80 | 2 | SLE R | 14658.40 | 1 | SLU | 16387.30 |
| -162 | Max | 1 | SLU | 5856.31 | 2 | SLE R | -302.39 | 1 | SLU | 312560.00 | 1 | SLU | 10688.80 | 2 | SLE R | -14574.30 | 1 | SLU | 20092.40 |
| -162 | Min | 2 | SLE R | 4338.00 | 1 | SLU | -408.23 | 2 | SLE R | 231526.00 | 2 | SLE R | 7917.60 | 2 | SLE R | -19675.30 | 1 | SLU | 14883.30 |
| -155 | Max | 1 | SLU | 6009.55 | 1 | SLU | 641.18 | 1 | SLU | 287771.00 | 1 | SLU | 20713.80 | 1 | SLU | 28716.10 | 1 | SLU | 21760.10 |
| -155 | Min | 2 | SLE R | 4451.52 | 2 | SLE R | 474.95 | 2 | SLE R | 213163.00 | 2 | SLE R | 15343.50 | 2 | SLE R | 21271.20 | 1 | SLU | 16118.60 |
| -154 | Max | 1 | SLU | 6007.07 | 2 | SLE R | -474.67 | 1 | SLU | 287981.00 | 1 | SLU | 20770.30 | 2 | SLE R | -21236.70 | 1 | SLU | 16246.80 |
| -154 | Min | 2 | SLE R | 4449.68 | 1 | SLU | -640.81 | 2 | SLE R | 213319.00 | 2 | SLE R | 15385.40 | 2 | SLE R | -28669.60 | 1 | SLU | 12034.70 |
| -153 | Max | 1 | SLU | 6038.81 | 1 | SLU | 208.03 | 1 | SLU | 315619.00 | 1 | SLU | 21458.00 | 1 | SLU | 10734.80 | 1 | SLU | 159637.00 |
| -153 | Min | 2 | SLE R | 4473.19 | 2 | SLE R | 154.10 | 2 | SLE R | 233792.00 | 2 | SLE R | 15894.80 | 2 | SLE R | 7951.73 | 1 | SLU | 118249.00 |
| -152 | Max | 1 | SLU | 6042.70 | 2 | SLE R | -156.07 | 1 | SLU | 315710.00 | 1 | SLU | 21456.20 | 2 | SLE R | -7848.29 | 1 | SLU | 147466.00 |
| -152 | Min | 2 | SLE R | 4476.07 | 1 | SLU | -210.70 | 2 | SLE R | 233859.00 | 2 | SLE R | 15893.50 | 2 | SLE R | -10595.20 | 1 | SLU | 109234.00 |
| -143 | Max | 1 | SLU | 6224.89 | 1 | SLU | 820.64 | 1 | SLU | 253546.00 | 1 | SLU | 32975.90 | 1 | SLU | 32425.90 | 1 | SLU | 21451.00 |
| -143 | Min | 2 | SLE R | 4611.03 | 2 | SLE R | 607.88 | 2 | SLE R | 187812.00 | 2 | SLE R | 24426.60 | 2 | SLE R | 24019.20 | 1 | SLU | 15889.70 |
| -142 | Max | 1 | SLU | 6222.70 | 2 | SLE R | -608.09 | 1 | SLU | 253743.00 | 1 | SLU | 33060.30 | 2 | SLE R | -23948.80 | 1 | SLU | 17192.50 |
| -142 | Min | 2 | SLE R | 4609.41 | 1 | SLU | -820.92 | 2 | SLE R | 187958.00 | 2 | SLE R | 24489.10 | 2 | SLE R | -32330.90 | 1 | SLU | 12735.20 |
| -139 | Max | 1 | SLU | 6270.22 | 1 | SLU | 558.54 | 1 | SLU | 274241.00 | 1 | SLU | 37079.00 | 1 | SLU | 24873.20 | 1 | SLU | 162497.00 |
| -139 | Min | 2 | SLE R | 4644.61 | 2 | SLE R | 413.73 | 2 | SLE R | 203142.00 | 2 | SLE R | 27465.90 | 2 | SLE R | 18424.60 | 1 | SLU | 120368.00 |
| -138 | Max | 1 | SLU | 6268.79 | 2 | SLE R | -411.90 | 1 | SLU | 274379.00 | 1 | SLU | 37336.20 | 2 | SLE R | -18504.80 | 1 | SLU | 126253.00 |
| -138 | Min | 2 | SLE R | 4643.55 | 1 | SLU | -556.06 | 2 | SLE R | 203244.00 | 2 | SLE R | 27656.40 | 2 | SLE R | -24981.40 | 1 | SLU | 93520.90 |
| -127 | Max | 1 | SLU | 6476.40 | 1 | SLU | 929.59 | 1 | SLU | 212189.00 | 1 | SLU | 44873.60 | 1 | SLU | 30881.60 | 1 | SLU | 21968.40 |
| -127 | Min | 2 | SLE R | 4797.33 | 2 | SLE R | 688.59 | 2 | SLE R | 157177.00 | 2 | SLE R | 33239.70 | 2 | SLE R | 22875.20 | 1 | SLU | 16272.90 |
| -126 | Max | 1 | SLU | 6475.78 | 2 | SLE R | -689.44 | 1 | SLU | 212368.00 | 1 | SLU | 44827.10 | 2 | SLE R | -22884.00 | 1 | SLU | 17406.80 |
| -126 | Min | 2 | SLE R | 4796.87 | 1 | SLU | -930.75 | 2 | SLE R | 157310.00 | 2 | SLE R | 33205.30 | 2 | SLE R | -30893.40 | 1 | SLU | 12893.90 |
| -105 | Max | 1 | SLU | 6649.98 | 1 | SLU | 719.13 | 1 | SLU | 304511.00 | 1 | SLU | 55915.30 | 1 | SLU | 22826.90 | 1 | SLU | 167834.00 |
| -105 | Min | 2 | SLE R | 4925.91 | 2 | SLE R | 532.69 | 2 | SLE R | 151490.00 | 2 | SLE R | 41418.70 | 2 | SLE R | 16908.80 | 1 | SLU | 124322.00 |
| -104 | Max | 1 | SLU | 6647.96 | 2 | SLE R | -535.21 | 1 | SLU | 304703.00 | 1 | SLU | 55868.70 | 2 | SLE R | -16910.80 | 1 | SLU | 123266.00 |
| -104 | Min | 2 | SLE R | 4924.41 | 1 | SLU | -722.53 | 2 | SLE R | 151632.00 | 2 | SLE R | 41384.20 | 2 | SLE R | -22829.50 | 1 | SLU | 91308.30 |
| -81 | Max | 1 | SLU | 6757.66 | 1 | SLU | 963.45 | 1 | SLU | 166267.00 | 1 | SLU | 54146.30 | 1 | SLU | 25252.60 | 1 | SLU | 20584.10 |
| -81 | Min | 2 | SLE R | 5005.68 | 2 | SLE R | 713.67 | 2 | SLE R | 123161.00 | 2 | SLE R | 40108.40 | 2 | SLE R | 18705.60 | 1 | SLU | 15247.50 |
| -78 | Max | 1 | SLU | 6757.23 | 2 | SLE R | -715.09 | 1 | SLU | 166477.00 | 1 | SLU | 54140.50 | 2 | SLE R | -18667.10 | 1 | SLU | 15268.90 |
| -78 | Min | 2 | SLE R | 5005.36 | 1 | SLU | -965.38 | 2 | SLE R | 123316.00 | 2 | SLE R | 40104.10 | 2 | SLE R | -25200.60 | 1 | SLU | 11310.30 |
| -45 | Max | 1 | SLU | 7017.10 | 1 | SLU | 919.22 | 1 | SLU | 122242.00 | 1 | SLU | 59193.90 | 1 | SLU | 17945.20 | 1 | SLU | 21711.60 |
| -45 | Min | 2 | SLE R | 5197.85 | 2 | SLE R | 680.90 | 2 | SLE R | 90549.90 | 2 | SLE R | 43847.30 | 2 | SLE R | 13292.70 | 1 | SLU | 16082.70 |
| -44 | Max | 1 | SLU | 7018.75 | 2 | SLE R | -680.41 | 1 | SLU | 122467.00 | 1 | SLU | 59119.70 | 2 | SLE R | -13241.10 | 1 | SLU | 20690.20 |
| -44 | Min | 2 | SLE R | 5199.08 | 1 | SLU | -918.56 | 2 | SLE R | 90716.20 | 2 | SLE R | 43792.40 | 2 | SLE R | -17875.50 | 1 | SLU | 15326.00 |
| -41 | Max | 1 | SLU | 7051.77 | 1 | SLU | 657.85 | 1 | SLU | 128535.00 | 1 | SLU | 64491.40 | 1 | SLU | 10929.70 | 1 | SLU | 161962.00 |
| -41 | Min | 2 | SLE R | 5223.53 | 2 | SLE R | 487.30 | 2 | SLE R | 95211.30 | 2 | SLE R | 47771.40 | 2 | SLE R | 8096.04 | 1 | SLU | 119972.00 |
| -40 | Max | 1 | SLU | 7055.80 | 2 | SLE R | -486.98 | 1 | SLU | 128741.00 | 1 | SLU | 64490.00 | 2 | SLE R | -8061.09 | 1 | SLU | 133927.00 |
| -40 | Min | 2 | SLE R | 5226.52 | 1 | SLU | -657.42 | 2 | SLE R | 95363.70 | 2 | SLE R | 47770.40 | 2 | SLE R | -10882.50 | 1 | SLU | 99205.50 |
| -29 | Max | 1 | SLU | 7266.56 | 2 | SLE R | -594.46 | 1 | SLU | 81184.60 | 1 | SLU | 60509.70 | 2 | SLE R | -7684.04 | 1 | SLU | 16418.10 |
| -29 | Min | 2 | SLE R | 5382.63 | 1 | SLU | -802.52 | 2 | SLE R | 60136.70 | 2 | SLE R | 44822.00 | 2 | SLE R | -10373.50 | 1 | SLU | 12161.50 |
| -28 | Max | 1 | SLU | 7265.62 | 1 | SLU | 800.64 | 1 | SLU | 80635.20 | 1 | SLU | 60527.60 | 1 | SLU | 10374.60 | 1 | SLU | 21465.50 |
| -28 | Min | 2 | SLE R | 5381.94 | 2 | SLE R | 593.07 | 2 | SLE R | 59729.80 | 2 | SLE R | 44835.20 | 2 | SLE R | 7684.90 | 1 | SLU | 15900.40 |
| -23 | Max | 1 | SLU | 7354.68 | 1 | SLU | 387.35 | 1 | SLU | 70710.80 | 1 | SLU | 62440.60 | 1 | SLU | 2004.95 | 1 | SLU | 161850.00 |
| -23 | Min | 2 | SLE R | 5447.91 | 2 | SLE R | 286.93 | 2 | SLE R | 52378.40 | 2 | SLE R | 46252.30 | 2 | SLE R | 1485.15 | 1 | SLU | 119889.00 |
| -22 | Max | 1 | SLU | 7356.74 | 2 | SLE R | -284.42 | 1 | SLU | 70857.90 | 1 | SLU | 62478.10 | 2 | SLE R | -1427.50 | 1 | SLU | 156344.00 |
| -22 | Min | 2 | SLE R | 5449.44 | 1 | SLU | -383.97 | 2 | SLE R | 52487.40 | 2 | SLE R | 46280.10 | 2 | SLE R | -1927.12 | 1 | SLU | 115810.00 |
| -17 | Max | 1 | SLU | 7463.04 | 1 | SLU | 0.38 | 1 | SLU | 49182.60 | 1 | SLU | 59871.20 | 1 | SLU | 47.77 | 1 | SLU | 164169.00 |
| -17 | Min | 2 | SLE R | 5528.18 | 2 | SLE R | 0.28 | 2 | SLE R | 36431.60 | 2 | SLE R | 44349.10 | 2 | SLE R | 35.38 | 1 | SLU | 121607.00 |
| -16 | Max | 1 | SLU | 7464.38 | 1 | SLU | 623.03 | 1 | SLU | 46634.90 | 1 | SLU | 59187.90 | 1 | SLU | 4732.68 | 1 | SLU | 21302.30 |
| -16 | Min | 2 | SLE R | 5529.17 | 2 | SLE R | 461.50 | 2 | SLE R | 34544.40 | 2 | SLE R | 43842.90 | 2 | SLE R | 3505.69 | 1 | SLU | 15779.50 |
| -15 | Max | 1 | SLU | 7464.87 | 2 | SLE R | -460.33 | 1 | SLU | 46827.10 | 1 | SLU | 59215.90 | 2 | SLE R | -3453.80 | 1 | SLU | 22191.80 |
| -15 | Min | 2 | SLE R | 5529.53 | 1 | SLU | -621.44 | 2 | SLE R | 34686.80 | 2 | SLE R | 43863.60 | 2 | SLE R | -4662.64 | 1 | SLU | 16438.40 |
| -8 | Max | 1 | SLU | 7608.59 | 1 | SLU | 392.10 | 1 | SLU | 22207.30 | 1 | SLU | 56863.60 | 1 | SLU | 1420.21 | 1 | SLU | 21950.50 |
| -8 | Min | 2 | SLE R | 5636.00 | 2 | SLE R | 290.44 | 2 | SLE R | 16449.90 | 2 | SLE R | 42121.10 | 2 | SLE R | 1052.01 | 1 | SLU | 16259.60 |
| -7 | Max | 1 | SLU | 7611.12 | 2 | SLE R | -290.38 | 1 | SLU | 22330.90 | 1 | SLU | 56884.80 | 2 | SLE R | -987.42 | 1 | SLU | 19026.10 |

Relazione di calcolo

| | | | | | | | | | | | | | | | | | | | |
|----|-----|---|-------|---------|---|-------|---------|---|-------|----------|---|-------|----------|---|-------|----------|---|-----|----------|
| -7 | Min | 2 | SLE R | 5637.87 | 1 | SLU | -392.01 | 2 | SLE R | 16541.40 | 2 | SLE R | 42136.90 | 2 | SLE R | -1333.02 | 1 | SLU | 14093.40 |
| -4 | Max | 1 | SLU | 7683.84 | 1 | SLU | 135.90 | 1 | SLU | 9426.53 | 1 | SLU | 55210.30 | 1 | SLU | 270.25 | 1 | SLU | 20776.40 |
| -4 | Min | 2 | SLE R | 5691.73 | 2 | SLE R | 100.67 | 2 | SLE R | 6982.62 | 2 | SLE R | 40896.50 | 2 | SLE R | 200.19 | 1 | SLU | 15389.90 |
| -3 | Max | 1 | SLU | 7682.76 | 2 | SLE R | -100.45 | 1 | SLU | 9469.03 | 1 | SLU | 55220.30 | 2 | SLE R | -125.55 | 1 | SLU | 22109.60 |
| -3 | Min | 2 | SLE R | 5690.93 | 1 | SLU | -135.61 | 2 | SLE R | 7014.10 | 2 | SLE R | 40903.90 | 2 | SLE R | -169.49 | 1 | SLU | 16377.50 |

Sollecitazioni elementi bidimensionali

Simbologia

σ_{xx} = Tensione normale sulle facce perp. all'asse X
 σ_{zz} = Tensione normale sulle facce perp. all'asse Z
 τ_{xy} = Tensione in dir. Y sulle facce perp. all'asse X
 τ_{xz} = Tensione in dir. Z sulle facce perp. all'asse X
 τ_{zy} = Tensione in dir. Y sulle facce perp. all'asse Z
 Bid. = Numero del muro/elemento bidimensionale
 CC = Numero della combinazione delle condizioni di carico elementari
 Mxx = Momento che provoca variazione di tensione sulle facce perp. all'asse X
 Mxz = Momento che provoca variazione di tensione tangenziale sulle facce perp. all'asse X
 Mzz = Momento che provoca variazione di tensione sulle facce perp. all'asse Z
 Nodo = Numero del nodo
 TCC = Tipo di combinazione di carico
 SLU = Stato limite ultimo
 SLE R = Stato limite d'esercizio, combinazione rara
 SLE F = Stato limite d'esercizio, combinazione frequente
 SLE Q = Stato limite d'esercizio, combinazione quasi permanente

Bid. 2

| | CC | TCC | Nodo | Min. | CC | TCC | Nodo | Max | | CC | TCC | Nodo | Min. | CC | TCC | Nodo | Max |
|--------------------------------------|----|-----|------|----------|----|-----|------|---------|--------------------------------------|----|-----|------|----------|----|-----|------|----------|
| σ_{xx} <daN/cm ² > | 1 | SLU | -109 | -114779 | 1 | SLU | -75 | 101090 | σ_{zz} <daN/cm ² > | 1 | SLU | -75 | -118674 | 1 | SLU | -101 | 116315 |
| τ_{xz} <daN/cm ² > | 1 | SLU | -76 | -110710 | 1 | SLU | -110 | 107438 | Mxx <daNm/m> | 1 | SLU | -88 | -9149480 | 1 | SLU | -100 | 11141500 |
| Mzz <daNm/m> | 1 | SLU | -66 | -2219210 | 1 | SLU | -75 | 4845330 | Mxz <daNm/m> | 1 | SLU | -88 | -5840780 | 1 | SLU | -88 | 4055160 |
| τ_{zy} <daN/cm ² > | 1 | SLU | -98 | -380642 | 1 | SLU | -111 | 292400 | τ_{xy} <daN/cm ² > | 1 | SLU | -88 | -282519 | 1 | SLU | -88 | 596757 |

Criteri di progetto utilizzati

Sezioni generiche

| Generali | |
|--|------------|
| Stampe | |
| Tipo di relazione | Estesa |
| Specifici | 3 |
| Materiali | |
| -Considera come elemento esistente | No |
| -Calcestruzzo | |
| -Livello di conoscenza | LC2 |
| -Fattore di confidenza | 1.20 |
| -Tipo di calcestruzzo | C40/50 |
| -Rck calcestruzzo | 500.00 |
| -Modulo elastico <daN/cm ² > | 355471.00 |
| -Resistenza caratteristica cilindrica (Fck) | 415.00 |
| -Resistenza caratteristica a trazione (Fctk) | 25.17 |
| -Resistenza media (Fcm) <daN/cm ² > | 495.00 |
| -Resistenza media a trazione (Fctm) <daN/cm ² > | 35.96 |
| - σ_{amm} calcestruzzo <daN/cm ² > | 147.50 |
| - τ_{c0} <daN/cm ² > | 8.70 |
| - τ_{c1} <daN/cm ² > | 24.00 |
| -Riduci Fcd per tutte le verifiche secondo il D.M. 18 | Si |
| - γ_c per stati limite ultimi | |
| -Automatico | x |
| -Pari a | |
| -Acciaio | |
| -Livello di conoscenza | LC2 |
| -Fattore di confidenza | 1.20 |
| -Tipo di acciaio | B450C |
| -Modulo elastico <daN/cm ² > | 2060000.00 |
| -Tensione caratteristica di snervamento (Fyk) <daN/cm ² > | 4500.00 |
| -Tensione media di snervamento (Fym) <daN/cm ² > | 4500.00 |
| -Sigma amm. acciaio <daN/cm ² > | 2600.00 |
| -Sigma amm. reti e tralicci <daN/cm ² > | 2600.00 |
| -Allungamento per verifiche di duttilità (Agt) <%> | 4.00 |
| - γ_s per stati limite ultimi | |
| -Automatico | x |
| -Pari a | |

Relazione di calcolo

| | |
|--|----------|
| -Coeff. di omogeneizzazione | 15.00 |
| Parametri per analisi pushover | |
| Numero fibre | 200.00 |
| Fattore di confinamento nucleo interno | 1.00 |
| Fattore di incrudimento acciaio ϵ | 0.10 |
| Posizione barre e normativa | |
| Copriferro reale al bordo staffa cm | 2.50 |
| Diametro staffa teorica mm | 8.00 |
| Distanza fra ferri su piú strati cm | 1.00 |
| Verifica con barre in posizione teorica | Si |
| -Copriferro cm | 3.00 |
| Normativa di riferimento | |
| -Relativa alle travl | |
| -Relativa ai pilastri | |
| -Relativa solo al controllo sulle tensioni | x |
| Elemento dissipativo | No |
| Verifiche secondo Circ. 65 del 10/04/97 | No |
| Verifiche e sollecitazioni | |
| Passo di verifica m | 0.50 |
| Integrare lo scorrimento lungo il tratto | Si |
| -Lunghezza del tratto m | 1.00 |
| Verifiche a pressoflessione | Si |
| Verifiche a flessione/pressoflessione retta | No |
| -Considera M_y | |
| -Considera M_z | |
| -Considera M_y e M_z | |
| Verifiche di stabilit  in direzione Z locale | No |
| -Coeff. ϕ_b | |
| Integrare lo scorrimento lungo il tratto | No |
| -Coeff. β | |
| Tipo verifica di stabilit  | |
| -Per N^*Q-M e per $N-c^*M$ (standard) | Si |
| -Per N^*Q-c^*M (doppia) | No |
| -Per N^*Q (sforzo normale e momento nullo) | No |
| -Per c^*M (momento e sforzo normale nullo) | No |
| Verifiche a taglio | |
| Modalit  di calcolo V_{rdu} | |
| -Considera V_{rdu} minimo | |
| -Considera V_{rdu} calcolato in corrispondenza di b_w minimo | |
| -Considera V_{rdu} in corrispondenza di b_w medio | x |
| -Considera V_{rdu} in corrispondenza di b_w massimo | |
| -Considera sempre Af Staffe non progettata in direzione del taglio | Si |
| -Verifica a taglio con traliccio ad inclinazione variabile | Si |
| -Limita $ctg \theta$ a | 2.50 |
| Dati per progettazione agli stati limite | |
| Condizioni ambientali | |
| -Ordinarie | x |
| -Aggressive | |
| -Molto aggressive | |
| Usa dominio N-M per flessioni rette | No |
| -Ricerca della sicurezza con sforzo normale costante | |
| -Ricerca della sicurezza con eccentricit  costante | |
| Controllo rapporto X/D | No |
| Classificazione barre tese/comprese | |
| -Solo le barre con deformazione percentuale rispetto alla barra pi  tesa/compressa non inferiore a ϵ | 30.00 |
| -In funzione della deformazione | |
| Dati per verifiche di resistenza al fuoco | |
| -Tempo di verifica (REI) $minuti$ | 120.00 |
| Dimensione MESH cm | 2.00 |
| -Passo di calcolo $secondi$ | 10.00 |
| -Temperatura ambiente C° | 20.00 |
| -Coeff. di convezione a temperatura ambiente $W/mq K$ | 9.00 |
| -Tipo di aggregati | SILICREI |
| -Massa volumica iniziale kg/mc | 2300.00 |
| -Umidit  iniziale ϵ | 3.00 |
| -Fattore di interpolazione conducibilit  | 0.50 |

Plinti/Pali

| | |
|----------|--|
| Generali | |
|----------|--|

Relazione di calcolo

| | |
|---|------------|
| Parametri di progetto | |
| Progettazione e verifica dell'armatura con sollecitazioni più gravose | Si |
| Parametri di disegno | |
| Scala disegno plinti | 25.00 |
| Disegno ancoraggi non necessari | Si |
| Copriferro per calcolo lunghezze ferri plinto <cm> | 3.00 |
| Copriferro per calcolo lunghezze ferri bicchiere <cm> | 2.00 |
| Calcolo lunghezza ferri semplificato | Si |
| Diametro per calcolo lunghezze ferri plinto <mm> | 10.00 |
| Diametro per calcolo lunghezze ferri bicchiere <mm> | 10.00 |
| Stampe | |
| Tipo di relazione | Estesa |
| Specifici | 3 |
| Materiali | |
| -Considera come elemento esistente | No |
| -Calcestruzzo | |
| -Livello di conoscenza | LC2 |
| -Fattore di confidenza | 1.20 |
| -Tipo di calcestruzzo | C30/37 |
| -Rck calcestruzzo | 370.00 |
| -Modulo elastico <daN/cm ² > | 330194.00 |
| -Resistenza caratteristica cilindrica (Fck) | 307.10 |
| -Resistenza caratteristica a trazione (Fctk) | 20.59 |
| -Resistenza media (Fcm) <daN/cm ² > | 387.10 |
| -Resistenza media a trazione (Fctm) <daN/cm ² > | 29.42 |
| -σ amm. calcestruzzo <daN/cm ² > | 115.00 |
| -τc0 <daN/cm ² > | 6.90 |
| -τc1 <daN/cm ² > | 20.30 |
| -Riduci Fcd per tutte le verifiche secondo il D.M. 18 | Si |
| -γc per stati limite ultimi | |
| -Automatico | x |
| -Pari a | |
| -Acciaio | |
| -Livello di conoscenza | LC2 |
| -Fattore di confidenza | 1.20 |
| -Tipo di acciaio | B450C |
| -Modulo elastico <daN/cm ² > | 2060000.00 |
| -Tensione caratteristica di snervamento (Fyk) <daN/cm ² > | 4500.00 |
| -Tensione media di snervamento (Fym) <daN/cm ² > | 4500.00 |
| -Sigma amm. acciaio <daN/cm ² > | 2600.00 |
| -Sigma amm. reti e tralicci <daN/cm ² > | 2600.00 |
| -Allungamento per verifiche di duttilità (Agt) <ε> | 4.00 |
| -γs per stati limite ultimi | |
| -Automatico | x |
| -Pari a | |
| -Coeff. di omogeneizzazione | 15.00 |
| Parametri di calcolo | |
| Copriferro teorico di calcolo <cm> | 4.00 |
| Angolo limite plinti snelli/tozzi <grad> | 30.00 |
| Considerare snelli plinti ambigui | Si |
| Peso specifico calcestruzzo plinto <daN/mc> | 2500.00 |
| Sovraccarichi agenti sul plinto <daN/mq> | 0.00 |
| Sollecitazioni dissipative amplificate | Si |
| Detrazione peso proprio e sovraccarichi | Si |
| Calcolo momenti con metodo dei trapezi | Si |
| Sezione verifica plinti a bicchiere | |
| -A filo parete | x |
| -In asse alla parete | |
| Raffittimento armatura zona centrale | No |
| Armatura base | |
| Elenco diametri utilizzabili 1 <mm> | 20 |
| Elenco diametri utilizzabili 2 <mm> | |
| Elenco diametri utilizzabili 3 <mm> | |
| Elenco diametri utilizzabili 4 <mm> | |
| Elenco diametri utilizzabili 5 <mm> | |
| Elenco diametri utilizzabili 6 <mm> | |
| Elenco diametri utilizzabili 7 <mm> | |
| Passi utilizzabili | |
| -Minimo <cm> | 5.00 |
| -Massimo <cm> | 25.00 |
| -Incremento <cm> | 2.00 |

Relazione di calcolo

| | |
|--|-------|
| Considera momenti da interazione cinematica | No |
| Elenco diametri ferri longitudinali 1 <mm> | 20 |
| Elenco diametri ferri longitudinali 2 <mm> | |
| Elenco diametri ferri longitudinali 3 <mm> | |
| Elenco diametri ferri longitudinali 4 <mm> | |
| Elenco diametri ferri longitudinali 5 <mm> | |
| Elenco diametri ferri longitudinali 6 <mm> | |
| Elenco diametri ferri longitudinali 7 <mm> | |
| Copriferro reale al bordo staffa <cm> | 4.00 |
| Diametro staffa teorica <mm> | 12.00 |
| Max distanza fra i ferri <cm> | 25.00 |
| Min. interferro ammissibile <cm> | 5.00 |
| Min. numero ferri | 25.00 |
| Alleggerimento ferri longitudinali | No |
| -Alla quota indicata <cm> | |
| -Come percentuale della lunghezza del palo | 0.00 |
| -Min. ferri rimanenti dopo alleggerimento | x |
| -Pari a | 0.00 |
| -Percentuale dell'armatura di testa del palo | |
| Armatura a taglio pali | |
| Elenco diametri staffe 1 <mm> | 0.00 |
| Elenco diametri staffe 2 <mm> | x |
| Elenco diametri staffe 3 <mm> | 50.00 |
| Elenco diametri staffe 4 <mm> | |
| Elenco diametri staffe 5 <mm> | 12 |
| Elenco diametri staffe 6 <mm> | |
| Elenco diametri staffe 7 <mm> | |
| Passi staffe | |
| -Minimo <cm> | |
| -Massimo <cm> | |
| -Incremento <cm> | |
| Tipo di minimizzazione staffatura | |
| -Minimizza il numero delle staffe | 5.00 |
| -Minimizza il peso delle staffe | 20.00 |
| Staffatura a spirale | 5.00 |
| Verifiche a taglio per sezioni circolari | |
| -Usa formulazione sezioni generiche | |
| -Considera rettangolo inscritto con B/H pari a | x |
| Verifiche a taglio per sezioni generiche | Si |
| -Considera Vrdu minimo | |
| -Considera Vrdu calcolato in corrispondenza di bw minimo | |
| -Considera Vrdu in corrispondenza di bw medio | 1.00 |
| -Considera Vrdu in corrispondenza di bw massimo | |
| -Considera sempre Af Staffe non proiettata in direzione del taglio | |
| Classificazione barre tese/comprese | |
| -Solo le barre con deformazione percentuale rispetto alla barra più tesa/compressa non inferiore a <%> | x |
| -In funzione della deformazione | Si |
| Capacità portante | |
| Efficienza | |
| -Pari a | |
| -Automatica | x |

Solette/Platee

| Generali | |
|---|------|
| Parametri di progetto | |
| Progetto e verifica con metodo d'integrazione | No |
| -Massima dimensione della linea d'integrazione | 1.00 |
| Calcolo armature con metodo di Wood | No |
| Accoppia pilastri per calcolo punzonamento | Si |
| -Massima distanza come un moltiplicatore dello spessore | 1.50 |
| Armatura a taglio | |
| Controllo resistenza a taglio allo S.L.U. DM 96 | No |
| Verifica con taglio totale | No |
| Progetta a taglio con traliccio ad inclinazione variabile | Si |
| -In Classe A limita ctg θ a | 2.50 |
| -In Classe B limita ctg θ a | 2.50 |
| Parametri di disegno | |
| Disposizione disegno | 2A |
| Particolari nel disegno principale | |
| -Eliminare le quotature | No |

Relazione di calcolo

| | |
|--|---|
| -Eliminare le campiture | No |
| -Eliminare la numerazione dei pilastri | No |
| -Eliminare la numerazione delle travi e dei muri | No |
| Particolari nei disegni secondari | |
| -Eliminare le quotature | Si |
| -Eliminare le campiture | Si |
| -Eliminare la numerazione dei pilastri | Si |
| -Eliminare la numerazione delle travi e dei muri | Si |
| Disegno armatura diffusa | No |
| Posizione particolari punzonamento | In automatico |
| Copriferro per calcolo lunghezza ferri <cm> | 3.50 |
| Risvoltare al bordo i ferri | |
| -Inferiori | Si |
| -Superiori | Si |
| Lunghezza risvolti ferri al bordo | Pari all'altezza meno due volte il copriferro |
| Disegno particolare ferri al bordo | Si |
| Scala disegno particolare ferri al bordo | 20.00 |
| Calcolo lunghezza ferri semplificato | No |
| Stampe | |
| Tipo di relazione | Estesa |
| Specifici | 3 |
| Materiali | |
| -Considera come elemento esistente | No |
| -Calcestruzzo | |
| -Livello di conoscenza | IC2 |
| -Fattore di confidenza | 1.20 |
| -Tipo di calcestruzzo | C40/50 |
| -Rck calcestruzzo | 500.00 |
| -Modulo elastico <daN/cm ² > | 355471.00 |
| -Resistenza caratteristica cilindrica (Fck) | 415.00 |
| -Resistenza caratteristica a trazione (Fctk) | 25.17 |
| -Resistenza media (Fcm) <daN/cm ² > | 495.00 |
| -Resistenza media a trazione (Fctm) <daN/cm ² > | 35.96 |
| -σ amm. calcestruzzo <daN/cm ² > | 147.50 |
| -τc0 <daN/cm ² > | 8.70 |
| -τc1 <daN/cm ² > | 24.00 |
| -Riduci Fcd per tutte le verifiche secondo il D.M. 18 | Si |
| -γc per stati limite ultimi | |
| -Automatico | x |
| -Pari a | |
| -Acciaio | |
| -Livello di conoscenza | IC2 |
| -Fattore di confidenza | 1.20 |
| -Tipo di acciaio | B450C |
| -Modulo elastico <daN/cm ² > | 2060000.00 |
| -Tensione caratteristica di snervamento (Fyk) <daN/cm ² > | 4500.00 |
| -Tensione media di snervamento (Fym) <daN/cm ² > | 4500.00 |
| -Sigma amm. acciaio <daN/cm ² > | 2600.00 |
| -Sigma amm. reti e tralicci <daN/cm ² > | 2600.00 |
| -Allungamento per verifiche di duttilità (Agt) <%> | 4.00 |
| -γs per stati limite ultimi | |
| -Automatico | x |
| -Pari a | |
| -Coeff. di omogeneizzazione | 15.00 |
| Parametri di calcolo | |
| Parametri di progetto secondo il D.M. 18 | |
| -Elemento dissipativo | No |
| -Sollecitazioni dissipative amplificate per elementi di fondazione | Si |
| Angolo d'armatura <grad> | 0.00 |
| Copriferro teorico superiore <cm> | 3.00 |
| Copriferro teorico inferiore <cm> | 3.00 |
| Tipo di progetto in doppia armatura | |
| -Tensione pari ai valori amm. | |
| -Tensione pari ai valori amm. con AComp/AfTesa minore o pari a | 1.00 |
| -Tensione pari ai valori amm. con AComp/AfTesa pari a | |
| Min. percentuale di regolamento | |
| -Platee di fondazione su suolo elastico | No |
| -Solette di elevazione | Si |
| Controlla min. armatura di ripartizione | No |
| Armatura a flessione | |
| Elenco diametri utilizzabili 1 <mm> | 10 |
| Elenco diametri utilizzabili 2 <mm> | 12 |

Relazione di calcolo

| | |
|--|-------|
| Alenco diametri utilizzabili 2 mm | 14 |
| Alenco diametri utilizzabili 4 mm | 16 |
| Numero diametri utilizzabili 6 mm | |
| Numero diametri utilizzabili 8 mm | |
| Numero diametri utilizzabili 10 mm | |
| Classi utilizzabili | |
| -Minimo (cm) | 11,00 |
| -Massimo (cm) | 30,00 |
| -Criterio (cm) | 1,00 |
| Dati di progetto e interasse Armatura | E8 |
| -Sempre | |
| -Nel medesimo direzione | |
| -Nella stessa posizione | |
| Uniformizzazione simetri armatura | E1 |
| -Sempre | |
| -Nella stessa direzione | |
| -Nel medesimo posizione | |
| Tipo di armatura (azione momento e flessione) | |
| -Minimizza il numero dei ferri | |
| -Minimizza il peso complessivo dei ferri | N |
| Verifiche a taglio | |
| Verifica punto di verifica ante parete di punzonamento | E8 |
| Verifica punto di verifica ante muro di spessore >= 1 | E8 |
| Ancoraggi | |
| Relazione di direzione per le ancoraggi ferri | 1,00 |
| Impedire ancoraggi armatura | |
| -Calcola la lunghezza minima di ancoraggio | x |
| -Imposta come multiplo del diametro | |
| Lunghezza ancoraggi ferri punzonamento | |
| Calcola la lunghezza minima di ancoraggio | / |
| -Imposta come multiplo del diametro | |
| Armatura a punzonamento | |
| Relazione di direzione per la zona di sviluppo | 0,90 |
| Relazione di direzione per la zona di sviluppo | 9 |
| A lunghezza minima per la zona di sviluppo | 1,00 |
| Distanza dal bordo libero (D.M. 91/80) | |
| -Distanza come un multiplo della spessore | 1,00 |
| Distanza minima di sviluppo | |
| Tipo di armatura a punzonamento | |
| -Solo in senso perpendicolare | |
| -Rapporto di ferro verticale (rispetto al diametro) | x |
| -Controlla prescrizione 200 | E1 |
| Moltiplicatore altezza utile per valutare perimetro efficace (D.M. 18) | 1,00 |
| Relazione di posizione delle barre | |
| Distanza minima tra barre per la zona di sviluppo | 0,10 |
| -Distanza minima (cm) | |
| Numero diametri utilizzabili 2 mm | 17 |
| Alenco diametri utilizzabili 2 mm | 14 |
| Alenco diametri utilizzabili 3 mm | 16 |
| Numero diametri utilizzabili 4 mm | 18 |
| Numero diametri utilizzabili 5 mm | 20 |
| Numero diametri utilizzabili 6 mm | |
| Numero diametri utilizzabili 8 mm | |
| Classi utilizzabili | |
| -Minimo (cm) | 11,00 |
| -Massimo (cm) | 30,00 |
| -Criterio (cm) | 1,00 |
| Tipo di armatura (azione momento e punzonamento) | |
| -Minimizza il numero dei ferri | x |
| -Minimizza il peso complessivo dei ferri | |
| Dati per progettazione agli stati limite | |
| Condizioni ambientali | |
| -Corrosive | / |
| -Aggressive | |
| -Materie pericolose | |
| Controllo numero N° | E8 |
| Classificazione barre tese/comprese | |
| -Solo le barre con definizione percentuale rispetto | |
| alla barra più tesa/compressa nel riferimento a 28 | 30,00 |
| -Fattore di riduzione della resistenza | |

Verifiche e armature solette/platee

Relazione di calcolo

Simbologia

A_{sm} = Distanza media tra le fessure
 Φ_{eq} = Diametro equivalente delle barre
 ϵ_{sm} = Deformazione unitaria media dell'armatura (*1000)
 σ_c = Tensione nel calcestruzzo
 σ_f = Tensione nel ferro
 σ_s = Tensione nell'acciaio nella sezione fessurata
 $A_{c\ eff}$ = Area di calcestruzzo efficace
 A_B = Area complessiva dei ferri nell'area di calcestruzzo efficace
 $A_{fE\ I}$ = Area di ferro effettiva totale presente nel punto di verifica, inferiore
 $A_{fE\ S}$ = Area di ferro effettiva totale presente nel punto di verifica, superiore
 $A_{fE\ St.}$ = Area di ferro effettiva della staffatura
 CC = Numero della combinazione delle condizioni di carico elementari
 $Cf\ inf$ = Copriferro inferiore
 $Cf\ sup$ = Copriferro superiore
 $Clas$ = Tipo di calcestruzzo
 DV = Direzione di verifica
 XX = Verifica per momento M_{xx}
 YY = Verifica per momento M_{yy}
 F_{cd} = Resistenza di calcolo a compressione del calcestruzzo
 F_{ck} = Resistenza caratteristica cilindrica a compressione del calcestruzzo
 F_{ctd} = Resistenza di calcolo a trazione del calcestruzzo
 F_{ctk} = Resistenza caratteristica a trazione del calcestruzzo
 F_{yd} = Resistenza di calcolo dell'acciaio
 F_{yk} = Tensione caratteristica di snervamento dell'acciaio
 K_2 = Coefficiente per distribuzione deformazioni
 MR_{dy} = Momento resistente allo stato limite ultimo intorno all'asse Y
 M_{om} = Momento flettente
 M_y = Momento flettente intorno all'asse Y
 $Nodo$ = Numero del nodo
 $Sic.$ = Sicurezza
 $Spess.$ = Spessore
 TCC = Tipo di combinazione di carico
 SLU = Stato limite ultimo
 $SLE\ R$ = Stato limite d'esercizio, combinazione rara
 $SLE\ F$ = Stato limite d'esercizio, combinazione frequente
 $SLE\ Q$ = Stato limite d'esercizio, combinazione quasi permanente
 Tp = Tipo di acciaio
 VR_{cd} = Taglio ultimo lato calcestruzzo
 VR_{sd} = Taglio ultimo lato armatura
 VR_{du} = Taglio ultimo resistente
 VS_{du} = Taglio agente nella direzione del momento ultimo
 W_k = Ampiezza caratteristica delle fessure
 X = Coordinata X del nodo
 Y = Coordinata Y del nodo
 c = Ricoprimento dell'armatura
 $ctg\theta$ = Cotangente dell'angolo di inclinazione dei puntoni di calcestruzzo
 s = Distanza massima tra le barre

Armatura soletta a quota 0.00

Caratteristiche delle sezioni e dei materiali utilizzati

| Spess. <cm> | Cf sup <cm> | Cf inf <cm> | Clas | Fck <daN/cm²> | Fctk <daN/cm²> | Fcd <daN/cm²> | Fctd <daN/cm²> | Tp | Fyk <daN/cm²> | Fyd <daN/cm²> |
|----------------|----------------|----------------|--------|------------------|-------------------|------------------|-------------------|-------|------------------|------------------|
| 350.00 | 3.00 | 3.00 | C40/50 | 415.00 | 25.17 | 235.17 | 16.78 | B450C | 4500.00 | 3913.04 |
| 260.00 | 3.00 | 3.00 | C40/50 | 415.00 | 25.17 | 235.17 | 16.78 | B450C | 4500.00 | 3913.04 |
| 150.00 | 3.00 | 3.00 | C40/50 | 415.00 | 25.17 | 235.17 | 16.78 | B450C | 4500.00 | 3913.04 |

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Nodo | X <m> | Y <m> | DV | CC | TCC | AfE S <cm²> | AfE I <cm²> | M _y <daNm> | MR _{dy} <daNm> | Sic. |
|------|----------|----------|----|----|-----|----------------|----------------|--------------------------|----------------------------|--------|
| -125 | 14.11 | 14.50 | XX | 1 | SLU | 7.54 | 13.40 | 718064.00 | 134210.00 | 0.187 |
| -125 | 14.11 | 14.50 | XX | 1 | SLU | 7.54 | 13.40 | 718064.00 | 134210.00 | 0.187 |
| -18 | 10.39 | 3.84 | XX | 1 | SLU | 7.54 | 13.40 | -2996.51 | -75874.20 | 25.321 |
| -151 | 12.61 | 19.16 | XX | 1 | SLU | 5.13 | 13.40 | 253181.00 | 76511.40 | 0.302 |
| -141 | 16.57 | 17.35 | XX | 1 | SLU | 5.13 | 13.40 | 243355.00 | 76511.40 | 0.314 |
| -17 | 11.50 | 3.06 | XX | 1 | SLU | 5.13 | 13.40 | -8418.92 | -29821.60 | 3.542 |
| -99 | 9.97 | 12.35 | XX | 1 | SLU | 13.40 | 13.40 | 1214140.00 | 181420.00 | 0.149 |
| -109 | 12.12 | 12.77 | XX | 1 | SLU | 13.40 | 13.40 | 1024710.00 | 181420.00 | 0.177 |
| -66 | 10.55 | 10.44 | XX | 1 | SLU | 13.40 | 13.40 | -327855.00 | -181420.00 | 0.553 |
| -132 | 10.94 | 15.43 | YY | 1 | SLU | 13.40 | 13.40 | 1222170.00 | 134214.00 | 0.110 |
| -132 | 10.94 | 15.43 | YY | 1 | SLU | 13.40 | 13.40 | 1222170.00 | 134214.00 | 0.110 |
| -37 | 12.06 | 7.55 | YY | 1 | SLU | 13.40 | 13.40 | -520744.00 | -134214.00 | 0.258 |
| -19 | 12.61 | 3.84 | YY | 1 | SLU | 13.40 | 13.40 | -134209.00 | -76518.00 | 0.570 |
| -150 | 10.39 | 19.16 | YY | 1 | SLU | 13.40 | 13.40 | 433701.00 | 76518.00 | 0.176 |
| -150 | 10.39 | 19.16 | YY | 1 | SLU | 13.40 | 13.40 | 433701.00 | 76518.00 | 0.176 |
| -69 | 11.91 | 10.61 | YY | 1 | SLU | 13.40 | 13.40 | -4202760.00 | -181420.00 | 0.043 |
| -88 | 11.50 | 11.50 | YY | 1 | SLU | 13.40 | 13.40 | 511975.00 | 181420.00 | 0.354 |
| -100 | 11.64 | 12.46 | YY | 1 | SLU | 13.40 | 13.40 | 6064350.00 | 181420.00 | 0.030 |

Stato limite ultimo - Verifiche a taglio

Relazione di calcolo

| Nodo | X <m> | Y <m> | DV | CC | TCC | Afe S <cmq> | Afe I <cmq> | Afe St. <cmq/m> | Vsdu <daN> | ctg θ | VRcd <daN> | VRsd <daN> | Vrdu <daN> | Sic. |
|------|----------|----------|----|----|-----|----------------|----------------|--------------------|---------------|--------------|---------------|---------------|---------------|-------|
| -125 | 14.11 | 14.50 | XX | 1 | SLU | 7.54 | 13.40 | | 210652.00 | | | | 83813.30 | 0.398 |
| -141 | 16.57 | 17.35 | XX | 1 | SLU | 5.13 | 13.40 | | 98826.20 | | | | 53081.80 | 0.537 |
| -109 | 12.12 | 12.77 | XX | 1 | SLU | 13.40 | 13.40 | | 578931.00 | | | | 108042.00 | 0.187 |
| -132 | 10.94 | 15.43 | YY | 1 | SLU | 13.40 | 13.40 | | 257247.00 | | | | 83813.30 | 0.326 |
| -150 | 10.39 | 19.16 | YY | 1 | SLU | 13.40 | 13.40 | | 134370.00 | | | | 53081.80 | 0.395 |
| -88 | 11.50 | 11.50 | YY | 1 | SLU | 13.40 | 13.40 | | 1456390.00 | | | | 108042.00 | 0.074 |

Stato limite d'esercizio - Verifiche tensionali

| Nodo | X <m> | Y <m> | DV | CC | TCC | Afe S <cmq> | Afe I <cmq> | Mom <daNm> | σ_c <daN/cm 2 > | σ_f <daN/cm 2 > |
|------|----------|----------|----|----|-------|----------------|----------------|---------------|------------------------------|------------------------------|
| -125 | 14.11 | 14.50 | XX | 2 | SLE R | 7.54 | 13.40 | 531899.00 | 137.25 | 16021.10 |
| -125 | 14.11 | 14.50 | XX | 4 | SLE Q | 7.54 | 13.40 | 531899.00 | 137.25 | 16021.10 |
| -18 | 10.39 | 3.84 | XX | 2 | SLE R | 7.54 | 13.40 | -2219.64 | 0.71 | 117.55 |
| -18 | 10.39 | 3.84 | XX | 4 | SLE Q | 7.54 | 13.40 | -2219.64 | 0.71 | 117.55 |
| -151 | 12.61 | 19.16 | XX | 2 | SLE R | 5.13 | 13.40 | 187541.00 | 115.93 | 9995.00 |
| -151 | 12.61 | 19.16 | XX | 4 | SLE Q | 5.13 | 13.40 | 187541.00 | 115.93 | 9995.00 |
| -17 | 11.50 | 3.06 | XX | 2 | SLE R | 5.13 | 13.40 | -6236.24 | 5.46 | 850.19 |
| -17 | 11.50 | 3.06 | XX | 4 | SLE Q | 5.13 | 13.40 | -6236.24 | 5.46 | 850.19 |
| -99 | 9.97 | 12.35 | XX | 2 | SLE R | 13.40 | 13.40 | 899367.00 | 143.00 | 19935.30 |
| -99 | 9.97 | 12.35 | XX | 4 | SLE Q | 13.40 | 13.40 | 899367.00 | 143.00 | 19935.30 |
| -66 | 10.55 | 10.44 | XX | 2 | SLE R | 13.40 | 13.40 | -242856.00 | 38.61 | 5383.11 |
| -66 | 10.55 | 10.44 | XX | 4 | SLE Q | 13.40 | 13.40 | -242856.00 | 38.61 | 5383.11 |
| -132 | 10.94 | 15.43 | YY | 2 | SLE R | 13.40 | 13.40 | 905313.00 | 226.82 | 27210.90 |
| -132 | 10.94 | 15.43 | YY | 4 | SLE Q | 13.40 | 13.40 | 905313.00 | 226.82 | 27210.90 |
| -37 | 12.06 | 7.55 | YY | 2 | SLE R | 13.40 | 13.40 | -385736.00 | 96.64 | 11594.00 |
| -37 | 12.06 | 7.55 | YY | 4 | SLE Q | 13.40 | 13.40 | -385736.00 | 96.64 | 11594.00 |
| -19 | 12.61 | 3.84 | YY | 2 | SLE R | 13.40 | 13.40 | -99414.10 | 58.17 | 5274.83 |
| -19 | 12.61 | 3.84 | YY | 4 | SLE Q | 13.40 | 13.40 | -99414.10 | 58.17 | 5274.83 |
| -150 | 10.39 | 19.16 | YY | 2 | SLE R | 13.40 | 13.40 | 321260.00 | 187.99 | 17045.80 |
| -150 | 10.39 | 19.16 | YY | 4 | SLE Q | 13.40 | 13.40 | 321260.00 | 187.99 | 17045.80 |
| -69 | 11.91 | 10.61 | YY | 2 | SLE R | 13.40 | 13.40 | -3113150.00 | 494.99 | 69005.80 |
| -69 | 11.91 | 10.61 | YY | 4 | SLE Q | 13.40 | 13.40 | -3113150.00 | 494.99 | 69005.80 |
| -100 | 11.64 | 12.46 | YY | 2 | SLE R | 13.40 | 13.40 | 4492110.00 | 714.25 | 99571.70 |
| -100 | 11.64 | 12.46 | YY | 4 | SLE Q | 13.40 | 13.40 | 4492110.00 | 714.25 | 99571.70 |

Stato limite d'esercizio - Verifiche a fessurazione

| Nodo | X <m> | Y <m> | DV | CC | TCC | c <mm> | s <mm> | K $_c$ | ϕ_{eq} | Δ_{sm} <mm> | A $_e$ <cmq> | A $_c$ eff <cmq> | σ_s <daN/cm 2 > | ϵ_{sm} | Wk <mm> |
|------|----------|----------|----|----|-------|-----------|-----------|--------|-------------|-----------------------|-----------------|---------------------|------------------------------|-----------------|------------|
| -125 | 14.11 | 14.50 | XX | 4 | SLE Q | 22.00 | 150.00 | 0.50 | 16.00 | 1730.52 | 15.41 | 750.00 | 16021.10 | 7.40 | 21.76 |
| -125 | 14.11 | 14.50 | XX | 3 | SLE F | 22.00 | 150.00 | 0.50 | 16.00 | 1730.52 | 15.41 | 750.00 | 16021.10 | 7.21 | 21.20 |
| -18 | 10.39 | 3.84 | XX | 4 | SLE Q | 24.00 | 150.00 | 0.50 | 12.00 | 1789.35 | 8.67 | 750.00 | 117.55 | 0.03 | 0.10 |
| -18 | 10.39 | 3.84 | XX | 3 | SLE F | 24.00 | 150.00 | 0.50 | 12.00 | 1789.35 | 8.67 | 750.00 | 117.55 | 0.03 | 0.10 |
| -151 | 12.61 | 19.16 | XX | 4 | SLE Q | 22.00 | 150.00 | 0.50 | 16.00 | 961.61 | 15.41 | 750.00 | 9995.00 | 4.47 | 7.31 |
| -151 | 12.61 | 19.16 | XX | 3 | SLE F | 22.00 | 150.00 | 0.50 | 16.00 | 961.61 | 15.41 | 750.00 | 9995.00 | 4.28 | 7.00 |
| -17 | 11.50 | 3.06 | XX | 4 | SLE Q | 23.00 | 300.00 | 0.50 | 14.00 | 1028.20 | 6.67 | 750.00 | 850.19 | 0.25 | 0.43 |
| -17 | 11.50 | 3.06 | XX | 3 | SLE F | 23.00 | 300.00 | 0.50 | 14.00 | 1028.20 | 6.67 | 750.00 | 850.19 | 0.25 | 0.43 |
| -99 | 9.97 | 12.35 | XX | 4 | SLE Q | 22.00 | 150.00 | 0.50 | 16.00 | 2372.18 | 15.41 | 750.00 | 19935.30 | 9.30 | 37.49 |
| -99 | 9.97 | 12.35 | XX | 3 | SLE F | 22.00 | 150.00 | 0.50 | 16.00 | 2372.18 | 15.41 | 750.00 | 19935.30 | 9.11 | 36.73 |
| -66 | 10.55 | 10.44 | XX | 4 | SLE Q | 22.00 | 150.00 | 0.50 | 16.00 | 2372.18 | 15.41 | 750.00 | 5383.11 | 2.23 | 9.00 |
| -66 | 10.55 | 10.44 | XX | 3 | SLE F | 22.00 | 150.00 | 0.50 | 16.00 | 2372.18 | 15.41 | 750.00 | 5383.11 | 2.04 | 8.24 |
| -132 | 10.94 | 15.43 | YY | 4 | SLE Q | 22.00 | 150.00 | 0.50 | 16.00 | 1735.78 | 15.41 | 750.00 | 27210.90 | 12.83 | 37.86 |
| -132 | 10.94 | 15.43 | YY | 3 | SLE F | 22.00 | 150.00 | 0.50 | 16.00 | 1735.78 | 15.41 | 750.00 | 27210.90 | 12.64 | 37.30 |
| -37 | 12.06 | 7.55 | YY | 4 | SLE Q | 22.00 | 150.00 | 0.50 | 16.00 | 1735.78 | 15.41 | 750.00 | 11594.00 | 5.25 | 15.49 |
| -37 | 12.06 | 7.55 | YY | 3 | SLE F | 22.00 | 150.00 | 0.50 | 16.00 | 1735.78 | 15.41 | 750.00 | 11594.00 | 5.06 | 14.92 |
| -19 | 12.61 | 3.84 | YY | 4 | SLE Q | 22.00 | 150.00 | 0.50 | 16.00 | 968.51 | 15.41 | 750.00 | 5274.83 | 2.18 | 3.59 |
| -19 | 12.61 | 3.84 | YY | 3 | SLE F | 22.00 | 150.00 | 0.50 | 16.00 | 968.51 | 15.41 | 750.00 | 5274.83 | 1.99 | 3.28 |
| -150 | 10.39 | 19.16 | YY | 4 | SLE Q | 22.00 | 150.00 | 0.50 | 16.00 | 968.51 | 15.41 | 750.00 | 17045.80 | 7.89 | 13.00 |
| -150 | 10.39 | 19.16 | YY | 3 | SLE F | 22.00 | 150.00 | 0.50 | 16.00 | 968.51 | 15.41 | 750.00 | 17045.80 | 7.70 | 12.68 |
| -69 | 11.91 | 10.61 | YY | 4 | SLE Q | 22.00 | 150.00 | 0.50 | 16.00 | 2372.18 | 15.41 | 750.00 | 69005.80 | 33.12 | 133.55 |
| -69 | 11.91 | 10.61 | YY | 3 | SLE F | 22.00 | 150.00 | 0.50 | 16.00 | 2372.18 | 15.41 | 750.00 | 69005.80 | 32.93 | 132.79 |
| -100 | 11.64 | 12.46 | YY | 4 | SLE Q | 22.00 | 150.00 | 0.50 | 16.00 | 2372.18 | 15.41 | 750.00 | 99571.70 | 47.96 | 193.39 |
| -100 | 11.64 | 12.46 | YY | 3 | SLE F | 22.00 | 150.00 | 0.50 | 16.00 | 2372.18 | 15.41 | 750.00 | 99571.70 | 47.77 | 192.62 |

Verifiche e armature plinti/pali

Simbologia

Az = Azioni ed effetti sul plinto/palo
 RVN = Reazioni vincolari agenti
 TAG = Effetti dovuti ai tagli
 ECC = Effetti dovuti all'eccentricità
 PP = Effetti dovuti al peso proprio
 SVR = Effetti dovuti ai sovraccarichi e al peso del terreno
 TOT = Azioni totali di calcolo
 CC = Numero della combinazione delle condizioni di carico elementari
 Caso = Caso di verifica
 cf = Copriferro

Relazione di calcolo

C1s = Tipo di calcestruzzo
 Fcd = Resistenza di calcolo a compressione del calcestruzzo
 Fck = Resistenza caratteristica cilindrica a compressione del calcestruzzo
 Fctd = Resistenza di calcolo a trazione del calcestruzzo
 Fctk = Resistenza caratteristica a trazione del calcestruzzo
 Fyd = Resistenza di calcolo dell'acciaio
 Fyk = Tensione caratteristica di snervamento dell'acciaio
 Mx = Momento intorno all'asse X
 My = Momento intorno all'asse Y
 Mz = Momento intorno all'asse Z
 N = Sforzo normale
 Palo = Numero del palo
 R = Raggio
 TCC = Tipo di combinazione di carico
 SLU = Stato limite ultimo
 SLE R = Stato limite d'esercizio, combinazione rara
 SLE F = Stato limite d'esercizio, combinazione frequente
 SLE Q = Stato limite d'esercizio, combinazione quasi permanente
 Tp = Tipo di acciaio
 Tx = Taglio in dir. X
 Ty = Taglio in dir. Y

Palo n. 1

Caratteristiche del palo e dei materiali utilizzati

| R <cm> | Cf <cm> | C1s | Fck <daN/cm ² > | Fctk <daN/cm ² > | Fcd <daN/cm ² > | Fctd <daN/cm ² > | Tp | Fyk <daN/cm ² > | Fyd <daN/cm ² > |
|-----------|------------|--------|-------------------------------|--------------------------------|-------------------------------|--------------------------------|-------|-------------------------------|-------------------------------|
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N <daN> | Mx <daNm> | My <daNm> | Mz <daNm> |
|-----|------------|--------------|--------------|--------------|
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 1 (-40)

| Caso | CC | TCC | Az | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|-----|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | RVN | 128741.00 | 7055.80 | -657.42 | 64490.00 | -10882.50 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 128741.00 | 7055.80 | -657.42 | 64490.00 | -10882.50 |
| 2 | 2 | SLE R | RVN | 95363.70 | 5226.52 | -486.98 | 47770.40 | -8061.09 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 95363.70 | 5226.52 | -486.98 | 47770.40 | -8061.09 |
| 3 | 3 | SLE F | RVN | 95363.70 | 5226.52 | -486.98 | 47770.40 | -8061.09 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 95363.70 | 5226.52 | -486.98 | 47770.40 | -8061.09 |
| 4 | 4 | SLE Q | RVN | 95363.70 | 5226.52 | -486.98 | 47770.40 | -8061.09 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 95363.70 | 5226.52 | -486.98 | 47770.40 | -8061.09 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|------|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | 1 | -128741.00 | -7055.80 | 657.42 | -64490.00 | 10882.50 |
| 2 | 2 | SLE R | 1 | -95363.70 | -5226.52 | 486.98 | -47770.40 | 8061.09 |
| 3 | 3 | SLE F | 1 | -95363.70 | -5226.52 | 486.98 | -47770.40 | 8061.09 |
| 4 | 4 | SLE Q | 1 | -95363.70 | -5226.52 | 486.98 | -47770.40 | 8061.09 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|-------|
| 1 | 0.00 | 1 | SLU | -128741.00 | 64233.50 | 10839.20 | -128741.00 | 195562.00 | 34234.00 | 2-3 | 170.00 | 3.048 |
| 2 | 59.52 | 1 | SLU | -129054.00 | 67622.40 | 11411.10 | -129054.00 | 195675.00 | 34254.90 | 2-3 | 170.00 | 2.897 |
| 3 | 119.05 | 1 | SLU | -128002.00 | 69615.20 | 11747.30 | -128002.00 | 195297.00 | 34184.60 | 2-3 | 170.00 | 2.808 |
| 4 | 178.57 | 1 | SLU | -126953.00 | 70417.10 | 11882.70 | -126953.00 | 194921.00 | 34114.50 | 2-3 | 170.00 | 2.771 |
| 5 | 238.09 | 1 | SLU | -125909.00 | 70217.00 | 11848.90 | -125909.00 | 194546.00 | 34044.60 | 2-3 | 170.00 | 2.774 |
| 6 | 297.62 | 1 | SLU | -124868.00 | 69187.30 | 11675.10 | -124868.00 | 194172.00 | 33975.10 | 2-3 | 170.00 | 2.809 |
| 7 | 357.14 | 1 | SLU | -123832.00 | 67421.40 | 11377.10 | -123832.00 | 193800.00 | 33905.80 | 2-3 | 170.00 | 2.877 |
| 8 | 416.67 | 1 | SLU | -120867.00 | 64822.30 | 10938.60 | -120867.00 | 192735.00 | 33707.50 | 2-3 | 170.00 | 2.976 |

Relazione di calcolo

| | | | | | | | | | | | | |
|----|---------|---|-----|------------|----------|----------|-------------|------------|-----------|-----|--------|--------|
| 9 | 476.19 | 1 | SLU | -117909.00 | 61523.50 | 10381.90 | -117909.00 | 191668.00 | 33508.70 | 2-3 | 170.00 | 3.119 |
| 10 | 535.71 | 1 | SLU | -114957.00 | 57712.00 | 9738.72 | -114957.00 | 190602.00 | 33309.90 | 2-3 | 170.00 | 3.306 |
| 11 | 595.24 | 1 | SLU | -112012.00 | 53550.60 | 9036.49 | -112012.00 | 189489.00 | 33209.40 | 2-3 | 170.00 | 3.542 |
| 12 | 654.76 | 1 | SLU | -109072.00 | 49178.80 | 8298.77 | -109072.00 | 188375.00 | 33111.30 | 2-3 | 170.00 | 3.835 |
| 13 | 714.29 | 1 | SLU | -106138.00 | 44715.10 | 7545.53 | -106138.00 | 187259.00 | 33016.00 | 2-3 | 170.00 | 4.193 |
| 14 | 773.81 | 1 | SLU | -103210.00 | 40258.10 | 6793.43 | -103210.00 | 186143.00 | 32919.80 | 2-3 | 170.00 | 4.630 |
| 15 | 833.33 | 1 | SLU | -100288.00 | 35888.90 | 6056.13 | -100288.00 | 185029.00 | 32823.00 | 2-3 | 170.00 | 5.163 |
| 16 | 892.86 | 1 | SLU | -97370.60 | 31672.20 | 5344.58 | -97370.60 | 184188.00 | 30689.80 | 2-3 | 170.62 | 5.813 |
| 17 | 952.38 | 1 | SLU | -94458.70 | 27658.80 | 4667.33 | -94458.70 | 183069.00 | 30601.60 | 2-3 | 170.62 | 6.617 |
| 18 | 1011.90 | 1 | SLU | -91551.80 | 23886.70 | 4030.80 | -91551.80 | 181949.00 | 30497.50 | 2-3 | 170.62 | 7.616 |
| 19 | 1071.43 | 1 | SLU | -88649.90 | 20382.80 | 3439.53 | -88649.90 | 180815.00 | 30295.60 | 2-3 | 170.62 | 8.869 |
| 20 | 1130.95 | 1 | SLU | -85752.70 | 17164.70 | 2896.49 | -85752.70 | 179677.00 | 30092.60 | 2-3 | 170.62 | 10.466 |
| 21 | 1190.48 | 1 | SLU | -82860.10 | 14241.80 | 2403.25 | -82860.10 | 178541.00 | 29890.00 | 2-3 | 170.62 | 12.534 |
| 22 | 1250.00 | 1 | SLU | -79971.90 | 11616.50 | 1960.25 | -79971.90 | 177404.00 | 29687.10 | 2-3 | 170.62 | 15.268 |
| 23 | 1309.52 | 1 | SLU | -77088.10 | 9285.81 | 1566.95 | -77088.10 | 175962.00 | 31273.80 | 2-3 | 170.00 | 18.978 |
| 24 | 1369.05 | 1 | SLU | -74208.40 | 7241.96 | 1222.06 | -74208.40 | 174823.00 | 31065.40 | 2-3 | 170.00 | 24.177 |
| 25 | 1428.57 | 1 | SLU | -71332.60 | 5473.51 | 923.64 | -71332.60 | 173681.00 | 30855.80 | 2-3 | 170.00 | 31.779 |
| 26 | 1488.10 | 1 | SLU | -68460.70 | 3966.14 | 669.27 | -2571250.00 | 172538.00 | 30646.00 | 2-3 | 170.00 | 37.558 |
| 27 | 1547.62 | 1 | SLU | -65592.40 | 2703.36 | 456.18 | -2571250.00 | 171396.00 | 30436.40 | 2-3 | 170.00 | 39.200 |
| 28 | 1607.14 | 1 | SLU | -62727.70 | 1667.12 | 281.32 | -2571250.00 | 170250.00 | 30226.00 | 2-3 | 170.00 | 40.991 |
| 29 | 1666.67 | 1 | SLU | -59866.40 | 838.28 | 141.46 | -2571250.00 | 169103.00 | 30014.90 | 2-3 | 170.00 | 42.950 |
| 30 | 1726.19 | 1 | SLU | -57008.20 | 197.04 | 33.25 | -2571250.00 | 167957.00 | 29804.10 | 2-3 | 170.00 | 45.103 |
| 31 | 1785.71 | 1 | SLU | -54153.10 | -276.72 | -46.70 | -2571250.00 | -166953.00 | -29188.50 | 2-3 | 350.00 | 47.481 |
| 32 | 1845.24 | 1 | SLU | -51300.90 | -603.20 | -101.79 | -2571250.00 | -165832.00 | -28978.00 | 2-3 | 350.00 | 50.121 |
| 33 | 1904.76 | 1 | SLU | -48451.50 | -802.48 | -135.42 | -2571250.00 | -164710.00 | -28767.60 | 2-3 | 350.00 | 53.069 |
| 34 | 1964.29 | 1 | SLU | -45604.70 | -894.40 | -150.93 | -2571250.00 | -163589.00 | -28557.50 | 2-3 | 350.00 | 56.381 |
| 35 | 2023.81 | 1 | SLU | -42760.30 | -898.47 | -151.61 | -2571250.00 | -162467.00 | -28346.70 | 2-3 | 350.00 | 60.132 |
| 36 | 2083.33 | 1 | SLU | -39918.20 | -833.83 | -140.71 | -2571250.00 | -161343.00 | -28135.20 | 2-3 | 350.00 | 64.413 |
| 37 | 2142.86 | 1 | SLU | -37078.20 | -719.28 | -121.38 | -2571250.00 | -160179.00 | -28013.60 | 2-3 | 350.00 | 69.347 |
| 38 | 2202.38 | 1 | SLU | -34240.20 | -573.27 | -96.74 | -2571250.00 | -159006.00 | -27910.70 | 2-3 | 350.00 | 75.094 |
| 39 | 2261.90 | 1 | SLU | -31404.10 | -413.96 | -69.85 | -2571250.00 | -157827.00 | -27813.80 | 2-3 | 350.00 | 81.876 |
| 40 | 2321.43 | 1 | SLU | -28569.70 | -259.27 | -43.75 | -2571250.00 | -156649.00 | -27715.80 | 2-3 | 350.00 | 89.999 |
| 41 | 2380.95 | 1 | SLU | -25736.70 | -126.95 | -21.42 | -2571250.00 | -155471.00 | -27616.50 | 2-3 | 350.00 | 99.906 |
| 42 | 2440.48 | 1 | SLU | -22905.20 | -34.67 | -5.85 | -2571250.00 | -154523.00 | -25770.60 | 2-3 | 350.62 | >100 |
| 43 | 2500.00 | 1 | SLU | -20074.90 | 0.00 | 0.00 | -2571250.00 | | | | | >100 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | CC | TCC | Ty <daN> | Tz <daN> | bw <m> | Asw <cmq> | Vsdu <daN> | ctgθ | VRsd <daN> | VRod <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|-----------|--------------|---------------|------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SLU | 7055.80 | -657.42 | 0.85 | 11.31 | 7086.36 | 1.00 | 32294.70 | 350109.00 | 32294.70 | 4.557 |
| 2 | 59.52 | 1 | SLU | 4504.56 | -419.71 | 0.85 | 11.31 | 4524.07 | 1.00 | 32294.70 | 350154.00 | 32294.70 | 7.138 |
| 3 | 119.05 | 1 | SLU | 2314.79 | -215.68 | 0.85 | 11.31 | 2324.81 | 1.00 | 32294.70 | 350003.00 | 32294.70 | 13.891 |
| 4 | 178.57 | 1 | SLU | 459.31 | -42.80 | 0.85 | 11.31 | 461.30 | 1.00 | 32294.70 | 349853.00 | 32294.70 | 70.008 |
| 5 | 238.09 | 1 | SLU | -1089.57 | 101.52 | 0.85 | 11.31 | 1094.29 | 1.00 | 32294.70 | 349703.00 | 32294.70 | 29.512 |
| 6 | 297.62 | 1 | SLU | -2359.67 | 219.86 | 0.85 | 11.31 | 2369.90 | 1.00 | 32294.70 | 349554.00 | 32294.70 | 13.627 |
| 7 | 357.14 | 1 | SLU | -3698.87 | 344.64 | 0.85 | 11.31 | 3714.89 | 1.00 | 32294.70 | 349406.00 | 32294.70 | 8.693 |
| 8 | 416.67 | 1 | SLU | -5059.12 | 471.38 | 0.85 | 11.31 | 5081.03 | 1.00 | 32294.70 | 348981.00 | 32294.70 | 6.356 |
| 9 | 476.19 | 1 | SLU | -6080.34 | 566.53 | 0.85 | 11.31 | 6106.68 | 1.00 | 32294.70 | 348557.00 | 32294.70 | 5.288 |
| 10 | 535.71 | 1 | SLU | -6805.28 | 634.08 | 0.85 | 11.31 | 6834.76 | 1.00 | 32294.70 | 348135.00 | 32294.70 | 4.725 |
| 11 | 595.24 | 1 | SLU | -7274.26 | 677.78 | 0.85 | 11.31 | 7305.77 | 1.00 | 32294.70 | 347713.00 | 32294.70 | 4.420 |
| 12 | 654.76 | 1 | SLU | -7524.89 | 701.13 | 0.85 | 11.31 | 7557.49 | 1.00 | 32294.70 | 347291.00 | 32294.70 | 4.273 |
| 13 | 714.29 | 1 | SLU | -7591.89 | 707.37 | 0.85 | 11.31 | 7624.78 | 1.00 | 32294.70 | 346871.00 | 32294.70 | 4.236 |
| 14 | 773.81 | 1 | SLU | -7506.98 | 699.46 | 0.85 | 11.31 | 7539.50 | 1.00 | 32294.70 | 346452.00 | 32294.70 | 4.283 |
| 15 | 833.33 | 1 | SLU | -7298.84 | 680.07 | 0.85 | 11.31 | 7330.46 | 1.00 | 32294.70 | 346033.00 | 32294.70 | 4.406 |
| 16 | 892.86 | 1 | SLU | -6993.19 | 651.59 | 0.85 | 11.31 | 7023.48 | 1.00 | 32294.70 | 345615.00 | 32294.70 | 4.598 |
| 17 | 952.38 | 1 | SLU | -6612.82 | 616.15 | 0.85 | 11.31 | 6641.46 | 1.00 | 32294.70 | 345198.00 | 32294.70 | 4.863 |
| 18 | 1011.90 | 1 | SLU | -6177.73 | 575.61 | 0.85 | 11.31 | 6204.49 | 1.00 | 32294.70 | 344782.00 | 32294.70 | 5.205 |
| 19 | 1071.43 | 1 | SLU | -5705.32 | 531.59 | 0.85 | 11.31 | 5730.03 | 1.00 | 32294.70 | 344366.00 | 32294.70 | 5.636 |
| 20 | 1130.95 | 1 | SLU | -5210.48 | 485.49 | 0.85 | 11.31 | 5233.05 | 1.00 | 32294.70 | 343951.00 | 32294.70 | 6.171 |
| 21 | 1190.48 | 1 | SLU | -4705.87 | 438.47 | 0.85 | 11.31 | 4726.26 | 1.00 | 32294.70 | 343537.00 | 32294.70 | 6.833 |
| 22 | 1250.00 | 1 | SLU | -4202.06 | 391.53 | 0.85 | 11.31 | 4220.26 | 1.00 | 32294.70 | 343123.00 | 32294.70 | 7.652 |
| 23 | 1309.52 | 1 | SLU | -3707.74 | 345.47 | 0.85 | 11.31 | 3723.80 | 1.00 | 32294.70 | 342710.00 | 32294.70 | 8.673 |
| 24 | 1369.05 | 1 | SLU | -3229.93 | 300.95 | 0.85 | 11.31 | 3243.92 | 1.00 | 32294.70 | 342298.00 | 32294.70 | 9.955 |
| 25 | 1428.57 | 1 | SLU | -2774.17 | 258.48 | 0.85 | 11.31 | 2786.19 | 1.00 | 32294.70 | 341886.00 | 32294.70 | 11.591 |
| 26 | 1488.10 | 1 | SLU | -2344.73 | 218.47 | 0.85 | 11.31 | 2354.88 | 1.00 | 32294.70 | 341474.00 | 32294.70 | 13.714 |
| 27 | 1547.62 | 1 | SLU | -1944.75 | 181.20 | 0.85 | 11.31 | 1953.17 | 1.00 | 32294.70 | 341064.00 | 32294.70 | 16.535 |
| 28 | 1607.14 | 1 | SLU | -1576.45 | 146.88 | 0.85 | 11.31 | 1583.27 | 1.00 | 32294.70 | 340653.00 | 32294.70 | 20.397 |
| 29 | 1666.67 | 1 | SLU | -1241.27 | 115.66 | 0.85 | 11.31 | 1246.65 | 1.00 | 32294.70 | 340243.00 | 32294.70 | 25.905 |
| 30 | 1726.19 | 1 | SLU | -940.04 | 87.59 | 0.85 | 11.31 | 944.11 | 1.00 | 32294.70 | 339834.00 | 32294.70 | 34.207 |
| 31 | 1785.71 | 1 | SLU | -673.07 | 62.71 | 0.85 | 11.31 | 675.98 | 1.00 | 32294.70 | 339425.00 | 32294.70 | 47.775 |
| 32 | 1845.24 | 1 | SLU | -440.30 | 41.03 | 0.85 | 11.31 | 442.21 | 1.00 | 32294.70 | 339016.00 | 32294.70 | 73.030 |
| 33 | 1904.76 | 1 | SLU | -241.43 | 22.50 | 0.85 | 11.31 | 242.47 | 1.00 | 32294.70 | 338608.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -75.95 | 7.08 | 0.85 | 11.31 | 76.28 | 1.00 | 32294.70 | 338200.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | 56.74 | -5.29 | 0.85 | 11.31 | 56.98 | 1.00 | 32294.70 | 337793.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 157.25 | -14.65 | 0.85 | 11.31 | 157.93 | 1.00 | 32294.70 | 337386.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 226.18 | -21.07 | 0.85 | 11.31 | 227.16 | 1.00 | 32294.70 | 336979.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 264.07 | -24.61 | 0.85 | 11.31 | 265.22 | 1.00 | 32294.70 | 336573.00 | 32294.70 | >100 |

Relazione di calcolo

| | | | | | | | | | | | | | |
|----|---------|---|-----|--------|--------|------|-------|--------|------|----------|-----------|----------|------|
| 39 | 2261.90 | 1 | SLU | 271.38 | -25.29 | 0.85 | 11.31 | 272.56 | 1.00 | 32294.70 | 336166.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 248.44 | -23.15 | 0.85 | 11.31 | 249.52 | 1.00 | 32294.70 | 335760.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 195.49 | -18.21 | 0.85 | 11.31 | 196.33 | 1.00 | 32294.70 | 335355.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 112.65 | -10.50 | 0.85 | 11.31 | 113.14 | 1.00 | 32294.70 | 334949.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mz <daNm> | My <daNm> | Aft <cmq> | Afc <cmq> | σ_c <daN/cmq> | σ_f <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-------------------------|-------------------------|
| 44 | 0.00 | 2 | SLE R | -95363.70 | 8029.03 | 47580.30 | 40.84 | 37.70 | 43.38 | 646.02 |
| 45 | 59.52 | 2 | SLE R | -95908.90 | 8452.63 | 50090.60 | 40.84 | 37.70 | 45.99 | 721.95 |
| 46 | 119.05 | 2 | SLE R | -95319.40 | 8701.73 | 51566.80 | 40.84 | 37.70 | 47.60 | 776.28 |
| 47 | 178.57 | 2 | SLE R | -94732.90 | 8801.97 | 52160.80 | 40.84 | 37.70 | 48.27 | 801.88 |
| 48 | 238.09 | 2 | SLE R | -94149.40 | 8776.95 | 52012.60 | 40.84 | 37.70 | 48.16 | 802.74 |
| 49 | 297.62 | 2 | SLE R | -93568.80 | 8648.25 | 51249.90 | 40.84 | 37.70 | 47.39 | 783.01 |
| 50 | 357.14 | 2 | SLE R | -92991.20 | 8427.51 | 49941.80 | 40.84 | 37.70 | 46.05 | 745.20 |
| 51 | 416.67 | 2 | SLE R | -90810.40 | 8102.63 | 48016.50 | 40.84 | 37.70 | 44.17 | 702.86 |
| 52 | 476.19 | 2 | SLE R | -88634.50 | 7690.29 | 45573.00 | 40.84 | 37.70 | 41.75 | 643.82 |
| 53 | 535.71 | 2 | SLE R | -86463.30 | 7213.87 | 42749.70 | 40.84 | 37.70 | 38.93 | 573.33 |
| 54 | 595.24 | 2 | SLE R | -84296.80 | 6693.70 | 39667.10 | 40.84 | 37.70 | 35.84 | 496.17 |
| 55 | 654.76 | 2 | SLE R | -82134.80 | 6147.24 | 36428.80 | 40.84 | 37.70 | 32.61 | 447.37 |
| 56 | 714.29 | 2 | SLE R | -79977.20 | 5589.28 | 33122.30 | 34.56 | 43.98 | 29.35 | 404.25 |
| 57 | 773.81 | 2 | SLE R | -77823.80 | 5032.17 | 29820.80 | 34.56 | 43.98 | 26.14 | 361.80 |
| 58 | 833.33 | 2 | SLE R | -75674.70 | 4486.02 | 26584.30 | 34.56 | 43.98 | 23.09 | 321.16 |
| 59 | 892.86 | 2 | SLE R | -73529.60 | 3958.95 | 23460.90 | 28.27 | 50.27 | 20.26 | 283.33 |
| 60 | 952.38 | 2 | SLE R | -71388.50 | 3457.28 | 20488.00 | 28.27 | 50.27 | 17.72 | 249.08 |
| 61 | 1011.90 | 2 | SLE R | -69251.20 | 2985.78 | 17693.80 | 21.99 | 56.55 | 15.49 | 218.88 |
| 62 | 1071.43 | 2 | SLE R | -67117.60 | 2547.80 | 15098.40 | 21.99 | 56.55 | 13.58 | 192.78 |
| 63 | 1130.95 | 2 | SLE R | -64987.60 | 2145.55 | 12714.60 | 15.71 | 62.83 | 11.96 | 170.53 |
| 64 | 1190.48 | 2 | SLE R | -62861.10 | 1780.19 | 10549.50 | 0.00 | 78.54 | 10.59 | 151.60 |
| 65 | 1250.00 | 2 | SLE R | -60737.90 | 1452.03 | 8604.82 | 0.00 | 78.54 | 9.41 | 135.15 |
| 66 | 1309.52 | 2 | SLE R | -58618.00 | 1160.70 | 6878.38 | 0.00 | 78.54 | 8.34 | 120.31 |
| 67 | 1369.05 | 2 | SLE R | -56501.30 | 905.23 | 5364.42 | 0.00 | 78.54 | 7.38 | 106.98 |
| 68 | 1428.57 | 2 | SLE R | -54387.60 | 684.17 | 4054.45 | 0.00 | 78.54 | 6.53 | 95.10 |
| 69 | 1488.10 | 2 | SLE R | -52276.80 | 495.76 | 2937.88 | 0.00 | 78.54 | 5.77 | 84.60 |
| 70 | 1547.62 | 2 | SLE R | -50168.80 | 337.91 | 2002.49 | 0.00 | 78.54 | 5.12 | 75.39 |
| 71 | 1607.14 | 2 | SLE R | -48063.50 | 208.39 | 1234.91 | 0.00 | 78.54 | 4.55 | 67.37 |
| 72 | 1666.67 | 2 | SLE R | -45960.80 | 104.78 | 620.95 | 0.00 | 78.54 | 4.06 | 60.45 |
| 73 | 1726.19 | 2 | SLE R | -43860.60 | 24.63 | 145.96 | 0.00 | 78.54 | 3.64 | 54.51 |
| 74 | 1785.71 | 2 | SLE R | -41762.70 | -34.59 | -204.98 | 0.00 | 78.54 | 3.50 | 52.38 |
| 75 | 1845.24 | 2 | SLE R | -39667.00 | -75.40 | -446.82 | 0.00 | 78.54 | 3.46 | 51.55 |
| 76 | 1904.76 | 2 | SLE R | -37573.50 | -100.31 | -594.43 | 0.00 | 78.54 | 3.36 | 50.05 |
| 77 | 1964.29 | 2 | SLE R | -35482.00 | -111.80 | -662.52 | 0.00 | 78.54 | 3.23 | 47.99 |
| 78 | 2023.81 | 2 | SLE R | -33392.30 | -112.31 | -665.53 | 0.00 | 78.54 | 3.06 | 45.46 |
| 79 | 2083.33 | 2 | SLE R | -31304.50 | -104.23 | -617.65 | 0.00 | 78.54 | 2.87 | 42.58 |
| 80 | 2142.86 | 2 | SLE R | -29218.40 | -89.91 | -532.80 | 0.00 | 78.54 | 2.65 | 39.43 |
| 81 | 2202.38 | 2 | SLE R | -27133.80 | -71.66 | -424.65 | 0.00 | 78.54 | 2.43 | 36.11 |
| 82 | 2261.90 | 2 | SLE R | -25050.70 | -51.74 | -306.63 | 0.00 | 78.54 | 2.20 | 32.73 |
| 83 | 2321.43 | 2 | SLE R | -22968.90 | -32.41 | -192.05 | 0.00 | 78.54 | 1.97 | 29.38 |
| 84 | 2380.95 | 2 | SLE R | -20888.40 | -15.87 | -94.04 | 0.00 | 78.54 | 1.75 | 26.14 |
| 85 | 2440.48 | 2 | SLE R | -18808.90 | -4.33 | -25.68 | 0.00 | 78.54 | 1.54 | 23.12 |
| 86 | 2500.00 | 2 | SLE R | -16730.50 | 0.00 | 0.00 | 0.00 | 78.54 | 1.36 | 20.40 |
| 87 | 0.00 | 4 | SLE Q | -95363.70 | 8029.03 | 47580.30 | 40.84 | 37.70 | 43.38 | 646.02 |
| 88 | 59.52 | 4 | SLE Q | -95908.90 | 8452.63 | 50090.60 | 40.84 | 37.70 | 45.99 | 721.95 |
| 89 | 119.05 | 4 | SLE Q | -95319.40 | 8701.73 | 51566.80 | 40.84 | 37.70 | 47.60 | 776.28 |
| 90 | 178.57 | 4 | SLE Q | -94732.90 | 8801.97 | 52160.80 | 40.84 | 37.70 | 48.27 | 801.88 |
| 91 | 238.09 | 4 | SLE Q | -94149.40 | 8776.95 | 52012.60 | 40.84 | 37.70 | 48.16 | 802.74 |
| 92 | 297.62 | 4 | SLE Q | -93568.80 | 8648.25 | 51249.90 | 40.84 | 37.70 | 47.39 | 783.01 |
| 93 | 357.14 | 4 | SLE Q | -92991.20 | 8427.51 | 49941.80 | 40.84 | 37.70 | 46.05 | 745.20 |
| 94 | 416.67 | 4 | SLE Q | -90810.40 | 8102.63 | 48016.50 | 40.84 | 37.70 | 44.17 | 702.86 |
| 95 | 476.19 | 4 | SLE Q | -88634.50 | 7690.29 | 45573.00 | 40.84 | 37.70 | 41.75 | 643.82 |
| 96 | 535.71 | 4 | SLE Q | -86463.30 | 7213.87 | 42749.70 | 40.84 | 37.70 | 38.93 | 573.33 |
| 97 | 595.24 | 4 | SLE Q | -84296.80 | 6693.70 | 39667.10 | 40.84 | 37.70 | 35.84 | 496.17 |
| 98 | 654.76 | 4 | SLE Q | -82134.80 | 6147.24 | 36428.80 | 40.84 | 37.70 | 32.61 | 447.37 |
| 99 | 714.29 | 4 | SLE Q | -79977.20 | 5589.28 | 33122.30 | 34.56 | 43.98 | 29.35 | 404.25 |
| 100 | 773.81 | 4 | SLE Q | -77823.80 | 5032.17 | 29820.80 | 34.56 | 43.98 | 26.14 | 361.80 |
| 101 | 833.33 | 4 | SLE Q | -75674.70 | 4486.02 | 26584.30 | 34.56 | 43.98 | 23.09 | 321.16 |
| 102 | 892.86 | 4 | SLE Q | -73529.60 | 3958.95 | 23460.90 | 28.27 | 50.27 | 20.26 | 283.33 |
| 103 | 952.38 | 4 | SLE Q | -71388.50 | 3457.28 | 20488.00 | 28.27 | 50.27 | 17.72 | 249.08 |
| 104 | 1011.90 | 4 | SLE Q | -69251.20 | 2985.78 | 17693.80 | 21.99 | 56.55 | 15.49 | 218.88 |
| 105 | 1071.43 | 4 | SLE Q | -67117.60 | 2547.80 | 15098.40 | 21.99 | 56.55 | 13.58 | 192.78 |
| 106 | 1130.95 | 4 | SLE Q | -64987.60 | 2145.55 | 12714.60 | 15.71 | 62.83 | 11.96 | 170.53 |
| 107 | 1190.48 | 4 | SLE Q | -62861.10 | 1780.19 | 10549.50 | 0.00 | 78.54 | 10.59 | 151.60 |
| 108 | 1250.00 | 4 | SLE Q | -60737.90 | 1452.03 | 8604.82 | 0.00 | 78.54 | 9.41 | 135.15 |
| 109 | 1309.52 | 4 | SLE Q | -58618.00 | 1160.70 | 6878.38 | 0.00 | 78.54 | 8.34 | 120.31 |
| 110 | 1369.05 | 4 | SLE Q | -56501.30 | 905.23 | 5364.42 | 0.00 | 78.54 | 7.38 | 106.98 |
| 111 | 1428.57 | 4 | SLE Q | -54387.60 | 684.17 | 4054.45 | 0.00 | 78.54 | 6.53 | 95.10 |
| 112 | 1488.10 | 4 | SLE Q | -52276.80 | 495.76 | 2937.88 | 0.00 | 78.54 | 5.77 | 84.60 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|-----------|---------|---------|------|-------|------|-------|
| 113 | 1547.62 | 4 | SLE Q | -50168.80 | 337.91 | 2002.49 | 0.00 | 78.54 | 5.12 | 75.39 |
| 114 | 1607.14 | 4 | SLE Q | -48063.50 | 208.39 | 1234.91 | 0.00 | 78.54 | 4.55 | 67.37 |
| 115 | 1666.67 | 4 | SLE Q | -45960.80 | 104.78 | 620.95 | 0.00 | 78.54 | 4.06 | 60.45 |
| 116 | 1726.19 | 4 | SLE Q | -43860.60 | 24.63 | 145.96 | 0.00 | 78.54 | 3.64 | 54.51 |
| 117 | 1785.71 | 4 | SLE Q | -41762.70 | -34.59 | -204.98 | 0.00 | 78.54 | 3.50 | 52.38 |
| 118 | 1845.24 | 4 | SLE Q | -39667.00 | -75.40 | -446.82 | 0.00 | 78.54 | 3.46 | 51.55 |
| 119 | 1904.76 | 4 | SLE Q | -37573.50 | -100.31 | -594.43 | 0.00 | 78.54 | 3.36 | 50.05 |
| 120 | 1964.29 | 4 | SLE Q | -35482.00 | -111.80 | -662.52 | 0.00 | 78.54 | 3.23 | 47.99 |
| 121 | 2023.81 | 4 | SLE Q | -33392.30 | -112.31 | -665.53 | 0.00 | 78.54 | 3.06 | 45.46 |
| 122 | 2083.33 | 4 | SLE Q | -31304.50 | -104.23 | -617.65 | 0.00 | 78.54 | 2.87 | 42.58 |
| 123 | 2142.86 | 4 | SLE Q | -29218.40 | -89.91 | -532.80 | 0.00 | 78.54 | 2.65 | 39.43 |
| 124 | 2202.38 | 4 | SLE Q | -27133.80 | -71.66 | -424.65 | 0.00 | 78.54 | 2.43 | 36.11 |
| 125 | 2261.90 | 4 | SLE Q | -25050.70 | -51.74 | -306.63 | 0.00 | 78.54 | 2.20 | 32.73 |
| 126 | 2321.43 | 4 | SLE Q | -22968.90 | -32.41 | -192.05 | 0.00 | 78.54 | 1.97 | 29.38 |
| 127 | 2380.95 | 4 | SLE Q | -20888.40 | -15.87 | -94.04 | 0.00 | 78.54 | 1.75 | 26.14 |
| 128 | 2440.48 | 4 | SLE Q | -18808.90 | -4.33 | -25.68 | 0.00 | 78.54 | 1.54 | 23.12 |
| 129 | 2500.00 | 4 | SLE Q | -16730.50 | 0.00 | 0.00 | 0.00 | 78.54 | 1.36 | 20.40 |

Stato limite d'esercizio - Verifiche a fessurazione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | c <mm> | s <mm> | K ₂ | φ _{eq} | Δ _{sm} <mm> | A _B <cmq> | A _c eff <cmq> | σ _B <daN/cmq> | ε _{sm} | Wk <mm> |
|------|-----------|----|-------|------------|--------------|--------------|-----------|-----------|----------------|-----------------|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------|------------|
| 87 | 0.00 | 4 | SLE Q | -95363.70 | 47580.30 | 8029.03 | 46.00 | 136.36 | 0.50 | 20.00 | 189.78 | 21.99 | 1075.18 | 646.02 | 0.19 | 0.06 |
| 88 | 59.52 | 4 | SLE Q | -95908.90 | 50090.60 | 8452.63 | 46.00 | 136.36 | 0.50 | 20.00 | 191.69 | 21.99 | 1096.18 | 721.95 | 0.21 | 0.07 |
| 89 | 119.05 | 4 | SLE Q | -95319.40 | 51566.80 | 8701.73 | 46.00 | 136.36 | 0.50 | 20.00 | 193.06 | 21.99 | 1111.21 | 776.28 | 0.23 | 0.07 |
| 90 | 178.57 | 4 | SLE Q | -94732.90 | 52160.80 | 8801.97 | 46.00 | 136.36 | 0.50 | 20.00 | 193.71 | 21.99 | 1118.38 | 801.88 | 0.23 | 0.08 |
| 91 | 238.09 | 4 | SLE Q | -94149.40 | 52012.60 | 8776.95 | 46.00 | 136.36 | 0.50 | 20.00 | 193.83 | 21.99 | 1119.71 | 802.74 | 0.23 | 0.08 |
| 92 | 297.62 | 4 | SLE Q | -93568.80 | 51249.90 | 8648.25 | 46.00 | 136.36 | 0.50 | 20.00 | 193.52 | 21.99 | 1116.26 | 783.01 | 0.23 | 0.08 |
| 93 | 357.14 | 4 | SLE Q | -92991.20 | 49941.80 | 8427.51 | 46.00 | 136.36 | 0.50 | 20.00 | 192.78 | 21.99 | 1108.18 | 745.20 | 0.22 | 0.07 |
| 94 | 416.67 | 4 | SLE Q | -90810.40 | 48016.50 | 8102.63 | 46.00 | 136.36 | 0.50 | 20.00 | 192.18 | 21.99 | 1101.56 | 702.86 | 0.20 | 0.07 |
| 95 | 476.19 | 4 | SLE Q | -88634.50 | 45573.00 | 7690.29 | 46.00 | 136.36 | 0.50 | 20.00 | 191.06 | 21.99 | 1089.19 | 643.82 | 0.19 | 0.06 |
| 96 | 535.71 | 4 | SLE Q | -86463.30 | 42749.70 | 7213.87 | 46.00 | 136.36 | 0.50 | 20.00 | 205.62 | 18.85 | 1070.80 | 573.33 | 0.17 | 0.06 |
| 97 | 595.24 | 4 | SLE Q | -84296.80 | 39667.10 | 6693.70 | 46.00 | 136.36 | 0.50 | 20.00 | 202.94 | 18.85 | 1045.63 | 496.17 | 0.14 | 0.05 |
| 98 | 654.76 | 4 | SLE Q | -82134.80 | 36428.80 | 6147.24 | 46.00 | 136.36 | 0.50 | 20.00 | 199.43 | 18.85 | 1012.47 | 416.64 | 0.12 | 0.04 |
| 99 | 714.29 | 4 | SLE Q | -79977.20 | 33122.30 | 5589.28 | 46.00 | 136.36 | 0.50 | 20.00 | 215.44 | 15.71 | 969.46 | 338.59 | 0.10 | 0.04 |
| 100 | 773.81 | 4 | SLE Q | -77823.80 | 29820.80 | 5032.17 | 46.00 | 136.36 | 0.50 | 20.00 | 208.06 | 15.71 | 911.56 | 265.35 | 0.08 | 0.03 |
| 101 | 833.33 | 4 | SLE Q | -75674.70 | 26584.30 | 4486.02 | 46.00 | 136.36 | 0.50 | 20.00 | 198.13 | 15.71 | 833.54 | 199.64 | 0.06 | 0.02 |
| 102 | 892.86 | 4 | SLE Q | -73529.60 | 23460.90 | 3958.95 | 46.00 | 136.36 | 0.50 | 20.00 | 184.88 | 15.71 | 729.48 | 143.30 | 0.04 | 0.01 |
| 103 | 952.38 | 4 | SLE Q | -71388.50 | 20488.00 | 3457.28 | 46.00 | 136.36 | 0.50 | 20.00 | 184.70 | 12.57 | 582.47 | 97.14 | 0.03 | 0.01 |
| 104 | 1011.90 | 4 | SLE Q | -69251.20 | 17693.80 | 2985.78 | 46.00 | 136.36 | 0.50 | 20.00 | 183.07 | 9.42 | 429.18 | 60.98 | 0.02 | 0.01 |
| 105 | 1071.43 | 4 | SLE Q | -67117.60 | 15098.40 | 2547.80 | 46.00 | 136.36 | 0.50 | 20.00 | 150.60 | 9.42 | 276.17 | 33.65 | 0.01 | 0.00 |
| 130 | 0.00 | 3 | SLE F | -95363.70 | 47580.30 | 8029.03 | 46.00 | 136.36 | 0.50 | 20.00 | 189.78 | 21.99 | 1075.18 | 646.02 | 0.19 | 0.06 |
| 131 | 59.52 | 3 | SLE F | -95908.90 | 50090.60 | 8452.63 | 46.00 | 136.36 | 0.50 | 20.00 | 191.69 | 21.99 | 1096.18 | 721.95 | 0.21 | 0.07 |
| 132 | 119.05 | 3 | SLE F | -95319.40 | 51566.80 | 8701.73 | 46.00 | 136.36 | 0.50 | 20.00 | 193.06 | 21.99 | 1111.21 | 776.28 | 0.23 | 0.07 |
| 133 | 178.57 | 3 | SLE F | -94732.90 | 52160.80 | 8801.97 | 46.00 | 136.36 | 0.50 | 20.00 | 193.71 | 21.99 | 1118.38 | 801.88 | 0.23 | 0.08 |
| 134 | 238.09 | 3 | SLE F | -94149.40 | 52012.60 | 8776.95 | 46.00 | 136.36 | 0.50 | 20.00 | 193.83 | 21.99 | 1119.71 | 802.74 | 0.23 | 0.08 |
| 135 | 297.62 | 3 | SLE F | -93568.80 | 51249.90 | 8648.25 | 46.00 | 136.36 | 0.50 | 20.00 | 193.52 | 21.99 | 1116.26 | 783.01 | 0.23 | 0.08 |
| 136 | 357.14 | 3 | SLE F | -92991.20 | 49941.80 | 8427.51 | 46.00 | 136.36 | 0.50 | 20.00 | 192.78 | 21.99 | 1108.18 | 745.20 | 0.22 | 0.07 |
| 137 | 416.67 | 3 | SLE F | -90810.40 | 48016.50 | 8102.63 | 46.00 | 136.36 | 0.50 | 20.00 | 192.18 | 21.99 | 1101.56 | 702.86 | 0.20 | 0.07 |
| 138 | 476.19 | 3 | SLE F | -88634.50 | 45573.00 | 7690.29 | 46.00 | 136.36 | 0.50 | 20.00 | 191.06 | 21.99 | 1089.19 | 643.82 | 0.19 | 0.06 |
| 139 | 535.71 | 3 | SLE F | -86463.30 | 42749.70 | 7213.87 | 46.00 | 136.36 | 0.50 | 20.00 | 205.62 | 18.85 | 1070.80 | 573.33 | 0.17 | 0.06 |
| 140 | 595.24 | 3 | SLE F | -84296.80 | 39667.10 | 6693.70 | 46.00 | 136.36 | 0.50 | 20.00 | 202.94 | 18.85 | 1045.63 | 496.17 | 0.14 | 0.05 |
| 141 | 654.76 | 3 | SLE F | -82134.80 | 36428.80 | 6147.24 | 46.00 | 136.36 | 0.50 | 20.00 | 199.43 | 18.85 | 1012.47 | 416.64 | 0.12 | 0.04 |
| 142 | 714.29 | 3 | SLE F | -79977.20 | 33122.30 | 5589.28 | 46.00 | 136.36 | 0.50 | 20.00 | 215.44 | 15.71 | 969.46 | 338.59 | 0.10 | 0.04 |
| 143 | 773.81 | 3 | SLE F | -77823.80 | 29820.80 | 5032.17 | 46.00 | 136.36 | 0.50 | 20.00 | 208.06 | 15.71 | 911.56 | 265.35 | 0.08 | 0.03 |
| 144 | 833.33 | 3 | SLE F | -75674.70 | 26584.30 | 4486.02 | 46.00 | 136.36 | 0.50 | 20.00 | 198.13 | 15.71 | 833.54 | 199.64 | 0.06 | 0.02 |
| 145 | 892.86 | 3 | SLE F | -73529.60 | 23460.90 | 3958.95 | 46.00 | 136.36 | 0.50 | 20.00 | 184.88 | 15.71 | 729.48 | 143.30 | 0.04 | 0.01 |
| 146 | 952.38 | 3 | SLE F | -71388.50 | 20488.00 | 3457.28 | 46.00 | 136.36 | 0.50 | 20.00 | 184.70 | 12.57 | 582.47 | 97.14 | 0.03 | 0.01 |
| 147 | 1011.90 | 3 | SLE F | -69251.20 | 17693.80 | 2985.78 | 46.00 | 136.36 | 0.50 | 20.00 | 183.07 | 9.42 | 429.18 | 60.98 | 0.02 | 0.01 |
| 148 | 1071.43 | 3 | SLE F | -67117.60 | 15098.40 | 2547.80 | 46.00 | 136.36 | 0.50 | 20.00 | 150.60 | 9.42 | 276.17 | 33.65 | 0.01 | 0.00 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 4 | SLU N cost - min. sic. |
| 13 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 47 | C.Rare - Sc min (max compr.), C.Rare - Sf min (max compr.) |
| 48 | C.Rare - Sf max (max traz.) |
| 65 | C.Rare - Sc max (min. compr.) |
| 90 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf min (max compr.) |
| 91 | C.Q.Per. - Sf max (max traz.), C.Q.Per. - Wk Max |
| 108 | C.Q.Per. - Sc max (min. compr.) |
| 134 | C.Freq - Wk Max |

Palo n. 2

Caratteristiche del palo e dei materiali utilizzati

| R <cm> | Cf <cm> | Cls | Fck <daN/cmq> | Fctk <daN/cmq> | Fcd <daN/cmq> | Fctd <daN/cmq> | Tp | Fyk <daN/cmq> | Fyd <daN/cmq> |
|-----------|------------|-----|------------------|-------------------|------------------|-------------------|----|------------------|------------------|
|-----------|------------|-----|------------------|-------------------|------------------|-------------------|----|------------------|------------------|

Relazione di calcolo

| | | | | | | | | | |
|-------|------|--------|--------|-------|--------|-------|-------|---------|---------|
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |
|-------|------|--------|--------|-------|--------|-------|-------|---------|---------|

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N <daN> | Mx <daNm> | My <daNm> | Mz |
|-----|------------|--------------|--------------|----|
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 2 (-104)

| Caso | CC | TCC | Az | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|-----|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | RVN | 204703.00 | 6647.96 | -722.53 | 55868.70 | -22829.50 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 204703.00 | 6647.96 | -722.53 | 55868.70 | -22829.50 |
| 2 | 2 | SLE R | RVN | 151632.00 | 4924.41 | -535.21 | 41384.20 | -16910.80 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 151632.00 | 4924.41 | -535.21 | 41384.20 | -16910.80 |
| 3 | 3 | SLE F | RVN | 151632.00 | 4924.41 | -535.21 | 41384.20 | -16910.80 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 151632.00 | 4924.41 | -535.21 | 41384.20 | -16910.80 |
| 4 | 4 | SLE Q | RVN | 151632.00 | 4924.41 | -535.21 | 41384.20 | -16910.80 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 151632.00 | 4924.41 | -535.21 | 41384.20 | -16910.80 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|------|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | 1 | -204703.00 | -6647.96 | 722.53 | -55868.70 | 22829.50 |
| 2 | 2 | SLE R | 1 | -151632.00 | -4924.41 | 535.21 | -41384.20 | 16910.80 |
| 3 | 3 | SLE F | 1 | -151632.00 | -4924.41 | 535.21 | -41384.20 | 16910.80 |
| 4 | 4 | SLE Q | 1 | -151632.00 | -4924.41 | 535.21 | -41384.20 | 16910.80 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|--------|
| 1 | 0.00 | 1 | SLU | -204703.00 | 55644.40 | 22737.80 | -204703.00 | 208278.00 | 86386.20 | 2-3 | 157.50 | 3.751 |
| 2 | 59.52 | 1 | SLU | -204488.00 | 58655.40 | 23968.20 | -204488.00 | 208211.00 | 86356.10 | 2-3 | 157.50 | 3.557 |
| 3 | 119.05 | 1 | SLU | -202382.00 | 60445.40 | 24699.70 | -202382.00 | 207548.00 | 86060.70 | 2-3 | 157.50 | 3.441 |
| 4 | 178.57 | 1 | SLU | -200283.00 | 61193.10 | 25005.20 | -200283.00 | 206887.00 | 85766.30 | 2-3 | 157.50 | 3.388 |
| 5 | 238.09 | 1 | SLU | -198189.00 | 61063.50 | 24952.20 | -198189.00 | 206228.00 | 85472.70 | 2-3 | 157.50 | 3.384 |
| 6 | 297.62 | 1 | SLU | -196102.00 | 60207.00 | 24602.30 | -196102.00 | 205568.00 | 85178.10 | 2-3 | 157.50 | 3.421 |
| 7 | 357.14 | 1 | SLU | -194021.00 | 58704.80 | 23988.40 | -194021.00 | 204909.00 | 84882.80 | 2-3 | 157.50 | 3.497 |
| 8 | 416.67 | 1 | SLU | -189272.00 | 56471.20 | 23075.70 | -189272.00 | 203402.00 | 84209.00 | 2-3 | 157.50 | 3.609 |
| 9 | 476.19 | 1 | SLU | -184534.00 | 53622.40 | 21911.60 | -184534.00 | 201892.00 | 83532.20 | 2-3 | 157.50 | 3.772 |
| 10 | 535.71 | 1 | SLU | -179806.00 | 50322.00 | 20563.00 | -179806.00 | 200381.00 | 82853.40 | 2-3 | 157.50 | 3.989 |
| 11 | 595.24 | 1 | SLU | -175087.00 | 46712.30 | 19087.90 | -175087.00 | 198867.00 | 82172.40 | 2-3 | 157.50 | 4.264 |
| 12 | 654.76 | 1 | SLU | -170378.00 | 42915.40 | 17536.40 | -170378.00 | 197350.00 | 81488.80 | 2-3 | 157.50 | 4.606 |
| 13 | 714.29 | 1 | SLU | -165678.00 | 39034.90 | 15950.80 | -165678.00 | 195832.00 | 80803.80 | 2-3 | 157.50 | 5.024 |
| 14 | 773.81 | 1 | SLU | -160986.00 | 35157.40 | 14366.30 | -160986.00 | 194311.00 | 80115.30 | 2-3 | 157.50 | 5.534 |
| 15 | 833.33 | 1 | SLU | -156304.00 | 31353.80 | 12812.00 | -156304.00 | 192789.00 | 79426.60 | 2-3 | 157.50 | 6.156 |
| 16 | 892.86 | 1 | SLU | -151629.00 | 27681.10 | 11311.20 | -151629.00 | 191263.00 | 78733.40 | 2-3 | 157.50 | 6.917 |
| 17 | 952.38 | 1 | SLU | -146963.00 | 24183.60 | 9882.10 | -146963.00 | 189737.00 | 78041.10 | 2-3 | 157.50 | 7.853 |
| 18 | 1011.90 | 1 | SLU | -142305.00 | 20895.00 | 8538.26 | -142305.00 | 188207.00 | 77343.20 | 2-3 | 157.50 | 9.015 |
| 19 | 1071.43 | 1 | SLU | -137654.00 | 17838.90 | 7289.47 | -137654.00 | 186676.00 | 76646.50 | 2-3 | 157.50 | 10.472 |
| 20 | 1130.95 | 1 | SLU | -133011.00 | 15031.00 | 6142.07 | -133011.00 | 185141.00 | 75946.70 | 2-3 | 157.50 | 12.324 |
| 21 | 1190.48 | 1 | SLU | -128375.00 | 12479.50 | 5099.48 | -128375.00 | 183498.00 | 75373.80 | 2-3 | 157.50 | 14.715 |
| 22 | 1250.00 | 1 | SLU | -123746.00 | 10187.00 | 4162.70 | -123746.00 | 181847.00 | 74801.50 | 2-3 | 157.50 | 17.868 |
| 23 | 1309.52 | 1 | SLU | -119123.00 | 8150.93 | 3330.69 | -119123.00 | 180195.00 | 74228.30 | 2-3 | 157.50 | 21.585 |
| 24 | 1369.05 | 1 | SLU | -114507.00 | 6364.62 | 2600.76 | -114507.00 | 178536.00 | 73655.90 | 2-3 | 157.50 | 22.455 |
| 25 | 1428.57 | 1 | SLU | -109897.00 | 4818.26 | 1968.88 | -109897.00 | 176875.00 | 73082.70 | 2-3 | 157.50 | 23.397 |
| 26 | 1488.10 | 1 | SLU | -105293.00 | 3499.49 | 1429.99 | -105293.00 | 175208.00 | 72510.50 | 2-3 | 157.50 | 24.420 |
| 27 | 1547.62 | 1 | SLU | -100695.00 | 2394.02 | 978.26 | -100695.00 | 173537.00 | 71937.90 | 2-3 | 157.50 | 25.535 |
| 28 | 1607.14 | 1 | SLU | -96101.50 | 1486.17 | 607.29 | -96101.50 | 171862.00 | 71366.20 | 2-3 | 157.50 | 26.756 |
| 29 | 1666.67 | 1 | SLU | -91513.50 | 759.33 | 310.28 | -91513.50 | 170182.00 | 70794.40 | 2-3 | 157.50 | 28.097 |
| 30 | 1726.19 | 1 | SLU | -86930.50 | 196.28 | 80.20 | -86930.50 | 168499.00 | 70223.50 | 2-3 | 157.50 | 29.578 |
| 31 | 1785.71 | 1 | SLU | -82352.10 | -220.50 | -90.10 | -82352.10 | -167096.00 | -68709.10 | 2-3 | 337.50 | 31.223 |
| 32 | 1845.24 | 1 | SLU | -77778.20 | -508.57 | -207.82 | -77778.20 | -165477.00 | -67941.00 | 2-3 | 337.50 | 33.059 |

Relazione di calcolo

| | | | | | | | | | | | | |
|----|---------|---|-----|-----------|---------|---------|-------------|------------|-----------|-----|--------|--------|
| 33 | 1904.76 | 1 | SLU | -73208.40 | -685.44 | -280.09 | -2571250.00 | -163838.00 | -67189.70 | 2-3 | 337.50 | 35.122 |
| 34 | 1964.29 | 1 | SLU | -68642.50 | -768.39 | -313.99 | -2571250.00 | -162196.00 | -66436.40 | 2-3 | 337.50 | 37.459 |
| 35 | 2023.81 | 1 | SLU | -64080.40 | -774.42 | -316.45 | -2571250.00 | -160551.00 | -65680.50 | 2-3 | 337.50 | 40.125 |
| 36 | 2083.33 | 1 | SLU | -59521.60 | -720.24 | -294.31 | -2571250.00 | -158903.00 | -64923.80 | 2-3 | 337.50 | 43.199 |
| 37 | 2142.86 | 1 | SLU | -54966.10 | -622.22 | -254.25 | -2571250.00 | -157225.00 | -64197.90 | 2-3 | 337.50 | 46.779 |
| 38 | 2202.38 | 1 | SLU | -50413.50 | -496.46 | -202.87 | -2571250.00 | -155456.00 | -63583.40 | 2-3 | 337.50 | 51.003 |
| 39 | 2261.90 | 1 | SLU | -45863.60 | -358.79 | -146.61 | -2571250.00 | -153676.00 | -62971.90 | 2-3 | 337.50 | 56.063 |
| 40 | 2321.43 | 1 | SLU | -41316.20 | -224.87 | -91.89 | -2571250.00 | -151895.00 | -62358.90 | 2-3 | 337.50 | 62.233 |
| 41 | 2380.95 | 1 | SLU | -36771.00 | -110.17 | -45.02 | -2571250.00 | -150103.00 | -61749.70 | 2-3 | 337.50 | 69.926 |
| 42 | 2440.48 | 1 | SLU | -32227.70 | -30.10 | -12.30 | -2571250.00 | -148310.00 | -61138.60 | 2-3 | 337.50 | 79.784 |
| 43 | 2500.00 | 1 | SLU | -27686.20 | 0.00 | 0.00 | -2571250.00 | | | | | 92.871 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | CC | TCC | Ty <daN> | Tz <daN> | bw <m> | Asw <cmq> | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|---------|----|-----|----------|----------|--------|-----------|------------|------|------------|------------|------------|--------|
| 1 | 0.00 | 1 | SLU | 6647.96 | -722.53 | 0.85 | 11.31 | 6687.11 | 1.00 | 32294.70 | 360990.00 | 32294.70 | 4.829 |
| 2 | 59.52 | 1 | SLU | 4275.18 | -464.64 | 0.85 | 11.31 | 4300.35 | 1.00 | 32294.70 | 360959.00 | 32294.70 | 7.510 |
| 3 | 119.05 | 1 | SLU | 2237.61 | -243.19 | 0.85 | 11.31 | 2250.78 | 1.00 | 32294.70 | 360657.00 | 32294.70 | 14.348 |
| 4 | 178.57 | 1 | SLU | 510.17 | -55.45 | 0.85 | 11.31 | 513.17 | 1.00 | 32294.70 | 360356.00 | 32294.70 | 62.931 |
| 5 | 238.09 | 1 | SLU | -932.73 | 101.37 | 0.85 | 11.31 | 938.22 | 1.00 | 32294.70 | 360057.00 | 32294.70 | 34.421 |
| 6 | 297.62 | 1 | SLU | -2116.81 | 230.06 | 0.85 | 11.31 | 2129.27 | 1.00 | 32294.70 | 359758.00 | 32294.70 | 15.167 |
| 7 | 357.14 | 1 | SLU | -3366.63 | 365.90 | 0.85 | 11.31 | 3386.45 | 1.00 | 32294.70 | 359460.00 | 32294.70 | 9.536 |
| 8 | 416.67 | 1 | SLU | -4637.46 | 504.02 | 0.85 | 11.31 | 4664.77 | 1.00 | 32294.70 | 358779.00 | 32294.70 | 6.923 |
| 9 | 476.19 | 1 | SLU | -5593.18 | 607.89 | 0.85 | 11.31 | 5626.11 | 1.00 | 32294.70 | 358101.00 | 32294.70 | 5.740 |
| 10 | 535.71 | 1 | SLU | -6273.38 | 681.82 | 0.85 | 11.31 | 6310.32 | 1.00 | 32294.70 | 357423.00 | 32294.70 | 5.118 |
| 11 | 595.24 | 1 | SLU | -6715.46 | 729.86 | 0.85 | 11.31 | 6755.01 | 1.00 | 32294.70 | 356747.00 | 32294.70 | 4.781 |
| 12 | 654.76 | 1 | SLU | -6954.31 | 755.82 | 0.85 | 11.31 | 6995.26 | 1.00 | 32294.70 | 356073.00 | 32294.70 | 4.617 |
| 13 | 714.29 | 1 | SLU | -7022.14 | 763.19 | 0.85 | 11.31 | 7063.49 | 1.00 | 32294.70 | 355400.00 | 32294.70 | 4.572 |
| 14 | 773.81 | 1 | SLU | -6948.38 | 755.18 | 0.85 | 11.31 | 6989.30 | 1.00 | 32294.70 | 354728.00 | 32294.70 | 4.621 |
| 15 | 833.33 | 1 | SLU | -6759.70 | 734.67 | 0.85 | 11.31 | 6799.51 | 1.00 | 32294.70 | 354057.00 | 32294.70 | 4.750 |
| 16 | 892.86 | 1 | SLU | -6479.96 | 704.27 | 0.85 | 11.31 | 6518.12 | 1.00 | 32294.70 | 353387.00 | 32294.70 | 4.955 |
| 17 | 952.38 | 1 | SLU | -6130.36 | 666.27 | 0.85 | 11.31 | 6166.46 | 1.00 | 32294.70 | 352719.00 | 32294.70 | 5.237 |
| 18 | 1011.90 | 1 | SLU | -5729.49 | 622.70 | 0.85 | 11.31 | 5763.23 | 1.00 | 32294.70 | 352052.00 | 32294.70 | 5.604 |
| 19 | 1071.43 | 1 | SLU | -5293.52 | 575.32 | 0.85 | 11.31 | 5324.69 | 1.00 | 32294.70 | 351386.00 | 32294.70 | 6.065 |
| 20 | 1130.95 | 1 | SLU | -4836.33 | 525.63 | 0.85 | 11.31 | 4864.81 | 1.00 | 32294.70 | 350721.00 | 32294.70 | 6.638 |
| 21 | 1190.48 | 1 | SLU | -4369.70 | 474.92 | 0.85 | 11.31 | 4395.43 | 1.00 | 32294.70 | 350056.00 | 32294.70 | 7.347 |
| 22 | 1250.00 | 1 | SLU | -3903.47 | 424.25 | 0.85 | 11.31 | 3926.45 | 1.00 | 32294.70 | 349393.00 | 32294.70 | 8.225 |
| 23 | 1309.52 | 1 | SLU | -3445.74 | 374.50 | 0.85 | 11.31 | 3466.03 | 1.00 | 32294.70 | 348731.00 | 32294.70 | 9.318 |
| 24 | 1369.05 | 1 | SLU | -3003.06 | 326.38 | 0.85 | 11.31 | 3020.75 | 1.00 | 32294.70 | 348070.00 | 32294.70 | 10.691 |
| 25 | 1428.57 | 1 | SLU | -2580.63 | 280.47 | 0.85 | 11.31 | 2595.82 | 1.00 | 32294.70 | 347410.00 | 32294.70 | 12.441 |
| 26 | 1488.10 | 1 | SLU | -2182.41 | 237.19 | 0.85 | 11.31 | 2195.26 | 1.00 | 32294.70 | 346750.00 | 32294.70 | 14.711 |
| 27 | 1547.62 | 1 | SLU | -1811.36 | 196.87 | 0.85 | 11.31 | 1822.03 | 1.00 | 32294.70 | 346092.00 | 32294.70 | 17.725 |
| 28 | 1607.14 | 1 | SLU | -1469.57 | 159.72 | 0.85 | 11.31 | 1478.22 | 1.00 | 32294.70 | 345434.00 | 32294.70 | 21.847 |
| 29 | 1666.67 | 1 | SLU | -1158.40 | 125.90 | 0.85 | 11.31 | 1165.22 | 1.00 | 32294.70 | 344776.00 | 32294.70 | 27.716 |
| 30 | 1726.19 | 1 | SLU | -878.63 | 95.49 | 0.85 | 11.31 | 883.80 | 1.00 | 32294.70 | 344120.00 | 32294.70 | 36.541 |
| 31 | 1785.71 | 1 | SLU | -630.57 | 68.53 | 0.85 | 11.31 | 634.28 | 1.00 | 32294.70 | 343464.00 | 32294.70 | 50.915 |
| 32 | 1845.24 | 1 | SLU | -414.20 | 45.02 | 0.85 | 11.31 | 416.64 | 1.00 | 32294.70 | 342809.00 | 32294.70 | 77.513 |
| 33 | 1904.76 | 1 | SLU | -229.23 | 24.91 | 0.85 | 11.31 | 230.58 | 1.00 | 32294.70 | 342154.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -75.20 | 8.17 | 0.85 | 11.31 | 75.65 | 1.00 | 32294.70 | 341500.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | 48.41 | -5.26 | 0.85 | 11.31 | 48.70 | 1.00 | 32294.70 | 340847.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 142.19 | -15.45 | 0.85 | 11.31 | 143.02 | 1.00 | 32294.70 | 340194.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 206.67 | -22.46 | 0.85 | 11.31 | 207.89 | 1.00 | 32294.70 | 339541.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 242.37 | -26.34 | 0.85 | 11.31 | 243.79 | 1.00 | 32294.70 | 338889.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 249.68 | -27.14 | 0.85 | 11.31 | 251.15 | 1.00 | 32294.70 | 338238.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 228.93 | -24.88 | 0.85 | 11.31 | 230.28 | 1.00 | 32294.70 | 337586.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 180.32 | -19.60 | 0.85 | 11.31 | 181.39 | 1.00 | 32294.70 | 336935.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 104.00 | -11.30 | 0.85 | 11.31 | 104.61 | 1.00 | 32294.70 | 336284.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mz <daNm> | My <daNm> | AFT <cmq> | AFC <cmq> | σ _c <daN/cm²> | σ _f <daN/cm²> |
|------|--------|----|-------|------------|-----------|-----------|-----------|-----------|--------------------------|--------------------------|
| 44 | 0.00 | 2 | SLE R | -151632.00 | 16842.80 | 41218.00 | 28.27 | 50.27 | 38.18 | 534.34 |
| 45 | 59.52 | 2 | SLE R | -151786.00 | 17754.20 | 43448.50 | 28.27 | 50.27 | 40.20 | 561.08 |
| 46 | 119.05 | 2 | SLE R | -150416.00 | 18296.00 | 44774.40 | 31.42 | 47.12 | 41.45 | 577.26 |
| 47 | 178.57 | 2 | SLE R | -149051.00 | 18522.40 | 45328.20 | 31.42 | 47.12 | 41.99 | 584.14 |
| 48 | 238.09 | 2 | SLE R | -147690.00 | 18483.10 | 45232.20 | 31.42 | 47.12 | 41.91 | 582.85 |
| 49 | 297.62 | 2 | SLE R | -146334.00 | 18223.90 | 44597.80 | 31.42 | 47.12 | 41.32 | 574.71 |
| 50 | 357.14 | 2 | SLE R | -144983.00 | 17769.20 | 43485.10 | 31.42 | 47.12 | 40.26 | 560.53 |
| 51 | 416.67 | 2 | SLE R | -141481.00 | 17093.10 | 41830.50 | 31.42 | 47.12 | 38.72 | 539.42 |
| 52 | 476.19 | 2 | SLE R | -137986.00 | 16230.80 | 39720.30 | 28.27 | 50.27 | 36.75 | 512.78 |
| 53 | 535.71 | 2 | SLE R | -134499.00 | 15231.80 | 37275.50 | 28.27 | 50.27 | 34.51 | 482.41 |
| 54 | 595.24 | 2 | SLE R | -131019.00 | 14139.20 | 34601.70 | 28.27 | 50.27 | 32.11 | 449.93 |
| 55 | 654.76 | 2 | SLE R | -127546.00 | 12989.90 | 31789.20 | 25.13 | 53.41 | 29.66 | 416.73 |
| 56 | 714.29 | 2 | SLE R | -124080.00 | 11815.40 | 28914.80 | 21.99 | 56.55 | 27.25 | 383.96 |
| 57 | 773.81 | 2 | SLE R | -120623.00 | 10641.70 | 26042.50 | 21.99 | 56.55 | 24.94 | 352.50 |
| 58 | 833.33 | 2 | SLE R | -117168.00 | 9490.40 | 23225.00 | 15.71 | 62.83 | 22.78 | 322.94 |
| 59 | 892.86 | 2 | SLE R | -113721.00 | 8378.70 | 20504.50 | 12.57 | 65.97 | 20.79 | 295.59 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|------------|----------|----------|-------|-------|-------|--------|
| 60 | 952.38 | 2 | SLE R | -110281.00 | 7320.07 | 17913.80 | 3.14 | 75.40 | 18.97 | 270.55 |
| 61 | 1011.90 | 2 | SLE R | -106846.00 | 6324.64 | 15477.70 | 0.00 | 78.54 | 17.32 | 247.65 |
| 62 | 1071.43 | 2 | SLE R | -103417.00 | 5399.61 | 13214.00 | 0.00 | 78.54 | 15.77 | 226.30 |
| 63 | 1130.95 | 2 | SLE R | -99993.90 | 4549.68 | 11134.00 | 0.00 | 78.54 | 14.34 | 206.35 |
| 64 | 1190.48 | 2 | SLE R | -96575.90 | 3777.39 | 9244.09 | 0.00 | 78.54 | 13.00 | 187.85 |
| 65 | 1250.00 | 2 | SLE R | -93163.10 | 3083.48 | 7545.95 | 0.00 | 78.54 | 11.78 | 170.81 |
| 66 | 1309.52 | 2 | SLE R | -89755.30 | 2467.18 | 6037.72 | 0.00 | 78.54 | 10.66 | 155.22 |
| 67 | 1369.05 | 2 | SLE R | -86352.30 | 1926.49 | 4714.53 | 0.00 | 78.54 | 9.65 | 141.04 |
| 68 | 1428.57 | 2 | SLE R | -82953.90 | 1458.43 | 3569.08 | 0.00 | 78.54 | 8.73 | 128.21 |
| 69 | 1488.10 | 2 | SLE R | -79560.00 | 1059.25 | 2592.21 | 0.00 | 78.54 | 7.91 | 116.66 |
| 70 | 1547.62 | 2 | SLE R | -76170.40 | 724.64 | 1773.35 | 0.00 | 78.54 | 7.18 | 106.32 |
| 71 | 1607.14 | 2 | SLE R | -72784.80 | 449.85 | 1100.87 | 0.00 | 78.54 | 6.53 | 97.09 |
| 72 | 1666.67 | 2 | SLE R | -69403.20 | 229.84 | 562.47 | 0.00 | 78.54 | 5.95 | 88.88 |
| 73 | 1726.19 | 2 | SLE R | -66025.20 | 59.41 | 145.39 | 0.00 | 78.54 | 5.45 | 81.60 |
| 74 | 1785.71 | 2 | SLE R | -62650.80 | -66.74 | -163.33 | 0.00 | 78.54 | 5.18 | 77.63 |
| 75 | 1845.24 | 2 | SLE R | -59279.80 | -153.94 | -376.72 | 0.00 | 78.54 | 5.03 | 75.14 |
| 76 | 1904.76 | 2 | SLE R | -55911.90 | -207.47 | -507.73 | 0.00 | 78.54 | 4.83 | 72.03 |
| 77 | 1964.29 | 2 | SLE R | -52547.10 | -232.58 | -569.18 | 0.00 | 78.54 | 4.59 | 68.39 |
| 78 | 2023.81 | 2 | SLE R | -49185.00 | -234.41 | -573.64 | 0.00 | 78.54 | 4.32 | 64.32 |
| 79 | 2083.33 | 2 | SLE R | -45825.60 | -218.01 | -533.51 | 0.00 | 78.54 | 4.02 | 59.92 |
| 80 | 2142.86 | 2 | SLE R | -42468.70 | -188.34 | -460.90 | 0.00 | 78.54 | 3.71 | 55.28 |
| 81 | 2202.38 | 2 | SLE R | -39114.00 | -150.27 | -367.75 | 0.00 | 78.54 | 3.38 | 50.48 |
| 82 | 2261.90 | 2 | SLE R | -35761.40 | -108.60 | -265.77 | 0.00 | 78.54 | 3.06 | 45.62 |
| 83 | 2321.43 | 2 | SLE R | -32410.80 | -68.06 | -166.57 | 0.00 | 78.54 | 2.73 | 40.78 |
| 84 | 2380.95 | 2 | SLE R | -29061.90 | -33.35 | -81.61 | 0.00 | 78.54 | 2.41 | 36.05 |
| 85 | 2440.48 | 2 | SLE R | -25714.50 | -9.11 | -22.30 | 0.00 | 78.54 | 2.10 | 31.52 |
| 86 | 2500.00 | 2 | SLE R | -22368.60 | 0.00 | 0.00 | 0.00 | 78.54 | 1.82 | 27.27 |
| 87 | 0.00 | 4 | SLE Q | -151632.00 | 16842.80 | 41218.00 | 28.27 | 50.27 | 38.18 | 534.34 |
| 88 | 59.52 | 4 | SLE Q | -151786.00 | 17754.20 | 43448.50 | 28.27 | 50.27 | 40.20 | 561.08 |
| 89 | 119.05 | 4 | SLE Q | -150416.00 | 18296.00 | 44774.40 | 31.42 | 47.12 | 41.45 | 577.26 |
| 90 | 178.57 | 4 | SLE Q | -149051.00 | 18522.40 | 45328.20 | 31.42 | 47.12 | 41.99 | 584.14 |
| 91 | 238.09 | 4 | SLE Q | -147690.00 | 18483.10 | 45232.20 | 31.42 | 47.12 | 41.91 | 582.85 |
| 92 | 297.62 | 4 | SLE Q | -146334.00 | 18223.90 | 44597.80 | 31.42 | 47.12 | 41.32 | 574.71 |
| 93 | 357.14 | 4 | SLE Q | -144983.00 | 17769.20 | 43485.10 | 31.42 | 47.12 | 40.26 | 560.53 |
| 94 | 416.67 | 4 | SLE Q | -141481.00 | 17093.10 | 41830.50 | 31.42 | 47.12 | 38.72 | 539.42 |
| 95 | 476.19 | 4 | SLE Q | -137986.00 | 16230.80 | 39720.30 | 28.27 | 50.27 | 36.75 | 512.78 |
| 96 | 535.71 | 4 | SLE Q | -134499.00 | 15231.80 | 37275.50 | 28.27 | 50.27 | 34.51 | 482.41 |
| 97 | 595.24 | 4 | SLE Q | -131019.00 | 14139.20 | 34601.70 | 28.27 | 50.27 | 32.11 | 449.93 |
| 98 | 654.76 | 4 | SLE Q | -127546.00 | 12989.90 | 31789.20 | 25.13 | 53.41 | 29.66 | 416.73 |
| 99 | 714.29 | 4 | SLE Q | -124080.00 | 11815.40 | 28914.80 | 21.99 | 56.55 | 27.25 | 383.96 |
| 100 | 773.81 | 4 | SLE Q | -120621.00 | 10641.70 | 26042.50 | 21.99 | 56.55 | 24.94 | 352.50 |
| 101 | 833.33 | 4 | SLE Q | -117168.00 | 9490.40 | 23225.00 | 15.71 | 62.83 | 22.78 | 322.94 |
| 102 | 892.86 | 4 | SLE Q | -113721.00 | 8378.70 | 20504.50 | 12.57 | 65.97 | 20.79 | 295.59 |
| 103 | 952.38 | 4 | SLE Q | -110281.00 | 7320.07 | 17913.80 | 3.14 | 75.40 | 18.97 | 270.55 |
| 104 | 1011.90 | 4 | SLE Q | -106846.00 | 6324.64 | 15477.70 | 0.00 | 78.54 | 17.32 | 247.65 |
| 105 | 1071.43 | 4 | SLE Q | -103417.00 | 5399.61 | 13214.00 | 0.00 | 78.54 | 15.77 | 226.30 |
| 106 | 1130.95 | 4 | SLE Q | -99993.90 | 4549.68 | 11134.00 | 0.00 | 78.54 | 14.34 | 206.35 |
| 107 | 1190.48 | 4 | SLE Q | -96575.90 | 3777.39 | 9244.09 | 0.00 | 78.54 | 13.00 | 187.85 |
| 108 | 1250.00 | 4 | SLE Q | -93163.10 | 3083.48 | 7545.95 | 0.00 | 78.54 | 11.78 | 170.81 |
| 109 | 1309.52 | 4 | SLE Q | -89755.30 | 2467.18 | 6037.72 | 0.00 | 78.54 | 10.66 | 155.22 |
| 110 | 1369.05 | 4 | SLE Q | -86352.30 | 1926.49 | 4714.53 | 0.00 | 78.54 | 9.65 | 141.04 |
| 111 | 1428.57 | 4 | SLE Q | -82953.90 | 1458.43 | 3569.08 | 0.00 | 78.54 | 8.73 | 128.21 |
| 112 | 1488.10 | 4 | SLE Q | -79560.00 | 1059.25 | 2592.21 | 0.00 | 78.54 | 7.91 | 116.66 |
| 113 | 1547.62 | 4 | SLE Q | -76170.40 | 724.64 | 1773.35 | 0.00 | 78.54 | 7.18 | 106.32 |
| 114 | 1607.14 | 4 | SLE Q | -72784.80 | 449.85 | 1100.87 | 0.00 | 78.54 | 6.53 | 97.09 |
| 115 | 1666.67 | 4 | SLE Q | -69403.20 | 229.84 | 562.47 | 0.00 | 78.54 | 5.95 | 88.88 |
| 116 | 1726.19 | 4 | SLE Q | -66025.20 | 59.41 | 145.39 | 0.00 | 78.54 | 5.45 | 81.60 |
| 117 | 1785.71 | 4 | SLE Q | -62650.80 | -66.74 | -163.33 | 0.00 | 78.54 | 5.18 | 77.63 |
| 118 | 1845.24 | 4 | SLE Q | -59279.80 | -153.94 | -376.72 | 0.00 | 78.54 | 5.03 | 75.14 |
| 119 | 1904.76 | 4 | SLE Q | -55911.90 | -207.47 | -507.73 | 0.00 | 78.54 | 4.83 | 72.03 |
| 120 | 1964.29 | 4 | SLE Q | -52547.10 | -232.58 | -569.18 | 0.00 | 78.54 | 4.59 | 68.39 |
| 121 | 2023.81 | 4 | SLE Q | -49185.00 | -234.41 | -573.64 | 0.00 | 78.54 | 4.32 | 64.32 |
| 122 | 2083.33 | 4 | SLE Q | -45825.60 | -218.01 | -533.51 | 0.00 | 78.54 | 4.02 | 59.92 |
| 123 | 2142.86 | 4 | SLE Q | -42468.70 | -188.34 | -460.90 | 0.00 | 78.54 | 3.71 | 55.28 |
| 124 | 2202.38 | 4 | SLE Q | -39114.00 | -150.27 | -367.75 | 0.00 | 78.54 | 3.38 | 50.48 |
| 125 | 2261.90 | 4 | SLE Q | -35761.40 | -108.60 | -265.77 | 0.00 | 78.54 | 3.06 | 45.62 |
| 126 | 2321.43 | 4 | SLE Q | -32410.80 | -68.06 | -166.57 | 0.00 | 78.54 | 2.73 | 40.78 |
| 127 | 2380.95 | 4 | SLE Q | -29061.90 | -33.35 | -81.61 | 0.00 | 78.54 | 2.41 | 36.05 |
| 128 | 2440.48 | 4 | SLE Q | -25714.50 | -9.11 | -22.30 | 0.00 | 78.54 | 2.10 | 31.52 |
| 129 | 2500.00 | 4 | SLE Q | -22368.60 | 0.00 | 0.00 | 0.00 | 78.54 | 1.82 | 27.27 |

Stato limite d'esercizio - Verifiche a fessurazione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | c <mm> | s <mm> | K ₂ | φ _{eq} | Δ _{sm} <mm> | A _s <cmq> | A _c eff <cmq> | σ _s <daN/cmq> | ε _{sm} | Wk <mm> |
|------|--------|----|-------|------------|-----------|-----------|--------|--------|----------------|-----------------|----------------------|----------------------|--------------------------|--------------------------|-----------------|---------|
| 87 | 0.00 | 4 | SLE Q | -151632.00 | 41218.00 | 16842.80 | 46.00 | 136.36 | 0.50 | 20.00 | 183.04 | 12.57 | 572.01 | 212.49 | 0.06 | 0.02 |
| 88 | 59.52 | 4 | SLE Q | -151786.00 | 43448.50 | 17754.20 | 46.00 | 136.36 | 0.50 | 20.00 | 194.37 | 12.57 | 643.23 | 254.07 | 0.07 | 0.02 |
| 89 | 119.05 | 4 | SLE Q | -150416.00 | 44774.40 | 18296.00 | 46.00 | 136.36 | 0.50 | 20.00 | 180.85 | 15.71 | 697.86 | 286.71 | 0.08 | 0.03 |

Relazione di calcolo

| | | | | | | | | | | | | | | | | |
|-----|--------|---|-------|------------|----------|----------|-------|--------|------|-------|--------|-------|--------|--------|------|------|
| 90 | 178.57 | 4 | SLE Q | -149051.00 | 45328.20 | 18522.40 | 46.00 | 136.36 | 0.50 | 20.00 | 184.59 | 15.71 | 727.24 | 304.57 | 0.09 | 0.03 |
| 91 | 238.09 | 4 | SLE Q | -147690.00 | 45232.20 | 18483.10 | 46.00 | 136.36 | 0.50 | 20.00 | 185.76 | 15.71 | 736.40 | 308.71 | 0.09 | 0.03 |
| 92 | 297.62 | 4 | SLE Q | -146334.00 | 44597.80 | 18223.90 | 46.00 | 136.36 | 0.50 | 20.00 | 184.95 | 15.71 | 730.06 | 301.10 | 0.09 | 0.03 |
| 93 | 357.14 | 4 | SLE Q | -144983.00 | 43485.10 | 17769.20 | 46.00 | 136.36 | 0.50 | 20.00 | 182.20 | 15.71 | 708.46 | 283.27 | 0.08 | 0.03 |
| 94 | 416.67 | 4 | SLE Q | -141481.00 | 41830.50 | 17093.10 | 46.00 | 136.36 | 0.50 | 20.00 | 179.65 | 15.71 | 688.38 | 263.76 | 0.08 | 0.02 |
| 95 | 476.19 | 4 | SLE Q | -137986.00 | 39720.30 | 16230.80 | 46.00 | 136.36 | 0.50 | 20.00 | 195.61 | 12.57 | 651.03 | 235.37 | 0.07 | 0.02 |
| 96 | 535.71 | 4 | SLE Q | -134499.00 | 37275.50 | 15231.80 | 46.00 | 136.36 | 0.50 | 20.00 | 187.26 | 12.57 | 598.53 | 201.63 | 0.06 | 0.02 |
| 97 | 595.24 | 4 | SLE Q | -131019.00 | 34601.70 | 14139.20 | 46.00 | 136.36 | 0.50 | 20.00 | 176.81 | 12.57 | 532.89 | 165.69 | 0.05 | 0.01 |
| 98 | 654.76 | 4 | SLE Q | -127546.00 | 31789.20 | 12989.90 | 46.00 | 136.36 | 0.50 | 20.00 | 188.82 | 9.42 | 456.28 | 130.14 | 0.04 | 0.01 |
| 99 | 714.29 | 4 | SLE Q | -124080.00 | 28914.80 | 11815.40 | 46.00 | 136.36 | 0.50 | 20.00 | 170.75 | 9.42 | 371.12 | 96.88 | 0.03 | 0.01 |
| 100 | 773.81 | 4 | SLE Q | -120621.00 | 26042.50 | 10641.70 | 46.00 | 136.36 | 0.50 | 20.00 | 181.47 | 6.28 | 281.08 | 67.12 | 0.02 | 0.01 |
| 101 | 833.33 | 4 | SLE Q | -117168.00 | 23225.00 | 9490.40 | 46.00 | 136.36 | 0.50 | 20.00 | 213.87 | 3.14 | 191.44 | 41.42 | 0.01 | 0.00 |
| 130 | 0.00 | 3 | SLE F | -151632.00 | 41218.00 | 16842.80 | 46.00 | 136.36 | 0.50 | 20.00 | 183.04 | 12.57 | 572.01 | 212.49 | 0.06 | 0.02 |
| 131 | 59.52 | 3 | SLE F | -151786.00 | 43448.50 | 17754.20 | 46.00 | 136.36 | 0.50 | 20.00 | 194.37 | 12.57 | 643.23 | 254.07 | 0.07 | 0.02 |
| 132 | 119.05 | 3 | SLE F | -150416.00 | 44774.40 | 18296.00 | 46.00 | 136.36 | 0.50 | 20.00 | 180.85 | 15.71 | 697.86 | 286.71 | 0.08 | 0.03 |
| 133 | 178.57 | 3 | SLE F | -149051.00 | 45328.20 | 18522.40 | 46.00 | 136.36 | 0.50 | 20.00 | 184.59 | 15.71 | 727.24 | 304.57 | 0.09 | 0.03 |
| 134 | 238.09 | 3 | SLE F | -147690.00 | 45232.20 | 18483.10 | 46.00 | 136.36 | 0.50 | 20.00 | 185.76 | 15.71 | 736.40 | 308.71 | 0.09 | 0.03 |
| 135 | 297.62 | 3 | SLE F | -146334.00 | 44597.80 | 18223.90 | 46.00 | 136.36 | 0.50 | 20.00 | 184.95 | 15.71 | 730.06 | 301.10 | 0.09 | 0.03 |
| 136 | 357.14 | 3 | SLE F | -144983.00 | 43485.10 | 17769.20 | 46.00 | 136.36 | 0.50 | 20.00 | 182.20 | 15.71 | 708.46 | 283.27 | 0.08 | 0.03 |
| 137 | 416.67 | 3 | SLE F | -141481.00 | 41830.50 | 17093.10 | 46.00 | 136.36 | 0.50 | 20.00 | 179.65 | 15.71 | 688.38 | 263.76 | 0.08 | 0.02 |
| 138 | 476.19 | 3 | SLE F | -137986.00 | 39720.30 | 16230.80 | 46.00 | 136.36 | 0.50 | 20.00 | 195.61 | 12.57 | 651.03 | 235.37 | 0.07 | 0.02 |
| 139 | 535.71 | 3 | SLE F | -134499.00 | 37275.50 | 15231.80 | 46.00 | 136.36 | 0.50 | 20.00 | 187.26 | 12.57 | 598.53 | 201.63 | 0.06 | 0.02 |
| 140 | 595.24 | 3 | SLE F | -131019.00 | 34601.70 | 14139.20 | 46.00 | 136.36 | 0.50 | 20.00 | 176.81 | 12.57 | 532.89 | 165.69 | 0.05 | 0.01 |
| 141 | 654.76 | 3 | SLE F | -127546.00 | 31789.20 | 12989.90 | 46.00 | 136.36 | 0.50 | 20.00 | 188.82 | 9.42 | 456.28 | 130.14 | 0.04 | 0.01 |
| 142 | 714.29 | 3 | SLE F | -124080.00 | 28914.80 | 11815.40 | 46.00 | 136.36 | 0.50 | 20.00 | 170.75 | 9.42 | 371.12 | 96.88 | 0.03 | 0.01 |
| 143 | 773.81 | 3 | SLE F | -120621.00 | 26042.50 | 10641.70 | 46.00 | 136.36 | 0.50 | 20.00 | 181.47 | 6.28 | 281.08 | 67.12 | 0.02 | 0.01 |
| 144 | 833.33 | 3 | SLE F | -117168.00 | 23225.00 | 9490.40 | 46.00 | 136.36 | 0.50 | 20.00 | 213.87 | 3.14 | 191.44 | 41.42 | 0.01 | 0.00 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 5 | SLU N cost - min. sic. |
| 13 | SLU Taglio - min. sic., SLU Taglio - min. sic. acciaio |
| 47 | C.Rare - Sc min (max compr.), C.Rare - Sf min (max compr.) |
| 48 | C.Rare - Sf max (max traz.) |
| 61 | C.Rare - Sc max (min. compr.) |
| 90 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf min (max compr.) |
| 91 | C.Q.Per. - Sf max (max traz.), C.Q.Per. - Wk Max |
| 104 | C.Q.Per. - Sc max (min. compr.) |
| 134 | C.Freq - Wk Max |

Palo n. 3

Caratteristiche del palo e dei materiali utilizzati

| R | Cf | Cls | Fck | Fctk | Fcd | Fctd | Tp | Fyk | Fyd |
|-------|------|--------|-----------|-----------|-----------|-----------|-------|-----------|-----------|
| <cm> | <cm> | | <daN/cm²> | <daN/cm²> | <daN/cm²> | <daN/cm²> | | <daN/cm²> | <daN/cm²> |
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | S450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N | Mx | My | Mz |
|-----|-------|--------|--------|--------|
| | <daN> | <daNm> | <daNm> | <daNm> |
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 3 (-138)

| Caso | CC | TCC | Az | N | Tx | Ty | Mx | My |
|------|----|-------|-----|-----------|---------|---------|----------|-----------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | RVN | 274379.00 | 6268.79 | -556.06 | 37336.20 | -24981.40 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 274379.00 | 6268.79 | -556.06 | 37336.20 | -24981.40 |
| 2 | 2 | SLE R | RVN | 203244.00 | 4643.55 | -411.90 | 27656.40 | -18504.80 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 203244.00 | 4643.55 | -411.90 | 27656.40 | -18504.80 |
| 3 | 3 | SLE F | RVN | 203244.00 | 4643.55 | -411.90 | 27656.40 | -18504.80 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 203244.00 | 4643.55 | -411.90 | 27656.40 | -18504.80 |
| 4 | 4 | SLE Q | RVN | 203244.00 | 4643.55 | -411.90 | 27656.40 | -18504.80 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 203244.00 | 4643.55 | -411.90 | 27656.40 | -18504.80 |

Relazione di calcolo

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-----|------|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | 1 | -274379.00 | -6268.79 | 556.06 | -37336.20 | 24981.40 |
| 2 | 2 | SLR | 1 | -203244.00 | -4643.55 | 411.90 | -27656.40 | 18504.80 |
| 3 | 3 | SLR | 1 | -203244.00 | -4643.55 | 411.90 | -27656.40 | 18504.80 |
| 4 | 4 | SLR | 1 | -203244.00 | -4643.55 | 411.90 | -27656.40 | 18504.80 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|--------|
| 1 | 0.00 | 1 | SLU | -274379.00 | 37169.30 | 24869.80 | -274379.00 | 206117.00 | 137723.00 | 2-3 | 146.25 | 5.543 |
| 2 | 59.52 | 1 | SLU | -273680.00 | 39782.80 | 26618.40 | -273680.00 | 205935.00 | 137605.00 | 2-3 | 146.25 | 5.174 |
| 3 | 119.05 | 1 | SLU | -270608.00 | 41486.90 | 27758.60 | -270608.00 | 205135.00 | 137083.00 | 2-3 | 146.25 | 4.943 |
| 4 | 178.57 | 1 | SLU | -267543.00 | 42410.80 | 28376.80 | -267543.00 | 204332.00 | 136560.00 | 2-3 | 146.25 | 4.816 |
| 5 | 238.09 | 1 | SLU | -264488.00 | 42673.80 | 28552.80 | -264488.00 | 203529.00 | 136038.00 | 2-3 | 146.25 | 4.768 |
| 6 | 297.62 | 1 | SLU | -261440.00 | 42385.50 | 28359.90 | -261440.00 | 202728.00 | 135516.00 | 2-3 | 146.25 | 4.782 |
| 7 | 357.14 | 1 | SLU | -258401.00 | 41602.80 | 27836.20 | -258401.00 | 201926.00 | 134994.00 | 2-3 | 146.25 | 4.852 |
| 8 | 416.67 | 1 | SLU | -252017.00 | 40253.70 | 26933.50 | -252017.00 | 200233.00 | 133892.00 | 2-3 | 146.25 | 4.973 |
| 9 | 476.19 | 1 | SLU | -245646.00 | 38422.10 | 25708.00 | -245646.00 | 198534.00 | 132787.00 | 2-3 | 146.25 | 5.167 |
| 10 | 535.71 | 1 | SLU | -239288.00 | 36228.80 | 24240.50 | -239288.00 | 196832.00 | 131679.00 | 2-3 | 146.25 | 5.433 |
| 11 | 595.24 | 1 | SLU | -232943.00 | 33779.60 | 22601.80 | -232943.00 | 195120.00 | 130567.00 | 2-3 | 146.25 | 5.776 |
| 12 | 654.76 | 1 | SLU | -226610.00 | 31165.80 | 20852.90 | -226610.00 | 193404.00 | 129452.00 | 2-3 | 146.25 | 6.206 |
| 13 | 714.29 | 1 | SLU | -220290.00 | 28465.20 | 19045.90 | -220290.00 | 191682.00 | 128334.00 | 2-3 | 146.25 | 6.735 |
| 14 | 773.81 | 1 | SLU | -213981.00 | 25743.20 | 17224.60 | -213981.00 | 189954.00 | 127213.00 | 2-3 | 146.25 | 7.381 |
| 15 | 833.33 | 1 | SLU | -207684.00 | 23053.90 | 15425.20 | -207684.00 | 188222.00 | 126090.00 | 2-3 | 146.25 | 8.168 |
| 16 | 892.86 | 1 | SLU | -201398.00 | 20441.00 | 13677.00 | -201398.00 | 186483.00 | 124963.00 | 2-3 | 146.25 | 9.127 |
| 17 | 952.38 | 1 | SLU | -195123.00 | 17939.30 | 12003.10 | -195123.00 | 184774.00 | 123705.00 | 2-3 | 146.25 | 10.302 |
| 18 | 1011.90 | 1 | SLU | -188858.00 | 15575.20 | 10421.30 | -188858.00 | 183079.00 | 122372.00 | 2-3 | 146.25 | 11.751 |
| 19 | 1071.43 | 1 | SLU | -182604.00 | 13368.20 | 8944.59 | -182604.00 | 181378.00 | 121028.00 | 2-3 | 146.25 | 13.556 |
| 20 | 1130.95 | 1 | SLU | -176359.00 | 11331.30 | 7581.74 | -176359.00 | 179673.00 | 119680.00 | 2-3 | 146.25 | 14.580 |
| 21 | 1190.48 | 1 | SLU | -170124.00 | 9472.51 | 6338.00 | -170124.00 | 177962.00 | 118326.00 | 2-3 | 146.25 | 15.114 |
| 22 | 1250.00 | 1 | SLU | -163897.00 | 7795.03 | 5215.61 | -163897.00 | 176141.00 | 117042.00 | 2-3 | 146.25 | 15.688 |
| 23 | 1309.52 | 1 | SLU | -157680.00 | 6298.46 | 4214.26 | -157680.00 | 174244.00 | 115807.00 | 2-3 | 146.25 | 16.307 |
| 24 | 1369.05 | 1 | SLU | -151471.00 | 4979.28 | 3331.60 | -151471.00 | 172329.00 | 114572.00 | 2-3 | 146.25 | 16.975 |
| 25 | 1428.57 | 1 | SLU | -145270.00 | 3831.42 | 2563.58 | -145270.00 | 170379.00 | 113349.00 | 2-3 | 146.25 | 17.700 |
| 26 | 1488.10 | 1 | SLU | -139077.00 | 2846.87 | 1904.82 | -139077.00 | 168422.00 | 112124.00 | 2-3 | 146.25 | 18.488 |
| 27 | 1547.62 | 1 | SLU | -132892.00 | 2016.07 | 1348.94 | -132892.00 | 166455.00 | 110894.00 | 2-3 | 146.25 | 19.348 |
| 28 | 1607.14 | 1 | SLU | -126713.00 | 1328.35 | 888.79 | -126713.00 | 164477.00 | 109661.00 | 2-3 | 146.25 | 20.292 |
| 29 | 1666.67 | 1 | SLU | -120542.00 | 772.23 | 516.69 | -120542.00 | 162493.00 | 108425.00 | 2-3 | 146.25 | 21.331 |
| 30 | 1726.19 | 1 | SLU | -114377.00 | 335.69 | 224.61 | -114377.00 | 160498.00 | 107185.00 | 2-3 | 146.25 | 22.481 |
| 31 | 1785.71 | 1 | SLU | -108217.00 | 6.44 | 4.31 | -108217.00 | 158494.00 | 105942.00 | 2-3 | 146.25 | 23.760 |
| 32 | 1845.24 | 1 | SLU | -102064.00 | -227.97 | -152.54 | -102064.00 | -156676.00 | -104737.00 | 2-3 | 326.25 | 25.192 |
| 33 | 1904.76 | 1 | SLU | -95916.50 | -379.99 | -254.25 | -95916.50 | -154820.00 | -103273.00 | 2-3 | 326.25 | 26.807 |
| 34 | 1964.29 | 1 | SLU | -89773.90 | -461.96 | -309.10 | -89773.90 | -152958.00 | -101805.00 | 2-3 | 326.25 | 28.641 |
| 35 | 2023.81 | 1 | SLU | -83636.10 | -486.07 | -325.23 | -83636.10 | -150999.00 | -100398.00 | 2-3 | 326.25 | 30.743 |
| 36 | 2083.33 | 1 | SLU | -77502.80 | -464.33 | -310.68 | -77502.80 | -148935.00 | -99061.70 | 2-3 | 326.25 | 33.176 |
| 37 | 2142.86 | 1 | SLU | -71373.70 | -408.55 | -273.36 | -71373.70 | -146864.00 | -97720.50 | 2-3 | 326.25 | 36.025 |
| 38 | 2202.38 | 1 | SLU | -65248.30 | -330.35 | -221.03 | -65248.30 | -144780.00 | -96371.30 | 2-3 | 326.25 | 39.407 |
| 39 | 2261.90 | 1 | SLU | -59126.50 | -241.18 | -161.37 | -59126.50 | -142687.00 | -95015.90 | 2-3 | 326.25 | 43.487 |
| 40 | 2321.43 | 1 | SLU | -53007.90 | -152.37 | -101.95 | -53007.90 | -140587.00 | -93655.10 | 2-3 | 326.25 | 48.507 |
| 41 | 2380.95 | 1 | SLU | -46892.10 | -75.13 | -50.27 | -46892.10 | -138476.00 | -92287.80 | 2-3 | 326.25 | 54.833 |
| 42 | 2440.48 | 1 | SLU | -40778.80 | -20.64 | -13.81 | -40778.80 | -136355.00 | -90914.10 | 2-3 | 326.25 | 63.054 |
| 43 | 2500.00 | 1 | SLU | -34667.70 | 0.00 | 0.00 | -34667.70 | -134234.00 | -89542.20 | 2-3 | 326.25 | 74.168 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | CC | TCC | Ty <daN> | Tz <daN> | bw <cm> | Asw <cmq> | Vsdu <daN> | ctgθ | VRsd <daN> | VRod <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|------------|--------------|---------------|------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SLU | 6268.79 | -556.06 | 0.85 | 11.31 | 6293.40 | 1.00 | 32294.70 | 370970.00 | 32294.70 | 5.132 |
| 2 | 59.52 | 1 | SLU | 4301.75 | -381.58 | 0.85 | 11.31 | 4318.64 | 1.00 | 32294.70 | 370870.00 | 32294.70 | 7.478 |
| 3 | 119.05 | 1 | SLU | 2604.02 | -230.99 | 0.85 | 11.31 | 2614.25 | 1.00 | 32294.70 | 370430.00 | 32294.70 | 12.353 |
| 4 | 178.57 | 1 | SLU | 1156.50 | -102.59 | 0.85 | 11.31 | 1161.05 | 1.00 | 32294.70 | 369991.00 | 32294.70 | 27.815 |
| 5 | 238.09 | 1 | SLU | -60.52 | 5.37 | 0.85 | 11.31 | 60.75 | 1.00 | 32294.70 | 369553.00 | 32294.70 | >100 |
| 6 | 297.62 | 1 | SLU | -1067.01 | 94.65 | 0.85 | 11.31 | 1071.20 | 1.00 | 32294.70 | 369117.00 | 32294.70 | 30.148 |
| 7 | 357.14 | 1 | SLU | -2141.16 | 189.93 | 0.85 | 11.31 | 2149.57 | 1.00 | 32294.70 | 368681.00 | 32294.70 | 15.024 |
| 8 | 416.67 | 1 | SLU | -3245.36 | 287.87 | 0.85 | 11.31 | 3258.10 | 1.00 | 32294.70 | 367767.00 | 32294.70 | 9.912 |
| 9 | 476.19 | 1 | SLU | -4090.00 | 362.80 | 0.85 | 11.31 | 4106.06 | 1.00 | 32294.70 | 366854.00 | 32294.70 | 7.865 |
| 10 | 535.71 | 1 | SLU | -4706.68 | 417.50 | 0.85 | 11.31 | 4725.16 | 1.00 | 32294.70 | 365944.00 | 32294.70 | 6.835 |
| 11 | 595.24 | 1 | SLU | -5125.38 | 454.64 | 0.85 | 11.31 | 5145.50 | 1.00 | 32294.70 | 365035.00 | 32294.70 | 6.276 |
| 12 | 654.76 | 1 | SLU | -5374.18 | 476.71 | 0.85 | 11.31 | 5395.28 | 1.00 | 32294.70 | 364128.00 | 32294.70 | 5.986 |
| 13 | 714.29 | 1 | SLU | -5479.14 | 486.02 | 0.85 | 11.31 | 5500.66 | 1.00 | 32294.70 | 363222.00 | 32294.70 | 5.871 |
| 14 | 773.81 | 1 | SLU | -5464.18 | 484.69 | 0.85 | 11.31 | 5485.63 | 1.00 | 32294.70 | 362319.00 | 32294.70 | 5.887 |
| 15 | 833.33 | 1 | SLU | -5351.01 | 474.65 | 0.85 | 11.31 | 5372.02 | 1.00 | 32294.70 | 361417.00 | 32294.70 | 6.012 |
| 16 | 892.86 | 1 | SLU | -5159.20 | 457.64 | 0.85 | 11.31 | 5179.46 | 1.00 | 32294.70 | 360516.00 | 32294.70 | 6.235 |

Relazione di calcolo

| | | | | | | | | | | | | | |
|----|---------|---|-----|----------|--------|------|-------|---------|------|----------|-----------|----------|--------|
| 17 | 952.38 | 1 | SLU | -4906.17 | 435.19 | 0.85 | 11.31 | 4925.43 | 1.00 | 32294.70 | 359617.00 | 32294.70 | 6.557 |
| 18 | 1011.90 | 1 | SLU | -4607.28 | 408.68 | 0.85 | 11.31 | 4625.37 | 1.00 | 32294.70 | 358720.00 | 32294.70 | 6.982 |
| 19 | 1071.43 | 1 | SLU | -4275.95 | 379.29 | 0.85 | 11.31 | 4292.74 | 1.00 | 32294.70 | 357824.00 | 32294.70 | 7.523 |
| 20 | 1130.95 | 1 | SLU | -3923.76 | 348.05 | 0.85 | 11.31 | 3939.17 | 1.00 | 32294.70 | 356930.00 | 32294.70 | 8.198 |
| 21 | 1190.48 | 1 | SLU | -3560.58 | 315.83 | 0.85 | 11.31 | 3574.56 | 1.00 | 32294.70 | 356036.00 | 32294.70 | 9.035 |
| 22 | 1250.00 | 1 | SLU | -3194.72 | 283.38 | 0.85 | 11.31 | 3207.26 | 1.00 | 32294.70 | 355145.00 | 32294.70 | 10.069 |
| 23 | 1309.52 | 1 | SLU | -2833.07 | 251.30 | 0.85 | 11.31 | 2844.20 | 1.00 | 32294.70 | 354254.00 | 32294.70 | 11.355 |
| 24 | 1369.05 | 1 | SLU | -2481.27 | 220.10 | 0.85 | 11.31 | 2491.01 | 1.00 | 32294.70 | 353365.00 | 32294.70 | 12.964 |
| 25 | 1428.57 | 1 | SLU | -2143.80 | 190.16 | 0.85 | 11.31 | 2152.21 | 1.00 | 32294.70 | 352477.00 | 32294.70 | 15.005 |
| 26 | 1488.10 | 1 | SLU | -1824.16 | 161.81 | 0.85 | 11.31 | 1831.32 | 1.00 | 32294.70 | 351589.00 | 32294.70 | 17.635 |
| 27 | 1547.62 | 1 | SLU | -1525.01 | 135.27 | 0.85 | 11.31 | 1530.99 | 1.00 | 32294.70 | 350703.00 | 32294.70 | 21.094 |
| 28 | 1607.14 | 1 | SLU | -1248.26 | 110.72 | 0.85 | 11.31 | 1253.17 | 1.00 | 32294.70 | 349818.00 | 32294.70 | 25.770 |
| 29 | 1666.67 | 1 | SLU | -995.25 | 88.28 | 0.85 | 11.31 | 999.16 | 1.00 | 32294.70 | 348934.00 | 32294.70 | 32.322 |
| 30 | 1726.19 | 1 | SLU | -766.78 | 68.02 | 0.85 | 11.31 | 769.79 | 1.00 | 32294.70 | 348051.00 | 32294.70 | 41.953 |
| 31 | 1785.71 | 1 | SLU | -563.28 | 49.97 | 0.85 | 11.31 | 565.50 | 1.00 | 32294.70 | 347169.00 | 32294.70 | 57.109 |
| 32 | 1845.24 | 1 | SLU | -384.87 | 34.14 | 0.85 | 11.31 | 386.38 | 1.00 | 32294.70 | 346288.00 | 32294.70 | 83.582 |
| 33 | 1904.76 | 1 | SLU | -231.44 | 20.53 | 0.85 | 11.31 | 232.35 | 1.00 | 32294.70 | 345407.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -102.73 | 9.11 | 0.85 | 11.31 | 103.14 | 1.00 | 32294.70 | 344527.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | 1.61 | -0.14 | 0.85 | 11.31 | 1.62 | 1.00 | 32294.70 | 343648.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 81.97 | -7.27 | 0.85 | 11.31 | 82.30 | 1.00 | 32294.70 | 342770.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 138.76 | -12.31 | 0.85 | 11.31 | 139.30 | 1.00 | 32294.70 | 341892.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 172.32 | -15.29 | 0.85 | 11.31 | 172.99 | 1.00 | 32294.70 | 341014.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 182.96 | -16.23 | 0.85 | 11.31 | 183.68 | 1.00 | 32294.70 | 340137.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 170.92 | -15.16 | 0.85 | 11.31 | 171.59 | 1.00 | 32294.70 | 339261.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 136.36 | -12.10 | 0.85 | 11.31 | 136.89 | 1.00 | 32294.70 | 338385.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 79.37 | -7.04 | 0.85 | 11.31 | 79.68 | 1.00 | 32294.70 | 337509.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mz <daNm> | My <daNm> | AFT <cmq> | AFC <cmq> | σ_c <daN/cmq> | σ_f <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-------------------------|-------------------------|
| 44 | 0.00 | 2 | SLE R | -203244.00 | 18422.10 | 27532.80 | 0.00 | 78.54 | 33.66 | 480.95 |
| 45 | 59.52 | 2 | SLE R | -203039.00 | 19717.30 | 29468.70 | 3.14 | 75.40 | 34.87 | 497.46 |
| 46 | 119.05 | 2 | SLE R | -200953.00 | 20562.00 | 30731.00 | 9.42 | 69.11 | 35.54 | 506.34 |
| 47 | 178.57 | 2 | SLE R | -198874.00 | 21019.90 | 31415.40 | 12.57 | 65.97 | 35.85 | 510.30 |
| 48 | 238.09 | 2 | SLE R | -196800.00 | 21150.20 | 31610.20 | 12.57 | 65.97 | 35.84 | 509.85 |
| 49 | 297.62 | 2 | SLE R | -194733.00 | 21007.30 | 31396.70 | 12.57 | 65.97 | 35.55 | 505.61 |
| 50 | 357.14 | 2 | SLE R | -192672.00 | 20619.40 | 30816.90 | 12.57 | 65.97 | 35.00 | 497.93 |
| 51 | 416.67 | 2 | SLE R | -187958.00 | 19950.80 | 29817.60 | 12.57 | 65.97 | 33.97 | 483.46 |
| 52 | 476.19 | 2 | SLE R | -183254.00 | 19042.90 | 28460.80 | 12.57 | 65.97 | 32.71 | 465.72 |
| 53 | 535.71 | 2 | SLE R | -178560.00 | 17955.90 | 26836.20 | 6.28 | 72.26 | 31.27 | 445.67 |
| 54 | 595.24 | 2 | SLE R | -173875.00 | 16742.00 | 25022.00 | 0.00 | 78.54 | 29.72 | 424.13 |
| 55 | 654.76 | 2 | SLE R | -169200.00 | 15446.60 | 23085.80 | 0.00 | 78.54 | 28.12 | 401.80 |
| 56 | 714.29 | 2 | SLE R | -164534.00 | 14108.10 | 21085.40 | 0.00 | 78.54 | 26.50 | 379.14 |
| 57 | 773.81 | 2 | SLE R | -159876.00 | 12759.00 | 19069.00 | 0.00 | 78.54 | 24.86 | 356.39 |
| 58 | 833.33 | 2 | SLE R | -155228.00 | 11426.10 | 17076.90 | 0.00 | 78.54 | 23.24 | 333.85 |
| 59 | 892.86 | 2 | SLE R | -150587.00 | 10131.10 | 15141.50 | 0.00 | 78.54 | 21.66 | 311.81 |
| 60 | 952.38 | 2 | SLE R | -145955.00 | 8891.17 | 13288.40 | 0.00 | 78.54 | 20.13 | 290.47 |
| 61 | 1011.90 | 2 | SLE R | -141330.00 | 7719.48 | 11537.20 | 0.00 | 78.54 | 18.67 | 270.00 |
| 62 | 1071.43 | 2 | SLE R | -136713.00 | 6625.62 | 9902.37 | 0.00 | 78.54 | 17.27 | 250.53 |
| 63 | 1130.95 | 2 | SLE R | -132103.00 | 5616.10 | 8393.59 | 0.00 | 78.54 | 15.96 | 232.14 |
| 64 | 1190.48 | 2 | SLE R | -127501.00 | 4694.81 | 7016.67 | 0.00 | 78.54 | 14.73 | 214.87 |
| 65 | 1250.00 | 2 | SLE R | -122905.00 | 3863.41 | 5774.09 | 0.00 | 78.54 | 13.58 | 198.74 |
| 66 | 1309.52 | 2 | SLE R | -118316.00 | 3121.68 | 4665.53 | 0.00 | 78.54 | 12.52 | 183.76 |
| 67 | 1369.05 | 2 | SLE R | -113733.00 | 2467.85 | 3688.35 | 0.00 | 78.54 | 11.54 | 169.90 |
| 68 | 1428.57 | 2 | SLE R | -109156.00 | 1898.95 | 2838.09 | 0.00 | 78.54 | 10.64 | 157.12 |
| 69 | 1488.10 | 2 | SLE R | -104585.00 | 1410.98 | 2108.79 | 0.00 | 78.54 | 9.81 | 145.37 |
| 70 | 1547.62 | 2 | SLE R | -100020.00 | 999.22 | 1493.39 | 0.00 | 78.54 | 9.06 | 134.59 |
| 71 | 1607.14 | 2 | SLE R | -95460.30 | 658.36 | 983.96 | 0.00 | 78.54 | 8.37 | 124.72 |
| 72 | 1666.67 | 2 | SLE R | -90905.50 | 382.74 | 572.02 | 0.00 | 78.54 | 7.75 | 115.68 |
| 73 | 1726.19 | 2 | SLE R | -86355.60 | 166.38 | 248.66 | 0.00 | 78.54 | 7.17 | 107.39 |
| 74 | 1785.71 | 2 | SLE R | -81810.40 | 3.19 | 4.77 | 0.00 | 78.54 | 6.65 | 99.79 |
| 75 | 1845.24 | 2 | SLE R | -77269.50 | -112.99 | -168.87 | 0.00 | 78.54 | 6.39 | 95.63 |
| 76 | 1904.76 | 2 | SLE R | -72732.80 | -188.33 | -281.48 | 0.00 | 78.54 | 6.09 | 91.05 |
| 77 | 1964.29 | 2 | SLE R | -68199.90 | -228.96 | -342.19 | 0.00 | 78.54 | 5.76 | 86.04 |
| 78 | 2023.81 | 2 | SLE R | -63670.80 | -240.91 | -360.05 | 0.00 | 78.54 | 5.40 | 80.66 |
| 79 | 2083.33 | 2 | SLE R | -59145.00 | -230.13 | -343.95 | 0.00 | 78.54 | 5.02 | 75.01 |
| 80 | 2142.86 | 2 | SLE R | -54622.40 | -202.49 | -302.63 | 0.00 | 78.54 | 4.63 | 69.15 |
| 81 | 2202.38 | 2 | SLE R | -50102.80 | -163.73 | -244.70 | 0.00 | 78.54 | 4.22 | 63.15 |
| 82 | 2261.90 | 2 | SLE R | -45585.80 | -119.53 | -178.65 | 0.00 | 78.54 | 3.82 | 57.09 |
| 83 | 2321.43 | 2 | SLE R | -41071.30 | -75.52 | -112.86 | 0.00 | 78.54 | 3.41 | 51.03 |
| 84 | 2380.95 | 2 | SLE R | -36559.00 | -37.24 | -55.65 | 0.00 | 78.54 | 3.01 | 45.04 |
| 85 | 2440.48 | 2 | SLE R | -32048.60 | -10.23 | -15.29 | 0.00 | 78.54 | 2.61 | 39.20 |
| 86 | 2500.00 | 2 | SLE R | -27540.00 | 0.00 | 0.00 | 0.00 | 78.54 | 2.24 | 33.58 |
| 87 | 0.00 | 4 | SLE Q | -203244.00 | 18422.10 | 27532.80 | 0.00 | 78.54 | 33.66 | 480.95 |
| 88 | 59.52 | 4 | SLE Q | -203039.00 | 19717.30 | 29468.70 | 3.14 | 75.40 | 34.87 | 497.46 |
| 89 | 119.05 | 4 | SLE Q | -200953.00 | 20562.00 | 30731.00 | 9.42 | 69.11 | 35.54 | 506.34 |
| 90 | 178.57 | 4 | SLE Q | -198874.00 | 21019.90 | 31415.40 | 12.57 | 65.97 | 35.85 | 510.30 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|------------|----------|----------|-------|-------|-------|--------|
| 91 | 238.09 | 4 | SLE Q | -196800.00 | 21150.20 | 31610.20 | 12.57 | 65.97 | 35.84 | 509.85 |
| 92 | 297.62 | 4 | SLE Q | -194733.00 | 21007.30 | 31396.70 | 12.57 | 65.97 | 35.55 | 505.61 |
| 93 | 357.14 | 4 | SLE Q | -192672.00 | 20619.40 | 30816.90 | 12.57 | 65.97 | 35.00 | 497.93 |
| 94 | 416.67 | 4 | SLE Q | -187958.00 | 19950.80 | 29817.60 | 12.57 | 65.97 | 33.97 | 483.46 |
| 95 | 476.19 | 4 | SLE Q | -183254.00 | 19042.90 | 28460.80 | 12.57 | 65.97 | 32.71 | 465.72 |
| 96 | 535.71 | 4 | SLE Q | -178560.00 | 17955.90 | 26836.20 | 6.28 | 72.26 | 31.27 | 445.67 |
| 97 | 595.24 | 4 | SLE Q | -173875.00 | 16742.00 | 25022.00 | 0.00 | 78.54 | 29.72 | 424.13 |
| 98 | 654.76 | 4 | SLE Q | -169200.00 | 15446.60 | 23085.80 | 0.00 | 78.54 | 28.12 | 401.80 |
| 99 | 714.29 | 4 | SLE Q | -164534.00 | 14108.10 | 21085.40 | 0.00 | 78.54 | 26.50 | 379.14 |
| 100 | 773.81 | 4 | SLE Q | -159876.00 | 12759.00 | 19069.00 | 0.00 | 78.54 | 24.86 | 356.39 |
| 101 | 833.33 | 4 | SLE Q | -155228.00 | 11426.10 | 17076.90 | 0.00 | 78.54 | 23.24 | 333.85 |
| 102 | 892.86 | 4 | SLE Q | -150587.00 | 10131.10 | 15141.50 | 0.00 | 78.54 | 21.66 | 311.81 |
| 103 | 952.38 | 4 | SLE Q | -145955.00 | 8891.17 | 13288.40 | 0.00 | 78.54 | 20.13 | 290.47 |
| 104 | 1011.90 | 4 | SLE Q | -141330.00 | 7719.48 | 11537.20 | 0.00 | 78.54 | 18.67 | 270.00 |
| 105 | 1071.43 | 4 | SLE Q | -136713.00 | 6625.62 | 9902.37 | 0.00 | 78.54 | 17.27 | 250.53 |
| 106 | 1130.95 | 4 | SLE Q | -132103.00 | 5616.10 | 8393.59 | 0.00 | 78.54 | 15.96 | 232.14 |
| 107 | 1190.48 | 4 | SLE Q | -127501.00 | 4694.81 | 7016.67 | 0.00 | 78.54 | 14.73 | 214.87 |
| 108 | 1250.00 | 4 | SLE Q | -122905.00 | 3863.41 | 5774.09 | 0.00 | 78.54 | 13.58 | 198.74 |
| 109 | 1309.52 | 4 | SLE Q | -118316.00 | 3121.68 | 4665.53 | 0.00 | 78.54 | 12.52 | 183.76 |
| 110 | 1369.05 | 4 | SLE Q | -113733.00 | 2467.85 | 3688.35 | 0.00 | 78.54 | 11.54 | 169.90 |
| 111 | 1428.57 | 4 | SLE Q | -109156.00 | 1898.95 | 2838.09 | 0.00 | 78.54 | 10.64 | 157.12 |
| 112 | 1488.10 | 4 | SLE Q | -104585.00 | 1410.98 | 2108.79 | 0.00 | 78.54 | 9.81 | 145.37 |
| 113 | 1547.62 | 4 | SLE Q | -100020.00 | 999.22 | 1493.39 | 0.00 | 78.54 | 9.06 | 134.59 |
| 114 | 1607.14 | 4 | SLE Q | -95460.30 | 658.36 | 983.96 | 0.00 | 78.54 | 8.37 | 124.72 |
| 115 | 1666.67 | 4 | SLE Q | -90905.50 | 382.74 | 572.02 | 0.00 | 78.54 | 7.75 | 115.68 |
| 116 | 1726.19 | 4 | SLE Q | -86355.60 | 166.38 | 248.66 | 0.00 | 78.54 | 7.17 | 107.39 |
| 117 | 1785.71 | 4 | SLE Q | -81810.40 | 3.19 | 4.77 | 0.00 | 78.54 | 6.65 | 99.79 |
| 118 | 1845.24 | 4 | SLE Q | -77269.50 | -112.99 | -168.87 | 0.00 | 78.54 | 6.39 | 95.63 |
| 119 | 1904.76 | 4 | SLE Q | -72732.80 | -188.33 | -281.48 | 0.00 | 78.54 | 6.09 | 91.05 |
| 120 | 1964.29 | 4 | SLE Q | -68199.90 | -228.96 | -342.19 | 0.00 | 78.54 | 5.76 | 86.04 |
| 121 | 2023.81 | 4 | SLE Q | -63670.80 | -240.91 | -360.05 | 0.00 | 78.54 | 5.40 | 80.66 |
| 122 | 2083.33 | 4 | SLE Q | -59145.00 | -230.13 | -343.95 | 0.00 | 78.54 | 5.02 | 75.01 |
| 123 | 2142.86 | 4 | SLE Q | -54622.40 | -202.49 | -302.63 | 0.00 | 78.54 | 4.63 | 69.15 |
| 124 | 2202.38 | 4 | SLE Q | -50102.80 | -163.73 | -244.70 | 0.00 | 78.54 | 4.22 | 63.15 |
| 125 | 2261.90 | 4 | SLE Q | -45585.80 | -119.53 | -178.65 | 0.00 | 78.54 | 3.82 | 57.09 |
| 126 | 2321.43 | 4 | SLE Q | -41071.30 | -75.52 | -112.86 | 0.00 | 78.54 | 3.41 | 51.03 |
| 127 | 2380.95 | 4 | SLE Q | -36559.00 | -37.24 | -55.65 | 0.00 | 78.54 | 3.01 | 45.04 |
| 128 | 2440.48 | 4 | SLE Q | -32048.60 | -10.23 | -15.29 | 0.00 | 78.54 | 2.61 | 39.20 |
| 129 | 2500.00 | 4 | SLE Q | -27540.00 | 0.00 | 0.00 | 0.00 | 78.54 | 2.24 | 33.58 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 1 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 5 | SLU N cost - min. sic. |
| 47 | C.Rare - Sc min (max compr.), C.Rare - Sf min (max compr.) |
| 49 | C.Rare - Sf max (max traz.) |
| 56 | C.Rare - Sc max (min. compr.) |
| 90 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf min (max compr.) |
| 92 | C.Q.Per. - Sf max (max traz.) |
| 99 | C.Q.Per. - Sc max (min. compr.) |

Palo n. 4

Caratteristiche del palo e dei materiali utilizzati

| R | Cf | Cls | Fck | Fctk | Fcd | Fctd | Tp | Fyk | Fyd |
|-------|------|--------|-----------|-----------|-----------|-----------|-------|-----------|-----------|
| <cm> | <cm> | | <daN/cm²> | <daN/cm²> | <daN/cm²> | <daN/cm²> | | <daN/cm²> | <daN/cm²> |
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N | Mx | My | Mz |
|-----|-------|--------|--------|--------|
| | <daN> | <daNm> | <daNm> | <daNm> |
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 4 (-152)

| Caso | CC | TCC | Az | N | Tx | Ty | Mx | My |
|------|----|-------|-----|-----------|---------|---------|----------|-----------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | RVN | 315710.00 | 6042.70 | -210.70 | 21456.20 | -10595.20 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 315710.00 | 6042.70 | -210.70 | 21456.20 | -10595.20 |
| 2 | 2 | SLE R | RVN | 233859.00 | 4476.07 | -156.07 | 15893.50 | -7848.29 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 233859.00 | 4476.07 | -156.07 | 15893.50 | -7848.29 |

Relazione di calcolo

| | | | | | | | | |
|---|---|-------|-----|-----------|---------|---------|----------|----------|
| 3 | 3 | SLE F | RVN | 233859.00 | 4476.07 | -156.07 | 15893.50 | -7848.29 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 233859.00 | 4476.07 | -156.07 | 15893.50 | -7848.29 |
| 4 | 4 | SLE Q | RVN | 233859.00 | 4476.07 | -156.07 | 15893.50 | -7848.29 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 233859.00 | 4476.07 | -156.07 | 15893.50 | -7848.29 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|------|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | 1 | -315710.00 | -6042.70 | 210.70 | -21456.20 | 10595.20 |
| 2 | 2 | SLE R | 1 | -233859.00 | -4476.07 | 156.07 | -15893.50 | 7848.29 |
| 3 | 3 | SLE F | 1 | -233859.00 | -4476.07 | 156.07 | -15893.50 | 7848.29 |
| 4 | 4 | SLE Q | 1 | -233859.00 | -4476.07 | 156.07 | -15893.50 | 7848.29 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|--------|
| 1 | 0.00 | 1 | SLU | -315710.00 | 21322.90 | 10529.40 | -2571250.00 | 233681.00 | 115344.00 | 2-3 | 153.75 | 8.144 |
| 2 | 59.52 | 1 | SLU | -314723.00 | 24152.60 | 11926.70 | -2571250.00 | 233428.00 | 115223.00 | 2-3 | 153.75 | 8.170 |
| 3 | 119.05 | 1 | SLU | -311077.00 | 26253.70 | 12964.20 | -2571250.00 | 232491.00 | 114774.00 | 2-3 | 153.75 | 8.266 |
| 4 | 178.57 | 1 | SLU | -307441.00 | 27721.40 | 13689.00 | -307441.00 | 231550.00 | 114323.00 | 2-3 | 153.75 | 8.352 |
| 5 | 238.09 | 1 | SLU | -303815.00 | 28644.90 | 14145.00 | -303815.00 | 230610.00 | 113873.00 | 2-3 | 153.75 | 8.051 |
| 6 | 297.62 | 1 | SLU | -300198.00 | 29106.60 | 14373.00 | -300198.00 | 229671.00 | 113424.00 | 2-3 | 153.75 | 7.991 |
| 7 | 357.14 | 1 | SLU | -296590.00 | 29145.10 | 14392.00 | -296590.00 | 228728.00 | 112973.00 | 2-3 | 153.75 | 7.848 |
| 8 | 416.67 | 1 | SLU | -289235.00 | 28687.10 | 14165.90 | -289235.00 | 226790.00 | 112038.00 | 2-3 | 153.75 | 7.906 |
| 9 | 476.19 | 1 | SLU | -281896.00 | 27793.90 | 13724.80 | -281896.00 | 224841.00 | 110925.00 | 2-3 | 153.75 | 8.088 |
| 10 | 535.71 | 1 | SLU | -274571.00 | 26560.70 | 13115.80 | -274571.00 | 222884.00 | 109805.00 | 2-3 | 153.75 | 8.388 |
| 11 | 595.24 | 1 | SLU | -267261.00 | 25071.90 | 12380.60 | -267261.00 | 220920.00 | 108680.00 | 2-3 | 153.75 | 8.805 |
| 12 | 654.76 | 1 | SLU | -259966.00 | 23401.10 | 11555.60 | -259966.00 | 218860.00 | 107627.00 | 2-3 | 153.75 | 9.345 |
| 13 | 714.29 | 1 | SLU | -252684.00 | 21611.90 | 10672.10 | -252684.00 | 216707.00 | 106640.00 | 2-3 | 153.75 | 10.020 |
| 14 | 773.81 | 1 | SLU | -245417.00 | 19758.90 | 9757.05 | -2571250.00 | 214543.00 | 105647.00 | 2-3 | 153.75 | 10.477 |
| 15 | 833.33 | 1 | SLU | -238162.00 | 17887.70 | 8833.06 | -2571250.00 | 212371.00 | 104615.00 | 2-3 | 153.75 | 10.796 |
| 16 | 892.86 | 1 | SLU | -230920.00 | 16036.40 | 7918.84 | -2571250.00 | 210188.00 | 103569.00 | 2-3 | 153.75 | 11.135 |
| 17 | 952.38 | 1 | SLU | -223690.00 | 14235.50 | 7029.59 | -2571250.00 | 207992.00 | 102516.00 | 2-3 | 153.75 | 11.495 |
| 18 | 1011.90 | 1 | SLU | -216473.00 | 12509.70 | 6177.36 | -2571250.00 | 205786.00 | 101458.00 | 2-3 | 153.75 | 11.878 |
| 19 | 1071.43 | 1 | SLU | -209267.00 | 10877.60 | 5371.40 | -2571250.00 | 203570.00 | 100396.00 | 2-3 | 153.75 | 12.287 |
| 20 | 1130.95 | 1 | SLU | -202072.00 | 9352.90 | 4618.51 | -2571250.00 | 201340.00 | 99327.30 | 2-3 | 153.75 | 12.724 |
| 21 | 1190.48 | 1 | SLU | -194888.00 | 7945.10 | 3923.33 | -2571250.00 | 199100.00 | 98254.00 | 2-3 | 153.75 | 13.194 |
| 22 | 1250.00 | 1 | SLU | -187714.00 | 6659.88 | 3288.68 | -2571250.00 | 196851.00 | 97176.60 | 2-3 | 153.75 | 13.698 |
| 23 | 1309.52 | 1 | SLU | -180551.00 | 5499.77 | 2715.81 | -2571250.00 | 194591.00 | 96094.60 | 2-3 | 153.75 | 14.241 |
| 24 | 1369.05 | 1 | SLU | -173397.00 | 4464.65 | 2204.67 | -2571250.00 | 192319.00 | 95007.10 | 2-3 | 153.75 | 14.829 |
| 25 | 1428.57 | 1 | SLU | -166253.00 | 3552.24 | 1754.11 | -2571250.00 | 190038.00 | 93915.80 | 2-3 | 153.75 | 15.466 |
| 26 | 1488.10 | 1 | SLU | -159117.00 | 2758.43 | 1362.13 | -2571250.00 | 187749.00 | 92820.70 | 2-3 | 153.75 | 16.159 |
| 27 | 1547.62 | 1 | SLU | -151990.00 | 2077.75 | 1026.00 | -2571250.00 | 185449.00 | 91720.80 | 2-3 | 153.75 | 16.917 |
| 28 | 1607.14 | 1 | SLU | -144872.00 | 1503.59 | 742.48 | -2571250.00 | 183139.00 | 90617.00 | 2-3 | 153.75 | 17.748 |
| 29 | 1666.67 | 1 | SLU | -137761.00 | 1028.55 | 507.90 | -2571250.00 | 180821.00 | 89509.90 | 2-3 | 153.75 | 18.665 |
| 30 | 1726.19 | 1 | SLU | -130657.00 | 644.62 | 318.31 | -2571250.00 | 178494.00 | 88398.90 | 2-3 | 153.75 | 19.679 |
| 31 | 1785.71 | 1 | SLU | -123560.00 | 343.36 | 169.55 | -2571250.00 | 176158.00 | 87284.30 | 2-3 | 153.75 | 20.810 |
| 32 | 1845.24 | 1 | SLU | -116470.00 | 116.11 | 57.34 | -2571250.00 | 173824.00 | 86113.40 | 2-3 | 153.75 | 22.076 |
| 33 | 1904.76 | 1 | SLU | -109387.00 | -45.94 | -22.68 | -2571250.00 | -171388.00 | -84545.20 | 2-3 | 333.75 | 23.506 |
| 34 | 1964.29 | 1 | SLU | -102309.00 | -151.65 | -74.89 | -2571250.00 | -168918.00 | -83411.00 | 2-3 | 333.75 | 25.132 |
| 35 | 2023.81 | 1 | SLU | -95236.20 | -209.85 | -103.62 | -2571250.00 | -166438.00 | -82242.40 | 2-3 | 333.75 | 26.999 |
| 36 | 2083.33 | 1 | SLU | -88168.90 | -229.32 | -113.24 | -2571250.00 | -163949.00 | -81053.30 | 2-3 | 333.75 | 29.163 |
| 37 | 2142.86 | 1 | SLU | -81106.30 | -218.73 | -108.01 | -2571250.00 | -161451.00 | -79860.50 | 2-3 | 333.75 | 31.702 |
| 38 | 2202.38 | 1 | SLU | -74048.10 | -186.69 | -92.19 | -2571250.00 | -158943.00 | -78663.80 | 2-3 | 333.75 | 34.724 |
| 39 | 2261.90 | 1 | SLU | -66993.80 | -141.70 | -69.97 | -2571250.00 | -156423.00 | -77463.00 | 2-3 | 333.75 | 38.380 |
| 40 | 2321.43 | 1 | SLU | -59943.20 | -92.18 | -45.52 | -2571250.00 | -153894.00 | -76259.10 | 2-3 | 333.75 | 42.895 |
| 41 | 2380.95 | 1 | SLU | -52895.70 | -46.51 | -22.97 | -2571250.00 | -151358.00 | -75052.10 | 2-3 | 333.75 | 48.610 |
| 42 | 2440.48 | 1 | SLU | -45851.10 | -13.01 | -6.42 | -2571250.00 | -148810.00 | -73841.80 | 2-3 | 333.75 | 56.078 |
| 43 | 2500.00 | 1 | SLU | -38808.90 | 0.00 | 0.00 | -2571250.00 | | | | | 66.254 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | CC | TCC | Ty <daN> | Tz <daN> | bw <cm> | Asw <cmq> | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|------------|--------------|---------------|------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SLU | 6042.70 | -210.70 | 0.85 | 11.31 | 6046.37 | 1.00 | 32294.70 | 376890.00 | 32294.70 | 5.341 |
| 2 | 59.52 | 1 | SLU | 4585.88 | -159.90 | 0.85 | 11.31 | 4588.67 | 1.00 | 32294.70 | 376749.00 | 32294.70 | 7.038 |
| 3 | 119.05 | 1 | SLU | 3312.66 | -115.51 | 0.85 | 11.31 | 3314.68 | 1.00 | 32294.70 | 376627.00 | 32294.70 | 9.743 |
| 4 | 178.57 | 1 | SLU | 2212.01 | -77.13 | 0.85 | 11.31 | 2213.36 | 1.00 | 32294.70 | 375706.00 | 32294.70 | 14.591 |
| 5 | 238.09 | 1 | SLU | 1272.13 | -44.36 | 0.85 | 11.31 | 1272.90 | 1.00 | 32294.70 | 375186.00 | 32294.70 | 25.371 |
| 6 | 297.62 | 1 | SLU | 480.70 | -16.76 | 0.85 | 11.31 | 481.00 | 1.00 | 32294.70 | 374668.00 | 32294.70 | 67.141 |
| 7 | 357.14 | 1 | SLU | -385.13 | 13.43 | 0.85 | 11.31 | 385.37 | 1.00 | 32294.70 | 374152.00 | 32294.70 | 83.802 |

Relazione di calcolo

| | | | | | | | | | | | | | |
|----|---------|---|-----|----------|--------|------|-------|---------|------|----------|-----------|----------|--------|
| 8 | 416.67 | 1 | SLU | -1296.56 | 45.21 | 0.85 | 11.31 | 1297.35 | 1.00 | 32294.70 | 373098.00 | 32294.70 | 24.893 |
| 9 | 476.19 | 1 | SLU | -2018.86 | 70.40 | 0.85 | 11.31 | 2020.09 | 1.00 | 32294.70 | 372047.00 | 32294.70 | 15.987 |
| 10 | 535.71 | 1 | SLU | -2573.14 | 89.72 | 0.85 | 11.31 | 2574.70 | 1.00 | 32294.70 | 370998.00 | 32294.70 | 12.543 |
| 11 | 595.24 | 1 | SLU | -2979.70 | 103.90 | 0.85 | 11.31 | 2981.52 | 1.00 | 32294.70 | 369950.00 | 32294.70 | 10.832 |
| 12 | 654.76 | 1 | SLU | -3257.83 | 113.60 | 0.85 | 11.31 | 3259.81 | 1.00 | 32294.70 | 368905.00 | 32294.70 | 9.907 |
| 13 | 714.29 | 1 | SLU | -3425.62 | 119.45 | 0.85 | 11.31 | 3427.70 | 1.00 | 32294.70 | 367862.00 | 32294.70 | 9.422 |
| 14 | 773.81 | 1 | SLU | -3499.85 | 122.04 | 0.85 | 11.31 | 3501.98 | 1.00 | 32294.70 | 366821.00 | 32294.70 | 9.222 |
| 15 | 833.33 | 1 | SLU | -3495.96 | 121.90 | 0.85 | 11.31 | 3498.09 | 1.00 | 32294.70 | 365782.00 | 32294.70 | 9.232 |
| 16 | 892.86 | 1 | SLU | -3427.99 | 119.53 | 0.85 | 11.31 | 3430.07 | 1.00 | 32294.70 | 364745.00 | 32294.70 | 9.415 |
| 17 | 952.38 | 1 | SLU | -3308.57 | 115.37 | 0.85 | 11.31 | 3310.58 | 1.00 | 32294.70 | 363709.00 | 32294.70 | 9.755 |
| 18 | 1011.90 | 1 | SLU | -3148.98 | 109.80 | 0.85 | 11.31 | 3150.90 | 1.00 | 32294.70 | 362676.00 | 32294.70 | 10.249 |
| 19 | 1071.43 | 1 | SLU | -2959.19 | 103.18 | 0.85 | 11.31 | 2960.99 | 1.00 | 32294.70 | 361643.00 | 32294.70 | 10.907 |
| 20 | 1130.95 | 1 | SLU | -2747.90 | 95.82 | 0.85 | 11.31 | 2749.57 | 1.00 | 32294.70 | 360613.00 | 32294.70 | 11.745 |
| 21 | 1190.48 | 1 | SLU | -2522.64 | 87.96 | 0.85 | 11.31 | 2524.17 | 1.00 | 32294.70 | 359584.00 | 32294.70 | 12.794 |
| 22 | 1250.00 | 1 | SLU | -2289.83 | 79.84 | 0.85 | 11.31 | 2291.22 | 1.00 | 32294.70 | 358556.00 | 32294.70 | 14.095 |
| 23 | 1309.52 | 1 | SLU | -2054.91 | 71.65 | 0.85 | 11.31 | 2056.16 | 1.00 | 32294.70 | 357530.00 | 32294.70 | 15.706 |
| 24 | 1369.05 | 1 | SLU | -1822.39 | 63.54 | 0.85 | 11.31 | 1823.49 | 1.00 | 32294.70 | 356505.00 | 32294.70 | 17.710 |
| 25 | 1428.57 | 1 | SLU | -1595.96 | 55.65 | 0.85 | 11.31 | 1596.93 | 1.00 | 32294.70 | 355482.00 | 32294.70 | 20.223 |
| 26 | 1488.10 | 1 | SLU | -1378.61 | 48.07 | 0.85 | 11.31 | 1379.45 | 1.00 | 32294.70 | 354460.00 | 32294.70 | 23.411 |
| 27 | 1547.62 | 1 | SLU | -1172.66 | 40.89 | 0.85 | 11.31 | 1173.37 | 1.00 | 32294.70 | 353439.00 | 32294.70 | 27.523 |
| 28 | 1607.14 | 1 | SLU | -979.90 | 34.17 | 0.85 | 11.31 | 980.50 | 1.00 | 32294.70 | 352419.00 | 32294.70 | 32.937 |
| 29 | 1666.67 | 1 | SLU | -801.65 | 27.95 | 0.85 | 11.31 | 802.14 | 1.00 | 32294.70 | 351401.00 | 32294.70 | 40.261 |
| 30 | 1726.19 | 1 | SLU | -638.85 | 22.28 | 0.85 | 11.31 | 639.23 | 1.00 | 32294.70 | 350383.00 | 32294.70 | 50.521 |
| 31 | 1785.71 | 1 | SLU | -492.08 | 17.16 | 0.85 | 11.31 | 492.38 | 1.00 | 32294.70 | 349367.00 | 32294.70 | 65.588 |
| 32 | 1845.24 | 1 | SLU | -361.73 | 12.61 | 0.85 | 11.31 | 361.95 | 1.00 | 32294.70 | 348351.00 | 32294.70 | 89.225 |
| 33 | 1904.76 | 1 | SLU | -247.93 | 8.65 | 0.85 | 11.31 | 248.08 | 1.00 | 32294.70 | 347337.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -150.72 | 5.26 | 0.85 | 11.31 | 150.81 | 1.00 | 32294.70 | 346323.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | -69.99 | 2.44 | 0.85 | 11.31 | 70.03 | 1.00 | 32294.70 | 345310.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | -5.62 | 0.20 | 0.85 | 11.31 | 5.62 | 1.00 | 32294.70 | 344297.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 42.58 | -1.48 | 0.85 | 11.31 | 42.60 | 1.00 | 32294.70 | 343286.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 74.77 | -2.61 | 0.85 | 11.31 | 74.81 | 1.00 | 32294.70 | 342275.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 91.11 | -3.18 | 0.85 | 11.31 | 91.16 | 1.00 | 32294.70 | 341264.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 91.73 | -3.20 | 0.85 | 11.31 | 91.78 | 1.00 | 32294.70 | 340254.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 76.72 | -2.68 | 0.85 | 11.31 | 76.77 | 1.00 | 32294.70 | 339245.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 46.14 | -1.61 | 0.85 | 11.31 | 46.16 | 1.00 | 32294.70 | 338236.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | OC | TCC | N <daN> | Mz <daNm> | My <daNm> | AFT <cmq> | AFC <cmq> | σ_c <daN/cmq> | σ_f <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-------------------------|-------------------------|
| 44 | 0.00 | 2 | SLE R | -233859.00 | 7799.54 | 15794.80 | 0.00 | 78.54 | 28.03 | 408.43 |
| 45 | 59.52 | 2 | SLE R | -233441.00 | 8834.56 | 17890.80 | 0.00 | 78.54 | 29.19 | 424.28 |
| 46 | 119.05 | 2 | SLE R | -230931.00 | 9603.11 | 19447.20 | 0.00 | 78.54 | 29.88 | 433.37 |
| 47 | 178.57 | 2 | SLE R | -228428.00 | 10140.00 | 20534.40 | 0.00 | 78.54 | 30.30 | 438.80 |
| 48 | 238.09 | 2 | SLE R | -225932.00 | 10477.80 | 21218.40 | 0.00 | 78.54 | 30.49 | 441.10 |
| 49 | 297.62 | 2 | SLE R | -223443.00 | 10666.70 | 21560.40 | 0.00 | 78.54 | 30.48 | 440.73 |
| 50 | 357.14 | 2 | SLE R | -220961.00 | 10660.70 | 21588.90 | 0.00 | 78.54 | 30.29 | 437.93 |
| 51 | 416.67 | 2 | SLE R | -215527.00 | 10493.20 | 21249.70 | 0.00 | 78.54 | 29.66 | 428.66 |
| 52 | 476.19 | 2 | SLE R | -210106.00 | 10166.50 | 20588.10 | 0.00 | 78.54 | 28.84 | 416.88 |
| 53 | 535.71 | 2 | SLE R | -204696.00 | 9715.44 | 19674.60 | 0.00 | 78.54 | 27.88 | 403.15 |
| 54 | 595.24 | 2 | SLE R | -199297.00 | 9170.84 | 18571.80 | 0.00 | 78.54 | 26.81 | 387.96 |
| 55 | 654.76 | 2 | SLE R | -193908.00 | 8559.68 | 17334.10 | 0.00 | 78.54 | 25.66 | 371.73 |
| 56 | 714.29 | 2 | SLE R | -188530.00 | 7905.25 | 16008.80 | 0.00 | 78.54 | 24.47 | 354.83 |
| 57 | 773.81 | 2 | SLE R | -183162.00 | 7227.44 | 14636.20 | 0.00 | 78.54 | 23.25 | 337.57 |
| 58 | 833.33 | 2 | SLE R | -177804.00 | 6543.01 | 13250.20 | 0.00 | 78.54 | 22.02 | 320.22 |
| 59 | 892.86 | 2 | SLE R | -172455.00 | 5865.81 | 11878.80 | 0.00 | 78.54 | 20.80 | 302.99 |
| 60 | 952.38 | 2 | SLE R | -167116.00 | 5207.10 | 10544.80 | 0.00 | 78.54 | 19.61 | 286.07 |
| 61 | 1011.90 | 2 | SLE R | -161785.00 | 4575.82 | 9266.45 | 0.00 | 78.54 | 18.44 | 269.59 |
| 62 | 1071.43 | 2 | SLE R | -156463.00 | 3978.82 | 8057.46 | 0.00 | 78.54 | 17.32 | 253.66 |
| 63 | 1130.95 | 2 | SLE R | -151150.00 | 3421.12 | 6928.07 | 0.00 | 78.54 | 16.24 | 238.37 |
| 64 | 1190.48 | 2 | SLE R | -145845.00 | 2906.17 | 5885.26 | 0.00 | 78.54 | 15.22 | 223.76 |
| 65 | 1250.00 | 2 | SLE R | -140547.00 | 2436.06 | 4933.24 | 0.00 | 78.54 | 14.24 | 209.87 |
| 66 | 1309.52 | 2 | SLE R | -135257.00 | 2011.71 | 4073.90 | 0.00 | 78.54 | 13.32 | 196.71 |
| 67 | 1369.05 | 2 | SLE R | -129975.00 | 1633.09 | 3307.15 | 0.00 | 78.54 | 12.45 | 184.29 |
| 68 | 1428.57 | 2 | SLE R | -124699.00 | 1299.34 | 2631.29 | 0.00 | 78.54 | 11.64 | 172.58 |
| 69 | 1488.10 | 2 | SLE R | -119430.00 | 1008.98 | 2043.28 | 0.00 | 78.54 | 10.87 | 161.56 |
| 70 | 1547.62 | 2 | SLE R | -114167.00 | 760.00 | 1539.07 | 0.00 | 78.54 | 10.16 | 151.21 |
| 71 | 1607.14 | 2 | SLE R | -108911.00 | 549.99 | 1113.77 | 0.00 | 78.54 | 9.49 | 141.48 |
| 72 | 1666.67 | 2 | SLE R | -103660.00 | 376.23 | 761.89 | 0.00 | 78.54 | 8.86 | 132.33 |
| 73 | 1726.19 | 2 | SLE R | -98415.20 | 235.79 | 477.49 | 0.00 | 78.54 | 8.27 | 123.72 |
| 74 | 1785.71 | 2 | SLE R | -93175.40 | 125.59 | 254.34 | 0.00 | 78.54 | 7.72 | 115.59 |
| 75 | 1845.24 | 2 | SLE R | -87940.60 | 42.47 | 86.01 | 0.00 | 78.54 | 7.20 | 107.89 |
| 76 | 1904.76 | 2 | SLE R | -82710.50 | -16.80 | -34.03 | 0.00 | 78.54 | 6.74 | 101.11 |
| 77 | 1964.29 | 2 | SLE R | -77484.90 | -55.47 | -112.33 | 0.00 | 78.54 | 6.36 | 95.35 |
| 78 | 2023.81 | 2 | SLE R | -72263.40 | -76.76 | -155.44 | 0.00 | 78.54 | 5.96 | 89.33 |
| 79 | 2083.33 | 2 | SLE R | -67045.80 | -83.88 | -169.86 | 0.00 | 78.54 | 5.55 | 83.08 |
| 80 | 2142.86 | 2 | SLE R | -61831.80 | -80.01 | -162.02 | 0.00 | 78.54 | 5.12 | 76.66 |
| 81 | 2202.38 | 2 | SLE R | -56621.10 | -68.29 | -138.29 | 0.00 | 78.54 | 4.68 | 70.12 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|------------|----------|----------|------|-------|-------|--------|
| 82 | 2261.90 | 2 | SLE R | -51413.40 | -51.83 | -104.96 | 0.00 | 78.54 | 4.24 | 63.51 |
| 83 | 2321.43 | 2 | SLE R | -46208.50 | -33.72 | -68.28 | 0.00 | 78.54 | 3.79 | 56.88 |
| 84 | 2380.95 | 2 | SLE R | -41006.10 | -17.01 | -34.45 | 0.00 | 78.54 | 3.35 | 50.27 |
| 85 | 2440.48 | 2 | SLE R | -35805.90 | -4.76 | -9.64 | 0.00 | 78.54 | 2.92 | 43.73 |
| 86 | 2500.00 | 2 | SLE R | -30607.60 | 0.00 | 0.00 | 0.00 | 78.54 | 2.49 | 37.32 |
| 87 | 0.00 | 4 | SLE Q | -233859.00 | 7799.54 | 15794.80 | 0.00 | 78.54 | 28.03 | 408.43 |
| 88 | 59.52 | 4 | SLE Q | -233441.00 | 8834.56 | 17890.80 | 0.00 | 78.54 | 29.19 | 424.28 |
| 89 | 119.05 | 4 | SLE Q | -230931.00 | 9603.11 | 19447.20 | 0.00 | 78.54 | 29.88 | 433.37 |
| 90 | 178.57 | 4 | SLE Q | -228428.00 | 10140.00 | 20534.40 | 0.00 | 78.54 | 30.30 | 438.80 |
| 91 | 238.09 | 4 | SLE Q | -225932.00 | 10477.80 | 21218.40 | 0.00 | 78.54 | 30.49 | 441.10 |
| 92 | 297.62 | 4 | SLE Q | -223443.00 | 10646.70 | 21560.40 | 0.00 | 78.54 | 30.48 | 440.73 |
| 93 | 357.14 | 4 | SLE Q | -220961.00 | 10660.70 | 21588.90 | 0.00 | 78.54 | 30.29 | 437.93 |
| 94 | 416.67 | 4 | SLE Q | -215527.00 | 10493.20 | 21249.70 | 0.00 | 78.54 | 29.66 | 428.66 |
| 95 | 476.19 | 4 | SLE Q | -210106.00 | 10166.50 | 20588.10 | 0.00 | 78.54 | 28.84 | 416.88 |
| 96 | 535.71 | 4 | SLE Q | -204696.00 | 9715.44 | 19674.60 | 0.00 | 78.54 | 27.88 | 403.15 |
| 97 | 595.24 | 4 | SLE Q | -199297.00 | 9170.84 | 18571.80 | 0.00 | 78.54 | 26.81 | 387.96 |
| 98 | 654.76 | 4 | SLE Q | -193908.00 | 8559.68 | 17334.10 | 0.00 | 78.54 | 25.66 | 371.73 |
| 99 | 714.29 | 4 | SLE Q | -188530.00 | 7905.25 | 16008.80 | 0.00 | 78.54 | 24.47 | 354.83 |
| 100 | 773.81 | 4 | SLE Q | -183162.00 | 7227.44 | 14636.20 | 0.00 | 78.54 | 23.25 | 337.57 |
| 101 | 833.33 | 4 | SLE Q | -177804.00 | 6543.01 | 13250.20 | 0.00 | 78.54 | 22.02 | 320.22 |
| 102 | 892.86 | 4 | SLE Q | -172455.00 | 5865.81 | 11878.80 | 0.00 | 78.54 | 20.80 | 302.99 |
| 103 | 952.38 | 4 | SLE Q | -167116.00 | 5207.10 | 10544.80 | 0.00 | 78.54 | 19.61 | 286.07 |
| 104 | 1011.90 | 4 | SLE Q | -161785.00 | 4575.82 | 9266.45 | 0.00 | 78.54 | 18.44 | 269.59 |
| 105 | 1071.43 | 4 | SLE Q | -156463.00 | 3978.82 | 8057.46 | 0.00 | 78.54 | 17.32 | 253.66 |
| 106 | 1130.95 | 4 | SLE Q | -151150.00 | 3421.12 | 6928.07 | 0.00 | 78.54 | 16.24 | 238.37 |
| 107 | 1190.48 | 4 | SLE Q | -145845.00 | 2906.17 | 5885.26 | 0.00 | 78.54 | 15.22 | 223.76 |
| 108 | 1250.00 | 4 | SLE Q | -140547.00 | 2436.06 | 4933.24 | 0.00 | 78.54 | 14.24 | 209.87 |
| 109 | 1309.52 | 4 | SLE Q | -135257.00 | 2011.71 | 4073.90 | 0.00 | 78.54 | 13.32 | 196.71 |
| 110 | 1369.05 | 4 | SLE Q | -129975.00 | 1633.09 | 3307.15 | 0.00 | 78.54 | 12.45 | 184.29 |
| 111 | 1428.57 | 4 | SLE Q | -124699.00 | 1299.34 | 2631.29 | 0.00 | 78.54 | 11.64 | 172.58 |
| 112 | 1488.10 | 4 | SLE Q | -119430.00 | 1008.98 | 2043.28 | 0.00 | 78.54 | 10.87 | 161.56 |
| 113 | 1547.62 | 4 | SLE Q | -114167.00 | 760.00 | 1539.07 | 0.00 | 78.54 | 10.16 | 151.21 |
| 114 | 1607.14 | 4 | SLE Q | -108911.00 | 549.99 | 1113.77 | 0.00 | 78.54 | 9.49 | 141.48 |
| 115 | 1666.67 | 4 | SLE Q | -103660.00 | 376.23 | 761.89 | 0.00 | 78.54 | 8.86 | 132.33 |
| 116 | 1726.19 | 4 | SLE Q | -98415.20 | 235.79 | 477.49 | 0.00 | 78.54 | 8.27 | 123.72 |
| 117 | 1785.71 | 4 | SLE Q | -93175.40 | 125.59 | 254.34 | 0.00 | 78.54 | 7.72 | 115.59 |
| 118 | 1845.24 | 4 | SLE Q | -87940.60 | 42.47 | 86.01 | 0.00 | 78.54 | 7.20 | 107.89 |
| 119 | 1904.76 | 4 | SLE Q | -82710.50 | -16.80 | -34.03 | 0.00 | 78.54 | 6.74 | 101.11 |
| 120 | 1964.29 | 4 | SLE Q | -77484.90 | -55.47 | -112.33 | 0.00 | 78.54 | 6.36 | 95.35 |
| 121 | 2023.81 | 4 | SLE Q | -72263.40 | -76.76 | -155.44 | 0.00 | 78.54 | 5.96 | 89.33 |
| 122 | 2083.33 | 4 | SLE Q | -67045.80 | -83.88 | -169.86 | 0.00 | 78.54 | 5.55 | 83.08 |
| 123 | 2142.86 | 4 | SLE Q | -61831.80 | -80.01 | -162.02 | 0.00 | 78.54 | 5.12 | 76.66 |
| 124 | 2202.38 | 4 | SLE Q | -56621.10 | -68.29 | -138.29 | 0.00 | 78.54 | 4.68 | 70.12 |
| 125 | 2261.90 | 4 | SLE Q | -51413.40 | -51.83 | -104.96 | 0.00 | 78.54 | 4.24 | 63.51 |
| 126 | 2321.43 | 4 | SLE Q | -46208.50 | -33.72 | -68.28 | 0.00 | 78.54 | 3.79 | 56.88 |
| 127 | 2380.95 | 4 | SLE Q | -41006.10 | -17.01 | -34.45 | 0.00 | 78.54 | 3.35 | 50.27 |
| 128 | 2440.48 | 4 | SLE Q | -35805.90 | -4.76 | -9.64 | 0.00 | 78.54 | 2.92 | 43.73 |
| 129 | 2500.00 | 4 | SLE Q | -30607.60 | 0.00 | 0.00 | 0.00 | 78.54 | 2.49 | 37.32 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 1 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 7 | SLU N cost - min. sic. |
| 48 | C.Rare - Sc min (max compr.), C.Rare - Sf min (max compr.) |
| 86 | C.Rare - Sc max (min. compr.), C.Rare - Sf max (max traz.) |
| 91 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf min (max compr.) |
| 129 | C.Q.Per. - Sc max (min. compr.), C.Q.Per. - Sf max (max traz.) |

Palo n. 5

Caratteristiche del palo e dei materiali utilizzati

| R | Cf | Cls | Fck | Fctk | Fcd | Fctd | Tp | Fyk | Fyd |
|-------|------|--------|-----------|-----------|-----------|-----------|-------|-----------|-----------|
| <cm> | <cm> | | <daN/cm²> | <daN/cm²> | <daN/cm²> | <daN/cm²> | | <daN/cm²> | <daN/cm²> |
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N | Mx | My | Mz |
|-----|-------|--------|--------|--------|
| | <daN> | <daNm> | <daNm> | <daNm> |
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 5 (-153)

| Caso | CC | TCC | Az | N | Tx | Ty | Mx | My |
|------|----|-----|-----|-----------|---------|--------|----------|----------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | RVN | 315619.00 | 6038.81 | 208.03 | 21458.00 | 10734.80 |

Relazione di calcolo

| | | | | | | | | |
|--|---|-------|-----|-----------|---------|--------|----------|----------|
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 315619.00 | 6038.81 | 208.03 | 21458.00 | 10734.80 |
| | 2 | SLE R | RVN | 233792.00 | 4473.19 | 154.10 | 15894.80 | 7951.73 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 233792.00 | 4473.19 | 154.10 | 15894.80 | 7951.73 |
| | 3 | SLE F | RVN | 233792.00 | 4473.19 | 154.10 | 15894.80 | 7951.73 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 233792.00 | 4473.19 | 154.10 | 15894.80 | 7951.73 |
| | 4 | SLE Q | RVN | 233792.00 | 4473.19 | 154.10 | 15894.80 | 7951.73 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 233792.00 | 4473.19 | 154.10 | 15894.80 | 7951.73 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|------|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | 1 | -315619.00 | -6038.81 | -208.03 | -21458.00 | -10734.80 |
| 2 | 2 | SLE R | 1 | -233792.00 | -4473.19 | -154.10 | -15894.80 | -7951.73 |
| 3 | 3 | SLE F | 1 | -233792.00 | -4473.19 | -154.10 | -15894.80 | -7951.73 |
| 4 | 4 | SLE Q | 1 | -233792.00 | -4473.19 | -154.10 | -15894.80 | -7951.73 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mx <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|--------|
| 1 | 0.00 | 1 | SLU | -315619.00 | 21325.00 | -10668.30 | -2571250.00 | 233644.00 | -115097.00 | 2-3 | 206.25 | 8.147 |
| 2 | 59.52 | 1 | SLU | -314633.00 | 24144.90 | -12079.10 | -2571250.00 | 233380.00 | -114970.00 | 2-3 | 206.25 | 8.172 |
| 3 | 119.05 | 1 | SLU | -310989.00 | 26237.90 | -13126.10 | -2571250.00 | 232402.00 | -114499.00 | 2-3 | 206.25 | 8.268 |
| 4 | 178.57 | 1 | SLU | -307354.00 | 27698.80 | -13857.00 | -307354.00 | 231417.00 | -114027.00 | 2-3 | 206.25 | 8.330 |
| 5 | 238.09 | 1 | SLU | -303729.00 | 28616.60 | -14316.10 | -303729.00 | 230434.00 | -113555.00 | 2-3 | 206.25 | 8.028 |
| 6 | 297.62 | 1 | SLU | -300113.00 | 29073.70 | -14544.80 | -300113.00 | 229452.00 | -113084.00 | 2-3 | 206.25 | 7.869 |
| 7 | 357.14 | 1 | SLU | -296507.00 | 29108.50 | -14562.20 | -296507.00 | 228464.00 | -112611.00 | 2-3 | 206.25 | 7.826 |
| 8 | 416.67 | 1 | SLU | -289154.00 | 28648.20 | -14331.90 | -289154.00 | 226446.00 | -111643.00 | 2-3 | 206.25 | 7.882 |
| 9 | 476.19 | 1 | SLU | -281816.00 | 27753.70 | -13884.40 | -281816.00 | 224414.00 | -110670.00 | 2-3 | 206.25 | 8.063 |
| 10 | 535.71 | 1 | SLU | -274494.00 | 26520.30 | -13267.40 | -274494.00 | 222371.00 | -109693.00 | 2-3 | 206.25 | 8.362 |
| 11 | 595.24 | 1 | SLU | -267186.00 | 25031.90 | -12522.80 | -267186.00 | 220320.00 | -108712.00 | 2-3 | 206.25 | 8.778 |
| 12 | 654.76 | 1 | SLU | -259893.00 | 23362.20 | -11687.50 | -259893.00 | 218260.00 | -107727.00 | 2-3 | 206.25 | 9.318 |
| 13 | 714.29 | 1 | SLU | -252613.00 | 21574.70 | -10793.20 | -252613.00 | 216187.00 | -106736.00 | 2-3 | 206.25 | 9.994 |
| 14 | 773.81 | 1 | SLU | -245348.00 | 19723.60 | -9867.18 | -2571250.00 | 214106.00 | -105741.00 | 2-3 | 206.25 | 10.480 |
| 15 | 833.33 | 1 | SLU | -238095.00 | 17854.70 | -8932.23 | -2571250.00 | 212018.00 | -104743.00 | 2-3 | 206.25 | 10.799 |
| 16 | 892.86 | 1 | SLU | -230855.00 | 16005.80 | -8007.26 | -2571250.00 | 209919.00 | -103740.00 | 2-3 | 206.25 | 11.138 |
| 17 | 952.38 | 1 | SLU | -223628.00 | 14207.50 | -7107.64 | -2571250.00 | 207810.00 | -102733.00 | 2-3 | 206.25 | 11.498 |
| 18 | 1011.90 | 1 | SLU | -216412.00 | 12484.30 | -6245.54 | -2571250.00 | 205695.00 | -101722.00 | 2-3 | 206.25 | 11.881 |
| 19 | 1071.43 | 1 | SLU | -209208.00 | 10854.70 | -5430.32 | -2571250.00 | 203571.00 | -100708.00 | 2-3 | 206.25 | 12.290 |
| 20 | 1130.95 | 1 | SLU | -202016.00 | 9332.54 | -4668.82 | -2571250.00 | 201438.00 | -99689.00 | 2-3 | 206.25 | 12.728 |
| 21 | 1190.48 | 1 | SLU | -194834.00 | 7927.15 | -3965.74 | -2571250.00 | 199325.00 | -98468.40 | 2-3 | 206.25 | 13.197 |
| 22 | 1250.00 | 1 | SLU | -187662.00 | 6644.21 | -3323.92 | -2571250.00 | 197210.00 | -97200.60 | 2-3 | 206.25 | 13.701 |
| 23 | 1309.52 | 1 | SLU | -180501.00 | 5486.24 | -2744.62 | -2571250.00 | 195086.00 | -95919.10 | 2-3 | 206.25 | 14.245 |
| 24 | 1369.05 | 1 | SLU | -173349.00 | 4453.10 | -2227.76 | -2571250.00 | 192881.00 | -94701.00 | 2-3 | 206.25 | 14.833 |
| 25 | 1428.57 | 1 | SLU | -166207.00 | 3542.49 | -1772.21 | -2571250.00 | 190559.00 | -93580.40 | 2-3 | 206.25 | 15.470 |
| 26 | 1488.10 | 1 | SLU | -159074.00 | 2750.31 | -1375.91 | -2571250.00 | 188225.00 | -92454.10 | 2-3 | 206.25 | 16.164 |
| 27 | 1547.62 | 1 | SLU | -151949.00 | 2071.08 | -1036.11 | -2571250.00 | 185875.00 | -91320.60 | 2-3 | 206.25 | 16.922 |
| 28 | 1607.14 | 1 | SLU | -144832.00 | 1498.21 | -749.51 | -2571250.00 | 183512.00 | -90181.20 | 2-3 | 206.25 | 17.753 |
| 29 | 1666.67 | 1 | SLU | -137723.00 | 1024.29 | -512.42 | -2571250.00 | 181137.00 | -89037.60 | 2-3 | 206.25 | 18.670 |
| 30 | 1726.19 | 1 | SLU | -130621.00 | 641.31 | -320.83 | -2571250.00 | 178717.00 | -87919.80 | 2-3 | 206.25 | 19.685 |
| 31 | 1785.71 | 1 | SLU | -123527.00 | 340.86 | -170.53 | -2571250.00 | 176283.00 | -86797.30 | 2-3 | 206.25 | 20.815 |
| 32 | 1845.24 | 1 | SLU | -116439.00 | 114.28 | -57.17 | -2571250.00 | 173835.00 | -85670.70 | 2-3 | 206.25 | 22.082 |
| 33 | 1904.76 | 1 | SLU | -109357.00 | -47.22 | 23.63 | -2571250.00 | 171508.00 | 84721.80 | 2-3 | 26.25 | 23.512 |
| 34 | 1964.29 | 1 | SLU | -102281.00 | -152.51 | 76.30 | -2571250.00 | 169194.00 | 83320.50 | 2-3 | 26.25 | 25.139 |
| 35 | 2023.81 | 1 | SLU | -95210.80 | -210.38 | 105.25 | -2571250.00 | 166873.00 | 81909.50 | 2-3 | 26.25 | 27.006 |
| 36 | 2083.33 | 1 | SLU | -88145.50 | -229.61 | 114.87 | -2571250.00 | 164354.00 | 80686.90 | 2-3 | 26.25 | 29.171 |
| 37 | 2142.86 | 1 | SLU | -81085.00 | -218.87 | 109.49 | -2571250.00 | 161816.00 | 79463.50 | 2-3 | 26.25 | 31.710 |
| 38 | 2202.38 | 1 | SLU | -74028.80 | -186.73 | 93.42 | -2571250.00 | 159262.00 | 78233.10 | 2-3 | 26.25 | 34.733 |
| 39 | 2261.90 | 1 | SLU | -66976.60 | -141.69 | 70.88 | -2571250.00 | 156693.00 | 76996.90 | 2-3 | 26.25 | 38.390 |
| 40 | 2321.43 | 1 | SLU | -59928.00 | -92.15 | 46.10 | -2571250.00 | 154111.00 | 75755.40 | 2-3 | 26.25 | 42.906 |
| 41 | 2380.95 | 1 | SLU | -52882.60 | -46.49 | 23.26 | -2571250.00 | 151516.00 | 74508.70 | 2-3 | 26.25 | 48.622 |
| 42 | 2440.48 | 1 | SLU | -45840.00 | -13.00 | 6.51 | -2571250.00 | 148908.00 | 73256.70 | 2-3 | 26.25 | 56.092 |
| 43 | 2500.00 | 1 | SLU | -38799.90 | 0.00 | 0.00 | -2571250.00 | | | | | 66.269 |

Stato limite ultimo - Verifiche a taglio

Relazione di calcolo

| Caso | X <cm> | OC | TCC | Ty <daN> | Tz <daN> | bw <m> | Asw <cmq> | Vsdu <daN> | ctgθ | VRsd <daN> | VRod <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|-----------|--------------|---------------|------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SLU | 6038.81 | 208.03 | 0.85 | 11.31 | 6042.39 | 1.00 | 32294.70 | 376877.00 | 32294.70 | 5.345 |
| 2 | 59.52 | 1 | SLU | 4581.12 | 157.82 | 0.85 | 11.31 | 4583.83 | 1.00 | 32294.70 | 376736.00 | 32294.70 | 7.045 |
| 3 | 119.05 | 1 | SLU | 3307.21 | 113.93 | 0.85 | 11.31 | 3309.18 | 1.00 | 32294.70 | 376214.00 | 32294.70 | 9.759 |
| 4 | 178.57 | 1 | SLU | 2206.05 | 76.00 | 0.85 | 11.31 | 2207.36 | 1.00 | 32294.70 | 375693.00 | 32294.70 | 14.630 |
| 5 | 238.09 | 1 | SLU | 1265.81 | 43.61 | 0.85 | 11.31 | 1266.56 | 1.00 | 32294.70 | 375174.00 | 32294.70 | 25.498 |
| 6 | 297.62 | 1 | SLU | 474.16 | 16.33 | 0.85 | 11.31 | 474.44 | 1.00 | 32294.70 | 374656.00 | 32294.70 | 68.070 |
| 7 | 357.14 | 1 | SLU | -391.83 | -13.50 | 0.85 | 11.31 | 392.06 | 1.00 | 32294.70 | 374140.00 | 32294.70 | 82.372 |
| 8 | 416.67 | 1 | SLU | -1303.30 | -44.90 | 0.85 | 11.31 | 1304.07 | 1.00 | 32294.70 | 373086.00 | 32294.70 | 24.765 |
| 9 | 476.19 | 1 | SLU | -2025.51 | -69.78 | 0.85 | 11.31 | 2026.71 | 1.00 | 32294.70 | 372035.00 | 32294.70 | 15.934 |
| 10 | 535.71 | 1 | SLU | -2579.60 | -88.86 | 0.85 | 11.31 | 2581.13 | 1.00 | 32294.70 | 370986.00 | 32294.70 | 12.512 |
| 11 | 595.24 | 1 | SLU | -2985.89 | -102.86 | 0.85 | 11.31 | 2987.66 | 1.00 | 32294.70 | 369940.00 | 32294.70 | 10.809 |
| 12 | 654.76 | 1 | SLU | -3263.68 | -112.43 | 0.85 | 11.31 | 3265.62 | 1.00 | 32294.70 | 368895.00 | 32294.70 | 9.889 |
| 13 | 714.29 | 1 | SLU | -3431.09 | -118.20 | 0.85 | 11.31 | 3433.12 | 1.00 | 32294.70 | 367852.00 | 32294.70 | 9.407 |
| 14 | 773.81 | 1 | SLU | -3504.90 | -120.74 | 0.85 | 11.31 | 3506.98 | 1.00 | 32294.70 | 366812.00 | 32294.70 | 9.209 |
| 15 | 833.33 | 1 | SLU | -3500.58 | -120.59 | 0.85 | 11.31 | 3502.66 | 1.00 | 32294.70 | 365773.00 | 32294.70 | 9.220 |
| 16 | 892.86 | 1 | SLU | -3432.17 | -118.23 | 0.85 | 11.31 | 3434.20 | 1.00 | 32294.70 | 364736.00 | 32294.70 | 9.404 |
| 17 | 952.38 | 1 | SLU | -3312.31 | -114.11 | 0.85 | 11.31 | 3314.28 | 1.00 | 32294.70 | 363700.00 | 32294.70 | 9.744 |
| 18 | 1011.90 | 1 | SLU | -3152.30 | -108.59 | 0.85 | 11.31 | 3154.17 | 1.00 | 32294.70 | 362667.00 | 32294.70 | 10.239 |
| 19 | 1071.43 | 1 | SLU | -2962.09 | -102.04 | 0.85 | 11.31 | 2963.85 | 1.00 | 32294.70 | 361635.00 | 32294.70 | 10.896 |
| 20 | 1130.95 | 1 | SLU | -2750.41 | -94.75 | 0.85 | 11.31 | 2752.04 | 1.00 | 32294.70 | 360605.00 | 32294.70 | 11.735 |
| 21 | 1190.48 | 1 | SLU | -2524.77 | -86.98 | 0.85 | 11.31 | 2526.27 | 1.00 | 32294.70 | 359576.00 | 32294.70 | 12.784 |
| 22 | 1250.00 | 1 | SLU | -2291.62 | -78.94 | 0.85 | 11.31 | 2292.98 | 1.00 | 32294.70 | 358549.00 | 32294.70 | 14.084 |
| 23 | 1309.52 | 1 | SLU | -2056.38 | -70.84 | 0.85 | 11.31 | 2057.60 | 1.00 | 32294.70 | 357523.00 | 32294.70 | 15.695 |
| 24 | 1369.05 | 1 | SLU | -1823.57 | -62.82 | 0.85 | 11.31 | 1824.65 | 1.00 | 32294.70 | 356499.00 | 32294.70 | 17.699 |
| 25 | 1428.57 | 1 | SLU | -1596.88 | -55.01 | 0.85 | 11.31 | 1597.83 | 1.00 | 32294.70 | 355475.00 | 32294.70 | 20.212 |
| 26 | 1488.10 | 1 | SLU | -1379.29 | -47.52 | 0.85 | 11.31 | 1380.11 | 1.00 | 32294.70 | 354454.00 | 32294.70 | 23.400 |
| 27 | 1547.62 | 1 | SLU | -1173.14 | -40.41 | 0.85 | 11.31 | 1173.83 | 1.00 | 32294.70 | 353433.00 | 32294.70 | 27.512 |
| 28 | 1607.14 | 1 | SLU | -980.20 | -33.77 | 0.85 | 11.31 | 980.78 | 1.00 | 32294.70 | 352414.00 | 32294.70 | 32.928 |
| 29 | 1666.67 | 1 | SLU | -801.79 | -27.62 | 0.85 | 11.31 | 802.27 | 1.00 | 32294.70 | 351395.00 | 32294.70 | 40.254 |
| 30 | 1726.19 | 1 | SLU | -638.85 | -22.01 | 0.85 | 11.31 | 639.23 | 1.00 | 32294.70 | 350378.00 | 32294.70 | 50.521 |
| 31 | 1785.71 | 1 | SLU | -491.98 | -16.95 | 0.85 | 11.31 | 492.27 | 1.00 | 32294.70 | 349362.00 | 32294.70 | 65.604 |
| 32 | 1845.24 | 1 | SLU | -361.53 | -12.45 | 0.85 | 11.31 | 361.75 | 1.00 | 32294.70 | 348347.00 | 32294.70 | 89.274 |
| 33 | 1904.76 | 1 | SLU | -247.67 | -8.53 | 0.85 | 11.31 | 247.82 | 1.00 | 32294.70 | 347332.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -150.41 | -5.18 | 0.85 | 11.31 | 150.49 | 1.00 | 32294.70 | 346319.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | -69.65 | -2.40 | 0.85 | 11.31 | 69.69 | 1.00 | 32294.70 | 345306.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | -5.27 | -0.18 | 0.85 | 11.31 | 5.27 | 1.00 | 32294.70 | 344294.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 42.92 | 1.48 | 0.85 | 11.31 | 42.95 | 1.00 | 32294.70 | 343283.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 75.09 | 2.59 | 0.85 | 11.31 | 75.14 | 1.00 | 32294.70 | 342272.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 91.40 | 3.15 | 0.85 | 11.31 | 91.46 | 1.00 | 32294.70 | 341262.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 91.97 | 3.17 | 0.85 | 11.31 | 92.03 | 1.00 | 32294.70 | 340252.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 76.90 | 2.65 | 0.85 | 11.31 | 76.94 | 1.00 | 32294.70 | 339243.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 46.23 | 1.59 | 0.85 | 11.31 | 46.26 | 1.00 | 32294.70 | 338234.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | OC | TCC | N <daN> | Mz <daNm> | My <daNm> | AFT <cmq> | AFC <cmq> | σ _c <daN/cmq> | σ _f <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-----------------------------|-----------------------------|
| 44 | 0.00 | 2 | SLE R | -233792.00 | -7902.44 | 15796.30 | 0.00 | 78.54 | 28.04 | 409.35 |
| 45 | 59.52 | 2 | SLE R | -233375.00 | -8947.45 | 17885.10 | 0.00 | 78.54 | 29.20 | 425.27 |
| 46 | 119.05 | 2 | SLE R | -230865.00 | -9723.04 | 19435.50 | 0.00 | 78.54 | 29.89 | 434.42 |
| 47 | 178.57 | 2 | SLE R | -228363.00 | -10264.40 | 20517.60 | 0.00 | 78.54 | 30.30 | 439.88 |
| 48 | 238.09 | 2 | SLE R | -225868.00 | -10604.50 | 21197.50 | 0.00 | 78.54 | 30.49 | 442.19 |
| 49 | 297.62 | 2 | SLE R | -223380.00 | -10773.90 | 21536.10 | 0.00 | 78.54 | 30.48 | 441.82 |
| 50 | 357.14 | 2 | SLE R | -220899.00 | -10786.80 | 21561.90 | 0.00 | 78.54 | 30.29 | 439.00 |
| 51 | 416.67 | 2 | SLE R | -215467.00 | -10616.20 | 21220.90 | 0.00 | 78.54 | 29.66 | 429.69 |
| 52 | 476.19 | 2 | SLE R | -210047.00 | -10284.80 | 20558.30 | 0.00 | 78.54 | 28.84 | 417.87 |
| 53 | 535.71 | 2 | SLE R | -204639.00 | -9827.67 | 19644.60 | 0.00 | 78.54 | 27.88 | 404.08 |
| 54 | 595.24 | 2 | SLE R | -199241.00 | -9276.12 | 18542.10 | 0.00 | 78.54 | 26.81 | 388.83 |
| 55 | 654.76 | 2 | SLE R | -193854.00 | -8657.37 | 17305.30 | 0.00 | 78.54 | 25.66 | 372.53 |
| 56 | 714.29 | 2 | SLE R | -188477.00 | -7994.97 | 15981.20 | 0.00 | 78.54 | 24.47 | 355.55 |
| 57 | 773.81 | 2 | SLE R | -183111.00 | -7309.02 | 14610.10 | 0.00 | 78.54 | 23.24 | 338.22 |
| 58 | 833.33 | 2 | SLE R | -177754.00 | -6616.46 | 13225.70 | 0.00 | 78.54 | 22.02 | 320.80 |
| 59 | 892.86 | 2 | SLE R | -172407.00 | -5931.30 | 11856.10 | 0.00 | 78.54 | 20.80 | 303.50 |
| 60 | 952.38 | 2 | SLE R | -167069.00 | -5264.92 | 10524.10 | 0.00 | 78.54 | 19.60 | 286.51 |
| 61 | 1011.90 | 2 | SLE R | -161740.00 | -4626.33 | 9247.61 | 0.00 | 78.54 | 18.44 | 269.97 |
| 62 | 1071.43 | 2 | SLE R | -156420.00 | -4022.46 | 8040.53 | 0.00 | 78.54 | 17.32 | 253.98 |
| 63 | 1130.95 | 2 | SLE R | -151108.00 | -3458.38 | 6913.00 | 0.00 | 78.54 | 16.24 | 238.63 |
| 64 | 1190.48 | 2 | SLE R | -145804.00 | -2937.58 | 5871.97 | 0.00 | 78.54 | 15.21 | 223.98 |
| 65 | 1250.00 | 2 | SLE R | -140509.00 | -2462.16 | 4921.64 | 0.00 | 78.54 | 14.24 | 210.04 |
| 66 | 1309.52 | 2 | SLE R | -135220.00 | -2033.05 | 4063.88 | 0.00 | 78.54 | 13.32 | 196.84 |
| 67 | 1369.05 | 2 | SLE R | -129939.00 | -1650.20 | 3298.59 | 0.00 | 78.54 | 12.45 | 184.38 |
| 68 | 1428.57 | 2 | SLE R | -124665.00 | -1312.75 | 2624.06 | 0.00 | 78.54 | 11.63 | 172.65 |
| 69 | 1488.10 | 2 | SLE R | -119397.00 | -1019.19 | 2037.27 | 0.00 | 78.54 | 10.87 | 161.60 |
| 70 | 1547.62 | 2 | SLE R | -114136.00 | -767.49 | 1534.14 | 0.00 | 78.54 | 10.16 | 151.23 |
| 71 | 1607.14 | 2 | SLE R | -108881.00 | -555.20 | 1109.79 | 0.00 | 78.54 | 9.49 | 141.49 |
| 72 | 1666.67 | 2 | SLE R | -103632.00 | -379.57 | 758.73 | 0.00 | 78.54 | 8.86 | 132.32 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|------------|-----------|----------|------|-------|-------|--------|
| 73 | 1726.19 | 2 | SLE R | -98388.80 | -237.65 | 475.05 | 0.00 | 78.54 | 8.27 | 123.70 |
| 74 | 1785.71 | 2 | SLE R | -93150.50 | -126.31 | 252.49 | 0.00 | 78.54 | 7.72 | 115.56 |
| 75 | 1845.24 | 2 | SLE R | -87917.20 | -42.35 | 84.66 | 0.00 | 78.54 | 7.19 | 107.86 |
| 76 | 1904.76 | 2 | SLE R | -82688.70 | 17.50 | -34.98 | 0.00 | 78.54 | 6.74 | 101.09 |
| 77 | 1964.29 | 2 | SLE R | -77464.60 | 56.52 | -112.97 | 0.00 | 78.54 | 6.36 | 95.33 |
| 78 | 2023.81 | 2 | SLE R | -72244.60 | 77.96 | -155.84 | 0.00 | 78.54 | 5.96 | 89.30 |
| 79 | 2083.33 | 2 | SLE R | -67028.50 | 85.09 | -170.09 | 0.00 | 78.54 | 5.55 | 83.06 |
| 80 | 2142.86 | 2 | SLE R | -61816.00 | 81.11 | -162.13 | 0.00 | 78.54 | 5.12 | 76.64 |
| 81 | 2202.38 | 2 | SLE R | -56606.80 | 69.20 | -138.32 | 0.00 | 78.54 | 4.68 | 70.10 |
| 82 | 2261.90 | 2 | SLE R | -51400.70 | 52.51 | -104.95 | 0.00 | 78.54 | 4.24 | 63.49 |
| 83 | 2321.43 | 2 | SLE R | -46197.30 | 34.15 | -68.26 | 0.00 | 78.54 | 3.79 | 56.86 |
| 84 | 2380.95 | 2 | SLE R | -40996.40 | 17.23 | -34.43 | 0.00 | 78.54 | 3.35 | 50.25 |
| 85 | 2440.48 | 2 | SLE R | -35797.70 | 4.82 | -9.63 | 0.00 | 78.54 | 2.92 | 43.72 |
| 86 | 2500.00 | 2 | SLE R | -30600.90 | 0.00 | 0.00 | 0.00 | 78.54 | 2.49 | 37.31 |
| 87 | 0.00 | 4 | SLE Q | -233792.00 | -7902.44 | 15796.30 | 0.00 | 78.54 | 28.04 | 409.35 |
| 88 | 59.52 | 4 | SLE Q | -233375.00 | -8947.45 | 17885.10 | 0.00 | 78.54 | 29.20 | 425.27 |
| 89 | 119.05 | 4 | SLE Q | -230865.00 | -9723.04 | 19435.50 | 0.00 | 78.54 | 29.89 | 434.42 |
| 90 | 178.57 | 4 | SLE Q | -228363.00 | -10264.40 | 20517.60 | 0.00 | 78.54 | 30.30 | 439.88 |
| 91 | 238.09 | 4 | SLE Q | -225868.00 | -10604.50 | 21197.50 | 0.00 | 78.54 | 30.49 | 442.19 |
| 92 | 297.62 | 4 | SLE Q | -223380.00 | -10773.90 | 21536.10 | 0.00 | 78.54 | 30.48 | 441.82 |
| 93 | 357.14 | 4 | SLE Q | -220899.00 | -10786.80 | 21561.90 | 0.00 | 78.54 | 30.29 | 439.00 |
| 94 | 416.67 | 4 | SLE Q | -215467.00 | -10616.20 | 21220.90 | 0.00 | 78.54 | 29.66 | 429.69 |
| 95 | 476.19 | 4 | SLE Q | -210047.00 | -10284.80 | 20558.30 | 0.00 | 78.54 | 28.84 | 417.87 |
| 96 | 535.71 | 4 | SLE Q | -204639.00 | -9827.67 | 19644.60 | 0.00 | 78.54 | 27.88 | 404.08 |
| 97 | 595.24 | 4 | SLE Q | -199241.00 | -9276.12 | 18542.10 | 0.00 | 78.54 | 26.81 | 388.83 |
| 98 | 654.76 | 4 | SLE Q | -193854.00 | -8657.37 | 17305.30 | 0.00 | 78.54 | 25.66 | 372.53 |
| 99 | 714.29 | 4 | SLE Q | -188477.00 | -7994.97 | 15981.20 | 0.00 | 78.54 | 24.47 | 355.55 |
| 100 | 773.81 | 4 | SLE Q | -183111.00 | -7309.02 | 14610.10 | 0.00 | 78.54 | 23.24 | 338.22 |
| 101 | 833.33 | 4 | SLE Q | -177754.00 | -6616.46 | 13225.70 | 0.00 | 78.54 | 22.02 | 320.80 |
| 102 | 892.86 | 4 | SLE Q | -172407.00 | -5931.30 | 11856.10 | 0.00 | 78.54 | 20.80 | 303.50 |
| 103 | 952.38 | 4 | SLE Q | -167069.00 | -5264.92 | 10524.10 | 0.00 | 78.54 | 19.60 | 286.51 |
| 104 | 1011.90 | 4 | SLE Q | -161740.00 | -4626.33 | 9247.61 | 0.00 | 78.54 | 18.44 | 269.97 |
| 105 | 1071.43 | 4 | SLE Q | -156420.00 | -4022.46 | 8040.53 | 0.00 | 78.54 | 17.32 | 253.98 |
| 106 | 1130.95 | 4 | SLE Q | -151108.00 | -3458.38 | 6913.00 | 0.00 | 78.54 | 16.24 | 238.63 |
| 107 | 1190.48 | 4 | SLE Q | -145804.00 | -2937.58 | 5871.97 | 0.00 | 78.54 | 15.21 | 223.98 |
| 108 | 1250.00 | 4 | SLE Q | -140509.00 | -2462.16 | 4921.64 | 0.00 | 78.54 | 14.24 | 210.04 |
| 109 | 1309.52 | 4 | SLE Q | -135220.00 | -2033.05 | 4063.88 | 0.00 | 78.54 | 13.32 | 196.84 |
| 110 | 1369.05 | 4 | SLE Q | -129939.00 | -1650.20 | 3298.59 | 0.00 | 78.54 | 12.45 | 184.38 |
| 111 | 1428.57 | 4 | SLE Q | -124665.00 | -1312.75 | 2624.06 | 0.00 | 78.54 | 11.63 | 172.65 |
| 112 | 1488.10 | 4 | SLE Q | -119397.00 | -1019.19 | 2037.27 | 0.00 | 78.54 | 10.87 | 161.60 |
| 113 | 1547.62 | 4 | SLE Q | -114136.00 | -767.49 | 1534.14 | 0.00 | 78.54 | 10.16 | 151.23 |
| 114 | 1607.14 | 4 | SLE Q | -108881.00 | -555.20 | 1109.79 | 0.00 | 78.54 | 9.49 | 141.49 |
| 115 | 1666.67 | 4 | SLE Q | -103632.00 | -379.57 | 758.73 | 0.00 | 78.54 | 8.86 | 132.32 |
| 116 | 1726.19 | 4 | SLE Q | -98388.80 | -237.65 | 475.05 | 0.00 | 78.54 | 8.27 | 123.70 |
| 117 | 1785.71 | 4 | SLE Q | -93150.50 | -126.31 | 252.49 | 0.00 | 78.54 | 7.72 | 115.56 |
| 118 | 1845.24 | 4 | SLE Q | -87917.20 | -42.35 | 84.66 | 0.00 | 78.54 | 7.19 | 107.86 |
| 119 | 1904.76 | 4 | SLE Q | -82688.70 | 17.50 | -34.98 | 0.00 | 78.54 | 6.74 | 101.09 |
| 120 | 1964.29 | 4 | SLE Q | -77464.60 | 56.52 | -112.97 | 0.00 | 78.54 | 6.36 | 95.33 |
| 121 | 2023.81 | 4 | SLE Q | -72244.60 | 77.96 | -155.84 | 0.00 | 78.54 | 5.96 | 89.30 |
| 122 | 2083.33 | 4 | SLE Q | -67028.50 | 85.09 | -170.09 | 0.00 | 78.54 | 5.55 | 83.06 |
| 123 | 2142.86 | 4 | SLE Q | -61816.00 | 81.11 | -162.13 | 0.00 | 78.54 | 5.12 | 76.64 |
| 124 | 2202.38 | 4 | SLE Q | -56606.80 | 69.20 | -138.32 | 0.00 | 78.54 | 4.68 | 70.10 |
| 125 | 2261.90 | 4 | SLE Q | -51400.70 | 52.51 | -104.95 | 0.00 | 78.54 | 4.24 | 63.49 |
| 126 | 2321.43 | 4 | SLE Q | -46197.30 | 34.15 | -68.26 | 0.00 | 78.54 | 3.79 | 56.86 |
| 127 | 2380.95 | 4 | SLE Q | -40996.40 | 17.23 | -34.43 | 0.00 | 78.54 | 3.35 | 50.25 |
| 128 | 2440.48 | 4 | SLE Q | -35797.70 | 4.82 | -9.63 | 0.00 | 78.54 | 2.92 | 43.72 |
| 129 | 2500.00 | 4 | SLE Q | -30600.90 | 0.00 | 0.00 | 0.00 | 78.54 | 2.49 | 37.31 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 1 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 7 | SLU N cost - min. sic. |
| 48 | C.Rare - Sc min (max compr.), C.Rare - Sf min (max compr.) |
| 86 | C.Rare - Sc max (min. compr.), C.Rare - Sf max (max traz.) |
| 91 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf min (max compr.) |
| 129 | C.Q.Per. - Sc max (min. compr.), C.Q.Per. - Sf max (max traz.) |

Palo n. 6

Caratteristiche del palo e dei materiali utilizzati

| R | Cf | Cls | Fck | Fctk | Fcd | Fctd | Tp | Fyk | Fyd |
|-------|------|--------|-----------|-----------|-----------|-----------|-------|-----------|-----------|
| <cm> | <cm> | | <daN/cm²> | <daN/cm²> | <daN/cm²> | <daN/cm²> | | <daN/cm²> | <daN/cm²> |
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Relazione di calcolo

Azioni ed effetti comuni

| Az | N <daN> | Mx <daNm> | My <daNm> | Mz <daNm> |
|-----|------------|--------------|--------------|--------------|
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 6 (-139)

| Caso | CC | TCC | Az | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|-----|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | RVN | 274241.00 | 6270.22 | 558.54 | 37079.00 | 24873.20 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 274241.00 | 6270.22 | 558.54 | 37079.00 | 24873.20 |
| 2 | 2 | SLE R | RVN | 203142.00 | 4644.61 | 413.73 | 27465.90 | 18424.60 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 203142.00 | 4644.61 | 413.73 | 27465.90 | 18424.60 |
| 3 | 3 | SLE F | RVN | 203142.00 | 4644.61 | 413.73 | 27465.90 | 18424.60 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 203142.00 | 4644.61 | 413.73 | 27465.90 | 18424.60 |
| 4 | 4 | SLE Q | RVN | 203142.00 | 4644.61 | 413.73 | 27465.90 | 18424.60 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 203142.00 | 4644.61 | 413.73 | 27465.90 | 18424.60 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|------|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | 1 | -274241.00 | -6270.22 | -558.54 | -37079.00 | -24873.20 |
| 2 | 2 | SLE R | 1 | -203142.00 | -4644.61 | -413.73 | -27465.90 | -18424.60 |
| 3 | 3 | SLE F | 1 | -203142.00 | -4644.61 | -413.73 | -27465.90 | -18424.60 |
| 4 | 4 | SLE Q | 1 | -203142.00 | -4644.61 | -413.73 | -27465.90 | -18424.60 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|--------|
| 1 | 0.00 | 1 | SLU | -274241.00 | 36912.70 | -24761.70 | -274241.00 | 206383.00 | -137991.00 | 2-3 | 213.75 | 5.585 |
| 2 | 59.52 | 1 | SLU | -273543.00 | 39526.40 | -26515.00 | -273543.00 | 206211.00 | -137860.00 | 2-3 | 213.75 | 5.212 |
| 3 | 119.05 | 1 | SLU | -270473.00 | 41234.30 | -27660.70 | -270473.00 | 205453.00 | -137285.00 | 2-3 | 213.75 | 4.977 |
| 4 | 178.57 | 1 | SLU | -267411.00 | 42164.70 | -28284.80 | -267411.00 | 204693.00 | -136708.00 | 2-3 | 213.75 | 4.848 |
| 5 | 238.09 | 1 | SLU | -264357.00 | 42436.50 | -28467.20 | -264357.00 | 203934.00 | -136131.00 | 2-3 | 213.75 | 4.798 |
| 6 | 297.62 | 1 | SLU | -261311.00 | 42158.80 | -28280.90 | -261311.00 | 203176.00 | -135554.00 | 2-3 | 213.75 | 4.811 |
| 7 | 357.14 | 1 | SLU | -258274.00 | 41388.20 | -27763.90 | -258274.00 | 202418.00 | -134978.00 | 2-3 | 213.75 | 4.882 |
| 8 | 416.67 | 1 | SLU | -251893.00 | 40052.80 | -26868.10 | -251893.00 | 200749.00 | -133806.00 | 2-3 | 213.75 | 5.002 |
| 9 | 476.19 | 1 | SLU | -245525.00 | 38236.00 | -25649.40 | -245525.00 | 198983.00 | -132682.00 | 2-3 | 213.75 | 5.194 |
| 10 | 535.71 | 1 | SLU | -239170.00 | 36058.20 | -24188.50 | -239170.00 | 197219.00 | -131530.00 | 2-3 | 213.75 | 5.460 |
| 11 | 595.24 | 1 | SLU | -232828.00 | 33624.80 | -22556.10 | -232828.00 | 195442.00 | -130371.00 | 2-3 | 213.75 | 5.802 |
| 12 | 654.76 | 1 | SLU | -226499.00 | 31026.70 | -20813.20 | -226499.00 | 193660.00 | -129209.00 | 2-3 | 213.75 | 6.231 |
| 13 | 714.29 | 1 | SLU | -220182.00 | 28341.40 | -19011.90 | -220182.00 | 191871.00 | -128044.00 | 2-3 | 213.75 | 6.759 |
| 14 | 773.81 | 1 | SLU | -213876.00 | 25634.20 | -17195.80 | -213876.00 | 190071.00 | -126872.00 | 2-3 | 213.75 | 7.403 |
| 15 | 833.33 | 1 | SLU | -207582.00 | 22958.90 | -15401.20 | -207582.00 | 188267.00 | -125698.00 | 2-3 | 213.75 | 8.188 |
| 16 | 892.86 | 1 | SLU | -201300.00 | 20359.20 | -13657.30 | -201300.00 | 186455.00 | -124520.00 | 2-3 | 213.75 | 9.146 |
| 17 | 952.38 | 1 | SLU | -195028.00 | 17869.70 | -11987.30 | -195028.00 | 184634.00 | -123337.00 | 2-3 | 213.75 | 10.319 |
| 18 | 1011.90 | 1 | SLU | -188766.00 | 15516.90 | -10409.00 | -188766.00 | 182808.00 | -122152.00 | 2-3 | 213.75 | 11.767 |
| 19 | 1071.43 | 1 | SLU | -182515.00 | 13320.10 | -8935.34 | -182515.00 | 180973.00 | -120962.00 | 2-3 | 213.75 | 13.571 |
| 20 | 1130.95 | 1 | SLU | -176273.00 | 11292.40 | -7575.12 | -176273.00 | 179131.00 | -119769.00 | 2-3 | 213.75 | 14.587 |
| 21 | 1190.48 | 1 | SLU | -170041.00 | 9441.67 | -6333.64 | -170041.00 | 177284.00 | -118573.00 | 2-3 | 213.75 | 15.121 |
| 22 | 1250.00 | 1 | SLU | -163818.00 | 7771.32 | -5213.14 | -163818.00 | 175427.00 | -117373.00 | 2-3 | 213.75 | 15.696 |
| 23 | 1309.52 | 1 | SLU | -157604.00 | 6280.94 | -4213.37 | -157604.00 | 173565.00 | -116171.00 | 2-3 | 213.75 | 16.315 |
| 24 | 1369.05 | 1 | SLU | -151398.00 | 4967.03 | -3331.97 | -151398.00 | 171696.00 | -114966.00 | 2-3 | 213.75 | 16.983 |
| 25 | 1428.57 | 1 | SLU | -145200.00 | 3823.60 | -2564.94 | -145200.00 | 169819.00 | -113758.00 | 2-3 | 213.75 | 17.708 |
| 26 | 1488.10 | 1 | SLU | -139011.00 | 2842.70 | -1906.93 | -139011.00 | 167938.00 | -112548.00 | 2-3 | 213.75 | 18.497 |
| 27 | 1547.62 | 1 | SLU | -132828.00 | 2014.83 | -1351.58 | -132828.00 | 166047.00 | -111335.00 | 2-3 | 213.75 | 19.358 |
| 28 | 1607.14 | 1 | SLU | -126653.00 | 1329.38 | -891.77 | -126653.00 | 164151.00 | -110119.00 | 2-3 | 213.75 | 20.302 |
| 29 | 1666.67 | 1 | SLU | -120484.00 | 774.95 | -519.85 | -120484.00 | 162250.00 | -108902.00 | 2-3 | 213.75 | 21.341 |
| 30 | 1726.19 | 1 | SLU | -114322.00 | 339.60 | -227.81 | -114322.00 | 160360.00 | -107623.00 | 2-3 | 213.75 | 22.491 |
| 31 | 1785.71 | 1 | SLU | -108166.00 | 11.07 | -7.43 | -108166.00 | 158514.00 | -106180.00 | 2-3 | 213.75 | 23.771 |
| 32 | 1845.24 | 1 | SLU | -102016.00 | -223.00 | 149.59 | -102016.00 | 156672.00 | -104669.00 | 2-3 | 33.75 | 25.204 |
| 33 | 1904.76 | 1 | SLU | -95871.60 | -375.00 | 251.56 | -95871.60 | 154461.00 | -103379.00 | 2-3 | 33.75 | 26.820 |
| 34 | 1964.29 | 1 | SLU | -89732.10 | -457.21 | 306.71 | -89732.10 | 152445.00 | -102085.00 | 2-3 | 33.75 | 28.655 |
| 35 | 2023.81 | 1 | SLU | -83597.50 | -481.77 | 323.18 | -83597.50 | 150422.00 | -100788.00 | 2-3 | 33.75 | 30.758 |
| 36 | 2083.33 | 1 | SLU | -77467.30 | -460.62 | 308.99 | -77467.30 | 148389.00 | -99485.10 | 2-3 | 33.75 | 33.191 |

Relazione di calcolo

| | | | | | | | | | | | | |
|----|---------|---|-----|-----------|---------|--------|-------------|------------|----------|-----|-------|--------|
| 37 | 2142.86 | 1 | SLU | -71341.20 | -405.51 | 272.03 | -2571250.00 | -146352.00 | 98179.00 | 2-3 | 33.75 | 36.041 |
| 38 | 2202.38 | 1 | SLU | -65219.00 | -328.03 | 220.05 | -2571250.00 | -144308.00 | 96868.10 | 2-3 | 33.75 | 39.425 |
| 39 | 2261.90 | 1 | SLU | -59100.30 | -239.56 | 160.70 | -2571250.00 | -142256.00 | 95553.10 | 2-3 | 33.75 | 43.507 |
| 40 | 2321.43 | 1 | SLU | -52984.80 | -151.38 | 101.55 | -2571250.00 | -140201.00 | 94234.70 | 2-3 | 33.75 | 48.528 |
| 41 | 2380.95 | 1 | SLU | -46872.10 | -74.66 | 50.08 | -2571250.00 | -138136.00 | 92911.80 | 2-3 | 33.75 | 54.857 |
| 42 | 2440.48 | 1 | SLU | -40761.90 | -20.51 | 13.76 | -2571250.00 | -136067.00 | 91585.80 | 2-3 | 33.75 | 63.080 |
| 43 | 2500.00 | 1 | SLU | -34653.90 | 0.00 | 0.00 | -2571250.00 | | | | | 74.198 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | CC | TCC | Ty <daN> | Tz <daN> | bw <m> | Asw <cmq> | V _{sd} <daN> | ctgθ | V _{Rsd} <daN> | V _{Rcd} <daN> | V _{rd} <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|-----------|--------------|--------------------------|------|---------------------------|---------------------------|--------------------------|--------|
| 1 | 0.00 | 1 | SLU | 6270.22 | 558.54 | 0.85 | 11.31 | 6295.05 | 1.00 | 32294.70 | 370950.00 | 32294.70 | 5.130 |
| 2 | 59.52 | 1 | SLU | 4309.24 | 383.86 | 0.85 | 11.31 | 4326.30 | 1.00 | 32294.70 | 370850.00 | 32294.70 | 7.465 |
| 3 | 119.05 | 1 | SLU | 2616.50 | 233.07 | 0.85 | 11.31 | 2626.86 | 1.00 | 32294.70 | 370410.00 | 32294.70 | 12.294 |
| 4 | 178.57 | 1 | SLU | 1173.02 | 104.49 | 0.85 | 11.31 | 1177.66 | 1.00 | 32294.70 | 369972.00 | 32294.70 | 27.423 |
| 5 | 238.09 | 1 | SLU | -40.83 | -3.64 | 0.85 | 11.31 | 40.99 | 1.00 | 32294.70 | 369534.00 | 32294.70 | >100 |
| 6 | 297.62 | 1 | SLU | -1044.91 | -93.08 | 0.85 | 11.31 | 1049.04 | 1.00 | 32294.70 | 369098.00 | 32294.70 | 30.785 |
| 7 | 357.14 | 1 | SLU | -2116.79 | -188.56 | 0.85 | 11.31 | 2125.17 | 1.00 | 32294.70 | 368663.00 | 32294.70 | 15.196 |
| 8 | 416.67 | 1 | SLU | -3218.98 | -286.74 | 0.85 | 11.31 | 3231.72 | 1.00 | 32294.70 | 367749.00 | 32294.70 | 9.993 |
| 9 | 476.19 | 1 | SLU | -4062.45 | -361.88 | 0.85 | 11.31 | 4078.54 | 1.00 | 32294.70 | 366837.00 | 32294.70 | 7.918 |
| 10 | 535.71 | 1 | SLU | -4678.68 | -416.77 | 0.85 | 11.31 | 4697.21 | 1.00 | 32294.70 | 365927.00 | 32294.70 | 6.875 |
| 11 | 595.24 | 1 | SLU | -5097.52 | -454.08 | 0.85 | 11.31 | 5117.70 | 1.00 | 32294.70 | 365018.00 | 32294.70 | 6.310 |
| 12 | 654.76 | 1 | SLU | -5346.94 | -476.30 | 0.85 | 11.31 | 5368.12 | 1.00 | 32294.70 | 364112.00 | 32294.70 | 6.016 |
| 13 | 714.29 | 1 | SLU | -5452.92 | -485.74 | 0.85 | 11.31 | 5474.51 | 1.00 | 32294.70 | 363207.00 | 32294.70 | 5.899 |
| 14 | 773.81 | 1 | SLU | -5439.26 | -484.52 | 0.85 | 11.31 | 5460.80 | 1.00 | 32294.70 | 362304.00 | 32294.70 | 5.914 |
| 15 | 833.33 | 1 | SLU | -5327.63 | -474.58 | 0.85 | 11.31 | 5348.72 | 1.00 | 32294.70 | 361402.00 | 32294.70 | 6.038 |
| 16 | 892.86 | 1 | SLU | -5137.50 | -457.64 | 0.85 | 11.31 | 5157.85 | 1.00 | 32294.70 | 360502.00 | 32294.70 | 6.261 |
| 17 | 952.38 | 1 | SLU | -4886.26 | -435.26 | 0.85 | 11.31 | 4905.60 | 1.00 | 32294.70 | 359604.00 | 32294.70 | 6.583 |
| 18 | 1011.90 | 1 | SLU | -4589.20 | -408.80 | 0.85 | 11.31 | 4607.37 | 1.00 | 32294.70 | 358707.00 | 32294.70 | 7.009 |
| 19 | 1071.43 | 1 | SLU | -4259.72 | -379.45 | 0.85 | 11.31 | 4276.58 | 1.00 | 32294.70 | 357811.00 | 32294.70 | 7.552 |
| 20 | 1130.95 | 1 | SLU | -3909.34 | -348.24 | 0.85 | 11.31 | 3924.82 | 1.00 | 32294.70 | 356917.00 | 32294.70 | 8.228 |
| 21 | 1190.48 | 1 | SLU | -3547.92 | -316.04 | 0.85 | 11.31 | 3561.97 | 1.00 | 32294.70 | 356025.00 | 32294.70 | 9.067 |
| 22 | 1250.00 | 1 | SLU | -3183.76 | -283.60 | 0.85 | 11.31 | 3196.36 | 1.00 | 32294.70 | 355133.00 | 32294.70 | 10.104 |
| 23 | 1309.52 | 1 | SLU | -2823.71 | -251.53 | 0.85 | 11.31 | 2834.89 | 1.00 | 32294.70 | 354243.00 | 32294.70 | 11.392 |
| 24 | 1369.05 | 1 | SLU | -2473.41 | -220.33 | 0.85 | 11.31 | 2483.20 | 1.00 | 32294.70 | 353354.00 | 32294.70 | 13.005 |
| 25 | 1428.57 | 1 | SLU | -2137.32 | -190.39 | 0.85 | 11.31 | 2145.78 | 1.00 | 32294.70 | 352467.00 | 32294.70 | 15.050 |
| 26 | 1488.10 | 1 | SLU | -1818.95 | -162.03 | 0.85 | 11.31 | 1826.15 | 1.00 | 32294.70 | 351580.00 | 32294.70 | 17.685 |
| 27 | 1547.62 | 1 | SLU | -1520.95 | -135.48 | 0.85 | 11.31 | 1526.97 | 1.00 | 32294.70 | 350694.00 | 32294.70 | 21.149 |
| 28 | 1607.14 | 1 | SLU | -1245.24 | -110.92 | 0.85 | 11.31 | 1250.17 | 1.00 | 32294.70 | 349810.00 | 32294.70 | 25.832 |
| 29 | 1666.67 | 1 | SLU | -993.14 | -88.47 | 0.85 | 11.31 | 997.08 | 1.00 | 32294.70 | 348926.00 | 32294.70 | 32.389 |
| 30 | 1726.19 | 1 | SLU | -765.47 | -68.19 | 0.85 | 11.31 | 768.50 | 1.00 | 32294.70 | 348044.00 | 32294.70 | 42.023 |
| 31 | 1785.71 | 1 | SLU | -562.66 | -50.12 | 0.85 | 11.31 | 564.89 | 1.00 | 32294.70 | 347162.00 | 32294.70 | 57.170 |
| 32 | 1845.24 | 1 | SLU | -384.82 | -34.28 | 0.85 | 11.31 | 386.35 | 1.00 | 32294.70 | 346281.00 | 32294.70 | 83.590 |
| 33 | 1904.76 | 1 | SLU | -231.86 | -20.65 | 0.85 | 11.31 | 232.78 | 1.00 | 32294.70 | 345401.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -103.52 | -9.22 | 0.85 | 11.31 | 103.93 | 1.00 | 32294.70 | 344521.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | 0.55 | 0.05 | 0.85 | 11.31 | 0.55 | 1.00 | 32294.70 | 343643.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 80.74 | 7.19 | 0.85 | 11.31 | 81.06 | 1.00 | 32294.70 | 342764.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 137.44 | 12.24 | 0.85 | 11.31 | 137.98 | 1.00 | 32294.70 | 341887.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 171.00 | 15.23 | 0.85 | 11.31 | 171.68 | 1.00 | 32294.70 | 341010.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 181.74 | 16.19 | 0.85 | 11.31 | 182.46 | 1.00 | 32294.70 | 340134.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 169.88 | 15.13 | 0.85 | 11.31 | 170.55 | 1.00 | 32294.70 | 339258.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 135.58 | 12.08 | 0.85 | 11.31 | 136.11 | 1.00 | 32294.70 | 338382.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 78.94 | 7.03 | 0.85 | 11.31 | 79.25 | 1.00 | 32294.70 | 337507.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | M _z <daNm> | M _y <daNm> | A _{fT} <cmq> | A _{fC} <cmq> | σ _c <daN/cmq> | σ _f <daN/cmq> |
|------|-----------|----|-------|------------|--------------------------|--------------------------|--------------------------|--------------------------|-----------------------------|-----------------------------|
| 44 | 0.00 | 2 | SLE R | -203142.00 | -18342.00 | 27342.80 | 0.00 | 78.54 | 33.54 | 478.30 |
| 45 | 59.52 | 2 | SLE R | -202938.00 | -19640.80 | 29278.80 | 3.14 | 75.40 | 34.76 | 494.70 |
| 46 | 119.05 | 2 | SLE R | -200853.00 | -20489.40 | 30543.90 | 9.42 | 69.11 | 35.43 | 503.52 |
| 47 | 178.57 | 2 | SLE R | -198775.00 | -20951.70 | 31233.10 | 9.42 | 69.11 | 35.74 | 507.46 |
| 48 | 238.09 | 2 | SLE R | -196703.00 | -21086.80 | 31434.50 | 12.57 | 65.97 | 35.73 | 507.06 |
| 49 | 297.62 | 2 | SLE R | -194638.00 | -20948.80 | 31228.80 | 12.57 | 65.97 | 35.44 | 502.89 |
| 50 | 357.14 | 2 | SLE R | -192578.00 | -20565.90 | 30657.90 | 9.42 | 69.11 | 34.90 | 495.33 |
| 51 | 416.67 | 2 | SLE R | -187866.00 | -19902.30 | 29668.70 | 9.42 | 69.11 | 33.88 | 481.00 |
| 52 | 476.19 | 2 | SLE R | -183165.00 | -18999.50 | 28322.90 | 9.42 | 69.11 | 32.62 | 463.42 |
| 53 | 535.71 | 2 | SLE R | -178473.00 | -17917.40 | 26709.80 | 9.42 | 69.11 | 31.19 | 443.55 |
| 54 | 595.24 | 2 | SLE R | -173791.00 | -16708.20 | 24907.30 | 0.00 | 78.54 | 29.66 | 422.20 |
| 55 | 654.76 | 2 | SLE R | -169118.00 | -15417.20 | 22982.70 | 0.00 | 78.54 | 28.06 | 400.05 |
| 56 | 714.29 | 2 | SLE R | -164454.00 | -14082.90 | 20993.60 | 0.00 | 78.54 | 26.44 | 377.57 |
| 57 | 773.81 | 2 | SLE R | -159799.00 | -12737.70 | 18988.30 | 0.00 | 78.54 | 24.82 | 354.98 |
| 58 | 833.33 | 2 | SLE R | -155152.00 | -11408.30 | 17006.60 | 0.00 | 78.54 | 23.20 | 332.60 |
| 59 | 892.86 | 2 | SLE R | -150514.00 | -10116.50 | 15080.90 | 0.00 | 78.54 | 21.63 | 310.70 |
| 60 | 952.38 | 2 | SLE R | -145884.00 | -8879.50 | 13236.80 | 0.00 | 78.54 | 20.10 | 289.51 |
| 61 | 1011.90 | 2 | SLE R | -141262.00 | -7710.38 | 11494.00 | 0.00 | 78.54 | 18.64 | 269.17 |
| 62 | 1071.43 | 2 | SLE R | -136647.00 | -6618.77 | 9866.72 | 0.00 | 78.54 | 17.25 | 249.82 |
| 63 | 1130.95 | 2 | SLE R | -132040.00 | -5611.20 | 8364.72 | 0.00 | 78.54 | 15.94 | 231.54 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|------------|-----------|----------|-------|-------|-------|--------|
| 64 | 1190.48 | 2 | SLE R | -127440.00 | -4691.58 | 6993.83 | 0.00 | 78.54 | 14.71 | 214.37 |
| 65 | 1250.00 | 2 | SLE R | -122846.00 | -3861.59 | 5756.54 | 0.00 | 78.54 | 13.57 | 198.33 |
| 66 | 1309.52 | 2 | SLE R | -118259.00 | -3121.01 | 4652.55 | 0.00 | 78.54 | 12.51 | 183.43 |
| 67 | 1369.05 | 2 | SLE R | -113679.00 | -2468.13 | 3679.28 | 0.00 | 78.54 | 11.53 | 169.63 |
| 68 | 1428.57 | 2 | SLE R | -109104.00 | -1899.96 | 2832.30 | 0.00 | 78.54 | 10.63 | 156.91 |
| 69 | 1488.10 | 2 | SLE R | -104536.00 | -1412.54 | 2105.70 | 0.00 | 78.54 | 9.81 | 145.21 |
| 70 | 1547.62 | 2 | SLE R | -99973.00 | -1001.17 | 1492.46 | 0.00 | 78.54 | 9.06 | 134.48 |
| 71 | 1607.14 | 2 | SLE R | -95415.50 | -660.57 | 984.73 | 0.00 | 78.54 | 8.37 | 124.64 |
| 72 | 1666.67 | 2 | SLE R | -90863.00 | -385.08 | 574.04 | 0.00 | 78.54 | 7.74 | 115.63 |
| 73 | 1726.19 | 2 | SLE R | -86315.40 | -168.75 | 251.55 | 0.00 | 78.54 | 7.17 | 107.36 |
| 74 | 1785.71 | 2 | SLE R | -81772.50 | -5.50 | 8.20 | 0.00 | 78.54 | 6.65 | 99.77 |
| 75 | 1845.24 | 2 | SLE R | -77233.90 | 110.81 | -165.19 | 0.00 | 78.54 | 6.38 | 95.57 |
| 76 | 1904.76 | 2 | SLE R | -72699.50 | 186.34 | -277.78 | 0.00 | 78.54 | 6.08 | 90.99 |
| 77 | 1964.29 | 2 | SLE R | -68169.00 | 227.19 | -338.68 | 0.00 | 78.54 | 5.75 | 85.98 |
| 78 | 2023.81 | 2 | SLE R | -63642.10 | 239.39 | -356.87 | 0.00 | 78.54 | 5.40 | 80.62 |
| 79 | 2083.33 | 2 | SLE R | -59118.70 | 228.88 | -341.20 | 0.00 | 78.54 | 5.02 | 74.97 |
| 80 | 2142.86 | 2 | SLE R | -54598.40 | 201.50 | -300.38 | 0.00 | 78.54 | 4.63 | 69.11 |
| 81 | 2202.38 | 2 | SLE R | -50081.10 | 163.00 | -242.98 | 0.00 | 78.54 | 4.22 | 63.12 |
| 82 | 2261.90 | 2 | SLE R | -45566.40 | 119.04 | -177.45 | 0.00 | 78.54 | 3.81 | 57.06 |
| 83 | 2321.43 | 2 | SLE R | -41054.20 | 75.22 | -112.13 | 0.00 | 78.54 | 3.41 | 51.01 |
| 84 | 2380.95 | 2 | SLE R | -36544.20 | 37.10 | -55.30 | 0.00 | 78.54 | 3.00 | 45.02 |
| 85 | 2440.48 | 2 | SLE R | -32036.10 | 10.19 | -15.19 | 0.00 | 78.54 | 2.61 | 39.19 |
| 86 | 2500.00 | 2 | SLE R | -27529.80 | 0.00 | 0.00 | 0.00 | 78.54 | 2.24 | 33.57 |
| 87 | 0.00 | 4 | SLE Q | -203142.00 | -18342.00 | 27342.80 | 0.00 | 78.54 | 33.54 | 478.30 |
| 88 | 59.52 | 4 | SLE Q | -202938.00 | -19640.80 | 29278.80 | 3.14 | 75.40 | 34.76 | 494.70 |
| 89 | 119.05 | 4 | SLE Q | -200853.00 | -20489.40 | 30543.90 | 9.42 | 69.11 | 35.43 | 503.52 |
| 90 | 178.57 | 4 | SLE Q | -198775.00 | -20951.70 | 31233.10 | 9.42 | 69.11 | 35.74 | 507.46 |
| 91 | 238.09 | 4 | SLE Q | -196703.00 | -21086.80 | 31434.50 | 12.57 | 65.97 | 35.73 | 507.06 |
| 92 | 297.62 | 4 | SLE Q | -194638.00 | -20948.80 | 31228.80 | 12.57 | 65.97 | 35.44 | 502.89 |
| 93 | 357.14 | 4 | SLE Q | -192578.00 | -20565.90 | 30657.90 | 9.42 | 69.11 | 34.90 | 495.33 |
| 94 | 416.67 | 4 | SLE Q | -187866.00 | -19902.30 | 29668.70 | 9.42 | 69.11 | 33.88 | 481.00 |
| 95 | 476.19 | 4 | SLE Q | -183165.00 | -18999.50 | 28322.90 | 9.42 | 69.11 | 32.62 | 463.42 |
| 96 | 535.71 | 4 | SLE Q | -178473.00 | -17917.40 | 26709.80 | 9.42 | 69.11 | 31.19 | 443.55 |
| 97 | 595.24 | 4 | SLE Q | -173791.00 | -16708.20 | 24907.30 | 0.00 | 78.54 | 29.66 | 422.20 |
| 98 | 654.76 | 4 | SLE Q | -169118.00 | -15417.20 | 22982.70 | 0.00 | 78.54 | 28.06 | 400.05 |
| 99 | 714.29 | 4 | SLE Q | -164454.00 | -14082.90 | 20993.60 | 0.00 | 78.54 | 26.44 | 377.57 |
| 100 | 773.81 | 4 | SLE Q | -159799.00 | -12737.70 | 18988.30 | 0.00 | 78.54 | 24.82 | 354.98 |
| 101 | 833.33 | 4 | SLE Q | -155152.00 | -11408.30 | 17006.60 | 0.00 | 78.54 | 23.20 | 332.60 |
| 102 | 892.86 | 4 | SLE Q | -150514.00 | -10116.50 | 15080.90 | 0.00 | 78.54 | 21.63 | 310.70 |
| 103 | 952.38 | 4 | SLE Q | -145884.00 | -8879.50 | 13236.80 | 0.00 | 78.54 | 20.10 | 289.51 |
| 104 | 1011.90 | 4 | SLE Q | -141262.00 | -7710.38 | 11494.00 | 0.00 | 78.54 | 18.64 | 269.17 |
| 105 | 1071.43 | 4 | SLE Q | -136647.00 | -6618.77 | 9866.72 | 0.00 | 78.54 | 17.25 | 249.82 |
| 106 | 1130.95 | 4 | SLE Q | -132040.00 | -5611.20 | 8364.72 | 0.00 | 78.54 | 15.94 | 231.54 |
| 107 | 1190.48 | 4 | SLE Q | -127440.00 | -4691.58 | 6993.83 | 0.00 | 78.54 | 14.71 | 214.37 |
| 108 | 1250.00 | 4 | SLE Q | -122846.00 | -3861.59 | 5756.54 | 0.00 | 78.54 | 13.57 | 198.33 |
| 109 | 1309.52 | 4 | SLE Q | -118259.00 | -3121.01 | 4652.55 | 0.00 | 78.54 | 12.51 | 183.43 |
| 110 | 1369.05 | 4 | SLE Q | -113679.00 | -2468.13 | 3679.28 | 0.00 | 78.54 | 11.53 | 169.63 |
| 111 | 1428.57 | 4 | SLE Q | -109104.00 | -1899.96 | 2832.30 | 0.00 | 78.54 | 10.63 | 156.91 |
| 112 | 1488.10 | 4 | SLE Q | -104536.00 | -1412.54 | 2105.70 | 0.00 | 78.54 | 9.81 | 145.21 |
| 113 | 1547.62 | 4 | SLE Q | -99973.00 | -1001.17 | 1492.46 | 0.00 | 78.54 | 9.06 | 134.48 |
| 114 | 1607.14 | 4 | SLE Q | -95415.50 | -660.57 | 984.73 | 0.00 | 78.54 | 8.37 | 124.64 |
| 115 | 1666.67 | 4 | SLE Q | -90863.00 | -385.08 | 574.04 | 0.00 | 78.54 | 7.74 | 115.63 |
| 116 | 1726.19 | 4 | SLE Q | -86315.40 | -168.75 | 251.55 | 0.00 | 78.54 | 7.17 | 107.36 |
| 117 | 1785.71 | 4 | SLE Q | -81772.50 | -5.50 | 8.20 | 0.00 | 78.54 | 6.65 | 99.77 |
| 118 | 1845.24 | 4 | SLE Q | -77233.90 | 110.81 | -165.19 | 0.00 | 78.54 | 6.38 | 95.57 |
| 119 | 1904.76 | 4 | SLE Q | -72699.50 | 186.34 | -277.78 | 0.00 | 78.54 | 6.08 | 90.99 |
| 120 | 1964.29 | 4 | SLE Q | -68169.00 | 227.19 | -338.68 | 0.00 | 78.54 | 5.75 | 85.98 |
| 121 | 2023.81 | 4 | SLE Q | -63642.10 | 239.39 | -356.87 | 0.00 | 78.54 | 5.40 | 80.62 |
| 122 | 2083.33 | 4 | SLE Q | -59118.70 | 228.88 | -341.20 | 0.00 | 78.54 | 5.02 | 74.97 |
| 123 | 2142.86 | 4 | SLE Q | -54598.40 | 201.50 | -300.38 | 0.00 | 78.54 | 4.63 | 69.11 |
| 124 | 2202.38 | 4 | SLE Q | -50081.10 | 163.00 | -242.98 | 0.00 | 78.54 | 4.22 | 63.12 |
| 125 | 2261.90 | 4 | SLE Q | -45566.40 | 119.04 | -177.45 | 0.00 | 78.54 | 3.81 | 57.06 |
| 126 | 2321.43 | 4 | SLE Q | -41054.20 | 75.22 | -112.13 | 0.00 | 78.54 | 3.41 | 51.01 |
| 127 | 2380.95 | 4 | SLE Q | -36544.20 | 37.10 | -55.30 | 0.00 | 78.54 | 3.00 | 45.02 |
| 128 | 2440.48 | 4 | SLE Q | -32036.10 | 10.19 | -15.19 | 0.00 | 78.54 | 2.61 | 39.19 |
| 129 | 2500.00 | 4 | SLE Q | -27529.80 | 0.00 | 0.00 | 0.00 | 78.54 | 2.24 | 33.57 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 1 | SIU Taglio - min. sic. c.a., SIU Taglio - min. sic. acciaio |
| 5 | SIU N cost - min. sic. |
| 47 | C.Rare - Sc min (max compr.), C.Rare - Sf min (max compr.) |
| 49 | C.Rare - Sf max (max trax.) |
| 56 | C.Rare - Sc max (min. compr.) |
| 90 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf min (max compr.) |
| 92 | C.Q.Per. - Sf max (max trax.) |
| 99 | C.Q.Per. - Sc max (min. compr.) |

Relazione di calcolo

Palo n. 7

Caratteristiche del palo e dei materiali utilizzati

| R <cm> | Cf <cm> | Cls | Fck <daN/cm ² > | Fctk <daN/cm ² > | Fcd <daN/cm ² > | Fctd <daN/cm ² > | Tp | Fyk <daN/cm ² > | Fyd <daN/cm ² > |
|-----------|------------|--------|-------------------------------|--------------------------------|-------------------------------|--------------------------------|-------|-------------------------------|-------------------------------|
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | S450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N <daN> | Mx <daNm> | My <daNm> | Mz <daNm> |
|-----|------------|--------------|--------------|--------------|
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 7 (-105)

| Caso | CC | TCC | Az | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|-----|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | RVN | 204511.00 | 6649.98 | 719.13 | 55915.30 | 22826.90 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 204511.00 | 6649.98 | 719.13 | 55915.30 | 22826.90 |
| 2 | 2 | SLE R | RVN | 151490.00 | 4925.91 | 532.69 | 41418.70 | 16908.80 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 151490.00 | 4925.91 | 532.69 | 41418.70 | 16908.80 |
| 3 | 3 | SLE F | RVN | 151490.00 | 4925.91 | 532.69 | 41418.70 | 16908.80 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 151490.00 | 4925.91 | 532.69 | 41418.70 | 16908.80 |
| 4 | 4 | SLE Q | RVN | 151490.00 | 4925.91 | 532.69 | 41418.70 | 16908.80 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 151490.00 | 4925.91 | 532.69 | 41418.70 | 16908.80 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|------|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | 1 | -204511.00 | -6649.98 | -719.13 | -55915.30 | -22826.90 |
| 2 | 2 | SLE R | 1 | -151490.00 | -4925.91 | -532.69 | -41418.70 | -16908.80 |
| 3 | 3 | SLE F | 1 | -151490.00 | -4925.91 | -532.69 | -41418.70 | -16908.80 |
| 4 | 4 | SLE Q | 1 | -151490.00 | -4925.91 | -532.69 | -41418.70 | -16908.80 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|--------|
| 1 | 0.00 | 1 | SLU | -204511.00 | 55690.80 | -22735.30 | -204511.00 | 208420.00 | -86103.60 | 2-3 | 202.50 | 3.749 |
| 2 | 59.52 | 1 | SLU | -204298.00 | 58702.80 | -23964.90 | -204298.00 | 208351.00 | -86080.20 | 2-3 | 202.50 | 3.555 |
| 3 | 119.05 | 1 | SLU | -202194.00 | 60492.90 | -24695.70 | -202194.00 | 207670.00 | -85848.40 | 2-3 | 202.50 | 3.439 |
| 4 | 178.57 | 1 | SLU | -200097.00 | 61240.20 | -25000.80 | -200097.00 | 206990.00 | -85617.00 | 2-3 | 202.50 | 3.386 |
| 5 | 238.09 | 1 | SLU | -198006.00 | 61109.60 | -24947.50 | -198006.00 | 206313.00 | -85385.80 | 2-3 | 202.50 | 3.383 |
| 6 | 297.62 | 1 | SLU | -195922.00 | 60251.70 | -24597.20 | -195922.00 | 205635.00 | -85155.20 | 2-3 | 202.50 | 3.420 |
| 7 | 357.14 | 1 | SLU | -193843.00 | 58747.70 | -23983.20 | -193843.00 | 204956.00 | -84925.10 | 2-3 | 202.50 | 3.496 |
| 8 | 416.67 | 1 | SLU | -189099.00 | 56511.80 | -23070.50 | -189099.00 | 203406.00 | -84398.50 | 2-3 | 202.50 | 3.608 |
| 9 | 476.19 | 1 | SLU | -184365.00 | 53660.40 | -21906.40 | -184365.00 | 201852.00 | -83871.60 | 2-3 | 202.50 | 3.771 |
| 10 | 535.71 | 1 | SLU | -179642.00 | 50357.30 | -20557.90 | -179642.00 | 200294.00 | -83344.20 | 2-3 | 202.50 | 3.989 |
| 11 | 595.24 | 1 | SLU | -174927.00 | 46744.60 | -19083.10 | -174927.00 | 198735.00 | -82800.50 | 2-3 | 202.50 | 4.264 |
| 12 | 654.76 | 1 | SLU | -170223.00 | 42944.80 | -17531.80 | -170223.00 | 197172.00 | -82242.20 | 2-3 | 202.50 | 4.606 |
| 13 | 714.29 | 1 | SLU | -165527.00 | 39061.40 | -15946.50 | -165527.00 | 195607.00 | -81683.30 | 2-3 | 202.50 | 5.024 |
| 14 | 773.81 | 1 | SLU | -160840.00 | 35181.00 | -14362.30 | -160840.00 | 194038.00 | -81124.20 | 2-3 | 202.50 | 5.535 |
| 15 | 833.33 | 1 | SLU | -156162.00 | 31374.60 | -12808.40 | -156162.00 | 192471.00 | -80565.10 | 2-3 | 201.88 | 6.154 |
| 16 | 892.86 | 1 | SLU | -151492.00 | 27699.10 | -11307.90 | -151492.00 | 191694.00 | -79996.00 | 2-3 | 201.88 | 6.914 |
| 17 | 952.38 | 1 | SLU | -146830.00 | 24199.20 | -9879.12 | -146830.00 | 189335.00 | -79194.40 | 2-3 | 202.50 | 7.852 |
| 18 | 1011.90 | 1 | SLU | -142177.00 | 20908.20 | -8535.61 | -142177.00 | 187764.00 | -78461.80 | 2-3 | 202.50 | 9.011 |
| 19 | 1071.43 | 1 | SLU | -137530.00 | 17850.10 | -7287.14 | -137530.00 | 186193.00 | -77730.30 | 2-3 | 202.50 | 10.465 |
| 20 | 1130.95 | 1 | SLU | -132892.00 | 15040.20 | -6140.03 | -132892.00 | 184616.00 | -76991.50 | 2-3 | 202.50 | 12.313 |
| 21 | 1190.48 | 1 | SLU | -128260.00 | 12487.00 | -5097.72 | -128260.00 | 183038.00 | -76254.20 | 2-3 | 202.50 | 14.701 |
| 22 | 1250.00 | 1 | SLU | -123635.00 | 10193.00 | -4161.20 | -123635.00 | 181454.00 | -75509.20 | 2-3 | 202.50 | 17.851 |
| 23 | 1309.52 | 1 | SLU | -119017.00 | 8155.54 | -3329.43 | -119017.00 | 179870.00 | -74765.90 | 2-3 | 202.50 | 21.604 |
| 24 | 1369.05 | 1 | SLU | -114405.00 | 6368.06 | -2599.71 | -114405.00 | 178279.00 | -74015.20 | 2-3 | 202.50 | 22.475 |
| 25 | 1428.57 | 1 | SLU | -109800.00 | 4820.71 | -1968.01 | -109800.00 | 176689.00 | -73265.80 | 2-3 | 202.50 | 23.418 |
| 26 | 1488.10 | 1 | SLU | -105200.00 | 3501.10 | -1429.30 | -105200.00 | 175092.00 | -72509.60 | 2-3 | 202.50 | 24.442 |
| 27 | 1547.62 | 1 | SLU | -100606.00 | 2394.95 | -977.72 | -100606.00 | 173495.00 | -71754.00 | 2-3 | 202.50 | 25.558 |

Relazione di calcolo

| | | | | | | | | | | | | |
|----|---------|---|-----|-----------|---------|---------|-------------|------------|-----------|-----|--------|--------|
| 28 | 1607.14 | 1 | SLU | -96017.00 | 1486.55 | -606.87 | -2571250.00 | 171893.00 | -70992.90 | 2-3 | 202.50 | 26.779 |
| 29 | 1666.67 | 1 | SLU | -91433.40 | 759.29 | -309.97 | -2571250.00 | 170289.00 | -70231.10 | 2-3 | 202.50 | 28.122 |
| 30 | 1726.19 | 1 | SLU | -86854.80 | 195.92 | -79.98 | -2571250.00 | 168680.00 | -69464.50 | 2-3 | 202.50 | 29.604 |
| 31 | 1785.71 | 1 | SLU | -82280.80 | -221.07 | 90.25 | -2571250.00 | -166784.00 | 69644.50 | 2-3 | 22.50 | 31.250 |
| 32 | 1845.24 | 1 | SLU | -77711.20 | -509.28 | 207.91 | -2571250.00 | -165094.00 | 69075.10 | 2-3 | 22.50 | 33.087 |
| 33 | 1904.76 | 1 | SLU | -73145.70 | -686.21 | 280.14 | -2571250.00 | -164094.00 | 66622.60 | 2-3 | 21.88 | 35.152 |
| 34 | 1964.29 | 1 | SLU | -68584.20 | -769.16 | 314.00 | -2571250.00 | -162391.00 | 66060.80 | 2-3 | 21.88 | 37.490 |
| 35 | 2023.81 | 1 | SLU | -64026.40 | -775.15 | 316.45 | -2571250.00 | -160035.00 | 66941.00 | 2-3 | 22.50 | 40.159 |
| 36 | 2083.33 | 1 | SLU | -59472.00 | -720.88 | 294.29 | -2571250.00 | -158344.00 | 66183.00 | 2-3 | 22.50 | 43.235 |
| 37 | 2142.86 | 1 | SLU | -54920.80 | -622.75 | 254.23 | -2571250.00 | -156647.00 | 65421.60 | 2-3 | 22.50 | 46.817 |
| 38 | 2202.38 | 1 | SLU | -50372.60 | -496.87 | 202.84 | -2571250.00 | -154947.00 | 64658.50 | 2-3 | 22.50 | 51.045 |
| 39 | 2261.90 | 1 | SLU | -45827.00 | -359.09 | 146.59 | -2571250.00 | -153240.00 | 63864.90 | 2-3 | 22.50 | 56.108 |
| 40 | 2321.43 | 1 | SLU | -41283.90 | -225.05 | 91.87 | -2571250.00 | -151531.00 | 63067.70 | 2-3 | 22.50 | 62.282 |
| 41 | 2380.95 | 1 | SLU | -36743.10 | -110.26 | 45.01 | -2571250.00 | -149815.00 | 62266.70 | 2-3 | 22.50 | 69.979 |
| 42 | 2440.48 | 1 | SLU | -32204.10 | -30.12 | 12.30 | -2571250.00 | -148097.00 | 61464.10 | 2-3 | 22.50 | 79.842 |
| 43 | 2500.00 | 1 | SLU | -27667.00 | 0.00 | 0.00 | -2571250.00 | | | | | 92.936 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | CC | TCC | Ty <daN> | Tz <daN> | bw <m> | Asw <cmq> | Vsdu <daN> | ctgθ | VRsd <daN> | VRod <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|-----------|--------------|---------------|------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SLU | 6649.98 | 719.13 | 0.85 | 11.31 | 6688.75 | 1.00 | 32294.70 | 360962.00 | 32294.70 | 4.828 |
| 2 | 59.52 | 1 | SLU | 4275.85 | 462.39 | 0.85 | 11.31 | 4300.78 | 1.00 | 32294.70 | 360932.00 | 32294.70 | 7.509 |
| 3 | 119.05 | 1 | SLU | 2237.15 | 241.93 | 0.85 | 11.31 | 2250.19 | 1.00 | 32294.70 | 360630.00 | 32294.70 | 14.352 |
| 4 | 178.57 | 1 | SLU | 508.77 | 55.02 | 0.85 | 11.31 | 511.74 | 1.00 | 32294.70 | 360330.00 | 32294.70 | 63.108 |
| 5 | 238.09 | 1 | SLU | -934.89 | -101.10 | 0.85 | 11.31 | 940.34 | 1.00 | 32294.70 | 360030.00 | 32294.70 | 34.343 |
| 6 | 297.62 | 1 | SLU | -2119.58 | -229.21 | 0.85 | 11.31 | 2131.94 | 1.00 | 32294.70 | 359732.00 | 32294.70 | 15.148 |
| 7 | 357.14 | 1 | SLU | -3370.02 | -364.44 | 0.85 | 11.31 | 3389.67 | 1.00 | 32294.70 | 359434.00 | 32294.70 | 9.527 |
| 8 | 416.67 | 1 | SLU | -4641.46 | -501.93 | 0.85 | 11.31 | 4668.52 | 1.00 | 32294.70 | 358755.00 | 32294.70 | 6.918 |
| 9 | 476.19 | 1 | SLU | -5597.59 | -605.33 | 0.85 | 11.31 | 5630.23 | 1.00 | 32294.70 | 358076.00 | 32294.70 | 5.736 |
| 10 | 535.71 | 1 | SLU | -6278.06 | -678.91 | 0.85 | 11.31 | 6314.66 | 1.00 | 32294.70 | 357400.00 | 32294.70 | 5.114 |
| 11 | 595.24 | 1 | SLU | -6720.27 | -726.74 | 0.85 | 11.31 | 6759.45 | 1.00 | 32294.70 | 356725.00 | 32294.70 | 4.778 |
| 12 | 654.76 | 1 | SLU | -6959.14 | -752.57 | 0.85 | 11.31 | 6999.71 | 1.00 | 32294.70 | 356051.00 | 32294.70 | 4.614 |
| 13 | 714.29 | 1 | SLU | -7026.89 | -759.89 | 0.85 | 11.31 | 7067.86 | 1.00 | 32294.70 | 355378.00 | 32294.70 | 4.569 |
| 14 | 773.81 | 1 | SLU | -6952.99 | -751.90 | 0.85 | 11.31 | 6993.53 | 1.00 | 32294.70 | 354707.00 | 32294.70 | 4.618 |
| 15 | 833.33 | 1 | SLU | -6764.10 | -731.48 | 0.85 | 11.31 | 6803.54 | 1.00 | 32294.70 | 354037.00 | 32294.70 | 4.747 |
| 16 | 892.86 | 1 | SLU | -6484.11 | -701.20 | 0.85 | 11.31 | 6521.92 | 1.00 | 32294.70 | 353368.00 | 32294.70 | 4.952 |
| 17 | 952.38 | 1 | SLU | -6134.23 | -663.36 | 0.85 | 11.31 | 6169.99 | 1.00 | 32294.70 | 352700.00 | 32294.70 | 5.234 |
| 18 | 1011.90 | 1 | SLU | -5733.05 | -619.98 | 0.85 | 11.31 | 5766.48 | 1.00 | 32294.70 | 352033.00 | 32294.70 | 5.600 |
| 19 | 1071.43 | 1 | SLU | -5296.77 | -572.80 | 0.85 | 11.31 | 5327.65 | 1.00 | 32294.70 | 351368.00 | 32294.70 | 6.062 |
| 20 | 1130.95 | 1 | SLU | -4839.26 | -523.32 | 0.85 | 11.31 | 4867.48 | 1.00 | 32294.70 | 350703.00 | 32294.70 | 6.635 |
| 21 | 1190.48 | 1 | SLU | -4372.31 | -472.82 | 0.85 | 11.31 | 4397.80 | 1.00 | 32294.70 | 350040.00 | 32294.70 | 7.343 |
| 22 | 1250.00 | 1 | SLU | -3905.77 | -422.37 | 0.85 | 11.31 | 3928.54 | 1.00 | 32294.70 | 349377.00 | 32294.70 | 8.221 |
| 23 | 1309.52 | 1 | SLU | -3447.74 | -372.84 | 0.85 | 11.31 | 3467.84 | 1.00 | 32294.70 | 348716.00 | 32294.70 | 9.313 |
| 24 | 1369.05 | 1 | SLU | -3004.78 | -324.94 | 0.85 | 11.31 | 3022.30 | 1.00 | 32294.70 | 348055.00 | 32294.70 | 10.685 |
| 25 | 1428.57 | 1 | SLU | -2582.08 | -279.23 | 0.85 | 11.31 | 2597.13 | 1.00 | 32294.70 | 347396.00 | 32294.70 | 12.435 |
| 26 | 1488.10 | 1 | SLU | -2183.61 | -236.14 | 0.85 | 11.31 | 2196.34 | 1.00 | 32294.70 | 346737.00 | 32294.70 | 14.704 |
| 27 | 1547.62 | 1 | SLU | -1812.33 | -195.99 | 0.85 | 11.31 | 1822.90 | 1.00 | 32294.70 | 346079.00 | 32294.70 | 17.716 |
| 28 | 1607.14 | 1 | SLU | -1470.33 | -159.00 | 0.85 | 11.31 | 1478.90 | 1.00 | 32294.70 | 345422.00 | 32294.70 | 21.837 |
| 29 | 1666.67 | 1 | SLU | -1158.97 | -125.33 | 0.85 | 11.31 | 1165.73 | 1.00 | 32294.70 | 344765.00 | 32294.70 | 27.703 |
| 30 | 1726.19 | 1 | SLU | -879.03 | -95.06 | 0.85 | 11.31 | 884.16 | 1.00 | 32294.70 | 344109.00 | 32294.70 | 36.526 |
| 31 | 1785.71 | 1 | SLU | -630.84 | -68.22 | 0.85 | 11.31 | 634.51 | 1.00 | 32294.70 | 343454.00 | 32294.70 | 50.897 |
| 32 | 1845.24 | 1 | SLU | -414.34 | -44.81 | 0.85 | 11.31 | 416.75 | 1.00 | 32294.70 | 342799.00 | 32294.70 | 77.491 |
| 33 | 1904.76 | 1 | SLU | -229.26 | -24.79 | 0.85 | 11.31 | 230.60 | 1.00 | 32294.70 | 342145.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -75.15 | -8.13 | 0.85 | 11.31 | 75.59 | 1.00 | 32294.70 | 341492.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | 48.53 | 5.25 | 0.85 | 11.31 | 48.81 | 1.00 | 32294.70 | 340839.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 142.35 | 15.39 | 0.85 | 11.31 | 143.18 | 1.00 | 32294.70 | 340187.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 206.87 | 22.37 | 0.85 | 11.31 | 208.07 | 1.00 | 32294.70 | 339535.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 242.57 | 26.23 | 0.85 | 11.31 | 243.99 | 1.00 | 32294.70 | 338883.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 249.88 | 27.02 | 0.85 | 11.31 | 251.33 | 1.00 | 32294.70 | 338232.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 229.10 | 24.78 | 0.85 | 11.31 | 230.44 | 1.00 | 32294.70 | 337582.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 180.46 | 19.51 | 0.85 | 11.31 | 181.51 | 1.00 | 32294.70 | 336931.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 104.07 | 11.25 | 0.85 | 11.31 | 104.68 | 1.00 | 32294.70 | 336281.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mz <daNm> | My <daNm> | AfT <cmq> | AfC <cmq> | σ _c <daN/cmq> | σ _f <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-----------------------------|-----------------------------|
| 44 | 0.00 | 2 | SLE R | -151490.00 | -16840.90 | 41252.40 | 28.27 | 50.27 | 38.21 | 535.13 |
| 45 | 59.52 | 2 | SLE R | -151645.00 | -17751.80 | 43483.50 | 31.42 | 47.12 | 40.23 | 561.96 |
| 46 | 119.05 | 2 | SLE R | -150277.00 | -18293.10 | 44809.60 | 31.42 | 47.12 | 41.48 | 578.20 |
| 47 | 178.57 | 2 | SLE R | -148913.00 | -18519.10 | 45363.10 | 31.42 | 47.12 | 42.02 | 585.10 |
| 48 | 238.09 | 2 | SLE R | -147555.00 | -18479.60 | 45266.30 | 31.42 | 47.12 | 41.94 | 583.81 |
| 49 | 297.62 | 2 | SLE R | -146201.00 | -18220.20 | 44630.90 | 31.42 | 47.12 | 41.35 | 575.64 |
| 50 | 357.14 | 2 | SLE R | -144851.00 | -17765.40 | 43516.80 | 31.42 | 47.12 | 40.29 | 561.42 |
| 51 | 416.67 | 2 | SLE R | -141353.00 | -17089.20 | 41860.60 | 31.42 | 47.12 | 38.74 | 540.25 |
| 52 | 476.19 | 2 | SLE R | -137861.00 | -16227.00 | 39748.50 | 31.42 | 47.12 | 36.77 | 513.55 |
| 53 | 535.71 | 2 | SLE R | -134378.00 | -15228.10 | 37301.70 | 28.27 | 50.27 | 34.53 | 483.10 |
| 54 | 595.24 | 2 | SLE R | -130901.00 | -14135.60 | 34625.60 | 28.27 | 50.27 | 32.12 | 450.52 |

Relazione di calcolo

| | | | | | | | | | | |
|----|---------|---|------|------------|-----------|-----------|-------|-------|-------|--------|
| 10 | 674,70 | 2 | 9,25 | -107431,00 | -12866,50 | 318,0,00 | 21,10 | 73,41 | 29,67 | 417,24 |
| 10 | 746,29 | 2 | 9,25 | -107869,00 | -11112,20 | 21904,30 | 21,10 | 73,41 | 27,03 | 334,38 |
| 10 | 774,91 | 1 | 8,75 | -108310,00 | -10668,80 | 26000,00 | 18,80 | 69,84 | 21,97 | 297,88 |
| 10 | 834,00 | 1 | 8,75 | -108760,00 | -9187,00 | 32700,00 | 18,80 | 69,84 | 22,78 | 324,79 |
| 10 | 890,90 | 1 | 8,75 | -109220,00 | -8097,05 | 39700,00 | 18,80 | 65,90 | 20,09 | 298,78 |
| 10 | 943,99 | 1 | 8,75 | -109700,00 | -7310,80 | 47200,00 | 18,80 | 63,00 | 18,90 | 270,69 |
| 10 | 1011,90 | 2 | 9,25 | -109751,00 | -6522,68 | 55487,60 | 0,00 | 78,14 | 17,10 | 247,75 |
| 10 | 1071,43 | 2 | 9,25 | -109320,00 | -5937,88 | 63000,00 | 0,00 | 78,14 | 15,77 | 226,38 |
| 10 | 1130,99 | 1 | 8,75 | -108900,00 | -5487,77 | 71000,00 | 0,00 | 80,61 | 14,33 | 208,10 |
| 10 | 1190,10 | 1 | 8,75 | -108490,00 | -5176,09 | 79000,00 | 0,00 | 80,61 | 13,00 | 191,88 |
| 10 | 1249,00 | 1 | 8,75 | -108090,00 | -4972,00 | 87000,00 | 0,00 | 80,61 | 11,68 | 178,80 |
| 10 | 1308,00 | 1 | 8,75 | -107700,00 | -4866,00 | 95000,00 | 0,00 | 80,61 | 10,36 | 168,00 |
| 10 | 1368,00 | 1 | 8,75 | -107320,00 | -4858,00 | 103000,00 | 0,00 | 80,61 | 9,04 | 159,00 |
| 10 | 1428,00 | 2 | 9,25 | -106950,00 | -4949,00 | 111000,00 | 0,00 | 80,61 | 7,72 | 151,00 |
| 10 | 1488,00 | 1 | 8,75 | -106600,00 | -5040,00 | 119000,00 | 0,00 | 80,61 | 6,40 | 144,00 |
| 10 | 1548,00 | 1 | 8,75 | -106260,00 | -5130,00 | 127000,00 | 0,00 | 80,61 | 5,08 | 138,00 |
| 10 | 1608,00 | 1 | 8,75 | -105930,00 | -5220,00 | 135000,00 | 0,00 | 80,61 | 3,76 | 133,00 |
| 10 | 1668,00 | 2 | 9,25 | -105610,00 | -5310,00 | 143000,00 | 0,00 | 80,61 | 2,44 | 129,00 |
| 10 | 1728,00 | 2 | 9,25 | -105300,00 | -5400,00 | 151000,00 | 0,00 | 80,61 | 1,12 | 126,00 |
| 10 | 1788,00 | 1 | 8,75 | -105000,00 | -5490,00 | 159000,00 | 0,00 | 80,61 | 0,00 | 124,00 |
| 10 | 1848,00 | 1 | 8,75 | -104710,00 | -5580,00 | 167000,00 | 0,00 | 80,61 | 0,00 | 123,00 |
| 10 | 1908,00 | 1 | 8,75 | -104430,00 | -5670,00 | 175000,00 | 0,00 | 80,61 | 0,00 | 123,00 |
| 10 | 1968,00 | 2 | 9,25 | -104160,00 | -5760,00 | 183000,00 | 0,00 | 80,61 | 0,00 | 124,00 |
| 10 | 2028,00 | 2 | 9,25 | -103900,00 | -5850,00 | 191000,00 | 0,00 | 80,61 | 0,00 | 125,00 |
| 10 | 2088,00 | 1 | 8,75 | -103650,00 | -5940,00 | 199000,00 | 0,00 | 80,61 | 0,00 | 126,00 |
| 10 | 2148,00 | 1 | 8,75 | -103410,00 | -6030,00 | 207000,00 | 0,00 | 80,61 | 0,00 | 127,00 |
| 10 | 2208,00 | 1 | 8,75 | -103180,00 | -6120,00 | 215000,00 | 0,00 | 80,61 | 0,00 | 128,00 |
| 10 | 2268,00 | 2 | 9,25 | -102960,00 | -6210,00 | 223000,00 | 0,00 | 80,61 | 0,00 | 129,00 |
| 10 | 2328,00 | 2 | 9,25 | -102750,00 | -6300,00 | 231000,00 | 0,00 | 80,61 | 0,00 | 130,00 |
| 10 | 2388,00 | 1 | 8,75 | -102550,00 | -6390,00 | 239000,00 | 0,00 | 80,61 | 0,00 | 131,00 |
| 10 | 2448,00 | 1 | 8,75 | -102360,00 | -6480,00 | 247000,00 | 0,00 | 80,61 | 0,00 | 132,00 |
| 10 | 2508,00 | 1 | 8,75 | -102180,00 | -6570,00 | 255000,00 | 0,00 | 80,61 | 0,00 | 133,00 |
| 10 | 2568,00 | 2 | 9,25 | -102010,00 | -6660,00 | 263000,00 | 0,00 | 80,61 | 0,00 | 134,00 |
| 10 | 2628,00 | 2 | 9,25 | -101850,00 | -6750,00 | 271000,00 | 0,00 | 80,61 | 0,00 | 135,00 |
| 10 | 2688,00 | 1 | 8,75 | -101700,00 | -6840,00 | 279000,00 | 0,00 | 80,61 | 0,00 | 136,00 |
| 10 | 2748,00 | 1 | 8,75 | -101560,00 | -6930,00 | 287000,00 | 0,00 | 80,61 | 0,00 | 137,00 |
| 10 | 2808,00 | 1 | 8,75 | -101430,00 | -7020,00 | 295000,00 | 0,00 | 80,61 | 0,00 | 138,00 |
| 10 | 2868,00 | 2 | 9,25 | -101310,00 | -7110,00 | 303000,00 | 0,00 | 80,61 | 0,00 | 139,00 |
| 10 | 2928,00 | 2 | 9,25 | -101200,00 | -7200,00 | 311000,00 | 0,00 | 80,61 | 0,00 | 140,00 |
| 10 | 2988,00 | 1 | 8,75 | -101100,00 | -7290,00 | 319000,00 | 0,00 | 80,61 | 0,00 | 141,00 |
| 10 | 3048,00 | 1 | 8,75 | -101010,00 | -7380,00 | 327000,00 | 0,00 | 80,61 | 0,00 | 142,00 |
| 10 | 3108,00 | 1 | 8,75 | -100930,00 | -7470,00 | 335000,00 | 0,00 | 80,61 | 0,00 | 143,00 |
| 10 | 3168,00 | 2 | 9,25 | -100860,00 | -7560,00 | 343000,00 | 0,00 | 80,61 | 0,00 | 144,00 |
| 10 | 3228,00 | 2 | 9,25 | -100800,00 | -7650,00 | 351000,00 | 0,00 | 80,61 | 0,00 | 145,00 |
| 10 | 3288,00 | 1 | 8,75 | -100750,00 | -7740,00 | 359000,00 | 0,00 | 80,61 | 0,00 | 146,00 |
| 10 | 3348,00 | 1 | 8,75 | -100710,00 | -7830,00 | 367000,00 | 0,00 | 80,61 | 0,00 | 147,00 |
| 10 | 3408,00 | 1 | 8,75 | -100680,00 | -7920,00 | 375000,00 | 0,00 | 80,61 | 0,00 | 148,00 |
| 10 | 3468,00 | 2 | 9,25 | -100660,00 | -8010,00 | 383000,00 | 0,00 | 80,61 | 0,00 | 149,00 |
| 10 | 3528,00 | 2 | 9,25 | -100650,00 | -8100,00 | 391000,00 | 0,00 | 80,61 | 0,00 | 150,00 |
| 10 | 3588,00 | 1 | 8,75 | -100650,00 | -8190,00 | 399000,00 | 0,00 | 80,61 | 0,00 | 151,00 |
| 10 | 3648,00 | 1 | 8,75 | -100660,00 | -8280,00 | 407000,00 | 0,00 | 80,61 | 0,00 | 152,00 |
| 10 | 3708,00 | 1 | 8,75 | -100680,00 | -8370,00 | 415000,00 | 0,00 | 80,61 | 0,00 | 153,00 |
| 10 | 3768,00 | 2 | 9,25 | -100710,00 | -8460,00 | 423000,00 | 0,00 | 80,61 | 0,00 | 154,00 |
| 10 | 3828,00 | 2 | 9,25 | -100750,00 | -8550,00 | 431000,00 | 0,00 | 80,61 | 0,00 | 155,00 |
| 10 | 3888,00 | 1 | 8,75 | -100800,00 | -8640,00 | 439000,00 | 0,00 | 80,61 | 0,00 | 156,00 |
| 10 | 3948,00 | 1 | 8,75 | -100860,00 | -8730,00 | 447000,00 | 0,00 | 80,61 | 0,00 | 157,00 |
| 10 | 4008,00 | 1 | 8,75 | -100930,00 | -8820,00 | 455000,00 | 0,00 | 80,61 | 0,00 | 158,00 |
| 10 | 4068,00 | 2 | 9,25 | -101010,00 | -8910,00 | 463000,00 | 0,00 | 80,61 | 0,00 | 159,00 |
| 10 | 4128,00 | 2 | 9,25 | -101100,00 | -9000,00 | 471000,00 | 0,00 | 80,61 | 0,00 | 160,00 |
| 10 | 4188,00 | 1 | 8,75 | -101200,00 | -9090,00 | 479000,00 | 0,00 | 80,61 | 0,00 | 161,00 |
| 10 | 4248,00 | 1 | 8,75 | -101310,00 | -9180,00 | 487000,00 | 0,00 | 80,61 | 0,00 | 162,00 |
| 10 | 4308,00 | 1 | 8,75 | -101430,00 | -9270,00 | 495000,00 | 0,00 | 80,61 | 0,00 | 163,00 |
| 10 | 4368,00 | 2 | 9,25 | -101560,00 | -9360,00 | 503000,00 | 0,00 | 80,61 | 0,00 | 164,00 |
| 10 | 4428,00 | 2 | 9,25 | -101700,00 | -9450,00 | 511000,00 | 0,00 | 80,61 | 0,00 | 165,00 |
| 10 | 4488,00 | 1 | 8,75 | -101850,00 | -9540,00 | 519000,00 | 0,00 | 80,61 | 0,00 | 166,00 |
| 10 | 4548,00 | 1 | 8,75 | -102010,00 | -9630,00 | 527000,00 | 0,00 | 80,61 | 0,00 | 167,00 |
| 10 | 4608,00 | 1 | 8,75 | -102180,00 | -9720,00 | 535000,00 | 0,00 | 80,61 | 0,00 | 168,00 |
| 10 | 4668,00 | 2 | 9,25 | -102360,00 | -9810,00 | 543000,00 | 0,00 | 80,61 | 0,00 | 169,00 |
| 10 | 4728,00 | 2 | 9,25 | -102550,00 | -9900,00 | 551000,00 | 0,00 | 80,61 | 0,00 | 170,00 |
| 10 | 4788,00 | 1 | 8,75 | -102750,00 | -9990,00 | 559000,00 | 0,00 | 80,61 | 0,00 | 171,00 |
| 10 | 4848,00 | 1 | 8,75 | -102960,00 | -10080,00 | 567000,00 | 0,00 | 80,61 | 0,00 | 172,00 |
| 10 | 4908,00 | 1 | 8,75 | -103180,00 | -10170,00 | 575000,00 | 0,00 | 80,61 | 0,00 | 173,00 |
| 10 | 4968,00 | 2 | 9,25 | -103410,00 | -10260,00 | 583000,00 | 0,00 | 80,61 | 0,00 | 174,00 |
| 10 | 5028,00 | 2 | 9,25 | -103650,00 | -10350,00 | 591000,00 | 0,00 | 80,61 | 0,00 | 175,00 |
| 10 | 5088,00 | 1 | 8,75 | -103900,00 | -10440,00 | 599000,00 | 0,00 | 80,61 | 0,00 | 176,00 |
| 10 | 5148,00 | 1 | 8,75 | -104160,00 | -10530,00 | 607000,00 | 0,00 | 80,61 | 0,00 | 177,00 |
| 10 | 5208,00 | 1 | 8,75 | -104430,00 | -10620,00 | 615000,00 | 0,00 | 80,61 | 0,00 | 178,00 |
| 10 | 5268,00 | 2 | 9,25 | -104710,00 | -10710,00 | 623000,00 | 0,00 | 80,61 | 0,00 | 179,00 |
| 10 | 5328,00 | 2 | 9,25 | -105000,00 | -10800,00 | 631000,00 | 0,00 | 80,61 | 0,00 | 180,00 |
| 10 | 5388,00 | 1 | 8,75 | -105300,00 | -10890,00 | 639000,00 | 0,00 | 80,61 | 0,00 | 181,00 |
| 10 | 5448,00 | 1 | 8,75 | -105610,00 | -10980,00 | 647000,00 | 0,00 | 80,61 | 0,00 | 182,00 |
| 10 | 5508,00 | 1 | 8,75 | -105930,00 | -11070,00 | 655000,00 | 0,00 | 80,61 | 0,00 | 183,00 |
| 10 | 5568,00 | 2 | 9,25 | -106260,00 | -11160,00 | 663000,00 | 0,00 | 80,61 | 0,00 | 184,00 |
| 10 | 5628,00 | 2 | 9,25 | -106600,00 | -11250,00 | 671000,00 | 0,00 | 80,61 | 0,00 | 185,00 |
| 10 | 5688,00 | 1 | 8,75 | -106950,00 | -11340,00 | 679000,00 | 0,00 | 80,61 | 0,00 | 186,00 |
| 10 | 5748,00 | 1 | 8,75 | -107320,00 | -11430,00 | 687000,00 | 0,00 | 80,61 | 0,00 | 187,00 |
| 10 | 5808,00 | 1 | 8,75 | -107700,00 | -11520,00 | 695000,00 | 0,00 | 80,61 | 0,00 | 188,00 |
| 10 | 5868,00 | 2 | 9,25 | -108090,00 | -11610,00 | 703000,00 | 0,00 | 80,61 | 0,00 | 189,00 |
| 10 | 5928,00 | 2 | 9,25 | -108490,00 | -11700,00 | 711000,00 | 0,00 | 80,61 | 0,00 | 190,00 |
| 10 | 5988,00 | 1 | 8,75 | -108900,00 | -11790,00 | 719000,00 | 0,00 | 80,61 | 0,00 | 191,00 |
| 10 | 6048,00 | 1 | 8,75 | -109320,00 | -11880,00 | 727000,00 | 0,00 | 80,61 | 0,00 | 192,00 |
| 10 | 6108,00 | 1 | 8,75 | -109750,00 | -11970,00 | 735000,00 | 0,00 | 80,61 | 0,00 | 193,00 |
| 10 | 6168,00 | 2 | 9,25 | -110190,00 | -12060,00 | 743000,00 | 0,00 | 80,61 | 0,00 | 194,00 |
| 10 | 6228,00 | 2 | 9,25 | -110640,00 | -12150,00 | 751000,00 | 0,00 | 80,61 | 0,00 | 195,00 |
| 10 | 6288,00 | 1 | 8,75 | -111100,00 | -12240,00 | 759000,00 | 0,00 | 80,61 | 0,00 | 196,00 |
| 10 | 6348,00 | 1 | 8,75 | -111570,00 | -12330,00 | 767000,00 | 0,00 | 80,61 | 0,00 | 197,00 |
| 10 | 6408,00 | 1 | 8,75 | -112050,00 | -12420,00 | 775000,00 | 0,00 | 80,61 | 0,00 | 198,00 |
| 10 | 6468,00 | 2 | 9,25 | -112540,00 | -12510,00 | 783000,00 | 0,00 | 80,61 | 0,00 | 199,00 |
| 10 | 6528,00 | 2 | 9,25 | -113040,00 | -12600,00 | 791000,00 | 0,00 | 80,61 | 0,00 | 200,00 |
| 10 | 6588,00 | 1 | 8,75 | -113550,00 | -12690,00 | 799000,00 | 0,00 | 80,61 | 0,00 | 201,00 |
| 10 | 6648,00 | 1 | 8,75 | -114070,00 | -12780,00 | 807000,00 | 0,00 | 80,61 | 0,00 | 202,00 |
| 10 | 6708,00 | 1 | 8,75 | -114600,00 | -12870,00 | 815000,00 | 0,00 | 80,61 | 0,00 | 203,00 |
| 10 | 6768,00 | 2 | 9,25 | -115140,00 | -12960,00 | 823000,00 | 0,00 | 80,61 | 0,00 | 204,00 |
| 10 | 6828,00 | 2 | 9,25 | -115690,00 | -13050,00 | 831000,00 | 0,00 | 80,61 | 0,00 | |

Relazione di calcolo

Stato limite d'esercizio - Verifiche a fessurazione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | c <mm> | s <mm> | K ₂ | φ _{eq} | Δ _{sm} <mm> | λ _s <cmq> | λ _c eff <cmq> | σ _s <daN/cmq> | ε _{sm} | Wk <mm> |
|------|-----------|----|-------|------------|--------------|--------------|-----------|-----------|----------------|-----------------|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------|------------|
| 87 | 0.00 | 4 | SLE Q | -151490.00 | 41252.40 | -16840.90 | 46.00 | 136.36 | 0.50 | 20.00 | 183.38 | 12.57 | 574.18 | 213.01 | 0.06 | 0.02 |
| 88 | 59.52 | 4 | SLE Q | -151645.00 | 43483.50 | -17751.80 | 46.00 | 136.36 | 0.50 | 20.00 | 194.72 | 12.57 | 645.40 | 254.66 | 0.07 | 0.02 |
| 89 | 119.05 | 4 | SLE Q | -150277.00 | 44809.60 | -18293.10 | 46.00 | 136.36 | 0.50 | 20.00 | 203.41 | 12.57 | 700.01 | 287.35 | 0.08 | 0.03 |
| 90 | 178.57 | 4 | SLE Q | -148913.00 | 45363.10 | -18519.10 | 46.00 | 136.36 | 0.50 | 20.00 | 184.85 | 15.71 | 729.23 | 305.22 | 0.09 | 0.03 |
| 91 | 238.09 | 4 | SLE Q | -147555.00 | 45266.30 | -18479.60 | 46.00 | 136.36 | 0.50 | 20.00 | 186.00 | 15.71 | 738.30 | 309.35 | 0.09 | 0.03 |
| 92 | 297.62 | 4 | SLE Q | -146201.00 | 44630.90 | -18220.20 | 46.00 | 136.36 | 0.50 | 20.00 | 185.20 | 15.71 | 731.98 | 301.70 | 0.09 | 0.03 |
| 93 | 357.14 | 4 | SLE Q | -144851.00 | 43516.80 | -17765.40 | 46.00 | 136.36 | 0.50 | 20.00 | 205.08 | 12.57 | 710.50 | 283.83 | 0.08 | 0.03 |
| 94 | 416.67 | 4 | SLE Q | -141353.00 | 41860.60 | -17089.20 | 46.00 | 136.36 | 0.50 | 20.00 | 201.88 | 12.57 | 690.40 | 264.27 | 0.08 | 0.03 |
| 95 | 476.19 | 4 | SLE Q | -137861.00 | 39748.50 | -16227.00 | 46.00 | 136.36 | 0.50 | 20.00 | 195.93 | 12.57 | 653.02 | 235.82 | 0.07 | 0.02 |
| 96 | 535.71 | 4 | SLE Q | -134378.00 | 37301.70 | -15228.10 | 46.00 | 136.36 | 0.50 | 20.00 | 187.57 | 12.57 | 600.49 | 202.01 | 0.06 | 0.02 |
| 97 | 595.24 | 4 | SLE Q | -130901.00 | 34625.60 | -14135.60 | 46.00 | 136.36 | 0.50 | 20.00 | 177.12 | 12.57 | 534.79 | 166.00 | 0.05 | 0.01 |
| 98 | 654.76 | 4 | SLE Q | -127431.00 | 31810.90 | -12986.50 | 46.00 | 136.36 | 0.50 | 20.00 | 164.91 | 12.57 | 458.09 | 130.37 | 0.04 | 0.01 |
| 99 | 714.29 | 4 | SLE Q | -123969.00 | 28934.30 | -11812.20 | 46.00 | 136.36 | 0.50 | 20.00 | 171.12 | 9.42 | 372.83 | 97.04 | 0.03 | 0.01 |
| 100 | 773.81 | 4 | SLE Q | -120513.00 | 26060.00 | -10638.80 | 46.00 | 136.36 | 0.50 | 20.00 | 181.96 | 6.28 | 282.62 | 67.23 | 0.02 | 0.01 |
| 101 | 833.33 | 4 | SLE Q | -117063.00 | 23240.40 | -9487.70 | 46.00 | 136.36 | 0.50 | 20.00 | 214.73 | 3.14 | 192.79 | 41.49 | 0.01 | 0.00 |
| 130 | 0.00 | 3 | SLE F | -151490.00 | 41252.40 | -16840.90 | 46.00 | 136.36 | 0.50 | 20.00 | 183.38 | 12.57 | 574.18 | 213.01 | 0.06 | 0.02 |
| 131 | 59.52 | 3 | SLE F | -151645.00 | 43483.50 | -17751.80 | 46.00 | 136.36 | 0.50 | 20.00 | 194.72 | 12.57 | 645.40 | 254.66 | 0.07 | 0.02 |
| 132 | 119.05 | 3 | SLE F | -150277.00 | 44809.60 | -18293.10 | 46.00 | 136.36 | 0.50 | 20.00 | 203.41 | 12.57 | 700.01 | 287.35 | 0.08 | 0.03 |
| 133 | 178.57 | 3 | SLE F | -148913.00 | 45363.10 | -18519.10 | 46.00 | 136.36 | 0.50 | 20.00 | 184.85 | 15.71 | 729.23 | 305.22 | 0.09 | 0.03 |
| 134 | 238.09 | 3 | SLE F | -147555.00 | 45266.30 | -18479.60 | 46.00 | 136.36 | 0.50 | 20.00 | 186.00 | 15.71 | 738.30 | 309.35 | 0.09 | 0.03 |
| 135 | 297.62 | 3 | SLE F | -146201.00 | 44630.90 | -18220.20 | 46.00 | 136.36 | 0.50 | 20.00 | 185.20 | 15.71 | 731.98 | 301.70 | 0.09 | 0.03 |
| 136 | 357.14 | 3 | SLE F | -144851.00 | 43516.80 | -17765.40 | 46.00 | 136.36 | 0.50 | 20.00 | 205.08 | 12.57 | 710.50 | 283.83 | 0.08 | 0.03 |
| 137 | 416.67 | 3 | SLE F | -141353.00 | 41860.60 | -17089.20 | 46.00 | 136.36 | 0.50 | 20.00 | 201.88 | 12.57 | 690.40 | 264.27 | 0.08 | 0.03 |
| 138 | 476.19 | 3 | SLE F | -137861.00 | 39748.50 | -16227.00 | 46.00 | 136.36 | 0.50 | 20.00 | 195.93 | 12.57 | 653.02 | 235.82 | 0.07 | 0.02 |
| 139 | 535.71 | 3 | SLE F | -134378.00 | 37301.70 | -15228.10 | 46.00 | 136.36 | 0.50 | 20.00 | 187.57 | 12.57 | 600.49 | 202.01 | 0.06 | 0.02 |
| 140 | 595.24 | 3 | SLE F | -130901.00 | 34625.60 | -14135.60 | 46.00 | 136.36 | 0.50 | 20.00 | 177.12 | 12.57 | 534.79 | 166.00 | 0.05 | 0.01 |
| 141 | 654.76 | 3 | SLE F | -127431.00 | 31810.90 | -12986.50 | 46.00 | 136.36 | 0.50 | 20.00 | 164.91 | 12.57 | 458.09 | 130.37 | 0.04 | 0.01 |
| 142 | 714.29 | 3 | SLE F | -123969.00 | 28934.30 | -11812.20 | 46.00 | 136.36 | 0.50 | 20.00 | 171.12 | 9.42 | 372.83 | 97.04 | 0.03 | 0.01 |
| 143 | 773.81 | 3 | SLE F | -120513.00 | 26060.00 | -10638.80 | 46.00 | 136.36 | 0.50 | 20.00 | 181.96 | 6.28 | 282.62 | 67.23 | 0.02 | 0.01 |
| 144 | 833.33 | 3 | SLE F | -117063.00 | 23240.40 | -9487.70 | 46.00 | 136.36 | 0.50 | 20.00 | 214.73 | 3.14 | 192.79 | 41.49 | 0.01 | 0.00 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 5 | SLU N cost - min. sic. |
| 13 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 47 | C.Rare - Sc min (max compr.), C.Rare - Sf min (max compr.) |
| 48 | C.Rare - Sf max (max traz.) |
| 61 | C.Rare - Sc max (min. compr.) |
| 89 | C.Q.Per. - Wk Max |
| 90 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf min (max compr.) |
| 91 | C.Q.Per. - Sf max (max traz.) |
| 104 | C.Q.Per. - Sc max (min. compr.) |
| 132 | C.Freq - Wk Max |

Palo n. 8

Caratteristiche del palo e dei materiali utilizzati

| R <cm> | Cf <cm> | Cls | F _{ck} <daN/cm ² > | F _{ctk} <daN/cm ² > | F _{cd} <daN/cm ² > | F _{ctd} <daN/cm ² > | Tp | F _{yk} <daN/cm ² > | F _{yd} <daN/cm ² > |
|-----------|------------|--------|---|--|---|--|-------|---|---|
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N <daN> | M _x <daNm> | M _y <daNm> | M _z <daNm> |
|-----|------------|--------------------------|--------------------------|--------------------------|
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 8 (-41)

| Caso | CC | TCC | Az | N <daN> | T _x <daN> | T _y <daN> | M _x <daNm> | M _y <daNm> |
|------|----|-----|-----|------------|-------------------------|-------------------------|--------------------------|--------------------------|
| 1 | 1 | SLU | RVN | 128535.00 | 7051.77 | 657.85 | 64491.40 | 10929.70 |
| | | 1 | SLU | TAG | | | 0.00 | 0.00 |
| | | 1 | SLU | ECC | | | 0.00 | 0.00 |
| | | 1 | SLU | TOT | 128535.00 | 7051.77 | 64491.40 | 10929.70 |
| 2 | 2 | SLE | RVN | 95211.30 | 5223.53 | 487.30 | 47771.40 | 8096.04 |
| | | 2 | SLE | TAG | | | 0.00 | 0.00 |
| | | 2 | SLE | ECC | | | 0.00 | 0.00 |
| | | 2 | SLE | TOT | 95211.30 | 5223.53 | 47771.40 | 8096.04 |
| 3 | 3 | SLE | RVN | 95211.30 | 5223.53 | 487.30 | 47771.40 | 8096.04 |
| | | 3 | SLE | TAG | | | 0.00 | 0.00 |
| | | 3 | SLE | ECC | | | 0.00 | 0.00 |

Relazione di calcolo

| | | | | | | | | |
|---|---|-------|-----|----------|---------|--------|----------|---------|
| | 3 | SLE F | TOT | 95211.30 | 5223.53 | 487.30 | 47771.40 | 8096.04 |
| 4 | 4 | SLE Q | RVN | 95211.30 | 5223.53 | 487.30 | 47771.40 | 8096.04 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 95211.30 | 5223.53 | 487.30 | 47771.40 | 8096.04 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|------|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | 1 | -128535.00 | -7051.77 | -657.85 | -64491.40 | -10929.70 |
| 2 | 2 | SLE R | 1 | -95211.30 | -5223.53 | -487.30 | -47771.40 | -8096.04 |
| 3 | 3 | SLE F | 1 | -95211.30 | -5223.53 | -487.30 | -47771.40 | -8096.04 |
| 4 | 4 | SLE Q | 1 | -95211.30 | -5223.53 | -487.30 | -47771.40 | -8096.04 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|--------|
| 1 | 0.00 | 1 | SLU | -128535.00 | 64234.90 | -10886.20 | -128535.00 | 195406.00 | -34614.80 | 2-3 | 190.00 | 3.046 |
| 2 | 59.52 | 1 | SLU | -128850.00 | 67621.20 | -11460.10 | -128850.00 | 195522.00 | -34638.10 | 2-3 | 190.00 | 2.895 |
| 3 | 119.05 | 1 | SLU | -127800.00 | 69611.80 | -11797.40 | -127800.00 | 195134.00 | -34560.20 | 2-3 | 190.00 | 2.807 |
| 4 | 178.57 | 1 | SLU | -126755.00 | 70411.80 | -11933.00 | -126755.00 | 194747.00 | -34482.70 | 2-3 | 190.00 | 2.769 |
| 5 | 238.09 | 1 | SLU | -125713.00 | 70210.10 | -11898.80 | -125713.00 | 194361.00 | -34405.40 | 2-3 | 190.00 | 2.772 |
| 6 | 297.62 | 1 | SLU | -124675.00 | 69179.20 | -11724.10 | -124675.00 | 193976.00 | -34328.50 | 2-3 | 190.00 | 2.808 |
| 7 | 357.14 | 1 | SLU | -123642.00 | 67412.30 | -11424.70 | -123642.00 | 193593.00 | -34251.90 | 2-3 | 190.00 | 2.875 |
| 8 | 416.67 | 1 | SLU | -120682.00 | 64812.50 | -10984.10 | -120682.00 | 192491.00 | -34030.20 | 2-3 | 190.00 | 2.974 |
| 9 | 476.19 | 1 | SLU | -117729.00 | 61513.30 | -10424.90 | -117729.00 | 191389.00 | -33808.60 | 2-3 | 190.00 | 3.115 |
| 10 | 535.71 | 1 | SLU | -114782.00 | 57701.70 | -9778.97 | -114782.00 | 190289.00 | -33587.70 | 2-3 | 190.00 | 3.302 |
| 11 | 595.24 | 1 | SLU | -111841.00 | 53540.30 | -9073.72 | -111841.00 | 189187.00 | -33365.60 | 2-3 | 190.00 | 3.538 |
| 12 | 654.76 | 1 | SLU | -108906.00 | 49168.80 | -8332.86 | -108906.00 | 188084.00 | -33142.90 | 2-3 | 190.00 | 3.830 |
| 13 | 714.29 | 1 | SLU | -105977.00 | 44705.40 | -7576.43 | -105977.00 | 186983.00 | -32920.90 | 2-3 | 190.00 | 4.187 |
| 14 | 773.81 | 1 | SLU | -103054.00 | 40248.90 | -6821.17 | -103054.00 | 185874.00 | -32711.50 | 2-3 | 190.00 | 4.623 |
| 15 | 833.33 | 1 | SLU | -100136.00 | 35880.20 | -6080.79 | -100136.00 | 184760.00 | -32504.90 | 2-3 | 190.00 | 5.155 |
| 16 | 892.86 | 1 | SLU | -97223.60 | 31664.20 | -5366.28 | -97223.60 | 183650.00 | -32299.10 | 2-3 | 190.00 | 5.806 |
| 17 | 952.38 | 1 | SLU | -94316.50 | 27651.40 | -4686.22 | -94316.50 | 182538.00 | -32093.00 | 2-3 | 190.00 | 6.608 |
| 18 | 1011.90 | 1 | SLU | -91414.40 | 23880.00 | -4047.05 | -91414.40 | 181423.00 | -31885.80 | 2-3 | 190.00 | 7.605 |
| 19 | 1071.43 | 1 | SLU | -88517.10 | 20376.80 | -3453.35 | -88517.10 | 180309.00 | -31678.90 | 2-3 | 190.00 | 8.858 |
| 20 | 1130.95 | 1 | SLU | -85624.70 | 17159.30 | -2908.07 | -85624.70 | 179197.00 | -31472.40 | 2-3 | 190.00 | 10.454 |
| 21 | 1190.48 | 1 | SLU | -82736.80 | 14237.00 | -2412.81 | -82736.80 | 178083.00 | -31265.20 | 2-3 | 190.00 | 12.521 |
| 22 | 1250.00 | 1 | SLU | -79853.40 | 11612.30 | -1968.00 | -79853.40 | 176968.00 | -31057.60 | 2-3 | 190.00 | 15.255 |
| 23 | 1309.52 | 1 | SLU | -76974.20 | 9282.20 | -1573.10 | -76974.20 | 175854.00 | -30850.30 | 2-3 | 190.00 | 18.964 |
| 24 | 1369.05 | 1 | SLU | -74099.20 | 7238.87 | -1226.80 | -74099.20 | 174740.00 | -30643.10 | 2-3 | 190.00 | 24.163 |
| 25 | 1428.57 | 1 | SLU | -71228.20 | 5470.89 | -927.18 | -71228.20 | 173624.00 | -30434.60 | 2-3 | 190.00 | 31.767 |
| 26 | 1488.10 | 1 | SLU | -68360.90 | 3963.95 | -671.79 | -68360.90 | 172508.00 | -30226.40 | 2-3 | 190.00 | 37.613 |
| 27 | 1547.62 | 1 | SLU | -65497.40 | 2701.56 | -457.85 | -65497.40 | 171392.00 | -30018.40 | 2-3 | 190.00 | 39.257 |
| 28 | 1607.14 | 1 | SLU | -62637.30 | 1665.66 | -282.29 | -62637.30 | 170275.00 | -29809.80 | 2-3 | 190.00 | 41.050 |
| 29 | 1666.67 | 1 | SLU | -59780.70 | 837.11 | -141.87 | -59780.70 | 169158.00 | -29600.60 | 2-3 | 190.00 | 43.011 |
| 30 | 1726.19 | 1 | SLU | -56927.20 | 196.13 | -33.24 | -56927.20 | 168040.00 | -29391.70 | 2-3 | 190.00 | 45.167 |
| 31 | 1785.71 | 1 | SLU | -54076.80 | -277.42 | 47.02 | -54076.80 | 166922.00 | -29182.80 | 2-3 | 10.00 | 47.548 |
| 32 | 1845.24 | 1 | SLU | -51229.20 | -603.72 | 102.31 | -51229.20 | 165804.00 | -28974.00 | 2-3 | 10.00 | 50.191 |
| 33 | 1904.76 | 1 | SLU | -48384.40 | -802.85 | 136.06 | -48384.40 | 164686.00 | -28765.20 | 2-3 | 10.00 | 53.142 |
| 34 | 1964.29 | 1 | SLU | -45542.30 | -894.65 | 151.62 | -45542.30 | 163568.00 | -28556.40 | 2-3 | 10.00 | 56.459 |
| 35 | 2023.81 | 1 | SLU | -42702.50 | -898.63 | 152.29 | -42702.50 | 162450.00 | -28347.60 | 2-3 | 10.00 | 60.213 |
| 36 | 2083.33 | 1 | SLU | -39865.10 | -833.93 | 141.33 | -39865.10 | 161332.00 | -28138.80 | 2-3 | 10.00 | 64.499 |
| 37 | 2142.86 | 1 | SLU | -37029.80 | -719.33 | 121.91 | -37029.80 | 160214.00 | -27930.00 | 2-3 | 10.00 | 69.437 |
| 38 | 2202.38 | 1 | SLU | -34196.40 | -573.29 | 97.16 | -34196.40 | 159096.00 | -27721.20 | 2-3 | 10.00 | 75.191 |
| 39 | 2261.90 | 1 | SLU | -31364.90 | -413.96 | 70.16 | -31364.90 | 157978.00 | -27512.40 | 2-3 | 10.00 | 81.978 |
| 40 | 2321.43 | 1 | SLU | -28535.10 | -259.26 | 43.94 | -28535.10 | 156860.00 | -27303.60 | 2-3 | 10.00 | 90.108 |
| 41 | 2380.95 | 1 | SLU | -25706.90 | -126.95 | 21.51 | -25706.90 | 155742.00 | -27094.80 | 2-3 | 10.00 | >100 |
| 42 | 2440.48 | 1 | SLU | -22880.00 | -34.67 | 5.88 | -22880.00 | 154624.00 | -26886.00 | 2-3 | 10.00 | >100 |
| 43 | 2500.00 | 1 | SLU | -20054.30 | 0.00 | 0.00 | -20054.30 | 153506.00 | -26677.20 | 2-3 | 10.00 | >100 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | CC | TCC | Ty <daN> | Tz <daN> | bw <m> | Asw <cmq> | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|-----------|--------------|---------------|------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SLU | 7051.77 | 657.85 | 0.85 | 11.31 | 7082.39 | 1.00 | 32294.70 | 350079.00 | 32294.70 | 4.560 |
| 2 | 59.52 | 1 | SLU | 4500.94 | 419.89 | 0.85 | 11.31 | 4520.49 | 1.00 | 32294.70 | 350124.00 | 32294.70 | 7.144 |
| 3 | 119.05 | 1 | SLU | 2311.56 | 215.64 | 0.85 | 11.31 | 2321.59 | 1.00 | 32294.70 | 349974.00 | 32294.70 | 13.911 |
| 4 | 178.57 | 1 | SLU | 456.44 | 42.58 | 0.85 | 11.31 | 458.42 | 1.00 | 32294.70 | 349824.00 | 32294.70 | 70.448 |
| 5 | 238.09 | 1 | SLU | -1092.11 | -101.88 | 0.85 | 11.31 | 1096.86 | 1.00 | 32294.70 | 349675.00 | 32294.70 | 29.443 |
| 6 | 297.62 | 1 | SLU | -2361.92 | -220.34 | 0.85 | 11.31 | 2372.17 | 1.00 | 32294.70 | 349527.00 | 32294.70 | 13.614 |
| 7 | 357.14 | 1 | SLU | -3700.75 | -345.24 | 0.85 | 11.31 | 3716.82 | 1.00 | 32294.70 | 349378.00 | 32294.70 | 8.689 |
| 8 | 416.67 | 1 | SLU | -5060.59 | -472.10 | 0.85 | 11.31 | 5082.56 | 1.00 | 32294.70 | 348955.00 | 32294.70 | 6.354 |
| 9 | 476.19 | 1 | SLU | -6081.44 | -567.33 | 0.85 | 11.31 | 6107.85 | 1.00 | 32294.70 | 348531.00 | 32294.70 | 5.287 |
| 10 | 535.71 | 1 | SLU | -6806.07 | -634.93 | 0.85 | 11.31 | 6835.62 | 1.00 | 32294.70 | 348109.00 | 32294.70 | 4.724 |

Relazione di calcolo

| | | | | | | | | | | | | | |
|----|---------|---|-----|----------|---------|------|-------|---------|------|----------|-----------|----------|--------|
| 11 | 595.24 | 1 | SLU | -7274.77 | -678.65 | 0.85 | 11.31 | 7306.36 | 1.00 | 32294.70 | 347688.00 | 32294.70 | 4.420 |
| 12 | 654.76 | 1 | SLU | -7525.17 | -702.01 | 0.85 | 11.31 | 7557.85 | 1.00 | 32294.70 | 347268.00 | 32294.70 | 4.273 |
| 13 | 714.29 | 1 | SLU | -7591.98 | -708.25 | 0.85 | 11.31 | 7624.94 | 1.00 | 32294.70 | 346848.00 | 32294.70 | 4.235 |
| 14 | 773.81 | 1 | SLU | -7506.90 | -700.31 | 0.85 | 11.31 | 7539.49 | 1.00 | 32294.70 | 346429.00 | 32294.70 | 4.283 |
| 15 | 833.33 | 1 | SLU | -7298.63 | -680.88 | 0.85 | 11.31 | 7330.32 | 1.00 | 32294.70 | 346012.00 | 32294.70 | 4.406 |
| 16 | 892.86 | 1 | SLU | -6992.88 | -652.36 | 0.85 | 11.31 | 7023.24 | 1.00 | 32294.70 | 345594.00 | 32294.70 | 4.598 |
| 17 | 952.38 | 1 | SLU | -6612.42 | -616.86 | 0.85 | 11.31 | 6641.13 | 1.00 | 32294.70 | 345178.00 | 32294.70 | 4.863 |
| 18 | 1011.90 | 1 | SLU | -6177.28 | -576.27 | 0.85 | 11.31 | 6204.10 | 1.00 | 32294.70 | 344762.00 | 32294.70 | 5.205 |
| 19 | 1071.43 | 1 | SLU | -5704.82 | -532.20 | 0.85 | 11.31 | 5729.59 | 1.00 | 32294.70 | 344347.00 | 32294.70 | 5.636 |
| 20 | 1130.95 | 1 | SLU | -5209.97 | -486.03 | 0.85 | 11.31 | 5232.59 | 1.00 | 32294.70 | 343933.00 | 32294.70 | 6.172 |
| 21 | 1190.48 | 1 | SLU | -4705.35 | -438.96 | 0.85 | 11.31 | 4725.78 | 1.00 | 32294.70 | 343519.00 | 32294.70 | 6.834 |
| 22 | 1250.00 | 1 | SLU | -4201.54 | -391.96 | 0.85 | 11.31 | 4219.79 | 1.00 | 32294.70 | 343106.00 | 32294.70 | 7.653 |
| 23 | 1309.52 | 1 | SLU | -3707.23 | -345.84 | 0.85 | 11.31 | 3723.33 | 1.00 | 32294.70 | 342694.00 | 32294.70 | 8.674 |
| 24 | 1369.05 | 1 | SLU | -3229.44 | -301.27 | 0.85 | 11.31 | 3243.46 | 1.00 | 32294.70 | 342282.00 | 32294.70 | 9.957 |
| 25 | 1428.57 | 1 | SLU | -2773.71 | -258.76 | 0.85 | 11.31 | 2785.75 | 1.00 | 32294.70 | 341871.00 | 32294.70 | 11.593 |
| 26 | 1488.10 | 1 | SLU | -2344.29 | -218.70 | 0.85 | 11.31 | 2354.47 | 1.00 | 32294.70 | 341460.00 | 32294.70 | 13.716 |
| 27 | 1547.62 | 1 | SLU | -1944.34 | -181.38 | 0.85 | 11.31 | 1952.79 | 1.00 | 32294.70 | 341050.00 | 32294.70 | 16.538 |
| 28 | 1607.14 | 1 | SLU | -1576.08 | -147.03 | 0.85 | 11.31 | 1582.92 | 1.00 | 32294.70 | 340640.00 | 32294.70 | 20.402 |
| 29 | 1666.67 | 1 | SLU | -1240.94 | -115.77 | 0.85 | 11.31 | 1246.33 | 1.00 | 32294.70 | 340231.00 | 32294.70 | 25.912 |
| 30 | 1726.19 | 1 | SLU | -939.74 | -87.67 | 0.85 | 11.31 | 943.82 | 1.00 | 32294.70 | 339822.00 | 32294.70 | 34.217 |
| 31 | 1785.71 | 1 | SLU | -672.80 | -62.76 | 0.85 | 11.31 | 675.72 | 1.00 | 32294.70 | 339414.00 | 32294.70 | 47.793 |
| 32 | 1845.24 | 1 | SLU | -440.07 | -41.05 | 0.85 | 11.31 | 441.99 | 1.00 | 32294.70 | 339006.00 | 32294.70 | 73.067 |
| 33 | 1904.76 | 1 | SLU | -241.23 | -22.50 | 0.85 | 11.31 | 242.28 | 1.00 | 32294.70 | 338599.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -75.78 | -7.07 | 0.85 | 11.31 | 76.11 | 1.00 | 32294.70 | 338192.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | 56.88 | 5.31 | 0.85 | 11.31 | 57.12 | 1.00 | 32294.70 | 337785.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 157.36 | 14.68 | 0.85 | 11.31 | 158.04 | 1.00 | 32294.70 | 337378.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 226.27 | 21.11 | 0.85 | 11.31 | 227.25 | 1.00 | 32294.70 | 336972.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 264.14 | 24.64 | 0.85 | 11.31 | 265.29 | 1.00 | 32294.70 | 336566.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 271.43 | 25.32 | 0.85 | 11.31 | 272.61 | 1.00 | 32294.70 | 336161.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 248.47 | 23.18 | 0.85 | 11.31 | 249.55 | 1.00 | 32294.70 | 335755.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 195.50 | 18.24 | 0.85 | 11.31 | 196.35 | 1.00 | 32294.70 | 335350.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 112.66 | 10.51 | 0.85 | 11.31 | 113.15 | 1.00 | 32294.70 | 334945.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mz <daNm> | My <daNm> | Aft <cmq> | Afc <cmq> | σ_c <daN/cmq> | σ_f <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-------------------------|-------------------------|
| 44 | 0.00 | 2 | SLE R | -95211.30 | -8063.85 | 47581.40 | 40.84 | 37.70 | 43.41 | 644.35 |
| 45 | 59.52 | 2 | SLE R | -95757.60 | -8488.95 | 50089.80 | 40.84 | 37.70 | 46.02 | 719.99 |
| 46 | 119.05 | 2 | SLE R | -95170.20 | -8738.84 | 51564.30 | 43.98 | 34.56 | 47.62 | 774.10 |
| 47 | 178.57 | 2 | SLE R | -94585.90 | -8839.27 | 52156.90 | 43.98 | 34.56 | 48.29 | 799.57 |
| 48 | 238.09 | 2 | SLE R | -94004.40 | -8813.95 | 52007.50 | 43.98 | 34.56 | 48.17 | 800.37 |
| 49 | 297.62 | 2 | SLE R | -93426.00 | -8684.53 | 51243.80 | 43.98 | 34.56 | 47.41 | 780.65 |
| 50 | 357.14 | 2 | SLE R | -92850.40 | -8462.72 | 49935.00 | 43.98 | 34.56 | 46.06 | 742.92 |
| 51 | 416.67 | 2 | SLE R | -90673.20 | -8136.35 | 48009.20 | 40.84 | 37.70 | 44.18 | 700.67 |
| 52 | 476.19 | 2 | SLE R | -88500.80 | -7722.17 | 45565.40 | 40.84 | 37.70 | 41.76 | 641.80 |
| 53 | 535.71 | 2 | SLE R | -86333.20 | -7243.68 | 42742.00 | 37.70 | 40.84 | 38.94 | 571.50 |
| 54 | 595.24 | 2 | SLE R | -84170.30 | -6721.28 | 39659.50 | 37.70 | 40.84 | 35.85 | 494.55 |
| 55 | 654.76 | 2 | SLE R | -82011.80 | -6172.49 | 36421.30 | 37.70 | 40.84 | 32.62 | 449.66 |
| 56 | 714.29 | 2 | SLE R | -79857.70 | -5612.17 | 33115.10 | 37.70 | 40.84 | 29.35 | 406.21 |
| 57 | 773.81 | 2 | SLE R | -77707.90 | -5052.72 | 29814.00 | 37.70 | 40.84 | 26.15 | 363.44 |
| 58 | 833.33 | 2 | SLE R | -75562.30 | -4504.29 | 26577.90 | 31.42 | 47.12 | 23.09 | 322.50 |
| 59 | 892.86 | 2 | SLE R | -73420.80 | -3975.02 | 23455.00 | 31.42 | 47.12 | 20.26 | 284.40 |
| 60 | 952.38 | 2 | SLE R | -71283.20 | -3471.27 | 20482.60 | 28.27 | 50.27 | 17.72 | 249.92 |
| 61 | 1011.90 | 2 | SLE R | -69149.40 | -2997.81 | 17688.90 | 25.13 | 53.41 | 15.49 | 219.52 |
| 62 | 1071.43 | 2 | SLE R | -67019.30 | -2558.03 | 15093.90 | 18.85 | 59.69 | 13.58 | 193.27 |
| 63 | 1130.95 | 2 | SLE R | -64892.80 | -2154.13 | 12710.60 | 12.57 | 65.97 | 11.95 | 170.89 |
| 64 | 1190.48 | 2 | SLE R | -62769.80 | -1787.27 | 10545.90 | 0.00 | 78.54 | 10.58 | 151.87 |
| 65 | 1250.00 | 2 | SLE R | -60650.10 | -1457.77 | 8601.73 | 0.00 | 78.54 | 9.40 | 135.35 |
| 66 | 1309.52 | 2 | SLE R | -58533.70 | -1165.26 | 6875.70 | 0.00 | 78.54 | 8.33 | 120.45 |
| 67 | 1369.05 | 2 | SLE R | -56420.50 | -908.74 | 5362.12 | 0.00 | 78.54 | 7.37 | 107.07 |
| 68 | 1428.57 | 2 | SLE R | -54310.20 | -686.80 | 4052.51 | 0.00 | 78.54 | 6.52 | 95.14 |
| 69 | 1488.10 | 2 | SLE R | -52202.90 | -497.62 | 2936.26 | 0.00 | 78.54 | 5.77 | 84.61 |
| 70 | 1547.62 | 2 | SLE R | -50098.40 | -339.14 | 2001.15 | 0.00 | 78.54 | 5.11 | 75.37 |
| 71 | 1607.14 | 2 | SLE R | -47996.60 | -209.10 | 1233.82 | 0.00 | 78.54 | 4.54 | 67.33 |
| 72 | 1666.67 | 2 | SLE R | -45897.30 | -105.09 | 620.08 | 0.00 | 78.54 | 4.05 | 60.39 |
| 73 | 1726.19 | 2 | SLE R | -43800.50 | -24.62 | 145.28 | 0.00 | 78.54 | 3.64 | 54.44 |
| 74 | 1785.71 | 2 | SLE R | -41706.10 | 34.83 | -205.50 | 0.00 | 78.54 | 3.50 | 52.31 |
| 75 | 1845.24 | 2 | SLE R | -39613.90 | 75.79 | -447.20 | 0.00 | 78.54 | 3.45 | 51.47 |
| 76 | 1904.76 | 2 | SLE R | -37523.80 | 100.79 | -594.71 | 0.00 | 78.54 | 3.36 | 49.97 |
| 77 | 1964.29 | 2 | SLE R | -35435.80 | 112.31 | -662.71 | 0.00 | 78.54 | 3.22 | 47.91 |
| 78 | 2023.81 | 2 | SLE R | -33349.60 | 112.81 | -665.65 | 0.00 | 78.54 | 3.06 | 45.39 |
| 79 | 2083.33 | 2 | SLE R | -31265.20 | 104.69 | -617.72 | 0.00 | 78.54 | 2.86 | 42.51 |
| 80 | 2142.86 | 2 | SLE R | -29182.50 | 90.30 | -532.84 | 0.00 | 78.54 | 2.65 | 39.36 |
| 81 | 2202.38 | 2 | SLE R | -27101.40 | 71.97 | -424.66 | 0.00 | 78.54 | 2.42 | 36.06 |
| 82 | 2261.90 | 2 | SLE R | -25021.70 | 51.97 | -306.64 | 0.00 | 78.54 | 2.19 | 32.68 |
| 83 | 2321.43 | 2 | SLE R | -22943.30 | 32.55 | -192.05 | 0.00 | 78.54 | 1.96 | 29.34 |
| 84 | 2380.95 | 2 | SLE R | -20866.20 | 15.94 | -94.04 | 0.00 | 78.54 | 1.74 | 26.11 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|-----------|----------|----------|-------|-------|-------|--------|
| 85 | 2440.48 | 2 | SLE R | -18790.20 | 4.35 | -25.68 | 0.00 | 78.54 | 1.54 | 23.09 |
| 86 | 2500.00 | 2 | SLE R | -16715.30 | 0.00 | 0.00 | 0.00 | 78.54 | 1.36 | 20.38 |
| 87 | 0.00 | 4 | SLE Q | -95211.30 | -8063.85 | 47581.40 | 40.84 | 37.70 | 43.41 | 644.35 |
| 88 | 59.52 | 4 | SLE Q | -95757.60 | -8488.95 | 50089.80 | 40.84 | 37.70 | 46.02 | 719.99 |
| 89 | 119.05 | 4 | SLE Q | -95170.20 | -8738.84 | 51564.30 | 43.98 | 34.56 | 47.62 | 774.10 |
| 90 | 178.57 | 4 | SLE Q | -94585.90 | -8839.27 | 52156.90 | 43.98 | 34.56 | 48.29 | 799.57 |
| 91 | 238.09 | 4 | SLE Q | -94004.40 | -8813.95 | 52007.50 | 43.98 | 34.56 | 48.17 | 800.37 |
| 92 | 297.62 | 4 | SLE Q | -93426.00 | -8684.53 | 51243.80 | 43.98 | 34.56 | 47.41 | 780.65 |
| 93 | 357.14 | 4 | SLE Q | -92850.40 | -8462.72 | 49935.00 | 43.98 | 34.56 | 46.06 | 742.92 |
| 94 | 416.67 | 4 | SLE Q | -90673.20 | -8136.35 | 48009.20 | 40.84 | 37.70 | 44.18 | 700.67 |
| 95 | 476.19 | 4 | SLE Q | -88500.80 | -7722.17 | 45565.40 | 40.84 | 37.70 | 41.76 | 641.80 |
| 96 | 535.71 | 4 | SLE Q | -86333.20 | -7243.68 | 42742.00 | 37.70 | 40.84 | 38.94 | 571.50 |
| 97 | 595.24 | 4 | SLE Q | -84170.30 | -6721.28 | 39659.50 | 37.70 | 40.84 | 35.85 | 494.55 |
| 98 | 654.76 | 4 | SLE Q | -82011.80 | -6172.49 | 36421.30 | 37.70 | 40.84 | 32.62 | 449.66 |
| 99 | 714.29 | 4 | SLE Q | -79857.70 | -5612.17 | 33115.10 | 37.70 | 40.84 | 29.35 | 406.21 |
| 100 | 773.81 | 4 | SLE Q | -77707.90 | -5052.72 | 29814.00 | 37.70 | 40.84 | 26.15 | 363.44 |
| 101 | 833.33 | 4 | SLE Q | -75562.30 | -4504.29 | 26577.90 | 31.42 | 47.12 | 23.09 | 322.50 |
| 102 | 892.86 | 4 | SLE Q | -73420.80 | -3975.02 | 23455.00 | 31.42 | 47.12 | 20.26 | 284.40 |
| 103 | 952.38 | 4 | SLE Q | -71283.20 | -3471.27 | 20482.60 | 28.27 | 50.27 | 17.72 | 249.92 |
| 104 | 1011.90 | 4 | SLE Q | -69149.40 | -2997.81 | 17688.90 | 25.13 | 53.41 | 15.49 | 219.52 |
| 105 | 1071.43 | 4 | SLE Q | -67019.30 | -2558.03 | 15093.90 | 18.85 | 59.69 | 13.58 | 193.27 |
| 106 | 1130.95 | 4 | SLE Q | -64892.80 | -2154.13 | 12710.60 | 12.57 | 65.97 | 11.95 | 170.89 |
| 107 | 1190.48 | 4 | SLE Q | -62769.80 | -1787.27 | 10545.90 | 0.00 | 78.54 | 10.58 | 151.87 |
| 108 | 1250.00 | 4 | SLE Q | -60650.10 | -1457.77 | 8601.73 | 0.00 | 78.54 | 9.40 | 135.35 |
| 109 | 1309.52 | 4 | SLE Q | -58533.70 | -1165.26 | 6875.70 | 0.00 | 78.54 | 8.33 | 120.45 |
| 110 | 1369.05 | 4 | SLE Q | -56420.50 | -908.74 | 5362.12 | 0.00 | 78.54 | 7.37 | 107.07 |
| 111 | 1428.57 | 4 | SLE Q | -54310.20 | -686.80 | 4052.51 | 0.00 | 78.54 | 6.52 | 95.14 |
| 112 | 1488.10 | 4 | SLE Q | -52202.90 | -497.62 | 2936.26 | 0.00 | 78.54 | 5.77 | 84.61 |
| 113 | 1547.62 | 4 | SLE Q | -50098.40 | -339.14 | 2001.15 | 0.00 | 78.54 | 5.11 | 75.37 |
| 114 | 1607.14 | 4 | SLE Q | -47996.60 | -209.10 | 1233.82 | 0.00 | 78.54 | 4.54 | 67.33 |
| 115 | 1666.67 | 4 | SLE Q | -45897.30 | -105.09 | 620.08 | 0.00 | 78.54 | 4.05 | 60.39 |
| 116 | 1726.19 | 4 | SLE Q | -43800.50 | -24.62 | 145.28 | 0.00 | 78.54 | 3.64 | 54.44 |
| 117 | 1785.71 | 4 | SLE Q | -41706.10 | 34.83 | -205.50 | 0.00 | 78.54 | 3.50 | 52.31 |
| 118 | 1845.24 | 4 | SLE Q | -39613.90 | 75.79 | -447.20 | 0.00 | 78.54 | 3.45 | 51.47 |
| 119 | 1904.76 | 4 | SLE Q | -37523.80 | 100.79 | -594.71 | 0.00 | 78.54 | 3.36 | 49.97 |
| 120 | 1964.29 | 4 | SLE Q | -35435.80 | 112.31 | -662.71 | 0.00 | 78.54 | 3.22 | 47.91 |
| 121 | 2023.81 | 4 | SLE Q | -33349.60 | 112.81 | -665.65 | 0.00 | 78.54 | 3.06 | 45.39 |
| 122 | 2083.33 | 4 | SLE Q | -31265.20 | 104.69 | -617.72 | 0.00 | 78.54 | 2.86 | 42.51 |
| 123 | 2142.86 | 4 | SLE Q | -29182.50 | 90.30 | -532.84 | 0.00 | 78.54 | 2.65 | 39.36 |
| 124 | 2202.38 | 4 | SLE Q | -27101.40 | 71.97 | -424.66 | 0.00 | 78.54 | 2.42 | 36.06 |
| 125 | 2261.90 | 4 | SLE Q | -25021.70 | 51.97 | -306.64 | 0.00 | 78.54 | 2.19 | 32.68 |
| 126 | 2321.43 | 4 | SLE Q | -22943.30 | 32.55 | -192.05 | 0.00 | 78.54 | 1.96 | 29.34 |
| 127 | 2380.95 | 4 | SLE Q | -20866.20 | 15.94 | -94.04 | 0.00 | 78.54 | 1.74 | 26.11 |
| 128 | 2440.48 | 4 | SLE Q | -18790.20 | 4.35 | -25.68 | 0.00 | 78.54 | 1.54 | 23.09 |
| 129 | 2500.00 | 4 | SLE Q | -16715.30 | 0.00 | 0.00 | 0.00 | 78.54 | 1.36 | 20.38 |

Stato limite d'esercizio - Verifiche a fessurazione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | c <mm> | s <mm> | K _c | φ _{eq} | Δ _{sm} <mm> | A _s <cmq> | A _c eff <cmq> | σ _s <daN/cmq> | e _{sm} | W _k <mm> |
|------|---------|----|-------|-----------|-----------|-----------|--------|--------|----------------|-----------------|----------------------|----------------------|--------------------------|--------------------------|-----------------|---------------------|
| 87 | 0.00 | 4 | SLE Q | -95211.30 | 47581.40 | -8063.85 | 46.00 | 136.36 | 0.50 | 20.00 | 206.15 | 18.85 | 1075.84 | 644.35 | 0.19 | 0.07 |
| 88 | 59.52 | 4 | SLE Q | -95757.60 | 50089.80 | -8488.95 | 46.00 | 136.36 | 0.50 | 20.00 | 208.37 | 18.85 | 1096.75 | 719.99 | 0.21 | 0.07 |
| 89 | 119.05 | 4 | SLE Q | -95170.20 | 51564.30 | -8738.84 | 46.00 | 136.36 | 0.50 | 20.00 | 209.96 | 18.85 | 1111.71 | 774.10 | 0.23 | 0.08 |
| 90 | 178.57 | 4 | SLE Q | -94585.90 | 52156.90 | -8839.27 | 46.00 | 136.36 | 0.50 | 20.00 | 210.71 | 18.85 | 1118.85 | 799.57 | 0.23 | 0.08 |
| 91 | 238.09 | 4 | SLE Q | -94004.40 | 52007.50 | -8813.95 | 46.00 | 136.36 | 0.50 | 20.00 | 210.85 | 18.85 | 1120.16 | 800.37 | 0.23 | 0.08 |
| 92 | 297.62 | 4 | SLE Q | -93426.00 | 51243.80 | -8684.53 | 46.00 | 136.36 | 0.50 | 20.00 | 210.49 | 18.85 | 1116.71 | 780.65 | 0.23 | 0.08 |
| 93 | 357.14 | 4 | SLE Q | -92850.40 | 49935.00 | -8462.72 | 46.00 | 136.36 | 0.50 | 20.00 | 209.63 | 18.85 | 1108.63 | 742.92 | 0.22 | 0.08 |
| 94 | 416.67 | 4 | SLE Q | -90673.20 | 48009.20 | -8136.35 | 46.00 | 136.36 | 0.50 | 20.00 | 208.93 | 18.85 | 1102.02 | 700.67 | 0.20 | 0.07 |
| 95 | 476.19 | 4 | SLE Q | -88500.80 | 45565.40 | -7722.17 | 46.00 | 136.36 | 0.50 | 20.00 | 207.62 | 18.85 | 1089.68 | 641.80 | 0.19 | 0.07 |
| 96 | 535.71 | 4 | SLE Q | -86333.20 | 42742.00 | -7243.68 | 46.00 | 136.36 | 0.50 | 20.00 | 205.67 | 18.85 | 1071.33 | 571.50 | 0.17 | 0.06 |
| 97 | 595.24 | 4 | SLE Q | -84170.30 | 39659.50 | -6721.28 | 46.00 | 136.36 | 0.50 | 20.00 | 203.01 | 18.85 | 1046.21 | 494.55 | 0.14 | 0.05 |
| 98 | 654.76 | 4 | SLE Q | -82011.80 | 36421.30 | -6172.49 | 46.00 | 136.36 | 0.50 | 20.00 | 199.50 | 18.85 | 1013.12 | 415.24 | 0.12 | 0.04 |
| 99 | 714.29 | 4 | SLE Q | -79857.70 | 33115.10 | -5612.17 | 46.00 | 136.36 | 0.50 | 20.00 | 194.94 | 18.85 | 970.20 | 337.39 | 0.10 | 0.03 |
| 100 | 773.81 | 4 | SLE Q | -77707.90 | 29814.00 | -5052.72 | 46.00 | 136.36 | 0.50 | 20.00 | 188.82 | 18.85 | 912.47 | 264.34 | 0.08 | 0.02 |
| 101 | 833.33 | 4 | SLE Q | -75562.30 | 26577.90 | -4504.29 | 46.00 | 136.36 | 0.50 | 20.00 | 198.27 | 15.71 | 834.64 | 198.79 | 0.06 | 0.02 |
| 102 | 892.86 | 4 | SLE Q | -73420.80 | 23455.00 | -3975.02 | 46.00 | 136.36 | 0.50 | 20.00 | 208.35 | 12.57 | 731.06 | 142.58 | 0.04 | 0.01 |
| 103 | 952.38 | 4 | SLE Q | -71283.20 | 20482.60 | -3471.27 | 46.00 | 136.36 | 0.50 | 20.00 | 184.94 | 12.57 | 583.99 | 96.54 | 0.03 | 0.01 |
| 104 | 1011.90 | 4 | SLE Q | -69149.40 | 17688.90 | -2997.81 | 46.00 | 136.36 | 0.50 | 20.00 | 160.53 | 12.57 | 430.57 | 60.47 | 0.02 | 0.00 |
| 105 | 1071.43 | 4 | SLE Q | -67019.30 | 15093.90 | -2558.03 | 46.00 | 136.36 | 0.50 | 20.00 | 180.29 | 6.28 | 277.39 | 33.22 | 0.01 | 0.00 |
| 130 | 0.00 | 3 | SLE F | -95211.30 | 47581.40 | -8063.85 | 46.00 | 136.36 | 0.50 | 20.00 | 206.15 | 18.85 | 1075.84 | 644.35 | 0.19 | 0.07 |
| 131 | 59.52 | 3 | SLE F | -95757.60 | 50089.80 | -8488.95 | 46.00 | 136.36 | 0.50 | 20.00 | 208.37 | 18.85 | 1096.75 | 719.99 | 0.21 | 0.07 |
| 132 | 119.05 | 3 | SLE F | -95170.20 | 51564.30 | -8738.84 | 46.00 | 136.36 | 0.50 | 20.00 | 209.96 | 18.85 | 1111.71 | 774.10 | 0.23 | 0.08 |
| 133 | 178.57 | 3 | SLE F | -94585.90 | 52156.90 | -8839.27 | 46.00 | 136.36 | 0.50 | 20.00 | 210.71 | 18.85 | 1118.85 | 799.57 | 0.23 | 0.08 |
| 134 | 238.09 | 3 | SLE F | -94004.40 | 52007.50 | -8813.95 | 46.00 | 136.36 | 0.50 | 20.00 | 210.85 | 18.85 | 1120.16 | 800.37 | 0.23 | 0.08 |
| 135 | 297.62 | 3 | SLE F | -93426.00 | 51243.80 | -8684.53 | 46.00 | 136.36 | 0.50 | 20.00 | 210.49 | 18.85 | 1116.71 | 780.65 | 0.23 | 0.08 |
| 136 | 357.14 | 3 | SLE F | -92850.40 | 49935.00 | -8462.72 | 46.00 | 136.36 | 0.50 | 20.00 | 209.63 | 18.85 | 1108.63 | 742.92 | 0.22 | 0.08 |
| 137 | 416.67 | 3 | SLE F | -90673.20 | 48009.20 | -8136.35 | 46.00 | 136.36 | 0.50 | 20.00 | 208.93 | 18.85 | 1102.02 | 700.67 | 0.20 | 0.07 |
| 138 | 476.19 | 3 | SLE F | -88500.80 | 45565.40 | -7722.17 | 46.00 | 136.36 | 0.50 | 20.00 | 207.62 | 18.85 | 1089.68 | 641.80 | 0.19 | 0.07 |

Relazione di calcolo

| | | | | | | | | | | | | | | | | |
|-----|---------|---|-------|-----------|----------|----------|-------|--------|------|-------|--------|-------|---------|--------|------|------|
| 139 | 535.71 | 3 | SLE F | -86333.20 | 42742.00 | -7243.68 | 46.00 | 136.36 | 0.50 | 20.00 | 205.67 | 18.85 | 1071.33 | 571.50 | 0.17 | 0.06 |
| 140 | 595.24 | 3 | SLE F | -84170.30 | 39659.50 | -6721.28 | 46.00 | 136.36 | 0.50 | 20.00 | 203.01 | 18.85 | 1046.21 | 494.55 | 0.14 | 0.05 |
| 141 | 654.76 | 3 | SLE F | -82011.80 | 36421.30 | -6172.49 | 46.00 | 136.36 | 0.50 | 20.00 | 199.50 | 18.85 | 1013.12 | 415.24 | 0.12 | 0.04 |
| 142 | 714.29 | 3 | SLE F | -79857.70 | 33115.10 | -5612.17 | 46.00 | 136.36 | 0.50 | 20.00 | 194.94 | 18.85 | 970.20 | 337.39 | 0.10 | 0.03 |
| 143 | 773.81 | 3 | SLE F | -77707.90 | 29814.00 | -5052.72 | 46.00 | 136.36 | 0.50 | 20.00 | 188.82 | 18.85 | 912.47 | 264.34 | 0.08 | 0.02 |
| 144 | 833.33 | 3 | SLE F | -75562.30 | 26577.90 | -4504.29 | 46.00 | 136.36 | 0.50 | 20.00 | 198.27 | 15.71 | 834.64 | 198.79 | 0.06 | 0.02 |
| 145 | 892.86 | 3 | SLE F | -73420.80 | 23455.00 | -3975.02 | 46.00 | 136.36 | 0.50 | 20.00 | 208.35 | 12.57 | 731.06 | 142.58 | 0.04 | 0.01 |
| 146 | 952.38 | 3 | SLE F | -71283.20 | 20482.60 | -3471.27 | 46.00 | 136.36 | 0.50 | 20.00 | 184.94 | 12.57 | 583.99 | 96.54 | 0.03 | 0.01 |
| 147 | 1011.90 | 3 | SLE F | -69149.40 | 17688.90 | -2997.81 | 46.00 | 136.36 | 0.50 | 20.00 | 160.53 | 12.57 | 430.57 | 60.47 | 0.02 | 0.00 |
| 148 | 1071.43 | 3 | SLE F | -67019.30 | 15093.90 | -2558.03 | 46.00 | 136.36 | 0.50 | 20.00 | 180.29 | 6.28 | 277.39 | 33.22 | 0.01 | 0.00 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 4 | SLU N cost - min. sic. |
| 13 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 47 | C.Rare - Sc min (max compr.), C.Rare - Sf min (max compr.) |
| 48 | C.Rare - Sf max (max traz.) |
| 65 | C.Rare - Sc max (min. compr.) |
| 90 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf min (max compr.) |
| 91 | C.Q.Per. - Sf max (max traz.), C.Q.Per. - Wk Max |
| 108 | C.Q.Per. - Sc max (min. compr.) |
| 134 | C.Freg - Wk Max |

Palo n. 9

Caratteristiche del palo e dei materiali utilizzati

| R | Cf | Cls | Fck | Fctk | Fcd | Fctd | Tp | Fyk | Fyd |
|-------|------|--------|-----------|-----------|-----------|-----------|-------|-----------|-----------|
| <cm> | <cm> | | <daN/cm²> | <daN/cm²> | <daN/cm²> | <daN/cm²> | | <daN/cm²> | <daN/cm²> |
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N | Mx | My | Mz |
|-----|-------|--------|--------|--------|
| | <daN> | <daNm> | <daNm> | <daNm> |
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 9 (-23)

| Caso | CC | TCC | Az | N | Tx | Ty | Mx | My |
|------|----|-------|-----|----------|---------|--------|----------|---------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | RVN | 70710.80 | 7354.68 | 387.35 | 62440.60 | 2004.95 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 70710.80 | 7354.68 | 387.35 | 62440.60 | 2004.95 |
| 2 | 2 | SLE R | RVN | 52378.40 | 5447.91 | 286.93 | 46252.30 | 1485.15 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 52378.40 | 5447.91 | 286.93 | 46252.30 | 1485.15 |
| 3 | 3 | SLE F | RVN | 52378.40 | 5447.91 | 286.93 | 46252.30 | 1485.15 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 52378.40 | 5447.91 | 286.93 | 46252.30 | 1485.15 |
| 4 | 4 | SLE Q | RVN | 52378.40 | 5447.91 | 286.93 | 46252.30 | 1485.15 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 52378.40 | 5447.91 | 286.93 | 46252.30 | 1485.15 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N | Tx | Ty | Mx | My |
|------|----|-------|------|-----------|----------|---------|-----------|----------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | 1 | -70710.80 | -7354.68 | -387.35 | -62440.60 | -2004.95 |
| 2 | 2 | SLE R | 1 | -52378.40 | -5447.91 | -286.93 | -46252.30 | -1485.15 |
| 3 | 3 | SLE F | 1 | -52378.40 | -5447.91 | -286.93 | -46252.30 | -1485.15 |
| 4 | 4 | SLE Q | 1 | -52378.40 | -5447.91 | -286.93 | -46252.30 | -1485.15 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X | CC | TCC | N | My | Mz | Nu | MRdy | MRdz | Rott. | α | Sic. |
|------|--------|----|-----|-----------|----------|----------|-----------|-----------|----------|-------|--------|-------|
| | <cm> | | | <daN> | <daNm> | <daNm> | <daN> | <daNm> | <daNm> | | <grad> | |
| 1 | 0.00 | 1 | SLU | -70710.80 | 62183.00 | -1996.68 | -70710.80 | 176095.00 | -4472.43 | 2-3 | 181.25 | 2.831 |
| 2 | 59.52 | 1 | SLU | -71427.40 | 65791.50 | -2112.55 | -71427.40 | 176385.00 | -4485.54 | 2-3 | 181.25 | 2.680 |
| 3 | 119.05 | 1 | SLU | -71179.90 | 67997.60 | -2183.39 | -71179.90 | 176285.00 | -4481.01 | 2-3 | 181.25 | 2.592 |
| 4 | 178.57 | 1 | SLU | -70934.60 | 69005.00 | -2215.74 | -70934.60 | 176186.00 | -4476.52 | 2-3 | 181.25 | 2.553 |

Relazione di calcolo

| | | | | | | | | | | | | |
|----|---------|---|-----|-----------|----------|----------|-----------|-----------|----------|-----|--------|--------|
| 5 | 238.09 | 1 | SLU | -70691.50 | 69001.70 | -2215.63 | -70691.50 | 176087.00 | -4472.08 | 2-3 | 181.25 | 2.551 |
| 6 | 297.62 | 1 | SLU | -70450.60 | 68159.40 | -2188.59 | -70450.60 | 175990.00 | -4467.68 | 2-3 | 181.25 | 2.582 |
| 7 | 357.14 | 1 | SLU | -70212.00 | 66570.00 | -2137.55 | -70212.00 | 175894.00 | -4463.32 | 2-3 | 181.25 | 2.642 |
| 8 | 436.67 | 1 | SLU | -68610.10 | 64131.80 | -2059.26 | -68610.10 | 175246.00 | -4434.12 | 2-3 | 181.25 | 2.732 |
| 9 | 476.19 | 1 | SLU | -67011.90 | 60977.10 | -1957.96 | -67011.90 | 174599.00 | -4405.09 | 2-3 | 181.25 | 2.863 |
| 10 | 535.71 | 1 | SLU | -65417.30 | 57293.50 | -1839.68 | -65417.30 | 173954.00 | -4376.22 | 2-3 | 181.25 | 3.036 |
| 11 | 595.24 | 1 | SLU | -63826.20 | 53244.20 | -1709.66 | -63826.20 | 173309.00 | -4347.52 | 2-3 | 181.25 | 3.254 |
| 12 | 654.76 | 1 | SLU | -62238.50 | 48969.80 | -1572.41 | -62238.50 | 172663.00 | -4318.01 | 2-3 | 181.25 | 3.525 |
| 13 | 714.29 | 1 | SLU | -60654.20 | 44589.40 | -1431.76 | -60654.20 | 172018.00 | -4288.54 | 2-3 | 181.25 | 3.857 |
| 14 | 773.81 | 1 | SLU | -59073.10 | 40202.90 | -1290.91 | -59073.10 | 171373.00 | -4259.23 | 2-3 | 181.25 | 4.262 |
| 15 | 833.33 | 1 | SLU | -57495.20 | 35892.20 | -1152.49 | -57495.20 | 170730.00 | -4230.08 | 2-3 | 181.25 | 4.756 |
| 16 | 892.86 | 1 | SLU | -55920.40 | 31723.30 | -1018.63 | -55920.40 | 170088.00 | -4201.09 | 2-3 | 181.25 | 5.360 |
| 17 | 952.38 | 1 | SLU | -54348.60 | 27747.90 | -890.98 | -54348.60 | 169446.00 | -4171.98 | 2-3 | 181.25 | 6.105 |
| 18 | 1011.90 | 1 | SLU | -52779.60 | 24005.10 | -770.80 | -52779.60 | 168802.00 | -4142.15 | 2-3 | 181.25 | 7.030 |
| 19 | 1071.43 | 1 | SLU | -51213.60 | 20522.90 | -658.99 | -51213.60 | 168159.00 | -4112.48 | 2-3 | 181.25 | 8.192 |
| 20 | 1130.95 | 1 | SLU | -49650.20 | 17319.70 | -556.13 | -49650.20 | 167518.00 | -4082.97 | 2-3 | 181.25 | 9.670 |
| 21 | 1190.48 | 1 | SLU | -48089.50 | 14405.90 | -462.57 | -48089.50 | 166877.00 | -4053.62 | 2-3 | 181.25 | 11.581 |
| 22 | 1250.00 | 1 | SLU | -46531.40 | 11784.90 | -378.41 | -46531.40 | 166234.00 | -4016.93 | 2-3 | 181.25 | 14.102 |
| 23 | 1309.52 | 1 | SLU | -44975.90 | 9454.29 | -303.57 | -44975.90 | 165590.00 | -3978.02 | 2-3 | 181.25 | 17.511 |
| 24 | 1369.05 | 1 | SLU | -43422.70 | 7407.10 | -237.84 | -43422.70 | 164944.00 | -3938.33 | 2-3 | 181.25 | 22.263 |
| 25 | 1428.57 | 1 | SLU | -41871.80 | 5632.52 | -180.86 | -41871.80 | 164300.00 | -3898.87 | 2-3 | 181.25 | 29.163 |
| 26 | 1488.10 | 1 | SLU | -40323.20 | 4116.83 | -132.19 | -40323.20 | 163657.00 | -3859.63 | 2-3 | 181.25 | 39.744 |
| 27 | 1547.62 | 1 | SLU | -38776.80 | 2844.08 | -91.32 | -38776.80 | 163014.00 | -3820.61 | 2-3 | 181.25 | 57.303 |
| 28 | 1607.14 | 1 | SLU | -37232.40 | 1796.65 | -57.69 | -37232.40 | 162373.00 | -3781.81 | 2-3 | 181.88 | 69.059 |
| 29 | 1666.67 | 1 | SLU | -35690.00 | 955.82 | -30.69 | -35690.00 | 161730.00 | -3743.21 | 2-3 | 181.88 | 72.044 |
| 30 | 1726.19 | 1 | SLU | -34149.60 | 302.15 | -9.70 | -34149.60 | 161087.00 | -3704.71 | 2-3 | 181.88 | 75.294 |
| 31 | 1785.71 | 1 | SLU | -32610.90 | -184.18 | 5.91 | -32610.90 | 160444.00 | -3666.31 | 2-3 | 1.88 | 78.846 |
| 32 | 1845.24 | 1 | SLU | -31074.10 | -523.10 | 16.80 | -31074.10 | 159801.00 | -3628.01 | 2-3 | 1.88 | 82.746 |
| 33 | 1904.76 | 1 | SLU | -29538.80 | -734.47 | 23.58 | -29538.80 | 159158.00 | -3589.81 | 2-3 | 1.88 | 87.046 |
| 34 | 1964.29 | 1 | SLU | -28005.20 | -837.91 | 26.91 | -28005.20 | 158515.00 | -3551.71 | 2-3 | 1.88 | 91.813 |
| 35 | 2023.81 | 1 | SLU | -26473.10 | -852.78 | 27.38 | -26473.10 | 157872.00 | -3513.71 | 2-3 | 1.88 | 97.127 |
| 36 | 2083.33 | 1 | SLU | -24942.40 | -798.08 | 25.63 | -24942.40 | 157229.00 | -3475.81 | 2-3 | 1.88 | >100 |
| 37 | 2142.86 | 1 | SLU | -23413.00 | -692.47 | 22.23 | -23413.00 | 156586.00 | -3438.01 | 2-3 | 1.88 | >100 |
| 38 | 2202.38 | 1 | SLU | -21884.90 | -554.28 | 17.80 | -21884.90 | 156043.00 | -3400.31 | 2-3 | 1.88 | >100 |
| 39 | 2261.90 | 1 | SLU | -20358.00 | -401.57 | 12.89 | -20358.00 | 155500.00 | -3362.71 | 2-3 | 1.88 | >100 |
| 40 | 2321.43 | 1 | SLU | -18832.10 | -252.17 | 8.10 | -18832.10 | 154957.00 | -3325.21 | 2-3 | 1.88 | >100 |
| 41 | 2380.95 | 1 | SLU | -17307.30 | -123.74 | 3.97 | -17307.30 | 154414.00 | -3287.81 | 2-3 | 1.88 | >100 |
| 42 | 2440.48 | 1 | SLU | -15783.40 | -33.85 | 1.09 | -15783.40 | 153871.00 | -3250.51 | 2-3 | 1.88 | >100 |
| 43 | 2500.00 | 1 | SLU | -14260.30 | 0.00 | 0.00 | -14260.30 | 153328.00 | -3213.31 | 2-3 | | >100 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | OC | TCC | Ty <daN> | Tz <daN> | bw <m> | Asw <cmg> | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|---------|----|-----|----------|----------|--------|-----------|------------|------|------------|------------|------------|--------|
| 1 | 0.00 | 1 | SLU | 7354.68 | 387.35 | 0.85 | 11.31 | 7364.87 | 1.00 | 32294.70 | 341797.00 | 32294.70 | 4.385 |
| 2 | 59.52 | 1 | SLU | 4820.90 | 253.90 | 0.85 | 11.31 | 4827.58 | 1.00 | 32294.70 | 341899.00 | 32294.70 | 6.690 |
| 3 | 119.05 | 1 | SLU | 2642.18 | 139.16 | 0.85 | 11.31 | 2645.84 | 1.00 | 32294.70 | 341864.00 | 32294.70 | 12.206 |
| 4 | 178.57 | 1 | SLU | 792.31 | 41.73 | 0.85 | 11.31 | 793.41 | 1.00 | 32294.70 | 341829.00 | 32294.70 | 40.704 |
| 5 | 238.09 | 1 | SLU | -755.53 | -39.79 | 0.85 | 11.31 | 756.58 | 1.00 | 32294.70 | 341794.00 | 32294.70 | 42.685 |
| 6 | 297.62 | 1 | SLU | -2028.35 | -106.83 | 0.85 | 11.31 | 2031.16 | 1.00 | 32294.70 | 341759.00 | 32294.70 | 15.900 |
| 7 | 357.14 | 1 | SLU | -3375.81 | -177.79 | 0.85 | 11.31 | 3380.49 | 1.00 | 32294.70 | 341725.00 | 32294.70 | 9.553 |
| 8 | 436.67 | 1 | SLU | -4749.98 | -250.17 | 0.85 | 11.31 | 4756.56 | 1.00 | 32294.70 | 341496.00 | 32294.70 | 6.790 |
| 9 | 476.19 | 1 | SLU | -5788.20 | -304.85 | 0.85 | 11.31 | 5796.22 | 1.00 | 32294.70 | 341267.00 | 32294.70 | 5.572 |
| 10 | 535.71 | 1 | SLU | -6532.37 | -344.04 | 0.85 | 11.31 | 6541.43 | 1.00 | 32294.70 | 341038.00 | 32294.70 | 4.937 |
| 11 | 595.24 | 1 | SLU | -7022.07 | -369.83 | 0.85 | 11.31 | 7031.80 | 1.00 | 32294.70 | 340811.00 | 32294.70 | 4.593 |
| 12 | 654.76 | 1 | SLU | -7294.26 | -384.17 | 0.85 | 11.31 | 7304.37 | 1.00 | 32294.70 | 340583.00 | 32294.70 | 4.421 |
| 13 | 714.29 | 1 | SLU | -7383.14 | -388.85 | 0.85 | 11.31 | 7393.37 | 1.00 | 32294.70 | 340356.00 | 32294.70 | 4.368 |
| 14 | 773.81 | 1 | SLU | -7319.96 | -385.52 | 0.85 | 11.31 | 7330.10 | 1.00 | 32294.70 | 340130.00 | 32294.70 | 4.406 |
| 15 | 833.33 | 1 | SLU | -7133.07 | -375.68 | 0.85 | 11.31 | 7142.95 | 1.00 | 32294.70 | 339904.00 | 32294.70 | 4.521 |
| 16 | 892.86 | 1 | SLU | -6847.88 | -360.66 | 0.85 | 11.31 | 6857.37 | 1.00 | 32294.70 | 339678.00 | 32294.70 | 4.709 |
| 17 | 952.38 | 1 | SLU | -6486.96 | -341.65 | 0.85 | 11.31 | 6495.96 | 1.00 | 32294.70 | 339453.00 | 32294.70 | 4.972 |
| 18 | 1011.90 | 1 | SLU | -6070.18 | -319.70 | 0.85 | 11.31 | 6078.59 | 1.00 | 32294.70 | 339228.00 | 32294.70 | 5.313 |
| 19 | 1071.43 | 1 | SLU | -5614.78 | -295.71 | 0.85 | 11.31 | 5622.56 | 1.00 | 32294.70 | 339004.00 | 32294.70 | 5.744 |
| 20 | 1130.95 | 1 | SLU | -5135.62 | -270.48 | 0.85 | 11.31 | 5142.74 | 1.00 | 32294.70 | 338780.00 | 32294.70 | 6.280 |
| 21 | 1190.48 | 1 | SLU | -4645.31 | -244.66 | 0.85 | 11.31 | 4651.74 | 1.00 | 32294.70 | 338556.00 | 32294.70 | 6.942 |
| 22 | 1250.00 | 1 | SLU | -4154.40 | -218.80 | 0.85 | 11.31 | 4160.16 | 1.00 | 32294.70 | 338333.00 | 32294.70 | 7.763 |
| 23 | 1309.52 | 1 | SLU | -3671.63 | -193.37 | 0.85 | 11.31 | 3676.72 | 1.00 | 32294.70 | 338110.00 | 32294.70 | 8.784 |
| 24 | 1369.05 | 1 | SLU | -3204.04 | -168.75 | 0.85 | 11.31 | 3208.48 | 1.00 | 32294.70 | 337888.00 | 32294.70 | 10.065 |
| 25 | 1428.57 | 1 | SLU | -2757.23 | -145.22 | 0.85 | 11.31 | 2761.05 | 1.00 | 32294.70 | 337666.00 | 32294.70 | 11.697 |
| 26 | 1488.10 | 1 | SLU | -2335.53 | -123.01 | 0.85 | 11.31 | 2338.77 | 1.00 | 32294.70 | 337444.00 | 32294.70 | 13.808 |
| 27 | 1547.62 | 1 | SLU | -1942.16 | -102.29 | 0.85 | 11.31 | 1944.85 | 1.00 | 32294.70 | 337222.00 | 32294.70 | 16.605 |
| 28 | 1607.14 | 1 | SLU | -1579.40 | -83.18 | 0.85 | 11.31 | 1581.59 | 1.00 | 32294.70 | 337001.00 | 32294.70 | 20.419 |
| 29 | 1666.67 | 1 | SLU | -1248.79 | -65.77 | 0.85 | 11.31 | 1250.52 | 1.00 | 32294.70 | 336780.00 | 32294.70 | 25.825 |
| 30 | 1726.19 | 1 | SLU | -951.20 | -50.10 | 0.85 | 11.31 | 952.52 | 1.00 | 32294.70 | 336560.00 | 32294.70 | 33.905 |
| 31 | 1785.71 | 1 | SLU | -687.04 | -36.18 | 0.85 | 11.31 | 687.99 | 1.00 | 32294.70 | 336339.00 | 32294.70 | 46.941 |
| 32 | 1845.24 | 1 | SLU | -456.31 | -24.03 | 0.85 | 11.31 | 456.94 | 1.00 | 32294.70 | 336119.00 | 32294.70 | 70.676 |
| 33 | 1904.76 | 1 | SLU | -258.75 | -13.63 | 0.85 | 11.31 | 259.11 | 1.00 | 32294.70 | 335899.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -93.93 | -4.95 | 0.85 | 11.31 | 94.06 | 1.00 | 32294.70 | 335680.00 | 32294.70 | >100 |

Relazione di calcolo

| | | | | | | | | | | | | | |
|----|---------|---|-----|--------|-------|------|-------|--------|------|----------|-----------|----------|------|
| 35 | 2023.81 | 1 | SLU | 38.70 | 2.04 | 0.85 | 11.31 | 38.75 | 1.00 | 32294.70 | 335460.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 139.72 | 7.36 | 0.85 | 11.31 | 139.91 | 1.00 | 32294.70 | 335241.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 209.71 | 11.04 | 0.85 | 11.31 | 210.00 | 1.00 | 32294.70 | 335022.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 249.16 | 13.12 | 0.85 | 11.31 | 249.51 | 1.00 | 32294.70 | 334803.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 258.51 | 13.62 | 0.85 | 11.31 | 258.87 | 1.00 | 32294.70 | 334584.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 238.10 | 12.54 | 0.85 | 11.31 | 238.43 | 1.00 | 32294.70 | 334366.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 188.13 | 9.91 | 0.85 | 11.31 | 188.39 | 1.00 | 32294.70 | 334147.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 108.75 | 5.73 | 0.85 | 11.31 | 108.90 | 1.00 | 32294.70 | 333929.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | OC | TCC | N <daN> | Mz <daNm> | My <daNm> | Aft <cmq> | Afc <cmq> | σ_c <daN/cmq> | σ_f <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-------------------------|-------------------------|
| 44 | 0.00 | 2 | SLE R | -52378.40 | -1479.02 | 46061.50 | 47.12 | 31.42 | 44.80 | 1037.87 |
| 45 | 59.52 | 2 | SLE R | -53222.40 | -1564.85 | 48734.50 | 47.12 | 31.42 | 47.55 | 1125.43 |
| 46 | 119.05 | 2 | SLE R | -53229.20 | -1617.33 | 50368.60 | 47.12 | 31.42 | 49.26 | 1185.51 |
| 47 | 178.57 | 2 | SLE R | -53237.60 | -1641.29 | 51114.80 | 47.12 | 31.42 | 50.03 | 1212.93 |
| 48 | 238.09 | 2 | SLE R | -53247.70 | -1641.21 | 51112.30 | 47.12 | 31.42 | 50.03 | 1212.71 |
| 49 | 297.62 | 2 | SLE R | -53259.40 | -1621.17 | 50488.50 | 47.12 | 31.42 | 49.38 | 1189.54 |
| 50 | 357.14 | 2 | SLE R | -53272.90 | -1583.37 | 49311.10 | 47.12 | 31.42 | 48.15 | 1146.01 |
| 51 | 416.67 | 2 | SLE R | -52101.50 | -1525.38 | 47505.00 | 47.12 | 31.42 | 46.33 | 1094.26 |
| 52 | 476.19 | 2 | SLE R | -50932.90 | -1450.34 | 45168.20 | 47.12 | 31.42 | 43.96 | 1023.07 |
| 53 | 535.71 | 2 | SLE R | -49767.00 | -1362.73 | 42439.60 | 47.12 | 31.42 | 41.18 | 937.67 |
| 54 | 595.24 | 2 | SLE R | -48603.80 | -1266.42 | 39440.20 | 47.12 | 31.42 | 38.10 | 842.71 |
| 55 | 654.76 | 2 | SLE R | -47443.30 | -1164.75 | 36273.90 | 47.12 | 31.42 | 34.85 | 742.24 |
| 56 | 714.29 | 2 | SLE R | -46285.20 | -1060.56 | 33029.20 | 43.98 | 34.56 | 31.50 | 639.78 |
| 57 | 773.81 | 2 | SLE R | -45129.70 | -956.23 | 29779.90 | 43.98 | 34.56 | 28.14 | 538.38 |
| 58 | 833.33 | 2 | SLE R | -43976.50 | -853.70 | 26586.80 | 40.84 | 37.70 | 24.84 | 440.73 |
| 59 | 892.86 | 2 | SLE R | -42825.80 | -754.54 | 23498.70 | 40.84 | 37.70 | 21.64 | 349.18 |
| 60 | 952.38 | 2 | SLE R | -41677.30 | -659.99 | 20554.00 | 40.84 | 37.70 | 18.61 | 265.91 |
| 61 | 1011.90 | 2 | SLE R | -40531.00 | -570.96 | 17781.50 | 37.70 | 40.84 | 15.80 | 215.14 |
| 62 | 1071.43 | 2 | SLE R | -39387.00 | -488.14 | 15202.10 | 34.56 | 43.98 | 13.26 | 182.04 |
| 63 | 1130.95 | 2 | SLE R | -38245.00 | -411.95 | 12829.40 | 31.42 | 47.12 | 11.04 | 152.89 |
| 64 | 1190.48 | 2 | SLE R | -37105.10 | -342.65 | 10671.10 | 28.27 | 50.27 | 9.18 | 128.23 |
| 65 | 1250.00 | 2 | SLE R | -35967.20 | -280.30 | 8729.56 | 21.99 | 56.55 | 7.68 | 108.15 |
| 66 | 1309.52 | 2 | SLE R | -34831.20 | -224.87 | 7003.18 | 15.71 | 62.83 | 6.51 | 92.21 |
| 67 | 1369.05 | 2 | SLE R | -33697.10 | -176.18 | 5486.74 | 0.00 | 78.54 | 5.58 | 79.56 |
| 68 | 1428.57 | 2 | SLE R | -32564.80 | -133.97 | 4172.24 | 0.00 | 78.54 | 4.81 | 68.96 |
| 69 | 1488.10 | 2 | SLE R | -31434.20 | -97.92 | 3049.51 | 0.00 | 78.54 | 4.13 | 59.71 |
| 70 | 1547.62 | 2 | SLE R | -30305.30 | -67.65 | 2106.73 | 0.00 | 78.54 | 3.55 | 51.72 |
| 71 | 1607.14 | 2 | SLE R | -29178.10 | -42.73 | 1330.85 | 0.00 | 78.54 | 3.06 | 44.91 |
| 72 | 1666.67 | 2 | SLE R | -28052.40 | -22.73 | 708.01 | 0.00 | 78.54 | 2.65 | 39.17 |
| 73 | 1726.19 | 2 | SLE R | -26928.20 | -7.19 | 223.81 | 0.00 | 78.54 | 2.30 | 34.40 |
| 74 | 1785.71 | 2 | SLE R | -25805.50 | 4.38 | -136.43 | 0.00 | 78.54 | 2.17 | 32.42 |
| 75 | 1845.24 | 2 | SLE R | -24684.10 | 12.44 | -387.48 | 0.00 | 78.54 | 2.21 | 32.82 |
| 76 | 1904.76 | 2 | SLE R | -23564.10 | 17.47 | -544.05 | 0.00 | 78.54 | 2.20 | 32.56 |
| 77 | 1964.29 | 2 | SLE R | -22445.30 | 19.93 | -620.68 | 0.00 | 78.54 | 2.15 | 31.74 |
| 78 | 2023.81 | 2 | SLE R | -21327.80 | 20.28 | -631.69 | 0.00 | 78.54 | 2.06 | 30.45 |
| 79 | 2083.33 | 2 | SLE R | -20211.40 | 18.98 | -591.17 | 0.00 | 78.54 | 1.95 | 28.80 |
| 80 | 2142.86 | 2 | SLE R | -19096.00 | 16.47 | -512.94 | 0.00 | 78.54 | 1.82 | 26.89 |
| 81 | 2202.38 | 2 | SLE R | -17981.70 | 13.18 | -410.57 | 0.00 | 78.54 | 1.67 | 24.81 |
| 82 | 2261.90 | 2 | SLE R | -16868.40 | 9.55 | -297.46 | 0.00 | 78.54 | 1.53 | 22.66 |
| 83 | 2321.43 | 2 | SLE R | -15755.90 | 6.00 | -186.79 | 0.00 | 78.54 | 1.38 | 20.53 |
| 84 | 2380.95 | 2 | SLE R | -14644.30 | 2.94 | -91.66 | 0.00 | 78.54 | 1.24 | 18.50 |
| 85 | 2440.48 | 2 | SLE R | -13533.50 | 0.81 | -25.07 | 0.00 | 78.54 | 1.11 | 16.68 |
| 86 | 2500.00 | 2 | SLE R | -12423.50 | 0.00 | 0.00 | 0.00 | 78.54 | 1.01 | 15.15 |
| 87 | 0.00 | 4 | SLE Q | -52378.40 | -1479.02 | 46061.50 | 47.12 | 31.42 | 44.80 | 1037.87 |
| 88 | 59.52 | 4 | SLE Q | -53222.40 | -1564.85 | 48734.50 | 47.12 | 31.42 | 47.55 | 1125.43 |
| 89 | 119.05 | 4 | SLE Q | -53229.20 | -1617.33 | 50368.60 | 47.12 | 31.42 | 49.26 | 1185.51 |
| 90 | 178.57 | 4 | SLE Q | -53237.60 | -1641.29 | 51114.80 | 47.12 | 31.42 | 50.03 | 1212.93 |
| 91 | 238.09 | 4 | SLE Q | -53247.70 | -1641.21 | 51112.30 | 47.12 | 31.42 | 50.03 | 1212.71 |
| 92 | 297.62 | 4 | SLE Q | -53259.40 | -1621.17 | 50488.50 | 47.12 | 31.42 | 49.38 | 1189.54 |
| 93 | 357.14 | 4 | SLE Q | -53272.90 | -1583.37 | 49311.10 | 47.12 | 31.42 | 48.15 | 1146.01 |
| 94 | 416.67 | 4 | SLE Q | -52101.50 | -1525.38 | 47505.00 | 47.12 | 31.42 | 46.33 | 1094.26 |
| 95 | 476.19 | 4 | SLE Q | -50932.90 | -1450.34 | 45168.20 | 47.12 | 31.42 | 43.96 | 1023.07 |
| 96 | 535.71 | 4 | SLE Q | -49767.00 | -1362.73 | 42439.60 | 47.12 | 31.42 | 41.18 | 937.67 |
| 97 | 595.24 | 4 | SLE Q | -48603.80 | -1266.42 | 39440.20 | 47.12 | 31.42 | 38.10 | 842.71 |
| 98 | 654.76 | 4 | SLE Q | -47443.30 | -1164.75 | 36273.90 | 47.12 | 31.42 | 34.85 | 742.24 |
| 99 | 714.29 | 4 | SLE Q | -46285.20 | -1060.56 | 33029.20 | 43.98 | 34.56 | 31.50 | 639.78 |
| 100 | 773.81 | 4 | SLE Q | -45129.70 | -956.23 | 29779.90 | 43.98 | 34.56 | 28.14 | 538.38 |
| 101 | 833.33 | 4 | SLE Q | -43976.50 | -853.70 | 26586.80 | 40.84 | 37.70 | 24.84 | 440.73 |
| 102 | 892.86 | 4 | SLE Q | -42825.80 | -754.54 | 23498.70 | 40.84 | 37.70 | 21.64 | 349.18 |
| 103 | 952.38 | 4 | SLE Q | -41677.30 | -659.99 | 20554.00 | 40.84 | 37.70 | 18.61 | 265.91 |
| 104 | 1011.90 | 4 | SLE Q | -40531.00 | -570.96 | 17781.50 | 37.70 | 40.84 | 15.80 | 215.14 |
| 105 | 1071.43 | 4 | SLE Q | -39387.00 | -488.14 | 15202.10 | 34.56 | 43.98 | 13.26 | 182.04 |
| 106 | 1130.95 | 4 | SLE Q | -38245.00 | -411.95 | 12829.40 | 31.42 | 47.12 | 11.04 | 152.89 |
| 107 | 1190.48 | 4 | SLE Q | -37105.10 | -342.65 | 10671.10 | 28.27 | 50.27 | 9.18 | 128.23 |
| 108 | 1250.00 | 4 | SLE Q | -35967.20 | -280.30 | 8729.56 | 21.99 | 56.55 | 7.68 | 108.15 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|-----------|---------|---------|-------|-------|------|-------|
| 109 | 1309.52 | 4 | SLE Q | -34831.20 | -224.87 | 7003.18 | 15.71 | 62.83 | 6.51 | 92.21 |
| 110 | 1369.03 | 4 | SLE Q | -33697.10 | -176.18 | 5486.74 | 0.00 | 78.54 | 5.58 | 79.56 |
| 111 | 1428.57 | 4 | SLE Q | -32564.80 | -133.97 | 4172.24 | 0.00 | 78.54 | 4.81 | 68.96 |
| 112 | 1488.10 | 4 | SLE Q | -31434.20 | -97.92 | 3049.51 | 0.00 | 78.54 | 4.13 | 59.71 |
| 113 | 1547.62 | 4 | SLE Q | -30305.30 | -67.65 | 2106.73 | 0.00 | 78.54 | 3.55 | 51.72 |
| 114 | 1607.14 | 4 | SLE Q | -29178.10 | -42.73 | 1330.85 | 0.00 | 78.54 | 3.06 | 44.91 |
| 115 | 1666.67 | 4 | SLE Q | -28052.40 | -22.73 | 708.01 | 0.00 | 78.54 | 2.65 | 39.17 |
| 116 | 1726.19 | 4 | SLE Q | -26928.20 | -7.19 | 223.81 | 0.00 | 78.54 | 2.30 | 34.40 |
| 117 | 1785.71 | 4 | SLE Q | -25805.50 | 4.38 | -136.43 | 0.00 | 78.54 | 2.17 | 32.42 |
| 118 | 1845.24 | 4 | SLE Q | -24684.10 | 12.44 | -387.48 | 0.00 | 78.54 | 2.21 | 32.82 |
| 119 | 1904.76 | 4 | SLE Q | -23564.10 | 17.47 | -544.05 | 0.00 | 78.54 | 2.20 | 32.56 |
| 120 | 1964.29 | 4 | SLE Q | -22445.30 | 19.93 | -620.68 | 0.00 | 78.54 | 2.15 | 31.74 |
| 121 | 2023.81 | 4 | SLE Q | -21327.80 | 20.28 | -631.69 | 0.00 | 78.54 | 2.06 | 30.45 |
| 122 | 2083.33 | 4 | SLE Q | -20211.40 | 18.98 | -591.17 | 0.00 | 78.54 | 1.95 | 28.80 |
| 123 | 2142.86 | 4 | SLE Q | -19096.00 | 16.47 | -512.94 | 0.00 | 78.54 | 1.82 | 26.89 |
| 124 | 2202.38 | 4 | SLE Q | -17981.70 | 13.18 | -410.57 | 0.00 | 78.54 | 1.67 | 24.81 |
| 125 | 2261.90 | 4 | SLE Q | -16868.40 | 9.55 | -297.46 | 0.00 | 78.54 | 1.53 | 22.66 |
| 126 | 2321.43 | 4 | SLE Q | -15755.90 | 6.00 | -186.79 | 0.00 | 78.54 | 1.38 | 20.53 |
| 127 | 2380.95 | 4 | SLE Q | -14644.30 | 2.94 | -91.66 | 0.00 | 78.54 | 1.24 | 18.50 |
| 128 | 2440.48 | 4 | SLE Q | -13533.50 | 0.81 | -25.07 | 0.00 | 78.54 | 1.11 | 16.68 |
| 129 | 2500.00 | 4 | SLE Q | -12423.50 | 0.00 | 0.00 | 0.00 | 78.54 | 1.01 | 15.15 |

Stato limite d'esercizio - Verifiche a fessurazione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | c <mm> | s <mm> | K _c | φ _{Eq} | Δ _{mm} <mm> | λ _B <cmq> | A _c eff <cmq> | σ _s <daN/cmq> | e _{mm} | W _k <mm> |
|------|-----------|----|-------|------------|--------------|--------------|-----------|-----------|----------------|-----------------|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------|------------------------|
| 87 | 0.00 | 4 | SLE Q | -52378.40 | 46061.50 | -1479.02 | 46.00 | 136.36 | 0.50 | 20.00 | 203.54 | 21.99 | 1226.47 | 1037.87 | 0.30 | 0.10 |
| 88 | 59.52 | 4 | SLE Q | -53222.40 | 48734.50 | -1564.85 | 46.00 | 136.36 | 0.50 | 20.00 | 204.22 | 21.99 | 1233.92 | 1125.43 | 0.33 | 0.11 |
| 89 | 119.05 | 4 | SLE Q | -53229.20 | 50368.60 | -1617.33 | 46.00 | 136.36 | 0.50 | 20.00 | 204.74 | 21.99 | 1239.66 | 1185.51 | 0.35 | 0.12 |
| 90 | 178.57 | 4 | SLE Q | -53237.60 | 51114.80 | -1641.29 | 46.00 | 136.36 | 0.50 | 20.00 | 204.97 | 21.99 | 1242.12 | 1212.93 | 0.35 | 0.12 |
| 91 | 238.09 | 4 | SLE Q | -53247.70 | 51112.30 | -1641.21 | 46.00 | 136.36 | 0.50 | 20.00 | 204.96 | 21.99 | 1242.08 | 1212.71 | 0.35 | 0.12 |
| 92 | 297.62 | 4 | SLE Q | -53259.40 | 50488.50 | -1621.17 | 46.00 | 136.36 | 0.50 | 20.00 | 204.77 | 21.99 | 1239.97 | 1189.54 | 0.35 | 0.12 |
| 93 | 357.14 | 4 | SLE Q | -53272.90 | 49311.10 | -1583.37 | 46.00 | 136.36 | 0.50 | 20.00 | 204.40 | 21.99 | 1235.84 | 1146.01 | 0.33 | 0.12 |
| 94 | 416.67 | 4 | SLE Q | -52101.50 | 47505.00 | -1525.38 | 46.00 | 136.36 | 0.50 | 20.00 | 204.15 | 21.99 | 1233.16 | 1094.26 | 0.32 | 0.11 |
| 95 | 476.19 | 4 | SLE Q | -50932.90 | 45168.20 | -1450.34 | 46.00 | 136.36 | 0.50 | 20.00 | 203.69 | 21.99 | 1228.06 | 1023.07 | 0.30 | 0.10 |
| 96 | 535.71 | 4 | SLE Q | -49767.00 | 42439.60 | -1362.73 | 46.00 | 136.36 | 0.50 | 20.00 | 203.00 | 21.99 | 1220.50 | 937.67 | 0.27 | 0.09 |
| 97 | 595.24 | 4 | SLE Q | -48603.80 | 39440.20 | -1266.42 | 46.00 | 136.36 | 0.50 | 20.00 | 202.07 | 21.99 | 1210.25 | 842.71 | 0.25 | 0.08 |
| 98 | 654.76 | 4 | SLE Q | -47443.30 | 36273.90 | -1164.75 | 46.00 | 136.36 | 0.50 | 20.00 | 200.85 | 21.99 | 1196.90 | 742.24 | 0.22 | 0.07 |
| 99 | 714.29 | 4 | SLE Q | -46285.20 | 33029.20 | -1060.56 | 46.00 | 136.36 | 0.50 | 20.00 | 199.30 | 21.99 | 1179.79 | 639.78 | 0.19 | 0.06 |
| 100 | 773.81 | 4 | SLE Q | -45129.70 | 29779.90 | -956.23 | 46.00 | 136.36 | 0.50 | 20.00 | 197.31 | 21.99 | 1157.91 | 538.38 | 0.16 | 0.05 |
| 101 | 833.33 | 4 | SLE Q | -43976.50 | 26586.80 | -853.70 | 46.00 | 136.36 | 0.50 | 20.00 | 194.74 | 21.99 | 1129.65 | 440.73 | 0.13 | 0.04 |
| 102 | 892.86 | 4 | SLE Q | -42825.80 | 23498.70 | -754.54 | 46.00 | 136.36 | 0.50 | 20.00 | 191.40 | 21.99 | 1092.96 | 349.18 | 0.10 | 0.03 |
| 103 | 952.38 | 4 | SLE Q | -41677.30 | 20554.00 | -659.99 | 46.00 | 136.36 | 0.50 | 20.00 | 202.76 | 18.85 | 1043.85 | 265.91 | 0.08 | 0.03 |
| 104 | 1011.90 | 4 | SLE Q | -40531.00 | 17781.50 | -570.96 | 46.00 | 136.36 | 0.50 | 20.00 | 216.38 | 15.71 | 976.89 | 192.91 | 0.06 | 0.02 |
| 105 | 1071.43 | 4 | SLE Q | -39387.00 | 15202.10 | -488.14 | 46.00 | 136.36 | 0.50 | 20.00 | 204.68 | 15.71 | 884.96 | 131.87 | 0.04 | 0.01 |
| 106 | 1130.95 | 4 | SLE Q | -38245.00 | 12829.40 | -411.95 | 46.00 | 136.36 | 0.50 | 20.00 | 187.37 | 15.71 | 749.04 | 83.79 | 0.02 | 0.01 |
| 107 | 1190.48 | 4 | SLE Q | -37105.10 | 10671.10 | -342.65 | 46.00 | 136.36 | 0.50 | 20.00 | 177.67 | 12.57 | 538.29 | 48.46 | 0.01 | 0.00 |
| 108 | 1250.00 | 4 | SLE Q | -35967.20 | 8729.56 | -280.30 | 46.00 | 136.36 | 0.50 | 20.00 | 160.19 | 9.42 | 321.33 | 24.13 | 0.01 | 0.00 |
| 130 | 0.00 | 3 | SLE F | -52378.40 | 46061.50 | -1479.02 | 46.00 | 136.36 | 0.50 | 20.00 | 203.54 | 21.99 | 1226.47 | 1037.87 | 0.30 | 0.10 |
| 131 | 59.52 | 3 | SLE F | -53222.40 | 48734.50 | -1564.85 | 46.00 | 136.36 | 0.50 | 20.00 | 204.22 | 21.99 | 1233.92 | 1125.43 | 0.33 | 0.11 |
| 132 | 119.05 | 3 | SLE F | -53229.20 | 50368.60 | -1617.33 | 46.00 | 136.36 | 0.50 | 20.00 | 204.74 | 21.99 | 1239.66 | 1185.51 | 0.35 | 0.12 |
| 133 | 178.57 | 3 | SLE F | -53237.60 | 51114.80 | -1641.29 | 46.00 | 136.36 | 0.50 | 20.00 | 204.97 | 21.99 | 1242.12 | 1212.93 | 0.35 | 0.12 |
| 134 | 238.09 | 3 | SLE F | -53247.70 | 51112.30 | -1641.21 | 46.00 | 136.36 | 0.50 | 20.00 | 204.96 | 21.99 | 1242.08 | 1212.71 | 0.35 | 0.12 |
| 135 | 297.62 | 3 | SLE F | -53259.40 | 50488.50 | -1621.17 | 46.00 | 136.36 | 0.50 | 20.00 | 204.77 | 21.99 | 1239.97 | 1189.54 | 0.35 | 0.12 |
| 136 | 357.14 | 3 | SLE F | -53272.90 | 49311.10 | -1583.37 | 46.00 | 136.36 | 0.50 | 20.00 | 204.40 | 21.99 | 1235.84 | 1146.01 | 0.33 | 0.12 |
| 137 | 416.67 | 3 | SLE F | -52101.50 | 47505.00 | -1525.38 | 46.00 | 136.36 | 0.50 | 20.00 | 204.15 | 21.99 | 1233.16 | 1094.26 | 0.32 | 0.11 |
| 138 | 476.19 | 3 | SLE F | -50932.90 | 45168.20 | -1450.34 | 46.00 | 136.36 | 0.50 | 20.00 | 203.69 | 21.99 | 1228.06 | 1023.07 | 0.30 | 0.10 |
| 139 | 535.71 | 3 | SLE F | -49767.00 | 42439.60 | -1362.73 | 46.00 | 136.36 | 0.50 | 20.00 | 203.00 | 21.99 | 1220.50 | 937.67 | 0.27 | 0.09 |
| 140 | 595.24 | 3 | SLE F | -48603.80 | 39440.20 | -1266.42 | 46.00 | 136.36 | 0.50 | 20.00 | 202.07 | 21.99 | 1210.25 | 842.71 | 0.25 | 0.08 |
| 141 | 654.76 | 3 | SLE F | -47443.30 | 36273.90 | -1164.75 | 46.00 | 136.36 | 0.50 | 20.00 | 200.85 | 21.99 | 1196.90 | 742.24 | 0.22 | 0.07 |
| 142 | 714.29 | 3 | SLE F | -46285.20 | 33029.20 | -1060.56 | 46.00 | 136.36 | 0.50 | 20.00 | 199.30 | 21.99 | 1179.79 | 639.78 | 0.19 | 0.06 |
| 143 | 773.81 | 3 | SLE F | -45129.70 | 29779.90 | -956.23 | 46.00 | 136.36 | 0.50 | 20.00 | 197.31 | 21.99 | 1157.91 | 538.38 | 0.16 | 0.05 |
| 144 | 833.33 | 3 | SLE F | -43976.50 | 26586.80 | -853.70 | 46.00 | 136.36 | 0.50 | 20.00 | 194.74 | 21.99 | 1129.65 | 440.73 | 0.13 | 0.04 |
| 145 | 892.86 | 3 | SLE F | -42825.80 | 23498.70 | -754.54 | 46.00 | 136.36 | 0.50 | 20.00 | 191.40 | 21.99 | 1092.96 | 349.18 | 0.10 | 0.03 |
| 146 | 952.38 | 3 | SLE F | -41677.30 | 20554.00 | -659.99 | 46.00 | 136.36 | 0.50 | 20.00 | 202.76 | 18.85 | 1043.85 | 265.91 | 0.08 | 0.03 |
| 147 | 1011.90 | 3 | SLE F | -40531.00 | 17781.50 | -570.96 | 46.00 | 136.36 | 0.50 | 20.00 | 216.38 | 15.71 | 976.89 | 192.91 | 0.06 | 0.02 |
| 148 | 1071.43 | 3 | SLE F | -39387.00 | 15202.10 | -488.14 | 46.00 | 136.36 | 0.50 | 20.00 | 204.68 | 15.71 | 884.96 | 131.87 | 0.04 | 0.01 |
| 149 | 1130.95 | 3 | SLE F | -38245.00 | 12829.40 | -411.95 | 46.00 | 136.36 | 0.50 | 20.00 | 187.37 | 15.71 | 749.04 | 83.79 | 0.02 | 0.01 |
| 150 | 1190.48 | 3 | SLE F | -37105.10 | 10671.10 | -342.65 | 46.00 | 136.36 | 0.50 | 20.00 | 177.67 | 12.57 | 538.29 | 48.46 | 0.01 | 0.00 |
| 151 | 1250.00 | 3 | SLE F | -35967.20 | 8729.56 | -280.30 | 46.00 | 136.36 | 0.50 | 20.00 | 160.19 | 9.42 | 321.33 | 24.13 | 0.01 | 0.00 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 5 | SLU N cost - min. sic. |
| 13 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 47 | C.Rare - Sc min (max compr.), C.Rare - Sf max (max trax.), C.Rare - Sf min (max compr.) |
| 68 | C.Rare - Sc max (min. compr.) |
| 90 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf max (max trax.), C.Q.Per. - Sf min (max compr.), C.Q.Per. - Wk Max |

Relazione di calcolo

| | |
|-----|---------------------------------|
| 111 | C.Q.Per. - Sc max (min. compr.) |
| 133 | C.Freq - Wk Max |

Palo n. 10

Caratteristiche del palo e dei materiali utilizzati

| R | Cf | Cls | Fck | Fctk | Fcd | Fctd | TP | Fyk | Fyd |
|-------|------|--------|-----------|-----------|-----------|-----------|-------|-----------|-----------|
| <cm> | <cm> | | <daN/cm²> | <daN/cm²> | <daN/cm²> | <daN/cm²> | | <daN/cm²> | <daN/cm²> |
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N | Mx | My | Mz |
|-----|-------|--------|--------|--------|
| | <daN> | <daNm> | <daNm> | <daNm> |
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 10 (-17)

| Caso | CC | TCC | Az | N | Tx | Ty | Mx | My |
|------|----|-------|-----|----------|---------|-------|----------|--------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | RVN | 49182.60 | 7463.04 | 0.38 | 59871.20 | 47.77 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 49182.60 | 7463.04 | 0.38 | 59871.20 | 47.77 |
| 2 | 2 | SLE R | RVN | 36431.60 | 5528.18 | 0.28 | 44349.10 | 35.38 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 36431.60 | 5528.18 | 0.28 | 44349.10 | 35.38 |
| 3 | 3 | SLE F | RVN | 36431.60 | 5528.18 | 0.28 | 44349.10 | 35.38 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 36431.60 | 5528.18 | 0.28 | 44349.10 | 35.38 |
| 4 | 4 | SLE Q | RVN | 36431.60 | 5528.18 | 0.28 | 44349.10 | 35.38 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 36431.60 | 5528.18 | 0.28 | 44349.10 | 35.38 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N | Tx | Ty | Mx | My |
|------|----|-------|------|-----------|----------|-------|-----------|--------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | 1 | -49182.60 | -7463.04 | -0.38 | -59871.20 | -47.77 |
| 2 | 2 | SLE R | 1 | -36431.60 | -5528.18 | -0.28 | -44349.10 | -35.38 |
| 3 | 3 | SLE F | 1 | -36431.60 | -5528.18 | -0.28 | -44349.10 | -35.38 |
| 4 | 4 | SLE Q | 1 | -36431.60 | -5528.18 | -0.28 | -44349.10 | -35.38 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X | CC | TCC | N | My | Mz | Nu | MRdy | MRdz | Rott. | α | Sic. |
|------|---------|----|-----|-----------|----------|--------|-----------|-----------|---------|-------|--------|--------|
| | <cm> | | | <daN> | <daNm> | <daNm> | <daN> | <daNm> | <daNm> | | <grad> | |
| 1 | 0.00 | 1 | SLU | -49182.60 | 59618.00 | -47.57 | -49182.60 | 167390.00 | -593.26 | 2-3 | 180.00 | 2.808 |
| 2 | 59.52 | 1 | SLU | -50048.90 | 63300.60 | -50.51 | -50048.90 | 167747.00 | -611.63 | 2-3 | 180.00 | 2.650 |
| 3 | 119.05 | 1 | SLU | -50100.00 | 65603.90 | -52.34 | -50100.00 | 167768.00 | -612.72 | 2-3 | 180.00 | 2.557 |
| 4 | 178.57 | 1 | SLU | -50152.60 | 66726.90 | -53.24 | -50152.60 | 167790.00 | -613.84 | 2-3 | 180.00 | 2.515 |
| 5 | 238.09 | 1 | SLU | -50206.80 | 66853.10 | -53.34 | -50206.80 | 167812.00 | -614.99 | 2-3 | 180.00 | 2.510 |
| 6 | 297.62 | 1 | SLU | -50262.60 | 66150.70 | -52.78 | -50262.60 | 167835.00 | -616.18 | 2-3 | 180.00 | 2.537 |
| 7 | 357.14 | 1 | SLU | -50320.00 | 64708.60 | -51.63 | -50320.00 | 167859.00 | -617.40 | 2-3 | 180.00 | 2.594 |
| 8 | 416.67 | 1 | SLU | -49223.70 | 62423.80 | -49.81 | -49223.70 | 167407.00 | -594.13 | 2-3 | 180.00 | 2.682 |
| 9 | 476.19 | 1 | SLU | -48130.00 | 59425.60 | -47.43 | -48130.00 | 166955.00 | -571.02 | 2-3 | 180.00 | 2.809 |
| 10 | 535.71 | 1 | SLU | -47038.80 | 55898.20 | -44.60 | -47038.80 | 166505.00 | -548.08 | 2-3 | 180.00 | 2.979 |
| 11 | 595.24 | 1 | SLU | -45950.30 | 52001.90 | -41.49 | -45950.30 | 166055.00 | -525.29 | 2-3 | 180.00 | 3.193 |
| 12 | 654.76 | 1 | SLU | -44864.10 | 47875.10 | -38.20 | -44864.10 | 165606.00 | -502.06 | 2-3 | 180.00 | 3.459 |
| 13 | 714.29 | 1 | SLU | -43780.40 | 43635.20 | -34.81 | -43780.40 | 165156.00 | -477.66 | 2-3 | 180.00 | 3.785 |
| 14 | 773.81 | 1 | SLU | -42699.00 | 39380.80 | -31.42 | -42699.00 | 164707.00 | -453.43 | 2-3 | 180.00 | 4.182 |
| 15 | 833.33 | 1 | SLU | -41619.90 | 35192.80 | -28.08 | -41619.90 | 164259.00 | -429.36 | 2-3 | 180.00 | 4.667 |
| 16 | 892.86 | 1 | SLU | -40543.10 | 31136.90 | -24.84 | -40543.10 | 163811.00 | -405.45 | 2-3 | 180.00 | 5.261 |
| 17 | 952.38 | 1 | SLU | -39468.40 | 27264.20 | -21.75 | -39468.40 | 163365.00 | -381.70 | 2-3 | 180.00 | 5.992 |
| 18 | 1011.90 | 1 | SLU | -38395.80 | 23613.80 | -18.84 | -38395.80 | 162919.00 | -358.11 | 2-3 | 180.00 | 6.899 |
| 19 | 1071.43 | 1 | SLU | -37325.30 | 20213.90 | -16.13 | -37325.30 | 162474.00 | -334.67 | 2-3 | 180.00 | 8.038 |
| 20 | 1130.95 | 1 | SLU | -36256.80 | 17083.20 | -13.63 | -36256.80 | 162029.00 | -311.38 | 2-3 | 180.00 | 9.485 |
| 21 | 1190.48 | 1 | SLU | -35190.30 | 14232.40 | -11.36 | -35190.30 | 161584.00 | -286.80 | 2-3 | 180.00 | 11.353 |
| 22 | 1250.00 | 1 | SLU | -34125.60 | 11665.40 | -9.31 | -34125.60 | 161139.00 | -261.82 | 2-3 | 180.00 | 13.813 |
| 23 | 1309.52 | 1 | SLU | -33062.80 | 9380.40 | -7.48 | -33062.80 | 160695.00 | -236.99 | 2-3 | 180.00 | 17.131 |
| 24 | 1369.05 | 1 | SLU | -32001.70 | 7371.01 | -5.88 | -32001.70 | 160251.00 | -212.33 | 2-3 | 180.00 | 21.741 |

Relazione di calcolo

| | | | | | | | | | | | | |
|----|---------|---|-----|-----------|---------|-------|-------------|------------|---------|-----|--------|--------|
| 25 | 1428.57 | 1 | SLU | -30942.40 | 5627.09 | -4.49 | -30942.40 | 159808.00 | -187.81 | 2-3 | 180.00 | 28.400 |
| 26 | 1488.10 | 1 | SLU | -29884.70 | 4135.56 | -3.30 | -29884.70 | 159366.00 | -163.44 | 2-3 | 180.00 | 38.536 |
| 27 | 1547.62 | 1 | SLU | -28828.60 | 2881.11 | -2.30 | -28828.60 | 158924.00 | -139.22 | 2-3 | 180.00 | 55.161 |
| 28 | 1607.14 | 1 | SLU | -27774.10 | 1846.79 | -1.47 | -27774.10 | 158483.00 | -115.15 | 2-3 | 180.00 | 85.815 |
| 29 | 1666.67 | 1 | SLU | -26723.00 | 1014.50 | -0.81 | -2571250.00 | 158042.00 | -91.21 | 2-3 | 180.00 | 96.226 |
| 30 | 1726.19 | 1 | SLU | -25669.40 | 365.42 | -0.29 | -2571250.00 | 157600.00 | -65.47 | 2-3 | 180.00 | >100 |
| 31 | 1785.71 | 1 | SLU | -24619.20 | -119.67 | 0.10 | -2571250.00 | -157158.00 | -39.75 | 2-3 | 0.00 | >100 |
| 32 | 1845.24 | 1 | SLU | -23570.20 | -460.16 | 0.37 | -2571250.00 | -156717.00 | -14.20 | 2-3 | 0.00 | >100 |
| 33 | 1904.76 | 1 | SLU | -22522.60 | -675.34 | 0.54 | -2571250.00 | -156276.00 | 11.22 | 2-3 | 0.00 | >100 |
| 34 | 1964.29 | 1 | SLU | -21476.10 | -784.36 | 0.63 | -2571250.00 | -155836.00 | 36.49 | 2-3 | 0.00 | >100 |
| 35 | 2023.81 | 1 | SLU | -20430.80 | -806.05 | 0.64 | -2571250.00 | -155396.00 | 61.62 | 2-3 | 0.00 | >100 |
| 36 | 2083.33 | 1 | SLU | -19386.60 | -758.95 | 0.61 | -2571250.00 | -154956.00 | 86.60 | 2-3 | 0.00 | >100 |
| 37 | 2142.86 | 1 | SLU | -18343.50 | -661.28 | 0.53 | -2571250.00 | -154517.00 | 111.44 | 2-3 | 0.00 | >100 |
| 38 | 2202.38 | 1 | SLU | -17301.30 | -530.94 | 0.42 | -2571250.00 | -154078.00 | 136.19 | 2-3 | 0.00 | >100 |
| 39 | 2261.90 | 1 | SLU | -16260.10 | -385.56 | 0.33 | -2571250.00 | -153638.00 | 162.94 | 2-3 | 0.00 | >100 |
| 40 | 2321.43 | 1 | SLU | -15219.70 | -242.56 | 0.19 | -2571250.00 | -153198.00 | 189.54 | 2-3 | 0.00 | >100 |
| 41 | 2380.95 | 1 | SLU | -14180.10 | -119.21 | 0.10 | -2571250.00 | -152758.00 | 216.00 | 2-3 | 0.00 | >100 |
| 42 | 2440.48 | 1 | SLU | -13141.30 | -32.65 | 0.03 | -2571250.00 | -152318.00 | 242.33 | 2-3 | 0.00 | >100 |
| 43 | 2500.00 | 1 | SLU | -12103.20 | 0.00 | 0.00 | -2571250.00 | | | | | >100 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | OC | TCC | Ty <daN> | Tz <daN> | lw <cm> | Asw <cmq> | Vsdu <daN> | ctgθ | VRsd <daN> | VRod <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|------------|--------------|---------------|------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SLU | 7463.05 | 0.38 | 0.85 | 11.31 | 7463.05 | 1.00 | 32294.70 | 338713.00 | 32294.70 | 4.327 |
| 2 | 59.52 | 1 | SLU | 4970.43 | 0.25 | 0.85 | 11.31 | 4970.43 | 1.00 | 32294.70 | 338837.00 | 32294.70 | 6.497 |
| 3 | 119.05 | 1 | SLU | 2824.52 | 0.14 | 0.85 | 11.31 | 2824.52 | 1.00 | 32294.70 | 338844.00 | 32294.70 | 11.434 |
| 4 | 178.57 | 1 | SLU | 1000.05 | 0.05 | 0.85 | 11.31 | 1000.05 | 1.00 | 32294.70 | 338852.00 | 32294.70 | 32.293 |
| 5 | 238.09 | 1 | SLU | -528.91 | -0.03 | 0.85 | 11.31 | 528.91 | 1.00 | 32294.70 | 338860.00 | 32294.70 | 61.059 |
| 6 | 297.62 | 1 | SLU | -1788.54 | -0.09 | 0.85 | 11.31 | 1788.54 | 1.00 | 32294.70 | 338868.00 | 32294.70 | 18.056 |
| 7 | 357.14 | 1 | SLU | -3125.56 | -0.16 | 0.85 | 11.31 | 3125.56 | 1.00 | 32294.70 | 338876.00 | 32294.70 | 10.332 |
| 8 | 416.67 | 1 | SLU | -4492.64 | -0.23 | 0.85 | 11.31 | 4492.64 | 1.00 | 32294.70 | 338719.00 | 32294.70 | 7.188 |
| 9 | 476.19 | 1 | SLU | -5529.74 | -0.28 | 0.85 | 11.31 | 5529.74 | 1.00 | 32294.70 | 338562.00 | 32294.70 | 5.840 |
| 10 | 535.71 | 1 | SLU | -6277.70 | -0.32 | 0.85 | 11.31 | 6277.70 | 1.00 | 32294.70 | 338406.00 | 32294.70 | 5.144 |
| 11 | 595.24 | 1 | SLU | -6775.14 | -0.34 | 0.85 | 11.31 | 6775.14 | 1.00 | 32294.70 | 338250.00 | 32294.70 | 4.767 |
| 12 | 654.76 | 1 | SLU | -7058.19 | -0.36 | 0.85 | 11.31 | 7058.19 | 1.00 | 32294.70 | 338094.00 | 32294.70 | 4.575 |
| 13 | 714.29 | 1 | SLU | -7160.27 | -0.36 | 0.85 | 11.31 | 7160.27 | 1.00 | 32294.70 | 337939.00 | 32294.70 | 4.510 |
| 14 | 773.81 | 1 | SLU | -7112.01 | -0.36 | 0.85 | 11.31 | 7112.01 | 1.00 | 32294.70 | 337784.00 | 32294.70 | 4.541 |
| 15 | 833.33 | 1 | SLU | -6941.16 | -0.35 | 0.85 | 11.31 | 6941.16 | 1.00 | 32294.70 | 337630.00 | 32294.70 | 4.653 |
| 16 | 892.86 | 1 | SLU | -6672.66 | -0.34 | 0.85 | 11.31 | 6672.66 | 1.00 | 32294.70 | 337475.00 | 32294.70 | 4.840 |
| 17 | 952.38 | 1 | SLU | -6328.68 | -0.32 | 0.85 | 11.31 | 6328.68 | 1.00 | 32294.70 | 337322.00 | 32294.70 | 5.103 |
| 18 | 1011.90 | 1 | SLU | -5928.72 | -0.30 | 0.85 | 11.31 | 5928.72 | 1.00 | 32294.70 | 337168.00 | 32294.70 | 5.447 |
| 19 | 1071.43 | 1 | SLU | -5489.77 | -0.28 | 0.85 | 11.31 | 5489.77 | 1.00 | 32294.70 | 337015.00 | 32294.70 | 5.883 |
| 20 | 1130.95 | 1 | SLU | -5026.45 | -0.25 | 0.85 | 11.31 | 5026.45 | 1.00 | 32294.70 | 336862.00 | 32294.70 | 6.425 |
| 21 | 1190.48 | 1 | SLU | -4551.22 | -0.23 | 0.85 | 11.31 | 4551.22 | 1.00 | 32294.70 | 336709.00 | 32294.70 | 7.096 |
| 22 | 1250.00 | 1 | SLU | -4074.50 | -0.21 | 0.85 | 11.31 | 4074.50 | 1.00 | 32294.70 | 336556.00 | 32294.70 | 7.926 |
| 23 | 1309.52 | 1 | SLU | -3604.93 | -0.18 | 0.85 | 11.31 | 3604.93 | 1.00 | 32294.70 | 336404.00 | 32294.70 | 8.958 |
| 24 | 1369.05 | 1 | SLU | -3149.50 | -0.16 | 0.85 | 11.31 | 3149.50 | 1.00 | 32294.70 | 336252.00 | 32294.70 | 10.254 |
| 25 | 1428.57 | 1 | SLU | -2713.78 | -0.14 | 0.85 | 11.31 | 2713.78 | 1.00 | 32294.70 | 336100.00 | 32294.70 | 11.900 |
| 26 | 1488.10 | 1 | SLU | -2302.08 | -0.12 | 0.85 | 11.31 | 2302.08 | 1.00 | 32294.70 | 335949.00 | 32294.70 | 14.028 |
| 27 | 1547.62 | 1 | SLU | -1917.64 | -0.10 | 0.85 | 11.31 | 1917.64 | 1.00 | 32294.70 | 335797.00 | 32294.70 | 16.841 |
| 28 | 1607.14 | 1 | SLU | -1562.76 | -0.08 | 0.85 | 11.31 | 1562.76 | 1.00 | 32294.70 | 335646.00 | 32294.70 | 20.665 |
| 29 | 1666.67 | 1 | SLU | -1239.01 | -0.06 | 0.85 | 11.31 | 1239.01 | 1.00 | 32294.70 | 335496.00 | 32294.70 | 26.065 |
| 30 | 1726.19 | 1 | SLU | -947.30 | -0.05 | 0.85 | 11.31 | 947.30 | 1.00 | 32294.70 | 335345.00 | 32294.70 | 34.092 |
| 31 | 1785.71 | 1 | SLU | -688.07 | -0.03 | 0.85 | 11.31 | 688.07 | 1.00 | 32294.70 | 335195.00 | 32294.70 | 46.935 |
| 32 | 1845.24 | 1 | SLU | -461.38 | -0.02 | 0.85 | 11.31 | 461.38 | 1.00 | 32294.70 | 335044.00 | 32294.70 | 69.997 |
| 33 | 1904.76 | 1 | SLU | -267.00 | -0.01 | 0.85 | 11.31 | 267.00 | 1.00 | 32294.70 | 334894.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -104.55 | -0.01 | 0.85 | 11.31 | 104.55 | 1.00 | 32294.70 | 334744.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | 26.48 | 0.00 | 0.85 | 11.31 | 26.48 | 1.00 | 32294.70 | 334595.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 126.66 | 0.01 | 0.85 | 11.31 | 126.66 | 1.00 | 32294.70 | 334445.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 196.50 | 0.01 | 0.85 | 11.31 | 196.50 | 1.00 | 32294.70 | 334296.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 236.51 | 0.01 | 0.85 | 11.31 | 236.51 | 1.00 | 32294.70 | 334146.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 247.09 | 0.01 | 0.85 | 11.31 | 247.09 | 1.00 | 32294.70 | 333997.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 228.56 | 0.01 | 0.85 | 11.31 | 228.56 | 1.00 | 32294.70 | 333848.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 181.12 | 0.01 | 0.85 | 11.31 | 181.12 | 1.00 | 32294.70 | 333699.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 104.92 | 0.01 | 0.85 | 11.31 | 104.92 | 1.00 | 32294.70 | 333550.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | OC | TCC | N <daN> | Mz <daNm> | My <daNm> | AfT <cmq> | AfC <cmq> | σc <daN/cmq> | σf <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-----------------|-----------------|
| 44 | 0.00 | 2 | SLE R | -36431.60 | -35.23 | 44161.50 | 47.12 | 31.42 | 43.79 | 1169.54 |
| 45 | 59.52 | 2 | SLE R | -37386.50 | -37.41 | 46889.30 | 47.12 | 31.42 | 46.57 | 1258.91 |
| 46 | 119.05 | 2 | SLE R | -37614.40 | -38.77 | 48595.50 | 47.12 | 31.42 | 48.32 | 1319.76 |
| 47 | 178.57 | 2 | SLE R | -37843.50 | -39.44 | 49427.30 | 47.12 | 31.42 | 49.17 | 1347.87 |
| 48 | 238.09 | 2 | SLE R | -38073.80 | -39.51 | 49520.80 | 47.12 | 31.42 | 49.25 | 1348.30 |
| 49 | 297.62 | 2 | SLE R | -38305.40 | -39.10 | 49000.50 | 47.12 | 31.42 | 48.70 | 1325.73 |
| 50 | 357.14 | 2 | SLE R | -38538.10 | -38.24 | 47932.30 | 47.12 | 31.42 | 47.59 | 1282.67 |
| 51 | 416.67 | 2 | SLE R | -37741.10 | -36.89 | 46239.90 | 47.12 | 31.42 | 45.88 | 1229.93 |

Relazione di calcolo

| | | | | | | | | | | |
|----|---------|---|------|------------|--------|-----------|-------|-------|-------|---------|
| 10 | 476,18 | 2 | 9,25 | -36966,30 | -25,10 | 44019,00 | 47,12 | 31,42 | 40,82 | 1,37,43 |
| 11 | 325,71 | 2 | 9,25 | -36,53,40 | -23,64 | 4,408,10 | 47,12 | 31,42 | 40,85 | 1079,33 |
| 12 | 280,24 | 1 | 8,77 | 22384,40 | 30,28 | 38,79,40 | 47,12 | 31,42 | 38,20 | 948,24 |
| 13 | 821,26 | 1 | 8,77 | 22,78,00 | 18,22 | 22,88,00 | 47,12 | 31,42 | 27,27 | 869,29 |
| 14 | 274,29 | 1 | 8,77 | -21,86,10 | -25,79 | 22,03,40 | 47,12 | 31,42 | 27,26 | 8,9,99 |
| 15 | 220,91 | 1 | 8,77 | -20,00,00 | -23,23 | 22,70,90 | 47,12 | 31,42 | 28,28 | 688,10 |
| 16 | 823,33 | 2 | 9,25 | -32217,10 | -23,13 | 26069,30 | 47,12 | 31,42 | 23,13 | 336,77 |
| 17 | 822,30 | 2 | 9,25 | -3,435,20 | -3,44 | 23069,30 | 47,09 | 34,76 | 22,06 | 438,00 |
| 18 | 922,28 | 1 | 8,77 | 22216,00 | 28,21 | 20,96,00 | 47,98 | 31,26 | 19,28 | 368,26 |
| 19 | 1071,40 | 1 | 8,77 | 22876,40 | 28,28 | 12,97,00 | 40,28 | 30,00 | 16,27 | 119,44 |
| 20 | 1071,40 | 1 | 8,77 | -22876,40 | -27,28 | 12,97,00 | 40,34 | 30,00 | 17,26 | 204,66 |
| 21 | 1170,92 | 1 | 8,77 | -22734,00 | -27,10 | 12,54,00 | 37,70 | 30,84 | 17,28 | 120,64 |
| 22 | 1130,43 | 2 | 9,25 | -27350,10 | -8,41 | 10362,00 | 34,56 | 30,08 | 3,13 | 226,37 |
| 23 | 1079,33 | 2 | 9,25 | -26777,70 | -8,13 | 8642,34 | 21,42 | 37,12 | 7,42 | 103,17 |
| 24 | 1309,22 | 1 | 8,77 | 22028,00 | 3,24 | 8228,47 | 12,18 | 32,27 | 8,20 | 82,49 |
| 25 | 1309,22 | 1 | 8,77 | 22787,00 | 3,28 | 2760,07 | 18,26 | 32,83 | 7,96 | 20,28 |
| 26 | 1428,23 | 1 | 8,77 | -22268,90 | -21,23 | 2760,07 | 0,00 | 32,24 | 4,75 | 28,14 |
| 27 | 1408,10 | 1 | 8,77 | -22107,00 | -21,44 | 3067,09 | 0,00 | 32,24 | 9,57 | 20,40 |
| 28 | 1247,32 | 2 | 9,25 | -22336,20 | -21,73 | 2,36,13 | 0,00 | 31,74 | 2,07 | 42,93 |
| 29 | 1207,14 | 2 | 9,25 | -22,721,90 | -21,69 | 2267,89 | 0,00 | 31,74 | 2,51 | 38,64 |
| 30 | 1228,22 | 1 | 8,77 | 22708,00 | 3,20 | 20,7,48 | 0,00 | 32,27 | 12,18 | 37,22 |
| 31 | 1278,14 | 1 | 8,77 | 22278,20 | 3,22 | 17,0,28 | 0,00 | 32,27 | 12,20 | 117,22 |
| 32 | 1205,21 | 1 | 8,77 | -12,885,00 | 3,23 | -18,66 | 0,00 | 32,24 | 12,66 | 24,89 |
| 33 | 1245,24 | 2 | 9,25 | -12,25,10 | 3,27 | -263,16 | 0,00 | 31,74 | 1,73 | 25,71 |
| 34 | 1304,73 | 2 | 9,25 | -12,268,90 | 3,41 | -200,23 | 0,00 | 31,74 | 1,75 | 25,91 |
| 35 | 1328,22 | 1 | 8,77 | 12609,00 | 3,46 | 287,00 | 0,00 | 32,27 | 12,48 | 125,22 |
| 36 | 2078,21 | 1 | 8,77 | 12821,00 | 3,48 | 297,03 | 0,00 | 32,27 | 12,88 | 125,21 |
| 37 | 2085,23 | 1 | 8,77 | -12,296,00 | 3,48 | -267,19 | 0,00 | 32,24 | 12,60 | 20,23 |
| 38 | 2120,92 | 1 | 8,77 | -12,340,90 | 3,29 | -268,94 | 0,00 | 32,24 | 12,50 | 20,17 |
| 39 | 2202,33 | 2 | 9,25 | -14386,20 | 3,31 | -203,23 | 0,00 | 31,74 | 1,39 | 20,22 |
| 40 | 2221,90 | 2 | 9,25 | -12932,90 | 3,23 | -235,00 | 0,00 | 31,74 | 1,27 | 18,17 |
| 41 | 2371,43 | 1 | 8,77 | 12820,00 | 3,24 | 179,28 | 0,00 | 32,27 | 12,18 | 117,21 |
| 42 | 2380,22 | 1 | 8,77 | 12327,40 | 3,23 | 88,00 | 0,00 | 32,27 | 12,05 | 125,22 |
| 43 | 2420,48 | 1 | 8,77 | -12,376,40 | 3,22 | -24,19 | 0,00 | 32,24 | 0,95 | 14,23 |
| 44 | 2420,00 | 1 | 8,77 | -12,375,00 | 3,22 | 0,00 | 0,00 | 32,24 | 0,98 | 13,23 |
| 45 | 0,00 | 4 | 9,25 | -36431,00 | -25,23 | 44,261,00 | 47,12 | 31,42 | 40,78 | 1,69,24 |
| 46 | 39,22 | 4 | 9,25 | -37386,20 | -27,41 | 46839,30 | 47,12 | 31,42 | 46,57 | 1079,31 |
| 47 | 119,23 | 1 | 8,77 | 22371,40 | 38,23 | 18,96,00 | 47,12 | 31,42 | 18,26 | 137,22 |
| 48 | 128,23 | 1 | 8,77 | 22878,00 | 39,44 | 19,67,00 | 47,12 | 31,42 | 19,27 | 137,23 |
| 49 | 208,22 | 4 | 9,25 | -20,079,90 | -18,21 | 4920,90 | 47,12 | 31,42 | 49,25 | 1348,23 |
| 50 | 227,23 | 4 | 9,25 | -20,025,40 | -18,10 | 4920,90 | 47,12 | 31,42 | 49,20 | 1325,23 |
| 51 | 227,14 | 4 | 9,25 | -18738,10 | -23,24 | 4732,20 | 47,12 | 31,42 | 47,58 | 1282,27 |
| 52 | 4,26,27 | 4 | 9,25 | -17741,10 | -26,13 | 46239,90 | 47,12 | 31,42 | 47,98 | 1029,32 |
| 53 | 276,14 | 1 | 8,77 | 22978,00 | 38,21 | 17,079,00 | 47,12 | 31,42 | 18,26 | 117,21 |
| 54 | 280,21 | 1 | 8,77 | 22758,40 | 38,24 | 17,028,00 | 47,12 | 31,42 | 18,26 | 1079,28 |
| 55 | 285,24 | 4 | 9,25 | -22,363,40 | -20,23 | 22278,90 | 47,12 | 31,42 | 22,20 | 820,24 |
| 56 | 284,26 | 4 | 9,25 | -22,379,20 | -20,23 | 22267,00 | 47,12 | 31,42 | 22,17 | 8,9,99 |
| 57 | 7,24,29 | 4 | 9,25 | -32798,10 | -25,79 | 32722,40 | 47,12 | 31,42 | 31,26 | 763,39 |
| 58 | 773,31 | 4 | 9,25 | -32000,70 | -23,27 | 29,70,90 | 47,12 | 31,42 | 28,38 | 679,10 |
| 59 | 828,22 | 1 | 8,77 | 22777,40 | 39,20 | 26088,00 | 47,12 | 31,42 | 26,28 | 227,22 |
| 60 | 828,22 | 1 | 8,77 | 22786,20 | 38,40 | 23087,00 | 47,98 | 31,26 | 27,28 | 228,22 |
| 61 | 828,22 | 1 | 8,77 | -22,55,00 | -26,11 | 20,95,00 | 47,98 | 34,26 | 19,28 | 3,9,23 |
| 62 | 1071,90 | 4 | 9,25 | -22,876,40 | -23,96 | 12487,00 | 40,34 | 30,00 | 12,27 | 228,44 |
| 63 | 1071,43 | 4 | 9,25 | -22089,40 | -21,90 | 14973,30 | 40,34 | 30,00 | 10,65 | 206,32 |
| 64 | 1120,92 | 4 | 9,25 | -22226,00 | -23,10 | 12256,00 | 27,70 | 30,84 | 11,28 | 233,64 |
| 65 | 1130,43 | 1 | 8,77 | 22350,00 | 8,21 | 16,26,00 | 37,26 | 32,98 | 9,28 | 118,22 |
| 66 | 1130,00 | 1 | 8,77 | 22777,00 | 8,23 | 8871,03 | 37,26 | 32,98 | 7,26 | 108,20 |
| 67 | 1308,22 | 4 | 9,25 | -22,026,00 | -25,24 | 1948,44 | 22,72 | 32,27 | 2,20 | 38,40 |
| 68 | 1308,22 | 4 | 9,25 | -22,227,10 | -24,23 | 2260,07 | 20,26 | 32,27 | 2,95 | 20,22 |
| 69 | 1428,27 | 4 | 9,25 | -24468,90 | -3,23 | 4,283,21 | 0,00 | 31,74 | 4,15 | 39,14 |
| 70 | 1488,10 | 4 | 9,25 | -22702,00 | -2,44 | 2063,38 | 0,00 | 31,74 | 2,51 | 39,40 |
| 71 | 1487,22 | 1 | 8,77 | 22788,00 | 3,20 | 11,87,21 | 0,00 | 32,27 | 12,97 | 22,28 |
| 72 | 1487,14 | 1 | 8,77 | 22777,40 | 3,20 | 1267,29 | 0,00 | 32,27 | 12,57 | 38,21 |
| 73 | 1487,22 | 4 | 9,25 | -22,408,00 | -23,20 | 20,7,48 | 0,00 | 32,24 | 2,73 | 17,23 |
| 74 | 1426,12 | 4 | 9,25 | -22,46,00 | -23,22 | 27,0,28 | 0,00 | 32,24 | 12,27 | 27,23 |
| 75 | 1785,71 | 4 | 9,25 | -12895,70 | 3,27 | -88,03 | 0,00 | 31,74 | 1,66 | 26,37 |
| 76 | 1873,24 | 1 | 8,77 | 12738,00 | 3,23 | 370,26 | 0,00 | 32,27 | 12,78 | 125,21 |
| 77 | 1907,26 | 1 | 8,77 | 12868,40 | 3,40 | 300,22 | 0,00 | 32,27 | 12,75 | 125,21 |
| 78 | 1874,29 | 4 | 9,25 | -12,028,00 | 3,46 | -287,00 | 0,00 | 32,24 | 12,70 | 25,27 |
| 79 | 2028,91 | 4 | 9,25 | -12,057,00 | 3,48 | -287,03 | 0,00 | 32,24 | 12,68 | 24,24 |
| 80 | 2083,33 | 4 | 9,25 | -16098,00 | 3,41 | -262,19 | 0,00 | 31,74 | 1,60 | 23,27 |
| 81 | 2142,10 | 4 | 9,25 | -12240,30 | 3,29 | -489,14 | 0,00 | 31,74 | 1,50 | 22,10 |
| 82 | 2142,22 | 1 | 8,77 | 12,288,00 | 3,21 | 398,29 | 0,00 | 32,27 | 12,89 | 120,22 |
| 83 | 2142,14 | 1 | 8,77 | 12868,40 | 3,22 | 125,26 | 0,00 | 32,27 | 12,57 | 12,23 |
| 84 | 2127,43 | 4 | 9,25 | -12,010,00 | 3,14 | -178,68 | 0,00 | 32,24 | 12,76 | 12,21 |
| 85 | 2120,92 | 4 | 9,25 | -12,127,90 | 3,23 | -188,00 | 0,00 | 32,24 | 12,05 | 15,26 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|-----------|------|--------|------|-------|------|-------|
| 128 | 2440.48 | 4 | SLE Q | -11576.40 | 0.02 | -24.19 | 0.00 | 78.54 | 0.95 | 14.28 |
| 129 | 2500.00 | 4 | SLE Q | -10825.60 | 0.00 | 0.00 | 0.00 | 78.54 | 0.88 | 13.20 |

Stato limite d'esercizio - Verifiche a fessurazione

| Caso | X <cm> | OC | TCC | N <daN> | My <daNm> | Mz <daNm> | c <mm> | s <mm> | K _c | φ _{eq} | Δ _{sm} <mm> | A _s <cmq> | A _c eff <cmq> | σ _s <daN/cmq> | ε _{sm} | Wk <mm> |
|------|-----------|----|-------|------------|--------------|--------------|-----------|-----------|----------------|-----------------|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------|------------|
| 87 | 0.00 | 4 | SLE Q | -36431.60 | 44161.50 | -35.23 | 46.00 | 136.36 | 0.50 | 20.00 | 207.94 | 21.99 | 1274.80 | 1169.54 | 0.34 | 0.12 |
| 88 | 59.52 | 4 | SLE Q | -37386.50 | 46889.30 | -37.41 | 46.00 | 136.36 | 0.50 | 20.00 | 208.30 | 21.99 | 1278.83 | 1258.91 | 0.37 | 0.13 |
| 89 | 119.05 | 4 | SLE Q | -37614.40 | 48595.50 | -38.77 | 46.00 | 136.36 | 0.50 | 20.00 | 208.61 | 21.99 | 1282.18 | 1319.75 | 0.38 | 0.14 |
| 90 | 178.57 | 4 | SLE Q | -37843.50 | 49427.30 | -39.44 | 46.00 | 136.36 | 0.50 | 20.00 | 208.72 | 21.99 | 1283.38 | 1347.87 | 0.39 | 0.14 |
| 91 | 238.09 | 4 | SLE Q | -38073.80 | 49520.80 | -39.51 | 46.00 | 136.36 | 0.50 | 20.00 | 208.68 | 21.99 | 1282.93 | 1348.30 | 0.39 | 0.14 |
| 92 | 297.62 | 4 | SLE Q | -38305.40 | 49000.50 | -39.10 | 46.00 | 136.36 | 0.50 | 20.00 | 208.51 | 21.99 | 1281.08 | 1325.73 | 0.39 | 0.14 |
| 93 | 357.14 | 4 | SLE Q | -38538.10 | 47932.30 | -38.24 | 46.00 | 136.36 | 0.50 | 20.00 | 208.22 | 21.99 | 1277.86 | 1282.67 | 0.37 | 0.13 |
| 94 | 416.67 | 4 | SLE Q | -37741.10 | 46239.90 | -36.89 | 46.00 | 136.36 | 0.50 | 20.00 | 208.05 | 21.99 | 1276.08 | 1229.93 | 0.36 | 0.13 |
| 95 | 476.19 | 4 | SLE Q | -36946.30 | 44019.00 | -35.12 | 46.00 | 136.36 | 0.50 | 20.00 | 207.75 | 21.99 | 1272.69 | 1157.43 | 0.34 | 0.12 |
| 96 | 535.71 | 4 | SLE Q | -36153.40 | 41406.10 | -33.04 | 46.00 | 136.36 | 0.50 | 20.00 | 207.29 | 21.99 | 1267.66 | 1070.36 | 0.31 | 0.11 |
| 97 | 595.24 | 4 | SLE Q | -35362.40 | 38519.90 | -30.73 | 46.00 | 136.36 | 0.50 | 20.00 | 206.67 | 21.99 | 1260.86 | 973.24 | 0.28 | 0.10 |
| 98 | 654.76 | 4 | SLE Q | -34573.30 | 35463.00 | -28.29 | 46.00 | 136.36 | 0.50 | 20.00 | 205.87 | 21.99 | 1252.04 | 869.99 | 0.25 | 0.09 |
| 99 | 714.29 | 4 | SLE Q | -33786.10 | 32322.40 | -25.79 | 46.00 | 136.36 | 0.50 | 20.00 | 204.84 | 21.99 | 1240.79 | 763.99 | 0.22 | 0.08 |
| 100 | 773.81 | 4 | SLE Q | -33000.70 | 29170.90 | -23.27 | 46.00 | 136.36 | 0.50 | 20.00 | 203.55 | 21.99 | 1226.52 | 658.10 | 0.19 | 0.07 |
| 101 | 833.33 | 4 | SLE Q | -32217.10 | 26068.80 | -20.80 | 46.00 | 136.36 | 0.50 | 20.00 | 201.90 | 21.99 | 1208.39 | 554.77 | 0.16 | 0.06 |
| 102 | 892.86 | 4 | SLE Q | -31435.20 | 23064.30 | -18.40 | 46.00 | 136.36 | 0.50 | 20.00 | 199.80 | 21.99 | 1185.34 | 456.06 | 0.13 | 0.05 |
| 103 | 952.38 | 4 | SLE Q | -30655.00 | 20195.70 | -16.11 | 46.00 | 136.36 | 0.50 | 20.00 | 197.11 | 21.99 | 1155.79 | 363.75 | 0.11 | 0.04 |
| 104 | 1011.90 | 4 | SLE Q | -29876.40 | 17491.70 | -13.96 | 46.00 | 136.36 | 0.50 | 20.00 | 210.53 | 18.85 | 1117.08 | 279.44 | 0.08 | 0.03 |
| 105 | 1071.43 | 4 | SLE Q | -29099.40 | 14973.30 | -11.95 | 46.00 | 136.36 | 0.50 | 20.00 | 204.83 | 18.85 | 1063.42 | 204.65 | 0.06 | 0.02 |
| 106 | 1130.95 | 4 | SLE Q | -28324.00 | 12654.20 | -10.10 | 46.00 | 136.36 | 0.50 | 20.00 | 196.72 | 18.85 | 986.91 | 140.94 | 0.04 | 0.01 |
| 107 | 1190.48 | 4 | SLE Q | -27550.10 | 10542.50 | -8.41 | 46.00 | 136.36 | 0.50 | 20.00 | 203.60 | 15.71 | 876.48 | 89.69 | 0.03 | 0.01 |
| 108 | 1250.00 | 4 | SLE Q | -26777.70 | 8641.04 | -6.89 | 46.00 | 136.36 | 0.50 | 20.00 | 202.80 | 12.57 | 696.15 | 51.58 | 0.02 | 0.01 |
| 109 | 1309.52 | 4 | SLE Q | -26006.70 | 6948.44 | -5.54 | 46.00 | 136.36 | 0.50 | 20.00 | 184.83 | 9.42 | 437.44 | 25.73 | 0.01 | 0.00 |
| 110 | 1369.05 | 4 | SLE Q | -25237.10 | 5460.01 | -4.36 | 46.00 | 136.36 | 0.50 | 20.00 | 217.24 | 3.14 | 196.72 | 9.46 | 0.00 | 0.00 |
| 130 | 0.00 | 3 | SLE F | -36431.60 | 44161.50 | -35.23 | 46.00 | 136.36 | 0.50 | 20.00 | 207.94 | 21.99 | 1274.80 | 1169.54 | 0.34 | 0.12 |
| 131 | 59.52 | 3 | SLE F | -37386.50 | 46889.30 | -37.41 | 46.00 | 136.36 | 0.50 | 20.00 | 208.30 | 21.99 | 1278.83 | 1258.91 | 0.37 | 0.13 |
| 132 | 119.05 | 3 | SLE F | -37614.40 | 48595.50 | -38.77 | 46.00 | 136.36 | 0.50 | 20.00 | 208.61 | 21.99 | 1282.18 | 1319.75 | 0.38 | 0.14 |
| 133 | 178.57 | 3 | SLE F | -37843.50 | 49427.30 | -39.44 | 46.00 | 136.36 | 0.50 | 20.00 | 208.72 | 21.99 | 1283.38 | 1347.87 | 0.39 | 0.14 |
| 134 | 238.09 | 3 | SLE F | -38073.80 | 49520.80 | -39.51 | 46.00 | 136.36 | 0.50 | 20.00 | 208.68 | 21.99 | 1282.93 | 1348.30 | 0.39 | 0.14 |
| 135 | 297.62 | 3 | SLE F | -38305.40 | 49000.50 | -39.10 | 46.00 | 136.36 | 0.50 | 20.00 | 208.51 | 21.99 | 1281.08 | 1325.73 | 0.39 | 0.14 |
| 136 | 357.14 | 3 | SLE F | -38538.10 | 47932.30 | -38.24 | 46.00 | 136.36 | 0.50 | 20.00 | 208.22 | 21.99 | 1277.86 | 1282.67 | 0.37 | 0.13 |
| 137 | 416.67 | 3 | SLE F | -37741.10 | 46239.90 | -36.89 | 46.00 | 136.36 | 0.50 | 20.00 | 208.05 | 21.99 | 1276.08 | 1229.93 | 0.36 | 0.13 |
| 138 | 476.19 | 3 | SLE F | -36946.30 | 44019.00 | -35.12 | 46.00 | 136.36 | 0.50 | 20.00 | 207.75 | 21.99 | 1272.69 | 1157.43 | 0.34 | 0.12 |
| 139 | 535.71 | 3 | SLE F | -36153.40 | 41406.10 | -33.04 | 46.00 | 136.36 | 0.50 | 20.00 | 207.29 | 21.99 | 1267.66 | 1070.36 | 0.31 | 0.11 |
| 140 | 595.24 | 3 | SLE F | -35362.40 | 38519.90 | -30.73 | 46.00 | 136.36 | 0.50 | 20.00 | 206.67 | 21.99 | 1260.86 | 973.24 | 0.28 | 0.10 |
| 141 | 654.76 | 3 | SLE F | -34573.30 | 35463.00 | -28.29 | 46.00 | 136.36 | 0.50 | 20.00 | 205.87 | 21.99 | 1252.04 | 869.99 | 0.25 | 0.09 |
| 142 | 714.29 | 3 | SLE F | -33786.10 | 32322.40 | -25.79 | 46.00 | 136.36 | 0.50 | 20.00 | 204.84 | 21.99 | 1240.79 | 763.99 | 0.22 | 0.08 |
| 143 | 773.81 | 3 | SLE F | -33000.70 | 29170.90 | -23.27 | 46.00 | 136.36 | 0.50 | 20.00 | 203.55 | 21.99 | 1226.52 | 658.10 | 0.19 | 0.07 |
| 144 | 833.33 | 3 | SLE F | -32217.10 | 26068.80 | -20.80 | 46.00 | 136.36 | 0.50 | 20.00 | 201.90 | 21.99 | 1208.39 | 554.77 | 0.16 | 0.06 |
| 145 | 892.86 | 3 | SLE F | -31435.20 | 23064.30 | -18.40 | 46.00 | 136.36 | 0.50 | 20.00 | 199.80 | 21.99 | 1185.34 | 456.06 | 0.13 | 0.05 |
| 146 | 952.38 | 3 | SLE F | -30655.00 | 20195.70 | -16.11 | 46.00 | 136.36 | 0.50 | 20.00 | 197.11 | 21.99 | 1155.79 | 363.75 | 0.11 | 0.04 |
| 147 | 1011.90 | 3 | SLE F | -29876.40 | 17491.70 | -13.96 | 46.00 | 136.36 | 0.50 | 20.00 | 210.53 | 18.85 | 1117.08 | 279.44 | 0.08 | 0.03 |
| 148 | 1071.43 | 3 | SLE F | -29099.40 | 14973.30 | -11.95 | 46.00 | 136.36 | 0.50 | 20.00 | 204.83 | 18.85 | 1063.42 | 204.65 | 0.06 | 0.02 |
| 149 | 1130.95 | 3 | SLE F | -28324.00 | 12654.20 | -10.10 | 46.00 | 136.36 | 0.50 | 20.00 | 196.72 | 18.85 | 986.91 | 140.94 | 0.04 | 0.01 |
| 150 | 1190.48 | 3 | SLE F | -27550.10 | 10542.50 | -8.41 | 46.00 | 136.36 | 0.50 | 20.00 | 203.60 | 15.71 | 876.48 | 89.69 | 0.03 | 0.01 |
| 151 | 1250.00 | 3 | SLE F | -26777.70 | 8641.04 | -6.89 | 46.00 | 136.36 | 0.50 | 20.00 | 202.80 | 12.57 | 696.15 | 51.58 | 0.02 | 0.01 |
| 152 | 1309.52 | 3 | SLE F | -26006.70 | 6948.44 | -5.54 | 46.00 | 136.36 | 0.50 | 20.00 | 184.83 | 9.42 | 437.44 | 25.73 | 0.01 | 0.00 |
| 153 | 1369.05 | 3 | SLE F | -25237.10 | 5460.01 | -4.36 | 46.00 | 136.36 | 0.50 | 20.00 | 217.24 | 3.14 | 196.72 | 9.46 | 0.00 | 0.00 |

Verifiche principali

| Caso | Tipo |
|------|---|
| 1 | SLU Taglio - min. sic. c.s., SLU Taglio - min. sic. acciaio |
| 5 | SLU N cost - min. sic. |
| 48 | C.Rare - Sc min (max compr.), C.Rare - Sf max (max trazz.), C.Rare - Sf min (max compr.) |
| 69 | C.Rare - Sc max (min. compr.) |
| 91 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf max (max trazz.), C.Q.Per. - Sf min (max compr.), C.Q.Per. - Wk Max |
| 112 | C.Q.Per. - Sc max (min. compr.) |
| 134 | C.Freq - Wk Max |

Palo n. 11

Caratteristiche del palo e dei materiali utilizzati

| R <cm> | Cf <cm> | Cl _s | F _{ck} <daN/cmq> | F _{ctk} <daN/cmq> | F _{cd} <daN/cmq> | F _{ctd} <daN/cmq> | T _p | F _{yk} <daN/cmq> | F _{yd} <daN/cmq> |
|-----------|------------|-----------------|------------------------------|-------------------------------|------------------------------|-------------------------------|----------------|------------------------------|------------------------------|
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | S450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N <daN> | M _x <daNm> | M _y <daNm> | M _z <daNm> |
|----|------------|--------------------------|--------------------------|--------------------------|
| | | | | |

Relazione di calcolo

| | | | | |
|-----|------|------|------|--|
| FP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 11 (-22)

| Caso | CC | TCC | Az | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|-----|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | RVN | 70857.90 | 7356.74 | -383.97 | 62478.10 | -1927.12 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 70857.90 | 7356.74 | -383.97 | 62478.10 | -1927.12 |
| 2 | 2 | SLE R | RVN | 52487.40 | 5449.44 | -284.42 | 46280.10 | -1427.50 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 52487.40 | 5449.44 | -284.42 | 46280.10 | -1427.50 |
| 3 | 3 | SLE F | RVN | 52487.40 | 5449.44 | -284.42 | 46280.10 | -1427.50 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 52487.40 | 5449.44 | -284.42 | 46280.10 | -1427.50 |
| 4 | 4 | SLE Q | RVN | 52487.40 | 5449.44 | -284.42 | 46280.10 | -1427.50 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 52487.40 | 5449.44 | -284.42 | 46280.10 | -1427.50 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|------|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | 1 | -70857.90 | -7356.74 | 383.97 | -62478.10 | 1927.12 |
| 2 | 2 | SLE R | 1 | -52487.40 | -5449.44 | 284.42 | -46280.10 | 1427.50 |
| 3 | 3 | SLE F | 1 | -52487.40 | -5449.44 | 284.42 | -46280.10 | 1427.50 |
| 4 | 4 | SLE Q | 1 | -52487.40 | -5449.44 | 284.42 | -46280.10 | 1427.50 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mx <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|--------|
| 1 | 0.00 | 1 | SLU | -70857.90 | 62220.40 | 1919.17 | -70857.90 | 175969.00 | 5357.94 | 2-3 | 178.12 | 2.828 |
| 2 | 59.52 | 1 | SLU | -71573.50 | 65829.90 | 2030.50 | -71573.50 | 176252.00 | 5373.94 | 2-3 | 178.12 | 2.677 |
| 3 | 119.05 | 1 | SLU | -71324.00 | 68036.30 | 2098.56 | -71324.00 | 176153.00 | 5368.36 | 2-3 | 178.12 | 2.589 |
| 4 | 178.57 | 1 | SLU | -71076.60 | 69043.40 | 2129.62 | -71076.60 | 176055.00 | 5362.83 | 2-3 | 178.12 | 2.550 |
| 5 | 238.09 | 1 | SLU | -70831.50 | 69039.30 | 2129.50 | -70831.50 | 175958.00 | 5357.35 | 2-3 | 178.12 | 2.549 |
| 6 | 297.62 | 1 | SLU | -70588.60 | 68196.00 | 2103.49 | -70588.60 | 175862.00 | 5351.92 | 2-3 | 178.12 | 2.579 |
| 7 | 357.14 | 1 | SLU | -70348.00 | 66605.20 | 2054.42 | -70348.00 | 175767.00 | 5346.54 | 2-3 | 178.12 | 2.639 |
| 8 | 416.67 | 1 | SLU | -68742.60 | 64165.20 | 1979.16 | -68742.60 | 175131.00 | 5310.72 | 2-3 | 178.12 | 2.729 |
| 9 | 476.19 | 1 | SLU | -67141.00 | 61008.40 | 1881.79 | -67141.00 | 174497.00 | 5275.05 | 2-3 | 178.12 | 2.860 |
| 10 | 535.71 | 1 | SLU | -65542.90 | 57322.60 | 1768.10 | -65542.90 | 173864.00 | 5239.54 | 2-3 | 178.12 | 3.033 |
| 11 | 595.24 | 1 | SLU | -63948.40 | 53271.00 | 1643.13 | -63948.40 | 173232.00 | 5204.17 | 2-3 | 178.12 | 3.252 |
| 12 | 654.76 | 1 | SLU | -62357.30 | 48994.10 | 1511.21 | -62357.30 | 172600.00 | 5168.38 | 2-3 | 178.12 | 3.523 |
| 13 | 714.29 | 1 | SLU | -60769.50 | 44611.30 | 1376.02 | -60769.50 | 171968.00 | 5132.45 | 2-3 | 178.12 | 3.855 |
| 14 | 773.81 | 1 | SLU | -59185.00 | 40222.40 | 1240.65 | -59185.00 | 171337.00 | 5096.67 | 2-3 | 178.12 | 4.260 |
| 15 | 833.33 | 1 | SLU | -57603.70 | 35909.40 | 1107.62 | -57603.70 | 170707.00 | 5061.04 | 2-3 | 178.12 | 4.754 |
| 16 | 892.86 | 1 | SLU | -56025.50 | 31738.30 | 978.96 | -56025.50 | 170078.00 | 5025.56 | 2-3 | 178.12 | 5.359 |
| 17 | 952.38 | 1 | SLU | -54450.30 | 27760.90 | 856.28 | -54450.30 | 169450.00 | 4990.21 | 2-3 | 178.12 | 6.104 |
| 18 | 1011.90 | 1 | SLU | -52877.90 | 24016.20 | 740.77 | -52877.90 | 168822.00 | 4954.67 | 2-3 | 178.12 | 7.029 |
| 19 | 1071.43 | 1 | SLU | -51308.50 | 20532.20 | 633.31 | -51308.50 | 168194.00 | 4918.70 | 2-3 | 178.12 | 8.191 |
| 20 | 1130.95 | 1 | SLU | -49741.80 | 17327.50 | 534.46 | -49741.80 | 167567.00 | 4882.86 | 2-3 | 178.12 | 9.670 |
| 21 | 1190.48 | 1 | SLU | -48177.70 | 14412.30 | 444.54 | -48177.70 | 166940.00 | 4847.16 | 2-3 | 178.12 | 11.583 |
| 22 | 1250.00 | 1 | SLU | -46616.20 | 11789.90 | 363.66 | -46616.20 | 166314.00 | 4811.60 | 2-3 | 178.12 | 14.106 |
| 23 | 1309.52 | 1 | SLU | -45057.30 | 9458.22 | 291.74 | -45057.30 | 165689.00 | 4776.17 | 2-3 | 178.12 | 17.517 |
| 24 | 1369.05 | 1 | SLU | -43500.70 | 7410.05 | 228.56 | -43500.70 | 165060.00 | 4759.26 | 2-3 | 178.12 | 22.274 |
| 25 | 1428.57 | 1 | SLU | -41946.50 | 5634.64 | 173.80 | -41946.50 | 164415.00 | 4787.25 | 2-3 | 178.12 | 29.178 |
| 26 | 1488.10 | 1 | SLU | -40394.50 | 4118.26 | 127.03 | -40394.50 | 163771.00 | 4815.00 | 2-3 | 178.12 | 39.765 |
| 27 | 1547.62 | 1 | SLU | -38844.70 | 2844.93 | 87.75 | -38844.70 | 163127.00 | 4842.37 | 2-3 | 178.12 | 57.337 |
| 28 | 1607.14 | 1 | SLU | -37297.00 | 1797.04 | 55.43 | -2571250.00 | 162484.00 | 4869.38 | 2-3 | 178.12 | 68.940 |
| 29 | 1666.67 | 1 | SLU | -35751.30 | 955.85 | 29.48 | -2571250.00 | 161842.00 | 4896.04 | 2-3 | 178.12 | 71.920 |
| 30 | 1726.19 | 1 | SLU | -34207.50 | 301.91 | 9.31 | -2571250.00 | 161200.00 | 4922.36 | 2-3 | 178.12 | 75.166 |
| 31 | 1785.71 | 1 | SLU | -32665.60 | -184.61 | -5.69 | -2571250.00 | -160464.00 | -3662.97 | 2-3 | 358.75 | 78.714 |
| 32 | 1845.24 | 1 | SLU | -31125.30 | -523.65 | -16.15 | -2571250.00 | -159819.00 | -3622.90 | 2-3 | 358.75 | 82.609 |
| 33 | 1904.76 | 1 | SLU | -29586.80 | -735.07 | -22.67 | -2571250.00 | -159175.00 | -3583.04 | 2-3 | 358.75 | 86.905 |
| 34 | 1964.29 | 1 | SLU | -28049.80 | -838.52 | -25.86 | -2571250.00 | -158532.00 | -3543.39 | 2-3 | 358.75 | 91.667 |
| 35 | 2023.81 | 1 | SLU | -26514.40 | -853.36 | -26.32 | -2571250.00 | -157888.00 | -3502.98 | 2-3 | 358.75 | 96.976 |
| 36 | 2083.33 | 1 | SLU | -24980.40 | -798.60 | -24.63 | -2571250.00 | -157194.00 | -3468.72 | 2-3 | 358.12 | >100 |
| 37 | 2142.86 | 1 | SLU | -23447.70 | -692.90 | -21.37 | -2571250.00 | -156549.00 | -3425.58 | 2-3 | 358.12 | >100 |
| 38 | 2202.38 | 1 | SLU | -21916.20 | -554.61 | -17.11 | -2571250.00 | -155904.00 | -3382.63 | 2-3 | 358.12 | >100 |
| 39 | 2261.90 | 1 | SLU | -20386.00 | -401.81 | -12.39 | -2571250.00 | -155260.00 | -3339.86 | 2-3 | 358.12 | >100 |

Relazione di calcolo

| | | | | | | | | | | | | |
|----|---------|---|-----|-----------|---------|-------|-------------|------------|----------|-----|--------|------|
| 40 | 2321.43 | 1 | SLU | -18856.80 | -252.31 | -7.78 | -2571250.00 | -154616.00 | -4997.30 | 2-3 | 358.12 | >100 |
| 41 | 2380.93 | 1 | SLU | -17328.70 | -123.81 | -3.82 | -2571250.00 | -153971.00 | -4954.09 | 2-3 | 358.12 | >100 |
| 42 | 2440.48 | 1 | SLU | -15801.50 | -33.87 | -1.04 | -2571250.00 | -153324.00 | -4910.00 | 2-3 | 358.12 | >100 |
| 43 | 2500.00 | 1 | SLU | -14275.10 | 0.00 | 0.00 | -2571250.00 | | | | | >100 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | CC | TCC | Ty <daN> | Tz <daN> | bw <m> | Asw <cmq> | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|---------|----|-----|----------|----------|--------|-----------|------------|------|------------|------------|------------|--------|
| 1 | 0.00 | 1 | SLU | 7356.74 | -383.97 | 0.85 | 11.31 | 7366.75 | 1.00 | 32294.70 | 341818.00 | 32294.70 | 4.384 |
| 2 | 59.52 | 1 | SLU | 4821.81 | -251.67 | 0.85 | 11.31 | 4828.38 | 1.00 | 32294.70 | 341920.00 | 32294.70 | 6.689 |
| 3 | 119.05 | 1 | SLU | 2642.12 | -137.90 | 0.85 | 11.31 | 2645.72 | 1.00 | 32294.70 | 341884.00 | 32294.70 | 12.206 |
| 4 | 178.57 | 1 | SLU | 791.44 | -41.31 | 0.85 | 11.31 | 792.52 | 1.00 | 32294.70 | 341849.00 | 32294.70 | 40.749 |
| 5 | 238.09 | 1 | SLU | -757.07 | 39.51 | 0.85 | 11.31 | 758.10 | 1.00 | 32294.70 | 341814.00 | 32294.70 | 42.600 |
| 6 | 297.62 | 1 | SLU | -2030.42 | 105.97 | 0.85 | 11.31 | 2033.18 | 1.00 | 32294.70 | 341779.00 | 32294.70 | 15.884 |
| 7 | 357.14 | 1 | SLU | -3378.43 | 176.33 | 0.85 | 11.31 | 3383.02 | 1.00 | 32294.70 | 341745.00 | 32294.70 | 9.546 |
| 8 | 416.67 | 1 | SLU | -4753.13 | 248.08 | 0.85 | 11.31 | 4759.60 | 1.00 | 32294.70 | 341515.00 | 32294.70 | 6.785 |
| 9 | 476.19 | 1 | SLU | -5791.73 | 302.29 | 0.85 | 11.31 | 5799.62 | 1.00 | 32294.70 | 341285.00 | 32294.70 | 5.568 |
| 10 | 535.71 | 1 | SLU | -6536.15 | 341.14 | 0.85 | 11.31 | 6545.05 | 1.00 | 32294.70 | 341056.00 | 32294.70 | 4.934 |
| 11 | 595.24 | 1 | SLU | -7025.98 | 366.71 | 0.85 | 11.31 | 7035.55 | 1.00 | 32294.70 | 340828.00 | 32294.70 | 4.590 |
| 12 | 654.76 | 1 | SLU | -7298.21 | 380.92 | 0.85 | 11.31 | 7308.15 | 1.00 | 32294.70 | 340600.00 | 32294.70 | 4.419 |
| 13 | 714.29 | 1 | SLU | -7387.05 | 385.55 | 0.85 | 11.31 | 7397.10 | 1.00 | 32294.70 | 340373.00 | 32294.70 | 4.366 |
| 14 | 773.81 | 1 | SLU | -7323.76 | 382.25 | 0.85 | 11.31 | 7333.73 | 1.00 | 32294.70 | 340146.00 | 32294.70 | 4.404 |
| 15 | 833.33 | 1 | SLU | -7136.72 | 372.49 | 0.85 | 11.31 | 7146.43 | 1.00 | 32294.70 | 339919.00 | 32294.70 | 4.519 |
| 16 | 892.86 | 1 | SLU | -6851.33 | 357.59 | 0.85 | 11.31 | 6860.66 | 1.00 | 32294.70 | 339693.00 | 32294.70 | 4.707 |
| 17 | 952.38 | 1 | SLU | -6490.19 | 338.75 | 0.85 | 11.31 | 6499.03 | 1.00 | 32294.70 | 339467.00 | 32294.70 | 4.969 |
| 18 | 1011.90 | 1 | SLU | -6073.16 | 316.98 | 0.85 | 11.31 | 6081.43 | 1.00 | 32294.70 | 339242.00 | 32294.70 | 5.310 |
| 19 | 1071.43 | 1 | SLU | -5617.51 | 293.20 | 0.85 | 11.31 | 5625.15 | 1.00 | 32294.70 | 339017.00 | 32294.70 | 5.741 |
| 20 | 1130.95 | 1 | SLU | -5138.08 | 268.17 | 0.85 | 11.31 | 5145.08 | 1.00 | 32294.70 | 338793.00 | 32294.70 | 6.277 |
| 21 | 1190.48 | 1 | SLU | -4647.51 | 242.57 | 0.85 | 11.31 | 4653.83 | 1.00 | 32294.70 | 338569.00 | 32294.70 | 6.939 |
| 22 | 1250.00 | 1 | SLU | -4156.35 | 216.93 | 0.85 | 11.31 | 4162.01 | 1.00 | 32294.70 | 338345.00 | 32294.70 | 7.759 |
| 23 | 1309.52 | 1 | SLU | -3673.33 | 191.72 | 0.85 | 11.31 | 3678.33 | 1.00 | 32294.70 | 338122.00 | 32294.70 | 8.780 |
| 24 | 1369.05 | 1 | SLU | -3205.50 | 167.31 | 0.85 | 11.31 | 3209.86 | 1.00 | 32294.70 | 337899.00 | 32294.70 | 10.061 |
| 25 | 1428.57 | 1 | SLU | -2758.47 | 143.97 | 0.85 | 11.31 | 2762.23 | 1.00 | 32294.70 | 337676.00 | 32294.70 | 11.692 |
| 26 | 1488.10 | 1 | SLU | -2336.56 | 121.95 | 0.85 | 11.31 | 2339.74 | 1.00 | 32294.70 | 337454.00 | 32294.70 | 13.803 |
| 27 | 1547.62 | 1 | SLU | -1943.00 | 101.41 | 0.85 | 11.31 | 1945.64 | 1.00 | 32294.70 | 337232.00 | 32294.70 | 16.599 |
| 28 | 1607.14 | 1 | SLU | -1580.07 | 82.47 | 0.85 | 11.31 | 1582.22 | 1.00 | 32294.70 | 337010.00 | 32294.70 | 20.411 |
| 29 | 1666.67 | 1 | SLU | -1249.29 | 65.20 | 0.85 | 11.31 | 1250.99 | 1.00 | 32294.70 | 336789.00 | 32294.70 | 25.815 |
| 30 | 1726.19 | 1 | SLU | -951.57 | 49.67 | 0.85 | 11.31 | 952.86 | 1.00 | 32294.70 | 336568.00 | 32294.70 | 33.892 |
| 31 | 1785.71 | 1 | SLU | -687.28 | 35.87 | 0.85 | 11.31 | 688.22 | 1.00 | 32294.70 | 336347.00 | 32294.70 | 46.925 |
| 32 | 1845.24 | 1 | SLU | -456.44 | 23.82 | 0.85 | 11.31 | 457.06 | 1.00 | 32294.70 | 336126.00 | 32294.70 | 70.657 |
| 33 | 1904.76 | 1 | SLU | -258.80 | 13.51 | 0.85 | 11.31 | 259.15 | 1.00 | 32294.70 | 335906.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -93.91 | 4.90 | 0.85 | 11.31 | 94.04 | 1.00 | 32294.70 | 335686.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | 38.78 | -2.02 | 0.85 | 11.31 | 38.83 | 1.00 | 32294.70 | 335466.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 139.84 | -7.30 | 0.85 | 11.31 | 140.03 | 1.00 | 32294.70 | 335246.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 209.85 | -10.95 | 0.85 | 11.31 | 210.14 | 1.00 | 32294.70 | 335027.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 249.32 | -13.01 | 0.85 | 11.31 | 249.66 | 1.00 | 32294.70 | 334807.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 258.67 | -13.50 | 0.85 | 11.31 | 259.02 | 1.00 | 32294.70 | 334588.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 238.24 | -12.43 | 0.85 | 11.31 | 238.56 | 1.00 | 32294.70 | 334369.00 | 32294.70 | >100 |
| 41 | 2380.93 | 1 | SLU | 188.24 | -9.82 | 0.85 | 11.31 | 188.49 | 1.00 | 32294.70 | 334150.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 108.81 | -5.68 | 0.85 | 11.31 | 108.95 | 1.00 | 32294.70 | 333931.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mz <daNm> | My <daNm> | AfT <cmq> | AfC <cmq> | σc <daN/cm²> | σt <daN/cm²> |
|------|---------|----|-------|-----------|-----------|-----------|-----------|-----------|--------------|--------------|
| 44 | 0.00 | 2 | SLE R | -52487.40 | 1421.61 | 46089.20 | 43.98 | 34.56 | 44.82 | 1034.29 |
| 45 | 59.52 | 2 | SLE R | -53330.60 | 1504.08 | 48762.90 | 47.12 | 31.42 | 47.57 | 1121.63 |
| 46 | 119.05 | 2 | SLE R | -53335.90 | 1554.49 | 50397.20 | 47.12 | 31.42 | 49.28 | 1181.56 |
| 47 | 178.57 | 2 | SLE R | -53342.80 | 1577.50 | 51143.20 | 47.12 | 31.42 | 50.06 | 1208.92 |
| 48 | 238.09 | 2 | SLE R | -53351.40 | 1577.41 | 51140.20 | 47.12 | 31.42 | 50.05 | 1208.70 |
| 49 | 297.62 | 2 | SLE R | -53361.60 | 1558.14 | 50515.50 | 47.12 | 31.42 | 49.40 | 1185.59 |
| 50 | 357.14 | 2 | SLE R | -53373.60 | 1521.79 | 49337.20 | 47.12 | 31.42 | 48.17 | 1142.16 |
| 51 | 416.67 | 2 | SLE R | -52199.60 | 1466.04 | 47529.70 | 47.12 | 31.42 | 46.35 | 1090.55 |
| 52 | 476.19 | 2 | SLE R | -51028.50 | 1393.92 | 45191.40 | 43.98 | 34.56 | 43.98 | 1019.54 |
| 53 | 535.71 | 2 | SLE R | -49860.10 | 1309.70 | 42461.20 | 43.98 | 34.56 | 41.19 | 934.36 |
| 54 | 595.24 | 2 | SLE R | -48694.30 | 1217.13 | 39460.00 | 43.98 | 34.56 | 38.12 | 839.65 |
| 55 | 654.76 | 2 | SLE R | -47531.20 | 1119.41 | 36291.90 | 43.98 | 34.56 | 34.86 | 739.44 |
| 56 | 714.29 | 2 | SLE R | -46370.70 | 1019.28 | 33045.40 | 43.98 | 34.56 | 31.51 | 637.26 |
| 57 | 773.81 | 2 | SLE R | -45212.60 | 919.00 | 29794.40 | 43.98 | 34.56 | 28.15 | 536.14 |
| 58 | 833.33 | 2 | SLE R | -44056.90 | 820.46 | 26599.60 | 43.98 | 34.56 | 24.84 | 438.76 |
| 59 | 892.86 | 2 | SLE R | -42903.60 | 725.16 | 23509.90 | 40.84 | 37.70 | 21.65 | 347.50 |
| 60 | 952.38 | 2 | SLE R | -41752.60 | 634.28 | 20563.60 | 37.70 | 40.84 | 18.62 | 264.50 |
| 61 | 1011.90 | 2 | SLE R | -40603.90 | 548.72 | 17789.80 | 37.70 | 40.84 | 15.80 | 216.02 |
| 62 | 1071.43 | 2 | SLE R | -39457.30 | 469.12 | 15209.10 | 34.56 | 43.98 | 13.26 | 182.73 |
| 63 | 1130.95 | 2 | SLE R | -38312.80 | 395.90 | 12835.20 | 31.42 | 47.12 | 11.04 | 153.42 |
| 64 | 1190.48 | 2 | SLE R | -37170.40 | 329.29 | 10675.70 | 28.27 | 50.27 | 9.18 | 128.66 |
| 65 | 1250.00 | 2 | SLE R | -36030.00 | 269.38 | 8733.29 | 21.99 | 56.55 | 7.69 | 108.50 |
| 66 | 1309.52 | 2 | SLE R | -34891.50 | 216.10 | 7006.09 | 12.57 | 65.97 | 6.51 | 92.49 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|-----------|---------|----------|-------|-------|-------|---------|
| 67 | 1369.05 | 2 | SLE R | -33754.90 | 169.30 | 5488.93 | 0.00 | 78.54 | 5.58 | 79.80 |
| 68 | 1428.57 | 2 | SLE R | -32620.10 | 128.74 | 4173.81 | 0.00 | 78.54 | 4.81 | 69.15 |
| 69 | 1488.10 | 2 | SLE R | -31487.10 | 94.09 | 3050.56 | 0.00 | 78.54 | 4.14 | 59.86 |
| 70 | 1547.62 | 2 | SLE R | -30355.70 | 65.00 | 2107.36 | 0.00 | 78.54 | 3.56 | 51.84 |
| 71 | 1607.14 | 2 | SLE R | -29226.00 | 41.06 | 1331.14 | 0.00 | 78.54 | 3.06 | 45.00 |
| 72 | 1666.67 | 2 | SLE R | -28097.80 | 21.84 | 708.04 | 0.00 | 78.54 | 2.65 | 39.24 |
| 73 | 1726.19 | 2 | SLE R | -26971.20 | 6.90 | 223.63 | 0.00 | 78.54 | 2.31 | 34.46 |
| 74 | 1785.71 | 2 | SLE R | -25846.00 | -4.22 | -136.75 | 0.00 | 78.54 | 2.17 | 32.47 |
| 75 | 1845.24 | 2 | SLE R | -24722.10 | -11.96 | -387.89 | 0.00 | 78.54 | 2.21 | 32.86 |
| 76 | 1904.76 | 2 | SLE R | -23599.60 | -16.79 | -544.50 | 0.00 | 78.54 | 2.20 | 32.59 |
| 77 | 1964.29 | 2 | SLE R | -22478.40 | -19.16 | -621.13 | 0.00 | 78.54 | 2.15 | 31.76 |
| 78 | 2023.81 | 2 | SLE R | -21358.40 | -19.50 | -632.12 | 0.00 | 78.54 | 2.06 | 30.47 |
| 79 | 2083.33 | 2 | SLE R | -20239.50 | -18.25 | -591.55 | 0.00 | 78.54 | 1.95 | 28.82 |
| 80 | 2142.86 | 2 | SLE R | -19121.70 | -15.83 | -513.26 | 0.00 | 78.54 | 1.82 | 26.91 |
| 81 | 2202.38 | 2 | SLE R | -18004.90 | -12.67 | -410.82 | 0.00 | 78.54 | 1.68 | 24.83 |
| 82 | 2261.90 | 2 | SLE R | -16889.10 | -9.18 | -297.63 | 0.00 | 78.54 | 1.53 | 22.68 |
| 83 | 2321.43 | 2 | SLE R | -15774.20 | -5.76 | -186.90 | 0.00 | 78.54 | 1.38 | 20.54 |
| 84 | 2380.95 | 2 | SLE R | -14660.20 | -2.83 | -91.71 | 0.00 | 78.54 | 1.24 | 18.52 |
| 85 | 2440.48 | 2 | SLE R | -13546.90 | -0.77 | -25.09 | 0.00 | 78.54 | 1.11 | 16.69 |
| 86 | 2500.00 | 2 | SLE R | -12434.40 | 0.00 | 0.00 | 0.00 | 78.54 | 1.01 | 15.16 |
| 87 | 0.00 | 4 | SLE Q | -52487.40 | 1421.61 | 46089.20 | 43.98 | 34.56 | 44.82 | 1034.29 |
| 88 | 59.52 | 4 | SLE Q | -53330.60 | 1504.08 | 48762.90 | 47.12 | 31.42 | 47.57 | 1121.63 |
| 89 | 119.05 | 4 | SLE Q | -53335.90 | 1554.49 | 50397.20 | 47.12 | 31.42 | 49.28 | 1181.56 |
| 90 | 178.57 | 4 | SLE Q | -53342.80 | 1577.50 | 51143.20 | 47.12 | 31.42 | 50.06 | 1208.92 |
| 91 | 238.09 | 4 | SLE Q | -53351.40 | 1577.41 | 51140.20 | 47.12 | 31.42 | 50.05 | 1208.70 |
| 92 | 297.62 | 4 | SLE Q | -53361.60 | 1558.14 | 50515.50 | 47.12 | 31.42 | 49.40 | 1185.59 |
| 93 | 357.14 | 4 | SLE Q | -53373.60 | 1521.79 | 49337.20 | 47.12 | 31.42 | 48.17 | 1142.16 |
| 94 | 416.67 | 4 | SLE Q | -52199.60 | 1466.04 | 47529.70 | 47.12 | 31.42 | 46.35 | 1090.55 |
| 95 | 476.19 | 4 | SLE Q | -51028.50 | 1393.92 | 45191.40 | 43.98 | 34.56 | 43.98 | 1019.54 |
| 96 | 535.71 | 4 | SLE Q | -49860.10 | 1309.70 | 42461.20 | 43.98 | 34.56 | 41.19 | 934.36 |
| 97 | 595.24 | 4 | SLE Q | -48694.30 | 1217.13 | 39460.00 | 43.98 | 34.56 | 38.12 | 839.65 |
| 98 | 654.76 | 4 | SLE Q | -47531.20 | 1119.41 | 36291.90 | 43.98 | 34.56 | 34.86 | 739.44 |
| 99 | 714.29 | 4 | SLE Q | -46370.70 | 1019.28 | 33045.40 | 43.98 | 34.56 | 31.51 | 637.26 |
| 100 | 773.81 | 4 | SLE Q | -45212.60 | 919.00 | 29794.40 | 43.98 | 34.56 | 28.15 | 536.14 |
| 101 | 833.33 | 4 | SLE Q | -44056.90 | 820.46 | 26599.60 | 43.98 | 34.56 | 24.84 | 438.76 |
| 102 | 892.86 | 4 | SLE Q | -42903.60 | 725.16 | 23509.90 | 40.84 | 37.70 | 21.65 | 347.50 |
| 103 | 952.38 | 4 | SLE Q | -41752.60 | 634.28 | 20563.60 | 37.70 | 40.84 | 18.62 | 264.50 |
| 104 | 1011.90 | 4 | SLE Q | -40603.90 | 548.72 | 17789.80 | 37.70 | 40.84 | 15.80 | 216.02 |
| 105 | 1071.43 | 4 | SLE Q | -39457.30 | 469.12 | 15209.10 | 34.56 | 43.98 | 13.26 | 182.73 |
| 106 | 1130.95 | 4 | SLE Q | -38312.80 | 395.90 | 12835.20 | 31.42 | 47.12 | 11.04 | 153.42 |
| 107 | 1190.48 | 4 | SLE Q | -37170.40 | 329.29 | 10675.70 | 28.27 | 50.27 | 9.18 | 128.66 |
| 108 | 1250.00 | 4 | SLE Q | -36030.00 | 269.38 | 8733.29 | 21.99 | 56.55 | 7.69 | 108.50 |
| 109 | 1309.52 | 4 | SLE Q | -34891.50 | 216.10 | 7006.09 | 12.57 | 65.97 | 6.51 | 92.49 |
| 110 | 1369.05 | 4 | SLE Q | -33754.90 | 169.30 | 5488.93 | 0.00 | 78.54 | 5.58 | 79.80 |
| 111 | 1428.57 | 4 | SLE Q | -32620.10 | 128.74 | 4173.81 | 0.00 | 78.54 | 4.81 | 69.15 |
| 112 | 1488.10 | 4 | SLE Q | -31487.10 | 94.09 | 3050.56 | 0.00 | 78.54 | 4.14 | 59.86 |
| 113 | 1547.62 | 4 | SLE Q | -30355.70 | 65.00 | 2107.36 | 0.00 | 78.54 | 3.56 | 51.84 |
| 114 | 1607.14 | 4 | SLE Q | -29226.00 | 41.06 | 1331.14 | 0.00 | 78.54 | 3.06 | 45.00 |
| 115 | 1666.67 | 4 | SLE Q | -28097.80 | 21.84 | 708.04 | 0.00 | 78.54 | 2.65 | 39.24 |
| 116 | 1726.19 | 4 | SLE Q | -26971.20 | 6.90 | 223.63 | 0.00 | 78.54 | 2.31 | 34.46 |
| 117 | 1785.71 | 4 | SLE Q | -25846.00 | -4.22 | -136.75 | 0.00 | 78.54 | 2.17 | 32.47 |
| 118 | 1845.24 | 4 | SLE Q | -24722.10 | -11.96 | -387.89 | 0.00 | 78.54 | 2.21 | 32.86 |
| 119 | 1904.76 | 4 | SLE Q | -23599.60 | -16.79 | -544.50 | 0.00 | 78.54 | 2.20 | 32.59 |
| 120 | 1964.29 | 4 | SLE Q | -22478.40 | -19.16 | -621.13 | 0.00 | 78.54 | 2.15 | 31.76 |
| 121 | 2023.81 | 4 | SLE Q | -21358.40 | -19.50 | -632.12 | 0.00 | 78.54 | 2.06 | 30.47 |
| 122 | 2083.33 | 4 | SLE Q | -20239.50 | -18.25 | -591.55 | 0.00 | 78.54 | 1.95 | 28.82 |
| 123 | 2142.86 | 4 | SLE Q | -19121.70 | -15.83 | -513.26 | 0.00 | 78.54 | 1.82 | 26.91 |
| 124 | 2202.38 | 4 | SLE Q | -18004.90 | -12.67 | -410.82 | 0.00 | 78.54 | 1.68 | 24.83 |
| 125 | 2261.90 | 4 | SLE Q | -16889.10 | -9.18 | -297.63 | 0.00 | 78.54 | 1.53 | 22.68 |
| 126 | 2321.43 | 4 | SLE Q | -15774.20 | -5.76 | -186.90 | 0.00 | 78.54 | 1.38 | 20.54 |
| 127 | 2380.95 | 4 | SLE Q | -14660.20 | -2.83 | -91.71 | 0.00 | 78.54 | 1.24 | 18.52 |
| 128 | 2440.48 | 4 | SLE Q | -13546.90 | -0.77 | -25.09 | 0.00 | 78.54 | 1.11 | 16.69 |
| 129 | 2500.00 | 4 | SLE Q | -12434.40 | 0.00 | 0.00 | 0.00 | 78.54 | 1.01 | 15.16 |

Stato limite d'esercizio - Verifiche a fessurazione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | c <mm> | s <mm> | K ₂ | φ _{eq} | Δ _{sm} <mm> | A _s <cmq> | A _{c,eff} <cmq> | σ _s <daN/cmq> | e _{sm} | Wk <mm> |
|------|-----------|----|-------|------------|--------------|--------------|-----------|-----------|----------------|-----------------|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------|------------|
| 87 | 0.00 | 4 | SLE Q | -52487.40 | 46089.20 | 1421.61 | 46.00 | 136.36 | 0.50 | 20.00 | 203.51 | 21.99 | 1226.11 | 1034.29 | 0.30 | 0.10 |
| 88 | 59.52 | 4 | SLE Q | -53330.60 | 48762.90 | 1504.08 | 46.00 | 136.36 | 0.50 | 20.00 | 204.19 | 21.99 | 1233.59 | 1121.63 | 0.33 | 0.11 |
| 89 | 119.05 | 4 | SLE Q | -53335.90 | 50397.20 | 1554.49 | 46.00 | 136.36 | 0.50 | 20.00 | 204.71 | 21.99 | 1239.35 | 1181.56 | 0.34 | 0.12 |
| 90 | 178.57 | 4 | SLE Q | -53342.80 | 51143.20 | 1577.50 | 46.00 | 136.36 | 0.50 | 20.00 | 204.94 | 21.99 | 1241.82 | 1208.92 | 0.35 | 0.12 |
| 91 | 238.09 | 4 | SLE Q | -53351.40 | 51140.20 | 1577.41 | 46.00 | 136.36 | 0.50 | 20.00 | 204.93 | 21.99 | 1241.78 | 1208.70 | 0.35 | 0.12 |
| 92 | 297.62 | 4 | SLE Q | -53361.60 | 50515.50 | 1558.14 | 46.00 | 136.36 | 0.50 | 20.00 | 204.74 | 21.99 | 1239.67 | 1185.59 | 0.35 | 0.12 |
| 93 | 357.14 | 4 | SLE Q | -53373.60 | 49337.20 | 1521.79 | 46.00 | 136.36 | 0.50 | 20.00 | 204.37 | 21.99 | 1235.53 | 1142.16 | 0.33 | 0.12 |
| 94 | 416.67 | 4 | SLE Q | -52199.60 | 47529.70 | 1466.04 | 46.00 | 136.36 | 0.50 | 20.00 | 204.12 | 21.99 | 1232.84 | 1090.55 | 0.32 | 0.11 |
| 95 | 476.19 | 4 | SLE Q | -51028.50 | 45191.40 | 1393.92 | 46.00 | 136.36 | 0.50 | 20.00 | 203.66 | 21.99 | 1227.73 | 1019.54 | 0.30 | 0.10 |
| 96 | 535.71 | 4 | SLE Q | -49860.10 | 42461.20 | 1309.70 | 46.00 | 136.36 | 0.50 | 20.00 | 202.97 | 21.99 | 1220.14 | 934.36 | 0.27 | 0.09 |

Relazione di calcolo

| | | | | | | | | | | | | | | | | |
|-----|---------|---|-------|-----------|----------|---------|-------|--------|------|-------|--------|-------|---------|---------|------|------|
| 97 | 595.24 | 4 | SLE Q | -48694.30 | 39460.00 | 1217.13 | 46.00 | 136.36 | 0.50 | 20.00 | 202.03 | 21.99 | 1209.87 | 839.65 | 0.24 | 0.08 |
| 98 | 654.76 | 4 | SLE Q | -47531.20 | 36291.90 | 1119.41 | 46.00 | 136.36 | 0.50 | 20.00 | 200.81 | 21.99 | 1196.48 | 739.44 | 0.22 | 0.07 |
| 99 | 714.29 | 4 | SLE Q | -46370.70 | 33045.40 | 1019.28 | 46.00 | 136.36 | 0.50 | 20.00 | 217.13 | 18.85 | 1179.32 | 637.26 | 0.19 | 0.07 |
| 100 | 773.81 | 4 | SLE Q | -45212.60 | 29794.40 | 919.00 | 46.00 | 136.36 | 0.50 | 20.00 | 214.80 | 18.85 | 1157.38 | 536.14 | 0.16 | 0.06 |
| 101 | 833.33 | 4 | SLE Q | -44056.90 | 26599.60 | 820.46 | 46.00 | 136.36 | 0.50 | 20.00 | 211.80 | 18.85 | 1129.08 | 438.76 | 0.13 | 0.05 |
| 102 | 892.86 | 4 | SLE Q | -42903.60 | 23509.90 | 725.16 | 46.00 | 136.36 | 0.50 | 20.00 | 207.90 | 18.85 | 1092.32 | 347.50 | 0.10 | 0.04 |
| 103 | 952.38 | 4 | SLE Q | -41752.60 | 20563.60 | 634.28 | 46.00 | 136.36 | 0.50 | 20.00 | 202.67 | 18.85 | 1043.07 | 264.50 | 0.08 | 0.03 |
| 104 | 1011.90 | 4 | SLE Q | -40603.90 | 17789.80 | 548.72 | 46.00 | 136.36 | 0.50 | 20.00 | 195.55 | 18.85 | 975.93 | 191.77 | 0.06 | 0.02 |
| 105 | 1071.43 | 4 | SLE Q | -39457.30 | 15209.10 | 469.12 | 46.00 | 136.36 | 0.50 | 20.00 | 185.77 | 18.85 | 883.77 | 130.97 | 0.04 | 0.01 |
| 106 | 1130.95 | 4 | SLE Q | -38312.80 | 12835.20 | 395.90 | 46.00 | 136.36 | 0.50 | 20.00 | 210.93 | 12.57 | 747.26 | 83.11 | 0.02 | 0.01 |
| 107 | 1190.48 | 4 | SLE Q | -37170.40 | 10675.70 | 329.29 | 46.00 | 136.36 | 0.50 | 20.00 | 177.36 | 12.57 | 536.33 | 47.97 | 0.01 | 0.00 |
| 108 | 1250.00 | 4 | SLE Q | -36030.00 | 8733.29 | 269.38 | 46.00 | 136.36 | 0.50 | 20.00 | 193.75 | 6.28 | 319.65 | 23.77 | 0.01 | 0.00 |
| 130 | 0.00 | 3 | SLE F | -52487.40 | 46089.20 | 1421.61 | 46.00 | 136.36 | 0.50 | 20.00 | 203.51 | 21.99 | 1226.11 | 1034.29 | 0.30 | 0.10 |
| 131 | 59.52 | 3 | SLE F | -53330.60 | 48762.90 | 1504.08 | 46.00 | 136.36 | 0.50 | 20.00 | 204.19 | 21.99 | 1233.59 | 1121.63 | 0.33 | 0.11 |
| 132 | 119.05 | 3 | SLE F | -53335.90 | 50397.20 | 1554.49 | 46.00 | 136.36 | 0.50 | 20.00 | 204.71 | 21.99 | 1239.35 | 1181.56 | 0.34 | 0.12 |
| 133 | 178.57 | 3 | SLE F | -53342.80 | 51143.20 | 1577.50 | 46.00 | 136.36 | 0.50 | 20.00 | 204.94 | 21.99 | 1241.82 | 1208.92 | 0.35 | 0.12 |
| 134 | 238.09 | 3 | SLE F | -53351.40 | 51140.20 | 1577.41 | 46.00 | 136.36 | 0.50 | 20.00 | 204.93 | 21.99 | 1241.78 | 1208.70 | 0.35 | 0.12 |
| 135 | 297.62 | 3 | SLE F | -53361.60 | 50515.50 | 1558.14 | 46.00 | 136.36 | 0.50 | 20.00 | 204.74 | 21.99 | 1239.67 | 1185.59 | 0.35 | 0.12 |
| 136 | 357.14 | 3 | SLE F | -53373.60 | 49337.20 | 1521.79 | 46.00 | 136.36 | 0.50 | 20.00 | 204.37 | 21.99 | 1235.53 | 1142.16 | 0.33 | 0.12 |
| 137 | 416.67 | 3 | SLE F | -52199.60 | 47529.70 | 1466.04 | 46.00 | 136.36 | 0.50 | 20.00 | 204.12 | 21.99 | 1232.84 | 1090.55 | 0.32 | 0.11 |
| 138 | 476.19 | 3 | SLE F | -51028.60 | 45191.40 | 1393.92 | 46.00 | 136.36 | 0.50 | 20.00 | 203.66 | 21.99 | 1227.73 | 1019.54 | 0.30 | 0.10 |
| 139 | 535.71 | 3 | SLE F | -49860.10 | 42461.20 | 1309.70 | 46.00 | 136.36 | 0.50 | 20.00 | 202.97 | 21.99 | 1220.14 | 934.36 | 0.27 | 0.09 |
| 140 | 595.24 | 3 | SLE F | -48694.30 | 39460.00 | 1217.13 | 46.00 | 136.36 | 0.50 | 20.00 | 202.03 | 21.99 | 1209.87 | 839.65 | 0.24 | 0.08 |
| 141 | 654.76 | 3 | SLE F | -47531.20 | 36291.90 | 1119.41 | 46.00 | 136.36 | 0.50 | 20.00 | 200.81 | 21.99 | 1196.48 | 739.44 | 0.22 | 0.07 |
| 142 | 714.29 | 3 | SLE F | -46370.70 | 33045.40 | 1019.28 | 46.00 | 136.36 | 0.50 | 20.00 | 217.13 | 18.85 | 1179.32 | 637.26 | 0.19 | 0.07 |
| 143 | 773.81 | 3 | SLE F | -45212.60 | 29794.40 | 919.00 | 46.00 | 136.36 | 0.50 | 20.00 | 214.80 | 18.85 | 1157.38 | 536.14 | 0.16 | 0.06 |
| 144 | 833.33 | 3 | SLE F | -44056.90 | 26599.60 | 820.46 | 46.00 | 136.36 | 0.50 | 20.00 | 211.80 | 18.85 | 1129.08 | 438.76 | 0.13 | 0.05 |
| 145 | 892.86 | 3 | SLE F | -42903.60 | 23509.90 | 725.16 | 46.00 | 136.36 | 0.50 | 20.00 | 207.90 | 18.85 | 1092.32 | 347.50 | 0.10 | 0.04 |
| 146 | 952.38 | 3 | SLE F | -41752.60 | 20563.60 | 634.28 | 46.00 | 136.36 | 0.50 | 20.00 | 202.67 | 18.85 | 1043.07 | 264.50 | 0.08 | 0.03 |
| 147 | 1011.90 | 3 | SLE F | -40603.90 | 17789.80 | 548.72 | 46.00 | 136.36 | 0.50 | 20.00 | 195.55 | 18.85 | 975.93 | 191.77 | 0.06 | 0.02 |
| 148 | 1071.43 | 3 | SLE F | -39457.30 | 15209.10 | 469.12 | 46.00 | 136.36 | 0.50 | 20.00 | 185.77 | 18.85 | 883.77 | 130.97 | 0.04 | 0.01 |
| 149 | 1130.95 | 3 | SLE F | -38312.80 | 12835.20 | 395.90 | 46.00 | 136.36 | 0.50 | 20.00 | 210.93 | 12.57 | 747.26 | 83.11 | 0.02 | 0.01 |
| 150 | 1190.48 | 3 | SLE F | -37170.40 | 10675.70 | 329.29 | 46.00 | 136.36 | 0.50 | 20.00 | 177.36 | 12.57 | 536.33 | 47.97 | 0.01 | 0.00 |
| 151 | 1250.00 | 3 | SLE F | -36030.00 | 8733.29 | 269.38 | 46.00 | 136.36 | 0.50 | 20.00 | 193.75 | 6.28 | 319.65 | 23.77 | 0.01 | 0.00 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 5 | SLU N cost - min. sic. |
| 13 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 47 | C.Rare - Sc min (max compr.), C.Rare - Sf max (max trax.), C.Rare - Sf min (max compr.) |
| 68 | C.Rare - Sc max (min. compr.) |
| 90 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf max (max trax.), C.Q.Per. - Sf min (max compr.), C.Q.Per. - Wk Max |
| 111 | C.Q.Per. - Sc max (min. compr.) |
| 133 | C.Freq - Wk Max |

Palo n. 12

Caratteristiche del palo e dei materiali utilizzati

| R | Cf | Cls | Fck | Fctk | Fcd | Fctd | Tp | Fyk | Fyd |
|-------|------|--------|-----------|-----------|-----------|-----------|-------|-----------|-----------|
| <cm> | <cm> | | <daN/cm²> | <daN/cm²> | <daN/cm²> | <daN/cm²> | | <daN/cm²> | <daN/cm²> |
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N | Mx | My | Mz |
|-----|-------|--------|--------|--------|
| | <daN> | <daNm> | <daNm> | <daNm> |
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 12 (-4)

| Caso | CC | TCC | Az | N | Tx | Ty | Mx | My |
|------|----|-------|-----|---------|---------|--------|----------|--------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | RVN | 9426.53 | 7683.84 | 135.90 | 55210.30 | 270.25 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 9426.53 | 7683.84 | 135.90 | 55210.30 | 270.25 |
| 2 | 2 | SLE R | RVN | 6982.62 | 5691.73 | 100.67 | 40896.50 | 200.19 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 6982.62 | 5691.73 | 100.67 | 40896.50 | 200.19 |
| 3 | 3 | SLE F | RVN | 6982.62 | 5691.73 | 100.67 | 40896.50 | 200.19 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 6982.62 | 5691.73 | 100.67 | 40896.50 | 200.19 |
| 4 | 4 | SLE Q | RVN | 6982.62 | 5691.73 | 100.67 | 40896.50 | 200.19 |

Relazione di calcolo

| | | | | | | | | | |
|--|---|-----|---|-----|---------|---------|--------|----------|--------|
| | 4 | SLE | Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE | Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE | Q | TOT | 6982.62 | 5691.73 | 100.67 | 40896.50 | 200.19 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> | |
|------|----|-----|------|------------|-------------|-------------|--------------|--------------|---------|
| 1 | 1 | SIU | 1 | -9426.53 | -7683.84 | -135.90 | -55210.30 | -270.25 | |
| 2 | 2 | SLE | R | 1 | -6982.62 | -5691.73 | -100.67 | -40896.50 | -200.19 |
| 3 | 3 | SLE | F | 1 | -6982.62 | -5691.73 | -100.67 | -40896.50 | -200.19 |
| 4 | 4 | SLE | Q | 1 | -6982.62 | -5691.73 | -100.67 | -40896.50 | -200.19 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|--------|
| 1 | 0.00 | 1 | SIU | -9426.53 | 54964.30 | -269.05 | -9426.53 | 150746.00 | 335.48 | 2-3 | 180.00 | 2.743 |
| 2 | 59.52 | 1 | SIU | -10569.10 | 58801.60 | -287.83 | -10569.10 | 151231.00 | 306.90 | 2-3 | 180.00 | 2.572 |
| 3 | 119.05 | 1 | SIU | -11171.70 | 61298.50 | -300.05 | -11171.70 | 151485.00 | 291.90 | 2-3 | 180.00 | 2.471 |
| 4 | 178.57 | 1 | SIU | -11774.50 | 62645.40 | -306.65 | -11774.50 | 151740.00 | 276.77 | 2-3 | 180.00 | 2.422 |
| 5 | 238.09 | 1 | SIU | -12377.80 | 63018.50 | -308.47 | -12377.80 | 151995.00 | 261.59 | 2-3 | 180.00 | 2.412 |
| 6 | 297.62 | 1 | SIU | -12981.40 | 62579.30 | -306.32 | -12981.40 | 152251.00 | 246.36 | 2-3 | 180.00 | 2.433 |
| 7 | 357.14 | 1 | SIU | -13585.50 | 61411.70 | -300.61 | -13585.50 | 152506.00 | 231.08 | 2-3 | 180.00 | 2.483 |
| 8 | 416.67 | 1 | SIU | -13422.70 | 59410.40 | -290.81 | -13422.70 | 152437.00 | 235.20 | 2-3 | 180.00 | 2.566 |
| 9 | 476.19 | 1 | SIU | -13260.70 | 56698.60 | -277.54 | -13260.70 | 152369.00 | 239.30 | 2-3 | 180.00 | 2.687 |
| 10 | 535.71 | 1 | SIU | -13099.30 | 53454.80 | -261.66 | -13099.30 | 152301.00 | 243.38 | 2-3 | 180.00 | 2.849 |
| 11 | 595.24 | 1 | SIU | -12938.70 | 49834.80 | -243.94 | -12938.70 | 152233.00 | 247.44 | 2-3 | 180.00 | 3.055 |
| 12 | 654.76 | 1 | SIU | -12778.80 | 45973.10 | -225.04 | -12778.80 | 152165.00 | 251.48 | 2-3 | 180.00 | 3.310 |
| 13 | 714.29 | 1 | SIU | -12619.50 | 41984.50 | -205.51 | -12619.50 | 152097.00 | 255.50 | 2-3 | 180.00 | 3.623 |
| 14 | 773.81 | 1 | SIU | -12461.00 | 37965.30 | -185.84 | -12461.00 | 152030.00 | 259.49 | 2-3 | 180.00 | 4.004 |
| 15 | 833.33 | 1 | SIU | -12303.10 | 33995.20 | -166.41 | -12303.10 | 151964.00 | 263.47 | 2-3 | 180.00 | 4.470 |
| 16 | 892.86 | 1 | SIU | -12145.80 | 30138.60 | -147.53 | -12145.80 | 151897.00 | 267.43 | 2-3 | 180.00 | 5.040 |
| 17 | 952.38 | 1 | SIU | -11989.20 | 26446.70 | -129.46 | -11989.20 | 151831.00 | 271.37 | 2-3 | 180.00 | 5.741 |
| 18 | 1011.90 | 1 | SIU | -11833.30 | 22958.50 | -112.38 | -11833.30 | 151765.00 | 275.29 | 2-3 | 180.00 | 6.610 |
| 19 | 1071.43 | 1 | SIU | -11678.00 | 19702.30 | -96.44 | -11678.00 | 151699.00 | 279.19 | 2-3 | 180.00 | 7.699 |
| 20 | 1130.95 | 1 | SIU | -11523.30 | 16697.60 | -81.73 | -11523.30 | 151633.00 | 283.08 | 2-3 | 180.00 | 9.081 |
| 21 | 1190.48 | 1 | SIU | -11369.20 | 13955.90 | -68.31 | -11369.20 | 151568.00 | 286.94 | 2-3 | 180.00 | 10.860 |
| 22 | 1250.00 | 1 | SIU | -11215.80 | 11482.00 | -56.20 | -11215.80 | 151503.00 | 290.79 | 2-3 | 180.00 | 13.195 |
| 23 | 1309.52 | 1 | SIU | -11062.90 | 9275.10 | -45.40 | -11062.90 | 151439.00 | 294.62 | 2-3 | 180.00 | 16.327 |
| 24 | 1369.05 | 1 | SIU | -10910.60 | 7330.07 | -35.88 | -10910.60 | 151374.00 | 298.41 | 2-3 | 180.00 | 20.651 |
| 25 | 1428.57 | 1 | SIU | -10759.00 | 5637.89 | -27.60 | -10759.00 | 151311.00 | 302.19 | 2-3 | 180.00 | 26.838 |
| 26 | 1488.10 | 1 | SIU | -10607.90 | 4186.68 | -20.49 | -10607.90 | 151247.00 | 305.94 | 2-3 | 180.00 | 36.125 |
| 27 | 1547.62 | 1 | SIU | -10457.30 | 2962.34 | -14.50 | -10457.30 | 151184.00 | 309.68 | 2-3 | 180.00 | 51.035 |
| 28 | 1607.14 | 1 | SIU | -10307.40 | 1949.06 | -9.54 | -10307.40 | 151121.00 | 313.40 | 2-3 | 180.00 | 77.534 |
| 29 | 1666.67 | 1 | SIU | -10158.00 | 1129.90 | -5.53 | -10158.00 | 151058.00 | 317.10 | 2-3 | 180.00 | >100 |
| 30 | 1726.19 | 1 | SIU | -10009.10 | 487.12 | -2.38 | -2571250.00 | 150995.00 | 320.80 | 2-3 | 180.00 | >100 |
| 31 | 1785.71 | 1 | SIU | -9860.74 | 2.54 | -0.01 | -2571250.00 | 150933.00 | 324.47 | 2-3 | 180.00 | >100 |
| 32 | 1845.24 | 1 | SIU | -9712.94 | -342.19 | 1.68 | -2571250.00 | -150871.00 | 328.12 | 2-3 | 0.00 | >100 |
| 33 | 1904.76 | 1 | SIU | -9565.65 | -565.45 | 2.77 | -9565.65 | -150807.00 | 331.88 | 2-3 | 0.00 | >100 |
| 34 | 1964.29 | 1 | SIU | -9418.88 | -685.46 | 3.36 | -9418.88 | -150742.00 | 335.67 | 2-3 | 0.00 | >100 |
| 35 | 2023.81 | 1 | SIU | -9272.61 | -720.20 | 3.93 | -9272.61 | -150680.00 | 339.31 | 2-3 | 0.00 | >100 |
| 36 | 2083.33 | 1 | SIU | -9126.84 | -687.39 | 3.36 | -9126.84 | -150619.00 | 342.93 | 2-3 | 0.00 | >100 |
| 37 | 2142.86 | 1 | SIU | -8981.56 | -604.47 | 2.96 | -8981.56 | -150557.00 | 346.53 | 2-3 | 0.00 | >100 |
| 38 | 2202.38 | 1 | SIU | -8836.76 | -488.56 | 2.39 | -2571250.00 | -150496.00 | 350.13 | 2-3 | 0.00 | >100 |
| 39 | 2261.90 | 1 | SIU | -8692.44 | -356.58 | 1.75 | -2571250.00 | -150435.00 | 353.70 | 2-3 | 0.00 | >100 |
| 40 | 2321.43 | 1 | SIU | -8548.58 | -225.22 | 1.10 | -2571250.00 | -150374.00 | 357.27 | 2-3 | 0.00 | >100 |
| 41 | 2380.95 | 1 | SIU | -8405.18 | -111.03 | 0.54 | -2571250.00 | -150313.00 | 360.82 | 2-3 | 0.00 | >100 |
| 42 | 2440.48 | 1 | SIU | -8262.23 | -30.49 | 0.15 | -2571250.00 | -150253.00 | 364.36 | 2-3 | 0.00 | >100 |
| 43 | 2500.00 | 1 | SIU | -8119.73 | 0.00 | 0.00 | -2571250.00 | | | | | >100 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | CC | TCC | Ty <daN> | Tz <daN> | bw <cm> | Asw <cmq> | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|------------|--------------|---------------|------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SIU | 7683.84 | 135.90 | 0.85 | 11.31 | 7685.04 | 1.00 | 32294.70 | 333018.00 | 32294.70 | 4.202 |
| 2 | 59.52 | 1 | SIU | 5264.69 | 93.12 | 0.85 | 11.31 | 5265.51 | 1.00 | 32294.70 | 333182.00 | 32294.70 | 6.133 |
| 3 | 119.05 | 1 | SIU | 3177.03 | 56.19 | 0.85 | 11.31 | 3177.53 | 1.00 | 32294.70 | 333268.00 | 32294.70 | 10.164 |
| 4 | 178.57 | 1 | SIU | 1397.33 | 24.71 | 0.85 | 11.31 | 1397.55 | 1.00 | 32294.70 | 333355.00 | 32294.70 | 23.108 |
| 5 | 238.09 | 1 | SIU | -98.71 | -1.75 | 0.85 | 11.31 | 98.72 | 1.00 | 32294.70 | 333441.00 | 32294.70 | >100 |
| 6 | 297.62 | 1 | SIU | -1335.70 | -23.62 | 0.85 | 11.31 | 1335.90 | 1.00 | 32294.70 | 333528.00 | 32294.70 | 24.174 |
| 7 | 357.14 | 1 | SIU | -2655.44 | -46.97 | 0.85 | 11.31 | 2655.86 | 1.00 | 32294.70 | 333614.00 | 32294.70 | 12.160 |
| 8 | 416.67 | 1 | SIU | -4011.71 | -70.95 | 0.85 | 11.31 | 4012.34 | 1.00 | 32294.70 | 333591.00 | 32294.70 | 8.049 |
| 9 | 476.19 | 1 | SIU | -5048.71 | -89.30 | 0.85 | 11.31 | 5049.50 | 1.00 | 32294.70 | 333568.00 | 32294.70 | 6.396 |
| 10 | 535.71 | 1 | SIU | -5805.34 | -102.68 | 0.85 | 11.31 | 5806.24 | 1.00 | 32294.70 | 333544.00 | 32294.70 | 5.562 |
| 11 | 595.24 | 1 | SIU | -6318.49 | -111.75 | 0.85 | 11.31 | 6319.48 | 1.00 | 32294.70 | 333521.00 | 32294.70 | 5.110 |
| 12 | 654.76 | 1 | SIU | -6622.75 | -117.14 | 0.85 | 11.31 | 6623.78 | 1.00 | 32294.70 | 333498.00 | 32294.70 | 4.876 |

Relazione di calcolo

| | | | | | | | | | | | | | |
|----|---------|---|-----|----------|---------|------|-------|---------|------|----------|-----------|----------|--------|
| 13 | 714.29 | 1 | SLU | -6750.17 | -119.39 | 0.85 | 11.31 | 6751.23 | 1.00 | 32294.70 | 333476.00 | 32294.70 | 4.784 |
| 14 | 773.81 | 1 | SLU | -6730.19 | -119.03 | 0.85 | 11.31 | 6731.25 | 1.00 | 32294.70 | 333453.00 | 32294.70 | 4.798 |
| 15 | 833.33 | 1 | SLU | -6589.54 | -116.55 | 0.85 | 11.31 | 6590.58 | 1.00 | 32294.70 | 333430.00 | 32294.70 | 4.900 |
| 16 | 892.86 | 1 | SLU | -6352.28 | -112.35 | 0.85 | 11.31 | 6353.28 | 1.00 | 32294.70 | 333408.00 | 32294.70 | 5.083 |
| 17 | 952.38 | 1 | SLU | -6039.84 | -106.83 | 0.85 | 11.31 | 6040.78 | 1.00 | 32294.70 | 333385.00 | 32294.70 | 5.346 |
| 18 | 1011.90 | 1 | SLU | -5671.11 | -100.30 | 0.85 | 11.31 | 5672.00 | 1.00 | 32294.70 | 333363.00 | 32294.70 | 5.694 |
| 19 | 1071.43 | 1 | SLU | -5262.60 | -93.08 | 0.85 | 11.31 | 5263.42 | 1.00 | 32294.70 | 333341.00 | 32294.70 | 6.136 |
| 20 | 1130.95 | 1 | SLU | -4828.54 | -85.40 | 0.85 | 11.31 | 4829.30 | 1.00 | 32294.70 | 333319.00 | 32294.70 | 6.687 |
| 21 | 1190.48 | 1 | SLU | -4381.08 | -77.49 | 0.85 | 11.31 | 4381.76 | 1.00 | 32294.70 | 333297.00 | 32294.70 | 7.370 |
| 22 | 1250.00 | 1 | SLU | -3930.42 | -69.52 | 0.85 | 11.31 | 3931.04 | 1.00 | 32294.70 | 333275.00 | 32294.70 | 8.215 |
| 23 | 1309.52 | 1 | SLU | -3485.05 | -61.64 | 0.85 | 11.31 | 3485.59 | 1.00 | 32294.70 | 333253.00 | 32294.70 | 9.265 |
| 24 | 1369.05 | 1 | SLU | -3051.87 | -53.98 | 0.85 | 11.31 | 3052.34 | 1.00 | 32294.70 | 333231.00 | 32294.70 | 10.580 |
| 25 | 1428.57 | 1 | SLU | -2636.39 | -46.63 | 0.85 | 11.31 | 2636.80 | 1.00 | 32294.70 | 333209.00 | 32294.70 | 12.248 |
| 26 | 1488.10 | 1 | SLU | -2242.93 | -39.67 | 0.85 | 11.31 | 2243.28 | 1.00 | 32294.70 | 333188.00 | 32294.70 | 14.396 |
| 27 | 1547.62 | 1 | SLU | -1874.73 | -33.16 | 0.85 | 11.31 | 1875.02 | 1.00 | 32294.70 | 333166.00 | 32294.70 | 17.224 |
| 28 | 1607.14 | 1 | SLU | -1534.15 | -27.13 | 0.85 | 11.31 | 1534.39 | 1.00 | 32294.70 | 333145.00 | 32294.70 | 21.047 |
| 29 | 1666.67 | 1 | SLU | -1222.82 | -21.63 | 0.85 | 11.31 | 1223.01 | 1.00 | 32294.70 | 333123.00 | 32294.70 | 26.406 |
| 30 | 1726.19 | 1 | SLU | -941.72 | -16.66 | 0.85 | 11.31 | 941.86 | 1.00 | 32294.70 | 333102.00 | 32294.70 | 34.288 |
| 31 | 1785.71 | 1 | SLU | -691.37 | -12.23 | 0.85 | 11.31 | 691.48 | 1.00 | 32294.70 | 333081.00 | 32294.70 | 46.704 |
| 32 | 1845.24 | 1 | SLU | -471.92 | -8.35 | 0.85 | 11.31 | 471.99 | 1.00 | 32294.70 | 333059.00 | 32294.70 | 68.422 |
| 33 | 1904.76 | 1 | SLU | -283.23 | -5.01 | 0.85 | 11.31 | 283.27 | 1.00 | 32294.70 | 333038.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -124.97 | -2.21 | 0.85 | 11.31 | 124.99 | 1.00 | 32294.70 | 333017.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | 3.29 | 0.06 | 0.85 | 11.31 | 3.29 | 1.00 | 32294.70 | 332996.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 102.04 | 1.80 | 0.85 | 11.31 | 102.06 | 1.00 | 32294.70 | 332975.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 171.76 | 3.04 | 0.85 | 11.31 | 171.79 | 1.00 | 32294.70 | 332955.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 212.90 | 3.77 | 0.85 | 11.31 | 212.93 | 1.00 | 32294.70 | 332934.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 225.83 | 3.99 | 0.85 | 11.31 | 225.87 | 1.00 | 32294.70 | 332913.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 210.84 | 3.73 | 0.85 | 11.31 | 210.88 | 1.00 | 32294.70 | 332893.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 168.15 | 2.97 | 0.85 | 11.31 | 168.17 | 1.00 | 32294.70 | 332872.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 97.85 | 1.73 | 0.85 | 11.31 | 97.86 | 1.00 | 32294.70 | 332852.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mz <daNm> | My <daNm> | AFT <cmq> | AFC <cmq> | σ_c <daN/cmq> | σ_f <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-------------------------|-------------------------|
| 44 | 0.00 | 2 | SLE R | -6982.62 | -199.29 | 40714.30 | 50.27 | 28.27 | 41.26 | 1446.08 |
| 45 | 59.52 | 2 | SLE R | -8142.20 | -213.21 | 43556.70 | 50.27 | 28.27 | 44.14 | 1537.41 |
| 46 | 119.05 | 2 | SLE R | -8778.63 | -222.26 | 45406.30 | 50.27 | 28.27 | 46.01 | 1598.53 |
| 47 | 178.57 | 2 | SLE R | -9415.33 | -227.15 | 46404.00 | 50.27 | 28.27 | 47.01 | 1627.31 |
| 48 | 238.09 | 2 | SLE R | -10052.30 | -228.50 | 46680.40 | 50.27 | 28.27 | 47.28 | 1628.71 |
| 49 | 297.62 | 2 | SLE R | -10689.60 | -226.91 | 46355.00 | 50.27 | 28.27 | 46.94 | 1607.27 |
| 50 | 357.14 | 2 | SLE R | -11327.30 | -222.67 | 45490.20 | 50.27 | 28.27 | 46.05 | 1565.36 |
| 51 | 416.67 | 2 | SLE R | -11221.90 | -215.42 | 44007.70 | 50.27 | 28.27 | 44.55 | 1510.59 |
| 52 | 476.19 | 2 | SLE R | -11117.10 | -205.58 | 41998.90 | 50.27 | 28.27 | 42.51 | 1435.85 |
| 53 | 535.71 | 2 | SLE R | -11013.00 | -193.82 | 39596.10 | 50.27 | 28.27 | 40.06 | 1346.15 |
| 54 | 595.24 | 2 | SLE R | -10909.40 | -180.70 | 36914.60 | 50.27 | 28.27 | 37.34 | 1245.89 |
| 55 | 654.76 | 2 | SLE R | -10806.40 | -166.69 | 34054.20 | 50.27 | 28.27 | 34.43 | 1138.84 |
| 56 | 714.29 | 2 | SLE R | -10704.00 | -152.23 | 31099.60 | 50.27 | 28.27 | 31.42 | 1028.25 |
| 57 | 773.81 | 2 | SLE R | -10602.10 | -137.66 | 28122.40 | 50.27 | 28.27 | 28.39 | 916.83 |
| 58 | 833.33 | 2 | SLE R | -10500.90 | -123.26 | 25181.60 | 50.27 | 28.27 | 25.40 | 806.84 |
| 59 | 892.86 | 2 | SLE R | -10400.20 | -109.28 | 22324.90 | 50.27 | 28.27 | 22.48 | 700.11 |
| 60 | 952.38 | 2 | SLE R | -10300.00 | -95.89 | 19590.20 | 50.27 | 28.27 | 19.69 | 598.09 |
| 61 | 1011.90 | 2 | SLE R | -10200.40 | -83.25 | 17006.30 | 50.27 | 28.27 | 17.04 | 501.92 |
| 62 | 1071.43 | 2 | SLE R | -10101.40 | -71.44 | 14594.30 | 50.27 | 28.27 | 14.57 | 412.44 |
| 63 | 1130.95 | 2 | SLE R | -10002.80 | -60.54 | 12368.60 | 47.12 | 31.42 | 12.28 | 330.28 |
| 64 | 1190.48 | 2 | SLE R | -9904.88 | -50.60 | 10337.70 | 47.12 | 31.42 | 10.17 | 255.89 |
| 65 | 1250.00 | 2 | SLE R | -9807.43 | -41.63 | 8505.15 | 47.12 | 31.42 | 8.26 | 189.62 |
| 66 | 1309.52 | 2 | SLE R | -9710.52 | -33.63 | 6870.45 | 43.98 | 34.56 | 6.55 | 131.88 |
| 67 | 1369.05 | 2 | SLE R | -9614.12 | -26.58 | 5429.68 | 40.84 | 37.70 | 5.02 | 83.30 |
| 68 | 1428.57 | 2 | SLE R | -9518.24 | -20.44 | 4176.21 | 37.70 | 40.84 | 3.71 | 50.61 |
| 69 | 1488.10 | 2 | SLE R | -9422.87 | -15.18 | 3101.25 | 31.42 | 47.12 | 2.67 | 37.01 |
| 70 | 1547.62 | 2 | SLE R | -9328.01 | -10.74 | 2194.32 | 21.99 | 56.55 | 1.94 | 27.44 |
| 71 | 1607.14 | 2 | SLE R | -9233.64 | -7.07 | 1443.75 | 0.00 | 78.54 | 1.50 | 21.40 |
| 72 | 1666.67 | 2 | SLE R | -9139.78 | -4.10 | 836.96 | 0.00 | 78.54 | 1.18 | 17.02 |
| 73 | 1726.19 | 2 | SLE R | -9046.40 | -1.77 | 360.83 | 0.00 | 78.54 | 0.92 | 13.56 |
| 74 | 1785.71 | 2 | SLE R | -8953.50 | -0.01 | 1.88 | 0.00 | 78.54 | 0.73 | 10.93 |
| 75 | 1845.24 | 2 | SLE R | -8861.09 | 1.24 | -253.48 | 0.00 | 78.54 | 0.85 | 12.59 |
| 76 | 1904.76 | 2 | SLE R | -8769.15 | 2.05 | -418.85 | 0.00 | 78.54 | 0.93 | 13.64 |
| 77 | 1964.29 | 2 | SLE R | -8677.69 | 2.49 | -507.75 | 0.00 | 78.54 | 0.97 | 14.15 |
| 78 | 2023.81 | 2 | SLE R | -8586.68 | 2.61 | -533.48 | 0.00 | 78.54 | 0.97 | 14.22 |
| 79 | 2083.33 | 2 | SLE R | -8496.14 | 2.49 | -509.18 | 0.00 | 78.54 | 0.95 | 13.94 |
| 80 | 2142.86 | 2 | SLE R | -8406.06 | 2.19 | -447.75 | 0.00 | 78.54 | 0.92 | 13.40 |
| 81 | 2202.38 | 2 | SLE R | -8316.42 | 1.77 | -361.90 | 0.00 | 78.54 | 0.86 | 12.68 |
| 82 | 2261.90 | 2 | SLE R | -8227.23 | 1.29 | -264.13 | 0.00 | 78.54 | 0.81 | 11.89 |
| 83 | 2321.43 | 2 | SLE R | -8138.49 | 0.82 | -166.83 | 0.00 | 78.54 | 0.75 | 11.10 |
| 84 | 2380.95 | 2 | SLE R | -8050.18 | 0.40 | -82.25 | 0.00 | 78.54 | 0.70 | 10.39 |
| 85 | 2440.48 | 2 | SLE R | -7962.30 | 0.11 | -22.59 | 0.00 | 78.54 | 0.66 | 9.87 |
| 86 | 2500.00 | 2 | SLE R | -7874.85 | 0.00 | 0.00 | 0.00 | 78.54 | 0.64 | 9.60 |

Relazione di calcolo

| | | | | | | | | | | | | | | | | |
|-----|---------|---|-------|-----------|----------|---------|-------|--------|------|-------|--------|-------|---------|---------|------|------|
| 133 | 178.57 | 3 | SLE F | -9415.33 | 46404.00 | -227.15 | 46.00 | 136.36 | 0.50 | 20.00 | 199.79 | 25.13 | 1354.51 | 1627.31 | 0.47 | 0.16 |
| 134 | 238.09 | 3 | SLE F | -10052.30 | 46680.40 | -228.50 | 46.00 | 136.36 | 0.50 | 20.00 | 199.68 | 25.13 | 1353.11 | 1628.71 | 0.47 | 0.16 |
| 135 | 297.62 | 3 | SLE F | -10689.60 | 46355.00 | -226.91 | 46.00 | 136.36 | 0.50 | 20.00 | 199.54 | 25.13 | 1351.39 | 1607.27 | 0.47 | 0.16 |
| 136 | 357.14 | 3 | SLE F | -11327.30 | 45490.20 | -222.67 | 46.00 | 136.36 | 0.50 | 20.00 | 199.37 | 25.13 | 1349.29 | 1565.36 | 0.46 | 0.15 |
| 137 | 416.67 | 3 | SLE F | -11221.90 | 44007.70 | -215.42 | 46.00 | 136.36 | 0.50 | 20.00 | 199.32 | 25.13 | 1348.61 | 1510.59 | 0.44 | 0.15 |
| 138 | 476.19 | 3 | SLE F | -11117.10 | 41998.90 | -205.58 | 46.00 | 136.36 | 0.50 | 20.00 | 199.23 | 25.13 | 1347.50 | 1435.85 | 0.42 | 0.14 |
| 139 | 535.71 | 3 | SLE F | -11013.00 | 39596.10 | -193.82 | 46.00 | 136.36 | 0.50 | 20.00 | 199.11 | 25.13 | 1345.95 | 1346.15 | 0.39 | 0.13 |
| 140 | 595.24 | 3 | SLE F | -10909.40 | 36914.60 | -180.70 | 46.00 | 136.36 | 0.50 | 20.00 | 214.22 | 21.99 | 1343.93 | 1245.89 | 0.36 | 0.13 |
| 141 | 654.76 | 3 | SLE F | -10806.40 | 34054.20 | -166.69 | 46.00 | 136.36 | 0.50 | 20.00 | 213.99 | 21.99 | 1341.39 | 1138.84 | 0.33 | 0.12 |
| 142 | 714.29 | 3 | SLE F | -10704.00 | 31099.60 | -152.23 | 46.00 | 136.36 | 0.50 | 20.00 | 213.71 | 21.99 | 1338.22 | 1028.25 | 0.30 | 0.11 |
| 143 | 773.81 | 3 | SLE F | -10602.10 | 28122.40 | -137.66 | 46.00 | 136.36 | 0.50 | 20.00 | 213.35 | 21.99 | 1334.30 | 916.83 | 0.27 | 0.10 |
| 144 | 833.33 | 3 | SLE F | -10500.90 | 25181.60 | -123.26 | 46.00 | 136.36 | 0.50 | 20.00 | 212.91 | 21.99 | 1329.45 | 806.84 | 0.23 | 0.09 |
| 145 | 892.86 | 3 | SLE F | -10400.20 | 22324.90 | -109.28 | 46.00 | 136.36 | 0.50 | 20.00 | 212.36 | 21.99 | 1323.41 | 700.11 | 0.20 | 0.07 |
| 146 | 952.38 | 3 | SLE F | -10300.00 | 19590.20 | -95.89 | 46.00 | 136.36 | 0.50 | 20.00 | 211.67 | 21.99 | 1315.83 | 598.09 | 0.17 | 0.06 |
| 147 | 1011.90 | 3 | SLE F | -10200.40 | 17006.30 | -83.25 | 46.00 | 136.36 | 0.50 | 20.00 | 210.79 | 21.99 | 1306.18 | 501.92 | 0.15 | 0.05 |
| 148 | 1071.43 | 3 | SLE F | -10101.40 | 14594.30 | -71.44 | 46.00 | 136.36 | 0.50 | 20.00 | 209.66 | 21.99 | 1293.70 | 412.44 | 0.12 | 0.04 |
| 149 | 1130.95 | 3 | SLE F | -10002.80 | 12368.60 | -60.54 | 46.00 | 136.36 | 0.50 | 20.00 | 208.16 | 21.99 | 1277.19 | 330.28 | 0.10 | 0.03 |
| 150 | 1190.48 | 3 | SLE F | -9904.88 | 10337.70 | -50.60 | 46.00 | 136.36 | 0.50 | 20.00 | 206.11 | 21.99 | 1254.68 | 255.89 | 0.07 | 0.03 |
| 151 | 1250.00 | 3 | SLE F | -9807.43 | 8505.15 | -41.63 | 46.00 | 136.36 | 0.50 | 20.00 | 203.21 | 21.99 | 1222.82 | 189.62 | 0.06 | 0.02 |
| 152 | 1309.52 | 3 | SLE F | -9710.52 | 6870.45 | -33.63 | 46.00 | 136.36 | 0.50 | 20.00 | 198.95 | 21.99 | 1175.93 | 131.88 | 0.04 | 0.01 |
| 153 | 1369.05 | 3 | SLE F | -9614.12 | 5429.68 | -26.58 | 46.00 | 136.36 | 0.50 | 20.00 | 209.08 | 18.85 | 1103.48 | 83.30 | 0.02 | 0.01 |
| 154 | 1428.57 | 3 | SLE F | -9518.24 | 4176.21 | -20.44 | 46.00 | 136.36 | 0.50 | 20.00 | 195.51 | 18.85 | 975.58 | 45.20 | 0.01 | 0.00 |
| 155 | 1488.10 | 3 | SLE F | -9422.87 | 3101.25 | -15.18 | 46.00 | 136.36 | 0.50 | 20.00 | 184.05 | 15.71 | 722.94 | 19.36 | 0.01 | 0.00 |
| 156 | 1547.62 | 3 | SLE F | -9328.01 | 2194.32 | -10.74 | 46.00 | 136.36 | 0.50 | 20.00 | 182.39 | 6.28 | 283.96 | 5.40 | 0.00 | 0.00 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 1 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 5 | SLU N cost - min. sic. |
| 48 | C.Rare - Sc min (max compr.), C.Rare - Sf max (max traz.), C.Rare - Sf min (max compr.) |
| 71 | C.Rare - Sc max (min. compr.) |
| 91 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf max (max traz.), C.Q.Per. - Sf min (max compr.), C.Q.Per. - Wk Max |
| 114 | C.Q.Per. - Sc max (min. compr.) |
| 134 | C.Freq - Wk Max |

Palo n. 13

Caratteristiche del palo e dei materiali utilizzati

| R | Cf | Cls | Fck | Fctk | Fcd | Fctd | Tp | Fyk | Fyd |
|-------|------|--------|-----------|-----------|-----------|-----------|-------|-----------|-----------|
| <cm> | <cm> | | <daN/cm²> | <daN/cm²> | <daN/cm²> | <daN/cm²> | | <daN/cm²> | <daN/cm²> |
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N | Mx | My | Mz |
|-----|-------|--------|--------|--------|
| | <daN> | <daNm> | <daNm> | <daNm> |
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 13 (-3)

| Caso | CC | TCC | Az | N | Tx | Ty | Mx | My |
|------|----|-------|-----|---------|---------|---------|----------|---------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | RVN | 9469.03 | 7682.76 | -135.61 | 55220.30 | -169.49 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 9469.03 | 7682.76 | -135.61 | 55220.30 | -169.49 |
| 2 | 2 | SLE R | RVN | 7014.10 | 5690.93 | -100.45 | 40903.90 | -125.55 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 7014.10 | 5690.93 | -100.45 | 40903.90 | -125.55 |
| 3 | 3 | SLE F | RVN | 7014.10 | 5690.93 | -100.45 | 40903.90 | -125.55 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 7014.10 | 5690.93 | -100.45 | 40903.90 | -125.55 |
| 4 | 4 | SLE Q | RVN | 7014.10 | 5690.93 | -100.45 | 40903.90 | -125.55 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 7014.10 | 5690.93 | -100.45 | 40903.90 | -125.55 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N | Tx | Ty | Mx | My |
|------|----|-------|------|----------|----------|--------|-----------|--------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | 1 | -9469.03 | -7682.76 | 135.61 | -55220.30 | 169.49 |
| 2 | 2 | SLE R | 1 | -7014.10 | -5690.93 | 100.45 | -40903.90 | 125.55 |
| 3 | 3 | SLE F | 1 | -7014.10 | -5690.93 | 100.45 | -40903.90 | 125.55 |

Relazione di calcolo

4 | 4 | SLE Q | 1 | -7014.10 | -5690.93 | 100.45 | -40903.90 | 125.55

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | OC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|--------|
| 1 | 0.00 | 1 | SLU | -9469.03 | 54974.30 | 168.73 | -9469.03 | 150764.00 | 334.42 | 2-3 | 180.00 | 2.742 |
| 2 | 59.52 | 1 | SLU | -10611.30 | 58810.90 | 180.51 | -10611.30 | 151248.00 | 305.86 | 2-3 | 180.00 | 2.572 |
| 3 | 119.05 | 1 | SLU | -11213.30 | 61307.20 | 188.17 | -11213.30 | 151502.00 | 290.86 | 2-3 | 180.00 | 2.471 |
| 4 | 178.57 | 1 | SLU | -11815.60 | 62653.40 | 192.30 | -11815.60 | 151757.00 | 275.74 | 2-3 | 180.00 | 2.422 |
| 5 | 238.09 | 1 | SLU | -12418.20 | 63025.80 | 193.44 | -12418.20 | 152012.00 | 260.57 | 2-3 | 180.00 | 2.412 |
| 6 | 297.62 | 1 | SLU | -13021.30 | 62585.90 | 192.09 | -13021.30 | 152268.00 | 245.35 | 2-3 | 180.00 | 2.433 |
| 7 | 357.14 | 1 | SLU | -13624.70 | 61417.60 | 188.53 | -13624.70 | 152523.00 | 230.09 | 2-3 | 180.00 | 2.483 |
| 8 | 416.67 | 1 | SLU | -13461.00 | 59415.50 | 182.36 | -13461.00 | 152454.00 | 234.24 | 2-3 | 180.00 | 2.566 |
| 9 | 476.19 | 1 | SLU | -13297.90 | 56703.10 | 174.04 | -13297.90 | 152385.00 | 238.36 | 2-3 | 180.00 | 2.687 |
| 10 | 535.71 | 1 | SLU | -13135.60 | 53458.70 | 164.08 | -13135.60 | 152316.00 | 242.46 | 2-3 | 180.00 | 2.849 |
| 11 | 595.24 | 1 | SLU | -12974.00 | 49838.10 | 152.97 | -12974.00 | 152248.00 | 246.55 | 2-3 | 180.00 | 3.055 |
| 12 | 654.76 | 1 | SLU | -12813.10 | 45975.90 | 141.11 | -12813.10 | 152179.00 | 250.61 | 2-3 | 180.00 | 3.310 |
| 13 | 714.29 | 1 | SLU | -12652.80 | 41986.80 | 128.87 | -12652.80 | 152112.00 | 254.66 | 2-3 | 180.00 | 3.623 |
| 14 | 773.81 | 1 | SLU | -12493.30 | 37967.20 | 116.53 | -12493.30 | 152044.00 | 258.68 | 2-3 | 180.00 | 4.005 |
| 15 | 833.33 | 1 | SLU | -12334.40 | 33996.70 | 104.34 | -12334.40 | 151977.00 | 262.68 | 2-3 | 180.00 | 4.470 |
| 16 | 892.86 | 1 | SLU | -12176.20 | 30139.80 | 92.51 | -12176.20 | 151910.00 | 266.67 | 2-3 | 180.00 | 5.040 |
| 17 | 952.38 | 1 | SLU | -12018.60 | 26447.60 | 81.17 | -12018.60 | 151843.00 | 270.63 | 2-3 | 180.00 | 5.741 |
| 18 | 1011.90 | 1 | SLU | -11861.70 | 22959.10 | 70.47 | -11861.70 | 151777.00 | 274.58 | 2-3 | 180.00 | 6.611 |
| 19 | 1071.43 | 1 | SLU | -11705.40 | 19702.70 | 60.47 | -11705.40 | 151711.00 | 278.50 | 2-3 | 180.00 | 7.700 |
| 20 | 1130.95 | 1 | SLU | -11549.70 | 16697.80 | 51.25 | -11549.70 | 151645.00 | 282.42 | 2-3 | 180.00 | 9.082 |
| 21 | 1190.48 | 1 | SLU | -11394.70 | 13955.90 | 42.83 | -11394.70 | 151579.00 | 286.30 | 2-3 | 180.00 | 10.861 |
| 22 | 1250.00 | 1 | SLU | -11240.30 | 11481.80 | 35.24 | -11240.30 | 151514.00 | 290.18 | 2-3 | 180.00 | 13.196 |
| 23 | 1309.52 | 1 | SLU | -11086.40 | 9274.89 | 28.47 | -11086.40 | 151449.00 | 294.03 | 2-3 | 180.00 | 16.329 |
| 24 | 1369.05 | 1 | SLU | -10933.20 | 7329.79 | 22.50 | -10933.20 | 151384.00 | 297.86 | 2-3 | 180.00 | 20.653 |
| 25 | 1428.57 | 1 | SLU | -10780.50 | 5637.55 | 17.30 | -10780.50 | 151320.00 | 301.65 | 2-3 | 180.00 | 26.841 |
| 26 | 1488.10 | 1 | SLU | -10628.50 | 4186.32 | 12.85 | -10628.50 | 151256.00 | 305.43 | 2-3 | 180.00 | 36.131 |
| 27 | 1547.62 | 1 | SLU | -10477.00 | 2961.95 | 9.09 | -10477.00 | 151192.00 | 309.19 | 2-3 | 180.00 | 51.045 |
| 28 | 1607.14 | 1 | SLU | -10326.00 | 1948.67 | 5.98 | -10326.00 | 151128.00 | 312.94 | 2-3 | 180.00 | 77.554 |
| 29 | 1666.67 | 1 | SLU | -10175.70 | 1129.52 | 3.47 | -10175.70 | 151065.00 | 316.66 | 2-3 | 180.00 | >100 |
| 30 | 1726.19 | 1 | SLU | -10025.80 | 486.75 | 1.49 | -2571250.00 | 151002.00 | 320.38 | 2-3 | 180.00 | >100 |
| 31 | 1785.71 | 1 | SLU | -9876.52 | 2.20 | 0.01 | -2571250.00 | 150939.00 | 324.08 | 2-3 | 180.00 | >100 |
| 32 | 1845.24 | 1 | SLU | -9727.75 | -342.50 | -1.05 | -2571250.00 | -150877.00 | 327.76 | 2-3 | 0.00 | >100 |
| 33 | 1904.76 | 1 | SLU | -9579.50 | -565.73 | -1.74 | -9579.50 | -150813.00 | 331.51 | 2-3 | 0.00 | >100 |
| 34 | 1964.29 | 1 | SLU | -9431.77 | -685.70 | -2.10 | -9431.77 | -150748.00 | 335.35 | 2-3 | 0.00 | >100 |
| 35 | 2023.81 | 1 | SLU | -9284.54 | -720.40 | -2.21 | -9284.54 | -150685.00 | 339.01 | 2-3 | 0.00 | >100 |
| 36 | 2083.33 | 1 | SLU | -9137.81 | -687.56 | -2.11 | -9137.81 | -150623.00 | 342.66 | 2-3 | 0.00 | >100 |
| 37 | 2142.86 | 1 | SLU | -8991.57 | -604.59 | -1.86 | -8991.57 | -150561.00 | 346.29 | 2-3 | 0.00 | >100 |
| 38 | 2202.38 | 1 | SLU | -8845.81 | -488.65 | -1.50 | -2571250.00 | -150500.00 | 349.90 | 2-3 | 0.00 | >100 |
| 39 | 2261.90 | 1 | SLU | -8700.53 | -356.64 | -1.09 | -2571250.00 | -150438.00 | 353.50 | 2-3 | 0.00 | >100 |
| 40 | 2321.43 | 1 | SLU | -8555.71 | -225.25 | -0.69 | -2571250.00 | -150377.00 | 357.10 | 2-3 | 0.00 | >100 |
| 41 | 2380.95 | 1 | SLU | -8411.36 | -111.05 | -0.34 | -2571250.00 | -150316.00 | 360.67 | 2-3 | 0.00 | >100 |
| 42 | 2440.48 | 1 | SLU | -8267.44 | -30.50 | -0.09 | -2571250.00 | -150255.00 | 364.23 | 2-3 | 0.00 | >100 |
| 43 | 2500.00 | 1 | SLU | -8123.98 | 0.00 | 0.00 | -2571250.00 | | | | | >100 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | OC | TCC | Ty <daN> | Tz <daN> | bw <cm> | Asw <cmq> | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|------------|--------------|---------------|------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SLU | 7682.76 | -135.61 | 0.85 | 11.31 | 7683.96 | 1.00 | 32294.70 | 333024.00 | 32294.70 | 4.203 |
| 2 | 59.52 | 1 | SLU | 5263.55 | -92.91 | 0.85 | 11.31 | 5264.37 | 1.00 | 32294.70 | 333188.00 | 32294.70 | 6.135 |
| 3 | 119.05 | 1 | SLU | 3175.86 | -56.06 | 0.85 | 11.31 | 3176.35 | 1.00 | 32294.70 | 333274.00 | 32294.70 | 10.167 |
| 4 | 178.57 | 1 | SLU | 1396.14 | -24.64 | 0.85 | 11.31 | 1396.36 | 1.00 | 32294.70 | 333361.00 | 32294.70 | 23.128 |
| 5 | 238.09 | 1 | SLU | -99.90 | 1.76 | 0.85 | 11.31 | 99.92 | 1.00 | 32294.70 | 333447.00 | 32294.70 | >100 |
| 6 | 297.62 | 1 | SLU | -1336.88 | 23.60 | 0.85 | 11.31 | 1337.08 | 1.00 | 32294.70 | 333533.00 | 32294.70 | 24.153 |
| 7 | 357.14 | 1 | SLU | -2656.59 | 46.89 | 0.85 | 11.31 | 2657.00 | 1.00 | 32294.70 | 333620.00 | 32294.70 | 12.155 |
| 8 | 416.67 | 1 | SLU | -4012.80 | 70.83 | 0.85 | 11.31 | 4013.43 | 1.00 | 32294.70 | 333596.00 | 32294.70 | 8.047 |
| 9 | 476.19 | 1 | SLU | -5049.74 | 89.14 | 0.85 | 11.31 | 5050.53 | 1.00 | 32294.70 | 333573.00 | 32294.70 | 6.394 |
| 10 | 535.71 | 1 | SLU | -5806.30 | 102.49 | 0.85 | 11.31 | 5807.20 | 1.00 | 32294.70 | 333550.00 | 32294.70 | 5.561 |
| 11 | 595.24 | 1 | SLU | -6319.38 | 111.55 | 0.85 | 11.31 | 6320.36 | 1.00 | 32294.70 | 333526.00 | 32294.70 | 5.110 |
| 12 | 654.76 | 1 | SLU | -6623.56 | 116.92 | 0.85 | 11.31 | 6624.59 | 1.00 | 32294.70 | 333503.00 | 32294.70 | 4.875 |
| 13 | 714.29 | 1 | SLU | -6750.91 | 119.16 | 0.85 | 11.31 | 6751.96 | 1.00 | 32294.70 | 333480.00 | 32294.70 | 4.783 |
| 14 | 773.81 | 1 | SLU | -6730.85 | 118.81 | 0.85 | 11.31 | 6731.90 | 1.00 | 32294.70 | 333458.00 | 32294.70 | 4.797 |
| 15 | 833.33 | 1 | SLU | -6590.12 | 116.33 | 0.85 | 11.31 | 6591.15 | 1.00 | 32294.70 | 333435.00 | 32294.70 | 4.900 |
| 16 | 892.86 | 1 | SLU | -6352.79 | 112.14 | 0.85 | 11.31 | 6353.78 | 1.00 | 32294.70 | 333412.00 | 32294.70 | 5.083 |
| 17 | 952.38 | 1 | SLU | -6040.27 | 106.62 | 0.85 | 11.31 | 6041.21 | 1.00 | 32294.70 | 333390.00 | 32294.70 | 5.346 |
| 18 | 1011.90 | 1 | SLU | -5671.48 | 100.11 | 0.85 | 11.31 | 5672.37 | 1.00 | 32294.70 | 333367.00 | 32294.70 | 5.693 |
| 19 | 1071.43 | 1 | SLU | -5262.91 | 92.90 | 0.85 | 11.31 | 5263.73 | 1.00 | 32294.70 | 333345.00 | 32294.70 | 6.135 |
| 20 | 1130.95 | 1 | SLU | -4828.80 | 85.24 | 0.85 | 11.31 | 4829.55 | 1.00 | 32294.70 | 333322.00 | 32294.70 | 6.687 |
| 21 | 1190.48 | 1 | SLU | -4381.28 | 77.34 | 0.85 | 11.31 | 4381.97 | 1.00 | 32294.70 | 333300.00 | 32294.70 | 7.370 |
| 22 | 1250.00 | 1 | SLU | -3930.58 | 69.38 | 0.85 | 11.31 | 3931.20 | 1.00 | 32294.70 | 333278.00 | 32294.70 | 8.215 |

Relazione di calcolo

| | | | | | | | | | | | | | |
|----|---------|---|-----|----------|-------|------|-------|---------|------|----------|-----------|----------|--------|
| 23 | 1309.52 | 1 | SLE | -3485.17 | 61.52 | 0.85 | 11.31 | 3485.71 | 1.00 | 32294.70 | 333256.00 | 32294.70 | 9.265 |
| 24 | 1369.05 | 1 | SLE | -3051.95 | 53.87 | 0.85 | 11.31 | 3052.43 | 1.00 | 32294.70 | 333234.00 | 32294.70 | 10.580 |
| 25 | 1428.57 | 1 | SLE | -2636.45 | 46.54 | 0.85 | 11.31 | 2636.86 | 1.00 | 32294.70 | 333212.00 | 32294.70 | 12.247 |
| 26 | 1488.10 | 1 | SLE | -2242.96 | 39.59 | 0.85 | 11.31 | 2243.31 | 1.00 | 32294.70 | 333190.00 | 32294.70 | 14.396 |
| 27 | 1547.62 | 1 | SLE | -1874.73 | 33.09 | 0.85 | 11.31 | 1875.03 | 1.00 | 32294.70 | 333169.00 | 32294.70 | 17.224 |
| 28 | 1607.14 | 1 | SLE | -1534.14 | 27.08 | 0.85 | 11.31 | 1534.38 | 1.00 | 32294.70 | 333147.00 | 32294.70 | 21.047 |
| 29 | 1666.67 | 1 | SLE | -1222.79 | 21.58 | 0.85 | 11.31 | 1222.98 | 1.00 | 32294.70 | 333126.00 | 32294.70 | 26.407 |
| 30 | 1726.19 | 1 | SLE | -941.67 | 16.62 | 0.85 | 11.31 | 941.82 | 1.00 | 32294.70 | 333104.00 | 32294.70 | 34.290 |
| 31 | 1785.71 | 1 | SLE | -691.32 | 12.20 | 0.85 | 11.31 | 691.43 | 1.00 | 32294.70 | 333083.00 | 32294.70 | 46.707 |
| 32 | 1845.24 | 1 | SLE | -471.86 | 8.33 | 0.85 | 11.31 | 471.94 | 1.00 | 32294.70 | 333061.00 | 32294.70 | 68.430 |
| 33 | 1904.76 | 1 | SLE | -283.17 | 5.00 | 0.85 | 11.31 | 283.21 | 1.00 | 32294.70 | 333040.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLE | -124.90 | 2.20 | 0.85 | 11.31 | 124.92 | 1.00 | 32294.70 | 333019.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLE | 3.36 | -0.06 | 0.85 | 11.31 | 3.36 | 1.00 | 32294.70 | 332998.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLE | 102.10 | -1.80 | 0.85 | 11.31 | 102.12 | 1.00 | 32294.70 | 332977.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLE | 171.82 | -3.03 | 0.85 | 11.31 | 171.85 | 1.00 | 32294.70 | 332956.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLE | 212.95 | -3.76 | 0.85 | 11.31 | 212.99 | 1.00 | 32294.70 | 332935.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLE | 225.88 | -3.99 | 0.85 | 11.31 | 225.91 | 1.00 | 32294.70 | 332914.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLE | 210.88 | -3.72 | 0.85 | 11.31 | 210.91 | 1.00 | 32294.70 | 332894.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLE | 168.17 | -2.97 | 0.85 | 11.31 | 168.20 | 1.00 | 32294.70 | 332873.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLE | 97.86 | -1.73 | 0.85 | 11.31 | 97.88 | 1.00 | 32294.70 | 332852.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mz <daNm> | My <daNm> | AfT <cmq> | AfC <cmq> | σ_c <daN/cmq> | σ_f <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-------------------------|-------------------------|
| 44 | 0.00 | 2 | SLE R | -7014.10 | 124.99 | 40721.70 | 50.27 | 28.27 | 41.27 | 1445.41 |
| 45 | 59.52 | 2 | SLE R | -8173.46 | 133.71 | 43563.70 | 50.27 | 28.27 | 44.14 | 1536.70 |
| 46 | 119.05 | 2 | SLE R | -8809.45 | 139.38 | 45412.70 | 50.27 | 28.27 | 46.01 | 1597.79 |
| 47 | 178.57 | 2 | SLE R | -9445.72 | 142.44 | 46409.90 | 50.27 | 28.27 | 47.02 | 1626.55 |
| 48 | 238.09 | 2 | SLE R | -10082.30 | 143.29 | 46685.80 | 50.27 | 28.27 | 47.29 | 1627.93 |
| 49 | 297.62 | 2 | SLE R | -10719.20 | 142.29 | 46359.90 | 50.27 | 28.27 | 46.95 | 1606.48 |
| 50 | 357.14 | 2 | SLE R | -11356.40 | 139.63 | 45494.50 | 50.27 | 28.27 | 46.06 | 1564.57 |
| 51 | 416.67 | 2 | SLE R | -11250.30 | 135.08 | 44011.50 | 50.27 | 28.27 | 44.55 | 1509.81 |
| 52 | 476.19 | 2 | SLE R | -11144.80 | 128.92 | 42002.30 | 50.27 | 28.27 | 42.51 | 1435.09 |
| 53 | 535.71 | 2 | SLE R | -11039.90 | 121.54 | 39599.00 | 50.27 | 28.27 | 40.07 | 1345.41 |
| 54 | 595.24 | 2 | SLE R | -10935.50 | 113.31 | 36917.10 | 50.27 | 28.27 | 37.34 | 1245.18 |
| 55 | 654.76 | 2 | SLE R | -10831.80 | 104.53 | 34056.30 | 50.27 | 28.27 | 34.43 | 1138.16 |
| 56 | 714.29 | 2 | SLE R | -10728.70 | 95.46 | 31101.40 | 50.27 | 28.27 | 31.42 | 1027.61 |
| 57 | 773.81 | 2 | SLE R | -10626.10 | 86.32 | 28123.80 | 50.27 | 28.27 | 28.39 | 916.23 |
| 58 | 833.33 | 2 | SLE R | -10524.10 | 77.29 | 25182.70 | 50.27 | 28.27 | 25.40 | 806.27 |
| 59 | 892.86 | 2 | SLE R | -10422.70 | 68.52 | 22325.80 | 50.27 | 28.27 | 22.48 | 699.58 |
| 60 | 952.38 | 2 | SLE R | -10321.80 | 60.13 | 19590.80 | 50.27 | 28.27 | 19.69 | 597.60 |
| 61 | 1011.90 | 2 | SLE R | -10221.40 | 52.20 | 17006.70 | 50.27 | 28.27 | 17.04 | 501.46 |
| 62 | 1071.43 | 2 | SLE R | -10121.70 | 44.79 | 14594.60 | 50.27 | 28.27 | 14.57 | 412.02 |
| 63 | 1130.95 | 2 | SLE R | -10022.40 | 37.96 | 12368.80 | 47.12 | 31.42 | 12.28 | 329.90 |
| 64 | 1190.48 | 2 | SLE R | -9923.74 | 31.73 | 10337.70 | 47.12 | 31.42 | 10.17 | 255.55 |
| 65 | 1250.00 | 2 | SLE R | -9825.58 | 26.10 | 8505.07 | 47.12 | 31.42 | 8.26 | 189.32 |
| 66 | 1309.52 | 2 | SLE R | -9727.94 | 21.09 | 6870.29 | 43.98 | 34.56 | 6.54 | 131.62 |
| 67 | 1369.05 | 2 | SLE R | -9630.82 | 16.66 | 5429.47 | 40.84 | 37.70 | 5.02 | 83.09 |
| 68 | 1428.57 | 2 | SLE R | -9534.22 | 12.82 | 4175.97 | 37.70 | 40.84 | 3.71 | 50.62 |
| 69 | 1488.10 | 2 | SLE R | -9438.14 | 9.52 | 3100.98 | 31.42 | 47.12 | 2.66 | 37.02 |
| 70 | 1547.62 | 2 | SLE R | -9342.56 | 6.73 | 2194.04 | 21.99 | 56.55 | 1.95 | 27.45 |
| 71 | 1607.14 | 2 | SLE R | -9247.48 | 4.43 | 1443.46 | 0.00 | 78.54 | 1.50 | 21.42 |
| 72 | 1666.67 | 2 | SLE R | -9152.89 | 2.57 | 836.68 | 0.00 | 78.54 | 1.18 | 17.04 |
| 73 | 1726.19 | 2 | SLE R | -9058.80 | 1.11 | 360.56 | 0.00 | 78.54 | 0.92 | 13.58 |
| 74 | 1785.71 | 2 | SLE R | -8965.19 | 0.01 | 1.63 | 0.00 | 78.54 | 0.73 | 10.94 |
| 75 | 1845.24 | 2 | SLE R | -8872.06 | -0.78 | -253.71 | 0.00 | 78.54 | 0.85 | 12.60 |
| 76 | 1904.76 | 2 | SLE R | -8779.41 | -1.29 | -419.06 | 0.00 | 78.54 | 0.93 | 13.65 |
| 77 | 1964.29 | 2 | SLE R | -8687.23 | -1.56 | -507.92 | 0.00 | 78.54 | 0.97 | 14.16 |
| 78 | 2023.81 | 2 | SLE R | -8595.52 | -1.64 | -533.63 | 0.00 | 78.54 | 0.97 | 14.23 |
| 79 | 2083.33 | 2 | SLE R | -8504.27 | -1.56 | -509.30 | 0.00 | 78.54 | 0.95 | 13.95 |
| 80 | 2142.86 | 2 | SLE R | -8413.47 | -1.37 | -447.85 | 0.00 | 78.54 | 0.92 | 13.40 |
| 81 | 2202.38 | 2 | SLE R | -8323.13 | -1.11 | -361.96 | 0.00 | 78.54 | 0.86 | 12.69 |
| 82 | 2261.90 | 2 | SLE R | -8233.23 | -0.81 | -264.18 | 0.00 | 78.54 | 0.81 | 11.89 |
| 83 | 2321.43 | 2 | SLE R | -8143.77 | -0.51 | -166.85 | 0.00 | 78.54 | 0.75 | 11.10 |
| 84 | 2380.95 | 2 | SLE R | -8054.75 | -0.25 | -82.26 | 0.00 | 78.54 | 0.70 | 10.40 |
| 85 | 2440.48 | 2 | SLE R | -7966.16 | -0.07 | -22.59 | 0.00 | 78.54 | 0.66 | 9.87 |
| 86 | 2500.00 | 2 | SLE R | -7878.00 | 0.00 | 0.00 | 0.00 | 78.54 | 0.64 | 9.61 |
| 87 | 0.00 | 4 | SLE Q | -7014.10 | 124.99 | 40721.70 | 50.27 | 28.27 | 41.27 | 1445.41 |
| 88 | 59.52 | 4 | SLE Q | -8173.46 | 133.71 | 43563.70 | 50.27 | 28.27 | 44.14 | 1536.70 |
| 89 | 119.05 | 4 | SLE Q | -8809.45 | 139.38 | 45412.70 | 50.27 | 28.27 | 46.01 | 1597.79 |
| 90 | 178.57 | 4 | SLE Q | -9445.72 | 142.44 | 46409.90 | 50.27 | 28.27 | 47.02 | 1626.55 |
| 91 | 238.09 | 4 | SLE Q | -10082.30 | 143.29 | 46685.80 | 50.27 | 28.27 | 47.29 | 1627.93 |
| 92 | 297.62 | 4 | SLE Q | -10719.20 | 142.29 | 46359.90 | 50.27 | 28.27 | 46.95 | 1606.48 |
| 93 | 357.14 | 4 | SLE Q | -11356.40 | 139.63 | 45494.50 | 50.27 | 28.27 | 46.06 | 1564.57 |
| 94 | 416.67 | 4 | SLE Q | -11250.30 | 135.08 | 44011.50 | 50.27 | 28.27 | 44.55 | 1509.81 |
| 95 | 476.19 | 4 | SLE Q | -11144.80 | 128.92 | 42002.30 | 50.27 | 28.27 | 42.51 | 1435.09 |
| 96 | 535.71 | 4 | SLE Q | -11039.90 | 121.54 | 39599.00 | 50.27 | 28.27 | 40.07 | 1345.41 |

Relazione di calcolo

| | | | | | | | | | | | | | | | | |
|-----|---------|---|-------|-----------|----------|-------|-------|--------|------|-------|--------|-------|---------|--------|------|------|
| 143 | 773.81 | 3 | SLE F | -10626.10 | 28123.80 | 86.32 | 46.00 | 136.36 | 0.50 | 20.00 | 198.17 | 25.13 | 1334.19 | 916.23 | 0.27 | 0.09 |
| 144 | 833.33 | 3 | SLE F | -10524.10 | 25182.70 | 77.29 | 46.00 | 136.36 | 0.50 | 20.00 | 212.90 | 21.99 | 1329.33 | 806.27 | 0.23 | 0.08 |
| 145 | 892.86 | 3 | SLE F | -10422.70 | 22325.80 | 68.52 | 46.00 | 136.36 | 0.50 | 20.00 | 212.35 | 21.99 | 1323.28 | 699.58 | 0.20 | 0.07 |
| 146 | 952.38 | 3 | SLE F | -10321.80 | 19590.80 | 60.13 | 46.00 | 136.36 | 0.50 | 20.00 | 211.66 | 21.99 | 1315.68 | 597.60 | 0.17 | 0.06 |
| 147 | 1011.90 | 3 | SLE F | -10221.40 | 17006.70 | 52.20 | 46.00 | 136.36 | 0.50 | 20.00 | 210.78 | 21.99 | 1306.02 | 501.46 | 0.15 | 0.05 |
| 148 | 1071.43 | 3 | SLE F | -10121.70 | 14594.60 | 44.79 | 46.00 | 136.36 | 0.50 | 20.00 | 209.64 | 21.99 | 1293.51 | 412.02 | 0.12 | 0.04 |
| 149 | 1130.95 | 3 | SLE F | -10022.40 | 12368.80 | 37.96 | 46.00 | 136.36 | 0.50 | 20.00 | 208.13 | 21.99 | 1276.95 | 329.90 | 0.10 | 0.03 |
| 150 | 1190.48 | 3 | SLE F | -9923.74 | 10337.70 | 31.73 | 46.00 | 136.36 | 0.50 | 20.00 | 206.08 | 21.99 | 1254.39 | 255.55 | 0.07 | 0.03 |
| 151 | 1250.00 | 3 | SLE F | -9825.58 | 8505.07 | 26.10 | 46.00 | 136.36 | 0.50 | 20.00 | 203.18 | 21.99 | 1222.45 | 189.32 | 0.06 | 0.02 |
| 152 | 1309.52 | 3 | SLE F | -9727.94 | 6870.29 | 21.09 | 46.00 | 136.36 | 0.50 | 20.00 | 198.90 | 21.99 | 1175.42 | 131.62 | 0.04 | 0.01 |
| 153 | 1369.05 | 3 | SLE F | -9630.82 | 5429.47 | 16.66 | 46.00 | 136.36 | 0.50 | 20.00 | 209.01 | 18.85 | 1102.77 | 83.09 | 0.02 | 0.01 |
| 154 | 1428.57 | 3 | SLE F | -9534.22 | 4175.97 | 12.82 | 46.00 | 136.36 | 0.50 | 20.00 | 195.39 | 18.85 | 974.44 | 45.04 | 0.01 | 0.00 |
| 155 | 1488.10 | 3 | SLE F | -9438.14 | 3100.98 | 9.52 | 46.00 | 136.36 | 0.50 | 20.00 | 183.76 | 15.71 | 720.67 | 19.27 | 0.01 | 0.00 |
| 156 | 1547.62 | 3 | SLE F | -9342.56 | 2194.04 | 6.73 | 46.00 | 136.36 | 0.50 | 20.00 | 181.78 | 6.28 | 282.06 | 5.36 | 0.00 | 0.00 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 1 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 5 | SLU N cost - min. sic. |
| 48 | C.Rare - Sc min (max compr.), C.Rare - Sf max (max traz.), C.Rare - Sf min (max compr.) |
| 71 | C.Rare - Sc max (min. compr.) |
| 91 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf max (max traz.), C.Q.Per. - Sf min (max compr.), C.Q.Per. - Wk Max |
| 114 | C.Q.Per. - Sc max (min. compr.) |
| 134 | C.Freq - Wk Max |

Palo n. 14

Caratteristiche del palo e dei materiali utilizzati

| R | Cf | Cls | Fck | Fctk | Fcd | Fctd | Tp | Fyk | Fyd |
|-------|------|--------|------------------------|------------------------|------------------------|------------------------|-------|------------------------|------------------------|
| <cm> | <cm> | | <daN/cm ² > | <daN/cm ² > | <daN/cm ² > | <daN/cm ² > | | <daN/cm ² > | <daN/cm ² > |
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | S450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N | Mx | My | Mz |
|-----|-------|--------|--------|--------|
| | <daN> | <daNm> | <daNm> | <daNm> |
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 14 (-7)

| Caso | CC | TCC | Az | N | Tx | Ty | Mx | My |
|------|----|-------|-----|----------|---------|---------|----------|----------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | RVN | 22330.90 | 7611.12 | -392.01 | 56884.80 | -1333.02 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 22330.90 | 7611.12 | -392.01 | 56884.80 | -1333.02 |
| 2 | 2 | SLE R | RVN | 16541.40 | 5637.87 | -290.38 | 42136.90 | -987.42 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 16541.40 | 5637.87 | -290.38 | 42136.90 | -987.42 |
| 3 | 3 | SLE F | RVN | 16541.40 | 5637.87 | -290.38 | 42136.90 | -987.42 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 16541.40 | 5637.87 | -290.38 | 42136.90 | -987.42 |
| 4 | 4 | SLE Q | RVN | 16541.40 | 5637.87 | -290.38 | 42136.90 | -987.42 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 16541.40 | 5637.87 | -290.38 | 42136.90 | -987.42 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N | Tx | Ty | Mx | My |
|------|----|-------|------|-----------|----------|--------|-----------|---------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | 1 | -22330.90 | -7611.12 | 392.01 | -56884.80 | 1333.02 |
| 2 | 2 | SLE R | 1 | -16541.40 | -5637.87 | 290.38 | -42136.90 | 987.42 |
| 3 | 3 | SLE F | 1 | -16541.40 | -5637.87 | 290.38 | -42136.90 | 987.42 |
| 4 | 4 | SLE Q | 1 | -16541.40 | -5637.87 | 290.38 | -42136.90 | 987.42 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X | CC | TCC | N | My | Mz | Nu | MRdy | MRdz | Rott. | α | Sic. |
|------|-------|----|-----|-----------|----------|---------|-----------|-----------|---------|-------|--------|-------|
| | <cm> | | | <daN> | <daNm> | <daNm> | <daN> | <daNm> | <daNm> | | <grad> | |
| 1 | 0.00 | 1 | SLU | -22330.90 | 56636.00 | 1327.19 | -22330.90 | 156229.00 | 3434.76 | 2-3 | 178.75 | 2.758 |
| 2 | 59.52 | 1 | SLU | -23383.80 | 60425.40 | 1415.98 | -23383.80 | 156672.00 | 3411.68 | 2-3 | 178.75 | 2.593 |

Relazione di calcolo

| | | | | | | | | | | | | |
|----|---------|---|-----|-----------|----------|---------|-------------|------------|----------|-----|--------|--------|
| 3 | 119.05 | 1 | SLU | -23807.40 | 62859.20 | 1473.02 | -23807.40 | 156850.00 | 3402.34 | 2-3 | 178.75 | 2.495 |
| 4 | 178.57 | 1 | SLU | -24231.70 | 64131.00 | 1502.82 | -24231.70 | 157028.00 | 3392.97 | 2-3 | 178.75 | 2.448 |
| 5 | 238.09 | 1 | SLU | -24656.70 | 64419.90 | 1509.59 | -24656.70 | 157207.00 | 3383.56 | 2-3 | 178.75 | 2.440 |
| 6 | 297.62 | 1 | SLU | -25082.50 | 63889.70 | 1497.17 | -25082.50 | 157386.00 | 3374.10 | 2-3 | 178.75 | 2.463 |
| 7 | 357.14 | 1 | SLU | -25509.10 | 62626.30 | 1467.56 | -25509.10 | 157565.00 | 3364.60 | 2-3 | 178.75 | 2.516 |
| 8 | 416.67 | 1 | SLU | -25043.30 | 60525.00 | 1418.32 | -25043.30 | 157369.00 | 3374.97 | 2-3 | 178.75 | 2.600 |
| 9 | 476.19 | 1 | SLU | -24578.90 | 57711.20 | 1352.38 | -24578.90 | 157174.00 | 3385.28 | 2-3 | 178.75 | 2.723 |
| 10 | 535.71 | 1 | SLU | -24115.70 | 54365.60 | 1273.98 | -24115.70 | 156980.00 | 3395.53 | 2-3 | 178.75 | 2.887 |
| 11 | 595.24 | 1 | SLU | -23653.90 | 50645.90 | 1186.82 | -23653.90 | 156785.00 | 3405.73 | 2-3 | 178.75 | 3.096 |
| 12 | 654.76 | 1 | SLU | -23193.30 | 46688.00 | 1094.07 | -23193.30 | 156592.00 | 3415.86 | 2-3 | 178.75 | 3.354 |
| 13 | 714.29 | 1 | SLU | -22734.00 | 42607.80 | 998.45 | -22734.00 | 156399.00 | 3425.94 | 2-3 | 178.75 | 3.671 |
| 14 | 773.81 | 1 | SLU | -22275.90 | 38502.40 | 902.25 | -22275.90 | 156206.00 | 3435.97 | 2-3 | 178.75 | 4.057 |
| 15 | 833.33 | 1 | SLU | -21819.00 | 34452.10 | 807.34 | -21819.00 | 156014.00 | 3445.94 | 2-3 | 178.75 | 4.528 |
| 16 | 892.86 | 1 | SLU | -21363.30 | 30521.90 | 715.24 | -21363.30 | 155822.00 | 3455.85 | 2-3 | 178.75 | 5.105 |
| 17 | 952.38 | 1 | SLU | -20908.70 | 26763.00 | 627.15 | -20908.70 | 155631.00 | 3465.72 | 2-3 | 178.75 | 5.815 |
| 18 | 1011.90 | 1 | SLU | -20455.20 | 23214.40 | 544.00 | -20455.20 | 155440.00 | 3475.53 | 2-3 | 178.75 | 6.696 |
| 19 | 1071.43 | 1 | SLU | -20002.80 | 19904.50 | 466.43 | -20002.80 | 155250.00 | 3485.29 | 2-3 | 178.75 | 7.800 |
| 20 | 1130.95 | 1 | SLU | -19551.50 | 16852.50 | 394.92 | -19551.50 | 155060.00 | 3495.00 | 2-3 | 178.75 | 9.201 |
| 21 | 1190.48 | 1 | SLU | -19101.30 | 14069.60 | 329.70 | -19101.30 | 154870.00 | 3504.66 | 2-3 | 178.75 | 11.007 |
| 22 | 1250.00 | 1 | SLU | -18652.10 | 11560.40 | 270.90 | -18652.10 | 154681.00 | 3514.27 | 2-3 | 178.75 | 13.380 |
| 23 | 1309.52 | 1 | SLU | -18203.80 | 9323.75 | 218.49 | -18203.80 | 154493.00 | 3523.83 | 2-3 | 178.75 | 16.570 |
| 24 | 1369.05 | 1 | SLU | -17756.60 | 7354.00 | 172.33 | -17756.60 | 154305.00 | 3533.34 | 2-3 | 178.75 | 20.982 |
| 25 | 1428.57 | 1 | SLU | -17310.30 | 5641.77 | 132.21 | -17310.30 | 154117.00 | 3542.80 | 2-3 | 178.75 | 27.317 |
| 26 | 1488.10 | 1 | SLU | -16864.90 | 4174.77 | 97.83 | -16864.90 | 153930.00 | 3552.21 | 2-3 | 178.75 | 36.871 |
| 27 | 1547.62 | 1 | SLU | -16420.50 | 2938.44 | 68.86 | -16420.50 | 153742.00 | 3561.63 | 2-3 | 178.75 | 52.321 |
| 28 | 1607.14 | 1 | SLU | -15976.90 | 1916.57 | 44.91 | -15976.90 | 153555.00 | 3571.59 | 2-3 | 178.75 | 80.119 |
| 29 | 1666.67 | 1 | SLU | -15534.10 | 1091.80 | 25.58 | -15534.10 | 153368.00 | 3582.07 | 2-3 | 178.75 | >100 |
| 30 | 1726.19 | 1 | SLU | -15092.30 | 445.99 | 10.45 | -2571250.00 | 153181.00 | 3592.50 | 2-3 | 178.75 | >100 |
| 31 | 1785.71 | 1 | SLU | -14651.20 | -39.41 | -0.92 | -2571250.00 | -152887.00 | -3182.88 | 2-3 | 358.75 | >100 |
| 32 | 1845.24 | 1 | SLU | -14210.90 | -383.15 | -8.98 | -2571250.00 | -152701.00 | -3170.74 | 2-3 | 358.75 | >100 |
| 33 | 1904.76 | 1 | SLU | -13771.30 | -603.94 | -14.15 | -2571250.00 | -152515.00 | -3158.62 | 2-3 | 358.75 | >100 |
| 34 | 1964.29 | 1 | SLU | -13332.50 | -720.33 | -16.88 | -2571250.00 | -152329.00 | -3146.55 | 2-3 | 358.75 | >100 |
| 35 | 2023.81 | 1 | SLU | -12894.50 | -750.64 | -17.59 | -2571250.00 | -152143.00 | -3134.51 | 2-3 | 358.75 | >100 |
| 36 | 2083.33 | 1 | SLU | -12457.10 | -712.89 | -16.71 | -2571250.00 | -151958.00 | -3122.50 | 2-3 | 358.75 | >100 |
| 37 | 2142.86 | 1 | SLU | -12020.30 | -624.79 | -14.64 | -2571250.00 | -151773.00 | -3110.53 | 2-3 | 358.75 | >100 |
| 38 | 2202.38 | 1 | SLU | -11584.30 | -503.77 | -11.81 | -2571250.00 | -151589.00 | -3098.59 | 2-3 | 358.75 | >100 |
| 39 | 2261.90 | 1 | SLU | -11148.80 | -367.01 | -8.60 | -2571250.00 | -151404.00 | -3086.68 | 2-3 | 358.75 | >100 |
| 40 | 2321.43 | 1 | SLU | -10714.00 | -231.47 | -5.42 | -2571250.00 | -151220.00 | -3074.83 | 2-3 | 358.75 | >100 |
| 41 | 2380.95 | 1 | SLU | -10279.70 | -113.99 | -2.67 | -2571250.00 | -151037.00 | -3063.05 | 2-3 | 358.75 | >100 |
| 42 | 2440.48 | 1 | SLU | -9845.93 | -31.27 | -0.73 | -2571250.00 | -150852.00 | -3051.14 | 2-3 | 358.75 | >100 |
| 43 | 2500.00 | 1 | SLU | -9412.73 | 0.00 | 0.00 | -2571250.00 | | | | | >100 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | OC | TCC | Ty <daN> | Tz <daN> | bw <cm> | Asw <cm²> | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|------------|--------------|---------------|------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SLU | 7611.12 | -392.01 | 0.85 | 11.31 | 7621.21 | 1.00 | 32294.70 | 334867.00 | 32294.70 | 4.237 |
| 2 | 59.52 | 1 | SLU | 5165.83 | -266.07 | 0.85 | 11.31 | 5172.68 | 1.00 | 32294.70 | 335018.00 | 32294.70 | 6.243 |
| 3 | 119.05 | 1 | SLU | 3057.38 | -157.47 | 0.85 | 11.31 | 3061.43 | 1.00 | 32294.70 | 335078.00 | 32294.70 | 10.549 |
| 4 | 178.57 | 1 | SLU | 1261.63 | -64.98 | 0.85 | 11.31 | 1263.30 | 1.00 | 32294.70 | 335139.00 | 32294.70 | 25.564 |
| 5 | 238.09 | 1 | SLU | -246.29 | 12.69 | 0.85 | 11.31 | 246.61 | 1.00 | 32294.70 | 335200.00 | 32294.70 | >100 |
| 6 | 297.62 | 1 | SLU | -1491.52 | 76.82 | 0.85 | 11.31 | 1493.50 | 1.00 | 32294.70 | 335261.00 | 32294.70 | 21.623 |
| 7 | 357.14 | 1 | SLU | -2817.71 | 145.13 | 0.85 | 11.31 | 2821.44 | 1.00 | 32294.70 | 335322.00 | 32294.70 | 11.446 |
| 8 | 416.67 | 1 | SLU | -4178.21 | 215.20 | 0.85 | 11.31 | 4183.75 | 1.00 | 32294.70 | 335255.00 | 32294.70 | 7.719 |
| 9 | 476.19 | 1 | SLU | -5215.65 | 268.63 | 0.85 | 11.31 | 5222.57 | 1.00 | 32294.70 | 335189.00 | 32294.70 | 6.184 |
| 10 | 535.71 | 1 | SLU | -5969.60 | 307.46 | 0.85 | 11.31 | 5977.52 | 1.00 | 32294.70 | 335122.00 | 32294.70 | 5.403 |
| 11 | 595.24 | 1 | SLU | -6477.57 | 333.63 | 0.85 | 11.31 | 6486.16 | 1.00 | 32294.70 | 335056.00 | 32294.70 | 4.979 |
| 12 | 654.76 | 1 | SLU | -6774.67 | 348.93 | 0.85 | 11.31 | 6783.65 | 1.00 | 32294.70 | 334990.00 | 32294.70 | 4.761 |
| 13 | 714.29 | 1 | SLU | -6893.46 | 355.05 | 0.85 | 11.31 | 6902.60 | 1.00 | 32294.70 | 334925.00 | 32294.70 | 4.679 |
| 14 | 773.81 | 1 | SLU | -6863.77 | 353.52 | 0.85 | 11.31 | 6872.87 | 1.00 | 32294.70 | 334859.00 | 32294.70 | 4.699 |
| 15 | 833.33 | 1 | SLU | -6712.71 | 345.74 | 0.85 | 11.31 | 6721.61 | 1.00 | 32294.70 | 334793.00 | 32294.70 | 4.805 |
| 16 | 892.86 | 1 | SLU | -6464.64 | 332.96 | 0.85 | 11.31 | 6473.21 | 1.00 | 32294.70 | 334728.00 | 32294.70 | 4.989 |
| 17 | 952.38 | 1 | SLU | -6141.26 | 316.31 | 0.85 | 11.31 | 6149.40 | 1.00 | 32294.70 | 334663.00 | 32294.70 | 5.252 |
| 18 | 1011.90 | 1 | SLU | -5761.68 | 296.75 | 0.85 | 11.31 | 5769.31 | 1.00 | 32294.70 | 334598.00 | 32294.70 | 5.598 |
| 19 | 1071.43 | 1 | SLU | -5342.57 | 275.17 | 0.85 | 11.31 | 5349.65 | 1.00 | 32294.70 | 334533.00 | 32294.70 | 6.037 |
| 20 | 1130.95 | 1 | SLU | -4898.31 | 252.29 | 0.85 | 11.31 | 4904.80 | 1.00 | 32294.70 | 334469.00 | 32294.70 | 6.584 |
| 21 | 1190.48 | 1 | SLU | -4441.14 | 228.74 | 0.85 | 11.31 | 4447.03 | 1.00 | 32294.70 | 334404.00 | 32294.70 | 7.262 |
| 22 | 1250.00 | 1 | SLU | -3981.37 | 205.06 | 0.85 | 11.31 | 3986.65 | 1.00 | 32294.70 | 334340.00 | 32294.70 | 8.101 |
| 23 | 1309.52 | 1 | SLU | -3527.53 | 181.69 | 0.85 | 11.31 | 3532.20 | 1.00 | 32294.70 | 334276.00 | 32294.70 | 9.143 |
| 24 | 1369.05 | 1 | SLU | -3086.54 | 158.97 | 0.85 | 11.31 | 3090.63 | 1.00 | 32294.70 | 334212.00 | 32294.70 | 10.449 |
| 25 | 1428.57 | 1 | SLU | -2663.96 | 137.21 | 0.85 | 11.31 | 2667.49 | 1.00 | 32294.70 | 334148.00 | 32294.70 | 12.107 |
| 26 | 1488.10 | 1 | SLU | -2264.09 | 116.61 | 0.85 | 11.31 | 2267.09 | 1.00 | 32294.70 | 334084.00 | 32294.70 | 14.245 |
| 27 | 1547.62 | 1 | SLU | -1890.18 | 97.35 | 0.85 | 11.31 | 1892.68 | 1.00 | 32294.70 | 334020.00 | 32294.70 | 17.063 |
| 28 | 1607.14 | 1 | SLU | -1544.57 | 79.55 | 0.85 | 11.31 | 1546.61 | 1.00 | 32294.70 | 333957.00 | 32294.70 | 20.881 |
| 29 | 1666.67 | 1 | SLU | -1228.85 | 63.29 | 0.85 | 11.31 | 1230.48 | 1.00 | 32294.70 | 333893.00 | 32294.70 | 26.246 |
| 30 | 1726.19 | 1 | SLU | -944.00 | 48.62 | 0.85 | 11.31 | 945.25 | 1.00 | 32294.70 | 333830.00 | 32294.70 | 34.165 |
| 31 | 1785.71 | 1 | SLU | -690.51 | 35.56 | 0.85 | 11.31 | 691.42 | 1.00 | 32294.70 | 333767.00 | 32294.70 | 46.708 |
| 32 | 1845.24 | 1 | SLU | -468.49 | 24.13 | 0.85 | 11.31 | 469.11 | 1.00 | 32294.70 | 333704.00 | 32294.70 | 68.843 |

Relazione di calcolo

| | | | | | | | | | | | | | |
|----|---------|---|-----|---------|--------|------|-------|--------|------|----------|-----------|----------|------|
| 33 | 1904.76 | 1 | SLU | -277.77 | 14.31 | 0.85 | 11.31 | 278.14 | 1.00 | 32294.70 | 333641.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -118.02 | 6.08 | 0.85 | 11.31 | 118.17 | 1.00 | 32294.70 | 333578.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | 11.25 | -0.58 | 0.85 | 11.31 | 11.26 | 1.00 | 32294.70 | 333515.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 110.52 | -5.69 | 0.85 | 11.31 | 110.67 | 1.00 | 32294.70 | 333452.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 180.31 | -9.29 | 0.85 | 11.31 | 180.55 | 1.00 | 32294.70 | 333390.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 221.08 | -11.39 | 0.85 | 11.31 | 221.37 | 1.00 | 32294.70 | 333327.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 233.21 | -12.01 | 0.85 | 11.31 | 233.52 | 1.00 | 32294.70 | 333265.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 217.00 | -11.18 | 0.85 | 11.31 | 217.29 | 1.00 | 32294.70 | 333203.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 172.66 | -8.89 | 0.85 | 11.31 | 172.89 | 1.00 | 32294.70 | 333141.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 100.31 | -5.17 | 0.85 | 11.31 | 100.44 | 1.00 | 32294.70 | 333078.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mz <daNm> | My <daNm> | AfT <cmq> | AfC <cmq> | σ_c <daN/cmq> | σ_f <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-------------------------|-------------------------|
| 44 | 0.00 | 2 | SLE R | -16541.40 | 983.10 | 41952.60 | 50.27 | 28.27 | 42.33 | 1356.02 |
| 45 | 59.52 | 2 | SLE R | -17634.60 | 1048.88 | 44759.50 | 50.27 | 28.27 | 45.16 | 1446.94 |
| 46 | 119.05 | 2 | SLE R | -18138.40 | 1091.12 | 46562.40 | 50.27 | 28.27 | 46.99 | 1508.11 |
| 47 | 178.57 | 2 | SLE R | -18642.80 | 1113.20 | 47504.50 | 50.27 | 28.27 | 47.93 | 1536.70 |
| 48 | 238.09 | 2 | SLE R | -19147.80 | 1118.21 | 47718.40 | 50.27 | 28.27 | 48.14 | 1537.73 |
| 49 | 297.62 | 2 | SLE R | -19653.40 | 1109.01 | 47325.70 | 50.27 | 28.27 | 47.72 | 1515.80 |
| 50 | 357.14 | 2 | SLE R | -20159.60 | 1087.08 | 46389.90 | 50.27 | 28.27 | 46.75 | 1473.34 |
| 51 | 416.67 | 2 | SLE R | -19829.80 | 1050.61 | 44833.30 | 50.27 | 28.27 | 45.17 | 1419.07 |
| 52 | 476.19 | 2 | SLE R | -19501.00 | 1001.76 | 42749.00 | 50.27 | 28.27 | 43.06 | 1344.85 |
| 53 | 535.71 | 2 | SLE R | -19173.30 | 943.69 | 40270.80 | 50.27 | 28.27 | 40.53 | 1255.74 |
| 54 | 595.24 | 2 | SLE R | -18846.60 | 879.12 | 37515.50 | 50.27 | 28.27 | 37.73 | 1156.18 |
| 55 | 654.76 | 2 | SLE R | -18520.90 | 810.42 | 34583.70 | 50.27 | 28.27 | 34.74 | 1050.00 |
| 56 | 714.29 | 2 | SLE R | -18196.20 | 739.60 | 31561.30 | 50.27 | 28.27 | 31.66 | 940.47 |
| 57 | 773.81 | 2 | SLE R | -17872.50 | 668.33 | 28520.30 | 50.27 | 28.27 | 28.55 | 830.35 |
| 58 | 833.33 | 2 | SLE R | -17549.70 | 598.03 | 25520.10 | 50.27 | 28.27 | 25.48 | 721.92 |
| 59 | 892.86 | 2 | SLE R | -17227.90 | 529.81 | 22608.80 | 50.27 | 28.27 | 22.49 | 617.05 |
| 60 | 952.38 | 2 | SLE R | -16907.00 | 464.56 | 19824.50 | 47.12 | 31.42 | 19.63 | 517.25 |
| 61 | 1011.90 | 2 | SLE R | -16587.00 | 402.96 | 17195.90 | 47.12 | 31.42 | 16.92 | 423.73 |
| 62 | 1071.43 | 2 | SLE R | -16267.90 | 345.51 | 14744.10 | 47.12 | 31.42 | 14.37 | 337.43 |
| 63 | 1130.95 | 2 | SLE R | -15949.70 | 292.53 | 12483.30 | 43.98 | 34.56 | 12.02 | 259.14 |
| 64 | 1190.48 | 2 | SLE R | -15632.30 | 244.22 | 10422.00 | 43.98 | 34.56 | 9.86 | 189.60 |
| 65 | 1250.00 | 2 | SLE R | -15315.80 | 200.67 | 8563.26 | 40.84 | 37.70 | 7.91 | 129.67 |
| 66 | 1309.52 | 2 | SLE R | -15000.10 | 161.84 | 6906.48 | 37.70 | 40.84 | 6.18 | 84.23 |
| 67 | 1369.05 | 2 | SLE R | -14685.20 | 127.65 | 5447.41 | 34.56 | 43.98 | 4.73 | 65.27 |
| 68 | 1428.57 | 2 | SLE R | -14371.10 | 97.93 | 4179.09 | 28.27 | 50.27 | 3.59 | 50.28 |
| 69 | 1488.10 | 2 | SLE R | -14057.70 | 72.47 | 3092.42 | 18.85 | 59.69 | 2.79 | 39.50 |
| 70 | 1547.62 | 2 | SLE R | -13745.10 | 51.01 | 2176.62 | 0.00 | 78.54 | 2.24 | 32.07 |
| 71 | 1607.14 | 2 | SLE R | -13433.30 | 33.27 | 1419.69 | 0.00 | 78.54 | 1.83 | 26.37 |
| 72 | 1666.67 | 2 | SLE R | -13122.10 | 18.95 | 808.74 | 0.00 | 78.54 | 1.49 | 21.69 |
| 73 | 1726.19 | 2 | SLE R | -12811.70 | 7.74 | 330.37 | 0.00 | 78.54 | 1.21 | 17.95 |
| 74 | 1785.71 | 2 | SLE R | -12502.00 | -0.68 | -29.20 | 0.00 | 78.54 | 1.03 | 15.45 |
| 75 | 1845.24 | 2 | SLE R | -12192.90 | -6.65 | -283.82 | 0.00 | 78.54 | 1.14 | 16.86 |
| 76 | 1904.76 | 2 | SLE R | -11884.50 | -10.48 | -447.36 | 0.00 | 78.54 | 1.20 | 17.63 |
| 77 | 1964.29 | 2 | SLE R | -11576.70 | -12.50 | -533.58 | 0.00 | 78.54 | 1.22 | 17.86 |
| 78 | 2023.81 | 2 | SLE R | -11269.50 | -13.03 | -556.03 | 0.00 | 78.54 | 1.20 | 17.64 |
| 79 | 2083.33 | 2 | SLE R | -10963.00 | -12.37 | -528.07 | 0.00 | 78.54 | 1.16 | 17.07 |
| 80 | 2142.86 | 2 | SLE R | -10657.00 | -10.85 | -462.81 | 0.00 | 78.54 | 1.11 | 16.24 |
| 81 | 2202.38 | 2 | SLE R | -10351.60 | -8.74 | -373.16 | 0.00 | 78.54 | 1.03 | 15.24 |
| 82 | 2261.90 | 2 | SLE R | -10046.80 | -6.37 | -271.86 | 0.00 | 78.54 | 0.96 | 14.16 |
| 83 | 2321.43 | 2 | SLE R | -9742.47 | -4.02 | -171.46 | 0.00 | 78.54 | 0.88 | 13.08 |
| 84 | 2380.95 | 2 | SLE R | -9438.69 | -1.98 | -84.44 | 0.00 | 78.54 | 0.81 | 12.10 |
| 85 | 2440.48 | 2 | SLE R | -9135.41 | -0.54 | -23.17 | 0.00 | 78.54 | 0.75 | 11.30 |
| 86 | 2500.00 | 2 | SLE R | -8832.63 | 0.00 | 0.00 | 0.00 | 78.54 | 0.72 | 10.77 |
| 87 | 0.00 | 4 | SLE Q | -16541.40 | 983.10 | 41952.60 | 50.27 | 28.27 | 42.33 | 1356.02 |
| 88 | 59.52 | 4 | SLE Q | -17634.60 | 1048.88 | 44759.50 | 50.27 | 28.27 | 45.16 | 1446.94 |
| 89 | 119.05 | 4 | SLE Q | -18138.40 | 1091.12 | 46562.40 | 50.27 | 28.27 | 46.99 | 1508.11 |
| 90 | 178.57 | 4 | SLE Q | -18642.80 | 1113.20 | 47504.50 | 50.27 | 28.27 | 47.93 | 1536.70 |
| 91 | 238.09 | 4 | SLE Q | -19147.80 | 1118.21 | 47718.40 | 50.27 | 28.27 | 48.14 | 1537.73 |
| 92 | 297.62 | 4 | SLE Q | -19653.40 | 1109.01 | 47325.70 | 50.27 | 28.27 | 47.72 | 1515.80 |
| 93 | 357.14 | 4 | SLE Q | -20159.60 | 1087.08 | 46389.90 | 50.27 | 28.27 | 46.75 | 1473.34 |
| 94 | 416.67 | 4 | SLE Q | -19829.80 | 1050.61 | 44833.30 | 50.27 | 28.27 | 45.17 | 1419.07 |
| 95 | 476.19 | 4 | SLE Q | -19501.00 | 1001.76 | 42749.00 | 50.27 | 28.27 | 43.06 | 1344.85 |
| 96 | 535.71 | 4 | SLE Q | -19173.30 | 943.69 | 40270.80 | 50.27 | 28.27 | 40.53 | 1255.74 |
| 97 | 595.24 | 4 | SLE Q | -18846.60 | 879.12 | 37515.50 | 50.27 | 28.27 | 37.73 | 1156.18 |
| 98 | 654.76 | 4 | SLE Q | -18520.90 | 810.42 | 34583.70 | 50.27 | 28.27 | 34.74 | 1050.00 |
| 99 | 714.29 | 4 | SLE Q | -18196.20 | 739.60 | 31561.30 | 50.27 | 28.27 | 31.66 | 940.47 |
| 100 | 773.81 | 4 | SLE Q | -17872.50 | 668.33 | 28520.30 | 50.27 | 28.27 | 28.55 | 830.35 |
| 101 | 833.33 | 4 | SLE Q | -17549.70 | 598.03 | 25520.10 | 50.27 | 28.27 | 25.48 | 721.92 |
| 102 | 892.86 | 4 | SLE Q | -17227.90 | 529.81 | 22608.80 | 50.27 | 28.27 | 22.49 | 617.05 |
| 103 | 952.38 | 4 | SLE Q | -16907.00 | 464.56 | 19824.50 | 47.12 | 31.42 | 19.63 | 517.25 |
| 104 | 1011.90 | 4 | SLE Q | -16587.00 | 402.96 | 17195.90 | 47.12 | 31.42 | 16.92 | 423.73 |
| 105 | 1071.43 | 4 | SLE Q | -16267.90 | 345.51 | 14744.10 | 47.12 | 31.42 | 14.37 | 337.43 |
| 106 | 1130.95 | 4 | SLE Q | -15949.70 | 292.53 | 12483.30 | 43.98 | 34.56 | 12.02 | 259.14 |

Relazione di calcolo

| | | | | | | | | | | | | | | | | |
|-----|---------|---|-------|-----------|---------|-------|-------|--------|------|-------|--------|-------|--------|-------|------|------|
| 154 | 1428.57 | 3 | SLE F | -14371.10 | 4179.09 | 97.93 | 46.00 | 136.36 | 0.50 | 20.00 | 179.94 | 12.57 | 552.54 | 19.39 | 0.01 | 0.00 |
| 155 | 1488.10 | 3 | SLE F | -14057.70 | 3092.42 | 72.47 | 46.00 | 136.36 | 0.50 | 20.00 | 160.11 | 6.28 | 213.97 | 5.76 | 0.00 | 0.00 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 1 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 5 | SLU N cost - min. sic. |
| 48 | C.Rare - Sc min (max compr.), C.Rare - Sf max (max traz.), C.Rare - Sf min (max compr.) |
| 71 | C.Rare - Sc max (min. compr.) |
| 91 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf max (max traz.), C.Q.Per. - Sf min (max compr.), C.Q.Per. - Wk Max |
| 114 | C.Q.Per. - Sc max (min. compr.) |
| 134 | C.Freq - Wk Max |

Palo n. 15

Caratteristiche del palo e dei materiali utilizzati

| R | Cf | Cls | Fck | Fctk | Fcd | Fctd | Tp | Fyk | Fyd |
|-------|------|--------|-----------|-----------|-----------|-----------|-------|-----------|-----------|
| <cm> | <cm> | | <daN/cm²> | <daN/cm²> | <daN/cm²> | <daN/cm²> | | <daN/cm²> | <daN/cm²> |
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N | Mx | My | Mz |
|-------|--------|--------|--------|--------|
| <daN> | <daNm> | <daNm> | <daNm> | <daNm> |
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 15 (-15)

| Caso | CC | TCC | Az | N | Tx | Ty | Mx | My |
|------|----|-------|-----|----------|---------|---------|----------|----------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | RVN | 46827.10 | 7464.87 | -621.44 | 59215.90 | -4662.64 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 46827.10 | 7464.87 | -621.44 | 59215.90 | -4662.64 |
| 2 | 2 | SLE R | RVN | 34686.80 | 5529.53 | -460.33 | 43863.60 | -3453.80 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 34686.80 | 5529.53 | -460.33 | 43863.60 | -3453.80 |
| 3 | 3 | SLE F | RVN | 34686.80 | 5529.53 | -460.33 | 43863.60 | -3453.80 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 34686.80 | 5529.53 | -460.33 | 43863.60 | -3453.80 |
| 4 | 4 | SLE Q | RVN | 34686.80 | 5529.53 | -460.33 | 43863.60 | -3453.80 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 34686.80 | 5529.53 | -460.33 | 43863.60 | -3453.80 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N | Tx | Ty | Mx | My |
|------|----|-------|------|-----------|----------|--------|-----------|---------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | 1 | -46827.10 | -7464.87 | 621.44 | -59215.90 | 4662.64 |
| 2 | 2 | SLE R | 1 | -34686.80 | -5529.53 | 460.33 | -43863.60 | 3453.80 |
| 3 | 3 | SLE F | 1 | -34686.80 | -5529.53 | 460.33 | -43863.60 | 3453.80 |
| 4 | 4 | SLE Q | 1 | -34686.80 | -5529.53 | 460.33 | -43863.60 | 3453.80 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X | CC | TCC | N | My | Mz | Nu | MRdy | MRdz | Rott. | α | Sic. |
|------|--------|----|-----|-----------|----------|---------|-----------|-----------|----------|-------|--------|-------|
| | <cm> | | | <daN> | <daNm> | <daNm> | <daN> | <daNm> | <daNm> | | <grad> | |
| 1 | 0.00 | 1 | SLU | -46827.10 | 58964.10 | 4642.81 | -46827.10 | 165961.00 | 12911.50 | 2-3 | 175.62 | 2.814 |
| 2 | 59.52 | 1 | SLU | -47709.80 | 62653.80 | 4933.33 | -47709.80 | 166315.00 | 12935.00 | 2-3 | 175.62 | 2.654 |
| 3 | 119.05 | 1 | SLU | -47793.50 | 64972.00 | 5115.87 | -47793.50 | 166348.00 | 12937.20 | 2-3 | 175.62 | 2.560 |
| 4 | 178.57 | 1 | SLU | -47878.80 | 66116.10 | 5205.95 | -47878.80 | 166382.00 | 12939.50 | 2-3 | 175.62 | 2.516 |
| 5 | 238.09 | 1 | SLU | -47965.50 | 66268.50 | 5217.95 | -47965.50 | 166417.00 | 12941.80 | 2-3 | 175.62 | 2.511 |
| 6 | 297.62 | 1 | SLU | -48053.80 | 65596.10 | 5165.01 | -48053.80 | 166452.00 | 12944.20 | 2-3 | 175.62 | 2.537 |
| 7 | 357.14 | 1 | SLU | -48143.50 | 64187.20 | 5054.07 | -48143.50 | 166488.00 | 12946.60 | 2-3 | 175.62 | 2.594 |
| 8 | 416.67 | 1 | SLU | -47102.50 | 61938.80 | 4877.04 | -47102.50 | 166071.00 | 12918.80 | 2-3 | 175.62 | 2.681 |
| 9 | 476.19 | 1 | SLU | -46064.00 | 58979.10 | 4643.99 | -46064.00 | 165655.00 | 12891.10 | 2-3 | 175.62 | 2.809 |
| 10 | 535.71 | 1 | SLU | -45028.00 | 55491.30 | 4369.36 | -45028.00 | 165240.00 | 12863.40 | 2-3 | 175.62 | 2.978 |
| 11 | 595.24 | 1 | SLU | -43994.40 | 51634.70 | 4065.70 | -43994.40 | 164826.00 | 12835.80 | 2-3 | 175.62 | 3.192 |
| 12 | 654.76 | 1 | SLU | -42963.10 | 47547.00 | 3743.83 | -42963.10 | 164412.00 | 12808.20 | 2-3 | 175.62 | 3.458 |
| 13 | 714.29 | 1 | SLU | -41934.20 | 43345.10 | 3412.98 | -41934.20 | 163999.00 | 12780.60 | 2-3 | 175.62 | 3.783 |
| 14 | 773.81 | 1 | SLU | -40907.50 | 39126.90 | 3080.84 | -40907.50 | 163587.00 | 12753.20 | 2-3 | 175.62 | 4.181 |

Relazione di calcolo

| | | | | | | | | | | | | |
|----|---------|---|-----|-----------|----------|---------|-------------|------------|-----------|-----|--------|--------|
| 15 | 833.33 | 1 | SLU | -39883.00 | 34973.20 | 2753.78 | -39883.00 | 163175.00 | 12726.30 | 2-3 | 175.62 | 4.665 |
| 16 | 892.86 | 1 | SLU | -38860.60 | 30949.20 | 2436.92 | -38860.60 | 162763.00 | 12699.50 | 2-3 | 175.62 | 5.259 |
| 17 | 952.38 | 1 | SLU | -37840.30 | 27105.90 | 2134.31 | -37840.30 | 162353.00 | 12672.70 | 2-3 | 175.62 | 5.989 |
| 18 | 1011.90 | 1 | SLU | -36822.10 | 23482.40 | 1848.99 | -36822.10 | 161943.00 | 12645.90 | 2-3 | 175.62 | 6.896 |
| 19 | 1071.43 | 1 | SLU | -35805.80 | 20106.70 | 1583.19 | -35805.80 | 161533.00 | 12619.20 | 2-3 | 175.62 | 8.033 |
| 20 | 1130.95 | 1 | SLU | -34791.40 | 16997.60 | 1338.39 | -34791.40 | 161121.00 | 12574.50 | 2-3 | 175.62 | 9.479 |
| 21 | 1190.48 | 1 | SLU | -33778.90 | 14165.90 | 1115.42 | -33778.90 | 160706.00 | 12506.20 | 2-3 | 175.62 | 11.344 |
| 22 | 1250.00 | 1 | SLU | -32768.30 | 11615.50 | 914.60 | -32768.30 | 160291.00 | 12438.10 | 2-3 | 175.62 | 13.799 |
| 23 | 1309.52 | 1 | SLU | -31759.30 | 9344.84 | 735.81 | -31759.30 | 159877.00 | 12370.20 | 2-3 | 175.62 | 17.107 |
| 24 | 1369.05 | 1 | SLU | -30752.10 | 7347.56 | 578.54 | -30752.10 | 159462.00 | 12301.40 | 2-3 | 175.62 | 21.700 |
| 25 | 1428.57 | 1 | SLU | -29746.50 | 5613.70 | 442.02 | -29746.50 | 159048.00 | 12231.20 | 2-3 | 175.62 | 28.328 |
| 26 | 1488.10 | 1 | SLU | -28742.60 | 4130.35 | 325.22 | -28742.60 | 158634.00 | 12161.30 | 2-3 | 175.62 | 38.401 |
| 27 | 1547.62 | 1 | SLU | -27740.10 | 2882.38 | 226.96 | -27740.10 | 158047.00 | 13812.80 | 2-3 | 175.00 | 54.871 |
| 28 | 1607.14 | 1 | SLU | -26739.20 | 1853.00 | 145.90 | -26739.20 | 157634.00 | 13741.70 | 2-3 | 175.00 | 85.129 |
| 29 | 1666.67 | 1 | SLU | -25739.70 | 1024.27 | 80.65 | -2571250.00 | 157221.00 | 13670.80 | 2-3 | 175.00 | 99.894 |
| 30 | 1726.19 | 1 | SLU | -24741.50 | 377.55 | 29.73 | -2571250.00 | 156809.00 | 13600.20 | 2-3 | 175.00 | >100 |
| 31 | 1785.71 | 1 | SLU | -23744.70 | -106.24 | -8.37 | -2571250.00 | -156215.00 | -13566.50 | 2-3 | 355.00 | >100 |
| 32 | 1845.24 | 1 | SLU | -22749.20 | -446.30 | -35.14 | -2571250.00 | -155795.00 | -13543.80 | 2-3 | 355.00 | >100 |
| 33 | 1904.76 | 1 | SLU | -21754.90 | -661.80 | -52.11 | -2571250.00 | -155376.00 | -13520.90 | 2-3 | 355.00 | >100 |
| 34 | 1964.29 | 1 | SLU | -20761.80 | -771.71 | -60.76 | -2571250.00 | -154957.00 | -13498.10 | 2-3 | 355.00 | >100 |
| 35 | 2023.81 | 1 | SLU | -19769.70 | -794.74 | -62.58 | -2571250.00 | -154539.00 | -13475.20 | 2-3 | 355.00 | >100 |
| 36 | 2083.33 | 1 | SLU | -18778.80 | -749.30 | -59.00 | -2571250.00 | -154122.00 | -13452.40 | 2-3 | 355.00 | >100 |
| 37 | 2142.86 | 1 | SLU | -17788.80 | -653.47 | -51.45 | -2571250.00 | -153705.00 | -13429.50 | 2-3 | 355.00 | >100 |
| 38 | 2202.38 | 1 | SLU | -16799.80 | -525.02 | -41.34 | -2571250.00 | -153285.00 | -13406.30 | 2-3 | 355.00 | >100 |
| 39 | 2261.90 | 1 | SLU | -15811.70 | -381.45 | -30.04 | -2571250.00 | -152992.00 | -11670.70 | 2-3 | 355.62 | >100 |
| 40 | 2321.43 | 1 | SLU | -14824.40 | -240.07 | -18.90 | -2571250.00 | -152574.00 | -11649.90 | 2-3 | 355.62 | >100 |
| 41 | 2380.95 | 1 | SLU | -13838.00 | -118.02 | -9.29 | -2571250.00 | -152155.00 | -11629.10 | 2-3 | 355.62 | >100 |
| 42 | 2440.48 | 1 | SLU | -12852.30 | -32.33 | -2.55 | -2571250.00 | -151737.00 | -11608.20 | 2-3 | 355.62 | >100 |
| 43 | 2500.00 | 1 | SLU | -11867.20 | 0.00 | 0.00 | -2571250.00 | | | | | >100 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | OC | TCC | Ty <daN> | Tz <daN> | bw <m> | Asw <cmq> | Vsdu <daN> | ctgθ | VRsd <daN> | VRod <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|-----------|--------------|---------------|------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SLU | 7464.87 | -621.44 | 0.85 | 11.31 | 7490.69 | 1.00 | 32294.70 | 338376.00 | 32294.70 | 4.311 |
| 2 | 59.52 | 1 | SLU | 4987.45 | -415.20 | 0.85 | 11.31 | 5004.70 | 1.00 | 32294.70 | 338502.00 | 32294.70 | 6.453 |
| 3 | 119.05 | 1 | SLU | 2854.09 | -237.60 | 0.85 | 11.31 | 2863.96 | 1.00 | 32294.70 | 338514.00 | 32294.70 | 11.276 |
| 4 | 178.57 | 1 | SLU | 1039.77 | -86.56 | 0.85 | 11.31 | 1043.37 | 1.00 | 32294.70 | 338526.00 | 32294.70 | 30.952 |
| 5 | 238.09 | 1 | SLU | -481.18 | 40.06 | 0.85 | 11.31 | 482.84 | 1.00 | 32294.70 | 338539.00 | 32294.70 | 66.885 |
| 6 | 297.62 | 1 | SLU | -1734.68 | 144.41 | 0.85 | 11.31 | 1740.68 | 1.00 | 32294.70 | 338551.00 | 32294.70 | 18.553 |
| 7 | 357.14 | 1 | SLU | -3065.92 | 255.23 | 0.85 | 11.31 | 3076.53 | 1.00 | 32294.70 | 338564.00 | 32294.70 | 10.497 |
| 8 | 416.67 | 1 | SLU | -4427.83 | 368.61 | 0.85 | 11.31 | 4443.15 | 1.00 | 32294.70 | 338415.00 | 32294.70 | 7.268 |
| 9 | 476.19 | 1 | SLU | -5461.88 | 454.69 | 0.85 | 11.31 | 5480.77 | 1.00 | 32294.70 | 338266.00 | 32294.70 | 5.892 |
| 10 | 535.71 | 1 | SLU | -6208.58 | 516.86 | 0.85 | 11.31 | 6230.05 | 1.00 | 32294.70 | 338118.00 | 32294.70 | 5.184 |
| 11 | 595.24 | 1 | SLU | -6706.25 | 558.29 | 0.85 | 11.31 | 6729.45 | 1.00 | 32294.70 | 337970.00 | 32294.70 | 4.799 |
| 12 | 654.76 | 1 | SLU | -6990.74 | 581.97 | 0.85 | 11.31 | 7014.93 | 1.00 | 32294.70 | 337822.00 | 32294.70 | 4.604 |
| 13 | 714.29 | 1 | SLU | -7095.25 | 590.67 | 0.85 | 11.31 | 7119.79 | 1.00 | 32294.70 | 337675.00 | 32294.70 | 4.536 |
| 14 | 773.81 | 1 | SLU | -7050.17 | 586.92 | 0.85 | 11.31 | 7074.55 | 1.00 | 32294.70 | 337528.00 | 32294.70 | 4.565 |
| 15 | 833.33 | 1 | SLU | -6883.06 | 573.00 | 0.85 | 11.31 | 6906.87 | 1.00 | 32294.70 | 337381.00 | 32294.70 | 4.676 |
| 16 | 892.86 | 1 | SLU | -6618.70 | 551.00 | 0.85 | 11.31 | 6641.60 | 1.00 | 32294.70 | 337234.00 | 32294.70 | 4.862 |
| 17 | 952.38 | 1 | SLU | -6279.11 | 522.73 | 0.85 | 11.31 | 6300.83 | 1.00 | 32294.70 | 337088.00 | 32294.70 | 5.125 |
| 18 | 1011.90 | 1 | SLU | -5883.68 | 489.81 | 0.85 | 11.31 | 5904.03 | 1.00 | 32294.70 | 336942.00 | 32294.70 | 5.470 |
| 19 | 1071.43 | 1 | SLU | -5449.28 | 453.64 | 0.85 | 11.31 | 5468.13 | 1.00 | 32294.70 | 336797.00 | 32294.70 | 5.906 |
| 20 | 1130.95 | 1 | SLU | -4990.47 | 415.45 | 0.85 | 11.31 | 5007.73 | 1.00 | 32294.70 | 336652.00 | 32294.70 | 6.449 |
| 21 | 1190.48 | 1 | SLU | -4519.61 | 376.25 | 0.85 | 11.31 | 4535.24 | 1.00 | 32294.70 | 336507.00 | 32294.70 | 7.121 |
| 22 | 1250.00 | 1 | SLU | -4047.09 | 336.91 | 0.85 | 11.31 | 4061.09 | 1.00 | 32294.70 | 336362.00 | 32294.70 | 7.952 |
| 23 | 1309.52 | 1 | SLU | -3581.49 | 298.15 | 0.85 | 11.31 | 3593.88 | 1.00 | 32294.70 | 336217.00 | 32294.70 | 8.986 |
| 24 | 1369.05 | 1 | SLU | -3129.78 | 260.55 | 0.85 | 11.31 | 3140.61 | 1.00 | 32294.70 | 336073.00 | 32294.70 | 10.283 |
| 25 | 1428.57 | 1 | SLU | -2697.51 | 224.56 | 0.85 | 11.31 | 2706.84 | 1.00 | 32294.70 | 335929.00 | 32294.70 | 11.931 |
| 26 | 1488.10 | 1 | SLU | -2288.98 | 190.55 | 0.85 | 11.31 | 2296.90 | 1.00 | 32294.70 | 335785.00 | 32294.70 | 14.060 |
| 27 | 1547.62 | 1 | SLU | -1907.41 | 158.79 | 0.85 | 11.31 | 1914.01 | 1.00 | 32294.70 | 335642.00 | 32294.70 | 16.873 |
| 28 | 1607.14 | 1 | SLU | -1555.11 | 129.46 | 0.85 | 11.31 | 1560.49 | 1.00 | 32294.70 | 335498.00 | 32294.70 | 20.695 |
| 29 | 1666.67 | 1 | SLU | -1233.64 | 102.70 | 0.85 | 11.31 | 1237.90 | 1.00 | 32294.70 | 335355.00 | 32294.70 | 26.088 |
| 30 | 1726.19 | 1 | SLU | -943.92 | 78.58 | 0.85 | 11.31 | 947.18 | 1.00 | 32294.70 | 335212.00 | 32294.70 | 34.096 |
| 31 | 1785.71 | 1 | SLU | -686.40 | 57.14 | 0.85 | 11.31 | 688.78 | 1.00 | 32294.70 | 335069.00 | 32294.70 | 46.887 |
| 32 | 1845.24 | 1 | SLU | -461.15 | 38.39 | 0.85 | 11.31 | 462.75 | 1.00 | 32294.70 | 334927.00 | 32294.70 | 69.789 |
| 33 | 1904.76 | 1 | SLU | -267.96 | 22.31 | 0.85 | 11.31 | 268.89 | 1.00 | 32294.70 | 334784.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -106.44 | 8.86 | 0.85 | 11.31 | 106.81 | 1.00 | 32294.70 | 334642.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | 23.92 | -1.99 | 0.85 | 11.31 | 24.00 | 1.00 | 32294.70 | 334500.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 123.64 | -10.29 | 0.85 | 11.31 | 124.07 | 1.00 | 32294.70 | 334358.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 193.27 | -16.09 | 0.85 | 11.31 | 193.94 | 1.00 | 32294.70 | 334216.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 233.28 | -19.42 | 0.85 | 11.31 | 234.09 | 1.00 | 32294.70 | 334074.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 244.08 | -20.32 | 0.85 | 11.31 | 244.93 | 1.00 | 32294.70 | 333933.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 225.98 | -18.81 | 0.85 | 11.31 | 226.76 | 1.00 | 32294.70 | 333792.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 179.20 | -14.92 | 0.85 | 11.31 | 179.82 | 1.00 | 32294.70 | 333650.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 103.85 | -8.65 | 0.85 | 11.31 | 104.21 | 1.00 | 32294.70 | 333509.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

Relazione di calcolo

| Caso | X <cm> | OC | TCC | N <daN> | Mz <daNm> | My <daNm> | AFT <cmq> | AFC <cmq> | σ_c <daN/cmq> | σ_f <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-------------------------|-------------------------|
| 44 | 0.00 | 2 | SLE R | -34686.80 | 3439.12 | 43677.10 | 50.27 | 28.27 | 43.33 | 1176.01 |
| 45 | 59.52 | 2 | SLE R | -35653.80 | 3654.32 | 46410.20 | 50.27 | 28.27 | 46.10 | 1265.57 |
| 46 | 119.05 | 2 | SLE R | -35905.90 | 3789.53 | 48127.40 | 50.27 | 28.27 | 47.85 | 1326.61 |
| 47 | 178.57 | 2 | SLE R | -36159.20 | 3856.26 | 48974.90 | 50.27 | 28.27 | 48.71 | 1355.03 |
| 48 | 238.09 | 2 | SLE R | -36413.60 | 3865.15 | 49087.80 | 50.27 | 28.27 | 48.82 | 1355.87 |
| 49 | 297.62 | 2 | SLE R | -36669.20 | 3825.93 | 48589.70 | 50.27 | 28.27 | 48.29 | 1333.78 |
| 50 | 357.14 | 2 | SLE R | -36925.90 | 3743.76 | 47546.10 | 50.27 | 28.27 | 47.20 | 1291.24 |
| 51 | 416.67 | 2 | SLE R | -36169.90 | 3612.62 | 45880.60 | 50.27 | 28.27 | 45.52 | 1238.88 |
| 52 | 476.19 | 2 | SLE R | -35415.90 | 3439.99 | 43688.30 | 50.27 | 28.27 | 43.30 | 1166.79 |
| 53 | 535.71 | 2 | SLE R | -34663.80 | 3236.56 | 41104.60 | 50.27 | 28.27 | 40.67 | 1080.12 |
| 54 | 595.24 | 2 | SLE R | -33913.60 | 3011.63 | 38247.90 | 50.27 | 28.27 | 37.76 | 983.36 |
| 55 | 654.76 | 2 | SLE R | -33165.20 | 2773.21 | 35220.00 | 47.12 | 31.42 | 34.66 | 880.41 |
| 56 | 714.29 | 2 | SLE R | -32418.50 | 2528.13 | 32107.50 | 47.12 | 31.42 | 31.47 | 774.64 |
| 57 | 773.81 | 2 | SLE R | -31673.60 | 2282.10 | 28982.90 | 43.98 | 34.56 | 28.25 | 668.88 |
| 58 | 833.33 | 2 | SLE R | -30930.40 | 2039.84 | 25906.10 | 43.98 | 34.56 | 25.08 | 565.55 |
| 59 | 892.86 | 2 | SLE R | -30188.90 | 1805.13 | 22925.30 | 43.98 | 34.56 | 22.00 | 466.68 |
| 60 | 952.38 | 2 | SLE R | -29449.00 | 1580.97 | 20078.50 | 43.98 | 34.56 | 19.04 | 374.01 |
| 61 | 1011.90 | 2 | SLE R | -28710.60 | 1369.63 | 17394.40 | 43.98 | 34.56 | 16.25 | 289.09 |
| 62 | 1071.43 | 2 | SLE R | -27973.80 | 1172.74 | 14893.90 | 40.84 | 37.70 | 13.66 | 213.39 |
| 63 | 1130.95 | 2 | SLE R | -27238.50 | 991.40 | 12590.90 | 37.70 | 40.84 | 11.29 | 154.19 |
| 64 | 1190.48 | 2 | SLE R | -26504.70 | 826.24 | 10493.30 | 37.70 | 40.84 | 9.19 | 126.71 |
| 65 | 1250.00 | 2 | SLE R | -25772.20 | 677.48 | 8604.10 | 31.42 | 47.12 | 7.41 | 103.15 |
| 66 | 1309.52 | 2 | SLE R | -25041.20 | 545.04 | 6922.10 | 25.13 | 53.41 | 5.98 | 84.03 |
| 67 | 1369.05 | 2 | SLE R | -24311.50 | 428.55 | 5442.63 | 18.85 | 59.69 | 4.89 | 69.28 |
| 68 | 1428.57 | 2 | SLE R | -23583.10 | 327.42 | 4158.29 | 6.28 | 72.26 | 4.07 | 58.17 |
| 69 | 1488.10 | 2 | SLE R | -22856.00 | 240.91 | 3059.52 | 0.00 | 78.54 | 3.44 | 49.47 |
| 70 | 1547.62 | 2 | SLE R | -22130.10 | 168.12 | 2135.10 | 0.00 | 78.54 | 2.90 | 42.06 |
| 71 | 1607.14 | 2 | SLE R | -21405.40 | 108.08 | 1372.59 | 0.00 | 78.54 | 2.45 | 35.79 |
| 72 | 1666.67 | 2 | SLE R | -20681.80 | 59.74 | 758.72 | 0.00 | 78.54 | 2.07 | 30.57 |
| 73 | 1726.19 | 2 | SLE R | -19959.30 | 22.02 | 279.66 | 0.00 | 78.54 | 1.77 | 26.31 |
| 74 | 1785.71 | 2 | SLE R | -19237.90 | -6.20 | -78.70 | 0.00 | 78.54 | 1.60 | 24.01 |
| 75 | 1845.24 | 2 | SLE R | -18517.60 | -26.03 | -330.59 | 0.00 | 78.54 | 1.68 | 24.90 |
| 76 | 1904.76 | 2 | SLE R | -17798.20 | -38.60 | -490.22 | 0.00 | 78.54 | 1.70 | 25.14 |
| 77 | 1964.29 | 2 | SLE R | -17079.80 | -45.01 | -571.63 | 0.00 | 78.54 | 1.68 | 24.84 |
| 78 | 2023.81 | 2 | SLE R | -16362.30 | -46.35 | -588.70 | 0.00 | 78.54 | 1.63 | 24.08 |
| 79 | 2083.33 | 2 | SLE R | -15645.70 | -43.70 | -555.04 | 0.00 | 78.54 | 1.56 | 22.97 |
| 80 | 2142.86 | 2 | SLE R | -14929.90 | -38.11 | -484.05 | 0.00 | 78.54 | 1.46 | 21.60 |
| 81 | 2202.38 | 2 | SLE R | -14215.00 | -30.62 | -388.90 | 0.00 | 78.54 | 1.36 | 20.06 |
| 82 | 2261.90 | 2 | SLE R | -13500.80 | -22.25 | -282.56 | 0.00 | 78.54 | 1.24 | 18.44 |
| 83 | 2321.43 | 2 | SLE R | -12787.30 | -14.00 | -177.83 | 0.00 | 78.54 | 1.13 | 16.84 |
| 84 | 2380.95 | 2 | SLE R | -12074.50 | -6.88 | -87.42 | 0.00 | 78.54 | 1.03 | 15.34 |
| 85 | 2440.48 | 2 | SLE R | -11362.30 | -1.89 | -23.95 | 0.00 | 78.54 | 0.94 | 14.02 |
| 86 | 2500.00 | 2 | SLE R | -10650.80 | 0.00 | 0.00 | 0.00 | 78.54 | 0.87 | 12.99 |
| 87 | 0.00 | 4 | SLE Q | -34686.80 | 3439.12 | 43677.10 | 50.27 | 28.27 | 43.33 | 1176.01 |
| 88 | 59.52 | 4 | SLE Q | -35653.80 | 3654.32 | 46410.20 | 50.27 | 28.27 | 46.10 | 1265.57 |
| 89 | 119.05 | 4 | SLE Q | -35905.90 | 3789.53 | 48127.40 | 50.27 | 28.27 | 47.85 | 1326.61 |
| 90 | 178.57 | 4 | SLE Q | -36159.20 | 3856.26 | 48974.90 | 50.27 | 28.27 | 48.71 | 1355.03 |
| 91 | 238.09 | 4 | SLE Q | -36413.60 | 3865.15 | 49087.80 | 50.27 | 28.27 | 48.82 | 1355.87 |
| 92 | 297.62 | 4 | SLE Q | -36669.20 | 3825.93 | 48589.70 | 50.27 | 28.27 | 48.29 | 1333.78 |
| 93 | 357.14 | 4 | SLE Q | -36925.90 | 3743.76 | 47546.10 | 50.27 | 28.27 | 47.20 | 1291.24 |
| 94 | 416.67 | 4 | SLE Q | -36169.90 | 3612.62 | 45880.60 | 50.27 | 28.27 | 45.52 | 1238.88 |
| 95 | 476.19 | 4 | SLE Q | -35415.90 | 3439.99 | 43688.30 | 50.27 | 28.27 | 43.30 | 1166.79 |
| 96 | 535.71 | 4 | SLE Q | -34663.80 | 3236.56 | 41104.60 | 50.27 | 28.27 | 40.67 | 1080.12 |
| 97 | 595.24 | 4 | SLE Q | -33913.60 | 3011.63 | 38247.90 | 50.27 | 28.27 | 37.76 | 983.36 |
| 98 | 654.76 | 4 | SLE Q | -33165.20 | 2773.21 | 35220.00 | 47.12 | 31.42 | 34.66 | 880.41 |
| 99 | 714.29 | 4 | SLE Q | -32418.50 | 2528.13 | 32107.50 | 47.12 | 31.42 | 31.47 | 774.64 |
| 100 | 773.81 | 4 | SLE Q | -31673.60 | 2282.10 | 28982.90 | 43.98 | 34.56 | 28.25 | 668.88 |
| 101 | 833.33 | 4 | SLE Q | -30930.40 | 2039.84 | 25906.10 | 43.98 | 34.56 | 25.08 | 565.55 |
| 102 | 892.86 | 4 | SLE Q | -30188.90 | 1805.13 | 22925.30 | 43.98 | 34.56 | 22.00 | 466.68 |
| 103 | 952.38 | 4 | SLE Q | -29449.00 | 1580.97 | 20078.50 | 43.98 | 34.56 | 19.04 | 374.01 |
| 104 | 1011.90 | 4 | SLE Q | -28710.60 | 1369.63 | 17394.40 | 43.98 | 34.56 | 16.25 | 289.09 |
| 105 | 1071.43 | 4 | SLE Q | -27973.80 | 1172.74 | 14893.90 | 40.84 | 37.70 | 13.66 | 213.39 |
| 106 | 1130.95 | 4 | SLE Q | -27238.50 | 991.40 | 12590.90 | 37.70 | 40.84 | 11.29 | 154.19 |
| 107 | 1190.48 | 4 | SLE Q | -26504.70 | 826.24 | 10493.30 | 37.70 | 40.84 | 9.19 | 126.71 |
| 108 | 1250.00 | 4 | SLE Q | -25772.20 | 677.48 | 8604.10 | 31.42 | 47.12 | 7.41 | 103.15 |
| 109 | 1309.52 | 4 | SLE Q | -25041.20 | 545.04 | 6922.10 | 25.13 | 53.41 | 5.98 | 84.03 |
| 110 | 1369.05 | 4 | SLE Q | -24311.50 | 428.55 | 5442.63 | 18.85 | 59.69 | 4.89 | 69.28 |
| 111 | 1428.57 | 4 | SLE Q | -23583.10 | 327.42 | 4158.29 | 6.28 | 72.26 | 4.07 | 58.17 |
| 112 | 1488.10 | 4 | SLE Q | -22856.00 | 240.91 | 3059.52 | 0.00 | 78.54 | 3.44 | 49.47 |
| 113 | 1547.62 | 4 | SLE Q | -22130.10 | 168.12 | 2135.10 | 0.00 | 78.54 | 2.90 | 42.06 |
| 114 | 1607.14 | 4 | SLE Q | -21405.40 | 108.08 | 1372.59 | 0.00 | 78.54 | 2.45 | 35.79 |
| 115 | 1666.67 | 4 | SLE Q | -20681.80 | 59.74 | 758.72 | 0.00 | 78.54 | 2.07 | 30.57 |
| 116 | 1726.19 | 4 | SLE Q | -19959.30 | 22.02 | 279.66 | 0.00 | 78.54 | 1.77 | 26.31 |
| 117 | 1785.71 | 4 | SLE Q | -19237.90 | -6.20 | -78.70 | 0.00 | 78.54 | 1.60 | 24.01 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|-----------|--------|---------|------|-------|------|-------|
| 118 | 1845.24 | 4 | SLE Q | -18517.60 | -26.03 | -330.59 | 0.00 | 78.54 | 1.68 | 24.90 |
| 119 | 1904.76 | 4 | SLE Q | -17798.20 | -38.60 | -490.22 | 0.00 | 78.54 | 1.70 | 25.14 |
| 120 | 1964.29 | 4 | SLE Q | -17079.80 | -45.01 | -571.63 | 0.00 | 78.54 | 1.68 | 24.84 |
| 121 | 2023.81 | 4 | SLE Q | -16362.30 | -46.35 | -588.70 | 0.00 | 78.54 | 1.63 | 24.08 |
| 122 | 2083.33 | 4 | SLE Q | -15645.70 | -43.70 | -555.04 | 0.00 | 78.54 | 1.56 | 22.97 |
| 123 | 2142.86 | 4 | SLE Q | -14929.90 | -38.11 | -484.05 | 0.00 | 78.54 | 1.46 | 21.60 |
| 124 | 2202.38 | 4 | SLE Q | -14215.00 | -30.62 | -388.90 | 0.00 | 78.54 | 1.36 | 20.06 |
| 125 | 2261.90 | 4 | SLE Q | -13500.80 | -22.25 | -282.56 | 0.00 | 78.54 | 1.24 | 18.44 |
| 126 | 2321.43 | 4 | SLE Q | -12787.30 | -14.00 | -177.83 | 0.00 | 78.54 | 1.13 | 16.84 |
| 127 | 2380.95 | 4 | SLE Q | -12074.50 | -6.88 | -87.42 | 0.00 | 78.54 | 1.03 | 15.34 |
| 128 | 2440.48 | 4 | SLE Q | -11362.30 | -1.89 | -23.95 | 0.00 | 78.54 | 0.94 | 14.02 |
| 129 | 2500.00 | 4 | SLE Q | -10650.80 | 0.00 | 0.00 | 0.00 | 78.54 | 0.87 | 12.99 |

Stato limite d'esercizio - Verifiche a fessurazione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | c <mm> | s <mm> | K _l | φ _{EQ} | Δ _{sm} <mm> | A _s <cmq> | A _{c eff} <cmq> | σ _s <daN/cmq> | ε _{sm} | Wk <mm> |
|------|-----------|----|-------|------------|--------------|--------------|-----------|-----------|----------------|-----------------|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------|------------|
| 87 | 0.00 | 4 | SLE Q | -34686.80 | 43677.10 | 3439.12 | 46.00 | 136.36 | 0.50 | 20.00 | 194.12 | 25.13 | 1283.22 | 1176.01 | 0.34 | 0.11 |
| 88 | 59.52 | 4 | SLE Q | -35653.80 | 46410.20 | 3654.32 | 46.00 | 136.36 | 0.50 | 20.00 | 194.40 | 25.13 | 1286.83 | 1265.57 | 0.37 | 0.12 |
| 89 | 119.05 | 4 | SLE Q | -35905.90 | 48127.40 | 3789.53 | 46.00 | 136.36 | 0.50 | 20.00 | 194.65 | 25.13 | 1289.88 | 1326.61 | 0.39 | 0.13 |
| 90 | 178.57 | 4 | SLE Q | -36159.20 | 48974.90 | 3856.26 | 46.00 | 136.36 | 0.50 | 20.00 | 194.73 | 25.13 | 1290.94 | 1355.03 | 0.39 | 0.13 |
| 91 | 238.09 | 4 | SLE Q | -36413.60 | 49087.80 | 3865.15 | 46.00 | 136.36 | 0.50 | 20.00 | 194.69 | 25.13 | 1290.47 | 1355.87 | 0.39 | 0.13 |
| 92 | 297.62 | 4 | SLE Q | -36669.20 | 48589.70 | 3825.93 | 46.00 | 136.36 | 0.50 | 20.00 | 194.55 | 25.13 | 1288.70 | 1333.78 | 0.39 | 0.13 |
| 93 | 357.14 | 4 | SLE Q | -36925.90 | 47546.10 | 3743.76 | 46.00 | 136.36 | 0.50 | 20.00 | 194.31 | 25.13 | 1285.66 | 1291.24 | 0.38 | 0.12 |
| 94 | 416.67 | 4 | SLE Q | -36169.90 | 45880.60 | 3612.62 | 46.00 | 136.36 | 0.50 | 20.00 | 194.18 | 25.13 | 1284.03 | 1238.88 | 0.36 | 0.12 |
| 95 | 476.19 | 4 | SLE Q | -35415.90 | 43688.30 | 3439.99 | 46.00 | 136.36 | 0.50 | 20.00 | 193.93 | 25.13 | 1280.91 | 1166.79 | 0.34 | 0.11 |
| 96 | 535.71 | 4 | SLE Q | -34663.80 | 41104.60 | 3236.56 | 46.00 | 136.36 | 0.50 | 20.00 | 193.56 | 25.13 | 1276.28 | 1080.12 | 0.31 | 0.10 |
| 97 | 595.24 | 4 | SLE Q | -33913.60 | 38247.90 | 3011.63 | 46.00 | 136.36 | 0.50 | 20.00 | 193.06 | 25.13 | 1270.03 | 983.36 | 0.29 | 0.09 |
| 98 | 654.76 | 4 | SLE Q | -33165.20 | 35220.00 | 2773.21 | 46.00 | 136.36 | 0.50 | 20.00 | 206.77 | 21.99 | 1261.94 | 880.41 | 0.26 | 0.09 |
| 99 | 714.29 | 4 | SLE Q | -32418.50 | 32107.50 | 2528.13 | 46.00 | 136.36 | 0.50 | 20.00 | 205.83 | 21.99 | 1251.66 | 774.64 | 0.23 | 0.08 |
| 100 | 773.81 | 4 | SLE Q | -31673.60 | 28982.90 | 2282.10 | 46.00 | 136.36 | 0.50 | 20.00 | 204.65 | 21.99 | 1238.68 | 668.88 | 0.19 | 0.07 |
| 101 | 833.33 | 4 | SLE Q | -30930.40 | 25906.10 | 2039.84 | 46.00 | 136.36 | 0.50 | 20.00 | 203.16 | 21.99 | 1222.26 | 565.55 | 0.16 | 0.06 |
| 102 | 892.86 | 4 | SLE Q | -30188.90 | 22925.30 | 1805.13 | 46.00 | 136.36 | 0.50 | 20.00 | 219.45 | 18.85 | 1201.15 | 466.68 | 0.14 | 0.05 |
| 103 | 952.38 | 4 | SLE Q | -29449.00 | 20078.50 | 1580.97 | 46.00 | 136.36 | 0.50 | 20.00 | 216.51 | 18.85 | 1173.53 | 374.01 | 0.11 | 0.04 |
| 104 | 1011.90 | 4 | SLE Q | -28710.60 | 17394.40 | 1369.63 | 46.00 | 136.36 | 0.50 | 20.00 | 212.60 | 18.85 | 1136.62 | 289.09 | 0.08 | 0.03 |
| 105 | 1071.43 | 4 | SLE Q | -27973.80 | 14893.90 | 1172.74 | 46.00 | 136.36 | 0.50 | 20.00 | 207.24 | 18.85 | 1086.15 | 213.39 | 0.06 | 0.02 |
| 106 | 1130.95 | 4 | SLE Q | -27238.50 | 12590.90 | 991.40 | 46.00 | 136.36 | 0.50 | 20.00 | 199.74 | 18.85 | 1015.38 | 148.38 | 0.04 | 0.01 |
| 107 | 1190.48 | 4 | SLE Q | -26504.70 | 10493.30 | 826.24 | 46.00 | 136.36 | 0.50 | 20.00 | 188.82 | 18.85 | 912.49 | 95.48 | 0.03 | 0.01 |
| 108 | 1250.00 | 4 | SLE Q | -25772.20 | 8604.10 | 677.48 | 46.00 | 136.36 | 0.50 | 20.00 | 211.74 | 12.57 | 752.37 | 55.63 | 0.02 | 0.01 |
| 109 | 1309.52 | 4 | SLE Q | -25041.20 | 6922.10 | 545.04 | 46.00 | 136.36 | 0.50 | 20.00 | 170.93 | 12.57 | 495.93 | 28.28 | 0.01 | 0.00 |
| 110 | 1369.05 | 4 | SLE Q | -24311.50 | 5442.63 | 428.55 | 46.00 | 136.36 | 0.50 | 20.00 | 168.60 | 6.28 | 240.65 | 11.02 | 0.00 | 0.00 |
| 130 | 0.00 | 3 | SLE F | -34686.80 | 43677.10 | 3439.12 | 46.00 | 136.36 | 0.50 | 20.00 | 194.12 | 25.13 | 1283.22 | 1176.01 | 0.34 | 0.11 |
| 131 | 59.52 | 3 | SLE F | -35653.80 | 46410.20 | 3654.32 | 46.00 | 136.36 | 0.50 | 20.00 | 194.40 | 25.13 | 1286.83 | 1265.57 | 0.37 | 0.12 |
| 132 | 119.05 | 3 | SLE F | -35905.90 | 48127.40 | 3789.53 | 46.00 | 136.36 | 0.50 | 20.00 | 194.65 | 25.13 | 1289.88 | 1326.61 | 0.39 | 0.13 |
| 133 | 178.57 | 3 | SLE F | -36159.20 | 48974.90 | 3856.26 | 46.00 | 136.36 | 0.50 | 20.00 | 194.73 | 25.13 | 1290.94 | 1355.03 | 0.39 | 0.13 |
| 134 | 238.09 | 3 | SLE F | -36413.60 | 49087.80 | 3865.15 | 46.00 | 136.36 | 0.50 | 20.00 | 194.69 | 25.13 | 1290.47 | 1355.87 | 0.39 | 0.13 |
| 135 | 297.62 | 3 | SLE F | -36669.20 | 48589.70 | 3825.93 | 46.00 | 136.36 | 0.50 | 20.00 | 194.55 | 25.13 | 1288.70 | 1333.78 | 0.39 | 0.13 |
| 136 | 357.14 | 3 | SLE F | -36925.90 | 47546.10 | 3743.76 | 46.00 | 136.36 | 0.50 | 20.00 | 194.31 | 25.13 | 1285.66 | 1291.24 | 0.38 | 0.12 |
| 137 | 416.67 | 3 | SLE F | -36169.90 | 45880.60 | 3612.62 | 46.00 | 136.36 | 0.50 | 20.00 | 194.18 | 25.13 | 1284.03 | 1238.88 | 0.36 | 0.12 |
| 138 | 476.19 | 3 | SLE F | -35415.90 | 43688.30 | 3439.99 | 46.00 | 136.36 | 0.50 | 20.00 | 193.93 | 25.13 | 1280.91 | 1166.79 | 0.34 | 0.11 |
| 139 | 535.71 | 3 | SLE F | -34663.80 | 41104.60 | 3236.56 | 46.00 | 136.36 | 0.50 | 20.00 | 193.56 | 25.13 | 1276.28 | 1080.12 | 0.31 | 0.10 |
| 140 | 595.24 | 3 | SLE F | -33913.60 | 38247.90 | 3011.63 | 46.00 | 136.36 | 0.50 | 20.00 | 193.06 | 25.13 | 1270.03 | 983.36 | 0.29 | 0.09 |
| 141 | 654.76 | 3 | SLE F | -33165.20 | 35220.00 | 2773.21 | 46.00 | 136.36 | 0.50 | 20.00 | 206.77 | 21.99 | 1261.94 | 880.41 | 0.26 | 0.09 |
| 142 | 714.29 | 3 | SLE F | -32418.50 | 32107.50 | 2528.13 | 46.00 | 136.36 | 0.50 | 20.00 | 205.83 | 21.99 | 1251.66 | 774.64 | 0.23 | 0.08 |
| 143 | 773.81 | 3 | SLE F | -31673.60 | 28982.90 | 2282.10 | 46.00 | 136.36 | 0.50 | 20.00 | 204.65 | 21.99 | 1238.68 | 668.88 | 0.19 | 0.07 |
| 144 | 833.33 | 3 | SLE F | -30930.40 | 25906.10 | 2039.84 | 46.00 | 136.36 | 0.50 | 20.00 | 203.16 | 21.99 | 1222.26 | 565.55 | 0.16 | 0.06 |
| 145 | 892.86 | 3 | SLE F | -30188.90 | 22925.30 | 1805.13 | 46.00 | 136.36 | 0.50 | 20.00 | 219.45 | 18.85 | 1201.15 | 466.68 | 0.14 | 0.05 |
| 146 | 952.38 | 3 | SLE F | -29449.00 | 20078.50 | 1580.97 | 46.00 | 136.36 | 0.50 | 20.00 | 216.51 | 18.85 | 1173.53 | 374.01 | 0.11 | 0.04 |
| 147 | 1011.90 | 3 | SLE F | -28710.60 | 17394.40 | 1369.63 | 46.00 | 136.36 | 0.50 | 20.00 | 212.60 | 18.85 | 1136.62 | 289.09 | 0.08 | 0.03 |
| 148 | 1071.43 | 3 | SLE F | -27973.80 | 14893.90 | 1172.74 | 46.00 | 136.36 | 0.50 | 20.00 | 207.24 | 18.85 | 1086.15 | 213.39 | 0.06 | 0.02 |
| 149 | 1130.95 | 3 | SLE F | -27238.50 | 12590.90 | 991.40 | 46.00 | 136.36 | 0.50 | 20.00 | 199.74 | 18.85 | 1015.38 | 148.38 | 0.04 | 0.01 |
| 150 | 1190.48 | 3 | SLE F | -26504.70 | 10493.30 | 826.24 | 46.00 | 136.36 | 0.50 | 20.00 | 188.82 | 18.85 | 912.49 | 95.48 | 0.03 | 0.01 |
| 151 | 1250.00 | 3 | SLE F | -25772.20 | 8604.10 | 677.48 | 46.00 | 136.36 | 0.50 | 20.00 | 211.74 | 12.57 | 752.37 | 55.63 | 0.02 | 0.01 |
| 152 | 1309.52 | 3 | SLE F | -25041.20 | 6922.10 | 545.04 | 46.00 | 136.36 | 0.50 | 20.00 | 170.93 | 12.57 | 495.93 | 28.28 | 0.01 | 0.00 |
| 153 | 1369.05 | 3 | SLE F | -24311.50 | 5442.63 | 428.55 | 46.00 | 136.36 | 0.50 | 20.00 | 168.60 | 6.28 | 240.65 | 11.02 | 0.00 | 0.00 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 1 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 5 | SLU N cost - min. sic. |
| 48 | C.Rare - Sc min (max compr.), C.Rare - Sf max (max traz.), C.Rare - Sf min (max compr.) |
| 69 | C.Rare - Sc max (min. compr.) |
| 91 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf max (max traz.), C.Q.Per. - Sf min (max compr.), C.Q.Per. - Wk Max |
| 112 | C.Q.Per. - Sc max (min. compr.) |
| 134 | C.Freq - Wk Max |

Relazione di calcolo

Caratteristiche del palo e dei materiali utilizzati

| R <cm> | Cf <cm> | Cls | Fck <daN/cm ² > | Fctk <daN/cm ² > | Fcd <daN/cm ² > | Fctd <daN/cm ² > | Tp | Fyk <daN/cm ² > | Fyd <daN/cm ² > |
|-----------|------------|--------|-------------------------------|--------------------------------|-------------------------------|--------------------------------|-------|-------------------------------|-------------------------------|
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N <daN> | Mx <daNm> | My <daNm> | Mz <daNm> |
|-----|------------|--------------|--------------|--------------|
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 16 (-29)

| Caso | CC | TCC | Az | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|-----|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | RVN | 81184.60 | 7266.56 | -802.52 | 60509.70 | -10373.50 |
| | | | TAG | | | | 0.00 | 0.00 |
| | | | ECC | | | | 0.00 | 0.00 |
| | | | TOT | 81184.60 | 7266.56 | -802.52 | 60509.70 | -10373.50 |
| 2 | 2 | SLE R | RVN | 60136.70 | 5382.63 | -594.46 | 44822.00 | -7684.04 |
| | | | TAG | | | | 0.00 | 0.00 |
| | | | ECC | | | | 0.00 | 0.00 |
| | | | TOT | 60136.70 | 5382.63 | -594.46 | 44822.00 | -7684.04 |
| 3 | 3 | SLE F | RVN | 60136.70 | 5382.63 | -594.46 | 44822.00 | -7684.04 |
| | | | TAG | | | | 0.00 | 0.00 |
| | | | ECC | | | | 0.00 | 0.00 |
| | | | TOT | 60136.70 | 5382.63 | -594.46 | 44822.00 | -7684.04 |
| 4 | 4 | SLE Q | RVN | 60136.70 | 5382.63 | -594.46 | 44822.00 | -7684.04 |
| | | | TAG | | | | 0.00 | 0.00 |
| | | | ECC | | | | 0.00 | 0.00 |
| | | | TOT | 60136.70 | 5382.63 | -594.46 | 44822.00 | -7684.04 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|------|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | 1 | -81184.60 | -7266.56 | 802.52 | -60509.70 | 10373.50 |
| 2 | 2 | SLE R | 1 | -60136.70 | -5382.63 | 594.46 | -44822.00 | 7684.04 |
| 3 | 3 | SLE F | 1 | -60136.70 | -5382.63 | 594.46 | -44822.00 | 7684.04 |
| 4 | 4 | SLE Q | 1 | -60136.70 | -5382.63 | 594.46 | -44822.00 | 7684.04 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|--------|
| 1 | 0.00 | 1 | SLU | -81184.60 | 60259.00 | 10330.50 | -81184.60 | 177580.00 | 31570.30 | 2-3 | 170.00 | 2.950 |
| 2 | 59.52 | 1 | SLU | -81828.40 | 63795.60 | 10936.80 | -81828.40 | 177834.00 | 31616.90 | 2-3 | 170.00 | 2.791 |
| 3 | 119.05 | 1 | SLU | -81435.60 | 65967.00 | 11309.00 | -81435.60 | 177679.00 | 31588.50 | 2-3 | 170.00 | 2.696 |
| 4 | 178.57 | 1 | SLU | -81045.30 | 66971.30 | 11481.20 | -81045.30 | 177525.00 | 31560.20 | 2-3 | 170.00 | 2.654 |
| 5 | 238.09 | 1 | SLU | -80657.60 | 66991.10 | 11484.60 | -80657.60 | 177372.00 | 31532.20 | 2-3 | 170.00 | 2.651 |
| 6 | 297.62 | 1 | SLU | -80272.40 | 66193.60 | 11347.90 | -80272.40 | 177220.00 | 31504.30 | 2-3 | 170.00 | 2.680 |
| 7 | 357.14 | 1 | SLU | -79889.70 | 64668.00 | 11086.30 | -79889.70 | 177068.00 | 31476.60 | 2-3 | 170.00 | 2.741 |
| 8 | 416.67 | 1 | SLU | -78041.90 | 62314.60 | 10682.90 | -78041.90 | 176338.00 | 31342.80 | 2-3 | 170.00 | 2.833 |
| 9 | 476.19 | 1 | SLU | -76198.30 | 59262.20 | 10159.60 | -76198.30 | 175610.00 | 31209.40 | 2-3 | 170.00 | 2.966 |
| 10 | 535.71 | 1 | SLU | -74358.70 | 55693.30 | 9547.76 | -74358.70 | 174883.00 | 31076.30 | 2-3 | 170.00 | 3.143 |
| 11 | 595.24 | 1 | SLU | -72523.10 | 51766.90 | 8874.62 | -72523.10 | 174155.00 | 30942.80 | 2-3 | 170.00 | 3.368 |
| 12 | 654.76 | 1 | SLU | -70691.40 | 47619.60 | 8163.63 | -70691.40 | 173426.00 | 30809.00 | 2-3 | 170.00 | 3.646 |
| 13 | 714.29 | 1 | SLU | -68863.60 | 43367.60 | 7434.70 | -68863.60 | 172698.00 | 30675.40 | 2-3 | 170.00 | 3.986 |
| 14 | 773.81 | 1 | SLU | -67039.40 | 39108.00 | 6704.47 | -67039.40 | 171972.00 | 30542.10 | 2-3 | 170.00 | 4.402 |
| 15 | 833.33 | 1 | SLU | -65218.80 | 34920.90 | 5986.65 | -65218.80 | 171247.00 | 30409.10 | 2-3 | 170.00 | 4.909 |
| 16 | 892.86 | 1 | SLU | -63401.70 | 30870.50 | 5292.26 | -63401.70 | 170520.00 | 30275.70 | 2-3 | 170.00 | 5.529 |
| 17 | 952.38 | 1 | SLU | -61588.00 | 27007.20 | 4629.96 | -61588.00 | 169793.00 | 30141.90 | 2-3 | 170.00 | 6.293 |
| 18 | 1011.90 | 1 | SLU | -59777.60 | 23369.10 | 4006.27 | -59777.60 | 169068.00 | 30008.40 | 2-3 | 170.00 | 7.242 |
| 19 | 1071.43 | 1 | SLU | -57970.40 | 19983.70 | 3425.90 | -57970.40 | 168343.00 | 29875.10 | 2-3 | 170.00 | 8.433 |
| 20 | 1130.95 | 1 | SLU | -56166.30 | 16869.00 | 2891.93 | -56166.30 | 167619.00 | 29742.00 | 2-3 | 170.00 | 9.947 |
| 21 | 1190.48 | 1 | SLU | -54365.20 | 14035.20 | 2406.12 | -54365.20 | 166894.00 | 29608.40 | 2-3 | 170.00 | 11.903 |
| 22 | 1250.00 | 1 | SLU | -52567.10 | 11485.60 | 1969.03 | -52567.10 | 166168.00 | 29474.50 | 2-3 | 170.00 | 14.482 |
| 23 | 1309.52 | 1 | SLU | -50771.70 | 9218.11 | 1580.30 | -50771.70 | 165443.00 | 29340.80 | 2-3 | 170.00 | 17.966 |
| 24 | 1369.05 | 1 | SLU | -48979.10 | 7225.94 | 1238.78 | -48979.10 | 164719.00 | 29207.40 | 2-3 | 170.00 | 22.818 |
| 25 | 1428.57 | 1 | SLU | -47189.10 | 5498.69 | 942.66 | -47189.10 | 163996.00 | 29074.10 | 2-3 | 170.00 | 29.854 |
| 26 | 1488.10 | 1 | SLU | -45401.70 | 4023.06 | 689.69 | -45401.70 | 163272.00 | 28940.30 | 2-3 | 170.00 | 40.624 |
| 27 | 1547.62 | 1 | SLU | -43616.70 | 2783.59 | 477.20 | -43616.70 | 162546.00 | 28806.10 | 2-3 | 170.00 | 58.452 |
| 28 | 1607.14 | 1 | SLU | -41834.00 | 1763.21 | 302.27 | -2571250.00 | 161822.00 | 28672.10 | 2-3 | 170.00 | 61.463 |
| 29 | 1666.67 | 1 | SLU | -40053.60 | 943.73 | 161.79 | -2571250.00 | 161098.00 | 28538.30 | 2-3 | 170.00 | 64.195 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|-----------|---------|----------|-------|-------|-------|---------|
| 57 | 773.81 | 2 | SLE R | -51030.60 | 4966.27 | 28968.90 | 40.84 | 37.70 | 26.95 | 461.75 |
| 58 | 833.33 | 2 | SLE R | -49697.70 | 4434.55 | 25867.30 | 40.84 | 37.70 | 23.76 | 371.61 |
| 59 | 892.86 | 2 | SLE R | -48367.40 | 3920.19 | 22867.00 | 40.84 | 37.70 | 20.69 | 288.31 |
| 60 | 952.38 | 2 | SLE R | -47039.80 | 3429.60 | 20005.30 | 37.70 | 40.84 | 17.81 | 244.79 |
| 61 | 1011.90 | 2 | SLE R | -45714.70 | 2967.61 | 17310.40 | 34.56 | 43.98 | 15.17 | 209.91 |
| 62 | 1071.43 | 2 | SLE R | -44392.00 | 2537.70 | 14802.70 | 34.56 | 43.98 | 12.82 | 178.72 |
| 63 | 1130.95 | 2 | SLE R | -43071.70 | 2142.17 | 12495.60 | 28.27 | 50.27 | 10.81 | 151.78 |
| 64 | 1190.48 | 2 | SLE R | -41753.80 | 1782.31 | 10396.40 | 21.99 | 56.55 | 9.15 | 129.32 |
| 65 | 1250.00 | 2 | SLE R | -40438.00 | 1458.54 | 8507.86 | 15.71 | 62.83 | 7.81 | 111.04 |
| 66 | 1309.52 | 2 | SLE R | -39124.50 | 1170.59 | 6828.23 | 3.14 | 75.40 | 6.74 | 96.29 |
| 67 | 1369.05 | 2 | SLE R | -37813.00 | 917.61 | 5352.55 | 0.00 | 78.54 | 5.86 | 84.11 |
| 68 | 1428.57 | 2 | SLE R | -36503.60 | 698.27 | 4073.10 | 0.00 | 78.54 | 5.08 | 73.43 |
| 69 | 1488.10 | 2 | SLE R | -35196.10 | 510.88 | 2980.05 | 0.00 | 78.54 | 4.41 | 64.07 |
| 70 | 1547.62 | 2 | SLE R | -33890.50 | 353.48 | 2061.92 | 0.00 | 78.54 | 3.83 | 55.96 |
| 71 | 1607.14 | 2 | SLE R | -32586.70 | 223.91 | 1306.08 | 0.00 | 78.54 | 3.33 | 49.01 |
| 72 | 1666.67 | 2 | SLE R | -31284.70 | 119.84 | 699.06 | 0.00 | 78.54 | 2.91 | 43.11 |
| 73 | 1726.19 | 2 | SLE R | -29984.30 | 38.90 | 226.89 | 0.00 | 78.54 | 2.56 | 38.17 |
| 74 | 1785.71 | 2 | SLE R | -28685.60 | -21.38 | -124.70 | 0.00 | 78.54 | 2.40 | 35.87 |
| 75 | 1845.24 | 2 | SLE R | -27388.40 | -63.44 | -370.03 | 0.00 | 78.54 | 2.42 | 36.04 |
| 76 | 1904.76 | 2 | SLE R | -26092.60 | -89.73 | -523.41 | 0.00 | 78.54 | 2.39 | 35.55 |
| 77 | 1964.29 | 2 | SLE R | -24798.30 | -102.68 | -598.96 | 0.00 | 78.54 | 2.33 | 34.51 |
| 78 | 2023.81 | 2 | SLE R | -23505.30 | -104.68 | -610.62 | 0.00 | 78.54 | 2.23 | 33.02 |
| 79 | 2083.33 | 2 | SLE R | -22213.60 | -98.07 | -572.06 | 0.00 | 78.54 | 2.10 | 31.17 |
| 80 | 2142.86 | 2 | SLE R | -20923.00 | -85.16 | -496.72 | 0.00 | 78.54 | 1.96 | 29.06 |
| 81 | 2202.38 | 2 | SLE R | -19633.60 | -68.20 | -397.81 | 0.00 | 78.54 | 1.80 | 26.78 |
| 82 | 2261.90 | 2 | SLE R | -18345.20 | -49.43 | -288.33 | 0.00 | 78.54 | 1.64 | 24.43 |
| 83 | 2321.43 | 2 | SLE R | -17057.80 | -31.05 | -181.12 | 0.00 | 78.54 | 1.48 | 22.09 |
| 84 | 2380.95 | 2 | SLE R | -15771.30 | -15.24 | -88.90 | 0.00 | 78.54 | 1.33 | 19.86 |
| 85 | 2440.48 | 2 | SLE R | -14485.70 | -4.17 | -24.32 | 0.00 | 78.54 | 1.19 | 17.84 |
| 86 | 2500.00 | 2 | SLE R | -13200.80 | 0.00 | 0.00 | 0.00 | 78.54 | 1.07 | 16.09 |
| 87 | 0.00 | 4 | SLE Q | -60136.70 | 7652.20 | 44636.30 | 47.12 | 31.42 | 42.87 | 915.33 |
| 88 | 59.52 | 4 | SLE Q | -60926.80 | 8101.31 | 47256.00 | 47.12 | 31.42 | 45.57 | 1001.60 |
| 89 | 119.05 | 4 | SLE Q | -60826.00 | 8377.05 | 48864.50 | 47.12 | 31.42 | 47.27 | 1061.89 |
| 90 | 178.57 | 4 | SLE Q | -60727.00 | 8504.58 | 49608.30 | 47.12 | 31.42 | 48.06 | 1090.50 |
| 91 | 238.09 | 4 | SLE Q | -60630.00 | 8507.10 | 49623.00 | 47.12 | 31.42 | 48.08 | 1092.23 |
| 92 | 297.62 | 4 | SLE Q | -60534.80 | 8405.83 | 49032.30 | 47.12 | 31.42 | 47.47 | 1071.60 |
| 93 | 357.14 | 4 | SLE Q | -60441.60 | 8212.09 | 47902.20 | 47.12 | 31.42 | 46.29 | 1031.14 |
| 94 | 416.67 | 4 | SLE Q | -59088.00 | 7913.24 | 46159.00 | 47.12 | 31.42 | 44.54 | 983.44 |
| 95 | 476.19 | 4 | SLE Q | -57737.60 | 7525.62 | 43897.90 | 47.12 | 31.42 | 42.26 | 916.82 |
| 96 | 535.71 | 4 | SLE Q | -56390.30 | 7072.41 | 41254.30 | 47.12 | 31.42 | 39.57 | 836.46 |
| 97 | 595.24 | 4 | SLE Q | -55046.00 | 6573.80 | 38345.80 | 43.98 | 34.56 | 36.59 | 746.97 |
| 98 | 654.76 | 4 | SLE Q | -53704.70 | 6047.14 | 35273.80 | 43.98 | 34.56 | 33.44 | 652.38 |
| 99 | 714.29 | 4 | SLE Q | -52366.20 | 5507.18 | 32124.10 | 40.84 | 37.70 | 30.20 | 556.27 |
| 100 | 773.81 | 4 | SLE Q | -51030.60 | 4966.27 | 28968.90 | 40.84 | 37.70 | 26.95 | 461.75 |
| 101 | 833.33 | 4 | SLE Q | -49697.70 | 4434.55 | 25867.30 | 40.84 | 37.70 | 23.76 | 371.61 |
| 102 | 892.86 | 4 | SLE Q | -48367.40 | 3920.19 | 22867.00 | 40.84 | 37.70 | 20.69 | 288.31 |
| 103 | 952.38 | 4 | SLE Q | -47039.80 | 3429.60 | 20005.30 | 37.70 | 40.84 | 17.81 | 244.79 |
| 104 | 1011.90 | 4 | SLE Q | -45714.70 | 2967.61 | 17310.40 | 34.56 | 43.98 | 15.17 | 209.91 |
| 105 | 1071.43 | 4 | SLE Q | -44392.00 | 2537.70 | 14802.70 | 34.56 | 43.98 | 12.82 | 178.72 |
| 106 | 1130.95 | 4 | SLE Q | -43071.70 | 2142.17 | 12495.60 | 28.27 | 50.27 | 10.81 | 151.78 |
| 107 | 1190.48 | 4 | SLE Q | -41753.80 | 1782.31 | 10396.40 | 21.99 | 56.55 | 9.15 | 129.32 |
| 108 | 1250.00 | 4 | SLE Q | -40438.00 | 1458.54 | 8507.86 | 15.71 | 62.83 | 7.81 | 111.04 |
| 109 | 1309.52 | 4 | SLE Q | -39124.50 | 1170.59 | 6828.23 | 3.14 | 75.40 | 6.74 | 96.29 |
| 110 | 1369.05 | 4 | SLE Q | -37813.00 | 917.61 | 5352.55 | 0.00 | 78.54 | 5.86 | 84.11 |
| 111 | 1428.57 | 4 | SLE Q | -36503.60 | 698.27 | 4073.10 | 0.00 | 78.54 | 5.08 | 73.43 |
| 112 | 1488.10 | 4 | SLE Q | -35196.10 | 510.88 | 2980.05 | 0.00 | 78.54 | 4.41 | 64.07 |
| 113 | 1547.62 | 4 | SLE Q | -33890.50 | 353.48 | 2061.92 | 0.00 | 78.54 | 3.83 | 55.96 |
| 114 | 1607.14 | 4 | SLE Q | -32586.70 | 223.91 | 1306.08 | 0.00 | 78.54 | 3.33 | 49.01 |
| 115 | 1666.67 | 4 | SLE Q | -31284.70 | 119.84 | 699.06 | 0.00 | 78.54 | 2.91 | 43.11 |
| 116 | 1726.19 | 4 | SLE Q | -29984.30 | 38.90 | 226.89 | 0.00 | 78.54 | 2.56 | 38.17 |
| 117 | 1785.71 | 4 | SLE Q | -28685.60 | -21.38 | -124.70 | 0.00 | 78.54 | 2.40 | 35.87 |
| 118 | 1845.24 | 4 | SLE Q | -27388.40 | -63.44 | -370.03 | 0.00 | 78.54 | 2.42 | 36.04 |
| 119 | 1904.76 | 4 | SLE Q | -26092.60 | -89.73 | -523.41 | 0.00 | 78.54 | 2.39 | 35.55 |
| 120 | 1964.29 | 4 | SLE Q | -24798.30 | -102.68 | -598.96 | 0.00 | 78.54 | 2.33 | 34.51 |
| 121 | 2023.81 | 4 | SLE Q | -23505.30 | -104.68 | -610.62 | 0.00 | 78.54 | 2.23 | 33.02 |
| 122 | 2083.33 | 4 | SLE Q | -22213.60 | -98.07 | -572.06 | 0.00 | 78.54 | 2.10 | 31.17 |
| 123 | 2142.86 | 4 | SLE Q | -20923.00 | -85.16 | -496.72 | 0.00 | 78.54 | 1.96 | 29.06 |
| 124 | 2202.38 | 4 | SLE Q | -19633.60 | -68.20 | -397.81 | 0.00 | 78.54 | 1.80 | 26.78 |
| 125 | 2261.90 | 4 | SLE Q | -18345.20 | -49.43 | -288.33 | 0.00 | 78.54 | 1.64 | 24.43 |
| 126 | 2321.43 | 4 | SLE Q | -17057.80 | -31.05 | -181.12 | 0.00 | 78.54 | 1.48 | 22.09 |
| 127 | 2380.95 | 4 | SLE Q | -15771.30 | -15.24 | -88.90 | 0.00 | 78.54 | 1.33 | 19.86 |
| 128 | 2440.48 | 4 | SLE Q | -14485.70 | -4.17 | -24.32 | 0.00 | 78.54 | 1.19 | 17.84 |
| 129 | 2500.00 | 4 | SLE Q | -13200.80 | 0.00 | 0.00 | 0.00 | 78.54 | 1.07 | 16.09 |

Stato limite d'esercizio - Verifiche a fessurazione

| Caso | X <mm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | c <mm> | s <mm> | K ₂ | φ _{eq} | Δ _{lim} <mm> | A _s <cmq> | A _{c,eff} <cmq> | σ _{st} <daN/cmq> | ε _{st} | Wk <mm> |
|------|-----------|----|-----|------------|--------------|--------------|-----------|-----------|----------------|-----------------|--------------------------|-------------------------|-----------------------------|------------------------------|-----------------|------------|
|------|-----------|----|-----|------------|--------------|--------------|-----------|-----------|----------------|-----------------|--------------------------|-------------------------|-----------------------------|------------------------------|-----------------|------------|

Relazione di calcolo

| | | | | | | | | | | | | | | | | |
|-----|---------|---|-------|-----------|----------|---------|-------|--------|------|-------|--------|-------|---------|---------|------|------|
| 87 | 0.00 | 4 | SLE Q | -60136.70 | 44636.30 | 7652.20 | 46.00 | 136.36 | 0.50 | 20.00 | 202.09 | 21.99 | 1210.52 | 915.33 | 0.27 | 0.09 |
| 88 | 59.52 | 4 | SLE Q | -60926.80 | 47256.00 | 8101.31 | 46.00 | 136.36 | 0.50 | 20.00 | 203.00 | 21.99 | 1220.54 | 1001.60 | 0.29 | 0.10 |
| 89 | 119.05 | 4 | SLE Q | -60826.00 | 48864.50 | 8377.05 | 46.00 | 136.36 | 0.50 | 20.00 | 203.69 | 21.99 | 1228.04 | 1061.89 | 0.31 | 0.11 |
| 90 | 178.57 | 4 | SLE Q | -60727.00 | 49608.30 | 8504.58 | 46.00 | 136.36 | 0.50 | 20.00 | 204.00 | 21.99 | 1231.46 | 1090.50 | 0.32 | 0.11 |
| 91 | 238.09 | 4 | SLE Q | -60630.00 | 49623.00 | 8507.10 | 46.00 | 136.36 | 0.50 | 20.00 | 204.03 | 21.99 | 1231.84 | 1092.23 | 0.32 | 0.11 |
| 92 | 297.62 | 4 | SLE Q | -60534.80 | 49032.30 | 8405.83 | 46.00 | 136.36 | 0.50 | 20.00 | 203.84 | 21.99 | 1229.73 | 1071.60 | 0.31 | 0.11 |
| 93 | 357.14 | 4 | SLE Q | -60441.60 | 47902.20 | 8212.09 | 46.00 | 136.36 | 0.50 | 20.00 | 203.43 | 21.99 | 1225.20 | 1031.14 | 0.30 | 0.10 |
| 94 | 416.67 | 4 | SLE Q | -59088.00 | 46159.00 | 7913.24 | 46.00 | 136.36 | 0.50 | 20.00 | 203.15 | 21.99 | 1222.11 | 983.44 | 0.29 | 0.10 |
| 95 | 476.19 | 4 | SLE Q | -57737.60 | 43897.90 | 7525.62 | 46.00 | 136.36 | 0.50 | 20.00 | 202.60 | 21.99 | 1216.09 | 916.82 | 0.27 | 0.09 |
| 96 | 535.71 | 4 | SLE Q | -56390.30 | 41254.30 | 7072.41 | 46.00 | 136.36 | 0.50 | 20.00 | 201.78 | 21.99 | 1207.06 | 836.46 | 0.24 | 0.08 |
| 97 | 595.24 | 4 | SLE Q | -55046.00 | 38345.80 | 6573.80 | 46.00 | 136.36 | 0.50 | 20.00 | 200.65 | 21.99 | 1194.69 | 746.97 | 0.22 | 0.07 |
| 98 | 654.76 | 4 | SLE Q | -53704.70 | 35273.80 | 6047.14 | 46.00 | 136.36 | 0.50 | 20.00 | 199.17 | 21.99 | 1178.37 | 652.38 | 0.19 | 0.06 |
| 99 | 714.29 | 4 | SLE Q | -52366.20 | 32124.10 | 5507.18 | 46.00 | 136.36 | 0.50 | 20.00 | 197.24 | 21.99 | 1157.20 | 556.27 | 0.16 | 0.05 |
| 100 | 773.81 | 4 | SLE Q | -51030.60 | 28968.90 | 4966.27 | 46.00 | 136.36 | 0.50 | 20.00 | 194.75 | 21.99 | 1129.81 | 461.75 | 0.13 | 0.04 |
| 101 | 833.33 | 4 | SLE Q | -49697.70 | 25867.30 | 4434.55 | 46.00 | 136.36 | 0.50 | 20.00 | 191.52 | 21.99 | 1094.23 | 371.61 | 0.11 | 0.04 |
| 102 | 892.86 | 4 | SLE Q | -48367.40 | 22867.00 | 3920.19 | 46.00 | 136.36 | 0.50 | 20.00 | 203.16 | 18.85 | 1047.69 | 288.31 | 0.08 | 0.03 |
| 103 | 952.38 | 4 | SLE Q | -47039.80 | 20005.30 | 3429.60 | 46.00 | 136.36 | 0.50 | 20.00 | 217.59 | 15.71 | 986.38 | 214.09 | 0.06 | 0.02 |
| 104 | 1011.90 | 4 | SLE Q | -45714.70 | 17310.40 | 2967.61 | 46.00 | 136.36 | 0.50 | 20.00 | 206.76 | 15.71 | 901.30 | 150.84 | 0.04 | 0.02 |
| 105 | 1071.43 | 4 | SLE Q | -44392.00 | 14802.70 | 2537.70 | 46.00 | 136.36 | 0.50 | 20.00 | 191.28 | 15.71 | 779.77 | 99.79 | 0.03 | 0.01 |
| 106 | 1130.95 | 4 | SLE Q | -43071.70 | 12495.60 | 2142.17 | 46.00 | 136.36 | 0.50 | 20.00 | 186.98 | 12.57 | 596.76 | 60.98 | 0.02 | 0.01 |
| 107 | 1190.48 | 4 | SLE Q | -41753.80 | 10396.40 | 1782.31 | 46.00 | 136.36 | 0.50 | 20.00 | 176.11 | 9.42 | 396.38 | 33.18 | 0.01 | 0.00 |
| 108 | 1250.00 | 4 | SLE Q | -40438.00 | 8507.86 | 1458.54 | 46.00 | 136.36 | 0.50 | 20.00 | 221.17 | 3.14 | 202.90 | 14.10 | 0.00 | 0.00 |
| 130 | 0.00 | 3 | SLE F | -60136.70 | 44636.30 | 7652.20 | 46.00 | 136.36 | 0.50 | 20.00 | 202.09 | 21.99 | 1210.52 | 915.33 | 0.27 | 0.09 |
| 131 | 59.52 | 3 | SLE F | -60926.80 | 47256.00 | 8101.31 | 46.00 | 136.36 | 0.50 | 20.00 | 203.00 | 21.99 | 1220.54 | 1001.60 | 0.29 | 0.10 |
| 132 | 119.05 | 3 | SLE F | -60826.00 | 48864.50 | 8377.05 | 46.00 | 136.36 | 0.50 | 20.00 | 203.69 | 21.99 | 1228.04 | 1061.89 | 0.31 | 0.11 |
| 133 | 178.57 | 3 | SLE F | -60727.00 | 49608.30 | 8504.58 | 46.00 | 136.36 | 0.50 | 20.00 | 204.00 | 21.99 | 1231.46 | 1090.50 | 0.32 | 0.11 |
| 134 | 238.09 | 3 | SLE F | -60630.00 | 49623.00 | 8507.10 | 46.00 | 136.36 | 0.50 | 20.00 | 204.03 | 21.99 | 1231.84 | 1092.23 | 0.32 | 0.11 |
| 135 | 297.62 | 3 | SLE F | -60534.80 | 49032.30 | 8405.83 | 46.00 | 136.36 | 0.50 | 20.00 | 203.84 | 21.99 | 1229.73 | 1071.60 | 0.31 | 0.11 |
| 136 | 357.14 | 3 | SLE F | -60441.60 | 47902.20 | 8212.09 | 46.00 | 136.36 | 0.50 | 20.00 | 203.43 | 21.99 | 1225.20 | 1031.14 | 0.30 | 0.10 |
| 137 | 416.67 | 3 | SLE F | -59088.00 | 46159.00 | 7913.24 | 46.00 | 136.36 | 0.50 | 20.00 | 203.15 | 21.99 | 1222.11 | 983.44 | 0.29 | 0.10 |
| 138 | 476.19 | 3 | SLE F | -57737.60 | 43897.90 | 7525.62 | 46.00 | 136.36 | 0.50 | 20.00 | 202.60 | 21.99 | 1216.09 | 916.82 | 0.27 | 0.09 |
| 139 | 535.71 | 3 | SLE F | -56390.30 | 41254.30 | 7072.41 | 46.00 | 136.36 | 0.50 | 20.00 | 201.78 | 21.99 | 1207.06 | 836.46 | 0.24 | 0.08 |
| 140 | 595.24 | 3 | SLE F | -55046.00 | 38345.80 | 6573.80 | 46.00 | 136.36 | 0.50 | 20.00 | 200.65 | 21.99 | 1194.69 | 746.97 | 0.22 | 0.07 |
| 141 | 654.76 | 3 | SLE F | -53704.70 | 35273.80 | 6047.14 | 46.00 | 136.36 | 0.50 | 20.00 | 199.17 | 21.99 | 1178.37 | 652.38 | 0.19 | 0.06 |
| 142 | 714.29 | 3 | SLE F | -52366.20 | 32124.10 | 5507.18 | 46.00 | 136.36 | 0.50 | 20.00 | 197.24 | 21.99 | 1157.20 | 556.27 | 0.16 | 0.05 |
| 143 | 773.81 | 3 | SLE F | -51030.60 | 28968.90 | 4966.27 | 46.00 | 136.36 | 0.50 | 20.00 | 194.75 | 21.99 | 1129.81 | 461.75 | 0.13 | 0.04 |
| 144 | 833.33 | 3 | SLE F | -49697.70 | 25867.30 | 4434.55 | 46.00 | 136.36 | 0.50 | 20.00 | 191.52 | 21.99 | 1094.23 | 371.61 | 0.11 | 0.04 |
| 145 | 892.86 | 3 | SLE F | -48367.40 | 22867.00 | 3920.19 | 46.00 | 136.36 | 0.50 | 20.00 | 203.16 | 18.85 | 1047.69 | 288.31 | 0.08 | 0.03 |
| 146 | 952.38 | 3 | SLE F | -47039.80 | 20005.30 | 3429.60 | 46.00 | 136.36 | 0.50 | 20.00 | 217.59 | 15.71 | 986.38 | 214.09 | 0.06 | 0.02 |
| 147 | 1011.90 | 3 | SLE F | -45714.70 | 17310.40 | 2967.61 | 46.00 | 136.36 | 0.50 | 20.00 | 206.76 | 15.71 | 901.30 | 150.84 | 0.04 | 0.02 |
| 148 | 1071.43 | 3 | SLE F | -44392.00 | 14802.70 | 2537.70 | 46.00 | 136.36 | 0.50 | 20.00 | 191.28 | 15.71 | 779.77 | 99.79 | 0.03 | 0.01 |
| 149 | 1130.95 | 3 | SLE F | -43071.70 | 12495.60 | 2142.17 | 46.00 | 136.36 | 0.50 | 20.00 | 186.98 | 12.57 | 596.76 | 60.98 | 0.02 | 0.01 |
| 150 | 1190.48 | 3 | SLE F | -41753.80 | 10396.40 | 1782.31 | 46.00 | 136.36 | 0.50 | 20.00 | 176.11 | 9.42 | 396.38 | 33.18 | 0.01 | 0.00 |
| 151 | 1250.00 | 3 | SLE F | -40438.00 | 8507.86 | 1458.54 | 46.00 | 136.36 | 0.50 | 20.00 | 221.17 | 3.14 | 202.90 | 14.10 | 0.00 | 0.00 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 1 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 5 | SLU N cost - min. sic. |
| 48 | C.Rare - Sc min (max compr.), C.Rare - Sf max (max traz.), C.Rare - Sf min (max compr.) |
| 67 | C.Rare - Sc max (min. compr.) |
| 91 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf max (max traz.), C.Q.Per. - Sf min (max compr.), C.Q.Per. - Wk Max |
| 110 | C.Q.Per. - Sc max (min. compr.) |
| 134 | C.Freq - Wk Max |

Palo n. 17

Caratteristiche del palo e dei materiali utilizzati

| R | Cf | Cls | Fck | Fctk | Fcd | Fctd | Tp | Fyk | Fyd |
|-------|------|--------|-----------|-----------|-----------|-----------|-------|-----------|-----------|
| <cm> | <cm> | | <daN/cm²> | <daN/cm²> | <daN/cm²> | <daN/cm²> | | <daN/cm²> | <daN/cm²> |
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | S450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N | Mx | My | Mz |
|-----|-------|--------|--------|--------|
| | <daN> | <daNm> | <daNm> | <daNm> |
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Flinto/Palo n. 17 (-44)

| Caso | CC | TCC | Az | N | Tx | Ty | Mx | My |
|------|----|-----|-----|-----------|---------|---------|----------|-----------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | RVN | 122467.00 | 7018.75 | -918.56 | 59119.70 | -17875.50 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 122467.00 | 7018.75 | -918.56 | 59119.70 | -17875.50 |

Relazione di calcolo

| | | | | | | | | | |
|---|---|-------|-----|----------|---------|---------|----------|-----------|--|
| 2 | 2 | SLE R | RVN | 90716.20 | 5199.08 | -680.41 | 43792.40 | -13241.10 | |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 | |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 | |
| | 2 | SLE R | TOT | 90716.20 | 5199.08 | -680.41 | 43792.40 | -13241.10 | |
| 3 | 3 | SLE F | RVN | 90716.20 | 5199.08 | -680.41 | 43792.40 | -13241.10 | |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 | |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 | |
| | 3 | SLE F | TOT | 90716.20 | 5199.08 | -680.41 | 43792.40 | -13241.10 | |
| 4 | 4 | SLE Q | RVN | 90716.20 | 5199.08 | -680.41 | 43792.40 | -13241.10 | |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 | |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 | |
| | 4 | SLE Q | TOT | 90716.20 | 5199.08 | -680.41 | 43792.40 | -13241.10 | |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|------|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | 1 | -122467.00 | -7018.75 | 918.56 | -59119.70 | 17875.50 |
| 2 | 2 | SLE R | 1 | -90716.20 | -5199.08 | 680.41 | -43792.40 | 13241.10 |
| 3 | 3 | SLE F | 1 | -90716.20 | -5199.08 | 680.41 | -43792.40 | 13241.10 |
| 4 | 4 | SLE Q | 1 | -90716.20 | -5199.08 | 680.41 | -43792.40 | 13241.10 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|--------|
| 1 | 0.00 | 1 | SLU | -122467.00 | 58878.80 | 17802.70 | -122467.00 | 187601.00 | 57009.40 | 2-3 | 163.12 | 3.188 |
| 2 | 59.52 | 1 | SLU | -122824.00 | 62188.80 | 18803.50 | -122824.00 | 187729.00 | 57051.80 | 2-3 | 163.12 | 3.020 |
| 3 | 119.05 | 1 | SLU | -121858.00 | 64187.50 | 19407.80 | -121858.00 | 187382.00 | 56936.60 | 2-3 | 163.12 | 2.920 |
| 4 | 178.57 | 1 | SLU | -120897.00 | 65066.20 | 19673.50 | -120897.00 | 187034.00 | 56821.10 | 2-3 | 163.12 | 2.876 |
| 5 | 238.09 | 1 | SLU | -119939.00 | 65001.00 | 19653.80 | -119939.00 | 186688.00 | 56706.10 | 2-3 | 163.12 | 2.873 |
| 6 | 297.62 | 1 | SLU | -118985.00 | 64153.10 | 19397.40 | -118985.00 | 186344.00 | 56591.50 | 2-3 | 163.12 | 2.906 |
| 7 | 357.14 | 1 | SLU | -118035.00 | 62609.10 | 18930.60 | -118035.00 | 186000.00 | 56477.50 | 2-3 | 163.12 | 2.972 |
| 8 | 416.67 | 1 | SLU | -115217.00 | 60275.00 | 18224.80 | -115217.00 | 184981.00 | 56139.30 | 2-3 | 163.12 | 3.070 |
| 9 | 476.19 | 1 | SLU | -112406.00 | 57275.30 | 17317.80 | -112406.00 | 183964.00 | 55801.60 | 2-3 | 163.12 | 3.213 |
| 10 | 535.71 | 1 | SLU | -109601.00 | 53785.40 | 16262.60 | -109601.00 | 182943.00 | 55461.40 | 2-3 | 163.12 | 3.402 |
| 11 | 595.24 | 1 | SLU | -106802.00 | 49958.10 | 15105.40 | -106802.00 | 181914.00 | 55134.40 | 2-3 | 163.12 | 3.642 |
| 12 | 654.76 | 1 | SLU | -104009.00 | 45924.50 | 13885.80 | -104009.00 | 180886.00 | 54810.00 | 2-3 | 163.12 | 3.939 |
| 13 | 714.29 | 1 | SLU | -101221.00 | 41796.20 | 12637.50 | -101221.00 | 179855.00 | 54484.30 | 2-3 | 163.12 | 4.304 |
| 14 | 773.81 | 1 | SLU | -98438.30 | 37666.10 | 11388.80 | -98438.30 | 178824.00 | 54158.40 | 2-3 | 163.12 | 4.748 |
| 15 | 833.33 | 1 | SLU | -95661.10 | 33610.80 | 10162.60 | -95661.10 | 177794.00 | 53833.00 | 2-3 | 163.12 | 5.290 |
| 16 | 892.86 | 1 | SLU | -92889.10 | 29691.70 | 8977.63 | -92889.10 | 176765.00 | 53507.70 | 2-3 | 163.12 | 5.954 |
| 17 | 952.38 | 1 | SLU | -90122.10 | 25956.90 | 7848.37 | -90122.10 | 175733.00 | 53180.50 | 2-3 | 163.12 | 6.771 |
| 18 | 1011.90 | 1 | SLU | -87359.90 | 22442.60 | 6785.79 | -87359.90 | 174703.00 | 52854.10 | 2-3 | 163.12 | 7.785 |
| 19 | 1071.43 | 1 | SLU | -84602.40 | 19174.80 | 5797.73 | -84602.40 | 173673.00 | 52527.80 | 2-3 | 163.12 | 9.058 |
| 20 | 1130.95 | 1 | SLU | -81849.40 | 16170.50 | 4889.33 | -81849.40 | 172641.00 | 52200.40 | 2-3 | 163.12 | 10.676 |
| 21 | 1190.48 | 1 | SLU | -79100.80 | 13438.90 | 4063.41 | -79100.80 | 171609.00 | 51872.40 | 2-3 | 163.12 | 12.769 |
| 22 | 1250.00 | 1 | SLU | -76356.40 | 10983.10 | 3320.86 | -76356.40 | 170578.00 | 51544.90 | 2-3 | 163.12 | 15.530 |
| 23 | 1309.52 | 1 | SLU | -73616.20 | 8800.52 | 2660.94 | -73616.20 | 169548.00 | 51217.80 | 2-3 | 163.12 | 19.264 |
| 24 | 1369.05 | 1 | SLU | -70879.90 | 6884.44 | 2081.59 | -70879.90 | 168515.00 | 50888.50 | 2-3 | 163.12 | 24.475 |
| 25 | 1428.57 | 1 | SLU | -68147.40 | 5224.54 | 1579.70 | -68147.40 | 167483.00 | 50559.60 | 2-3 | 163.12 | 32.053 |
| 26 | 1488.10 | 1 | SLU | -65418.50 | 3807.77 | 1151.32 | -65418.50 | 166451.00 | 50231.00 | 2-3 | 163.12 | 39.305 |
| 27 | 1547.62 | 1 | SLU | -62693.20 | 2619.02 | 791.89 | -62693.20 | 165418.00 | 49901.80 | 2-3 | 163.12 | 41.013 |
| 28 | 1607.14 | 1 | SLU | -59971.20 | 1641.67 | 496.38 | -59971.20 | 164384.00 | 49571.50 | 2-3 | 163.12 | 42.875 |
| 29 | 1666.67 | 1 | SLU | -57252.50 | 858.04 | 259.44 | -57252.50 | 163351.00 | 49241.40 | 2-3 | 163.12 | 44.911 |
| 30 | 1726.19 | 1 | SLU | -54536.80 | 249.81 | 75.53 | -54536.80 | 162318.00 | 48911.80 | 2-3 | 163.12 | 47.147 |
| 31 | 1785.71 | 1 | SLU | -51824.00 | -201.66 | -60.97 | -51824.00 | 161603.00 | 48582.20 | 2-3 | 163.12 | 49.615 |
| 32 | 1845.24 | 1 | SLU | -49114.10 | -515.12 | -155.75 | -49114.10 | 160539.00 | 48252.60 | 2-3 | 163.12 | 52.353 |
| 33 | 1904.76 | 1 | SLU | -46406.70 | -709.25 | -214.45 | -46406.70 | 159476.00 | 47923.00 | 2-3 | 163.12 | 55.407 |
| 34 | 1964.29 | 1 | SLU | -43701.90 | -802.49 | -242.64 | -43701.90 | 158409.00 | 47593.40 | 2-3 | 163.12 | 58.836 |
| 35 | 2023.81 | 1 | SLU | -40999.30 | -813.01 | -245.82 | -40999.30 | 157342.00 | 47263.80 | 2-3 | 163.12 | 62.714 |
| 36 | 2083.33 | 1 | SLU | -38299.00 | -758.65 | -229.39 | -38299.00 | 156274.00 | 46934.20 | 2-3 | 163.12 | 67.136 |
| 37 | 2142.86 | 1 | SLU | -35600.80 | -656.93 | -198.63 | -35600.80 | 155203.00 | 46604.60 | 2-3 | 163.12 | 72.225 |
| 38 | 2202.38 | 1 | SLU | -32904.40 | -525.05 | -158.75 | -32904.40 | 154129.00 | 46275.00 | 2-3 | 163.12 | 78.143 |
| 39 | 2261.90 | 1 | SLU | -30209.80 | -379.96 | -114.89 | -30209.80 | 153055.00 | 45945.40 | 2-3 | 163.12 | 85.113 |
| 40 | 2321.43 | 1 | SLU | -27516.90 | -238.38 | -72.08 | -27516.90 | 151981.00 | 45615.80 | 2-3 | 163.12 | 93.443 |
| 41 | 2380.95 | 1 | SLU | -24825.40 | -116.89 | -35.34 | -24825.40 | 150907.00 | 45286.20 | 2-3 | 163.12 | >100 |
| 42 | 2440.48 | 1 | SLU | -22135.20 | -31.96 | -9.66 | -22135.20 | 149833.00 | 44956.60 | 2-3 | 163.12 | >100 |
| 43 | 2500.00 | 1 | SLU | -19446.20 | 0.00 | 0.00 | -19446.20 | 148759.00 | 44627.00 | 2-3 | 163.12 | >100 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | CC | TCC | Ty <daN> | Tz <daN> | bw <cm> | Asw <cmq> | Vsdu <daN> | ctgθ | VRsd <daN> | VRod <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|------------|--------------|---------------|------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SLU | 7018.75 | -918.56 | 0.85 | 11.31 | 7078.60 | 1.00 | 32294.70 | 349210.00 | 32294.70 | 4.562 |
| 2 | 59.52 | 1 | SLU | 4561.75 | -597.01 | 0.85 | 11.31 | 4600.65 | 1.00 | 32294.70 | 349261.00 | 32294.70 | 7.020 |
| 3 | 119.05 | 1 | SLU | 2450.34 | -320.68 | 0.85 | 11.31 | 2471.23 | 1.00 | 32294.70 | 349123.00 | 32294.70 | 13.068 |

Relazione di calcolo

| | | | | | | | | | | | | | |
|----|---------|---|-----|----------|--------|------|-------|---------|------|----------|-----------|----------|--------|
| 4 | 178.57 | 1 | SLU | 658.83 | -86.22 | 0.85 | 11.31 | 664.45 | 1.00 | 32294.70 | 348985.00 | 32294.70 | 48.604 |
| 5 | 238.09 | 1 | SLU | -838.99 | 109.80 | 0.85 | 11.31 | 846.14 | 1.00 | 32294.70 | 348848.00 | 32294.70 | 38.167 |
| 6 | 297.62 | 1 | SLU | -2069.52 | 270.84 | 0.85 | 11.31 | 2087.17 | 1.00 | 32294.70 | 348711.00 | 32294.70 | 15.473 |
| 7 | 357.14 | 1 | SLU | -3370.48 | 441.10 | 0.85 | 11.31 | 3399.22 | 1.00 | 32294.70 | 348575.00 | 32294.70 | 9.501 |
| 8 | 416.67 | 1 | SLU | -4695.44 | 614.50 | 0.85 | 11.31 | 4735.48 | 1.00 | 32294.70 | 348172.00 | 32294.70 | 6.820 |
| 9 | 476.19 | 1 | SLU | -5694.39 | 745.24 | 0.85 | 11.31 | 5742.94 | 1.00 | 32294.70 | 347769.00 | 32294.70 | 5.623 |
| 10 | 535.71 | 1 | SLU | -6408.13 | 838.64 | 0.85 | 11.31 | 6462.77 | 1.00 | 32294.70 | 347367.00 | 32294.70 | 4.997 |
| 11 | 595.24 | 1 | SLU | -6875.19 | 899.77 | 0.85 | 11.31 | 6933.82 | 1.00 | 32294.70 | 346966.00 | 32294.70 | 4.658 |
| 12 | 654.76 | 1 | SLU | -7131.56 | 933.32 | 0.85 | 11.31 | 7192.37 | 1.00 | 32294.70 | 346566.00 | 32294.70 | 4.490 |
| 13 | 714.29 | 1 | SLU | -7210.47 | 943.65 | 0.85 | 11.31 | 7271.95 | 1.00 | 32294.70 | 346167.00 | 32294.70 | 4.441 |
| 14 | 773.81 | 1 | SLU | -7142.32 | 934.73 | 0.85 | 11.31 | 7203.22 | 1.00 | 32294.70 | 345768.00 | 32294.70 | 4.483 |
| 15 | 833.33 | 1 | SLU | -6954.63 | 910.17 | 0.85 | 11.31 | 7013.94 | 1.00 | 32294.70 | 345371.00 | 32294.70 | 4.604 |
| 16 | 892.86 | 1 | SLU | -6672.10 | 873.19 | 0.85 | 11.31 | 6729.00 | 1.00 | 32294.70 | 344973.00 | 32294.70 | 4.799 |
| 17 | 952.38 | 1 | SLU | -6316.64 | 826.67 | 0.85 | 11.31 | 6370.50 | 1.00 | 32294.70 | 344577.00 | 32294.70 | 5.069 |
| 18 | 1011.90 | 1 | SLU | -5907.49 | 773.13 | 0.85 | 11.31 | 5957.87 | 1.00 | 32294.70 | 344181.00 | 32294.70 | 5.421 |
| 19 | 1071.43 | 1 | SLU | -5461.40 | 714.75 | 0.85 | 11.31 | 5507.97 | 1.00 | 32294.70 | 343786.00 | 32294.70 | 5.863 |
| 20 | 1130.95 | 1 | SLU | -4992.76 | 653.41 | 0.85 | 11.31 | 5035.34 | 1.00 | 32294.70 | 343392.00 | 32294.70 | 6.414 |
| 21 | 1190.48 | 1 | SLU | -4513.77 | 590.73 | 0.85 | 11.31 | 4552.27 | 1.00 | 32294.70 | 342998.00 | 32294.70 | 7.094 |
| 22 | 1250.00 | 1 | SLU | -4034.67 | 528.02 | 0.85 | 11.31 | 4069.07 | 1.00 | 32294.70 | 342605.00 | 32294.70 | 7.937 |
| 23 | 1309.52 | 1 | SLU | -3563.86 | 466.41 | 0.85 | 11.31 | 3594.25 | 1.00 | 32294.70 | 342213.00 | 32294.70 | 8.985 |
| 24 | 1369.05 | 1 | SLU | -3108.18 | 406.77 | 0.85 | 11.31 | 3134.68 | 1.00 | 32294.70 | 341821.00 | 32294.70 | 10.302 |
| 25 | 1428.57 | 1 | SLU | -2673.01 | 349.82 | 0.85 | 11.31 | 2695.81 | 1.00 | 32294.70 | 341429.00 | 32294.70 | 11.980 |
| 26 | 1488.10 | 1 | SLU | -2262.53 | 296.10 | 0.85 | 11.31 | 2281.82 | 1.00 | 32294.70 | 341039.00 | 32294.70 | 14.153 |
| 27 | 1547.62 | 1 | SLU | -1879.81 | 246.01 | 0.85 | 11.31 | 1895.84 | 1.00 | 32294.70 | 340648.00 | 32294.70 | 17.035 |
| 28 | 1607.14 | 1 | SLU | -1527.07 | 199.85 | 0.85 | 11.31 | 1540.09 | 1.00 | 32294.70 | 340258.00 | 32294.70 | 20.969 |
| 29 | 1666.67 | 1 | SLU | -1205.73 | 157.80 | 0.85 | 11.31 | 1216.01 | 1.00 | 32294.70 | 339869.00 | 32294.70 | 26.558 |
| 30 | 1726.19 | 1 | SLU | -916.65 | 119.96 | 0.85 | 11.31 | 924.46 | 1.00 | 32294.70 | 339480.00 | 32294.70 | 34.934 |
| 31 | 1785.71 | 1 | SLU | -660.17 | 86.40 | 0.85 | 11.31 | 665.80 | 1.00 | 32294.70 | 339091.00 | 32294.70 | 48.505 |
| 32 | 1845.24 | 1 | SLU | -436.29 | 57.10 | 0.85 | 11.31 | 440.01 | 1.00 | 32294.70 | 338703.00 | 32294.70 | 73.396 |
| 33 | 1904.76 | 1 | SLU | -244.73 | 32.03 | 0.85 | 11.31 | 246.82 | 1.00 | 32294.70 | 338315.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -85.06 | 11.13 | 0.85 | 11.31 | 85.79 | 1.00 | 32294.70 | 337928.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | 43.27 | -5.66 | 0.85 | 11.31 | 43.64 | 1.00 | 32294.70 | 337541.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 140.84 | -18.43 | 0.85 | 11.31 | 142.04 | 1.00 | 32294.70 | 337154.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 208.21 | -27.25 | 0.85 | 11.31 | 209.99 | 1.00 | 32294.70 | 336768.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 245.88 | -32.18 | 0.85 | 11.31 | 247.98 | 1.00 | 32294.70 | 336381.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 254.27 | -33.28 | 0.85 | 11.31 | 256.43 | 1.00 | 32294.70 | 335995.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 233.69 | -30.58 | 0.85 | 11.31 | 235.69 | 1.00 | 32294.70 | 335610.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 184.39 | -24.13 | 0.85 | 11.31 | 185.96 | 1.00 | 32294.70 | 335224.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 106.47 | -13.93 | 0.85 | 11.31 | 107.38 | 1.00 | 32294.70 | 334839.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mz <daNm> | My <daNm> | Aft <cmq> | Afc <cmq> | σ_c <daN/cmq> | σ_f <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-------------------------|-------------------------|
| 44 | 0.00 | 2 | SLE R | -90716.20 | 13187.20 | 43613.90 | 37.70 | 40.84 | 41.37 | 600.82 |
| 45 | 59.52 | 2 | SLE R | -91293.80 | 13928.50 | 46065.80 | 40.84 | 37.70 | 44.04 | 676.44 |
| 46 | 119.05 | 2 | SLE R | -90768.80 | 14376.20 | 47546.30 | 43.98 | 34.56 | 45.72 | 731.47 |
| 47 | 178.57 | 2 | SLE R | -90246.60 | 14573.00 | 48197.10 | 43.98 | 34.56 | 46.48 | 758.88 |
| 48 | 238.09 | 2 | SLE R | -89727.20 | 14558.40 | 48148.90 | 43.98 | 34.56 | 46.47 | 762.39 |
| 49 | 297.62 | 2 | SLE R | -89210.70 | 14368.50 | 47520.80 | 43.98 | 34.56 | 45.81 | 745.95 |
| 50 | 357.14 | 2 | SLE R | -88697.00 | 14022.60 | 46377.10 | 43.98 | 34.56 | 44.58 | 711.92 |
| 51 | 416.67 | 2 | SLE R | -86625.30 | 13499.90 | 44648.20 | 40.84 | 37.70 | 42.82 | 673.39 |
| 52 | 476.19 | 2 | SLE R | -84558.30 | 12828.00 | 42426.20 | 40.84 | 37.70 | 40.52 | 618.48 |
| 53 | 535.71 | 2 | SLE R | -82495.80 | 12046.40 | 39841.10 | 37.70 | 40.84 | 37.82 | 552.22 |
| 54 | 595.24 | 2 | SLE R | -80437.80 | 11189.20 | 37006.00 | 37.70 | 40.84 | 34.85 | 479.20 |
| 55 | 654.76 | 2 | SLE R | -78384.00 | 10285.80 | 34018.20 | 37.70 | 40.84 | 31.74 | 432.88 |
| 56 | 714.29 | 2 | SLE R | -76334.50 | 9361.15 | 30960.10 | 37.70 | 40.84 | 28.58 | 391.44 |
| 57 | 773.81 | 2 | SLE R | -74289.00 | 8436.13 | 27900.80 | 37.70 | 40.84 | 25.47 | 350.54 |
| 58 | 833.33 | 2 | SLE R | -72247.60 | 7527.86 | 24896.90 | 31.42 | 47.12 | 22.50 | 311.28 |
| 59 | 892.86 | 2 | SLE R | -70210.00 | 6650.10 | 21993.90 | 31.42 | 47.12 | 19.74 | 274.64 |
| 60 | 952.38 | 2 | SLE R | -68176.20 | 5813.61 | 19227.30 | 28.27 | 50.27 | 17.25 | 241.40 |
| 61 | 1011.90 | 2 | SLE R | -66146.00 | 5026.51 | 16624.20 | 25.13 | 53.41 | 15.07 | 212.03 |
| 62 | 1071.43 | 2 | SLE R | -64119.40 | 4294.62 | 14203.60 | 18.85 | 59.69 | 13.20 | 186.62 |
| 63 | 1130.95 | 2 | SLE R | -62096.20 | 3621.73 | 11978.10 | 12.57 | 65.97 | 11.61 | 164.94 |
| 64 | 1190.48 | 2 | SLE R | -60076.40 | 3009.94 | 9954.76 | 0.00 | 78.54 | 10.27 | 146.53 |
| 65 | 1250.00 | 2 | SLE R | -58059.80 | 2459.90 | 8135.62 | 0.00 | 78.54 | 9.12 | 130.61 |
| 66 | 1309.52 | 2 | SLE R | -56046.30 | 1971.07 | 6518.90 | 0.00 | 78.54 | 8.08 | 116.26 |
| 67 | 1369.05 | 2 | SLE R | -54035.80 | 1541.92 | 5099.58 | 0.00 | 78.54 | 7.15 | 103.38 |
| 68 | 1428.57 | 2 | SLE R | -52028.20 | 1170.15 | 3870.03 | 0.00 | 78.54 | 6.32 | 91.89 |
| 69 | 1488.10 | 2 | SLE R | -50023.40 | 852.83 | 2820.57 | 0.00 | 78.54 | 5.59 | 81.73 |
| 70 | 1547.62 | 2 | SLE R | -48021.20 | 586.59 | 1940.02 | 0.00 | 78.54 | 4.95 | 72.81 |
| 71 | 1607.14 | 2 | SLE R | -46021.70 | 367.69 | 1216.05 | 0.00 | 78.54 | 4.40 | 65.05 |
| 72 | 1666.67 | 2 | SLE R | -44024.60 | 192.18 | 635.58 | 0.00 | 78.54 | 3.92 | 58.35 |
| 73 | 1726.19 | 2 | SLE R | -42029.90 | 55.95 | 185.05 | 0.00 | 78.54 | 3.52 | 52.61 |
| 74 | 1785.71 | 2 | SLE R | -40037.40 | -45.17 | -149.38 | 0.00 | 78.54 | 3.34 | 49.91 |
| 75 | 1845.24 | 2 | SLE R | -38047.10 | -115.37 | -381.57 | 0.00 | 78.54 | 3.30 | 49.18 |
| 76 | 1904.76 | 2 | SLE R | -36058.80 | -158.85 | -525.37 | 0.00 | 78.54 | 3.21 | 47.81 |
| 77 | 1964.29 | 2 | SLE R | -34072.50 | -179.73 | -594.43 | 0.00 | 78.54 | 3.09 | 45.89 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|-----------|----------|----------|-------|-------|-------|--------|
| 78 | 2023.81 | 2 | SLE R | -32088.00 | -182.09 | -602.23 | 0.00 | 78.54 | 2.93 | 43.53 |
| 79 | 2083.33 | 2 | SLE R | -30105.20 | -169.91 | -561.96 | 0.00 | 78.54 | 2.75 | 40.82 |
| 80 | 2142.86 | 2 | SLE R | -28124.00 | -147.13 | -486.61 | 0.00 | 78.54 | 2.55 | 37.85 |
| 81 | 2202.38 | 2 | SLE R | -26144.30 | -117.60 | -388.93 | 0.00 | 78.54 | 2.34 | 34.72 |
| 82 | 2261.90 | 2 | SLE R | -24166.00 | -85.10 | -281.45 | 0.00 | 78.54 | 2.12 | 31.52 |
| 83 | 2321.43 | 2 | SLE R | -22189.10 | -53.39 | -176.58 | 0.00 | 78.54 | 1.90 | 28.35 |
| 84 | 2380.95 | 2 | SLE R | -20213.30 | -26.18 | -86.59 | 0.00 | 78.54 | 1.69 | 25.28 |
| 85 | 2440.48 | 2 | SLE R | -18238.60 | -7.16 | -23.67 | 0.00 | 78.54 | 1.50 | 22.41 |
| 86 | 2500.00 | 2 | SLE R | -16264.90 | 0.00 | 0.00 | 0.00 | 78.54 | 1.32 | 19.83 |
| 87 | 0.00 | 4 | SLE Q | -90716.20 | 13187.20 | 43613.90 | 37.70 | 40.84 | 41.37 | 600.82 |
| 88 | 59.52 | 4 | SLE Q | -91293.80 | 13928.50 | 46065.80 | 40.84 | 37.70 | 44.04 | 676.44 |
| 89 | 119.05 | 4 | SLE Q | -90768.80 | 14376.20 | 47546.30 | 43.98 | 34.56 | 45.72 | 731.47 |
| 90 | 178.57 | 4 | SLE Q | -90246.60 | 14573.00 | 48197.10 | 43.98 | 34.56 | 46.48 | 758.88 |
| 91 | 238.09 | 4 | SLE Q | -89727.20 | 14558.40 | 48148.90 | 43.98 | 34.56 | 46.47 | 762.39 |
| 92 | 297.62 | 4 | SLE Q | -89210.70 | 14368.50 | 47520.80 | 43.98 | 34.56 | 45.81 | 745.95 |
| 93 | 357.14 | 4 | SLE Q | -88697.00 | 14022.60 | 46377.10 | 43.98 | 34.56 | 44.58 | 711.92 |
| 94 | 416.67 | 4 | SLE Q | -86625.30 | 13499.90 | 44648.20 | 40.84 | 37.70 | 42.82 | 673.39 |
| 95 | 476.19 | 4 | SLE Q | -84558.30 | 12828.00 | 42426.20 | 40.84 | 37.70 | 40.52 | 618.48 |
| 96 | 535.71 | 4 | SLE Q | -82495.80 | 12046.40 | 39841.10 | 37.70 | 40.84 | 37.82 | 552.22 |
| 97 | 595.24 | 4 | SLE Q | -80437.80 | 11189.20 | 37006.00 | 37.70 | 40.84 | 34.85 | 479.20 |
| 98 | 654.76 | 4 | SLE Q | -78384.00 | 10285.80 | 34018.20 | 37.70 | 40.84 | 31.74 | 432.88 |
| 99 | 714.29 | 4 | SLE Q | -76334.50 | 9361.15 | 30960.10 | 37.70 | 40.84 | 28.58 | 391.44 |
| 100 | 773.81 | 4 | SLE Q | -74289.00 | 8436.13 | 27900.80 | 37.70 | 40.84 | 25.47 | 350.54 |
| 101 | 833.33 | 4 | SLE Q | -72247.60 | 7527.86 | 24896.90 | 31.42 | 47.12 | 22.50 | 311.28 |
| 102 | 892.86 | 4 | SLE Q | -70210.00 | 6650.10 | 21993.90 | 31.42 | 47.12 | 19.74 | 274.64 |
| 103 | 952.38 | 4 | SLE Q | -68176.20 | 5813.61 | 19227.30 | 28.27 | 50.27 | 17.25 | 241.40 |
| 104 | 1011.90 | 4 | SLE Q | -66146.00 | 5026.51 | 16624.20 | 25.13 | 53.41 | 15.07 | 212.03 |
| 105 | 1071.43 | 4 | SLE Q | -64119.40 | 4294.62 | 14203.60 | 18.85 | 59.69 | 13.20 | 186.62 |
| 106 | 1130.95 | 4 | SLE Q | -62096.20 | 3621.73 | 11978.10 | 12.57 | 65.97 | 11.61 | 164.94 |
| 107 | 1190.48 | 4 | SLE Q | -60076.40 | 3009.94 | 9954.76 | 0.00 | 78.54 | 10.27 | 146.53 |
| 108 | 1250.00 | 4 | SLE Q | -58059.80 | 2459.90 | 8135.62 | 0.00 | 78.54 | 9.12 | 130.61 |
| 109 | 1309.52 | 4 | SLE Q | -56046.30 | 1971.07 | 6518.90 | 0.00 | 78.54 | 8.08 | 116.26 |
| 110 | 1369.05 | 4 | SLE Q | -54035.80 | 1541.92 | 5099.58 | 0.00 | 78.54 | 7.15 | 103.38 |
| 111 | 1428.57 | 4 | SLE Q | -52028.20 | 1170.15 | 3870.03 | 0.00 | 78.54 | 6.32 | 91.89 |
| 112 | 1488.10 | 4 | SLE Q | -50023.40 | 852.83 | 2820.57 | 0.00 | 78.54 | 5.59 | 81.73 |
| 113 | 1547.62 | 4 | SLE Q | -48021.20 | 586.59 | 1940.02 | 0.00 | 78.54 | 4.95 | 72.81 |
| 114 | 1607.14 | 4 | SLE Q | -46021.70 | 367.69 | 1216.05 | 0.00 | 78.54 | 4.40 | 65.05 |
| 115 | 1666.67 | 4 | SLE Q | -44024.60 | 192.18 | 635.58 | 0.00 | 78.54 | 3.92 | 58.35 |
| 116 | 1726.19 | 4 | SLE Q | -42029.90 | 55.95 | 185.05 | 0.00 | 78.54 | 3.52 | 52.61 |
| 117 | 1785.71 | 4 | SLE Q | -40037.40 | -45.17 | -149.38 | 0.00 | 78.54 | 3.34 | 49.91 |
| 118 | 1845.24 | 4 | SLE Q | -38047.10 | -115.37 | -381.57 | 0.00 | 78.54 | 3.30 | 49.18 |
| 119 | 1904.76 | 4 | SLE Q | -36058.80 | -158.85 | -525.37 | 0.00 | 78.54 | 3.21 | 47.81 |
| 120 | 1964.29 | 4 | SLE Q | -34072.50 | -179.73 | -594.43 | 0.00 | 78.54 | 3.09 | 45.89 |
| 121 | 2023.81 | 4 | SLE Q | -32088.00 | -182.09 | -602.23 | 0.00 | 78.54 | 2.93 | 43.53 |
| 122 | 2083.33 | 4 | SLE Q | -30105.20 | -169.91 | -561.96 | 0.00 | 78.54 | 2.75 | 40.82 |
| 123 | 2142.86 | 4 | SLE Q | -28124.00 | -147.13 | -486.61 | 0.00 | 78.54 | 2.55 | 37.85 |
| 124 | 2202.38 | 4 | SLE Q | -26144.30 | -117.60 | -388.93 | 0.00 | 78.54 | 2.34 | 34.72 |
| 125 | 2261.90 | 4 | SLE Q | -24166.00 | -85.10 | -281.45 | 0.00 | 78.54 | 2.12 | 31.52 |
| 126 | 2321.43 | 4 | SLE Q | -22189.10 | -53.39 | -176.58 | 0.00 | 78.54 | 1.90 | 28.35 |
| 127 | 2380.95 | 4 | SLE Q | -20213.30 | -26.18 | -86.59 | 0.00 | 78.54 | 1.69 | 25.28 |
| 128 | 2440.48 | 4 | SLE Q | -18238.60 | -7.16 | -23.67 | 0.00 | 78.54 | 1.50 | 22.41 |
| 129 | 2500.00 | 4 | SLE Q | -16264.90 | 0.00 | 0.00 | 0.00 | 78.54 | 1.32 | 19.83 |

Stato limite d'esercizio - Verifiche a fessurazione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | c <mm> | s <mm> | K ₂ | φ _{eq} | Δ _{sm} <mm> | A _B <cmq> | A _{C eff} <cmq> | σ _s <daN/cmq> | e _{sm} | Wk <mm> |
|------|-----------|----|-------|------------|--------------|--------------|-----------|-----------|----------------|-----------------|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------|------------|
| 87 | 0.00 | 4 | SLE Q | -90716.20 | 43613.90 | 13187.20 | 46.00 | 136.36 | 0.50 | 20.00 | 203.64 | 18.85 | 1052.17 | 600.82 | 0.17 | 0.06 |
| 88 | 59.52 | 4 | SLE Q | -91293.80 | 46065.80 | 13928.50 | 46.00 | 136.36 | 0.50 | 20.00 | 206.05 | 18.85 | 1074.92 | 676.44 | 0.20 | 0.07 |
| 89 | 119.05 | 4 | SLE Q | -90768.80 | 47546.30 | 14376.20 | 46.00 | 136.36 | 0.50 | 20.00 | 207.77 | 18.85 | 1091.09 | 731.47 | 0.21 | 0.08 |
| 90 | 178.57 | 4 | SLE Q | -90246.60 | 48197.10 | 14573.00 | 46.00 | 136.36 | 0.50 | 20.00 | 208.61 | 18.85 | 1099.00 | 758.88 | 0.22 | 0.08 |
| 91 | 238.09 | 4 | SLE Q | -89727.20 | 48148.90 | 14558.40 | 46.00 | 136.36 | 0.50 | 20.00 | 208.81 | 18.85 | 1100.91 | 762.39 | 0.22 | 0.08 |
| 92 | 297.62 | 4 | SLE Q | -89210.70 | 47520.80 | 14368.50 | 46.00 | 136.36 | 0.50 | 20.00 | 208.50 | 18.85 | 1097.97 | 745.95 | 0.22 | 0.08 |
| 93 | 357.14 | 4 | SLE Q | -88697.00 | 46377.10 | 14022.60 | 46.00 | 136.36 | 0.50 | 20.00 | 207.69 | 18.85 | 1090.33 | 711.92 | 0.21 | 0.07 |
| 94 | 416.67 | 4 | SLE Q | -86625.30 | 44648.20 | 13499.90 | 46.00 | 136.36 | 0.50 | 20.00 | 207.04 | 18.85 | 1084.25 | 673.39 | 0.20 | 0.07 |
| 95 | 476.19 | 4 | SLE Q | -84558.30 | 42426.20 | 12828.00 | 46.00 | 136.36 | 0.50 | 20.00 | 205.78 | 18.85 | 1072.37 | 618.48 | 0.18 | 0.06 |
| 96 | 535.71 | 4 | SLE Q | -82495.80 | 39841.10 | 12046.40 | 46.00 | 136.36 | 0.50 | 20.00 | 203.87 | 18.85 | 1054.39 | 552.22 | 0.16 | 0.06 |
| 97 | 595.24 | 4 | SLE Q | -80437.80 | 37006.00 | 11189.20 | 46.00 | 136.36 | 0.50 | 20.00 | 201.23 | 18.85 | 1029.49 | 479.20 | 0.14 | 0.05 |
| 98 | 654.76 | 4 | SLE Q | -78384.00 | 34018.20 | 10285.80 | 46.00 | 136.36 | 0.50 | 20.00 | 197.71 | 18.85 | 996.33 | 403.57 | 0.12 | 0.04 |
| 99 | 714.29 | 4 | SLE Q | -76334.50 | 30960.10 | 9361.15 | 46.00 | 136.36 | 0.50 | 20.00 | 193.11 | 18.85 | 952.97 | 329.03 | 0.10 | 0.03 |
| 100 | 773.81 | 4 | SLE Q | -74289.00 | 27900.80 | 8436.13 | 46.00 | 136.36 | 0.50 | 20.00 | 187.16 | 18.85 | 896.86 | 258.77 | 0.08 | 0.02 |
| 101 | 833.33 | 4 | SLE Q | -72247.60 | 24896.90 | 7527.86 | 46.00 | 136.36 | 0.50 | 20.00 | 196.93 | 15.71 | 824.15 | 195.41 | 0.06 | 0.02 |
| 102 | 892.86 | 4 | SLE Q | -70210.00 | 21993.90 | 6650.10 | 46.00 | 136.36 | 0.50 | 20.00 | 205.94 | 12.57 | 715.92 | 140.82 | 0.04 | 0.01 |
| 103 | 952.38 | 4 | SLE Q | -68176.20 | 19227.30 | 5813.61 | 46.00 | 136.36 | 0.50 | 20.00 | 182.74 | 12.57 | 570.11 | 95.96 | 0.03 | 0.01 |
| 104 | 1011.90 | 4 | SLE Q | -66146.00 | 16624.20 | 5026.51 | 46.00 | 136.36 | 0.50 | 20.00 | 158.17 | 12.57 | 415.76 | 60.66 | 0.02 | 0.00 |
| 105 | 1071.43 | 4 | SLE Q | -64119.40 | 14203.60 | 4294.62 | 46.00 | 136.36 | 0.50 | 20.00 | 176.82 | 6.28 | 266.48 | 33.90 | 0.01 | 0.00 |
| 130 | 0.00 | 3 | SLE F | -90716.20 | 43613.90 | 13187.20 | 46.00 | 136.36 | 0.50 | 20.00 | 203.64 | 18.85 | 1052.17 | 600.82 | 0.17 | 0.06 |
| 131 | 59.52 | 3 | SLE F | -91293.80 | 46065.80 | 13928.50 | 46.00 | 136.36 | 0.50 | 20.00 | 206.05 | 18.85 | 1074.92 | 676.44 | 0.20 | 0.07 |

Relazione di calcolo

| | | | | | | | | | | | | | | | | |
|-----|---------|---|-------|-----------|----------|----------|-------|--------|------|-------|--------|-------|---------|--------|------|------|
| 132 | 119.05 | 3 | SLE F | -90768.80 | 47546.30 | 14376.20 | 46.00 | 136.36 | 0.50 | 20.00 | 207.77 | 18.85 | 1091.09 | 731.47 | 0.21 | 0.08 |
| 133 | 178.57 | 3 | SLE F | -90246.60 | 48197.10 | 14573.00 | 46.00 | 136.36 | 0.50 | 20.00 | 208.61 | 18.85 | 1099.00 | 758.88 | 0.22 | 0.08 |
| 134 | 238.09 | 3 | SLE F | -89727.20 | 48148.90 | 14558.40 | 46.00 | 136.36 | 0.50 | 20.00 | 208.81 | 18.85 | 1100.91 | 762.39 | 0.22 | 0.08 |
| 135 | 297.62 | 3 | SLE F | -89210.70 | 47520.80 | 14368.50 | 46.00 | 136.36 | 0.50 | 20.00 | 208.50 | 18.85 | 1097.97 | 745.95 | 0.22 | 0.08 |
| 136 | 357.14 | 3 | SLE F | -88697.00 | 46377.10 | 14022.60 | 46.00 | 136.36 | 0.50 | 20.00 | 207.69 | 18.85 | 1090.33 | 711.92 | 0.21 | 0.07 |
| 137 | 416.67 | 3 | SLE F | -88625.30 | 44648.20 | 13499.90 | 46.00 | 136.36 | 0.50 | 20.00 | 207.04 | 18.85 | 1084.25 | 673.39 | 0.20 | 0.07 |
| 138 | 476.19 | 3 | SLE F | -84558.30 | 42426.20 | 12828.00 | 46.00 | 136.36 | 0.50 | 20.00 | 205.78 | 18.85 | 1072.37 | 618.48 | 0.18 | 0.06 |
| 139 | 535.71 | 3 | SLE F | -82495.80 | 39841.10 | 12046.40 | 46.00 | 136.36 | 0.50 | 20.00 | 203.87 | 18.85 | 1054.39 | 552.22 | 0.16 | 0.06 |
| 140 | 595.24 | 3 | SLE F | -80437.80 | 37006.00 | 11189.20 | 46.00 | 136.36 | 0.50 | 20.00 | 201.23 | 18.85 | 1029.49 | 479.20 | 0.14 | 0.05 |
| 141 | 654.76 | 3 | SLE F | -78384.00 | 34018.20 | 10285.80 | 46.00 | 136.36 | 0.50 | 20.00 | 197.71 | 18.85 | 996.33 | 403.57 | 0.12 | 0.04 |
| 142 | 714.29 | 3 | SLE F | -76334.50 | 30960.10 | 9361.15 | 46.00 | 136.36 | 0.50 | 20.00 | 193.11 | 18.85 | 952.97 | 329.03 | 0.10 | 0.03 |
| 143 | 773.81 | 3 | SLE F | -74289.00 | 27900.80 | 8436.13 | 46.00 | 136.36 | 0.50 | 20.00 | 187.16 | 18.85 | 896.86 | 258.77 | 0.08 | 0.02 |
| 144 | 833.33 | 3 | SLE F | -72247.60 | 24896.90 | 7527.86 | 46.00 | 136.36 | 0.50 | 20.00 | 196.93 | 15.71 | 824.15 | 195.41 | 0.06 | 0.02 |
| 145 | 892.86 | 3 | SLE F | -70210.00 | 21993.90 | 6650.10 | 46.00 | 136.36 | 0.50 | 20.00 | 205.94 | 12.57 | 715.92 | 140.82 | 0.04 | 0.01 |
| 146 | 952.38 | 3 | SLE F | -68176.20 | 19227.30 | 5813.61 | 46.00 | 136.36 | 0.50 | 20.00 | 182.74 | 12.57 | 570.11 | 95.96 | 0.03 | 0.01 |
| 147 | 1011.90 | 3 | SLE F | -66146.00 | 16624.20 | 5026.51 | 46.00 | 136.36 | 0.50 | 20.00 | 158.17 | 12.57 | 415.76 | 60.66 | 0.02 | 0.00 |
| 148 | 1071.43 | 3 | SLE F | -64119.40 | 14203.60 | 4294.62 | 46.00 | 136.36 | 0.50 | 20.00 | 176.82 | 6.28 | 266.48 | 33.90 | 0.01 | 0.00 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 5 | SLU N cost - min. sic. |
| 13 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 47 | C.Rare - Sc min (max compr.), C.Rare - Sf min (max compr.) |
| 48 | C.Rare - Sf max (max traz.) |
| 65 | C.Rare - Sc max (min. compr.) |
| 90 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf min (max compr.) |
| 91 | C.Q.Per. - Sf max (max traz.), C.Q.Per. - Wk Max |
| 108 | C.Q.Per. - Sc max (min. compr.) |
| 134 | C.Freq - Wk Max |

Palo n. 18

Caratteristiche del palo e dei materiali utilizzati

| R | Cf | Cls | Fck | Fctk | Fcd | Fctd | tp | Fyk | Fyd |
|-------|------|--------|-----------|-----------|-----------|-----------|-------|-----------|-----------|
| <cm> | <cm> | | <daN/cm²> | <daN/cm²> | <daN/cm²> | <daN/cm²> | | <daN/cm²> | <daN/cm²> |
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | S450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N | Mx | My | Mz |
|-----|-------|--------|--------|--------|
| | <daN> | <daNm> | <daNm> | <daNm> |
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 18 (-78)

| Caso | CC | TCC | Az | N | Tx | Ty | Mx | My |
|------|----|-------|-----|-----------|---------|---------|----------|-----------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | RVN | 166477.00 | 6757.23 | -965.38 | 54140.50 | -25200.60 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 166477.00 | 6757.23 | -965.38 | 54140.50 | -25200.60 |
| 2 | 2 | SLE R | RVN | 123316.00 | 5005.36 | -715.09 | 40104.10 | -18667.10 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 123316.00 | 5005.36 | -715.09 | 40104.10 | -18667.10 |
| 3 | 3 | SLE F | RVN | 123316.00 | 5005.36 | -715.09 | 40104.10 | -18667.10 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 123316.00 | 5005.36 | -715.09 | 40104.10 | -18667.10 |
| 4 | 4 | SLE Q | RVN | 123316.00 | 5005.36 | -715.09 | 40104.10 | -18667.10 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 123316.00 | 5005.36 | -715.09 | 40104.10 | -18667.10 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N | Tx | Ty | Mx | My |
|------|----|-------|------|------------|----------|--------|-----------|----------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | 1 | -166477.00 | -6757.23 | 965.38 | -54140.50 | 25200.60 |
| 2 | 2 | SLE R | 1 | -123316.00 | -5005.36 | 715.09 | -40104.10 | 18667.10 |
| 3 | 3 | SLE F | 1 | -123316.00 | -5005.36 | 715.09 | -40104.10 | 18667.10 |
| 4 | 4 | SLE Q | 1 | -123316.00 | -5005.36 | 715.09 | -40104.10 | 18667.10 |

Da 0 a -25

Relazione di calcolo

| | | | | | | | | | | | | | |
|----|---------|---|-----|----------|--------|------|-------|---------|------|----------|-----------|----------|--------|
| 28 | 1607.14 | 1 | SLU | -1472.01 | 210.30 | 0.85 | 11.31 | 1486.96 | 1.00 | 32294.70 | 343028.00 | 32294.70 | 21.719 |
| 29 | 1666.67 | 1 | SLU | -1162.11 | 166.03 | 0.85 | 11.31 | 1173.91 | 1.00 | 32294.70 | 342495.00 | 32294.70 | 27.510 |
| 30 | 1726.19 | 1 | SLU | -883.32 | 126.20 | 0.85 | 11.31 | 892.29 | 1.00 | 32294.70 | 341963.00 | 32294.70 | 36.193 |
| 31 | 1785.71 | 1 | SLU | -635.99 | 90.86 | 0.85 | 11.31 | 642.45 | 1.00 | 32294.70 | 341432.00 | 32294.70 | 50.268 |
| 32 | 1845.24 | 1 | SLU | -420.11 | 60.02 | 0.85 | 11.31 | 424.37 | 1.00 | 32294.70 | 340900.00 | 32294.70 | 76.100 |
| 33 | 1904.76 | 1 | SLU | -235.41 | 33.63 | 0.85 | 11.31 | 237.80 | 1.00 | 32294.70 | 340370.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -81.46 | 11.64 | 0.85 | 11.31 | 82.29 | 1.00 | 32294.70 | 339840.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | 42.25 | -6.04 | 0.85 | 11.31 | 42.68 | 1.00 | 32294.70 | 339310.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 136.30 | -19.47 | 0.85 | 11.31 | 137.68 | 1.00 | 32294.70 | 338781.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 201.21 | -28.75 | 0.85 | 11.31 | 203.25 | 1.00 | 32294.70 | 338252.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 237.47 | -33.93 | 0.85 | 11.31 | 239.88 | 1.00 | 32294.70 | 337723.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 245.50 | -35.07 | 0.85 | 11.31 | 247.99 | 1.00 | 32294.70 | 337195.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 225.59 | -32.23 | 0.85 | 11.31 | 227.88 | 1.00 | 32294.70 | 336667.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 177.97 | -25.43 | 0.85 | 11.31 | 179.78 | 1.00 | 32294.70 | 336140.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 102.75 | -14.68 | 0.85 | 11.31 | 103.80 | 1.00 | 32294.70 | 335612.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mz <daNm> | My <daNm> | AFT <cmq> | AFC <cmq> | σ_c <daN/cmq> | σ_f <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-------------------------|-------------------------|
| 44 | 0.00 | 2 | SLE R | -123316.00 | 18591.10 | 39940.90 | 34.56 | 43.98 | 37.85 | 524.03 |
| 45 | 59.52 | 2 | SLE R | -123667.00 | 19633.10 | 42179.50 | 34.56 | 43.98 | 40.18 | 554.60 |
| 46 | 119.05 | 2 | SLE R | -122690.00 | 20261.50 | 43529.60 | 34.56 | 43.98 | 41.67 | 573.72 |
| 47 | 178.57 | 2 | SLE R | -121717.00 | 20536.70 | 44120.80 | 34.56 | 43.98 | 42.35 | 582.38 |
| 48 | 238.09 | 2 | SLE R | -120747.00 | 20514.30 | 44072.60 | 34.56 | 43.98 | 42.35 | 582.04 |
| 49 | 297.62 | 2 | SLE R | -119781.00 | 20245.10 | 43494.30 | 34.56 | 43.98 | 41.76 | 574.18 |
| 50 | 357.14 | 2 | SLE R | -118819.00 | 19756.40 | 42444.30 | 34.56 | 43.98 | 40.67 | 559.67 |
| 51 | 416.67 | 2 | SLE R | -115982.00 | 19018.70 | 40859.40 | 34.56 | 43.98 | 39.08 | 538.27 |
| 52 | 476.19 | 2 | SLE R | -113151.00 | 18071.10 | 38823.70 | 34.56 | 43.98 | 37.01 | 510.65 |
| 53 | 535.71 | 2 | SLE R | -110326.00 | 16969.10 | 36456.20 | 34.56 | 43.98 | 34.61 | 478.65 |
| 54 | 595.24 | 2 | SLE R | -107507.00 | 15760.80 | 33860.30 | 34.56 | 43.98 | 32.01 | 443.96 |
| 55 | 654.76 | 2 | SLE R | -104694.00 | 14487.60 | 31125.00 | 28.27 | 50.27 | 29.33 | 408.12 |
| 56 | 714.29 | 2 | SLE R | -101887.00 | 13184.70 | 28325.70 | 28.27 | 50.27 | 26.67 | 372.42 |
| 57 | 773.81 | 2 | SLE R | -99084.40 | 11881.30 | 25525.60 | 28.27 | 50.27 | 24.11 | 337.99 |
| 58 | 833.33 | 2 | SLE R | -96287.60 | 10601.60 | 22776.30 | 21.99 | 56.55 | 21.72 | 305.65 |
| 59 | 892.86 | 2 | SLE R | -93495.90 | 9364.98 | 20119.60 | 21.99 | 56.55 | 19.53 | 275.96 |
| 60 | 952.38 | 2 | SLE R | -90709.20 | 8186.57 | 17587.90 | 15.71 | 62.83 | 17.57 | 249.15 |
| 61 | 1011.90 | 2 | SLE R | -87927.40 | 7077.81 | 15205.90 | 9.42 | 69.11 | 15.83 | 225.24 |
| 62 | 1071.43 | 2 | SLE R | -85150.40 | 6046.87 | 12991.00 | 0.00 | 78.54 | 14.29 | 203.99 |
| 63 | 1130.95 | 2 | SLE R | -82377.90 | 5099.08 | 10954.80 | 0.00 | 78.54 | 12.90 | 184.87 |
| 64 | 1190.48 | 2 | SLE R | -79609.80 | 4237.40 | 9103.55 | 0.00 | 78.54 | 11.63 | 167.23 |
| 65 | 1250.00 | 2 | SLE R | -76846.00 | 3462.73 | 7439.27 | 0.00 | 78.54 | 10.46 | 151.03 |
| 66 | 1309.52 | 2 | SLE R | -74086.30 | 2774.30 | 5960.25 | 0.00 | 78.54 | 9.40 | 136.27 |
| 67 | 1369.05 | 2 | SLE R | -71330.60 | 2169.95 | 4661.89 | 0.00 | 78.54 | 8.44 | 122.90 |
| 68 | 1428.57 | 2 | SLE R | -68578.70 | 1646.44 | 3537.18 | 0.00 | 78.54 | 7.58 | 110.88 |
| 69 | 1488.10 | 2 | SLE R | -65830.40 | 1199.63 | 2577.27 | 0.00 | 78.54 | 6.81 | 100.13 |
| 70 | 1547.62 | 2 | SLE R | -63085.80 | 824.77 | 1771.92 | 0.00 | 78.54 | 6.13 | 90.57 |
| 71 | 1607.14 | 2 | SLE R | -60344.50 | 516.60 | 1109.85 | 0.00 | 78.54 | 5.53 | 82.13 |
| 72 | 1666.67 | 2 | SLE R | -57606.40 | 269.53 | 579.06 | 0.00 | 78.54 | 5.01 | 74.70 |
| 73 | 1726.19 | 2 | SLE R | -54871.40 | 77.80 | 167.15 | 0.00 | 78.54 | 4.55 | 68.19 |
| 74 | 1785.71 | 2 | SLE R | -52139.40 | -64.48 | -138.53 | 0.00 | 78.54 | 4.32 | 64.65 |
| 75 | 1845.24 | 2 | SLE R | -49410.20 | -163.24 | -350.70 | 0.00 | 78.54 | 4.21 | 62.97 |
| 76 | 1904.76 | 2 | SLE R | -46683.60 | -224.36 | -482.00 | 0.00 | 78.54 | 4.07 | 60.66 |
| 77 | 1964.29 | 2 | SLE R | -43959.50 | -253.66 | -544.95 | 0.00 | 78.54 | 3.88 | 57.83 |
| 78 | 2023.81 | 2 | SLE R | -41237.80 | -256.87 | -551.86 | 0.00 | 78.54 | 3.66 | 54.56 |
| 79 | 2083.33 | 2 | SLE R | -38518.30 | -239.63 | -514.82 | 0.00 | 78.54 | 3.42 | 50.96 |
| 80 | 2142.86 | 2 | SLE R | -35800.80 | -207.46 | -445.71 | 0.00 | 78.54 | 3.16 | 47.11 |
| 81 | 2202.38 | 2 | SLE R | -33085.30 | -165.79 | -356.19 | 0.00 | 78.54 | 2.89 | 43.10 |
| 82 | 2261.90 | 2 | SLE R | -30371.50 | -119.97 | -257.73 | 0.00 | 78.54 | 2.61 | 39.03 |
| 83 | 2321.43 | 2 | SLE R | -27659.40 | -75.26 | -161.69 | 0.00 | 78.54 | 2.34 | 34.98 |
| 84 | 2380.95 | 2 | SLE R | -24948.80 | -36.90 | -79.28 | 0.00 | 78.54 | 2.07 | 31.03 |
| 85 | 2440.48 | 2 | SLE R | -22239.50 | -10.09 | -21.67 | 0.00 | 78.54 | 1.82 | 27.28 |
| 86 | 2500.00 | 2 | SLE R | -19531.40 | 0.00 | 0.00 | 0.00 | 78.54 | 1.59 | 23.81 |
| 87 | 0.00 | 4 | SLE Q | -123316.00 | 18591.10 | 39940.90 | 34.56 | 43.98 | 37.85 | 524.03 |
| 88 | 59.52 | 4 | SLE Q | -123667.00 | 19633.10 | 42179.50 | 34.56 | 43.98 | 40.18 | 554.60 |
| 89 | 119.05 | 4 | SLE Q | -122690.00 | 20261.50 | 43529.60 | 34.56 | 43.98 | 41.67 | 573.72 |
| 90 | 178.57 | 4 | SLE Q | -121717.00 | 20536.70 | 44120.80 | 34.56 | 43.98 | 42.35 | 582.38 |
| 91 | 238.09 | 4 | SLE Q | -120747.00 | 20514.30 | 44072.60 | 34.56 | 43.98 | 42.35 | 582.04 |
| 92 | 297.62 | 4 | SLE Q | -119781.00 | 20245.10 | 43494.30 | 34.56 | 43.98 | 41.76 | 574.18 |
| 93 | 357.14 | 4 | SLE Q | -118819.00 | 19756.40 | 42444.30 | 34.56 | 43.98 | 40.67 | 559.67 |
| 94 | 416.67 | 4 | SLE Q | -115982.00 | 19018.70 | 40859.40 | 34.56 | 43.98 | 39.08 | 538.27 |
| 95 | 476.19 | 4 | SLE Q | -113151.00 | 18071.10 | 38823.70 | 34.56 | 43.98 | 37.01 | 510.65 |
| 96 | 535.71 | 4 | SLE Q | -110326.00 | 16969.10 | 36456.20 | 34.56 | 43.98 | 34.61 | 478.65 |
| 97 | 595.24 | 4 | SLE Q | -107507.00 | 15760.80 | 33860.30 | 34.56 | 43.98 | 32.01 | 443.96 |
| 98 | 654.76 | 4 | SLE Q | -104694.00 | 14487.60 | 31125.00 | 28.27 | 50.27 | 29.33 | 408.12 |
| 99 | 714.29 | 4 | SLE Q | -101887.00 | 13184.70 | 28325.70 | 28.27 | 50.27 | 26.67 | 372.42 |
| 100 | 773.81 | 4 | SLE Q | -99084.40 | 11881.30 | 25525.60 | 28.27 | 50.27 | 24.11 | 337.99 |
| 101 | 833.33 | 4 | SLE Q | -96287.60 | 10601.60 | 22776.30 | 21.99 | 56.55 | 21.72 | 305.65 |

Relazione di calcolo

134 C.Freq - Wk Max

Palo n. 19

Caratteristiche del palo e dei materiali utilizzati

| R <cm> | Cf <cm> | Cls | Fck <daN/cm ² > | Fctk <daN/cm ² > | Fcd <daN/cm ² > | Fctd <daN/cm ² > | Tp | Fyk <daN/cm ² > | Fyd <daN/cm ² > |
|-----------|------------|--------|-------------------------------|--------------------------------|-------------------------------|--------------------------------|-------|-------------------------------|-------------------------------|
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | S450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti:

Azioni ed effetti comuni

| Az | N <daN> | Mx <daNm> | My <daNm> | Mz <daNm> |
|-----|------------|--------------|--------------|--------------|
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 19 (-126)

| Caso | CC | TCC | Az | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|-----|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | RVN | 212368.00 | 6475.78 | -930.75 | 44827.10 | -30893.40 |
| | | | TAG | | | | 0.00 | 0.00 |
| | | | ECC | | | | 0.00 | 0.00 |
| | | | TOT | 212368.00 | 6475.78 | -930.75 | 44827.10 | -30893.40 |
| 2 | 2 | SLE R | RVN | 157310.00 | 4796.87 | -689.44 | 33205.30 | -22884.00 |
| | | | TAG | | | | 0.00 | 0.00 |
| | | | ECC | | | | 0.00 | 0.00 |
| | | | TOT | 157310.00 | 4796.87 | -689.44 | 33205.30 | -22884.00 |
| 3 | 3 | SLE F | RVN | 157310.00 | 4796.87 | -689.44 | 33205.30 | -22884.00 |
| | | | TAG | | | | 0.00 | 0.00 |
| | | | ECC | | | | 0.00 | 0.00 |
| | | | TOT | 157310.00 | 4796.87 | -689.44 | 33205.30 | -22884.00 |
| 4 | 4 | SLE Q | RVN | 157310.00 | 4796.87 | -689.44 | 33205.30 | -22884.00 |
| | | | TAG | | | | 0.00 | 0.00 |
| | | | ECC | | | | 0.00 | 0.00 |
| | | | TOT | 157310.00 | 4796.87 | -689.44 | 33205.30 | -22884.00 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|------|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | 1 | -212368.00 | -6475.78 | 930.75 | -44827.10 | 30893.40 |
| 2 | 2 | SLE R | 1 | -157310.00 | -4796.87 | 689.44 | -33205.30 | 22884.00 |
| 3 | 3 | SLE F | 1 | -157310.00 | -4796.87 | 689.44 | -33205.30 | 22884.00 |
| 4 | 4 | SLE Q | 1 | -157310.00 | -4796.87 | 689.44 | -33205.30 | 22884.00 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|--------|
| 1 | 0.00 | 1 | SLU | -212368.00 | 44640.60 | 30764.90 | -212368.00 | 188055.00 | 129102.00 | 2-3 | 145.62 | 4.207 |
| 2 | 59.52 | 1 | SLU | -212100.00 | 47287.50 | 32589.00 | -212100.00 | 187981.00 | 129054.00 | 2-3 | 145.62 | 3.970 |
| 3 | 119.05 | 1 | SLU | -209888.00 | 48918.80 | 33713.30 | -209888.00 | 187375.00 | 128658.00 | 2-3 | 145.62 | 3.826 |
| 4 | 178.57 | 1 | SLU | -207682.00 | 49681.70 | 34239.10 | -207682.00 | 186769.00 | 128262.00 | 2-3 | 145.62 | 3.755 |
| 5 | 238.09 | 1 | SLU | -205483.00 | 49712.00 | 34259.90 | -205483.00 | 186172.00 | 127829.00 | 2-3 | 145.62 | 3.741 |
| 6 | 297.62 | 1 | SLU | -203290.00 | 49133.90 | 33861.50 | -203290.00 | 184203.00 | 129295.00 | 2-3 | 145.00 | 3.771 |
| 7 | 357.14 | 1 | SLU | -201103.00 | 48013.60 | 33089.40 | -201103.00 | 183619.00 | 128828.00 | 2-3 | 145.00 | 3.847 |
| 8 | 416.67 | 1 | SLU | -196175.00 | 46276.50 | 31892.30 | -196175.00 | 182299.00 | 127770.00 | 2-3 | 145.00 | 3.961 |
| 9 | 476.19 | 1 | SLU | -191257.00 | 44018.50 | 30336.10 | -191257.00 | 180977.00 | 126711.00 | 2-3 | 145.00 | 4.133 |
| 10 | 535.71 | 1 | SLU | -186349.00 | 41375.10 | 28514.40 | -186349.00 | 179652.00 | 125647.00 | 2-3 | 145.00 | 4.363 |
| 11 | 595.24 | 1 | SLU | -181452.00 | 38464.60 | 26508.60 | -181452.00 | 178326.00 | 124581.00 | 2-3 | 145.00 | 4.657 |
| 12 | 654.76 | 1 | SLU | -176564.00 | 35388.80 | 24388.80 | -176564.00 | 176988.00 | 123517.00 | 2-3 | 145.00 | 5.022 |
| 13 | 714.29 | 1 | SLU | -171686.00 | 32234.00 | 22214.70 | -171686.00 | 175632.00 | 122462.00 | 2-3 | 145.00 | 5.469 |
| 14 | 773.81 | 1 | SLU | -166816.00 | 29072.60 | 20035.90 | -166816.00 | 174274.00 | 121404.00 | 2-3 | 145.00 | 6.015 |
| 15 | 833.33 | 1 | SLU | -161956.00 | 25964.10 | 17893.60 | -161956.00 | 172914.00 | 120343.00 | 2-3 | 145.00 | 6.681 |
| 16 | 892.86 | 1 | SLU | -157105.00 | 22956.40 | 15820.80 | -157105.00 | 171551.00 | 119279.00 | 2-3 | 145.00 | 7.494 |
| 17 | 952.38 | 1 | SLU | -152261.00 | 20087.00 | 13843.30 | -152261.00 | 170162.00 | 118232.00 | 2-3 | 145.00 | 8.494 |
| 18 | 1011.90 | 1 | SLU | -147426.00 | 17384.40 | 11980.80 | -147426.00 | 168657.00 | 117264.00 | 2-3 | 145.00 | 9.729 |
| 19 | 1071.43 | 1 | SLU | -142599.00 | 14869.00 | 10247.30 | -142599.00 | 167148.00 | 116294.00 | 2-3 | 145.00 | 11.276 |
| 20 | 1130.95 | 1 | SLU | -137780.00 | 12554.50 | 8652.13 | -137780.00 | 165633.00 | 115323.00 | 2-3 | 145.00 | 13.237 |
| 21 | 1190.48 | 1 | SLU | -132968.00 | 10448.20 | 7200.57 | -132968.00 | 164114.00 | 114351.00 | 2-3 | 145.00 | 15.764 |
| 22 | 1250.00 | 1 | SLU | -128163.00 | 8552.92 | 5894.40 | -128163.00 | 162590.00 | 113377.00 | 2-3 | 145.00 | 19.082 |
| 23 | 1309.52 | 1 | SLU | -123365.00 | 6867.03 | 4732.54 | -123365.00 | 161061.00 | 112402.00 | 2-3 | 145.00 | 20.843 |
| 24 | 1369.05 | 1 | SLU | -118574.00 | 5385.58 | 3711.57 | -118574.00 | 159527.00 | 111425.00 | 2-3 | 145.00 | 21.685 |
| 25 | 1428.57 | 1 | SLU | -113789.00 | 4100.88 | 2826.19 | -113789.00 | 157989.00 | 110447.00 | 2-3 | 145.00 | 22.597 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|-----------|------|------|------|-------|------|-------|
| 129 | 2500.00 | 4 | SLE Q | -22937.50 | 0.00 | 0.00 | 0.00 | 78.54 | 1.86 | 27.97 |
|-----|---------|---|-------|-----------|------|------|------|-------|------|-------|

Stato limite d'esercizio - Verifiche a fessurazione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | c <mm> | s <mm> | K ₂ | φ _{eq} | Δ _{sm} <mm> | A _{st} <cmq> | A _{c eff} <cmq> | σ _s <daN/cmq> | ε _{sm} | Wk <mm> |
|------|-----------|----|-------|------------|--------------|--------------|-----------|-----------|----------------|-----------------|-------------------------|--------------------------|-----------------------------|-----------------------------|-----------------|------------|
| 87 | 0.00 | 4 | SLE Q | -157310.00 | 33067.10 | 22788.80 | 46.00 | 136.36 | 0.50 | 20.00 | 172.80 | 9.42 | 380.76 | 129.33 | 0.04 | 0.01 |
| 88 | 59.52 | 4 | SLE Q | -157425.00 | 35027.80 | 24140.00 | 46.00 | 136.36 | 0.50 | 20.00 | 164.16 | 12.57 | 453.42 | 162.03 | 0.05 | 0.01 |
| 89 | 119.05 | 4 | SLE Q | -155976.00 | 36236.20 | 24972.80 | 46.00 | 136.36 | 0.50 | 20.00 | 173.34 | 12.57 | 511.05 | 188.59 | 0.05 | 0.02 |
| 90 | 178.57 | 4 | SLE Q | -154532.00 | 36801.30 | 25362.30 | 46.00 | 136.36 | 0.50 | 20.00 | 178.71 | 12.57 | 544.79 | 204.31 | 0.06 | 0.02 |
| 91 | 238.09 | 4 | SLE Q | -153093.00 | 36823.70 | 25377.70 | 46.00 | 136.36 | 0.50 | 20.00 | 180.89 | 12.57 | 558.49 | 209.70 | 0.06 | 0.02 |
| 92 | 297.62 | 4 | SLE Q | -151659.00 | 36395.50 | 25082.60 | 46.00 | 136.36 | 0.50 | 20.00 | 180.38 | 12.57 | 555.34 | 206.06 | 0.06 | 0.02 |
| 93 | 357.14 | 4 | SLE Q | -150229.00 | 35565.60 | 24510.70 | 46.00 | 136.36 | 0.50 | 20.00 | 177.42 | 12.57 | 536.70 | 194.47 | 0.06 | 0.02 |
| 94 | 416.67 | 4 | SLE Q | -146594.00 | 34278.90 | 23623.90 | 46.00 | 136.36 | 0.50 | 20.00 | 174.74 | 12.57 | 519.87 | 181.50 | 0.05 | 0.02 |
| 95 | 476.19 | 4 | SLE Q | -142966.00 | 32606.30 | 22471.20 | 46.00 | 136.36 | 0.50 | 20.00 | 169.38 | 12.57 | 486.21 | 161.50 | 0.05 | 0.01 |
| 96 | 535.71 | 4 | SLE Q | -139346.00 | 30648.20 | 21121.80 | 46.00 | 136.36 | 0.50 | 20.00 | 161.75 | 12.57 | 438.26 | 137.18 | 0.04 | 0.01 |
| 97 | 595.24 | 4 | SLE Q | -135734.00 | 28492.30 | 19636.00 | 46.00 | 136.36 | 0.50 | 20.00 | 172.44 | 9.42 | 379.06 | 110.96 | 0.03 | 0.01 |
| 98 | 654.76 | 4 | SLE Q | -132129.00 | 26213.90 | 18065.80 | 46.00 | 136.36 | 0.50 | 20.00 | 191.24 | 6.28 | 311.76 | 84.81 | 0.02 | 0.01 |
| 99 | 714.29 | 4 | SLE Q | -128531.00 | 23877.10 | 16455.30 | 46.00 | 136.36 | 0.50 | 20.00 | 168.28 | 6.28 | 239.64 | 60.15 | 0.02 | 0.01 |
| 130 | 0.00 | 3 | SLE F | -157310.00 | 33067.10 | 22788.80 | 46.00 | 136.36 | 0.50 | 20.00 | 172.80 | 9.42 | 380.76 | 129.33 | 0.04 | 0.01 |
| 131 | 59.52 | 3 | SLE F | -157425.00 | 35027.80 | 24140.00 | 46.00 | 136.36 | 0.50 | 20.00 | 164.16 | 12.57 | 453.42 | 162.03 | 0.05 | 0.01 |
| 132 | 119.05 | 3 | SLE F | -155976.00 | 36236.20 | 24972.80 | 46.00 | 136.36 | 0.50 | 20.00 | 173.34 | 12.57 | 511.05 | 188.59 | 0.05 | 0.02 |
| 133 | 178.57 | 3 | SLE F | -154532.00 | 36801.30 | 25362.30 | 46.00 | 136.36 | 0.50 | 20.00 | 178.71 | 12.57 | 544.79 | 204.31 | 0.06 | 0.02 |
| 134 | 238.09 | 3 | SLE F | -153093.00 | 36823.70 | 25377.70 | 46.00 | 136.36 | 0.50 | 20.00 | 180.89 | 12.57 | 558.49 | 209.70 | 0.06 | 0.02 |
| 135 | 297.62 | 3 | SLE F | -151659.00 | 36395.50 | 25082.60 | 46.00 | 136.36 | 0.50 | 20.00 | 180.38 | 12.57 | 555.34 | 206.06 | 0.06 | 0.02 |
| 136 | 357.14 | 3 | SLE F | -150229.00 | 35565.60 | 24510.70 | 46.00 | 136.36 | 0.50 | 20.00 | 177.42 | 12.57 | 536.70 | 194.47 | 0.06 | 0.02 |
| 137 | 416.67 | 3 | SLE F | -146594.00 | 34278.90 | 23623.90 | 46.00 | 136.36 | 0.50 | 20.00 | 174.74 | 12.57 | 519.87 | 181.50 | 0.05 | 0.02 |
| 138 | 476.19 | 3 | SLE F | -142966.00 | 32606.30 | 22471.20 | 46.00 | 136.36 | 0.50 | 20.00 | 169.38 | 12.57 | 486.21 | 161.50 | 0.05 | 0.01 |
| 139 | 535.71 | 3 | SLE F | -139346.00 | 30648.20 | 21121.80 | 46.00 | 136.36 | 0.50 | 20.00 | 161.75 | 12.57 | 438.26 | 137.18 | 0.04 | 0.01 |
| 140 | 595.24 | 3 | SLE F | -135734.00 | 28492.30 | 19636.00 | 46.00 | 136.36 | 0.50 | 20.00 | 172.44 | 9.42 | 379.06 | 110.96 | 0.03 | 0.01 |
| 141 | 654.76 | 3 | SLE F | -132129.00 | 26213.90 | 18065.80 | 46.00 | 136.36 | 0.50 | 20.00 | 191.24 | 6.28 | 311.76 | 84.81 | 0.02 | 0.01 |
| 142 | 714.29 | 3 | SLE F | -128531.00 | 23877.10 | 16455.30 | 46.00 | 136.36 | 0.50 | 20.00 | 168.28 | 6.28 | 239.64 | 60.15 | 0.02 | 0.01 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 1 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 5 | SLU N cost - min. sic. |
| 47 | C.Rare - Sf min (max compr.) |
| 48 | C.Rare - Sc min (max compr.), C.Rare - Sf max (max traz.) |
| 61 | C.Rare - Sc max (min. compr.) |
| 90 | C.Q.Per. - Sf min (max compr.) |
| 91 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf max (max traz.), C.Q.Per. - Wk Max |
| 104 | C.Q.Per. - Sc max (min. compr.) |
| 134 | C.Freq - Wk Max |

Palo n. 20

Caratteristiche del palo e dei materiali utilizzati

| R <cm> | Cf <cm> | Cls | Fck <daN/cmq> | Fctk <daN/cmq> | Fcd <daN/cmq> | Fctd <daN/cmq> | Tp | Fyk <daN/cmq> | Fyd <daN/cmq> |
|-----------|------------|--------|------------------|-------------------|------------------|-------------------|-------|------------------|------------------|
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N <daN> | Mx <daNm> | My <daNm> | Mz <daNm> |
|-----|------------|--------------|--------------|--------------|
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 20 (-142)

| Caso | CC | TCC | Az | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|-----|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | RVN | 253743.00 | 6222.70 | -820.92 | 33060.30 | -32330.90 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 253743.00 | 6222.70 | -820.92 | 33060.30 | -32330.90 |
| 2 | 2 | SLE R | RVN | 187958.00 | 4609.41 | -608.09 | 24489.10 | -23948.80 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 187958.00 | 4609.41 | -608.09 | 24489.10 | -23948.80 |
| 3 | 3 | SLE F | RVN | 187958.00 | 4609.41 | -608.09 | 24489.10 | -23948.80 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 187958.00 | 4609.41 | -608.09 | 24489.10 | -23948.80 |
| 4 | 4 | SLE Q | RVN | 187958.00 | 4609.41 | -608.09 | 24489.10 | -23948.80 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |

Relazione di calcolo

| | | | | | | | | |
|--|---|-------|-----|-----------|---------|---------|----------|-----------|
| | 4 | SLE Q | TOT | 187958.00 | 4609.41 | -608.09 | 24489.10 | -23948.80 |
|--|---|-------|-----|-----------|---------|---------|----------|-----------|

Sollecitazioni nei pali

| Caso | OC | TCC | Palo | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|------|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | 1 | -253743.00 | -6222.70 | 820.92 | -33060.30 | 32330.90 |
| 2 | 2 | SLE R | 1 | -187958.00 | -4609.41 | 608.09 | -24489.10 | 23948.80 |
| 3 | 3 | SLE F | 1 | -187958.00 | -4609.41 | 608.09 | -24489.10 | 23948.80 |
| 4 | 4 | SLE Q | 1 | -187958.00 | -4609.41 | 608.09 | -24489.10 | 23948.80 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | OC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|--------|
| 1 | 0.00 | 1 | SLU | -253743.00 | 32914.80 | 32188.60 | -253743.00 | 172789.00 | 168767.00 | 2-3 | 135.62 | 5.246 |
| 2 | 59.52 | 1 | SLU | -253187.00 | 35149.70 | 34374.30 | -253187.00 | 172666.00 | 168641.00 | 2-3 | 135.62 | 4.909 |
| 3 | 119.05 | 1 | SLU | -250401.00 | 36591.80 | 35784.50 | -250401.00 | 172053.00 | 168010.00 | 2-3 | 135.62 | 4.699 |
| 4 | 178.57 | 1 | SLU | -247622.00 | 37354.00 | 36529.90 | -247622.00 | 171439.00 | 167378.00 | 2-3 | 135.62 | 4.586 |
| 5 | 238.09 | 1 | SLU | -244852.00 | 37540.80 | 36712.60 | -244852.00 | 170824.00 | 166745.00 | 2-3 | 135.62 | 4.546 |
| 6 | 297.62 | 1 | SLU | -242088.00 | 37248.10 | 36426.40 | -242088.00 | 170211.00 | 166113.00 | 2-3 | 135.62 | 4.565 |
| 7 | 357.14 | 1 | SLU | -239333.00 | 36525.90 | 35720.10 | -239333.00 | 169599.00 | 165483.00 | 2-3 | 135.62 | 4.638 |
| 8 | 416.67 | 1 | SLU | -233433.00 | 35312.40 | 34533.40 | -233433.00 | 168281.00 | 164123.00 | 2-3 | 135.62 | 4.759 |
| 9 | 476.19 | 1 | SLU | -227546.00 | 33681.00 | 32938.00 | -227546.00 | 166963.00 | 162763.00 | 2-3 | 135.62 | 4.950 |
| 10 | 535.71 | 1 | SLU | -221670.00 | 31737.30 | 31037.20 | -221670.00 | 165640.00 | 161395.00 | 2-3 | 135.62 | 5.210 |
| 11 | 595.24 | 1 | SLU | -215807.00 | 29573.50 | 28921.10 | -215807.00 | 164250.00 | 160057.00 | 2-3 | 135.62 | 5.544 |
| 12 | 654.76 | 1 | SLU | -209955.00 | 27269.10 | 26667.50 | -209955.00 | 162748.00 | 158769.00 | 2-3 | 135.62 | 5.961 |
| 13 | 714.29 | 1 | SLU | -204115.00 | 24891.90 | 24342.80 | -204115.00 | 161239.00 | 157477.00 | 2-3 | 135.62 | 6.473 |
| 14 | 773.81 | 1 | SLU | -198285.00 | 22498.90 | 22002.50 | -198285.00 | 159727.00 | 156183.00 | 2-3 | 135.62 | 7.099 |
| 15 | 833.33 | 1 | SLU | -192466.00 | 20136.90 | 19692.70 | -192466.00 | 158203.00 | 154884.00 | 2-3 | 135.62 | 7.861 |
| 16 | 892.86 | 1 | SLU | -186658.00 | 17844.20 | 17450.50 | -186658.00 | 156677.00 | 153584.00 | 2-3 | 135.62 | 8.790 |
| 17 | 952.38 | 1 | SLU | -180859.00 | 15650.60 | 15305.40 | -180859.00 | 155143.00 | 152281.00 | 2-3 | 135.62 | 9.931 |
| 18 | 1011.90 | 1 | SLU | -175070.00 | 13579.20 | 13279.70 | -175070.00 | 153578.00 | 149288.00 | 2-3 | 136.25 | 11.341 |
| 19 | 1071.43 | 1 | SLU | -169291.00 | 11646.60 | 11389.70 | -169291.00 | 153742.00 | 147949.00 | 2-3 | 136.25 | 13.098 |
| 20 | 1130.95 | 1 | SLU | -163520.00 | 9864.18 | 9646.57 | -163520.00 | 152200.00 | 146607.00 | 2-3 | 136.25 | 15.317 |
| 21 | 1190.48 | 1 | SLU | -157759.00 | 8238.48 | 8056.73 | -157759.00 | 150652.00 | 145263.00 | 2-3 | 136.25 | 16.299 |
| 22 | 1250.00 | 1 | SLU | -152005.00 | 6772.27 | 6622.87 | -152005.00 | 149125.00 | 143865.00 | 2-3 | 136.25 | 16.916 |
| 23 | 1309.52 | 1 | SLU | -146260.00 | 5464.99 | 5344.43 | -146260.00 | 147655.00 | 142324.00 | 2-3 | 136.25 | 17.580 |
| 24 | 1369.05 | 1 | SLU | -140523.00 | 4313.41 | 4218.25 | -140523.00 | 146183.00 | 140780.00 | 2-3 | 136.25 | 18.298 |
| 25 | 1428.57 | 1 | SLU | -134794.00 | 3312.08 | 3239.02 | -134794.00 | 144705.00 | 139226.00 | 2-3 | 136.25 | 19.076 |
| 26 | 1488.10 | 1 | SLU | -129071.00 | 2453.89 | 2399.75 | -129071.00 | 143224.00 | 137666.00 | 2-3 | 136.25 | 19.921 |
| 27 | 1547.62 | 1 | SLU | -123356.00 | 1730.36 | 1692.19 | -123356.00 | 140210.00 | 137560.00 | 2-3 | 135.62 | 20.844 |
| 28 | 1607.14 | 1 | SLU | -117647.00 | 1132.07 | 1107.10 | -117647.00 | 138727.00 | 135980.00 | 2-3 | 135.62 | 21.856 |
| 29 | 1666.67 | 1 | SLU | -111944.00 | 648.91 | 634.60 | -111944.00 | 137241.00 | 134396.00 | 2-3 | 135.62 | 22.969 |
| 30 | 1726.19 | 1 | SLU | -106248.00 | 270.31 | 264.35 | -106248.00 | 135750.00 | 132801.00 | 2-3 | 135.62 | 24.201 |
| 31 | 1785.71 | 1 | SLU | -100557.00 | -14.56 | -14.23 | -100557.00 | -134145.00 | -131466.00 | 2-3 | 315.62 | 25.570 |
| 32 | 1845.24 | 1 | SLU | -94871.30 | -216.60 | -211.83 | -94871.30 | -132472.00 | -130050.00 | 2-3 | 315.62 | 27.102 |
| 33 | 1904.76 | 1 | SLU | -89190.90 | -346.76 | -339.11 | -89190.90 | -132260.00 | -127155.00 | 2-3 | 316.25 | 28.829 |
| 34 | 1964.29 | 1 | SLU | -83515.30 | -415.85 | -406.67 | -83515.30 | -130572.00 | -125737.00 | 2-3 | 316.25 | 30.788 |
| 35 | 2023.81 | 1 | SLU | -77844.10 | -434.55 | -424.96 | -77844.10 | -128872.00 | -124318.00 | 2-3 | 316.25 | 33.031 |
| 36 | 2083.33 | 1 | SLU | -72177.20 | -413.39 | -404.27 | -72177.20 | -127214.00 | -122809.00 | 2-3 | 316.25 | 35.624 |
| 37 | 2142.86 | 1 | SLU | -66514.10 | -362.72 | -354.72 | -66514.10 | -125609.00 | -121175.00 | 2-3 | 316.25 | 38.657 |
| 38 | 2202.38 | 1 | SLU | -60854.60 | -292.70 | -286.25 | -60854.60 | -123999.00 | -119533.00 | 2-3 | 316.25 | 42.252 |
| 39 | 2261.90 | 1 | SLU | -55198.30 | -213.37 | -208.67 | -55198.30 | -122385.00 | -117887.00 | 2-3 | 316.25 | 46.582 |
| 40 | 2321.43 | 1 | SLU | -49545.10 | -134.64 | -131.67 | -49545.10 | -120764.00 | -116229.00 | 2-3 | 316.25 | 51.897 |
| 41 | 2380.95 | 1 | SLU | -43894.40 | -66.33 | -64.87 | -43894.40 | -119153.00 | -114534.00 | 2-3 | 316.25 | 58.578 |
| 42 | 2440.48 | 1 | SLU | -38246.20 | -18.20 | -17.80 | -38246.20 | -116232.00 | -114077.00 | 2-3 | 315.62 | 67.229 |
| 43 | 2500.00 | 1 | SLU | -32599.90 | 0.00 | 0.00 | -32599.90 | | | | | 78.873 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | OC | TCC | Ty <daN> | Tz <daN> | bw <cm> | Asw <cm²> | Vsdu <daN> | ctgθ | VRsd <daN> | VRod <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|------------|--------------|---------------|------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SLU | 6222.70 | -820.92 | 0.85 | 11.31 | 6276.62 | 1.00 | 32294.70 | 368014.00 | 32294.70 | 5.145 |
| 2 | 59.52 | 1 | SLU | 4237.53 | -559.03 | 0.85 | 11.31 | 4274.25 | 1.00 | 32294.70 | 367934.00 | 32294.70 | 7.556 |
| 3 | 119.05 | 1 | SLU | 2525.33 | -333.15 | 0.85 | 11.31 | 2547.21 | 1.00 | 32294.70 | 367535.00 | 32294.70 | 12.678 |
| 4 | 178.57 | 1 | SLU | 1066.59 | -140.71 | 0.85 | 11.31 | 1075.83 | 1.00 | 32294.70 | 367137.00 | 32294.70 | 30.018 |
| 5 | 238.09 | 1 | SLU | -158.79 | 20.95 | 0.85 | 11.31 | 160.17 | 1.00 | 32294.70 | 366740.00 | 32294.70 | >100 |
| 6 | 297.62 | 1 | SLU | -1171.15 | 154.50 | 0.85 | 11.31 | 1181.30 | 1.00 | 32294.70 | 366345.00 | 32294.70 | 27.338 |
| 7 | 357.14 | 1 | SLU | -2249.99 | 296.83 | 0.85 | 11.31 | 2269.49 | 1.00 | 32294.70 | 365950.00 | 32294.70 | 14.230 |
| 8 | 416.67 | 1 | SLU | -3357.42 | 442.92 | 0.85 | 11.31 | 3386.51 | 1.00 | 32294.70 | 365105.00 | 32294.70 | 9.536 |
| 9 | 476.19 | 1 | SLU | -4202.67 | 554.43 | 0.85 | 11.31 | 4239.08 | 1.00 | 32294.70 | 364262.00 | 32294.70 | 7.618 |
| 10 | 535.71 | 1 | SLU | -4817.80 | 635.58 | 0.85 | 11.31 | 4859.54 | 1.00 | 32294.70 | 363420.00 | 32294.70 | 6.646 |
| 11 | 595.24 | 1 | SLU | -5233.20 | 690.38 | 0.85 | 11.31 | 5278.54 | 1.00 | 32294.70 | 362580.00 | 32294.70 | 6.118 |
| 12 | 654.76 | 1 | SLU | -5477.33 | 722.59 | 0.85 | 11.31 | 5524.79 | 1.00 | 32294.70 | 361742.00 | 32294.70 | 5.845 |
| 13 | 714.29 | 1 | SLU | -5576.58 | 735.68 | 0.85 | 11.31 | 5624.90 | 1.00 | 32294.70 | 360905.00 | 32294.70 | 5.741 |

Relazione di calcolo

| | | | | | | | | | | | | | |
|----|---------|---|-----|----------|--------|------|-------|---------|------|----------|-----------|----------|--------|
| 14 | 773.81 | 1 | SLU | -5555.14 | 732.86 | 0.85 | 11.31 | 5603.27 | 1.00 | 32294.70 | 360070.00 | 32294.70 | 5.764 |
| 15 | 833.33 | 1 | SLU | -5435.00 | 717.01 | 0.85 | 11.31 | 5482.09 | 1.00 | 32294.70 | 359237.00 | 32294.70 | 5.891 |
| 16 | 892.86 | 1 | SLU | -5235.93 | 690.75 | 0.85 | 11.31 | 5281.29 | 1.00 | 32294.70 | 358405.00 | 32294.70 | 6.115 |
| 17 | 952.38 | 1 | SLU | -4975.52 | 656.39 | 0.85 | 11.31 | 5018.63 | 1.00 | 32294.70 | 357574.00 | 32294.70 | 6.435 |
| 18 | 1011.90 | 1 | SLU | -4669.29 | 615.99 | 0.85 | 11.31 | 4709.75 | 1.00 | 32294.70 | 356745.00 | 32294.70 | 6.857 |
| 19 | 1071.43 | 1 | SLU | -4330.78 | 571.33 | 0.85 | 11.31 | 4368.31 | 1.00 | 32294.70 | 355917.00 | 32294.70 | 7.393 |
| 20 | 1130.95 | 1 | SLU | -3971.67 | 523.96 | 0.85 | 11.31 | 4006.08 | 1.00 | 32294.70 | 355091.00 | 32294.70 | 8.061 |
| 21 | 1190.48 | 1 | SLU | -3601.89 | 475.18 | 0.85 | 11.31 | 3633.10 | 1.00 | 32294.70 | 354265.00 | 32294.70 | 8.889 |
| 22 | 1250.00 | 1 | SLU | -3229.83 | 426.09 | 0.85 | 11.31 | 3257.81 | 1.00 | 32294.70 | 353441.00 | 32294.70 | 9.913 |
| 23 | 1309.52 | 1 | SLU | -2862.41 | 377.62 | 0.85 | 11.31 | 2887.21 | 1.00 | 32294.70 | 352618.00 | 32294.70 | 11.185 |
| 24 | 1369.05 | 1 | SLU | -2505.28 | 330.51 | 0.85 | 11.31 | 2526.99 | 1.00 | 32294.70 | 351797.00 | 32294.70 | 12.780 |
| 25 | 1428.57 | 1 | SLU | -2162.95 | 285.35 | 0.85 | 11.31 | 2181.69 | 1.00 | 32294.70 | 350976.00 | 32294.70 | 14.803 |
| 26 | 1488.10 | 1 | SLU | -1838.93 | 242.60 | 0.85 | 11.31 | 1854.86 | 1.00 | 32294.70 | 350156.00 | 32294.70 | 17.411 |
| 27 | 1547.62 | 1 | SLU | -1535.86 | 202.62 | 0.85 | 11.31 | 1549.17 | 1.00 | 32294.70 | 349337.00 | 32294.70 | 20.846 |
| 28 | 1607.14 | 1 | SLU | -1255.66 | 165.65 | 0.85 | 11.31 | 1266.54 | 1.00 | 32294.70 | 348520.00 | 32294.70 | 25.498 |
| 29 | 1666.67 | 1 | SLU | -999.63 | 131.88 | 0.85 | 11.31 | 1008.30 | 1.00 | 32294.70 | 347703.00 | 32294.70 | 32.029 |
| 30 | 1726.19 | 1 | SLU | -768.59 | 101.39 | 0.85 | 11.31 | 775.25 | 1.00 | 32294.70 | 346887.00 | 32294.70 | 41.657 |
| 31 | 1785.71 | 1 | SLU | -562.92 | 74.26 | 0.85 | 11.31 | 567.79 | 1.00 | 32294.70 | 346072.00 | 32294.70 | 56.877 |
| 32 | 1845.24 | 1 | SLU | -382.73 | 50.49 | 0.85 | 11.31 | 386.05 | 1.00 | 32294.70 | 345257.00 | 32294.70 | 83.655 |
| 33 | 1904.76 | 1 | SLU | -227.90 | 30.07 | 0.85 | 11.31 | 229.87 | 1.00 | 32294.70 | 344444.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -98.14 | 12.95 | 0.85 | 11.31 | 98.99 | 1.00 | 32294.70 | 343631.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | 6.91 | -0.91 | 0.85 | 11.31 | 6.97 | 1.00 | 32294.70 | 342818.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 87.65 | -11.56 | 0.85 | 11.31 | 88.41 | 1.00 | 32294.70 | 342007.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 144.50 | -19.06 | 0.85 | 11.31 | 145.75 | 1.00 | 32294.70 | 341196.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 177.83 | -23.46 | 0.85 | 11.31 | 179.37 | 1.00 | 32294.70 | 340385.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 187.94 | -24.79 | 0.85 | 11.31 | 189.57 | 1.00 | 32294.70 | 339575.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 175.08 | -23.10 | 0.85 | 11.31 | 176.60 | 1.00 | 32294.70 | 338765.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 139.41 | -18.39 | 0.85 | 11.31 | 140.62 | 1.00 | 32294.70 | 337955.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 81.04 | -10.69 | 0.85 | 11.31 | 81.74 | 1.00 | 32294.70 | 337146.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mx <daNm> | My <daNm> | AFT <cmq> | AFC <cmq> | σ_c <daN/cmq> | σ_f <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-------------------------|-------------------------|
| 44 | 0.00 | 2 | SLE R | -187958.00 | 23843.40 | 24381.30 | 6.28 | 72.26 | 32.80 | 469.82 |
| 45 | 59.52 | 2 | SLE R | -187859.00 | 25462.40 | 26036.80 | 12.57 | 65.97 | 34.09 | 487.41 |
| 46 | 119.05 | 2 | SLE R | -185985.00 | 26507.00 | 27105.00 | 15.71 | 62.83 | 34.83 | 497.32 |
| 47 | 178.57 | 2 | SLE R | -184117.00 | 27059.20 | 27669.60 | 15.71 | 62.83 | 35.18 | 501.93 |
| 48 | 238.09 | 2 | SLE R | -182255.00 | 27194.50 | 27808.00 | 18.85 | 59.69 | 35.19 | 501.73 |
| 49 | 297.62 | 2 | SLE R | -180399.00 | 26982.50 | 27591.20 | 18.85 | 59.69 | 34.88 | 497.40 |
| 50 | 357.14 | 2 | SLE R | -178548.00 | 26459.30 | 27056.20 | 18.85 | 59.69 | 34.31 | 489.35 |
| 51 | 416.67 | 2 | SLE R | -174193.00 | 25580.30 | 26157.30 | 15.71 | 62.83 | 33.27 | 474.63 |
| 52 | 476.19 | 2 | SLE R | -169847.00 | 24398.50 | 24948.90 | 15.71 | 62.83 | 31.97 | 456.40 |
| 53 | 535.71 | 2 | SLE R | -165510.00 | 22990.50 | 23509.10 | 12.57 | 65.97 | 30.49 | 435.70 |
| 54 | 595.24 | 2 | SLE R | -161182.00 | 21423.00 | 21906.30 | 12.57 | 65.97 | 28.90 | 413.49 |
| 55 | 654.76 | 2 | SLE R | -156863.00 | 19753.70 | 20199.30 | 6.28 | 72.26 | 27.26 | 390.55 |
| 56 | 714.29 | 2 | SLE R | -152552.00 | 18031.70 | 18438.50 | 0.00 | 78.54 | 25.61 | 367.48 |
| 57 | 773.81 | 2 | SLE R | -148250.00 | 16298.20 | 16665.80 | 0.00 | 78.54 | 23.99 | 344.69 |
| 58 | 833.33 | 2 | SLE R | -143955.00 | 14587.20 | 14916.20 | 0.00 | 78.54 | 22.39 | 322.25 |
| 59 | 892.86 | 2 | SLE R | -139668.00 | 12926.30 | 13217.90 | 0.00 | 78.54 | 20.82 | 300.31 |
| 60 | 952.38 | 2 | SLE R | -135389.00 | 11337.30 | 11593.10 | 0.00 | 78.54 | 19.31 | 279.11 |
| 61 | 1011.90 | 2 | SLE R | -131117.00 | 9836.78 | 10058.70 | 0.00 | 78.54 | 17.86 | 258.81 |
| 62 | 1071.43 | 2 | SLE R | -126852.00 | 8436.82 | 8627.14 | 0.00 | 78.54 | 16.49 | 239.53 |
| 63 | 1130.95 | 2 | SLE R | -122593.00 | 7145.61 | 7306.80 | 0.00 | 78.54 | 15.20 | 221.35 |
| 64 | 1190.48 | 2 | SLE R | -118341.00 | 5967.95 | 6102.58 | 0.00 | 78.54 | 13.99 | 204.32 |
| 65 | 1250.00 | 2 | SLE R | -114096.00 | 4905.83 | 5016.49 | 0.00 | 78.54 | 12.87 | 188.46 |
| 66 | 1309.52 | 2 | SLE R | -109857.00 | 3958.84 | 4048.14 | 0.00 | 78.54 | 11.83 | 173.76 |
| 67 | 1369.05 | 2 | SLE R | -105623.00 | 3124.63 | 3195.12 | 0.00 | 78.54 | 10.87 | 160.21 |
| 68 | 1428.57 | 2 | SLE R | -101396.00 | 2399.27 | 2453.40 | 0.00 | 78.54 | 10.00 | 147.76 |
| 69 | 1488.10 | 2 | SLE R | -97173.40 | 1777.59 | 1817.69 | 0.00 | 78.54 | 9.20 | 136.36 |
| 70 | 1547.62 | 2 | SLE R | -92956.40 | 1253.47 | 1281.75 | 0.00 | 78.54 | 8.47 | 125.94 |
| 71 | 1607.14 | 2 | SLE R | -88744.30 | 820.07 | 838.57 | 0.00 | 78.54 | 7.81 | 116.45 |
| 72 | 1666.67 | 2 | SLE R | -84537.00 | 470.07 | 480.67 | 0.00 | 78.54 | 7.22 | 107.80 |
| 73 | 1726.19 | 2 | SLE R | -80334.20 | 195.81 | 200.23 | 0.00 | 78.54 | 6.67 | 99.92 |
| 74 | 1785.71 | 2 | SLE R | -76135.70 | -10.54 | -10.78 | 0.00 | 78.54 | 6.20 | 92.93 |
| 75 | 1845.24 | 2 | SLE R | -71941.30 | -156.91 | -160.45 | 0.00 | 78.54 | 5.96 | 89.29 |
| 76 | 1904.76 | 2 | SLE R | -67750.80 | -251.19 | -256.86 | 0.00 | 78.54 | 5.69 | 85.12 |
| 77 | 1964.29 | 2 | SLE R | -63563.90 | -301.24 | -308.03 | 0.00 | 78.54 | 5.39 | 80.52 |
| 78 | 2023.81 | 2 | SLE R | -59380.40 | -314.79 | -321.89 | 0.00 | 78.54 | 5.06 | 75.56 |
| 79 | 2083.33 | 2 | SLE R | -55200.10 | -299.46 | -306.22 | 0.00 | 78.54 | 4.71 | 70.31 |
| 80 | 2142.86 | 2 | SLE R | -51022.80 | -262.75 | -268.68 | 0.00 | 78.54 | 4.34 | 64.85 |
| 81 | 2202.38 | 2 | SLE R | -46848.10 | -212.03 | -216.82 | 0.00 | 78.54 | 3.96 | 59.25 |
| 82 | 2261.90 | 2 | SLE R | -42676.10 | -154.57 | -158.05 | 0.00 | 78.54 | 3.58 | 53.58 |
| 83 | 2321.43 | 2 | SLE R | -38506.20 | -97.53 | -99.73 | 0.00 | 78.54 | 3.20 | 47.93 |
| 84 | 2380.95 | 2 | SLE R | -34338.50 | -48.05 | -49.13 | 0.00 | 78.54 | 2.83 | 42.35 |
| 85 | 2440.48 | 2 | SLE R | -30172.60 | -13.19 | -13.48 | 0.00 | 78.54 | 2.46 | 36.92 |
| 86 | 2500.00 | 2 | SLE R | -26008.30 | 0.00 | 0.00 | 0.00 | 78.54 | 2.11 | 31.71 |
| 87 | 0.00 | 4 | SLE Q | -187958.00 | 23843.40 | 24381.30 | 6.28 | 72.26 | 32.80 | 469.82 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|------------|----------|----------|-------|-------|-------|--------|
| 88 | 59.52 | 4 | SLE Q | -187859.00 | 25462.40 | 26036.80 | 12.57 | 65.97 | 34.09 | 487.41 |
| 89 | 119.05 | 4 | SLE Q | -185985.00 | 26507.00 | 27105.00 | 15.71 | 62.83 | 34.83 | 497.32 |
| 90 | 178.57 | 4 | SLE Q | -184117.00 | 27059.20 | 27669.60 | 15.71 | 62.83 | 35.18 | 501.93 |
| 91 | 238.09 | 4 | SLE Q | -182255.00 | 27194.50 | 27808.00 | 18.85 | 59.69 | 35.19 | 501.73 |
| 92 | 297.62 | 4 | SLE Q | -180399.00 | 26982.50 | 27591.20 | 18.85 | 59.69 | 34.88 | 497.40 |
| 93 | 357.14 | 4 | SLE Q | -178548.00 | 26459.30 | 27056.20 | 18.85 | 59.69 | 34.31 | 489.35 |
| 94 | 416.67 | 4 | SLE Q | -174193.00 | 25580.30 | 26157.30 | 15.71 | 62.83 | 33.27 | 474.63 |
| 95 | 476.19 | 4 | SLE Q | -169847.00 | 24398.50 | 24948.90 | 15.71 | 62.83 | 31.97 | 456.40 |
| 96 | 535.71 | 4 | SLE Q | -165510.00 | 22990.50 | 23509.10 | 12.57 | 65.97 | 30.49 | 435.70 |
| 97 | 595.24 | 4 | SLE Q | -161182.00 | 21423.00 | 21906.30 | 12.57 | 65.97 | 28.90 | 413.49 |
| 98 | 654.76 | 4 | SLE Q | -156863.00 | 19753.70 | 20199.30 | 6.28 | 72.26 | 27.26 | 390.55 |
| 99 | 714.29 | 4 | SLE Q | -152552.00 | 18031.70 | 18438.50 | 0.00 | 78.54 | 25.61 | 367.48 |
| 100 | 773.81 | 4 | SLE Q | -148250.00 | 16298.20 | 16665.80 | 0.00 | 78.54 | 23.99 | 344.69 |
| 101 | 833.33 | 4 | SLE Q | -143955.00 | 14587.20 | 14916.20 | 0.00 | 78.54 | 22.39 | 322.25 |
| 102 | 892.86 | 4 | SLE Q | -139668.00 | 12926.30 | 13217.90 | 0.00 | 78.54 | 20.82 | 300.31 |
| 103 | 952.38 | 4 | SLE Q | -135389.00 | 11337.30 | 11593.10 | 0.00 | 78.54 | 19.31 | 279.11 |
| 104 | 1011.90 | 4 | SLE Q | -131117.00 | 9836.78 | 10058.70 | 0.00 | 78.54 | 17.86 | 258.81 |
| 105 | 1071.43 | 4 | SLE Q | -126852.00 | 8436.82 | 8627.14 | 0.00 | 78.54 | 16.49 | 239.53 |
| 106 | 1130.95 | 4 | SLE Q | -122593.00 | 7145.61 | 7306.80 | 0.00 | 78.54 | 15.20 | 221.35 |
| 107 | 1190.48 | 4 | SLE Q | -118341.00 | 5967.95 | 6102.58 | 0.00 | 78.54 | 13.99 | 204.32 |
| 108 | 1250.00 | 4 | SLE Q | -114096.00 | 4905.83 | 5016.49 | 0.00 | 78.54 | 12.87 | 188.46 |
| 109 | 1309.52 | 4 | SLE Q | -109857.00 | 3958.84 | 4048.14 | 0.00 | 78.54 | 11.83 | 173.76 |
| 110 | 1369.05 | 4 | SLE Q | -105623.00 | 3124.63 | 3195.12 | 0.00 | 78.54 | 10.87 | 160.21 |
| 111 | 1428.57 | 4 | SLE Q | -101396.00 | 2399.27 | 2453.40 | 0.00 | 78.54 | 10.00 | 147.76 |
| 112 | 1488.10 | 4 | SLE Q | -97173.40 | 1777.59 | 1817.69 | 0.00 | 78.54 | 9.20 | 136.36 |
| 113 | 1547.62 | 4 | SLE Q | -92956.40 | 1253.47 | 1281.75 | 0.00 | 78.54 | 8.47 | 125.94 |
| 114 | 1607.14 | 4 | SLE Q | -88744.30 | 820.07 | 838.57 | 0.00 | 78.54 | 7.81 | 116.45 |
| 115 | 1666.67 | 4 | SLE Q | -84537.00 | 470.07 | 480.67 | 0.00 | 78.54 | 7.22 | 107.80 |
| 116 | 1726.19 | 4 | SLE Q | -80334.20 | 195.81 | 200.23 | 0.00 | 78.54 | 6.67 | 99.92 |
| 117 | 1785.71 | 4 | SLE Q | -76135.70 | -10.54 | -10.78 | 0.00 | 78.54 | 6.20 | 92.93 |
| 118 | 1845.24 | 4 | SLE Q | -71941.30 | -156.91 | -160.45 | 0.00 | 78.54 | 5.96 | 89.29 |
| 119 | 1904.76 | 4 | SLE Q | -67750.80 | -251.19 | -256.86 | 0.00 | 78.54 | 5.69 | 85.12 |
| 120 | 1964.29 | 4 | SLE Q | -63563.90 | -301.24 | -308.03 | 0.00 | 78.54 | 5.39 | 80.52 |
| 121 | 2023.81 | 4 | SLE Q | -59380.40 | -314.79 | -321.89 | 0.00 | 78.54 | 5.06 | 75.56 |
| 122 | 2083.33 | 4 | SLE Q | -55200.10 | -299.46 | -306.22 | 0.00 | 78.54 | 4.71 | 70.31 |
| 123 | 2142.86 | 4 | SLE Q | -51022.80 | -262.75 | -268.68 | 0.00 | 78.54 | 4.34 | 64.85 |
| 124 | 2202.38 | 4 | SLE Q | -46848.10 | -212.03 | -216.82 | 0.00 | 78.54 | 3.96 | 59.25 |
| 125 | 2261.90 | 4 | SLE Q | -42676.10 | -154.57 | -158.05 | 0.00 | 78.54 | 3.58 | 53.58 |
| 126 | 2321.43 | 4 | SLE Q | -38506.20 | -97.53 | -99.73 | 0.00 | 78.54 | 3.20 | 47.93 |
| 127 | 2380.95 | 4 | SLE Q | -34338.50 | -48.05 | -49.13 | 0.00 | 78.54 | 2.83 | 42.35 |
| 128 | 2440.48 | 4 | SLE Q | -30172.60 | -13.19 | -13.48 | 0.00 | 78.54 | 2.46 | 36.92 |
| 129 | 2500.00 | 4 | SLE Q | -26008.30 | 0.00 | 0.00 | 0.00 | 78.54 | 2.11 | 31.71 |

Stato limite d'esercizio - Verifiche a fessurazione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mx <daNm> | c <mm> | s <mm> | K_{σ} | Φ_{eq} | Δ_{sm} <mm> | A_s <cmq> | A_c eff <cmq> | σ_s <daN/cmq> | ϵ_{sm} | Wk <mm> |
|------|--------|----|-------|------------|-----------|-----------|--------|--------|--------------|-------------|--------------------|-------------|-----------------|----------------------|-----------------|---------|
| 90 | 178.57 | 4 | SLE Q | -184117.00 | 27669.60 | 27059.20 | 46.00 | 136.36 | 0.50 | 20.00 | 211.44 | 3.14 | 187.61 | 57.42 | 0.02 | 0.01 |
| 91 | 238.09 | 4 | SLE Q | -182255.00 | 27808.00 | 27194.50 | 46.00 | 136.36 | 0.50 | 20.00 | 156.65 | 6.28 | 203.11 | 62.53 | 0.02 | 0.00 |
| 92 | 297.62 | 4 | SLE Q | -180399.00 | 27591.20 | 26982.50 | 46.00 | 136.36 | 0.50 | 20.00 | 157.45 | 6.28 | 205.61 | 62.81 | 0.02 | 0.00 |
| 93 | 357.14 | 4 | SLE Q | -178548.00 | 27056.20 | 26459.30 | 46.00 | 136.36 | 0.50 | 20.00 | 216.80 | 3.14 | 196.03 | 58.71 | 0.02 | 0.01 |
| 94 | 416.67 | 4 | SLE Q | -174193.00 | 26157.30 | 25580.30 | 46.00 | 136.36 | 0.50 | 20.00 | 210.93 | 3.14 | 186.81 | 54.05 | 0.02 | 0.01 |
| 133 | 178.57 | 3 | SLE F | -184117.00 | 27669.60 | 27059.20 | 46.00 | 136.36 | 0.50 | 20.00 | 211.44 | 3.14 | 187.61 | 57.42 | 0.02 | 0.01 |
| 134 | 238.09 | 3 | SLE F | -182255.00 | 27808.00 | 27194.50 | 46.00 | 136.36 | 0.50 | 20.00 | 156.65 | 6.28 | 203.11 | 62.53 | 0.02 | 0.00 |
| 135 | 297.62 | 3 | SLE F | -180399.00 | 27591.20 | 26982.50 | 46.00 | 136.36 | 0.50 | 20.00 | 157.45 | 6.28 | 205.61 | 62.81 | 0.02 | 0.00 |
| 136 | 357.14 | 3 | SLE F | -178548.00 | 27056.20 | 26459.30 | 46.00 | 136.36 | 0.50 | 20.00 | 216.80 | 3.14 | 196.03 | 58.71 | 0.02 | 0.01 |
| 137 | 416.67 | 3 | SLE F | -174193.00 | 26157.30 | 25580.30 | 46.00 | 136.36 | 0.50 | 20.00 | 210.93 | 3.14 | 186.81 | 54.05 | 0.02 | 0.01 |

Verifiche principali

| Caso | Tipo |
|------|---|
| 1 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 5 | SLU N coast - min. sic. |
| 47 | C.Rare - Sf min (max compr.) |
| 48 | C.Rare - Sc min (max compr.) |
| 49 | C.Rare - Sf max (max traz.) |
| 57 | C.Rare - Sc max (min. compr.) |
| 90 | C.Q.Per. - Sf min (max compr.) |
| 91 | C.Q.Per. - Sc min (max compr.) |
| 92 | C.Q.Per. - Sf max (max traz.) |
| 93 | C.Q.Per. - Wk Max |
| 100 | C.Q.Per. - Sc max (min. compr.) |
| 136 | C.Freq - Wk Max |

Palo n. 21

Caratteristiche del palo e dei materiali utilizzati

| R <cm> | Cf <cm> | Cl _s | F _{ck} <daN/cmq> | F _{ctk} <daN/cmq> | F _{cd} <daN/cmq> | F _{ctd} <daN/cmq> | TP | F _{yk} <daN/cmq> | F _{yd} <daN/cmq> |
|--------|---------|-----------------|---------------------------|----------------------------|---------------------------|----------------------------|----|---------------------------|---------------------------|
|--------|---------|-----------------|---------------------------|----------------------------|---------------------------|----------------------------|----|---------------------------|---------------------------|

Relazione di calcolo

60.00|6.00|C30/37| 307.10| 20.59| 174.02| 13.73|B450C| 4300.00| 3913.04|

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N <daN> | Mx <daNm> | My <daNm> | Mz |
|-----|------------|--------------|--------------|----|
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 21 (-154)

| Caso | CC | TCC | Az | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|-----|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | RVN | 287981.00 | 6007.07 | -640.81 | 20770.30 | -28669.60 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 287981.00 | 6007.07 | -640.81 | 20770.30 | -28669.60 |
| 2 | 2 | SLE R | RVN | 213319.00 | 4449.68 | -474.67 | 15385.40 | -21236.70 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 213319.00 | 4449.68 | -474.67 | 15385.40 | -21236.70 |
| 3 | 3 | SLE F | RVN | 213319.00 | 4449.68 | -474.67 | 15385.40 | -21236.70 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 213319.00 | 4449.68 | -474.67 | 15385.40 | -21236.70 |
| 4 | 4 | SLE Q | RVN | 213319.00 | 4449.68 | -474.67 | 15385.40 | -21236.70 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 213319.00 | 4449.68 | -474.67 | 15385.40 | -21236.70 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|------|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | 1 | -287981.00 | -6007.07 | 640.81 | -20770.30 | 28669.60 |
| 2 | 2 | SLE R | 1 | -213319.00 | -4449.68 | 474.67 | -15385.40 | 21236.70 |
| 3 | 3 | SLE F | 1 | -213319.00 | -4449.68 | 474.67 | -15385.40 | 21236.70 |
| 4 | 4 | SLE Q | 1 | -213319.00 | -4449.68 | 474.67 | -15385.40 | 21236.70 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|--------|
| 1 | 0.00 | 1 | SLU | -287981.00 | 20667.70 | 28527.90 | -287981.00 | 149329.00 | 203596.00 | 2-3 | 126.25 | 7.167 |
| 2 | 59.52 | 1 | SLU | -287187.00 | 22470.30 | 31016.10 | -287187.00 | 149192.00 | 203408.00 | 2-3 | 126.25 | 6.586 |
| 3 | 119.05 | 1 | SLU | -283926.00 | 23713.00 | 32731.40 | -283926.00 | 148633.00 | 202626.00 | 2-3 | 126.25 | 6.217 |
| 4 | 178.57 | 1 | SLU | -280674.00 | 24473.00 | 33780.50 | -280674.00 | 148079.00 | 201839.00 | 2-3 | 126.25 | 6.001 |
| 5 | 238.09 | 1 | SLU | -277430.00 | 24822.20 | 34262.50 | -277430.00 | 147524.00 | 201050.00 | 2-3 | 126.25 | 5.894 |
| 6 | 297.62 | 1 | SLU | -274195.00 | 24826.60 | 34268.60 | -274195.00 | 146969.00 | 200261.00 | 2-3 | 126.25 | 5.870 |
| 7 | 357.14 | 1 | SLU | -270969.00 | 24519.40 | 33844.50 | -270969.00 | 146321.00 | 199499.00 | 2-3 | 126.25 | 5.920 |
| 8 | 416.67 | 1 | SLU | -264265.00 | 23852.30 | 32923.70 | -264265.00 | 144989.00 | 197830.00 | 2-3 | 126.25 | 6.033 |
| 9 | 476.19 | 1 | SLU | -257575.00 | 22875.20 | 31575.00 | -257575.00 | 143705.00 | 196070.00 | 2-3 | 126.25 | 6.235 |
| 10 | 535.71 | 1 | SLU | -250899.00 | 21662.20 | 29900.70 | -250899.00 | 142415.00 | 194301.00 | 2-3 | 126.25 | 6.525 |
| 11 | 595.24 | 1 | SLU | -244237.00 | 20278.40 | 27990.60 | -244237.00 | 141116.00 | 192521.00 | 2-3 | 126.25 | 6.906 |
| 12 | 654.76 | 1 | SLU | -237587.00 | 18780.00 | 25922.30 | -237587.00 | 139814.00 | 190735.00 | 2-3 | 126.25 | 7.388 |
| 13 | 714.29 | 1 | SLU | -230951.00 | 17215.30 | 23762.60 | -230951.00 | 138505.00 | 188941.00 | 2-3 | 126.25 | 7.984 |
| 14 | 773.81 | 1 | SLU | -224326.00 | 15625.20 | 21567.70 | -224326.00 | 137189.00 | 187136.00 | 2-3 | 126.25 | 8.712 |
| 15 | 833.33 | 1 | SLU | -217714.00 | 14043.60 | 19384.50 | -217714.00 | 135869.00 | 185325.00 | 2-3 | 126.25 | 9.600 |
| 16 | 892.86 | 1 | SLU | -211113.00 | 12498.10 | 17251.40 | -211113.00 | 134543.00 | 183507.00 | 2-3 | 126.25 | 10.681 |
| 17 | 952.38 | 1 | SLU | -204524.00 | 11011.00 | 15198.70 | -204524.00 | 133210.00 | 181678.00 | 2-3 | 126.25 | 12.003 |
| 18 | 1011.90 | 1 | SLU | -197946.00 | 9599.42 | 13250.20 | -197946.00 | 131873.00 | 179844.00 | 2-3 | 126.25 | 12.990 |
| 19 | 1071.43 | 1 | SLU | -191378.00 | 8276.07 | 11423.60 | -191378.00 | 130530.00 | 178002.00 | 2-3 | 126.25 | 13.435 |
| 20 | 1130.95 | 1 | SLU | -184821.00 | 7049.93 | 9731.14 | -184821.00 | 129181.00 | 176151.00 | 2-3 | 126.25 | 13.912 |
| 21 | 1190.48 | 1 | SLU | -178273.00 | 5926.66 | 8180.66 | -178273.00 | 127827.00 | 174295.00 | 2-3 | 126.25 | 14.423 |
| 22 | 1250.00 | 1 | SLU | -171735.00 | 4909.10 | 6776.10 | -171735.00 | 126469.00 | 172431.00 | 2-3 | 126.25 | 14.972 |
| 23 | 1309.52 | 1 | SLU | -165207.00 | 3997.73 | 5518.13 | -165207.00 | 125104.00 | 170559.00 | 2-3 | 126.25 | 15.564 |
| 24 | 1369.05 | 1 | SLU | -158687.00 | 3191.10 | 4404.73 | -158687.00 | 123735.00 | 168681.00 | 2-3 | 126.25 | 16.203 |
| 25 | 1428.57 | 1 | SLU | -152176.00 | 2486.15 | 3431.67 | -152176.00 | 122361.00 | 166796.00 | 2-3 | 126.25 | 16.897 |
| 26 | 1488.10 | 1 | SLU | -145672.00 | 1878.54 | 2592.99 | -145672.00 | 120982.00 | 164904.00 | 2-3 | 126.25 | 17.651 |
| 27 | 1547.62 | 1 | SLU | -139177.00 | 1362.98 | 1881.35 | -139177.00 | 119599.00 | 163007.00 | 2-3 | 126.25 | 18.475 |
| 28 | 1607.14 | 1 | SLU | -132689.00 | 933.40 | 1288.39 | -132689.00 | 118211.00 | 161102.00 | 2-3 | 126.25 | 19.378 |
| 29 | 1666.67 | 1 | SLU | -126208.00 | 583.19 | 804.99 | -126208.00 | 116818.00 | 159192.00 | 2-3 | 126.25 | 20.373 |
| 30 | 1726.19 | 1 | SLU | -119734.00 | 305.39 | 421.54 | -119734.00 | 115422.00 | 157276.00 | 2-3 | 126.25 | 21.475 |
| 31 | 1785.71 | 1 | SLU | -113267.00 | 92.80 | 128.09 | -113267.00 | 114020.00 | 155353.00 | 2-3 | 126.25 | 22.701 |
| 32 | 1845.24 | 1 | SLU | -106805.00 | -61.91 | -85.46 | -106805.00 | 112400.00 | 153273.00 | 2-3 | 306.25 | 24.074 |

Relazione di calcolo

| | | | | | | | | | | | | |
|----|---------|---|-----|------------|---------|---------|-------------|------------|------------|-----|--------|--------|
| 33 | 1904.76 | 1 | SLU | -100349.00 | -166.10 | -229.27 | -2571250.00 | -110927.00 | -151253.00 | 2-3 | 306.25 | 25.623 |
| 34 | 1964.29 | 1 | SLU | -93899.00 | -227.09 | -313.46 | -2571250.00 | -109449.00 | -149227.00 | 2-3 | 306.25 | 27.383 |
| 35 | 2023.81 | 1 | SLU | -87453.60 | -252.15 | -348.05 | -2571250.00 | -107965.00 | -147191.00 | 2-3 | 306.25 | 29.401 |
| 36 | 2083.33 | 1 | SLU | -81012.90 | -248.45 | -342.94 | -2571250.00 | -106474.00 | -145146.00 | 2-3 | 306.25 | 31.739 |
| 37 | 2142.86 | 1 | SLU | -74576.60 | -223.06 | -307.90 | -2571250.00 | -104980.00 | -143095.00 | 2-3 | 306.25 | 34.478 |
| 38 | 2202.38 | 1 | SLU | -68144.30 | -182.95 | -252.52 | -2571250.00 | -103479.00 | -141035.00 | 2-3 | 306.25 | 37.732 |
| 39 | 2261.90 | 1 | SLU | -61715.60 | -134.98 | -186.32 | -2571250.00 | -101974.00 | -138969.00 | 2-3 | 306.25 | 41.663 |
| 40 | 2321.43 | 1 | SLU | -55290.20 | -85.98 | -118.67 | -2571250.00 | -100465.00 | -136897.00 | 2-3 | 306.25 | 46.505 |
| 41 | 2380.95 | 1 | SLU | -48867.80 | -42.67 | -58.90 | -2571250.00 | -98949.80 | -134816.00 | 2-3 | 306.25 | 52.616 |
| 42 | 2440.48 | 1 | SLU | -42448.00 | -11.78 | -16.26 | -2571250.00 | -97431.30 | -132730.00 | 2-3 | 306.25 | 60.574 |
| 43 | 2500.00 | 1 | SLU | -36030.50 | 0.00 | 0.00 | -2571250.00 | | | | | 71.363 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | CC | TCC | Ty <daN> | Tz <daN> | bw <m> | Asw <cmq> | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|-----------|--------------|---------------|------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SLU | 6007.07 | -640.81 | 0.85 | 11.31 | 6041.15 | 1.00 | 32294.70 | 372918.00 | 32294.70 | 5.346 |
| 2 | 59.52 | 1 | SLU | 4297.61 | -458.45 | 0.85 | 11.31 | 4321.99 | 1.00 | 32294.70 | 372805.00 | 32294.70 | 7.472 |
| 3 | 119.05 | 1 | SLU | 2815.86 | -300.38 | 0.85 | 11.31 | 2831.84 | 1.00 | 32294.70 | 372337.00 | 32294.70 | 11.404 |
| 4 | 178.57 | 1 | SLU | 1546.46 | -164.97 | 0.85 | 11.31 | 1555.24 | 1.00 | 32294.70 | 371872.00 | 32294.70 | 20.765 |
| 5 | 238.09 | 1 | SLU | 473.42 | -50.50 | 0.85 | 11.31 | 476.10 | 1.00 | 32294.70 | 371407.00 | 32294.70 | 67.832 |
| 6 | 297.62 | 1 | SLU | -419.66 | 44.77 | 0.85 | 11.31 | 422.04 | 1.00 | 32294.70 | 370944.00 | 32294.70 | 76.521 |
| 7 | 357.14 | 1 | SLU | -1381.23 | 147.34 | 0.85 | 11.31 | 1389.07 | 1.00 | 32294.70 | 370481.00 | 32294.70 | 23.249 |
| 8 | 416.67 | 1 | SLU | -2378.24 | 253.70 | 0.85 | 11.31 | 2391.73 | 1.00 | 32294.70 | 369521.00 | 32294.70 | 13.503 |
| 9 | 476.19 | 1 | SLU | -3150.92 | 336.13 | 0.85 | 11.31 | 3168.80 | 1.00 | 32294.70 | 368563.00 | 32294.70 | 10.191 |
| 10 | 535.71 | 1 | SLU | -3725.82 | 397.45 | 0.85 | 11.31 | 3746.96 | 1.00 | 32294.70 | 367607.00 | 32294.70 | 8.619 |
| 11 | 595.24 | 1 | SLU | -4128.22 | 440.38 | 0.85 | 11.31 | 4151.64 | 1.00 | 32294.70 | 366652.00 | 32294.70 | 7.779 |
| 12 | 654.76 | 1 | SLU | -4381.93 | 467.44 | 0.85 | 11.31 | 4406.79 | 1.00 | 32294.70 | 365700.00 | 32294.70 | 7.328 |
| 13 | 714.29 | 1 | SLU | -4509.12 | 481.01 | 0.85 | 11.31 | 4534.70 | 1.00 | 32294.70 | 364749.00 | 32294.70 | 7.122 |
| 14 | 773.81 | 1 | SLU | -4530.19 | 483.26 | 0.85 | 11.31 | 4555.89 | 1.00 | 32294.70 | 363800.00 | 32294.70 | 7.089 |
| 15 | 833.33 | 1 | SLU | -4463.76 | 476.17 | 0.85 | 11.31 | 4489.09 | 1.00 | 32294.70 | 362853.00 | 32294.70 | 7.194 |
| 16 | 892.86 | 1 | SLU | -4326.66 | 461.55 | 0.85 | 11.31 | 4351.21 | 1.00 | 32294.70 | 361908.00 | 32294.70 | 7.422 |
| 17 | 952.38 | 1 | SLU | -4133.91 | 440.99 | 0.85 | 11.31 | 4157.37 | 1.00 | 32294.70 | 360964.00 | 32294.70 | 7.768 |
| 18 | 1011.90 | 1 | SLU | -3898.84 | 415.91 | 0.85 | 11.31 | 3920.96 | 1.00 | 32294.70 | 360022.00 | 32294.70 | 8.236 |
| 19 | 1071.43 | 1 | SLU | -3633.10 | 387.56 | 0.85 | 11.31 | 3653.71 | 1.00 | 32294.70 | 359081.00 | 32294.70 | 8.839 |
| 20 | 1130.95 | 1 | SLU | -3346.81 | 357.02 | 0.85 | 11.31 | 3365.80 | 1.00 | 32294.70 | 358142.00 | 32294.70 | 9.595 |
| 21 | 1190.48 | 1 | SLU | -3048.65 | 325.22 | 0.85 | 11.31 | 3065.95 | 1.00 | 32294.70 | 357204.00 | 32294.70 | 10.533 |
| 22 | 1250.00 | 1 | SLU | -2745.94 | 292.92 | 0.85 | 11.31 | 2761.52 | 1.00 | 32294.70 | 356267.00 | 32294.70 | 11.695 |
| 23 | 1309.52 | 1 | SLU | -2444.80 | 260.80 | 0.85 | 11.31 | 2458.67 | 1.00 | 32294.70 | 355332.00 | 32294.70 | 13.135 |
| 24 | 1369.05 | 1 | SLU | -2150.25 | 229.38 | 0.85 | 11.31 | 2162.45 | 1.00 | 32294.70 | 354398.00 | 32294.70 | 14.934 |
| 25 | 1428.57 | 1 | SLU | -1866.36 | 199.09 | 0.85 | 11.31 | 1876.95 | 1.00 | 32294.70 | 353466.00 | 32294.70 | 17.206 |
| 26 | 1488.10 | 1 | SLU | -1596.32 | 170.29 | 0.85 | 11.31 | 1605.38 | 1.00 | 32294.70 | 352534.00 | 32294.70 | 20.117 |
| 27 | 1547.62 | 1 | SLU | -1342.57 | 143.22 | 0.85 | 11.31 | 1350.19 | 1.00 | 32294.70 | 351604.00 | 32294.70 | 23.919 |
| 28 | 1607.14 | 1 | SLU | -1106.94 | 118.08 | 0.85 | 11.31 | 1113.23 | 1.00 | 32294.70 | 350674.00 | 32294.70 | 29.010 |
| 29 | 1666.67 | 1 | SLU | -890.71 | 95.02 | 0.85 | 11.31 | 895.76 | 1.00 | 32294.70 | 349746.00 | 32294.70 | 36.053 |
| 30 | 1726.19 | 1 | SLU | -694.72 | 74.11 | 0.85 | 11.31 | 698.66 | 1.00 | 32294.70 | 348819.00 | 32294.70 | 46.224 |
| 31 | 1785.71 | 1 | SLU | -519.44 | 55.41 | 0.85 | 11.31 | 522.39 | 1.00 | 32294.70 | 347892.00 | 32294.70 | 61.821 |
| 32 | 1845.24 | 1 | SLU | -365.10 | 38.95 | 0.85 | 11.31 | 367.18 | 1.00 | 32294.70 | 346967.00 | 32294.70 | 87.954 |
| 33 | 1904.76 | 1 | SLU | -231.70 | 24.72 | 0.85 | 11.31 | 233.01 | 1.00 | 32294.70 | 346042.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -119.09 | 12.70 | 0.85 | 11.31 | 119.76 | 1.00 | 32294.70 | 345118.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | -27.03 | 2.88 | 0.85 | 11.31 | 27.19 | 1.00 | 32294.70 | 344195.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 44.75 | -4.77 | 0.85 | 11.31 | 45.00 | 1.00 | 32294.70 | 343272.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 96.55 | -10.30 | 0.85 | 11.31 | 97.09 | 1.00 | 32294.70 | 342350.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 128.64 | -13.72 | 0.85 | 11.31 | 129.37 | 1.00 | 32294.70 | 341429.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 141.27 | -15.07 | 0.85 | 11.31 | 142.07 | 1.00 | 32294.70 | 340508.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 134.62 | -14.36 | 0.85 | 11.31 | 135.38 | 1.00 | 32294.70 | 339588.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 108.81 | -11.61 | 0.85 | 11.31 | 109.42 | 1.00 | 32294.70 | 338668.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 63.93 | -6.82 | 0.85 | 11.31 | 64.29 | 1.00 | 32294.70 | 337748.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mz <daNm> | My <daNm> | AFT <cmq> | AFC <cmq> | σc <daN/cm²> | σf <daN/cm²> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-----------------|-----------------|
| 44 | 0.00 | 2 | SLE R | -213319.00 | 21131.80 | 15309.40 | 0.00 | 78.54 | 30.85 | 442.36 |
| 45 | 59.52 | 2 | SLE R | -213044.00 | 22974.90 | 16644.70 | 0.00 | 78.54 | 32.00 | 457.92 |
| 46 | 119.05 | 2 | SLE R | -210819.00 | 24245.50 | 17565.20 | 0.00 | 78.54 | 32.63 | 466.17 |
| 47 | 178.57 | 2 | SLE R | -208600.00 | 25022.60 | 18128.20 | 0.00 | 78.54 | 32.95 | 470.17 |
| 48 | 238.09 | 2 | SLE R | -206387.00 | 25379.60 | 18386.80 | 0.00 | 78.54 | 33.00 | 470.55 |
| 49 | 297.62 | 2 | SLE R | -204181.00 | 25384.10 | 18390.10 | 0.00 | 78.54 | 32.82 | 467.90 |
| 50 | 357.14 | 2 | SLE R | -201982.00 | 25070.00 | 18162.50 | 0.00 | 78.54 | 32.44 | 462.50 |
| 51 | 416.67 | 2 | SLE R | -197031.00 | 24387.90 | 17668.40 | 0.00 | 78.54 | 31.60 | 450.59 |
| 52 | 476.19 | 2 | SLE R | -192091.00 | 23388.90 | 16944.60 | 0.00 | 78.54 | 30.56 | 435.94 |
| 53 | 535.71 | 2 | SLE R | -187161.00 | 22148.70 | 16046.10 | 0.00 | 78.54 | 29.37 | 419.24 |
| 54 | 595.24 | 2 | SLE R | -182241.00 | 20733.70 | 15021.00 | 0.00 | 78.54 | 28.07 | 401.03 |
| 55 | 654.76 | 2 | SLE R | -177331.00 | 19201.70 | 13911.10 | 0.00 | 78.54 | 26.69 | 381.83 |
| 56 | 714.29 | 2 | SLE R | -172431.00 | 17601.90 | 12752.10 | 0.00 | 78.54 | 25.27 | 362.06 |
| 57 | 773.81 | 2 | SLE R | -167539.00 | 15976.10 | 11574.20 | 0.00 | 78.54 | 23.83 | 342.07 |
| 58 | 833.33 | 2 | SLE R | -162657.00 | 14358.90 | 10402.60 | 0.00 | 78.54 | 22.40 | 322.17 |
| 59 | 892.86 | 2 | SLE R | -157784.00 | 12778.80 | 9257.87 | 0.00 | 78.54 | 20.99 | 302.60 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|------------|----------|----------|------|-------|-------|--------|
| 60 | 952.38 | 2 | SLE R | -152919.00 | 11258.30 | 8156.32 | 0.00 | 78.54 | 19.63 | 283.55 |
| 61 | 1011.90 | 2 | SLE R | -148062.00 | 9814.99 | 7110.68 | 0.00 | 78.54 | 18.31 | 265.18 |
| 62 | 1071.43 | 2 | SLE R | -143213.00 | 8461.92 | 6130.42 | 0.00 | 78.54 | 17.05 | 247.60 |
| 63 | 1130.95 | 2 | SLE R | -138371.00 | 7208.25 | 5222.17 | 0.00 | 78.54 | 15.85 | 230.88 |
| 64 | 1190.48 | 2 | SLE R | -133538.00 | 6059.75 | 4390.12 | 0.00 | 78.54 | 14.73 | 215.08 |
| 65 | 1250.00 | 2 | SLE R | -128711.00 | 5019.34 | 3636.37 | 0.00 | 78.54 | 13.67 | 200.22 |
| 66 | 1309.52 | 2 | SLE R | -123891.00 | 4087.51 | 2961.28 | 0.00 | 78.54 | 12.68 | 186.31 |
| 67 | 1369.05 | 2 | SLE R | -119078.00 | 3262.76 | 2363.78 | 0.00 | 78.54 | 11.76 | 173.33 |
| 68 | 1428.57 | 2 | SLE R | -114271.00 | 2541.98 | 1841.59 | 0.00 | 78.54 | 10.91 | 161.25 |
| 69 | 1488.10 | 2 | SLE R | -109471.00 | 1920.73 | 1391.52 | 0.00 | 78.54 | 10.13 | 150.04 |
| 70 | 1547.62 | 2 | SLE R | -104676.00 | 1393.59 | 1009.62 | 0.00 | 78.54 | 9.40 | 139.65 |
| 71 | 1607.14 | 2 | SLE R | -99886.80 | 954.36 | 691.41 | 0.00 | 78.54 | 8.73 | 130.02 |
| 72 | 1666.67 | 2 | SLE R | -95103.00 | 596.29 | 432.00 | 0.00 | 78.54 | 8.11 | 121.10 |
| 73 | 1726.19 | 2 | SLE R | -90324.30 | 312.25 | 226.22 | 0.00 | 78.54 | 7.54 | 112.82 |
| 74 | 1785.71 | 2 | SLE R | -85550.50 | 94.88 | 68.74 | 0.00 | 78.54 | 7.01 | 105.12 |
| 75 | 1845.24 | 2 | SLE R | -80781.30 | -63.30 | -45.86 | 0.00 | 78.54 | 6.61 | 99.04 |
| 76 | 1904.76 | 2 | SLE R | -76016.40 | -169.83 | -123.04 | 0.00 | 78.54 | 6.29 | 94.16 |
| 77 | 1964.29 | 2 | SLE R | -71255.50 | -232.19 | -168.22 | 0.00 | 78.54 | 5.94 | 88.90 |
| 78 | 2023.81 | 2 | SLE R | -66498.50 | -257.82 | -186.78 | 0.00 | 78.54 | 5.57 | 83.32 |
| 79 | 2083.33 | 2 | SLE R | -61745.10 | -254.03 | -184.04 | 0.00 | 78.54 | 5.18 | 77.49 |
| 80 | 2142.86 | 2 | SLE R | -56995.00 | -228.07 | -165.23 | 0.00 | 78.54 | 4.78 | 71.47 |
| 81 | 2202.38 | 2 | SLE R | -52247.90 | -187.06 | -135.52 | 0.00 | 78.54 | 4.37 | 65.33 |
| 82 | 2261.90 | 2 | SLE R | -47503.60 | -138.01 | -99.99 | 0.00 | 78.54 | 3.95 | 59.12 |
| 83 | 2321.43 | 2 | SLE R | -42761.90 | -87.91 | -63.69 | 0.00 | 78.54 | 3.53 | 52.90 |
| 84 | 2380.95 | 2 | SLE R | -38022.50 | -43.63 | -31.61 | 0.00 | 78.54 | 3.12 | 46.74 |
| 85 | 2440.48 | 2 | SLE R | -33285.10 | -12.05 | -8.73 | 0.00 | 78.54 | 2.71 | 40.69 |
| 86 | 2500.00 | 2 | SLE R | -28549.50 | 0.00 | 0.00 | 0.00 | 78.54 | 2.32 | 34.81 |
| 87 | 0.00 | 4 | SLE Q | -213319.00 | 21131.80 | 15309.40 | 0.00 | 78.54 | 30.85 | 442.36 |
| 88 | 59.52 | 4 | SLE Q | -213044.00 | 22974.90 | 16644.70 | 0.00 | 78.54 | 32.00 | 457.92 |
| 89 | 119.05 | 4 | SLE Q | -210819.00 | 24245.50 | 17565.20 | 0.00 | 78.54 | 32.63 | 466.17 |
| 90 | 178.57 | 4 | SLE Q | -208600.00 | 25022.60 | 18128.20 | 0.00 | 78.54 | 32.95 | 470.17 |
| 91 | 238.09 | 4 | SLE Q | -206387.00 | 25379.60 | 18386.80 | 0.00 | 78.54 | 33.00 | 470.55 |
| 92 | 297.62 | 4 | SLE Q | -204181.00 | 25384.10 | 18390.10 | 0.00 | 78.54 | 32.82 | 467.90 |
| 93 | 357.14 | 4 | SLE Q | -201982.00 | 25070.00 | 18162.50 | 0.00 | 78.54 | 32.44 | 462.50 |
| 94 | 416.67 | 4 | SLE Q | -197031.00 | 24387.90 | 17668.40 | 0.00 | 78.54 | 31.60 | 450.59 |
| 95 | 476.19 | 4 | SLE Q | -192091.00 | 23388.90 | 16944.60 | 0.00 | 78.54 | 30.56 | 435.94 |
| 96 | 535.71 | 4 | SLE Q | -187161.00 | 22148.70 | 16046.10 | 0.00 | 78.54 | 29.37 | 419.24 |
| 97 | 595.24 | 4 | SLE Q | -182241.00 | 20733.70 | 15021.00 | 0.00 | 78.54 | 28.07 | 401.03 |
| 98 | 654.76 | 4 | SLE Q | -177331.00 | 19201.70 | 13911.10 | 0.00 | 78.54 | 26.69 | 381.83 |
| 99 | 714.29 | 4 | SLE Q | -172431.00 | 17601.90 | 12752.10 | 0.00 | 78.54 | 25.27 | 362.06 |
| 100 | 773.81 | 4 | SLE Q | -167539.00 | 15976.10 | 11574.20 | 0.00 | 78.54 | 23.83 | 342.07 |
| 101 | 833.33 | 4 | SLE Q | -162657.00 | 14358.90 | 10402.60 | 0.00 | 78.54 | 22.40 | 322.17 |
| 102 | 892.86 | 4 | SLE Q | -157784.00 | 12778.80 | 9257.87 | 0.00 | 78.54 | 20.99 | 302.60 |
| 103 | 952.38 | 4 | SLE Q | -152919.00 | 11258.30 | 8156.32 | 0.00 | 78.54 | 19.63 | 283.55 |
| 104 | 1011.90 | 4 | SLE Q | -148062.00 | 9814.99 | 7110.68 | 0.00 | 78.54 | 18.31 | 265.18 |
| 105 | 1071.43 | 4 | SLE Q | -143213.00 | 8461.92 | 6130.42 | 0.00 | 78.54 | 17.05 | 247.60 |
| 106 | 1130.95 | 4 | SLE Q | -138371.00 | 7208.25 | 5222.17 | 0.00 | 78.54 | 15.85 | 230.88 |
| 107 | 1190.48 | 4 | SLE Q | -133538.00 | 6059.75 | 4390.12 | 0.00 | 78.54 | 14.73 | 215.08 |
| 108 | 1250.00 | 4 | SLE Q | -128711.00 | 5019.34 | 3636.37 | 0.00 | 78.54 | 13.67 | 200.22 |
| 109 | 1309.52 | 4 | SLE Q | -123891.00 | 4087.51 | 2961.28 | 0.00 | 78.54 | 12.68 | 186.31 |
| 110 | 1369.05 | 4 | SLE Q | -119078.00 | 3262.76 | 2363.78 | 0.00 | 78.54 | 11.76 | 173.33 |
| 111 | 1428.57 | 4 | SLE Q | -114271.00 | 2541.98 | 1841.59 | 0.00 | 78.54 | 10.91 | 161.25 |
| 112 | 1488.10 | 4 | SLE Q | -109471.00 | 1920.73 | 1391.52 | 0.00 | 78.54 | 10.13 | 150.04 |
| 113 | 1547.62 | 4 | SLE Q | -104676.00 | 1393.59 | 1009.62 | 0.00 | 78.54 | 9.40 | 139.65 |
| 114 | 1607.14 | 4 | SLE Q | -99886.80 | 954.36 | 691.41 | 0.00 | 78.54 | 8.73 | 130.02 |
| 115 | 1666.67 | 4 | SLE Q | -95103.00 | 596.29 | 432.00 | 0.00 | 78.54 | 8.11 | 121.10 |
| 116 | 1726.19 | 4 | SLE Q | -90324.30 | 312.25 | 226.22 | 0.00 | 78.54 | 7.54 | 112.82 |
| 117 | 1785.71 | 4 | SLE Q | -85550.50 | 94.88 | 68.74 | 0.00 | 78.54 | 7.01 | 105.12 |
| 118 | 1845.24 | 4 | SLE Q | -80781.30 | -63.30 | -45.86 | 0.00 | 78.54 | 6.61 | 99.04 |
| 119 | 1904.76 | 4 | SLE Q | -76016.40 | -169.83 | -123.04 | 0.00 | 78.54 | 6.29 | 94.16 |
| 120 | 1964.29 | 4 | SLE Q | -71255.50 | -232.19 | -168.22 | 0.00 | 78.54 | 5.94 | 88.90 |
| 121 | 2023.81 | 4 | SLE Q | -66498.50 | -257.82 | -186.78 | 0.00 | 78.54 | 5.57 | 83.32 |
| 122 | 2083.33 | 4 | SLE Q | -61745.10 | -254.03 | -184.04 | 0.00 | 78.54 | 5.18 | 77.49 |
| 123 | 2142.86 | 4 | SLE Q | -56995.00 | -228.07 | -165.23 | 0.00 | 78.54 | 4.78 | 71.47 |
| 124 | 2202.38 | 4 | SLE Q | -52247.90 | -187.06 | -135.52 | 0.00 | 78.54 | 4.37 | 65.33 |
| 125 | 2261.90 | 4 | SLE Q | -47503.60 | -138.01 | -99.99 | 0.00 | 78.54 | 3.95 | 59.12 |
| 126 | 2321.43 | 4 | SLE Q | -42761.90 | -87.91 | -63.69 | 0.00 | 78.54 | 3.53 | 52.90 |
| 127 | 2380.95 | 4 | SLE Q | -38022.50 | -43.63 | -31.61 | 0.00 | 78.54 | 3.12 | 46.74 |
| 128 | 2440.48 | 4 | SLE Q | -33285.10 | -12.05 | -8.73 | 0.00 | 78.54 | 2.71 | 40.69 |
| 129 | 2500.00 | 4 | SLE Q | -28549.50 | 0.00 | 0.00 | 0.00 | 78.54 | 2.32 | 34.81 |

Verifiche principali

| Caso | Tipo |
|------|---|
| 1 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 6 | SLU N cost - min. sic. |
| 48 | C.Rare - Sc min (max compr.), C.Rare - Sf min (max compr.) |
| 49 | C.Rare - Sc max (min. compr.) |

Relazione di calcolo

| | |
|----|--|
| 51 | C.Rare - Sf max (max traz.) |
| 91 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf min (max compr.) |
| 92 | C.Q.Per. - Sc max (min. compr.) |
| 94 | C.Q.Per. - Sf max (max traz.) |

Palo n. 22

Caratteristiche del palo e dei materiali utilizzati

| R | Cf | Cls | Fck | Fctk | Fcd | Fctd | tp | Fyk | Fyd |
|-------|------|--------|-----------|-----------|-----------|-----------|-------|-----------|-----------|
| <cm> | <cm> | | <daN/cm²> | <daN/cm²> | <daN/cm²> | <daN/cm²> | | <daN/cm²> | <daN/cm²> |
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N | Mx | My | Mz |
|-----|-------|--------|--------|--------|
| | <daN> | <daNm> | <daNm> | <daNm> |
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 22 (-162)

| Caso | CC | TCC | Az | N | Tx | Ty | Mx | My |
|------|----|-------|-----|-----------|---------|---------|----------|-----------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | RVN | 312560.00 | 5856.31 | -408.23 | 10688.80 | -19675.30 |
| | | | TAG | | | | 0.00 | 0.00 |
| | | | ECC | | | | 0.00 | 0.00 |
| | | | TOT | 312560.00 | 5856.31 | -408.23 | 10688.80 | -19675.30 |
| 2 | 2 | SLE R | RVN | 231526.00 | 4338.00 | -302.39 | 7917.60 | -14574.30 |
| | | | TAG | | | | 0.00 | 0.00 |
| | | | ECC | | | | 0.00 | 0.00 |
| | | | TOT | 231526.00 | 4338.00 | -302.39 | 7917.60 | -14574.30 |
| 3 | 3 | SLE F | RVN | 231526.00 | 4338.00 | -302.39 | 7917.60 | -14574.30 |
| | | | TAG | | | | 0.00 | 0.00 |
| | | | ECC | | | | 0.00 | 0.00 |
| | | | TOT | 231526.00 | 4338.00 | -302.39 | 7917.60 | -14574.30 |
| 4 | 4 | SLE Q | RVN | 231526.00 | 4338.00 | -302.39 | 7917.60 | -14574.30 |
| | | | TAG | | | | 0.00 | 0.00 |
| | | | ECC | | | | 0.00 | 0.00 |
| | | | TOT | 231526.00 | 4338.00 | -302.39 | 7917.60 | -14574.30 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N | Tx | Ty | Mx | My |
|------|----|-------|------|------------|----------|--------|-----------|----------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | 1 | -312560.00 | -5856.31 | 408.23 | -10688.80 | 19675.30 |
| 2 | 2 | SLE R | 1 | -231526.00 | -4338.00 | 302.39 | -7917.60 | 14574.30 |
| 3 | 3 | SLE F | 1 | -231526.00 | -4338.00 | 302.39 | -7917.60 | 14574.30 |
| 4 | 4 | SLE Q | 1 | -231526.00 | -4338.00 | 302.39 | -7917.60 | 14574.30 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X | CC | TCC | N | My | Mz | Nu | MRdy | MRdz | Rott. | α | Sic. |
|------|---------|----|-----|------------|----------|----------|-------------|-----------|-----------|-------|--------|--------|
| | <cm> | | | <daN> | <daNm> | <daNm> | <daN> | <daNm> | <daNm> | | <grad> | |
| 1 | 0.00 | 1 | SLU | -312560.00 | 10620.80 | 19550.20 | -2571250.00 | 124920.00 | 227607.00 | 2-3 | 118.75 | 8.226 |
| 2 | 59.52 | 1 | SLU | -311596.00 | 12086.30 | 22247.70 | -2571250.00 | 124781.00 | 227353.00 | 2-3 | 118.75 | 8.252 |
| 3 | 119.05 | 1 | SLU | -307993.00 | 13180.20 | 24261.30 | -2571250.00 | 124259.00 | 226406.00 | 2-3 | 118.75 | 8.348 |
| 4 | 178.57 | 1 | SLU | -304401.00 | 13950.80 | 25679.80 | -2571250.00 | 123739.00 | 225461.00 | 2-3 | 118.75 | 8.447 |
| 5 | 238.09 | 1 | SLU | -300818.00 | 14443.30 | 26586.40 | -300818.00 | 123216.00 | 224513.00 | 2-3 | 118.75 | 8.464 |
| 6 | 297.62 | 1 | SLU | -297244.00 | 14699.70 | 27058.40 | -297244.00 | 122692.00 | 223564.00 | 2-3 | 118.75 | 8.282 |
| 7 | 357.14 | 1 | SLU | -293680.00 | 14739.40 | 27131.40 | -293680.00 | 122170.00 | 222617.00 | 2-3 | 118.75 | 8.224 |
| 8 | 416.67 | 1 | SLU | -289399.00 | 14524.60 | 26736.10 | -286399.00 | 121093.00 | 220665.00 | 2-3 | 118.75 | 8.273 |
| 9 | 476.19 | 1 | SLU | -279133.00 | 14086.40 | 25929.40 | -279133.00 | 120012.00 | 218706.00 | 2-3 | 118.75 | 8.454 |
| 10 | 535.71 | 1 | SLU | -271882.00 | 13473.20 | 24800.70 | -271882.00 | 118925.00 | 216739.00 | 2-3 | 118.75 | 8.759 |
| 11 | 595.24 | 1 | SLU | -264646.00 | 12728.10 | 23429.10 | -264646.00 | 117832.00 | 214760.00 | 2-3 | 118.75 | 9.187 |
| 12 | 654.76 | 1 | SLU | -257424.00 | 11888.60 | 21883.90 | -257424.00 | 116735.00 | 212773.00 | 2-3 | 118.75 | 9.745 |
| 13 | 714.29 | 1 | SLU | -250216.00 | 10987.30 | 20224.90 | -2571250.00 | 115633.00 | 210777.00 | 2-3 | 118.75 | 10.276 |
| 14 | 773.81 | 1 | SLU | -243021.00 | 10052.10 | 18503.30 | -2571250.00 | 114526.00 | 208773.00 | 2-3 | 118.75 | 10.580 |
| 15 | 833.33 | 1 | SLU | -235839.00 | 9106.23 | 16762.20 | -2571250.00 | 113415.00 | 206758.00 | 2-3 | 118.75 | 10.902 |
| 16 | 892.86 | 1 | SLU | -228670.00 | 8169.22 | 15037.40 | -2571250.00 | 112300.00 | 204735.00 | 2-3 | 118.75 | 11.244 |
| 17 | 952.38 | 1 | SLU | -221513.00 | 7256.84 | 13358.00 | -2571250.00 | 111182.00 | 202706.00 | 2-3 | 118.75 | 11.608 |
| 18 | 1011.90 | 1 | SLU | -214368.00 | 6381.63 | 11746.90 | -2571250.00 | 110059.00 | 200666.00 | 2-3 | 118.75 | 11.995 |
| 19 | 1071.43 | 1 | SLU | -207235.00 | 5553.25 | 10222.10 | -2571250.00 | 108931.00 | 198617.00 | 2-3 | 118.75 | 12.407 |
| 20 | 1130.95 | 1 | SLU | -200113.00 | 4778.81 | 8796.57 | -2571250.00 | 107802.00 | 196563.00 | 2-3 | 118.75 | 12.849 |
| 21 | 1190.48 | 1 | SLU | -193001.00 | 4063.21 | 7479.33 | -2571250.00 | 106668.00 | 194500.00 | 2-3 | 118.75 | 13.322 |
| 22 | 1250.00 | 1 | SLU | -185900.00 | 3409.44 | 6275.91 | -2571250.00 | 105553.00 | 192393.00 | 2-3 | 118.75 | 13.831 |

Relazione di calcolo

| | | | | | | | | | | | | |
|----|---------|---|-----|------------|---------|---------|-------------|-----------|------------|-----|--------|--------|
| 23 | 1309.52 | 1 | SLU | -178808.00 | 2818.89 | 5188.86 | -2571250.00 | 104337.00 | 190177.00 | 2-3 | 118.75 | 14.380 |
| 24 | 1369.05 | 1 | SLU | -171727.00 | 2291.58 | 4218.21 | -2571250.00 | 103114.00 | 187947.00 | 2-3 | 118.75 | 14.973 |
| 25 | 1428.57 | 1 | SLU | -164654.00 | 1826.41 | 3361.96 | -2571250.00 | 101883.00 | 185702.00 | 2-3 | 118.75 | 15.616 |
| 26 | 1488.10 | 1 | SLU | -157590.00 | 1421.37 | 2616.38 | -2571250.00 | 100646.00 | 183444.00 | 2-3 | 118.75 | 16.316 |
| 27 | 1547.62 | 1 | SLU | -150535.00 | 1073.73 | 1976.46 | -2571250.00 | 99402.70 | 181176.00 | 2-3 | 118.75 | 17.081 |
| 28 | 1607.14 | 1 | SLU | -143488.00 | 780.18 | 1436.11 | -2571250.00 | 98154.00 | 178896.00 | 2-3 | 118.75 | 17.920 |
| 29 | 1666.67 | 1 | SLU | -136449.00 | 536.99 | 988.46 | -2571250.00 | 96897.30 | 176600.00 | 2-3 | 118.75 | 18.844 |
| 30 | 1726.19 | 1 | SLU | -129416.00 | 340.13 | 626.09 | -2571250.00 | 95634.80 | 174293.00 | 2-3 | 118.75 | 19.868 |
| 31 | 1785.71 | 1 | SLU | -122391.00 | 185.34 | 341.16 | -2571250.00 | 94363.70 | 171977.00 | 2-3 | 118.75 | 21.008 |
| 32 | 1845.24 | 1 | SLU | -115373.00 | 68.24 | 125.61 | -2571250.00 | 93068.90 | 169628.00 | 2-3 | 118.75 | 22.287 |
| 33 | 1904.76 | 1 | SLU | -108360.00 | -15.63 | -28.77 | -2571250.00 | -91885.80 | -167506.00 | 2-3 | 298.75 | 23.729 |
| 34 | 1964.29 | 1 | SLU | -101353.00 | -70.76 | -130.25 | -2571250.00 | -90642.00 | -165150.00 | 2-3 | 298.75 | 25.369 |
| 35 | 2023.81 | 1 | SLU | -94352.30 | -101.62 | -187.05 | -2571250.00 | -89315.70 | -162725.00 | 2-3 | 298.75 | 27.252 |
| 36 | 2083.33 | 1 | SLU | -87356.10 | -112.66 | -207.38 | -2571250.00 | -87981.60 | -160286.00 | 2-3 | 298.75 | 29.434 |
| 37 | 2142.86 | 1 | SLU | -80364.70 | -108.29 | -199.33 | -2571250.00 | -86640.40 | -157835.00 | 2-3 | 298.75 | 31.995 |
| 38 | 2202.38 | 1 | SLU | -73377.50 | -92.87 | -170.95 | -2571250.00 | -85292.20 | -155370.00 | 2-3 | 298.75 | 35.041 |
| 39 | 2261.90 | 1 | SLU | -66394.30 | -70.72 | -130.18 | -2571250.00 | -83936.50 | -152893.00 | 2-3 | 298.75 | 38.727 |
| 40 | 2321.43 | 1 | SLU | -59414.70 | -46.12 | -84.89 | -2571250.00 | -82571.80 | -150401.00 | 2-3 | 298.75 | 43.276 |
| 41 | 2380.95 | 1 | SLU | -52438.20 | -23.31 | -42.91 | -2571250.00 | -81200.30 | -147897.00 | 2-3 | 298.75 | 49.034 |
| 42 | 2440.48 | 1 | SLU | -45464.60 | -6.53 | -12.02 | -2571250.00 | -79821.90 | -145382.00 | 2-3 | 298.75 | 56.555 |
| 43 | 2500.00 | 1 | SLU | -38493.40 | 0.00 | 0.00 | -2571250.00 | | | | | 66.797 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | CC | TCC | Ty <daN> | Tz <daN> | bw <m> | Asw <cmq> | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|-----------|--------------|---------------|------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SLU | 5856.31 | -408.23 | 0.85 | 11.31 | 5870.52 | 1.00 | 32294.70 | 376439.00 | 32294.70 | 5.501 |
| 2 | 59.52 | 1 | SLU | 4463.64 | -311.15 | 0.85 | 11.31 | 4474.47 | 1.00 | 32294.70 | 376301.00 | 32294.70 | 7.218 |
| 3 | 119.05 | 1 | SLU | 3245.58 | -226.24 | 0.85 | 11.31 | 3253.45 | 1.00 | 32294.70 | 375785.00 | 32294.70 | 9.926 |
| 4 | 178.57 | 1 | SLU | 2191.76 | -152.78 | 0.85 | 11.31 | 2197.08 | 1.00 | 32294.70 | 375270.00 | 32294.70 | 14.699 |
| 5 | 238.09 | 1 | SLU | 1291.07 | -90.00 | 0.85 | 11.31 | 1294.20 | 1.00 | 32294.70 | 374757.00 | 32294.70 | 24.953 |
| 6 | 297.62 | 1 | SLU | 531.87 | -37.08 | 0.85 | 11.31 | 533.16 | 1.00 | 32294.70 | 374245.00 | 32294.70 | 60.572 |
| 7 | 357.14 | 1 | SLU | -299.84 | 20.90 | 0.85 | 11.31 | 300.57 | 1.00 | 32294.70 | 373735.00 | 32294.70 | >100 |
| 8 | 416.67 | 1 | SLU | -1176.46 | 82.01 | 0.85 | 11.31 | 1179.32 | 1.00 | 32294.70 | 373222.00 | 32294.70 | 27.384 |
| 9 | 476.19 | 1 | SLU | -1872.46 | 130.53 | 0.85 | 11.31 | 1877.01 | 1.00 | 32294.70 | 371651.00 | 32294.70 | 17.205 |
| 10 | 535.71 | 1 | SLU | -2407.89 | 167.85 | 0.85 | 11.31 | 2413.73 | 1.00 | 32294.70 | 370612.00 | 32294.70 | 13.380 |
| 11 | 595.24 | 1 | SLU | -2802.05 | 195.33 | 0.85 | 11.31 | 2808.85 | 1.00 | 32294.70 | 369576.00 | 32294.70 | 11.498 |
| 12 | 654.76 | 1 | SLU | -3073.27 | 214.23 | 0.85 | 11.31 | 3080.73 | 1.00 | 32294.70 | 368541.00 | 32294.70 | 10.483 |
| 13 | 714.29 | 1 | SLU | -3238.79 | 225.77 | 0.85 | 11.31 | 3246.65 | 1.00 | 32294.70 | 367509.00 | 32294.70 | 9.947 |
| 14 | 773.81 | 1 | SLU | -3314.61 | 231.06 | 0.85 | 11.31 | 3322.66 | 1.00 | 32294.70 | 366478.00 | 32294.70 | 9.720 |
| 15 | 833.33 | 1 | SLU | -3315.44 | 231.11 | 0.85 | 11.31 | 3323.49 | 1.00 | 32294.70 | 365450.00 | 32294.70 | 9.717 |
| 16 | 892.86 | 1 | SLU | -3254.68 | 226.88 | 0.85 | 11.31 | 3262.58 | 1.00 | 32294.70 | 364423.00 | 32294.70 | 9.899 |
| 17 | 952.38 | 1 | SLU | -3144.39 | 219.19 | 0.85 | 11.31 | 3152.02 | 1.00 | 32294.70 | 363398.00 | 32294.70 | 10.246 |
| 18 | 1011.90 | 1 | SLU | -2995.35 | 208.80 | 0.85 | 11.31 | 3002.61 | 1.00 | 32294.70 | 362374.00 | 32294.70 | 10.755 |
| 19 | 1071.43 | 1 | SLU | -2817.08 | 196.37 | 0.85 | 11.31 | 2823.91 | 1.00 | 32294.70 | 361352.00 | 32294.70 | 11.436 |
| 20 | 1130.95 | 1 | SLU | -2617.91 | 182.49 | 0.85 | 11.31 | 2624.26 | 1.00 | 32294.70 | 360332.00 | 32294.70 | 12.306 |
| 21 | 1190.48 | 1 | SLU | -2405.05 | 167.65 | 0.85 | 11.31 | 2410.89 | 1.00 | 32294.70 | 359313.00 | 32294.70 | 13.395 |
| 22 | 1250.00 | 1 | SLU | -2184.66 | 152.29 | 0.85 | 11.31 | 2189.97 | 1.00 | 32294.70 | 358296.00 | 32294.70 | 14.747 |
| 23 | 1309.52 | 1 | SLU | -1961.96 | 136.76 | 0.85 | 11.31 | 1966.72 | 1.00 | 32294.70 | 357280.00 | 32294.70 | 16.421 |
| 24 | 1369.05 | 1 | SLU | -1741.27 | 121.38 | 0.85 | 11.31 | 1745.50 | 1.00 | 32294.70 | 356266.00 | 32294.70 | 18.502 |
| 25 | 1428.57 | 1 | SLU | -1526.16 | 106.39 | 0.85 | 11.31 | 1529.86 | 1.00 | 32294.70 | 355253.00 | 32294.70 | 21.110 |
| 26 | 1488.10 | 1 | SLU | -1319.48 | 91.98 | 0.85 | 11.31 | 1322.68 | 1.00 | 32294.70 | 354241.00 | 32294.70 | 24.416 |
| 27 | 1547.62 | 1 | SLU | -1123.49 | 78.32 | 0.85 | 11.31 | 1126.21 | 1.00 | 32294.70 | 353231.00 | 32294.70 | 28.675 |
| 28 | 1607.14 | 1 | SLU | -939.91 | 65.52 | 0.85 | 11.31 | 942.19 | 1.00 | 32294.70 | 352221.00 | 32294.70 | 34.276 |
| 29 | 1666.67 | 1 | SLU | -770.03 | 53.68 | 0.85 | 11.31 | 771.90 | 1.00 | 32294.70 | 351213.00 | 32294.70 | 41.838 |
| 30 | 1726.19 | 1 | SLU | -614.75 | 42.85 | 0.85 | 11.31 | 616.25 | 1.00 | 32294.70 | 350206.00 | 32294.70 | 52.406 |
| 31 | 1785.71 | 1 | SLU | -474.68 | 33.09 | 0.85 | 11.31 | 475.83 | 1.00 | 32294.70 | 349199.00 | 32294.70 | 67.870 |
| 32 | 1845.24 | 1 | SLU | -350.16 | 24.41 | 0.85 | 11.31 | 351.01 | 1.00 | 32294.70 | 348194.00 | 32294.70 | 92.004 |
| 33 | 1904.76 | 1 | SLU | -241.37 | 16.83 | 0.85 | 11.31 | 241.96 | 1.00 | 32294.70 | 347190.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -148.33 | 10.34 | 0.85 | 11.31 | 148.69 | 1.00 | 32294.70 | 346186.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | -70.96 | 4.95 | 0.85 | 11.31 | 71.13 | 1.00 | 32294.70 | 345183.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | -9.15 | 0.64 | 0.85 | 11.31 | 9.17 | 1.00 | 32294.70 | 344181.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 37.27 | -2.60 | 0.85 | 11.31 | 37.37 | 1.00 | 32294.70 | 343179.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 68.46 | -4.77 | 0.85 | 11.31 | 68.63 | 1.00 | 32294.70 | 342179.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 84.57 | -5.90 | 0.85 | 11.31 | 84.77 | 1.00 | 32294.70 | 341178.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 85.71 | -5.97 | 0.85 | 11.31 | 85.91 | 1.00 | 32294.70 | 340179.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 71.96 | -5.02 | 0.85 | 11.31 | 72.14 | 1.00 | 32294.70 | 339179.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 43.38 | -3.02 | 0.85 | 11.31 | 43.49 | 1.00 | 32294.70 | 338180.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mz <daNm> | My <daNm> | AfT <cmq> | AfC <cmq> | σ _c <daN/cm²> | σ _f <daN/cm²> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-----------------------------|-----------------------------|
| 44 | 0.00 | 2 | SLE R | -231526.00 | 14481.60 | 7867.25 | 0.00 | 78.54 | 27.28 | 398.30 |
| 45 | 59.52 | 2 | SLE R | -231125.00 | 16479.80 | 8952.79 | 0.00 | 78.54 | 28.41 | 413.82 |
| 46 | 119.05 | 2 | SLE R | -228647.00 | 17971.30 | 9763.09 | 0.00 | 78.54 | 29.08 | 422.74 |
| 47 | 178.57 | 2 | SLE R | -226176.00 | 19022.10 | 10333.90 | 0.00 | 78.54 | 29.49 | 428.15 |
| 48 | 238.09 | 2 | SLE R | -223712.00 | 19693.60 | 10698.70 | 0.00 | 78.54 | 29.69 | 430.52 |
| 49 | 297.62 | 2 | SLE R | -221255.00 | 20043.20 | 10888.70 | 0.00 | 78.54 | 29.69 | 430.33 |

Relazione di calcolo

| | | | | | | | | | | | |
|----|---------|---|---|---|------------|----------|----------|------|-------|-------|--------|
| 10 | 257,14 | 2 | 9 | 2 | -218901,00 | 20397,40 | 10918,10 | 0,00 | 78,54 | 29,22 | 427,77 |
| 11 | 416,07 | 2 | 9 | 2 | -212427,00 | 18914,70 | 10719,00 | 0,00 | 78,54 | 29,91 | 418,87 |
| 12 | 726,14 | 1 | 9 | 7 | 208060,00 | 19026,90 | 10167,80 | 0,00 | 78,54 | 28,73 | 407,27 |
| 13 | 289,21 | 1 | 9 | 7 | 207701,00 | 18901,90 | 9960,78 | 0,00 | 78,54 | 27,27 | 394,31 |
| 14 | 655,24 | 1 | 9 | 7 | -197059,00 | 17744,90 | 9470,78 | 0,00 | 78,54 | 26,10 | 379,16 |
| 15 | 124,26 | 1 | 9 | 7 | -192070,00 | 16710,90 | 8991,79 | 0,00 | 78,54 | 25,00 | 363,99 |
| 16 | 124,26 | 2 | 9 | 2 | -186701,00 | 14911,40 | 8138,77 | 0,00 | 78,54 | 23,92 | 347,65 |
| 17 | 773,21 | 2 | 9 | 2 | -181387,00 | 13710,10 | 7447,09 | 0,00 | 78,54 | 22,73 | 331,05 |
| 18 | 838,26 | 1 | 9 | 7 | 136086,00 | 12716,10 | 6741,45 | 0,00 | 78,54 | 21,56 | 314,78 |
| 19 | 838,26 | 1 | 9 | 7 | 136086,00 | 11722,80 | 6031,24 | 0,00 | 78,54 | 20,43 | 299,78 |
| 20 | 838,26 | 1 | 9 | 7 | -131500,00 | 9894,00 | 5292,44 | 0,00 | 78,54 | 19,27 | 284,06 |
| 21 | 1077,90 | 1 | 9 | 7 | -126070,00 | 8701,44 | 4571,74 | 0,00 | 78,54 | 18,11 | 268,06 |
| 22 | 1077,90 | 2 | 9 | 2 | -124051,00 | 7571,04 | 4112,52 | 0,00 | 78,54 | 17,02 | 249,59 |
| 23 | 1120,92 | 2 | 9 | 2 | -149689,00 | 5512,09 | 3139,96 | 0,00 | 78,54 | 15,97 | 219,72 |
| 24 | 1120,92 | 1 | 9 | 7 | 147779,00 | 5540,77 | 3009,79 | 0,00 | 78,54 | 14,98 | 200,00 |
| 25 | 1120,92 | 1 | 9 | 7 | 149406,00 | 4848,80 | 2621,57 | 0,00 | 78,54 | 14,03 | 186,98 |
| 26 | 1108,20 | 1 | 9 | 7 | -111966,00 | 3943,00 | 2080,07 | 0,00 | 78,54 | 13,13 | 174,75 |
| 27 | 1108,20 | 1 | 9 | 7 | -120710,00 | 3724,00 | 1891,47 | 0,00 | 78,54 | 12,29 | 161,99 |
| 28 | 1428,27 | 2 | 9 | 2 | -120512,00 | 2491,76 | 1322,00 | 0,00 | 78,54 | 11,49 | 150,76 |
| 29 | 1428,27 | 2 | 9 | 2 | -118299,00 | 1931,06 | 1022,97 | 0,00 | 78,54 | 10,73 | 139,76 |
| 30 | 1674,22 | 1 | 9 | 7 | 112084,00 | 1761,05 | 933,38 | 0,00 | 78,54 | 10,00 | 134,61 |
| 31 | 1674,22 | 1 | 9 | 7 | 107888,00 | 1560,78 | 827,97 | 0,00 | 78,54 | 9,33 | 130,08 |
| 32 | 1674,22 | 1 | 9 | 7 | -102689,00 | 1372,18 | 739,73 | 0,00 | 78,54 | 8,73 | 121,07 |
| 33 | 1726,19 | 1 | 9 | 7 | -97486,70 | 1201,77 | 671,95 | 0,00 | 78,54 | 8,17 | 112,29 |
| 34 | 1785,71 | 2 | 9 | 2 | -92309,40 | 1021,71 | 617,29 | 0,00 | 78,54 | 7,63 | 104,57 |
| 35 | 1845,24 | 1 | 9 | 7 | 87103,00 | 842,05 | 563,66 | 0,00 | 78,54 | 7,11 | 106,97 |
| 36 | 1845,24 | 1 | 9 | 7 | 87960,70 | 711,37 | 511,58 | 0,00 | 78,54 | 6,61 | 100,09 |
| 37 | 1845,24 | 1 | 9 | 7 | -82707,40 | 596,49 | 472,47 | 0,00 | 78,54 | 6,13 | 94,78 |
| 38 | 2073,91 | 1 | 9 | 7 | -77609,10 | 479,26 | 446,27 | 0,00 | 78,54 | 5,66 | 89,47 |
| 39 | 2083,33 | 2 | 9 | 2 | -66443,80 | 323,61 | 322,45 | 0,00 | 78,54 | 5,49 | 82,23 |
| 40 | 2142,10 | 2 | 9 | 2 | -61282,40 | 147,66 | 130,21 | 0,00 | 78,54 | 5,07 | 71,89 |
| 41 | 2700,26 | 1 | 9 | 7 | 56701,70 | 126,68 | 81,79 | 0,00 | 78,54 | 4,66 | 66,27 |
| 42 | 2700,26 | 1 | 9 | 7 | 56964,70 | 86,78 | 57,89 | 0,00 | 78,54 | 4,26 | 62,97 |
| 43 | 2700,26 | 1 | 9 | 7 | -44870,70 | 60,08 | 44,76 | 0,00 | 78,54 | 3,91 | 56,96 |
| 44 | 2700,26 | 1 | 9 | 7 | -40660,70 | 41,48 | 31,07 | 0,00 | 78,54 | 3,57 | 49,04 |
| 45 | 2440,43 | 2 | 9 | 2 | -35519,60 | 21,00 | 14,94 | 0,00 | 78,54 | 2,83 | 41,29 |
| 46 | 2500,20 | 2 | 9 | 2 | -30373,00 | 1,00 | 0,00 | 0,00 | 78,54 | 2,47 | 37,03 |
| 47 | 0,00 | 1 | 9 | 7 | 273568,00 | 1191,60 | 767,05 | 0,00 | 78,54 | 37,28 | 369,39 |
| 48 | 39,22 | 1 | 9 | 7 | 271700,00 | 870,80 | 667,79 | 0,00 | 78,54 | 36,47 | 376,80 |
| 49 | 178,02 | 4 | 9 | 2 | -229649,00 | 1761,10 | 8701,08 | 0,00 | 78,54 | 38,00 | 400,24 |
| 50 | 178,02 | 4 | 9 | 2 | -227710,00 | 1900,70 | 10071,90 | 0,00 | 78,54 | 38,49 | 409,75 |
| 51 | 279,29 | 4 | 9 | 2 | -227710,00 | 1899,60 | 10098,70 | 0,00 | 78,54 | 29,09 | 430,72 |
| 52 | 297,02 | 4 | 9 | 2 | -221250,00 | 2043,20 | 10318,70 | 0,00 | 78,54 | 29,09 | 430,73 |
| 53 | 307,14 | 1 | 9 | 7 | 218890,00 | 1000,70 | 5048,10 | 0,00 | 78,54 | 29,67 | 420,77 |
| 54 | 276,87 | 1 | 9 | 7 | 218700,00 | 980,10 | 5019,00 | 0,00 | 78,54 | 28,47 | 416,87 |
| 55 | 426,19 | 4 | 9 | 2 | -200060,00 | 1820,40 | 10474,10 | 0,00 | 78,54 | 30,71 | 400,24 |
| 56 | 275,21 | 4 | 9 | 2 | -202704,00 | 1870,40 | 8990,70 | 0,00 | 78,54 | 27,77 | 394,71 |
| 57 | 595,24 | 4 | 9 | 2 | -197359,00 | 1734,00 | 8428,10 | 0,00 | 78,54 | 26,18 | 379,66 |
| 58 | 634,70 | 4 | 9 | 2 | -192021,00 | 1621,00 | 8166,37 | 0,00 | 78,54 | 25,08 | 363,09 |
| 59 | 771,27 | 1 | 9 | 7 | 186701,00 | 1491,70 | 8138,77 | 0,00 | 78,54 | 24,03 | 347,65 |
| 60 | 771,27 | 1 | 9 | 7 | 181387,00 | 1370,10 | 7447,09 | 0,00 | 78,54 | 23,00 | 331,05 |
| 61 | 870,96 | 4 | 9 | 2 | -181387,00 | 1241,60 | 6741,45 | 0,00 | 78,54 | 21,87 | 314,78 |
| 62 | 870,96 | 4 | 9 | 2 | -176070,00 | 1139,00 | 6031,24 | 0,00 | 78,54 | 20,79 | 299,78 |
| 63 | 972,33 | 4 | 9 | 2 | -167993,00 | 994,80 | 5373,44 | 0,00 | 78,54 | 19,72 | 284,06 |
| 64 | 1021,90 | 4 | 9 | 2 | -160220,00 | 871,44 | 4707,16 | 0,00 | 78,54 | 18,71 | 268,06 |
| 65 | 1070,16 | 1 | 9 | 7 | 157960,00 | 767,37 | 4112,52 | 0,00 | 78,54 | 17,67 | 249,59 |
| 66 | 1120,92 | 1 | 9 | 7 | 157869,00 | 651,98 | 3621,86 | 0,00 | 78,54 | 16,67 | 234,56 |
| 67 | 1190,49 | 4 | 9 | 2 | -144449,00 | 5540,74 | 3009,78 | 0,00 | 78,54 | 14,90 | 200,00 |
| 68 | 1220,00 | 4 | 9 | 2 | -139200,00 | 4649,00 | 2521,57 | 0,00 | 78,54 | 14,03 | 186,98 |
| 69 | 1220,00 | 4 | 9 | 2 | -132960,00 | 3943,60 | 2138,07 | 0,00 | 78,54 | 13,12 | 174,75 |
| 70 | 1269,52 | 4 | 9 | 2 | -128737,00 | 3124,60 | 1697,47 | 0,00 | 78,54 | 12,23 | 161,99 |
| 71 | 1278,40 | 1 | 9 | 7 | 128737,00 | 2760,27 | 1467,90 | 0,00 | 78,54 | 11,49 | 150,77 |
| 72 | 1288,10 | 1 | 9 | 7 | 128394,00 | 1922,08 | 1027,84 | 0,00 | 78,54 | 10,73 | 139,78 |
| 73 | 1284,60 | 4 | 9 | 2 | -117089,00 | 1464,05 | 736,06 | 0,00 | 78,54 | 10,00 | 134,61 |
| 74 | 1300,14 | 4 | 9 | 2 | -110886,00 | 1067,46 | 527,97 | 0,00 | 78,54 | 9,33 | 130,08 |
| 75 | 1666,07 | 4 | 9 | 2 | -102693,00 | 752,10 | 397,77 | 0,00 | 78,54 | 8,77 | 121,07 |
| 76 | 1726,19 | 4 | 9 | 2 | -97490,70 | 603,77 | 322,85 | 0,00 | 78,54 | 8,10 | 112,29 |
| 77 | 1785,71 | 1 | 9 | 7 | 97490,70 | 472,07 | 262,09 | 0,00 | 78,54 | 7,61 | 106,97 |
| 78 | 1845,24 | 4 | 9 | 2 | -92309,40 | 305,05 | 208,55 | 0,00 | 78,54 | 7,14 | 100,09 |
| 79 | 1845,24 | 4 | 9 | 2 | -87103,70 | 171,37 | 146,58 | 0,00 | 78,54 | 6,67 | 94,79 |
| 80 | 1966,29 | 4 | 9 | 2 | -82707,40 | 90,49 | 72,47 | 0,00 | 78,54 | 6,10 | 89,48 |
| 81 | 2023,31 | 4 | 9 | 2 | -77609,10 | 71,00 | 57,27 | 0,00 | 78,54 | 5,60 | 82,23 |
| 82 | 2083,33 | 1 | 9 | 7 | 66710,80 | 50,67 | 32,73 | 0,00 | 78,54 | 5,19 | 76,97 |
| 83 | 2142,10 | 1 | 9 | 7 | 61282,40 | 30,00 | 21,00 | 0,00 | 78,54 | 4,82 | 71,89 |
| 84 | 2700,26 | 1 | 9 | 7 | 56701,70 | 17,67 | 12,78 | 0,00 | 78,54 | 4,44 | 66,24 |
| 85 | 2700,26 | 1 | 9 | 7 | 56964,70 | 13,47 | 9,77 | 0,00 | 78,54 | 4,07 | 62,97 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|-----------|--------|--------|------|-------|------|-------|
| 126 | 2321.43 | 4 | SLE Q | -45817.10 | -62.88 | -34.16 | 0.00 | 78.54 | 3.76 | 56.36 |
| 127 | 2380.93 | 4 | SLE Q | -40667.30 | -31.78 | -17.27 | 0.00 | 78.54 | 3.32 | 49.84 |
| 128 | 2440.48 | 4 | SLE Q | -35519.60 | -8.90 | -4.84 | 0.00 | 78.54 | 2.89 | 43.38 |
| 129 | 2500.00 | 4 | SLE Q | -30373.90 | 0.00 | 0.00 | 0.00 | 78.54 | 2.47 | 37.03 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 1 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 7 | SLU N cost - min. sic. |
| 48 | C.Rare - Sf min (max compr.) |
| 49 | C.Rare - Sc min (max compr.) |
| 86 | C.Rare - Sc max (min. compr.), C.Rare - Sf max (max traz.) |
| 91 | C.Q.Per. - Sf min (max compr.) |
| 92 | C.Q.Per. - Sc min (max compr.) |
| 129 | C.Q.Per. - Sc max (min. compr.), C.Q.Per. - Sf max (max traz.) |

Palo n. 23

Caratteristiche del palo e dei materiali utilizzati

| R | Cf | Cls | Fck | Fctk | Fcd | Fctd | Tp | Fyk | Fyd |
|-------|------|--------|-----------|-----------|-----------|-----------|-------|-----------|-----------|
| <cm> | <cm> | | <daN/cm²> | <daN/cm²> | <daN/cm²> | <daN/cm²> | | <daN/cm²> | <daN/cm²> |
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N | Mx | My | Mz |
|-----|-------|--------|--------|--------|
| | <daN> | <daNm> | <daNm> | <daNm> |
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 23 (-166)

| Caso | CC | TCC | Az | N | Tx | Ty | Mx | My |
|------|----|-------|-----|-----------|---------|---------|---------|----------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | RVN | 325273.00 | 5774.99 | -137.89 | 4780.05 | -6966.63 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 325273.00 | 5774.99 | -137.89 | 4780.05 | -6966.63 |
| 2 | 2 | SLE R | RVN | 240943.00 | 4277.77 | -102.14 | 3540.78 | -5160.46 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 240943.00 | 4277.77 | -102.14 | 3540.78 | -5160.46 |
| 3 | 3 | SLE F | RVN | 240943.00 | 4277.77 | -102.14 | 3540.78 | -5160.46 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 240943.00 | 4277.77 | -102.14 | 3540.78 | -5160.46 |
| 4 | 4 | SLE Q | RVN | 240943.00 | 4277.77 | -102.14 | 3540.78 | -5160.46 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 240943.00 | 4277.77 | -102.14 | 3540.78 | -5160.46 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N | Tx | Ty | Mx | My |
|------|----|-------|------|------------|----------|--------|----------|---------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | 1 | -325273.00 | -5774.99 | 137.89 | -4780.05 | 6966.63 |
| 2 | 2 | SLE R | 1 | -240943.00 | -4277.77 | 102.14 | -3540.78 | 5160.46 |
| 3 | 3 | SLE F | 1 | -240943.00 | -4277.77 | 102.14 | -3540.78 | 5160.46 |
| 4 | 4 | SLE Q | 1 | -240943.00 | -4277.77 | 102.14 | -3540.78 | 5160.46 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X | CC | TCC | N | My | Mz | Nu | MRdy | MRdz | Rott. | α | Sic. |
|------|--------|----|-----|------------|----------|----------|-------------|-----------|-----------|-------|--------|-------|
| | <cm> | | | <daN> | <daNm> | <daNm> | <daN> | <daNm> | <daNm> | | <grad> | |
| 1 | 0.00 | 1 | SLU | -325273.00 | 4718.47 | 6876.88 | -2571250.00 | 148613.00 | 217313.00 | 2-3 | 124.38 | 7.905 |
| 2 | 59.52 | 1 | SLU | -324221.00 | 6481.43 | 9446.27 | -2571250.00 | 148441.00 | 217070.00 | 2-3 | 124.38 | 7.931 |
| 3 | 119.05 | 1 | SLU | -320442.00 | 7906.39 | 11523.10 | -2571250.00 | 147821.00 | 216196.00 | 2-3 | 124.38 | 8.024 |
| 4 | 178.57 | 1 | SLU | -316674.00 | 9032.49 | 13164.30 | -2571250.00 | 147185.00 | 215322.00 | 2-3 | 124.38 | 8.120 |
| 5 | 238.09 | 1 | SLU | -312915.00 | 9896.97 | 14424.20 | -2571250.00 | 146544.00 | 214450.00 | 2-3 | 124.38 | 8.217 |
| 6 | 297.62 | 1 | SLU | -309166.00 | 10535.00 | 15354.10 | -2571250.00 | 145902.00 | 213578.00 | 2-3 | 124.38 | 8.317 |
| 7 | 357.14 | 1 | SLU | -305427.00 | 10960.10 | 15973.60 | -2571250.00 | 145259.00 | 212704.00 | 2-3 | 124.38 | 8.419 |
| 8 | 416.67 | 1 | SLU | -297848.00 | 11128.70 | 16219.40 | -2571250.00 | 143949.00 | 210926.00 | 2-3 | 124.38 | 8.633 |
| 9 | 476.19 | 1 | SLU | -290284.00 | 11065.70 | 16127.60 | -2571250.00 | 145043.00 | 207487.00 | 2-3 | 125.00 | 8.858 |
| 10 | 535.71 | 1 | SLU | -282736.00 | 10814.20 | 15761.00 | -2571250.00 | 143725.00 | 205677.00 | 2-3 | 125.00 | 9.094 |
| 11 | 595.24 | 1 | SLU | -275203.00 | 10413.10 | 15176.50 | -2571250.00 | 140244.00 | 205149.00 | 2-3 | 124.38 | 9.343 |

Relazione di calcolo

| | | | | | | | | | | | | |
|----|---------|---|-----|------------|---------|----------|-------------|------------|------------|-----|--------|--------|
| 12 | 654.76 | 1 | SLU | -267685.00 | 9896.94 | 14424.20 | -2571250.00 | 139033.00 | 203154.00 | 2-3 | 124.38 | 9.606 |
| 13 | 714.29 | 1 | SLU | -260181.00 | 9296.07 | 13548.40 | -2571250.00 | 137816.00 | 201149.00 | 2-3 | 124.38 | 9.883 |
| 14 | 773.81 | 1 | SLU | -252691.00 | 8636.94 | 12587.80 | -2571250.00 | 136595.00 | 199129.00 | 2-3 | 124.38 | 10.175 |
| 15 | 833.33 | 1 | SLU | -245214.00 | 7942.30 | 11575.40 | -2571250.00 | 135195.00 | 197142.00 | 2-3 | 124.38 | 10.486 |
| 16 | 892.86 | 1 | SLU | -237751.00 | 7231.43 | 10539.40 | -2571250.00 | 133751.00 | 195135.00 | 2-3 | 124.38 | 10.815 |
| 17 | 952.38 | 1 | SLU | -230301.00 | 6520.49 | 9503.21 | -2571250.00 | 132309.00 | 193102.00 | 2-3 | 124.38 | 11.165 |
| 18 | 1011.90 | 1 | SLU | -222863.00 | 5822.73 | 8486.26 | -2571250.00 | 130857.00 | 191055.00 | 2-3 | 124.38 | 11.537 |
| 19 | 1071.43 | 1 | SLU | -215437.00 | 5148.79 | 7504.05 | -2571250.00 | 129397.00 | 188998.00 | 2-3 | 124.38 | 11.935 |
| 20 | 1130.95 | 1 | SLU | -208022.00 | 4507.04 | 6568.74 | -2571250.00 | 127931.00 | 186933.00 | 2-3 | 124.38 | 12.361 |
| 21 | 1190.48 | 1 | SLU | -200618.00 | 3903.76 | 5689.49 | -2571250.00 | 126457.00 | 184856.00 | 2-3 | 124.38 | 12.817 |
| 22 | 1250.00 | 1 | SLU | -193226.00 | 3343.44 | 4872.86 | -2571250.00 | 124973.00 | 182767.00 | 2-3 | 124.38 | 13.307 |
| 23 | 1309.52 | 1 | SLU | -185844.00 | 2829.03 | 4123.14 | -2571250.00 | 123482.00 | 180670.00 | 2-3 | 124.38 | 13.836 |
| 24 | 1369.05 | 1 | SLU | -178471.00 | 2362.15 | 3442.68 | -2571250.00 | 121985.00 | 178563.00 | 2-3 | 124.38 | 14.407 |
| 25 | 1428.57 | 1 | SLU | -171108.00 | 1943.26 | 2832.19 | -2571250.00 | 120480.00 | 176446.00 | 2-3 | 124.38 | 15.027 |
| 26 | 1488.10 | 1 | SLU | -163755.00 | 1571.93 | 2290.99 | -2571250.00 | 118967.00 | 174318.00 | 2-3 | 124.38 | 15.702 |
| 27 | 1547.62 | 1 | SLU | -156410.00 | 1246.92 | 1817.31 | -2571250.00 | 119396.00 | 170811.00 | 2-3 | 125.00 | 16.439 |
| 28 | 1607.14 | 1 | SLU | -149074.00 | 966.38 | 1408.43 | -2571250.00 | 117862.00 | 168672.00 | 2-3 | 125.00 | 17.248 |
| 29 | 1666.67 | 1 | SLU | -141745.00 | 727.95 | 1060.94 | -2571250.00 | 116321.00 | 166523.00 | 2-3 | 125.00 | 18.140 |
| 30 | 1726.19 | 1 | SLU | -134424.00 | 528.91 | 770.85 | -2571250.00 | 114774.00 | 164365.00 | 2-3 | 125.00 | 19.128 |
| 31 | 1785.71 | 1 | SLU | -127111.00 | 366.22 | 533.75 | -2571250.00 | 113221.00 | 162199.00 | 2-3 | 125.00 | 20.228 |
| 32 | 1845.24 | 1 | SLU | -119804.00 | 236.66 | 344.92 | -2571250.00 | 111663.00 | 160026.00 | 2-3 | 125.00 | 21.462 |
| 33 | 1904.76 | 1 | SLU | -112504.00 | 136.85 | 199.45 | -2571250.00 | 110097.00 | 157843.00 | 2-3 | 125.00 | 22.855 |
| 34 | 1964.29 | 1 | SLU | -105209.00 | 63.31 | 92.27 | -2571250.00 | 108672.00 | 155468.00 | 2-3 | 125.00 | 24.439 |
| 35 | 2023.81 | 1 | SLU | -97920.50 | 12.52 | 18.24 | -2571250.00 | 105567.00 | 154155.00 | 2-3 | 124.38 | 26.259 |
| 36 | 2083.33 | 1 | SLU | -90637.00 | -19.08 | -27.81 | -2571250.00 | -103642.00 | -151818.00 | 2-3 | 304.38 | 28.369 |
| 37 | 2142.86 | 1 | SLU | -83358.50 | -35.04 | -51.07 | -2571250.00 | -101991.00 | -149495.00 | 2-3 | 304.38 | 30.846 |
| 38 | 2202.38 | 1 | SLU | -76084.40 | -38.90 | -56.70 | -2571250.00 | -102007.00 | -145977.00 | 2-3 | 305.00 | 33.795 |
| 39 | 2261.90 | 1 | SLU | -68814.30 | -34.21 | -49.86 | -2571250.00 | -100328.00 | -143640.00 | 2-3 | 305.00 | 37.365 |
| 40 | 2321.43 | 1 | SLU | -61548.00 | -24.48 | -35.67 | -2571250.00 | -98642.60 | -141296.00 | 2-3 | 305.00 | 41.776 |
| 41 | 2380.95 | 1 | SLU | -54285.00 | -13.20 | -19.24 | -2571250.00 | -96949.40 | -138943.00 | 2-3 | 305.00 | 47.366 |
| 42 | 2440.48 | 1 | SLU | -47024.80 | -3.88 | -5.66 | -2571250.00 | -95247.00 | -136581.00 | 2-3 | 305.00 | 54.678 |
| 43 | 2500.00 | 1 | SLU | -39767.20 | 0.00 | 0.00 | -2571250.00 | | | | | 64.657 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | CC | TCC | Ty <daN> | Tz <daN> | bw <m> | Asw <cmq> | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|-----------|--------------|---------------|------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SLU | 5774.99 | -137.89 | 0.85 | 11.31 | 5776.64 | 1.00 | 32294.70 | 378260.00 | 32294.70 | 5.591 |
| 2 | 59.52 | 1 | SLU | 4712.07 | -112.51 | 0.85 | 11.31 | 4713.41 | 1.00 | 32294.70 | 378109.00 | 32294.70 | 6.852 |
| 3 | 119.05 | 1 | SLU | 3767.63 | -89.96 | 0.85 | 11.31 | 3768.70 | 1.00 | 32294.70 | 377568.00 | 32294.70 | 8.569 |
| 4 | 178.57 | 1 | SLU | 2936.67 | -70.12 | 0.85 | 11.31 | 2937.50 | 1.00 | 32294.70 | 377028.00 | 32294.70 | 10.994 |
| 5 | 238.09 | 1 | SLU | 2213.30 | -52.85 | 0.85 | 11.31 | 2213.94 | 1.00 | 32294.70 | 376490.00 | 32294.70 | 14.587 |
| 6 | 297.62 | 1 | SLU | 1590.97 | -37.99 | 0.85 | 11.31 | 1591.43 | 1.00 | 32294.70 | 375953.00 | 32294.70 | 20.293 |
| 7 | 357.14 | 1 | SLU | 890.63 | -21.27 | 0.85 | 11.31 | 890.89 | 1.00 | 32294.70 | 375417.00 | 32294.70 | 36.250 |
| 8 | 416.67 | 1 | SLU | 134.26 | -3.21 | 0.85 | 11.31 | 134.30 | 1.00 | 32294.70 | 374332.00 | 32294.70 | >100 |
| 9 | 476.19 | 1 | SLU | -487.15 | 11.63 | 0.85 | 11.31 | 487.29 | 1.00 | 32294.70 | 373248.00 | 32294.70 | 66.275 |
| 10 | 535.71 | 1 | SLU | -986.76 | 23.56 | 0.85 | 11.31 | 987.04 | 1.00 | 32294.70 | 372167.00 | 32294.70 | 32.719 |
| 11 | 595.24 | 1 | SLU | -1377.54 | 32.89 | 0.85 | 11.31 | 1377.93 | 1.00 | 32294.70 | 371088.00 | 32294.70 | 23.437 |
| 12 | 654.76 | 1 | SLU | -1672.06 | 39.92 | 0.85 | 11.31 | 1672.54 | 1.00 | 32294.70 | 370011.00 | 32294.70 | 19.309 |
| 13 | 714.29 | 1 | SLU | -1882.35 | 44.94 | 0.85 | 11.31 | 1882.89 | 1.00 | 32294.70 | 368936.00 | 32294.70 | 17.152 |
| 14 | 773.81 | 1 | SLU | -2019.77 | 48.23 | 0.85 | 11.31 | 2020.35 | 1.00 | 32294.70 | 367863.00 | 32294.70 | 15.985 |
| 15 | 833.33 | 1 | SLU | -2094.93 | 50.02 | 0.85 | 11.31 | 2095.52 | 1.00 | 32294.70 | 366792.00 | 32294.70 | 15.411 |
| 16 | 892.86 | 1 | SLU | -2117.62 | 50.56 | 0.85 | 11.31 | 2118.23 | 1.00 | 32294.70 | 365723.00 | 32294.70 | 15.246 |
| 17 | 952.38 | 1 | SLU | -2096.83 | 50.07 | 0.85 | 11.31 | 2097.43 | 1.00 | 32294.70 | 364656.00 | 32294.70 | 15.397 |
| 18 | 1011.90 | 1 | SLU | -2040.68 | 48.72 | 0.85 | 11.31 | 2041.26 | 1.00 | 32294.70 | 363591.00 | 32294.70 | 15.821 |
| 19 | 1071.43 | 1 | SLU | -1956.46 | 46.71 | 0.85 | 11.31 | 1957.02 | 1.00 | 32294.70 | 362527.00 | 32294.70 | 16.502 |
| 20 | 1130.95 | 1 | SLU | -1850.65 | 44.19 | 0.85 | 11.31 | 1851.17 | 1.00 | 32294.70 | 361465.00 | 32294.70 | 17.445 |
| 21 | 1190.48 | 1 | SLU | -1728.95 | 41.28 | 0.85 | 11.31 | 1729.44 | 1.00 | 32294.70 | 360405.00 | 32294.70 | 18.674 |
| 22 | 1250.00 | 1 | SLU | -1596.32 | 38.11 | 0.85 | 11.31 | 1596.77 | 1.00 | 32294.70 | 359346.00 | 32294.70 | 20.225 |
| 23 | 1309.52 | 1 | SLU | -1457.03 | 34.79 | 0.85 | 11.31 | 1457.45 | 1.00 | 32294.70 | 358288.00 | 32294.70 | 22.158 |
| 24 | 1369.05 | 1 | SLU | -1314.74 | 31.39 | 0.85 | 11.31 | 1315.11 | 1.00 | 32294.70 | 357232.00 | 32294.70 | 24.557 |
| 25 | 1428.57 | 1 | SLU | -1172.48 | 27.99 | 0.85 | 11.31 | 1172.82 | 1.00 | 32294.70 | 356178.00 | 32294.70 | 27.536 |
| 26 | 1488.10 | 1 | SLU | -1032.81 | 24.66 | 0.85 | 11.31 | 1033.10 | 1.00 | 32294.70 | 355124.00 | 32294.70 | 31.260 |
| 27 | 1547.62 | 1 | SLU | -897.77 | 21.44 | 0.85 | 11.31 | 898.03 | 1.00 | 32294.70 | 354072.00 | 32294.70 | 35.962 |
| 28 | 1607.14 | 1 | SLU | -769.04 | 18.36 | 0.85 | 11.31 | 769.26 | 1.00 | 32294.70 | 353021.00 | 32294.70 | 41.982 |
| 29 | 1666.67 | 1 | SLU | -647.90 | 15.47 | 0.85 | 11.31 | 648.09 | 1.00 | 32294.70 | 351972.00 | 32294.70 | 49.831 |
| 30 | 1726.19 | 1 | SLU | -535.36 | 12.78 | 0.85 | 11.31 | 535.51 | 1.00 | 32294.70 | 350923.00 | 32294.70 | 60.307 |
| 31 | 1785.71 | 1 | SLU | -432.13 | 10.32 | 0.85 | 11.31 | 432.26 | 1.00 | 32294.70 | 349875.00 | 32294.70 | 74.712 |
| 32 | 1845.24 | 1 | SLU | -338.76 | 8.09 | 0.85 | 11.31 | 338.85 | 1.00 | 32294.70 | 348829.00 | 32294.70 | 95.306 |
| 33 | 1904.76 | 1 | SLU | -255.57 | 6.10 | 0.85 | 11.31 | 255.64 | 1.00 | 32294.70 | 347783.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -182.79 | 4.36 | 0.85 | 11.31 | 182.84 | 1.00 | 32294.70 | 346738.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | -120.53 | 2.88 | 0.85 | 11.31 | 120.57 | 1.00 | 32294.70 | 345694.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | -68.83 | 1.64 | 0.85 | 11.31 | 68.85 | 1.00 | 32294.70 | 344651.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | -27.67 | 0.66 | 0.85 | 11.31 | 27.68 | 1.00 | 32294.70 | 343608.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 2.97 | -0.07 | 0.85 | 11.31 | 2.97 | 1.00 | 32294.70 | 342566.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 23.15 | -0.55 | 0.85 | 11.31 | 23.16 | 1.00 | 32294.70 | 341525.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 32.91 | -0.79 | 0.85 | 11.31 | 32.92 | 1.00 | 32294.70 | 340484.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 32.30 | -0.77 | 0.85 | 11.31 | 32.30 | 1.00 | 32294.70 | 339444.00 | 32294.70 | >100 |

Relazione di calcolo

| | | | | | | | | | | | | | |
|----|---------|---|-----|-------|-------|------|-------|-------|------|----------|-----------|----------|------|
| 42 | 2440.48 | 1 | SLU | 21.32 | -0.51 | 0.85 | 11.31 | 21.33 | 1.00 | 32294.70 | 338404.00 | 32294.70 | >100 |
|----|---------|---|-----|-------|-------|------|-------|-------|------|----------|-----------|----------|------|

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mz <daNm> | My <daNm> | Aft <cmq> | Afc <cmq> | σ_c <daN/cmq> | σ_f <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-------------------------|-------------------------|
| 44 | 0.00 | 2 | SLE R | -240943.00 | 5093.98 | 3495.16 | 0.00 | 78.54 | 22.78 | 337.04 |
| 45 | 59.52 | 2 | SLE R | -240477.00 | 6997.24 | 4801.05 | 0.00 | 78.54 | 23.94 | 352.64 |
| 46 | 119.05 | 2 | SLE R | -237868.00 | 8535.62 | 5856.59 | 0.00 | 78.54 | 24.69 | 362.53 |
| 47 | 178.57 | 2 | SLE R | -235267.00 | 9751.33 | 6690.73 | 0.00 | 78.54 | 25.24 | 369.69 |
| 48 | 238.09 | 2 | SLE R | -232673.00 | 10684.60 | 7331.09 | 0.00 | 78.54 | 25.62 | 374.45 |
| 49 | 297.62 | 2 | SLE R | -230086.00 | 11373.40 | 7803.69 | 0.00 | 78.54 | 25.84 | 377.15 |
| 50 | 357.14 | 2 | SLE R | -227506.00 | 11832.30 | 8118.58 | 0.00 | 78.54 | 25.92 | 377.91 |
| 51 | 416.67 | 2 | SLE R | -221907.00 | 12014.40 | 8243.51 | 0.00 | 78.54 | 25.58 | 372.63 |
| 52 | 476.19 | 2 | SLE R | -216320.00 | 11946.30 | 8196.81 | 0.00 | 78.54 | 25.08 | 365.24 |
| 53 | 535.71 | 2 | SLE R | -210744.00 | 11674.80 | 8010.52 | 0.00 | 78.54 | 24.46 | 356.13 |
| 54 | 595.24 | 2 | SLE R | -205179.00 | 11241.80 | 7713.42 | 0.00 | 78.54 | 23.73 | 345.67 |
| 55 | 654.76 | 2 | SLE R | -199626.00 | 10684.60 | 7331.07 | 0.00 | 78.54 | 22.93 | 334.16 |
| 56 | 714.29 | 2 | SLE R | -194083.00 | 10035.90 | 6885.98 | 0.00 | 78.54 | 22.07 | 321.89 |
| 57 | 773.81 | 2 | SLE R | -188550.00 | 9324.30 | 6397.73 | 0.00 | 78.54 | 21.18 | 309.10 |
| 58 | 833.33 | 2 | SLE R | -183028.00 | 8574.38 | 5883.18 | 0.00 | 78.54 | 20.26 | 296.00 |
| 59 | 892.86 | 2 | SLE R | -177515.00 | 7806.94 | 5356.62 | 0.00 | 78.54 | 19.33 | 282.76 |
| 60 | 952.38 | 2 | SLE R | -172012.00 | 7039.42 | 4829.99 | 0.00 | 78.54 | 18.40 | 269.53 |
| 61 | 1011.90 | 2 | SLE R | -166518.00 | 6286.12 | 4313.13 | 0.00 | 78.54 | 17.48 | 256.43 |
| 62 | 1071.43 | 2 | SLE R | -161034.00 | 5558.56 | 3813.92 | 0.00 | 78.54 | 16.58 | 243.56 |
| 63 | 1130.95 | 2 | SLE R | -155557.00 | 4865.73 | 3338.55 | 0.00 | 78.54 | 15.70 | 231.00 |
| 64 | 1190.48 | 2 | SLE R | -150090.00 | 4214.44 | 2891.67 | 0.00 | 78.54 | 14.84 | 218.80 |
| 65 | 1250.00 | 2 | SLE R | -144630.00 | 3609.53 | 2476.62 | 0.00 | 78.54 | 14.02 | 207.00 |
| 66 | 1309.52 | 2 | SLE R | -139178.00 | 3054.18 | 2095.58 | 0.00 | 78.54 | 13.23 | 195.64 |
| 67 | 1369.05 | 2 | SLE R | -133733.00 | 2550.14 | 1749.74 | 0.00 | 78.54 | 12.47 | 184.72 |
| 68 | 1428.57 | 2 | SLE R | -128296.00 | 2097.92 | 1439.45 | 0.00 | 78.54 | 11.74 | 174.25 |
| 69 | 1488.10 | 2 | SLE R | -122865.00 | 1697.03 | 1164.39 | 0.00 | 78.54 | 11.05 | 164.22 |
| 70 | 1547.62 | 2 | SLE R | -117441.00 | 1346.15 | 923.64 | 0.00 | 78.54 | 10.39 | 154.62 |
| 71 | 1607.14 | 2 | SLE R | -112023.00 | 1043.28 | 715.83 | 0.00 | 78.54 | 9.76 | 145.45 |
| 72 | 1666.67 | 2 | SLE R | -106612.00 | 785.88 | 539.22 | 0.00 | 78.54 | 9.16 | 136.66 |
| 73 | 1726.19 | 2 | SLE R | -101206.00 | 571.00 | 391.78 | 0.00 | 78.54 | 8.58 | 128.25 |
| 74 | 1785.71 | 2 | SLE R | -95805.30 | 395.37 | 271.27 | 0.00 | 78.54 | 8.04 | 120.17 |
| 75 | 1845.24 | 2 | SLE R | -90409.90 | 255.50 | 175.31 | 0.00 | 78.54 | 7.51 | 112.40 |
| 76 | 1904.76 | 2 | SLE R | -85019.40 | 147.74 | 101.37 | 0.00 | 78.54 | 7.00 | 104.92 |
| 77 | 1964.29 | 2 | SLE R | -79633.50 | 68.35 | 46.90 | 0.00 | 78.54 | 6.52 | 97.67 |
| 78 | 2023.81 | 2 | SLE R | -74251.80 | 13.51 | 9.27 | 0.00 | 78.54 | 6.04 | 90.65 |
| 79 | 2083.33 | 2 | SLE R | -68874.10 | -20.60 | -14.13 | 0.00 | 78.54 | 5.61 | 84.15 |
| 80 | 2142.86 | 2 | SLE R | -63500.10 | -37.83 | -25.95 | 0.00 | 78.54 | 5.19 | 77.74 |
| 81 | 2202.38 | 2 | SLE R | -58129.50 | -42.00 | -28.82 | 0.00 | 78.54 | 4.75 | 71.23 |
| 82 | 2261.90 | 2 | SLE R | -52762.00 | -36.93 | -25.34 | 0.00 | 78.54 | 4.31 | 64.64 |
| 83 | 2321.43 | 2 | SLE R | -47397.30 | -26.42 | -18.13 | 0.00 | 78.54 | 3.87 | 58.01 |
| 84 | 2380.95 | 2 | SLE R | -42035.20 | -14.25 | -9.78 | 0.00 | 78.54 | 3.43 | 51.37 |
| 85 | 2440.48 | 2 | SLE R | -36675.30 | -4.19 | -2.88 | 0.00 | 78.54 | 2.98 | 44.75 |
| 86 | 2500.00 | 2 | SLE R | -31317.50 | 0.00 | 0.00 | 0.00 | 78.54 | 2.55 | 38.18 |
| 87 | 0.00 | 4 | SLE Q | -240943.00 | 5093.98 | 3495.16 | 0.00 | 78.54 | 22.78 | 337.04 |
| 88 | 59.52 | 4 | SLE Q | -240477.00 | 6997.24 | 4801.05 | 0.00 | 78.54 | 23.94 | 352.64 |
| 89 | 119.05 | 4 | SLE Q | -237868.00 | 8535.62 | 5856.59 | 0.00 | 78.54 | 24.69 | 362.53 |
| 90 | 178.57 | 4 | SLE Q | -235267.00 | 9751.33 | 6690.73 | 0.00 | 78.54 | 25.24 | 369.69 |
| 91 | 238.09 | 4 | SLE Q | -232673.00 | 10684.60 | 7331.09 | 0.00 | 78.54 | 25.62 | 374.45 |
| 92 | 297.62 | 4 | SLE Q | -230086.00 | 11373.40 | 7803.69 | 0.00 | 78.54 | 25.84 | 377.15 |
| 93 | 357.14 | 4 | SLE Q | -227506.00 | 11832.30 | 8118.58 | 0.00 | 78.54 | 25.92 | 377.91 |
| 94 | 416.67 | 4 | SLE Q | -221907.00 | 12014.40 | 8243.51 | 0.00 | 78.54 | 25.58 | 372.63 |
| 95 | 476.19 | 4 | SLE Q | -216320.00 | 11946.30 | 8196.81 | 0.00 | 78.54 | 25.08 | 365.24 |
| 96 | 535.71 | 4 | SLE Q | -210744.00 | 11674.80 | 8010.52 | 0.00 | 78.54 | 24.46 | 356.13 |
| 97 | 595.24 | 4 | SLE Q | -205179.00 | 11241.80 | 7713.42 | 0.00 | 78.54 | 23.73 | 345.67 |
| 98 | 654.76 | 4 | SLE Q | -199626.00 | 10684.60 | 7331.07 | 0.00 | 78.54 | 22.93 | 334.16 |
| 99 | 714.29 | 4 | SLE Q | -194083.00 | 10035.90 | 6885.98 | 0.00 | 78.54 | 22.07 | 321.89 |
| 100 | 773.81 | 4 | SLE Q | -188550.00 | 9324.30 | 6397.73 | 0.00 | 78.54 | 21.18 | 309.10 |
| 101 | 833.33 | 4 | SLE Q | -183028.00 | 8574.38 | 5883.18 | 0.00 | 78.54 | 20.26 | 296.00 |
| 102 | 892.86 | 4 | SLE Q | -177515.00 | 7806.94 | 5356.62 | 0.00 | 78.54 | 19.33 | 282.76 |
| 103 | 952.38 | 4 | SLE Q | -172012.00 | 7039.42 | 4829.99 | 0.00 | 78.54 | 18.40 | 269.53 |
| 104 | 1011.90 | 4 | SLE Q | -166518.00 | 6286.12 | 4313.13 | 0.00 | 78.54 | 17.48 | 256.43 |
| 105 | 1071.43 | 4 | SLE Q | -161034.00 | 5558.56 | 3813.92 | 0.00 | 78.54 | 16.58 | 243.56 |
| 106 | 1130.95 | 4 | SLE Q | -155557.00 | 4865.73 | 3338.55 | 0.00 | 78.54 | 15.70 | 231.00 |
| 107 | 1190.48 | 4 | SLE Q | -150090.00 | 4214.44 | 2891.67 | 0.00 | 78.54 | 14.84 | 218.80 |
| 108 | 1250.00 | 4 | SLE Q | -144630.00 | 3609.53 | 2476.62 | 0.00 | 78.54 | 14.02 | 207.00 |
| 109 | 1309.52 | 4 | SLE Q | -139178.00 | 3054.18 | 2095.58 | 0.00 | 78.54 | 13.23 | 195.64 |
| 110 | 1369.05 | 4 | SLE Q | -133733.00 | 2550.14 | 1749.74 | 0.00 | 78.54 | 12.47 | 184.72 |
| 111 | 1428.57 | 4 | SLE Q | -128296.00 | 2097.92 | 1439.45 | 0.00 | 78.54 | 11.74 | 174.25 |
| 112 | 1488.10 | 4 | SLE Q | -122865.00 | 1697.03 | 1164.39 | 0.00 | 78.54 | 11.05 | 164.22 |
| 113 | 1547.62 | 4 | SLE Q | -117441.00 | 1346.15 | 923.64 | 0.00 | 78.54 | 10.39 | 154.62 |
| 114 | 1607.14 | 4 | SLE Q | -112023.00 | 1043.28 | 715.83 | 0.00 | 78.54 | 9.76 | 145.45 |
| 115 | 1666.67 | 4 | SLE Q | -106612.00 | 785.88 | 539.22 | 0.00 | 78.54 | 9.16 | 136.66 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|------------|--------|--------|------|-------|------|--------|
| 116 | 1726.19 | 4 | SLE Q | -101206.00 | 571.00 | 391.78 | 0.00 | 78.54 | 8.58 | 128.25 |
| 117 | 1785.71 | 4 | SLE Q | -95805.30 | 395.37 | 271.27 | 0.00 | 78.54 | 8.04 | 120.17 |
| 118 | 1845.24 | 4 | SLE Q | -90409.90 | 255.50 | 175.31 | 0.00 | 78.54 | 7.51 | 112.40 |
| 119 | 1904.76 | 4 | SLE Q | -85019.40 | 147.74 | 101.37 | 0.00 | 78.54 | 7.00 | 104.92 |
| 120 | 1964.29 | 4 | SLE Q | -79633.50 | 68.35 | 46.90 | 0.00 | 78.54 | 6.52 | 97.67 |
| 121 | 2023.81 | 4 | SLE Q | -74251.80 | 13.51 | 9.27 | 0.00 | 78.54 | 6.04 | 90.65 |
| 122 | 2083.33 | 4 | SLE Q | -68874.10 | -20.60 | -14.13 | 0.00 | 78.54 | 5.61 | 84.15 |
| 123 | 2142.86 | 4 | SLE Q | -63500.10 | -37.83 | -25.95 | 0.00 | 78.54 | 5.19 | 77.74 |
| 124 | 2202.38 | 4 | SLE Q | -58129.50 | -42.00 | -28.82 | 0.00 | 78.54 | 4.75 | 71.23 |
| 125 | 2261.90 | 4 | SLE Q | -52762.00 | -36.93 | -25.34 | 0.00 | 78.54 | 4.31 | 64.64 |
| 126 | 2321.43 | 4 | SLE Q | -47397.30 | -26.42 | -18.13 | 0.00 | 78.54 | 3.87 | 58.01 |
| 127 | 2380.95 | 4 | SLE Q | -42035.20 | -14.25 | -9.78 | 0.00 | 78.54 | 3.43 | 51.37 |
| 128 | 2440.48 | 4 | SLE Q | -36675.30 | -4.19 | -2.88 | 0.00 | 78.54 | 2.98 | 44.75 |
| 129 | 2500.00 | 4 | SLE Q | -31317.50 | 0.00 | 0.00 | 0.00 | 78.54 | 2.55 | 38.18 |

Verifiche principali

| Caso | Tipo |
|------|---|
| 1 | SLU N cost - min. sic., SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 50 | C.Rare - Sc min (max compr.), C.Rare - Sf min (max compr.) |
| 86 | C.Rare - Sc max (min. compr.), C.Rare - Sf max (max traz.) |
| 93 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf min (max compr.) |
| 129 | C.Q.Per. - Sc max (min. compr.), C.Q.Per. - Sf max (max traz.) |

Palo n. 24

Caratteristiche del palo e dei materiali utilizzati

| R | Cf | Cls | Fck | Fctk | Fcd | Fctd | TP | Fyk | Fyd |
|-------|------|--------|-----------|-----------|-----------|-----------|-------|-----------|-----------|
| <cm> | <cm> | | <daN/cm²> | <daN/cm²> | <daN/cm²> | <daN/cm²> | | <daN/cm²> | <daN/cm²> |
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N | Mx | My | Mz |
|-----|-------|--------|--------|--------|
| | <daN> | <daNm> | <daNm> | <daNm> |
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 24 (-167)

| Caso | CC | TCC | Az | N | Tx | Ty | Mx | My |
|------|----|-------|-----|-----------|---------|--------|---------|---------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | RVN | 325212.00 | 5775.78 | 139.45 | 4784.90 | 7112.64 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 325212.00 | 5775.78 | 139.45 | 4784.90 | 7112.64 |
| 2 | 2 | SLE R | RVN | 240898.00 | 4278.35 | 103.30 | 3544.37 | 5268.62 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 240898.00 | 4278.35 | 103.30 | 3544.37 | 5268.62 |
| 3 | 3 | SLE F | RVN | 240898.00 | 4278.35 | 103.30 | 3544.37 | 5268.62 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 240898.00 | 4278.35 | 103.30 | 3544.37 | 5268.62 |
| 4 | 4 | SLE Q | RVN | 240898.00 | 4278.35 | 103.30 | 3544.37 | 5268.62 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 240898.00 | 4278.35 | 103.30 | 3544.37 | 5268.62 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N | Tx | Ty | Mx | My |
|------|----|-------|------|------------|----------|---------|----------|----------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | 1 | -325212.00 | -5775.78 | -139.45 | -4784.90 | -7112.64 |
| 2 | 2 | SLE R | 1 | -240898.00 | -4278.35 | -103.30 | -3544.37 | -5268.62 |
| 3 | 3 | SLE F | 1 | -240898.00 | -4278.35 | -103.30 | -3544.37 | -5268.62 |
| 4 | 4 | SLE Q | 1 | -240898.00 | -4278.35 | -103.30 | -3544.37 | -5268.62 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X | CC | TCC | N | My | Mz | Nu | MRdy | MRdz | Rott. | α | Sic. |
|------|--------|----|-----|------------|---------|-----------|-------------|-----------|------------|-------|--------|-------|
| | <cm> | | | <daN> | <daNm> | <daNm> | <daN> | <daNm> | <daNm> | | <grad> | |
| 1 | 0.00 | 1 | SLU | -325212.00 | 4723.98 | -7022.09 | -2571250.00 | 146611.00 | -218744.00 | 2-3 | 236.25 | 7.906 |
| 2 | 59.52 | 1 | SLU | -324159.00 | 6463.07 | -9607.19 | -2571250.00 | 146433.00 | -218489.00 | 2-3 | 236.25 | 7.932 |
| 3 | 119.05 | 1 | SLU | -320382.00 | 7867.81 | -11695.30 | -2571250.00 | 145794.00 | -217576.00 | 2-3 | 236.25 | 8.026 |
| 4 | 178.57 | 1 | SLU | -316614.00 | 8976.95 | -13344.00 | -2571250.00 | 145150.00 | -216656.00 | 2-3 | 236.25 | 8.121 |

Relazione di calcolo

| | | | | | | | | | | | | |
|----|---------|---|-----|------------|----------|-----------|-------------|------------|------------|-----|--------|--------|
| 5 | 238.09 | 1 | SLU | -312856.00 | 9827.38 | -14608.20 | -2571250.00 | 144507.00 | -215739.00 | 2-3 | 236.25 | 8.219 |
| 6 | 297.62 | 1 | SLU | -309108.00 | 10453.90 | -15539.50 | -2571250.00 | 143863.00 | -214820.00 | 2-3 | 236.25 | 8.318 |
| 7 | 357.14 | 1 | SLU | -305370.00 | 10870.00 | -16158.00 | -2571250.00 | 143217.00 | -213899.00 | 2-3 | 236.25 | 8.420 |
| 8 | 436.67 | 1 | SLU | -297792.00 | 11032.70 | -16399.90 | -2571250.00 | 141901.00 | -212023.00 | 2-3 | 236.25 | 8.634 |
| 9 | 476.19 | 1 | SLU | -290230.00 | 10966.50 | -16301.50 | -2571250.00 | 140578.00 | -210138.00 | 2-3 | 236.25 | 8.859 |
| 10 | 535.71 | 1 | SLU | -282683.00 | 10714.30 | -15926.50 | -2571250.00 | 139244.00 | -208241.00 | 2-3 | 236.25 | 9.096 |
| 11 | 595.24 | 1 | SLU | -275151.00 | 10314.30 | -15332.00 | -2571250.00 | 137903.00 | -206335.00 | 2-3 | 236.25 | 9.345 |
| 12 | 654.76 | 1 | SLU | -267635.00 | 9800.89 | -14568.80 | -2571250.00 | 136556.00 | -204421.00 | 2-3 | 236.25 | 9.607 |
| 13 | 714.29 | 1 | SLU | -260132.00 | 9203.99 | -13681.50 | -2571250.00 | 135201.00 | -202498.00 | 2-3 | 236.25 | 9.884 |
| 14 | 773.81 | 1 | SLU | -252644.00 | 8549.77 | -12709.00 | -2571250.00 | 133837.00 | -200563.00 | 2-3 | 236.25 | 10.177 |
| 15 | 833.33 | 1 | SLU | -245169.00 | 7860.72 | -11684.80 | -2571250.00 | 132467.00 | -198621.00 | 2-3 | 236.25 | 10.488 |
| 16 | 892.86 | 1 | SLU | -237707.00 | 7155.89 | -10637.10 | -2571250.00 | 131091.00 | -196672.00 | 2-3 | 236.25 | 10.817 |
| 17 | 952.38 | 1 | SLU | -230258.00 | 6451.25 | -9589.62 | -2571250.00 | 129707.00 | -194713.00 | 2-3 | 236.25 | 11.167 |
| 18 | 1011.90 | 1 | SLU | -222821.00 | 5759.87 | -8561.90 | -2571250.00 | 128315.00 | -192745.00 | 2-3 | 236.25 | 11.540 |
| 19 | 1071.43 | 1 | SLU | -215397.00 | 5092.28 | -7569.55 | -2571250.00 | 126919.00 | -190770.00 | 2-3 | 236.25 | 11.937 |
| 20 | 1130.95 | 1 | SLU | -207983.00 | 4456.72 | -6624.81 | -2571250.00 | 125561.00 | -188729.00 | 2-3 | 236.25 | 12.363 |
| 21 | 1190.48 | 1 | SLU | -200581.00 | 3859.39 | -5736.89 | -2571250.00 | 124297.00 | -186541.00 | 2-3 | 236.25 | 12.819 |
| 22 | 1250.00 | 1 | SLU | -193190.00 | 3304.71 | -4912.37 | -2571250.00 | 123031.00 | -184341.00 | 2-3 | 236.25 | 13.309 |
| 23 | 1309.52 | 1 | SLU | -185809.00 | 2795.58 | -4155.56 | -2571250.00 | 121761.00 | -182129.00 | 2-3 | 236.25 | 13.838 |
| 24 | 1369.05 | 1 | SLU | -178438.00 | 2333.57 | -3468.79 | -2571250.00 | 120487.00 | -179905.00 | 2-3 | 236.25 | 14.410 |
| 25 | 1428.57 | 1 | SLU | -171077.00 | 1919.14 | -2852.76 | -2571250.00 | 119212.00 | -177665.00 | 2-3 | 236.25 | 15.030 |
| 26 | 1488.10 | 1 | SLU | -163725.00 | 1551.84 | -2306.77 | -2571250.00 | 117891.00 | -175423.00 | 2-3 | 236.25 | 15.705 |
| 27 | 1547.62 | 1 | SLU | -156381.00 | 1230.42 | -1829.00 | -2571250.00 | 116524.00 | -173182.00 | 2-3 | 236.25 | 16.442 |
| 28 | 1607.14 | 1 | SLU | -149046.00 | 953.05 | -1416.69 | -2571250.00 | 114944.00 | -170985.00 | 2-3 | 236.25 | 17.251 |
| 29 | 1666.67 | 1 | SLU | -141719.00 | 717.39 | -1066.38 | -2571250.00 | 113353.00 | -168774.00 | 2-3 | 236.25 | 18.143 |
| 30 | 1726.19 | 1 | SLU | -134400.00 | 520.71 | -774.03 | -2571250.00 | 111752.00 | -166551.00 | 2-3 | 236.25 | 19.131 |
| 31 | 1785.71 | 1 | SLU | -127088.00 | 360.03 | -535.18 | -2571250.00 | 110142.00 | -164318.00 | 2-3 | 236.25 | 20.232 |
| 32 | 1845.24 | 1 | SLU | -119782.00 | 232.13 | -345.05 | -2571250.00 | 108524.00 | -162075.00 | 2-3 | 236.25 | 21.466 |
| 33 | 1904.76 | 1 | SLU | -112483.00 | 133.66 | -198.68 | -2571250.00 | 106895.00 | -159821.00 | 2-3 | 236.25 | 22.859 |
| 34 | 1964.29 | 1 | SLU | -105190.00 | 61.18 | -90.94 | -2571250.00 | 105254.00 | -157557.00 | 2-3 | 236.25 | 24.444 |
| 35 | 2023.81 | 1 | SLU | -97903.10 | 11.19 | -16.63 | -2571250.00 | 103604.00 | -155283.00 | 2-3 | 236.25 | 26.263 |
| 36 | 2083.33 | 1 | SLU | -90621.10 | -19.82 | 29.47 | -2571250.00 | -102482.00 | -152802.00 | 2-3 | 56.25 | 28.374 |
| 37 | 2142.86 | 1 | SLU | -83343.90 | -35.38 | 52.60 | -2571250.00 | -101096.00 | -150336.00 | 2-3 | 56.25 | 30.851 |
| 38 | 2202.38 | 1 | SLU | -76071.20 | -39.00 | 57.98 | -2571250.00 | -99644.60 | -147876.00 | 2-3 | 56.25 | 33.800 |
| 39 | 2261.90 | 1 | SLU | -68802.60 | -34.19 | 50.82 | -2571250.00 | -97969.20 | -145470.00 | 2-3 | 56.25 | 37.371 |
| 40 | 2321.43 | 1 | SLU | -61537.60 | -24.41 | 36.29 | -2571250.00 | -96282.00 | -143051.00 | 2-3 | 56.25 | 41.783 |
| 41 | 2380.95 | 1 | SLU | -54276.00 | -13.15 | 19.55 | -2571250.00 | -94583.40 | -140622.00 | 2-3 | 56.25 | 47.374 |
| 42 | 2440.48 | 1 | SLU | -47017.30 | -3.86 | 5.74 | -2571250.00 | -92870.00 | -138179.00 | 2-3 | 56.25 | 54.687 |
| 43 | 2500.00 | 1 | SLU | -39761.00 | 0.00 | 0.00 | -2571250.00 | | | | | 64.668 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | OC | TCC | Ty <daN> | Tz <daN> | bw <m> | Asw <cmq> | Vsdu <daN> | ctgθ | VRed <daN> | VRed <daN> | Vrdu <daN> | Sic. |
|------|---------|----|-----|----------|----------|--------|-----------|------------|------|------------|------------|------------|--------|
| 1 | 0.00 | 1 | SLU | 5775.78 | 139.45 | 0.85 | 11.31 | 5777.46 | 1.00 | 32294.70 | 378251.00 | 32294.70 | 5.590 |
| 2 | 59.52 | 1 | SLU | 4709.91 | 113.72 | 0.85 | 11.31 | 4711.29 | 1.00 | 32294.70 | 378100.00 | 32294.70 | 6.855 |
| 3 | 119.05 | 1 | SLU | 3763.03 | 90.86 | 0.85 | 11.31 | 3764.13 | 1.00 | 32294.70 | 377559.00 | 32294.70 | 8.580 |
| 4 | 178.57 | 1 | SLU | 2930.09 | 70.75 | 0.85 | 11.31 | 2930.94 | 1.00 | 32294.70 | 377020.00 | 32294.70 | 11.019 |
| 5 | 238.09 | 1 | SLU | 2205.14 | 53.24 | 0.85 | 11.31 | 2205.78 | 1.00 | 32294.70 | 376481.00 | 32294.70 | 14.641 |
| 6 | 297.62 | 1 | SLU | 1581.59 | 38.19 | 0.85 | 11.31 | 1582.05 | 1.00 | 32294.70 | 375945.00 | 32294.70 | 20.413 |
| 7 | 357.14 | 1 | SLU | 880.07 | 21.25 | 0.85 | 11.31 | 880.33 | 1.00 | 32294.70 | 375409.00 | 32294.70 | 36.685 |
| 8 | 436.67 | 1 | SLU | 122.63 | 2.96 | 0.85 | 11.31 | 122.66 | 1.00 | 32294.70 | 374324.00 | 32294.70 | >100 |
| 9 | 476.19 | 1 | SLU | -499.45 | -12.06 | 0.85 | 11.31 | 499.60 | 1.00 | 32294.70 | 373240.00 | 32294.70 | 64.642 |
| 10 | 535.71 | 1 | SLU | -999.39 | -24.13 | 0.85 | 11.31 | 999.68 | 1.00 | 32294.70 | 372159.00 | 32294.70 | 32.305 |
| 11 | 595.24 | 1 | SLU | -1390.20 | -33.57 | 0.85 | 11.31 | 1390.61 | 1.00 | 32294.70 | 371081.00 | 32294.70 | 23.224 |
| 12 | 654.76 | 1 | SLU | -1684.52 | -40.67 | 0.85 | 11.31 | 1685.01 | 1.00 | 32294.70 | 370004.00 | 32294.70 | 19.166 |
| 13 | 714.29 | 1 | SLU | -1894.42 | -45.74 | 0.85 | 11.31 | 1894.97 | 1.00 | 32294.70 | 368929.00 | 32294.70 | 17.042 |
| 14 | 773.81 | 1 | SLU | -2031.29 | -49.04 | 0.85 | 11.31 | 2031.88 | 1.00 | 32294.70 | 367857.00 | 32294.70 | 15.894 |
| 15 | 833.33 | 1 | SLU | -2105.79 | -50.84 | 0.85 | 11.31 | 2106.40 | 1.00 | 32294.70 | 366786.00 | 32294.70 | 15.332 |
| 16 | 892.86 | 1 | SLU | -2127.74 | -51.37 | 0.85 | 11.31 | 2128.36 | 1.00 | 32294.70 | 365717.00 | 32294.70 | 15.174 |
| 17 | 952.38 | 1 | SLU | -2106.16 | -50.85 | 0.85 | 11.31 | 2106.77 | 1.00 | 32294.70 | 364650.00 | 32294.70 | 15.329 |
| 18 | 1011.90 | 1 | SLU | -2049.18 | -49.48 | 0.85 | 11.31 | 2049.77 | 1.00 | 32294.70 | 363585.00 | 32294.70 | 15.755 |
| 19 | 1071.43 | 1 | SLU | -1964.12 | -47.42 | 0.85 | 11.31 | 1964.69 | 1.00 | 32294.70 | 362521.00 | 32294.70 | 16.438 |
| 20 | 1130.95 | 1 | SLU | -1857.48 | -44.85 | 0.85 | 11.31 | 1858.02 | 1.00 | 32294.70 | 361460.00 | 32294.70 | 17.381 |
| 21 | 1190.48 | 1 | SLU | -1734.97 | -43.89 | 0.85 | 11.31 | 1735.47 | 1.00 | 32294.70 | 360399.00 | 32294.70 | 18.609 |
| 22 | 1250.00 | 1 | SLU | -1601.56 | -38.67 | 0.85 | 11.31 | 1602.02 | 1.00 | 32294.70 | 359341.00 | 32294.70 | 20.159 |
| 23 | 1309.52 | 1 | SLU | -1461.53 | -35.29 | 0.85 | 11.31 | 1461.96 | 1.00 | 32294.70 | 358283.00 | 32294.70 | 22.090 |
| 24 | 1369.05 | 1 | SLU | -1318.54 | -31.84 | 0.85 | 11.31 | 1318.92 | 1.00 | 32294.70 | 357227.00 | 32294.70 | 24.486 |
| 25 | 1428.57 | 1 | SLU | -1175.64 | -28.39 | 0.85 | 11.31 | 1175.98 | 1.00 | 32294.70 | 356173.00 | 32294.70 | 27.462 |
| 26 | 1488.10 | 1 | SLU | -1035.36 | -25.00 | 0.85 | 11.31 | 1035.66 | 1.00 | 32294.70 | 355120.00 | 32294.70 | 31.183 |
| 27 | 1547.62 | 1 | SLU | -899.78 | -21.73 | 0.85 | 11.31 | 900.05 | 1.00 | 32294.70 | 354068.00 | 32294.70 | 35.881 |
| 28 | 1607.14 | 1 | SLU | -770.56 | -18.61 | 0.85 | 11.31 | 770.79 | 1.00 | 32294.70 | 353017.00 | 32294.70 | 41.898 |
| 29 | 1666.67 | 1 | SLU | -648.99 | -15.67 | 0.85 | 11.31 | 649.18 | 1.00 | 32294.70 | 351968.00 | 32294.70 | 49.747 |
| 30 | 1726.19 | 1 | SLU | -536.07 | -12.94 | 0.85 | 11.31 | 536.22 | 1.00 | 32294.70 | 350919.00 | 32294.70 | 60.226 |
| 31 | 1785.71 | 1 | SLU | -432.52 | -10.44 | 0.85 | 11.31 | 432.64 | 1.00 | 32294.70 | 349872.00 | 32294.70 | 74.645 |
| 32 | 1845.24 | 1 | SLU | -338.86 | -8.18 | 0.85 | 11.31 | 338.96 | 1.00 | 32294.70 | 348826.00 | 32294.70 | 95.276 |
| 33 | 1904.76 | 1 | SLU | -255.45 | -6.17 | 0.85 | 11.31 | 255.52 | 1.00 | 32294.70 | 347780.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -182.49 | -4.41 | 0.85 | 11.31 | 182.54 | 1.00 | 32294.70 | 346736.00 | 32294.70 | >100 |

Relazione di calcolo

| | | | | | | | | | | | | | |
|----|---------|---|-----|---------|-------|------|-------|--------|------|----------|-----------|----------|------|
| 35 | 2023.81 | 1 | SLU | -120.09 | -2.90 | 0.85 | 11.31 | 120.13 | 1.00 | 32294.70 | 345692.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | -68.30 | -1.65 | 0.85 | 11.31 | 68.32 | 1.00 | 32294.70 | 344649.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | -27.10 | -0.65 | 0.85 | 11.31 | 27.10 | 1.00 | 32294.70 | 343606.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 3.55 | 0.09 | 0.85 | 11.31 | 3.55 | 1.00 | 32294.70 | 342564.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 23.70 | 0.57 | 0.85 | 11.31 | 23.70 | 1.00 | 32294.70 | 341523.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 33.38 | 0.81 | 0.85 | 11.31 | 33.39 | 1.00 | 32294.70 | 340483.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 32.65 | 0.79 | 0.85 | 11.31 | 32.66 | 1.00 | 32294.70 | 339443.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 21.52 | 0.52 | 0.85 | 11.31 | 21.52 | 1.00 | 32294.70 | 338403.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mz <daNm> | My <daNm> | Aft <cmq> | Afc <cmq> | σ_c <daN/cmq> | σ_f <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-------------------------|-------------------------|
| 44 | 0.00 | 2 | SLE R | -240898.00 | -5201.55 | 3499.25 | 0.00 | 78.54 | 22.82 | 337.81 |
| 45 | 59.52 | 2 | SLE R | -240431.00 | -7116.44 | 4787.46 | 0.00 | 78.54 | 23.98 | 353.48 |
| 46 | 119.05 | 2 | SLE R | -237823.00 | -8663.19 | 5828.01 | 0.00 | 78.54 | 24.73 | 363.42 |
| 47 | 178.57 | 2 | SLE R | -235222.00 | -9884.46 | 6649.59 | 0.00 | 78.54 | 25.28 | 370.60 |
| 48 | 238.09 | 2 | SLE R | -232629.00 | -10820.90 | 7279.54 | 0.00 | 78.54 | 25.65 | 375.38 |
| 49 | 297.62 | 2 | SLE R | -230043.00 | -11510.70 | 7743.65 | 0.00 | 78.54 | 25.87 | 378.07 |
| 50 | 357.14 | 2 | SLE R | -227464.00 | -11968.90 | 8051.86 | 0.00 | 78.54 | 25.95 | 378.81 |
| 51 | 416.67 | 2 | SLE R | -221866.00 | -12148.00 | 8172.38 | 0.00 | 78.54 | 25.61 | 373.50 |
| 52 | 476.19 | 2 | SLE R | -216279.00 | -12075.20 | 8123.35 | 0.00 | 78.54 | 25.11 | 366.08 |
| 53 | 535.71 | 2 | SLE R | -210705.00 | -11797.40 | 7936.49 | 0.00 | 78.54 | 24.48 | 356.92 |
| 54 | 595.24 | 2 | SLE R | -205141.00 | -11357.00 | 7640.24 | 0.00 | 78.54 | 23.75 | 346.41 |
| 55 | 654.76 | 2 | SLE R | -199589.00 | -10791.70 | 7259.92 | 0.00 | 78.54 | 22.95 | 334.84 |
| 56 | 714.29 | 2 | SLE R | -194047.00 | -10134.50 | 6817.77 | 0.00 | 78.54 | 22.09 | 322.51 |
| 57 | 773.81 | 2 | SLE R | -188515.00 | -9414.10 | 6333.17 | 0.00 | 78.54 | 21.19 | 309.66 |
| 58 | 833.33 | 2 | SLE R | -182994.00 | -8655.38 | 5822.75 | 0.00 | 78.54 | 20.27 | 296.50 |
| 59 | 892.86 | 2 | SLE R | -177483.00 | -7879.30 | 5300.66 | 0.00 | 78.54 | 19.34 | 283.20 |
| 60 | 952.38 | 2 | SLE R | -171981.00 | -7103.42 | 4778.70 | 0.00 | 78.54 | 18.41 | 269.91 |
| 61 | 1011.90 | 2 | SLE R | -166488.00 | -6342.15 | 4266.57 | 0.00 | 78.54 | 17.49 | 256.76 |
| 62 | 1071.43 | 2 | SLE R | -161004.00 | -5607.08 | 3772.06 | 0.00 | 78.54 | 16.58 | 243.84 |
| 63 | 1130.95 | 2 | SLE R | -155529.00 | -4907.26 | 3301.27 | 0.00 | 78.54 | 15.70 | 231.23 |
| 64 | 1190.48 | 2 | SLE R | -150062.00 | -4249.54 | 2858.81 | 0.00 | 78.54 | 14.85 | 218.99 |
| 65 | 1250.00 | 2 | SLE R | -144603.00 | -3638.79 | 2447.93 | 0.00 | 78.54 | 14.02 | 207.16 |
| 66 | 1309.52 | 2 | SLE R | -139152.00 | -3078.19 | 2070.80 | 0.00 | 78.54 | 13.23 | 195.76 |
| 67 | 1369.05 | 2 | SLE R | -133709.00 | -2569.47 | 1728.57 | 0.00 | 78.54 | 12.47 | 184.81 |
| 68 | 1428.57 | 2 | SLE R | -128272.00 | -2113.15 | 1421.59 | 0.00 | 78.54 | 11.74 | 174.31 |
| 69 | 1488.10 | 2 | SLE R | -122843.00 | -1708.72 | 1149.51 | 0.00 | 78.54 | 11.05 | 164.26 |
| 70 | 1547.62 | 2 | SLE R | -117420.00 | -1354.81 | 911.42 | 0.00 | 78.54 | 10.39 | 154.65 |
| 71 | 1607.14 | 2 | SLE R | -112003.00 | -1049.40 | 705.97 | 0.00 | 78.54 | 9.76 | 145.46 |
| 72 | 1666.67 | 2 | SLE R | -106593.00 | -789.91 | 531.40 | 0.00 | 78.54 | 9.16 | 136.66 |
| 73 | 1726.19 | 2 | SLE R | -101188.00 | -573.36 | 385.71 | 0.00 | 78.54 | 8.58 | 128.23 |
| 74 | 1785.71 | 2 | SLE R | -95788.30 | -396.43 | 266.69 | 0.00 | 78.54 | 8.03 | 120.15 |
| 75 | 1845.24 | 2 | SLE R | -90394.00 | -255.59 | 171.95 | 0.00 | 78.54 | 7.51 | 112.38 |
| 76 | 1904.76 | 2 | SLE R | -85004.50 | -147.17 | 99.01 | 0.00 | 78.54 | 7.00 | 104.89 |
| 77 | 1964.29 | 2 | SLE R | -79619.60 | -67.36 | 45.32 | 0.00 | 78.54 | 6.51 | 97.65 |
| 78 | 2023.81 | 2 | SLE R | -74238.90 | -12.32 | 8.29 | 0.00 | 78.54 | 6.04 | 90.62 |
| 79 | 2083.33 | 2 | SLE R | -68862.30 | 21.83 | -14.68 | 0.00 | 78.54 | 5.61 | 84.14 |
| 80 | 2142.86 | 2 | SLE R | -63489.30 | 38.96 | -26.21 | 0.00 | 78.54 | 5.18 | 77.74 |
| 81 | 2202.38 | 2 | SLE R | -58119.70 | 42.95 | -28.89 | 0.00 | 78.54 | 4.75 | 71.22 |
| 82 | 2261.90 | 2 | SLE R | -52753.30 | 37.64 | -25.32 | 0.00 | 78.54 | 4.31 | 64.64 |
| 83 | 2321.43 | 2 | SLE R | -47389.60 | 26.88 | -18.08 | 0.00 | 78.54 | 3.87 | 58.01 |
| 84 | 2380.95 | 2 | SLE R | -42028.60 | 14.48 | -9.74 | 0.00 | 78.54 | 3.43 | 51.37 |
| 85 | 2440.48 | 2 | SLE R | -36669.70 | 4.25 | -2.86 | 0.00 | 78.54 | 2.98 | 44.75 |
| 86 | 2500.00 | 2 | SLE R | -31312.90 | 0.00 | 0.00 | 0.00 | 78.54 | 2.55 | 38.18 |
| 87 | 0.00 | 4 | SLE Q | -240898.00 | -5201.55 | 3499.25 | 0.00 | 78.54 | 22.82 | 337.81 |
| 88 | 59.52 | 4 | SLE Q | -240431.00 | -7116.44 | 4787.46 | 0.00 | 78.54 | 23.98 | 353.48 |
| 89 | 119.05 | 4 | SLE Q | -237823.00 | -8663.19 | 5828.01 | 0.00 | 78.54 | 24.73 | 363.42 |
| 90 | 178.57 | 4 | SLE Q | -235222.00 | -9884.46 | 6649.59 | 0.00 | 78.54 | 25.28 | 370.60 |
| 91 | 238.09 | 4 | SLE Q | -232629.00 | -10820.90 | 7279.54 | 0.00 | 78.54 | 25.65 | 375.38 |
| 92 | 297.62 | 4 | SLE Q | -230043.00 | -11510.70 | 7743.65 | 0.00 | 78.54 | 25.87 | 378.07 |
| 93 | 357.14 | 4 | SLE Q | -227464.00 | -11968.90 | 8051.86 | 0.00 | 78.54 | 25.95 | 378.81 |
| 94 | 416.67 | 4 | SLE Q | -221866.00 | -12148.00 | 8172.38 | 0.00 | 78.54 | 25.61 | 373.50 |
| 95 | 476.19 | 4 | SLE Q | -216279.00 | -12075.20 | 8123.35 | 0.00 | 78.54 | 25.11 | 366.08 |
| 96 | 535.71 | 4 | SLE Q | -210705.00 | -11797.40 | 7936.49 | 0.00 | 78.54 | 24.48 | 356.92 |
| 97 | 595.24 | 4 | SLE Q | -205141.00 | -11357.00 | 7640.24 | 0.00 | 78.54 | 23.75 | 346.41 |
| 98 | 654.76 | 4 | SLE Q | -199589.00 | -10791.70 | 7259.92 | 0.00 | 78.54 | 22.95 | 334.84 |
| 99 | 714.29 | 4 | SLE Q | -194047.00 | -10134.50 | 6817.77 | 0.00 | 78.54 | 22.09 | 322.51 |
| 100 | 773.81 | 4 | SLE Q | -188515.00 | -9414.10 | 6333.17 | 0.00 | 78.54 | 21.19 | 309.66 |
| 101 | 833.33 | 4 | SLE Q | -182994.00 | -8655.38 | 5822.75 | 0.00 | 78.54 | 20.27 | 296.50 |
| 102 | 892.86 | 4 | SLE Q | -177483.00 | -7879.30 | 5300.66 | 0.00 | 78.54 | 19.34 | 283.20 |
| 103 | 952.38 | 4 | SLE Q | -171981.00 | -7103.42 | 4778.70 | 0.00 | 78.54 | 18.41 | 269.91 |
| 104 | 1011.90 | 4 | SLE Q | -166488.00 | -6342.15 | 4266.57 | 0.00 | 78.54 | 17.49 | 256.76 |
| 105 | 1071.43 | 4 | SLE Q | -161004.00 | -5607.08 | 3772.06 | 0.00 | 78.54 | 16.58 | 243.84 |
| 106 | 1130.95 | 4 | SLE Q | -155529.00 | -4907.26 | 3301.27 | 0.00 | 78.54 | 15.70 | 231.23 |
| 107 | 1190.48 | 4 | SLE Q | -150062.00 | -4249.54 | 2858.81 | 0.00 | 78.54 | 14.85 | 218.99 |
| 108 | 1250.00 | 4 | SLE Q | -144603.00 | -3638.79 | 2447.93 | 0.00 | 78.54 | 14.02 | 207.16 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|------------|----------|---------|------|-------|-------|--------|
| 109 | 1309.52 | 4 | SLE Q | -139152.00 | -3078.19 | 2070.80 | 0.00 | 78.54 | 13.23 | 195.76 |
| 110 | 1369.03 | 4 | SLE Q | -133709.00 | -2569.47 | 1728.57 | 0.00 | 78.54 | 12.47 | 184.81 |
| 111 | 1428.57 | 4 | SLE Q | -128272.00 | -2113.15 | 1421.59 | 0.00 | 78.54 | 11.74 | 174.31 |
| 112 | 1488.10 | 4 | SLE Q | -122843.00 | -1708.72 | 1149.51 | 0.00 | 78.54 | 11.05 | 164.26 |
| 113 | 1547.62 | 4 | SLE Q | -117420.00 | -1354.81 | 911.42 | 0.00 | 78.54 | 10.39 | 154.65 |
| 114 | 1607.14 | 4 | SLE Q | -112003.00 | -1049.40 | 705.97 | 0.00 | 78.54 | 9.76 | 145.46 |
| 115 | 1666.67 | 4 | SLE Q | -106593.00 | -789.91 | 531.40 | 0.00 | 78.54 | 9.16 | 136.66 |
| 116 | 1726.19 | 4 | SLE Q | -101188.00 | -573.36 | 385.71 | 0.00 | 78.54 | 8.58 | 128.23 |
| 117 | 1785.71 | 4 | SLE Q | -95788.30 | -396.43 | 266.69 | 0.00 | 78.54 | 8.03 | 120.15 |
| 118 | 1845.24 | 4 | SLE Q | -90394.00 | -255.59 | 171.95 | 0.00 | 78.54 | 7.51 | 112.38 |
| 119 | 1904.76 | 4 | SLE Q | -85004.50 | -147.17 | 99.01 | 0.00 | 78.54 | 7.00 | 104.89 |
| 120 | 1964.29 | 4 | SLE Q | -79619.60 | -67.36 | 45.32 | 0.00 | 78.54 | 6.51 | 97.65 |
| 121 | 2023.81 | 4 | SLE Q | -74238.90 | -12.32 | 8.29 | 0.00 | 78.54 | 6.04 | 90.62 |
| 122 | 2083.33 | 4 | SLE Q | -68862.30 | 21.83 | -14.68 | 0.00 | 78.54 | 5.61 | 84.14 |
| 123 | 2142.86 | 4 | SLE Q | -63489.30 | 38.96 | -26.21 | 0.00 | 78.54 | 5.18 | 77.74 |
| 124 | 2202.38 | 4 | SLE Q | -58119.70 | 42.95 | -28.89 | 0.00 | 78.54 | 4.75 | 71.22 |
| 125 | 2261.90 | 4 | SLE Q | -52753.30 | 37.64 | -25.32 | 0.00 | 78.54 | 4.31 | 64.64 |
| 126 | 2321.43 | 4 | SLE Q | -47389.60 | 26.88 | -18.08 | 0.00 | 78.54 | 3.87 | 58.01 |
| 127 | 2380.95 | 4 | SLE Q | -42028.60 | 14.48 | -9.74 | 0.00 | 78.54 | 3.43 | 51.37 |
| 128 | 2440.48 | 4 | SLE Q | -36669.70 | 4.25 | -2.86 | 0.00 | 78.54 | 2.98 | 44.75 |
| 129 | 2500.00 | 4 | SLE Q | -31312.90 | 0.00 | 0.00 | 0.00 | 78.54 | 2.55 | 38.18 |

Verifiche principali

| Caso | Tipo |
|------|---|
| 1 | SLU N cost - min. sic., SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 50 | C.Rare - Sc min (max compr.), C.Rare - Sf min (max compr.) |
| 86 | C.Rare - Sc max (min. compr.), C.Rare - Sf max (max traz.) |
| 93 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf min (max compr.) |
| 129 | C.Q.Per. - Sc max (min. compr.), C.Q.Per. - Sf max (max traz.) |

Palo n. 25

Caratteristiche del palo e dei materiali utilizzati

| R | Cf | Cls | Fck | Fctk | Fcd | Fctd | Tp | Fyk | Fyd |
|-------|------|--------|-----------|-----------|-----------|-----------|-------|-----------|-----------|
| <cm> | <cm> | | <daN/cmq> | <daN/cmq> | <daN/cmq> | <daN/cmq> | | <daN/cmq> | <daN/cmq> |
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N | Mx | My | Mz |
|-----|-------|--------|--------|--------|
| | <daN> | <daNm> | <daNm> | <daNm> |
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 25 (-163)

| Caso | CC | TCC | Az | N | Tx | Ty | Mx | My |
|------|----|-------|-----|-----------|---------|--------|----------|----------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | RVN | 312389.00 | 5857.57 | 408.31 | 10679.60 | 19788.80 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 312389.00 | 5857.57 | 408.31 | 10679.60 | 19788.80 |
| 2 | 2 | SLE R | RVN | 231400.00 | 4338.94 | 302.46 | 7910.80 | 14658.40 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 231400.00 | 4338.94 | 302.46 | 7910.80 | 14658.40 |
| 3 | 3 | SLE F | RVN | 231400.00 | 4338.94 | 302.46 | 7910.80 | 14658.40 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 231400.00 | 4338.94 | 302.46 | 7910.80 | 14658.40 |
| 4 | 4 | SLE Q | RVN | 231400.00 | 4338.94 | 302.46 | 7910.80 | 14658.40 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 231400.00 | 4338.94 | 302.46 | 7910.80 | 14658.40 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N | Tx | Ty | Mx | My |
|------|----|-------|------|------------|----------|---------|-----------|-----------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | 1 | -312389.00 | -5857.57 | -408.31 | -10679.60 | -19788.80 |
| 2 | 2 | SLE R | 1 | -231400.00 | -4338.94 | -302.46 | -7910.80 | -14658.40 |
| 3 | 3 | SLE F | 1 | -231400.00 | -4338.94 | -302.46 | -7910.80 | -14658.40 |
| 4 | 4 | SLE Q | 1 | -231400.00 | -4338.94 | -302.46 | -7910.80 | -14658.40 |

Da 0 a -25

Relazione di calcolo

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | OC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|--------------------|--------|
| 1 | 0.00 | 1 | SLU | -312389.00 | 10611.90 | -19663.30 | -2571250.00 | 124958.00 | -227696.00 | 2-3 | 241.25 | 8.231 |
| 2 | 59.52 | 1 | SLU | -311426.00 | 12069.90 | -22364.90 | -2571250.00 | 124825.00 | -227454.00 | 2-3 | 241.25 | 8.256 |
| 3 | 119.05 | 1 | SLU | -307826.00 | 13157.60 | -24380.40 | -2571250.00 | 124326.00 | -226549.00 | 2-3 | 241.25 | 8.353 |
| 4 | 178.57 | 1 | SLU | -304236.00 | 13923.10 | -25799.00 | -2571250.00 | 123829.00 | -225646.00 | 2-3 | 241.25 | 8.451 |
| 5 | 238.09 | 1 | SLU | -300656.00 | 14411.60 | -26704.10 | -300656.00 | 123330.00 | -224741.00 | 2-3 | 241.25 | 8.448 |
| 6 | 297.62 | 1 | SLU | -297084.00 | 14664.90 | -27173.40 | -297084.00 | 122830.00 | -223836.00 | 2-3 | 241.25 | 8.269 |
| 7 | 357.14 | 1 | SLU | -293523.00 | 14702.30 | -27242.70 | -293523.00 | 122332.00 | -222932.00 | 2-3 | 241.25 | 8.214 |
| 8 | 416.67 | 1 | SLU | -286245.00 | 14486.20 | -26842.30 | -286245.00 | 121306.00 | -221073.00 | 2-3 | 241.25 | 8.267 |
| 9 | 476.19 | 1 | SLU | -278984.00 | 14047.60 | -26029.50 | -278984.00 | 120276.00 | -219208.00 | 2-3 | 241.25 | 8.453 |
| 10 | 535.71 | 1 | SLU | -271737.00 | 13434.80 | -24894.10 | -271737.00 | 119233.00 | -217248.00 | 2-3 | 241.25 | 8.761 |
| 11 | 595.24 | 1 | SLU | -264505.00 | 12690.70 | -23515.30 | -264505.00 | 118093.00 | -215209.00 | 2-3 | 241.25 | 9.187 |
| 12 | 654.76 | 1 | SLU | -257286.00 | 11852.70 | -21962.60 | -257286.00 | 116956.00 | -213150.00 | 2-3 | 241.25 | 9.742 |
| 13 | 714.29 | 1 | SLU | -250082.00 | 10953.40 | -20296.10 | -2571250.00 | 115814.00 | -211081.00 | 2-3 | 241.25 | 10.282 |
| 14 | 773.81 | 1 | SLU | -242891.00 | 10020.30 | -18567.10 | -2571250.00 | 114666.00 | -209001.00 | 2-3 | 241.25 | 10.586 |
| 15 | 833.33 | 1 | SLU | -235714.00 | 9076.73 | -16818.80 | -2571250.00 | 113510.00 | -206906.00 | 2-3 | 241.25 | 10.908 |
| 16 | 892.86 | 1 | SLU | -228548.00 | 8142.16 | -15087.10 | -2571250.00 | 112350.00 | -204801.00 | 2-3 | 241.25 | 11.250 |
| 17 | 952.38 | 1 | SLU | -221395.00 | 7232.26 | -13401.10 | -2571250.00 | 111186.00 | -202687.00 | 2-3 | 241.25 | 11.614 |
| 18 | 1011.90 | 1 | SLU | -214254.00 | 6359.53 | -11783.90 | -2571250.00 | 110015.00 | -200560.00 | 2-3 | 241.25 | 12.001 |
| 19 | 1071.43 | 1 | SLU | -207125.00 | 5533.56 | -10253.40 | -2571250.00 | 108839.00 | -198421.00 | 2-3 | 241.25 | 12.414 |
| 20 | 1130.95 | 1 | SLU | -200006.00 | 4761.44 | -8822.73 | -2571250.00 | 107658.00 | -196274.00 | 2-3 | 241.25 | 12.856 |
| 21 | 1190.48 | 1 | SLU | -192899.00 | 4048.03 | -7500.83 | -2571250.00 | 106473.00 | -194117.00 | 2-3 | 241.25 | 13.329 |
| 22 | 1250.00 | 1 | SLU | -185801.00 | 3396.33 | -6293.25 | -2571250.00 | 105281.00 | -191947.00 | 2-3 | 241.25 | 13.839 |
| 23 | 1309.52 | 1 | SLU | -178734.00 | 2807.69 | -5202.52 | -2571250.00 | 104085.00 | -189768.00 | 2-3 | 241.25 | 14.387 |
| 24 | 1369.05 | 1 | SLU | -171636.00 | 2282.12 | -4228.67 | -2571250.00 | 102885.00 | -187581.00 | 2-3 | 241.25 | 14.981 |
| 25 | 1428.57 | 1 | SLU | -164567.00 | 1818.53 | -3369.66 | -2571250.00 | 101679.00 | -185383.00 | 2-3 | 241.25 | 15.624 |
| 26 | 1488.10 | 1 | SLU | -157508.00 | 1414.91 | -2621.76 | -2571250.00 | 100468.00 | -183175.00 | 2-3 | 241.25 | 16.325 |
| 27 | 1547.62 | 1 | SLU | -150456.00 | 1068.51 | -1979.91 | -2571250.00 | 99254.10 | -180959.00 | 2-3 | 241.25 | 17.090 |
| 28 | 1607.14 | 1 | SLU | -143413.00 | 776.05 | -1437.99 | -2571250.00 | 98035.30 | -178735.00 | 2-3 | 241.25 | 17.929 |
| 29 | 1666.67 | 1 | SLU | -136377.00 | 533.80 | -989.10 | -2571250.00 | 96811.20 | -176501.00 | 2-3 | 241.25 | 18.854 |
| 30 | 1726.19 | 1 | SLU | -129349.00 | 337.73 | -625.79 | -2571250.00 | 95583.60 | -174259.00 | 2-3 | 241.25 | 19.878 |
| 31 | 1785.71 | 1 | SLU | -122328.00 | 183.59 | -340.19 | -2571250.00 | 94352.30 | -172011.00 | 2-3 | 241.25 | 21.019 |
| 32 | 1845.24 | 1 | SLU | -115313.00 | 67.03 | -124.20 | -2571250.00 | 93115.70 | -169753.00 | 2-3 | 241.25 | 22.298 |
| 33 | 1904.76 | 1 | SLU | -108304.00 | -16.42 | 30.43 | -2571250.00 | -91762.00 | 167241.00 | 2-3 | 61.25 | 23.741 |
| 34 | 1964.29 | 1 | SLU | -101302.00 | -71.23 | 131.98 | -2571250.00 | -90461.40 | 164864.00 | 2-3 | 61.25 | 25.382 |
| 35 | 2023.81 | 1 | SLU | -94304.40 | -101.86 | 188.73 | -2571250.00 | -89155.30 | 162478.00 | 2-3 | 61.25 | 27.265 |
| 36 | 2083.33 | 1 | SLU | -87312.10 | -112.74 | 208.90 | -2571250.00 | -87843.70 | 160082.00 | 2-3 | 61.25 | 29.449 |
| 37 | 2142.86 | 1 | SLU | -80324.50 | -108.27 | 200.62 | -2571250.00 | -86525.90 | 157675.00 | 2-3 | 61.25 | 32.011 |
| 38 | 2202.38 | 1 | SLU | -73341.20 | -92.81 | 171.97 | -2571250.00 | -85203.60 | 155260.00 | 2-3 | 61.25 | 35.059 |
| 39 | 2261.90 | 1 | SLU | -66361.90 | -70.64 | 130.90 | -2571250.00 | -83876.60 | 152837.00 | 2-3 | 61.25 | 38.746 |
| 40 | 2321.43 | 1 | SLU | -59386.10 | -46.05 | 85.34 | -2571250.00 | -82543.00 | 150403.00 | 2-3 | 61.25 | 43.297 |
| 41 | 2380.95 | 1 | SLU | -52413.40 | -23.27 | 43.12 | -2571250.00 | -81205.10 | 147962.00 | 2-3 | 61.25 | 49.057 |
| 42 | 2440.48 | 1 | SLU | -45443.60 | -6.52 | 12.08 | -2571250.00 | -79862.90 | 145514.00 | 2-3 | 61.25 | 56.581 |
| 43 | 2500.00 | 1 | SLU | -38476.30 | 0.00 | 0.00 | -2571250.00 | | | | | 66.827 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | OC | TCC | Ty <daN> | Tz <daN> | bw <cm> | Asw <cm ² > | Vsdu <daN> | ctg θ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|------------|---------------------------|---------------|--------------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SLU | 5857.57 | 408.31 | 0.85 | 11.31 | 5871.78 | 1.00 | 32294.70 | 376415.00 | 32294.70 | 5.500 |
| 2 | 59.52 | 1 | SLU | 4462.53 | 311.07 | 0.85 | 11.31 | 4473.36 | 1.00 | 32294.70 | 376277.00 | 32294.70 | 7.219 |
| 3 | 119.05 | 1 | SLU | 3242.50 | 226.03 | 0.85 | 11.31 | 3250.37 | 1.00 | 32294.70 | 375761.00 | 32294.70 | 9.936 |
| 4 | 178.57 | 1 | SLU | 2187.07 | 152.46 | 0.85 | 11.31 | 2192.38 | 1.00 | 32294.70 | 375247.00 | 32294.70 | 14.730 |
| 5 | 238.09 | 1 | SLU | 1285.09 | 89.58 | 0.85 | 11.31 | 1288.21 | 1.00 | 32294.70 | 374734.00 | 32294.70 | 25.070 |
| 6 | 297.62 | 1 | SLU | 524.89 | 36.59 | 0.85 | 11.31 | 526.16 | 1.00 | 32294.70 | 374222.00 | 32294.70 | 61.378 |
| 7 | 357.14 | 1 | SLU | -307.81 | -21.46 | 0.85 | 11.31 | 308.55 | 1.00 | 32294.70 | 373712.00 | 32294.70 | >100 |
| 8 | 416.67 | 1 | SLU | -1185.34 | -82.63 | 0.85 | 11.31 | 1188.21 | 1.00 | 32294.70 | 372670.00 | 32294.70 | 27.179 |
| 9 | 476.19 | 1 | SLU | -1881.92 | -131.18 | 0.85 | 11.31 | 1886.49 | 1.00 | 32294.70 | 371630.00 | 32294.70 | 17.119 |
| 10 | 535.71 | 1 | SLU | -2417.65 | -168.53 | 0.85 | 11.31 | 2423.52 | 1.00 | 32294.70 | 370592.00 | 32294.70 | 13.326 |
| 11 | 595.24 | 1 | SLU | -2811.88 | -196.01 | 0.85 | 11.31 | 2818.70 | 1.00 | 32294.70 | 369556.00 | 32294.70 | 13.457 |
| 12 | 654.76 | 1 | SLU | -3082.98 | -214.91 | 0.85 | 11.31 | 3090.46 | 1.00 | 32294.70 | 368522.00 | 32294.70 | 10.450 |
| 13 | 714.29 | 1 | SLU | -3248.22 | -226.43 | 0.85 | 11.31 | 3256.10 | 1.00 | 32294.70 | 367490.00 | 32294.70 | 9.918 |
| 14 | 773.81 | 1 | SLU | -3323.64 | -231.68 | 0.85 | 11.31 | 3331.71 | 1.00 | 32294.70 | 366460.00 | 32294.70 | 9.693 |
| 15 | 833.33 | 1 | SLU | -3323.98 | -231.71 | 0.85 | 11.31 | 3332.04 | 1.00 | 32294.70 | 365432.00 | 32294.70 | 9.692 |
| 16 | 892.86 | 1 | SLU | -3262.65 | -227.43 | 0.85 | 11.31 | 3270.57 | 1.00 | 32294.70 | 364405.00 | 32294.70 | 9.874 |
| 17 | 952.38 | 1 | SLU | -3151.75 | -219.70 | 0.85 | 11.31 | 3159.40 | 1.00 | 32294.70 | 363381.00 | 32294.70 | 10.222 |
| 18 | 1011.90 | 1 | SLU | -3002.07 | -209.27 | 0.85 | 11.31 | 3009.35 | 1.00 | 32294.70 | 362358.00 | 32294.70 | 10.731 |
| 19 | 1071.43 | 1 | SLU | -2823.15 | -196.79 | 0.85 | 11.31 | 2830.00 | 1.00 | 32294.70 | 361337.00 | 32294.70 | 11.412 |
| 20 | 1130.95 | 1 | SLU | -2623.34 | -182.87 | 0.85 | 11.31 | 2629.70 | 1.00 | 32294.70 | 360317.00 | 32294.70 | 12.281 |
| 21 | 1190.48 | 1 | SLU | -2409.85 | -167.98 | 0.85 | 11.31 | 2415.69 | 1.00 | 32294.70 | 359299.00 | 32294.70 | 13.369 |
| 22 | 1250.00 | 1 | SLU | -2188.85 | -152.58 | 0.85 | 11.31 | 2194.16 | 1.00 | 32294.70 | 358282.00 | 32294.70 | 14.719 |
| 23 | 1309.52 | 1 | SLU | -1965.56 | -137.01 | 0.85 | 11.31 | 1970.33 | 1.00 | 32294.70 | 357267.00 | 32294.70 | 16.390 |
| 24 | 1369.05 | 1 | SLU | -1744.33 | -121.59 | 0.85 | 11.31 | 1748.56 | 1.00 | 32294.70 | 356253.00 | 32294.70 | 18.469 |
| 25 | 1428.57 | 1 | SLU | -1528.70 | -106.56 | 0.85 | 11.31 | 1532.41 | 1.00 | 32294.70 | 355241.00 | 32294.70 | 21.075 |
| 26 | 1488.10 | 1 | SLU | -1321.55 | -92.12 | 0.85 | 11.31 | 1324.76 | 1.00 | 32294.70 | 354229.00 | 32294.70 | 24.378 |
| 27 | 1547.62 | 1 | SLU | -1125.13 | -78.43 | 0.85 | 11.31 | 1127.86 | 1.00 | 32294.70 | 353219.00 | 32294.70 | 28.634 |

Relazione di calcolo

| | | | | | | | | | | | | | |
|----|---------|---|-----|---------|--------|------|-------|--------|------|----------|-----------|----------|--------|
| 28 | 1607.14 | 1 | SLU | -941.16 | -65.61 | 0.85 | 11.31 | 943.45 | 1.00 | 32294.70 | 352210.00 | 32294.70 | 34.231 |
| 29 | 1666.67 | 1 | SLU | -770.94 | -53.74 | 0.85 | 11.31 | 772.81 | 1.00 | 32294.70 | 351203.00 | 32294.70 | 41.789 |
| 30 | 1726.19 | 1 | SLU | -615.36 | -42.90 | 0.85 | 11.31 | 616.85 | 1.00 | 32294.70 | 350196.00 | 32294.70 | 52.354 |
| 31 | 1785.71 | 1 | SLU | -475.02 | -33.11 | 0.85 | 11.31 | 476.18 | 1.00 | 32294.70 | 349190.00 | 32294.70 | 67.821 |
| 32 | 1845.24 | 1 | SLU | -350.28 | -24.42 | 0.85 | 11.31 | 351.13 | 1.00 | 32294.70 | 348185.00 | 32294.70 | 91.973 |
| 33 | 1904.76 | 1 | SLU | -241.31 | -16.82 | 0.85 | 11.31 | 241.89 | 1.00 | 32294.70 | 347182.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -148.12 | -10.32 | 0.85 | 11.31 | 148.47 | 1.00 | 32294.70 | 346178.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | -70.64 | -4.92 | 0.85 | 11.31 | 70.81 | 1.00 | 32294.70 | 345176.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | -8.75 | -0.61 | 0.85 | 11.31 | 8.77 | 1.00 | 32294.70 | 344175.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 37.71 | 2.63 | 0.85 | 11.31 | 37.80 | 1.00 | 32294.70 | 343174.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 68.91 | 4.80 | 0.85 | 11.31 | 69.08 | 1.00 | 32294.70 | 342173.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 84.99 | 5.92 | 0.85 | 11.31 | 85.19 | 1.00 | 32294.70 | 341174.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 86.07 | 6.00 | 0.85 | 11.31 | 86.28 | 1.00 | 32294.70 | 340175.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 72.23 | 5.04 | 0.85 | 11.31 | 72.41 | 1.00 | 32294.70 | 339176.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 43.54 | 3.03 | 0.85 | 11.31 | 43.64 | 1.00 | 32294.70 | 338177.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mz <daNm> | My <daNm> | AfT <cmq> | AfC <cmq> | σ_c <daN/cmq> | σ_f <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-------------------------|-------------------------|
| 44 | 0.00 | 2 | SLE R | -231400.00 | -14565.40 | 7860.63 | 0.00 | 78.54 | 27.30 | 397.83 |
| 45 | 59.52 | 2 | SLE R | -230999.00 | -16566.60 | 8940.64 | 0.00 | 78.54 | 28.43 | 413.24 |
| 46 | 119.05 | 2 | SLE R | -228523.00 | -18059.60 | 9746.36 | 0.00 | 78.54 | 29.10 | 422.08 |
| 47 | 178.57 | 2 | SLE R | -226054.00 | -19110.30 | 10313.40 | 0.00 | 78.54 | 29.51 | 427.42 |
| 48 | 238.09 | 2 | SLE R | -223591.00 | -19780.80 | 10675.30 | 0.00 | 78.54 | 29.71 | 429.74 |
| 49 | 297.62 | 2 | SLE R | -221136.00 | -20128.40 | 10862.90 | 0.00 | 78.54 | 29.71 | 429.51 |
| 50 | 357.14 | 2 | SLE R | -218688.00 | -20179.70 | 10890.60 | 0.00 | 78.54 | 29.54 | 426.93 |
| 51 | 416.67 | 2 | SLE R | -213313.00 | -19883.20 | 10730.50 | 0.00 | 78.54 | 28.93 | 418.02 |
| 52 | 476.19 | 2 | SLE R | -207949.00 | -19281.10 | 10405.60 | 0.00 | 78.54 | 28.14 | 406.70 |
| 53 | 535.71 | 2 | SLE R | -202596.00 | -18440.00 | 9951.69 | 0.00 | 78.54 | 27.22 | 393.49 |
| 54 | 595.24 | 2 | SLE R | -197254.00 | -17418.70 | 9400.51 | 0.00 | 78.54 | 26.19 | 378.87 |
| 55 | 654.76 | 2 | SLE R | -191923.00 | -16268.60 | 8779.81 | 0.00 | 78.54 | 25.08 | 363.23 |
| 56 | 714.29 | 2 | SLE R | -186602.00 | -15034.10 | 8113.60 | 0.00 | 78.54 | 23.93 | 346.94 |
| 57 | 773.81 | 2 | SLE R | -181291.00 | -13753.40 | 7422.41 | 0.00 | 78.54 | 22.75 | 330.29 |
| 58 | 833.33 | 2 | SLE R | -175990.00 | -12458.40 | 6723.51 | 0.00 | 78.54 | 21.57 | 313.54 |
| 59 | 892.86 | 2 | SLE R | -170698.00 | -11175.60 | 6031.23 | 0.00 | 78.54 | 20.39 | 296.90 |
| 60 | 952.38 | 2 | SLE R | -165416.00 | -9926.71 | 5357.23 | 0.00 | 78.54 | 19.23 | 280.54 |
| 61 | 1011.90 | 2 | SLE R | -160142.00 | -8728.83 | 4710.76 | 0.00 | 78.54 | 18.11 | 264.59 |
| 62 | 1071.43 | 2 | SLE R | -154877.00 | -7595.14 | 4098.93 | 0.00 | 78.54 | 17.02 | 249.16 |
| 63 | 1130.95 | 2 | SLE R | -149620.00 | -6535.35 | 3526.99 | 0.00 | 78.54 | 15.97 | 234.34 |
| 64 | 1190.48 | 2 | SLE R | -144371.00 | -5556.17 | 2998.54 | 0.00 | 78.54 | 14.97 | 220.16 |
| 65 | 1250.00 | 2 | SLE R | -139130.00 | -4661.66 | 2515.80 | 0.00 | 78.54 | 14.03 | 206.66 |
| 66 | 1309.52 | 2 | SLE R | -133896.00 | -3853.72 | 2079.77 | 0.00 | 78.54 | 13.13 | 193.86 |
| 67 | 1369.05 | 2 | SLE R | -128670.00 | -3132.35 | 1690.46 | 0.00 | 78.54 | 12.28 | 181.76 |
| 68 | 1428.57 | 2 | SLE R | -123450.00 | -2496.05 | 1347.06 | 0.00 | 78.54 | 11.49 | 170.34 |
| 69 | 1488.10 | 2 | SLE R | -118238.00 | -1942.05 | 1048.08 | 0.00 | 78.54 | 10.74 | 159.59 |
| 70 | 1547.62 | 2 | SLE R | -113031.00 | -1466.60 | 791.49 | 0.00 | 78.54 | 10.04 | 149.46 |
| 71 | 1607.14 | 2 | SLE R | -107830.00 | -1065.17 | 574.85 | 0.00 | 78.54 | 9.39 | 139.93 |
| 72 | 1666.67 | 2 | SLE R | -102636.00 | -732.67 | 395.40 | 0.00 | 78.54 | 8.77 | 130.96 |
| 73 | 1726.19 | 2 | SLE R | -97446.50 | -463.55 | 250.17 | 0.00 | 78.54 | 8.19 | 122.49 |
| 74 | 1785.71 | 2 | SLE R | -92262.50 | -251.99 | 136.00 | 0.00 | 78.54 | 7.65 | 114.49 |
| 75 | 1845.24 | 2 | SLE R | -87083.40 | -92.00 | 49.65 | 0.00 | 78.54 | 7.13 | 106.91 |
| 76 | 1904.76 | 2 | SLE R | -81909.00 | 22.54 | -12.17 | 0.00 | 78.54 | 6.67 | 100.05 |
| 77 | 1964.29 | 2 | SLE R | -76739.00 | 97.77 | -52.76 | 0.00 | 78.54 | 6.29 | 94.35 |
| 78 | 2023.81 | 2 | SLE R | -71573.20 | 139.80 | -75.45 | 0.00 | 78.54 | 5.90 | 88.38 |
| 79 | 2083.33 | 2 | SLE R | -66411.10 | 154.74 | -83.51 | 0.00 | 78.54 | 5.49 | 82.21 |
| 80 | 2142.86 | 2 | SLE R | -61252.70 | 148.61 | -80.20 | 0.00 | 78.54 | 5.07 | 75.87 |
| 81 | 2202.38 | 2 | SLE R | -56097.50 | 127.38 | -68.75 | 0.00 | 78.54 | 4.63 | 69.42 |
| 82 | 2261.90 | 2 | SLE R | -50945.30 | 96.96 | -52.33 | 0.00 | 78.54 | 4.20 | 62.89 |
| 83 | 2321.43 | 2 | SLE R | -45795.90 | 63.21 | -34.11 | 0.00 | 78.54 | 3.76 | 56.34 |
| 84 | 2380.95 | 2 | SLE R | -40648.90 | 31.94 | -17.24 | 0.00 | 78.54 | 3.32 | 49.82 |
| 85 | 2440.48 | 2 | SLE R | -35504.10 | 8.95 | -4.83 | 0.00 | 78.54 | 2.89 | 43.36 |
| 86 | 2500.00 | 2 | SLE R | -30361.20 | 0.00 | 0.00 | 0.00 | 78.54 | 2.47 | 37.02 |
| 87 | 0.00 | 4 | SLE Q | -231400.00 | -14565.40 | 7860.63 | 0.00 | 78.54 | 27.30 | 397.83 |
| 88 | 59.52 | 4 | SLE Q | -230999.00 | -16566.60 | 8940.64 | 0.00 | 78.54 | 28.43 | 413.24 |
| 89 | 119.05 | 4 | SLE Q | -228523.00 | -18059.60 | 9746.36 | 0.00 | 78.54 | 29.10 | 422.08 |
| 90 | 178.57 | 4 | SLE Q | -226054.00 | -19110.30 | 10313.40 | 0.00 | 78.54 | 29.51 | 427.42 |
| 91 | 238.09 | 4 | SLE Q | -223591.00 | -19780.80 | 10675.30 | 0.00 | 78.54 | 29.71 | 429.74 |
| 92 | 297.62 | 4 | SLE Q | -221136.00 | -20128.40 | 10862.90 | 0.00 | 78.54 | 29.71 | 429.51 |
| 93 | 357.14 | 4 | SLE Q | -218688.00 | -20179.70 | 10890.60 | 0.00 | 78.54 | 29.54 | 426.93 |
| 94 | 416.67 | 4 | SLE Q | -213313.00 | -19883.20 | 10730.50 | 0.00 | 78.54 | 28.93 | 418.02 |
| 95 | 476.19 | 4 | SLE Q | -207949.00 | -19281.10 | 10405.60 | 0.00 | 78.54 | 28.14 | 406.70 |
| 96 | 535.71 | 4 | SLE Q | -202596.00 | -18440.00 | 9951.69 | 0.00 | 78.54 | 27.22 | 393.49 |
| 97 | 595.24 | 4 | SLE Q | -197254.00 | -17418.70 | 9400.51 | 0.00 | 78.54 | 26.19 | 378.87 |
| 98 | 654.76 | 4 | SLE Q | -191923.00 | -16268.60 | 8779.81 | 0.00 | 78.54 | 25.08 | 363.23 |
| 99 | 714.29 | 4 | SLE Q | -186602.00 | -15034.10 | 8113.60 | 0.00 | 78.54 | 23.93 | 346.94 |
| 100 | 773.81 | 4 | SLE Q | -181291.00 | -13753.40 | 7422.41 | 0.00 | 78.54 | 22.75 | 330.29 |
| 101 | 833.33 | 4 | SLE Q | -175990.00 | -12458.40 | 6723.51 | 0.00 | 78.54 | 21.57 | 313.54 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|------------|-----------|---------|------|-------|-------|--------|
| 102 | 892.86 | 4 | SLE Q | -170698.00 | -11175.60 | 6031.23 | 0.00 | 78.54 | 20.39 | 296.90 |
| 103 | 952.38 | 4 | SLE Q | -165416.00 | -9926.71 | 5357.23 | 0.00 | 78.54 | 19.23 | 280.54 |
| 104 | 1011.90 | 4 | SLE Q | -160142.00 | -8728.83 | 4710.76 | 0.00 | 78.54 | 18.11 | 264.59 |
| 105 | 1071.43 | 4 | SLE Q | -154877.00 | -7595.14 | 4098.93 | 0.00 | 78.54 | 17.02 | 249.16 |
| 106 | 1130.95 | 4 | SLE Q | -149620.00 | -6535.35 | 3526.99 | 0.00 | 78.54 | 15.97 | 234.34 |
| 107 | 1190.48 | 4 | SLE Q | -144371.00 | -5556.17 | 2998.54 | 0.00 | 78.54 | 14.97 | 220.16 |
| 108 | 1250.00 | 4 | SLE Q | -139130.00 | -4661.66 | 2515.80 | 0.00 | 78.54 | 14.03 | 206.66 |
| 109 | 1309.52 | 4 | SLE Q | -133896.00 | -3853.72 | 2079.77 | 0.00 | 78.54 | 13.13 | 193.86 |
| 110 | 1369.05 | 4 | SLE Q | -128670.00 | -3132.35 | 1690.46 | 0.00 | 78.54 | 12.28 | 181.76 |
| 111 | 1428.57 | 4 | SLE Q | -123450.00 | -2496.05 | 1347.06 | 0.00 | 78.54 | 11.49 | 170.34 |
| 112 | 1488.10 | 4 | SLE Q | -118238.00 | -1942.05 | 1048.08 | 0.00 | 78.54 | 10.74 | 159.59 |
| 113 | 1547.62 | 4 | SLE Q | -113031.00 | -1466.60 | 791.49 | 0.00 | 78.54 | 10.04 | 149.46 |
| 114 | 1607.14 | 4 | SLE Q | -107830.00 | -1065.17 | 574.85 | 0.00 | 78.54 | 9.39 | 139.93 |
| 115 | 1666.67 | 4 | SLE Q | -102636.00 | -732.67 | 395.40 | 0.00 | 78.54 | 8.77 | 130.96 |
| 116 | 1726.19 | 4 | SLE Q | -97446.50 | -463.55 | 250.17 | 0.00 | 78.54 | 8.19 | 122.49 |
| 117 | 1785.71 | 4 | SLE Q | -92262.50 | -251.99 | 136.00 | 0.00 | 78.54 | 7.65 | 114.49 |
| 118 | 1845.24 | 4 | SLE Q | -87083.40 | -92.00 | 49.65 | 0.00 | 78.54 | 7.13 | 106.91 |
| 119 | 1904.76 | 4 | SLE Q | -81909.00 | 22.54 | -12.17 | 0.00 | 78.54 | 6.67 | 100.05 |
| 120 | 1964.29 | 4 | SLE Q | -76739.00 | 97.77 | -52.76 | 0.00 | 78.54 | 6.29 | 94.35 |
| 121 | 2023.81 | 4 | SLE Q | -71573.20 | 139.80 | -75.45 | 0.00 | 78.54 | 5.90 | 88.38 |
| 122 | 2083.33 | 4 | SLE Q | -66411.10 | 154.74 | -83.51 | 0.00 | 78.54 | 5.49 | 82.21 |
| 123 | 2142.86 | 4 | SLE Q | -61252.70 | 148.61 | -80.20 | 0.00 | 78.54 | 5.07 | 75.87 |
| 124 | 2202.38 | 4 | SLE Q | -56097.50 | 127.38 | -68.75 | 0.00 | 78.54 | 4.63 | 69.42 |
| 125 | 2261.90 | 4 | SLE Q | -50945.30 | 96.96 | -52.33 | 0.00 | 78.54 | 4.20 | 62.89 |
| 126 | 2321.43 | 4 | SLE Q | -45795.90 | 63.21 | -34.11 | 0.00 | 78.54 | 3.76 | 56.34 |
| 127 | 2380.95 | 4 | SLE Q | -40648.90 | 31.94 | -17.24 | 0.00 | 78.54 | 3.32 | 49.82 |
| 128 | 2440.48 | 4 | SLE Q | -35504.10 | 8.95 | -4.83 | 0.00 | 78.54 | 2.89 | 43.36 |
| 129 | 2500.00 | 4 | SLE Q | -30361.20 | 0.00 | 0.00 | 0.00 | 78.54 | 2.47 | 37.02 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 1 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 7 | SLU N cost - min. sic. |
| 48 | C.Rare - Sf min (max compr.) |
| 49 | C.Rare - Sc min (max compr.) |
| 86 | C.Rare - Sc max (min. compr.), C.Rare - Sf max (max traz.) |
| 91 | C.Q.Per. - Sf min (max compr.) |
| 92 | C.Q.Per. - Sc min (max compr.) |
| 129 | C.Q.Per. - Sc max (min. compr.), C.Q.Per. - Sf max (max traz.) |

Palo n. 26

Caratteristiche del palo e dei materiali utilizzati

| R | Cf | Cls | Fck | Fctk | Fcd | Fctd | Tp | Fyk | Fyd |
|-------|------|--------|-----------|-----------|-----------|-----------|-------|-----------|-----------|
| <cm> | <cm> | | <daN/cm²> | <daN/cm²> | <daN/cm²> | <daN/cm²> | | <daN/cm²> | <daN/cm²> |
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | S450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N | Mx | My | Mz |
|-----|-------|--------|--------|--------|
| | <daN> | <daNm> | <daNm> | <daNm> |
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 26 (-155)

| Caso | CC | TCC | Az | N | Tx | Ty | Mx | My |
|------|----|-------|-----|-----------|---------|--------|----------|----------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | RVN | 287771.00 | 6009.55 | 641.18 | 20713.80 | 28716.10 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 287771.00 | 6009.55 | 641.18 | 20713.80 | 28716.10 |
| 2 | 2 | SLE R | RVN | 213163.00 | 4451.52 | 474.95 | 15343.50 | 21271.20 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 213163.00 | 4451.52 | 474.95 | 15343.50 | 21271.20 |
| 3 | 3 | SLE F | RVN | 213163.00 | 4451.52 | 474.95 | 15343.50 | 21271.20 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 213163.00 | 4451.52 | 474.95 | 15343.50 | 21271.20 |
| 4 | 4 | SLE Q | RVN | 213163.00 | 4451.52 | 474.95 | 15343.50 | 21271.20 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 213163.00 | 4451.52 | 474.95 | 15343.50 | 21271.20 |

Relazione di calcolo

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-----|------|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | 1 | -287771.00 | -6009.55 | -641.18 | -20713.80 | -28716.10 |
| 2 | 2 | SLR | 1 | -213163.00 | -4451.52 | -474.95 | -15343.50 | -21271.20 |
| 3 | 3 | SLR | 1 | -213163.00 | -4451.52 | -474.95 | -15343.50 | -21271.20 |
| 4 | 4 | SLR | 1 | -213163.00 | -4451.52 | -474.95 | -15343.50 | -21271.20 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mx <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|--------|
| 1 | 0.00 | 1 | SLU | -287771.00 | 20611.40 | -28574.10 | -287771.00 | 148994.00 | -203222.00 | 2-3 | 233.75 | 7.152 |
| 2 | 59.52 | 1 | SLU | -286978.00 | 22409.60 | -31067.10 | -286978.00 | 148851.00 | -203025.00 | 2-3 | 233.75 | 6.572 |
| 3 | 119.05 | 1 | SLU | -283720.00 | 23649.40 | -32785.80 | -283720.00 | 148260.00 | -202216.00 | 2-3 | 233.75 | 6.203 |
| 4 | 178.57 | 1 | SLU | -280471.00 | 24407.80 | -33837.20 | -280471.00 | 147671.00 | -201407.00 | 2-3 | 233.75 | 5.986 |
| 5 | 238.09 | 1 | SLU | -277230.00 | 24756.30 | -34320.40 | -277230.00 | 147078.00 | -200595.00 | 2-3 | 233.75 | 5.878 |
| 6 | 297.62 | 1 | SLU | -273998.00 | 24761.00 | -34326.90 | -273998.00 | 146487.00 | -199784.00 | 2-3 | 233.75 | 5.853 |
| 7 | 357.14 | 1 | SLU | -270775.00 | 24454.80 | -33902.40 | -270775.00 | 145897.00 | -198975.00 | 2-3 | 233.75 | 5.902 |
| 8 | 416.67 | 1 | SLU | -264076.00 | 23789.70 | -32980.30 | -264076.00 | 144661.00 | -197279.00 | 2-3 | 233.75 | 6.016 |
| 9 | 476.19 | 1 | SLU | -257391.00 | 22815.30 | -31629.50 | -257391.00 | 143421.00 | -195578.00 | 2-3 | 233.75 | 6.219 |
| 10 | 535.71 | 1 | SLU | -250720.00 | 21605.60 | -29952.50 | -250720.00 | 142178.00 | -193872.00 | 2-3 | 233.75 | 6.510 |
| 11 | 595.24 | 1 | SLU | -244062.00 | 20225.50 | -28039.20 | -244062.00 | 140927.00 | -192157.00 | 2-3 | 233.75 | 6.893 |
| 12 | 654.76 | 1 | SLU | -237418.00 | 18731.10 | -25967.50 | -237418.00 | 139674.00 | -190437.00 | 2-3 | 233.75 | 7.376 |
| 13 | 714.29 | 1 | SLU | -230786.00 | 17170.60 | -23804.10 | -230786.00 | 138416.00 | -188711.00 | 2-3 | 233.75 | 7.974 |
| 14 | 773.81 | 1 | SLU | -224167.00 | 15584.70 | -21605.50 | -224167.00 | 137152.00 | -186977.00 | 2-3 | 233.75 | 8.704 |
| 15 | 833.33 | 1 | SLU | -217559.00 | 14007.30 | -19418.70 | -217559.00 | 135886.00 | -185239.00 | 2-3 | 233.75 | 9.595 |
| 16 | 892.86 | 1 | SLU | -210963.00 | 12465.90 | -17281.80 | -210963.00 | 134615.00 | -183495.00 | 2-3 | 233.75 | 10.680 |
| 17 | 952.38 | 1 | SLU | -204379.00 | 10982.70 | -15225.60 | -204379.00 | 133341.00 | -181747.00 | 2-3 | 233.75 | 12.007 |
| 18 | 1011.90 | 1 | SLU | -197806.00 | 9574.77 | -13273.80 | -197806.00 | 132061.00 | -179989.00 | 2-3 | 233.75 | 12.999 |
| 19 | 1071.43 | 1 | SLU | -191243.00 | 8254.88 | -11444.00 | -191243.00 | 130777.00 | -178227.00 | 2-3 | 233.75 | 13.445 |
| 20 | 1130.95 | 1 | SLU | -184690.00 | 7031.93 | -9748.56 | -184690.00 | 129477.00 | -176465.00 | 2-3 | 233.75 | 13.922 |
| 21 | 1190.48 | 1 | SLU | -178148.00 | 5911.57 | -8195.38 | -178148.00 | 127999.00 | -174733.00 | 2-3 | 233.75 | 14.433 |
| 22 | 1250.00 | 1 | SLU | -171614.00 | 4896.64 | -6788.35 | -171614.00 | 126614.00 | -172835.00 | 2-3 | 233.75 | 14.983 |
| 23 | 1309.52 | 1 | SLU | -165090.00 | 3987.64 | -5528.17 | -165090.00 | 125222.00 | -170930.00 | 2-3 | 233.75 | 15.575 |
| 24 | 1369.05 | 1 | SLU | -158575.00 | 3183.08 | -4412.80 | -158575.00 | 123825.00 | -169016.00 | 2-3 | 233.75 | 16.215 |
| 25 | 1428.57 | 1 | SLU | -152069.00 | 2479.94 | -3438.01 | -152069.00 | 122420.00 | -167091.00 | 2-3 | 233.75 | 16.908 |
| 26 | 1488.10 | 1 | SLU | -145571.00 | 1873.90 | -2597.84 | -145571.00 | 121007.00 | -165157.00 | 2-3 | 233.75 | 17.663 |
| 27 | 1547.62 | 1 | SLU | -139080.00 | 1359.66 | -1884.93 | -139080.00 | 119589.00 | -163214.00 | 2-3 | 233.75 | 18.488 |
| 28 | 1607.14 | 1 | SLU | -132597.00 | 931.17 | -1290.91 | -132597.00 | 118170.00 | -161255.00 | 2-3 | 233.75 | 19.392 |
| 29 | 1666.67 | 1 | SLU | -126121.00 | 581.85 | -806.64 | -126121.00 | 116760.00 | -159258.00 | 2-3 | 233.75 | 20.387 |
| 30 | 1726.19 | 1 | SLU | -119652.00 | 304.75 | -422.49 | -119652.00 | 115311.00 | -157263.00 | 2-3 | 233.75 | 21.489 |
| 31 | 1785.71 | 1 | SLU | -113189.00 | 92.69 | -128.50 | -113189.00 | 113851.00 | -155262.00 | 2-3 | 233.75 | 22.716 |
| 32 | 1845.24 | 1 | SLU | -106732.00 | -61.64 | 85.45 | -106732.00 | 112599.00 | -153403.00 | 2-3 | 53.75 | 24.091 |
| 33 | 1904.76 | 1 | SLU | -100281.00 | -165.57 | 229.54 | -100281.00 | 111110.00 | -151502.00 | 2-3 | 53.75 | 25.640 |
| 34 | 1964.29 | 1 | SLU | -93835.30 | -226.43 | 313.90 | -93835.30 | 109538.00 | -149543.00 | 2-3 | 53.75 | 27.402 |
| 35 | 2023.81 | 1 | SLU | -87394.70 | -251.44 | 348.57 | -87394.70 | 108029.00 | -147477.00 | 2-3 | 53.75 | 29.421 |
| 36 | 2083.33 | 1 | SLU | -80958.70 | -247.76 | 343.48 | -80958.70 | 106514.00 | -145402.00 | 2-3 | 53.75 | 31.760 |
| 37 | 2142.86 | 1 | SLU | -74527.10 | -222.45 | 308.39 | -74527.10 | 104990.00 | -143314.00 | 2-3 | 53.75 | 34.501 |
| 38 | 2202.38 | 1 | SLU | -68099.60 | -182.45 | 252.93 | -68099.60 | 103458.00 | -141216.00 | 2-3 | 53.75 | 37.757 |
| 39 | 2261.90 | 1 | SLU | -61675.60 | -134.62 | 186.62 | -61675.60 | 101919.00 | -139108.00 | 2-3 | 53.75 | 41.690 |
| 40 | 2321.43 | 1 | SLU | -55255.00 | -85.74 | 118.87 | -55255.00 | 100374.00 | -136990.00 | 2-3 | 53.75 | 46.534 |
| 41 | 2380.95 | 1 | SLU | -48837.30 | -42.56 | 59.00 | -48837.30 | 98820.20 | -134859.00 | 2-3 | 53.75 | 52.649 |
| 42 | 2440.48 | 1 | SLU | -42422.30 | -11.75 | 16.29 | -42422.30 | 97260.10 | -132720.00 | 2-3 | 53.75 | 60.611 |
| 43 | 2500.00 | 1 | SLU | -36009.50 | 0.00 | 0.00 | -36009.50 | | | | | 71.405 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | CC | TCC | Ty <daN> | Tz <daN> | bw <cm> | Asw <cm²> | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|------------|--------------|---------------|------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SLU | 6009.55 | 641.18 | 0.85 | 11.31 | 6043.66 | 1.00 | 32294.70 | 372888.00 | 32294.70 | 5.344 |
| 2 | 59.52 | 1 | SLU | 4299.62 | 458.74 | 0.85 | 11.31 | 4324.02 | 1.00 | 32294.70 | 372775.00 | 32294.70 | 7.469 |
| 3 | 119.05 | 1 | SLU | 2817.44 | 300.60 | 0.85 | 11.31 | 2833.44 | 1.00 | 32294.70 | 372308.00 | 32294.70 | 11.398 |
| 4 | 178.57 | 1 | SLU | 1547.68 | 165.13 | 0.85 | 11.31 | 1556.46 | 1.00 | 32294.70 | 371843.00 | 32294.70 | 20.749 |
| 5 | 238.09 | 1 | SLU | 474.31 | 50.61 | 0.85 | 11.31 | 477.00 | 1.00 | 32294.70 | 371378.00 | 32294.70 | 67.703 |
| 6 | 297.62 | 1 | SLU | -419.04 | -44.71 | 0.85 | 11.31 | 421.41 | 1.00 | 32294.70 | 370915.00 | 32294.70 | 76.634 |
| 7 | 357.14 | 1 | SLU | -1380.92 | -147.34 | 0.85 | 11.31 | 1388.76 | 1.00 | 32294.70 | 370454.00 | 32294.70 | 23.254 |
| 8 | 416.67 | 1 | SLU | -2378.26 | -253.75 | 0.85 | 11.31 | 2391.76 | 1.00 | 32294.70 | 369494.00 | 32294.70 | 13.502 |
| 9 | 476.19 | 1 | SLU | -3151.21 | -336.21 | 0.85 | 11.31 | 3169.09 | 1.00 | 32294.70 | 368537.00 | 32294.70 | 10.191 |
| 10 | 535.71 | 1 | SLU | -3726.32 | -397.57 | 0.85 | 11.31 | 3747.47 | 1.00 | 32294.70 | 367581.00 | 32294.70 | 8.618 |
| 11 | 595.24 | 1 | SLU | -4128.89 | -440.53 | 0.85 | 11.31 | 4152.33 | 1.00 | 32294.70 | 366627.00 | 32294.70 | 7.778 |
| 12 | 654.76 | 1 | SLU | -4382.73 | -467.61 | 0.85 | 11.31 | 4407.60 | 1.00 | 32294.70 | 365676.00 | 32294.70 | 7.327 |
| 13 | 714.29 | 1 | SLU | -4510.00 | -481.19 | 0.85 | 11.31 | 4535.60 | 1.00 | 32294.70 | 364726.00 | 32294.70 | 7.120 |
| 14 | 773.81 | 1 | SLU | -4531.13 | -483.44 | 0.85 | 11.31 | 4556.84 | 1.00 | 32294.70 | 363778.00 | 32294.70 | 7.087 |
| 15 | 833.33 | 1 | SLU | -4464.73 | -476.36 | 0.85 | 11.31 | 4490.07 | 1.00 | 32294.70 | 362831.00 | 32294.70 | 7.192 |
| 16 | 892.86 | 1 | SLU | -4327.63 | -461.73 | 0.85 | 11.31 | 4352.19 | 1.00 | 32294.70 | 361886.00 | 32294.70 | 7.420 |

Relazione di calcolo

| | | | | | | | | | | | | | |
|----|---------|---|-----|----------|---------|------|-------|---------|------|----------|-----------|----------|--------|
| 17 | 952.38 | 1 | SLU | -4134.87 | -441.16 | 0.85 | 11.31 | 4158.34 | 1.00 | 32294.70 | 360943.00 | 32294.70 | 7.766 |
| 18 | 1011.90 | 1 | SLU | -3899.77 | -416.08 | 0.85 | 11.31 | 3921.90 | 1.00 | 32294.70 | 360002.00 | 32294.70 | 8.234 |
| 19 | 1071.43 | 1 | SLU | -3633.99 | -387.72 | 0.85 | 11.31 | 3654.61 | 1.00 | 32294.70 | 359062.00 | 32294.70 | 8.837 |
| 20 | 1130.95 | 1 | SLU | -3347.65 | -357.17 | 0.85 | 11.31 | 3366.65 | 1.00 | 32294.70 | 358123.00 | 32294.70 | 9.593 |
| 21 | 1190.48 | 1 | SLU | -3049.43 | -325.35 | 0.85 | 11.31 | 3066.74 | 1.00 | 32294.70 | 357186.00 | 32294.70 | 10.531 |
| 22 | 1250.00 | 1 | SLU | -2746.65 | -293.05 | 0.85 | 11.31 | 2762.24 | 1.00 | 32294.70 | 356250.00 | 32294.70 | 11.691 |
| 23 | 1309.52 | 1 | SLU | -2445.45 | -260.91 | 0.85 | 11.31 | 2459.33 | 1.00 | 32294.70 | 355316.00 | 32294.70 | 13.132 |
| 24 | 1369.05 | 1 | SLU | -2150.84 | -229.48 | 0.85 | 11.31 | 2163.05 | 1.00 | 32294.70 | 354382.00 | 32294.70 | 14.930 |
| 25 | 1428.57 | 1 | SLU | -1866.89 | -199.19 | 0.85 | 11.31 | 1877.48 | 1.00 | 32294.70 | 353450.00 | 32294.70 | 17.201 |
| 26 | 1488.10 | 1 | SLU | -1596.78 | -170.37 | 0.85 | 11.31 | 1605.84 | 1.00 | 32294.70 | 352520.00 | 32294.70 | 20.111 |
| 27 | 1547.62 | 1 | SLU | -1342.97 | -143.29 | 0.85 | 11.31 | 1350.59 | 1.00 | 32294.70 | 351590.00 | 32294.70 | 23.912 |
| 28 | 1607.14 | 1 | SLU | -1107.28 | -118.14 | 0.85 | 11.31 | 1113.57 | 1.00 | 32294.70 | 350661.00 | 32294.70 | 29.001 |
| 29 | 1666.67 | 1 | SLU | -891.00 | -95.06 | 0.85 | 11.31 | 896.05 | 1.00 | 32294.70 | 349734.00 | 32294.70 | 36.041 |
| 30 | 1726.19 | 1 | SLU | -694.95 | -74.15 | 0.85 | 11.31 | 698.89 | 1.00 | 32294.70 | 348807.00 | 32294.70 | 46.208 |
| 31 | 1785.71 | 1 | SLU | -519.63 | -55.44 | 0.85 | 11.31 | 532.58 | 1.00 | 32294.70 | 347881.00 | 32294.70 | 61.799 |
| 32 | 1845.24 | 1 | SLU | -365.25 | -38.97 | 0.85 | 11.31 | 367.32 | 1.00 | 32294.70 | 346956.00 | 32294.70 | 87.919 |
| 33 | 1904.76 | 1 | SLU | -231.81 | -24.73 | 0.85 | 11.31 | 233.12 | 1.00 | 32294.70 | 346032.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -119.17 | -12.71 | 0.85 | 11.31 | 119.84 | 1.00 | 32294.70 | 345109.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | -27.08 | -2.89 | 0.85 | 11.31 | 27.24 | 1.00 | 32294.70 | 344186.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 44.72 | 4.77 | 0.85 | 11.31 | 44.97 | 1.00 | 32294.70 | 343265.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 96.54 | 10.30 | 0.85 | 11.31 | 97.69 | 1.00 | 32294.70 | 342343.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 128.65 | 13.73 | 0.85 | 11.31 | 129.38 | 1.00 | 32294.70 | 341423.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 141.28 | 15.07 | 0.85 | 11.31 | 142.08 | 1.00 | 32294.70 | 340502.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 134.63 | 14.36 | 0.85 | 11.31 | 135.40 | 1.00 | 32294.70 | 339583.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 108.82 | 11.61 | 0.85 | 11.31 | 109.44 | 1.00 | 32294.70 | 338664.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 63.94 | 6.82 | 0.85 | 11.31 | 64.30 | 1.00 | 32294.70 | 337745.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mz <daNm> | My <daNm> | AfT <cmq> | AfC <cmq> | σ _c <daN/cmq> | σ _f <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-----------------------------|-----------------------------|
| 44 | 0.00 | 2 | SLE R | -213163.00 | -21166.00 | 15267.70 | 0.00 | 78.54 | 30.83 | 443.61 |
| 45 | 59.52 | 2 | SLE R | -212890.00 | -23012.70 | 16599.70 | 0.00 | 78.54 | 31.99 | 459.30 |
| 46 | 119.05 | 2 | SLE R | -210666.00 | -24285.80 | 17518.10 | 0.00 | 78.54 | 32.62 | 467.64 |
| 47 | 178.57 | 2 | SLE R | -208450.00 | -25064.60 | 18079.80 | 0.00 | 78.54 | 32.94 | 471.70 |
| 48 | 238.09 | 2 | SLE R | -206239.00 | -25422.50 | 18338.00 | 0.00 | 78.54 | 32.99 | 472.11 |
| 49 | 297.62 | 2 | SLE R | -204035.00 | -25427.30 | 18341.50 | 0.00 | 78.54 | 32.81 | 469.47 |
| 50 | 357.14 | 2 | SLE R | -201838.00 | -25112.90 | 18114.70 | 0.00 | 78.54 | 32.43 | 464.06 |
| 51 | 416.67 | 2 | SLE R | -196891.00 | -24429.80 | 17622.00 | 0.00 | 78.54 | 31.59 | 452.10 |
| 52 | 476.19 | 2 | SLE R | -191954.00 | -23429.20 | 16900.20 | 0.00 | 78.54 | 30.56 | 437.39 |
| 53 | 535.71 | 2 | SLE R | -187028.00 | -22187.00 | 16004.20 | 0.00 | 78.54 | 29.36 | 420.61 |
| 54 | 595.24 | 2 | SLE R | -182112.00 | -20769.80 | 14981.90 | 0.00 | 78.54 | 28.06 | 402.31 |
| 55 | 654.76 | 2 | SLE R | -177206.00 | -19235.20 | 13874.90 | 0.00 | 78.54 | 26.68 | 383.01 |
| 56 | 714.29 | 2 | SLE R | -172309.00 | -17632.70 | 12719.00 | 0.00 | 78.54 | 25.26 | 363.13 |
| 57 | 773.81 | 2 | SLE R | -167421.00 | -16004.10 | 11544.20 | 0.00 | 78.54 | 23.82 | 343.04 |
| 58 | 833.33 | 2 | SLE R | -162542.00 | -14384.20 | 10375.70 | 0.00 | 78.54 | 22.39 | 323.03 |
| 59 | 892.86 | 2 | SLE R | -157672.00 | -12801.30 | 9233.99 | 0.00 | 78.54 | 20.99 | 303.35 |
| 60 | 952.38 | 2 | SLE R | -152811.00 | -11278.20 | 8135.32 | 0.00 | 78.54 | 19.62 | 284.20 |
| 61 | 1011.90 | 2 | SLE R | -147958.00 | -9832.42 | 7092.42 | 0.00 | 78.54 | 18.30 | 265.74 |
| 62 | 1071.43 | 2 | SLE R | -143112.00 | -8477.01 | 6114.72 | 0.00 | 78.54 | 17.04 | 248.06 |
| 63 | 1130.95 | 2 | SLE R | -138275.00 | -7221.16 | 5208.84 | 0.00 | 78.54 | 15.85 | 231.27 |
| 64 | 1190.48 | 2 | SLE R | -133444.00 | -6070.65 | 4378.94 | 0.00 | 78.54 | 14.72 | 215.39 |
| 65 | 1250.00 | 2 | SLE R | -128621.00 | -5028.41 | 3627.14 | 0.00 | 78.54 | 13.66 | 200.47 |
| 66 | 1309.52 | 2 | SLE R | -123805.00 | -4094.94 | 2953.80 | 0.00 | 78.54 | 12.68 | 186.49 |
| 67 | 1369.05 | 2 | SLE R | -118995.00 | -3268.74 | 2357.84 | 0.00 | 78.54 | 11.76 | 173.46 |
| 68 | 1428.57 | 2 | SLE R | -114192.00 | -2546.68 | 1836.99 | 0.00 | 78.54 | 10.91 | 161.33 |
| 69 | 1488.10 | 2 | SLE R | -109395.00 | -1924.33 | 1388.07 | 0.00 | 78.54 | 10.12 | 150.08 |
| 70 | 1547.62 | 2 | SLE R | -104604.00 | -1396.25 | 1007.15 | 0.00 | 78.54 | 9.39 | 139.66 |
| 71 | 1607.14 | 2 | SLE R | -99818.40 | -956.23 | 689.75 | 0.00 | 78.54 | 8.72 | 130.00 |
| 72 | 1666.67 | 2 | SLE R | -95038.20 | -597.51 | 431.00 | 0.00 | 78.54 | 8.11 | 121.06 |
| 73 | 1726.19 | 2 | SLE R | -90263.00 | -312.95 | 225.74 | 0.00 | 78.54 | 7.54 | 112.77 |
| 74 | 1785.71 | 2 | SLE R | -85492.80 | -95.18 | 68.66 | 0.00 | 78.54 | 7.01 | 105.06 |
| 75 | 1845.24 | 2 | SLE R | -80727.00 | 63.30 | -45.66 | 0.00 | 78.54 | 6.60 | 98.97 |
| 76 | 1904.76 | 2 | SLE R | -75965.70 | 170.03 | -122.65 | 0.00 | 78.54 | 6.28 | 94.09 |
| 77 | 1964.29 | 2 | SLE R | -71208.40 | 232.52 | -167.72 | 0.00 | 78.54 | 5.94 | 88.82 |
| 78 | 2023.81 | 2 | SLE R | -66454.90 | 258.20 | -186.25 | 0.00 | 78.54 | 5.57 | 83.25 |
| 79 | 2083.33 | 2 | SLE R | -61705.00 | 254.43 | -183.53 | 0.00 | 78.54 | 5.18 | 77.43 |
| 80 | 2142.86 | 2 | SLE R | -56958.30 | 228.43 | -164.78 | 0.00 | 78.54 | 4.78 | 71.41 |
| 81 | 2202.38 | 2 | SLE R | -52214.80 | 187.36 | -135.15 | 0.00 | 78.54 | 4.36 | 65.28 |
| 82 | 2261.90 | 2 | SLE R | -47474.00 | 138.24 | -99.72 | 0.00 | 78.54 | 3.95 | 59.07 |
| 83 | 2321.43 | 2 | SLE R | -42735.80 | 88.05 | -63.51 | 0.00 | 78.54 | 3.53 | 52.86 |
| 84 | 2380.95 | 2 | SLE R | -37999.90 | 43.70 | -31.52 | 0.00 | 78.54 | 3.12 | 46.71 |
| 85 | 2440.48 | 2 | SLE R | -33266.00 | 12.07 | -8.70 | 0.00 | 78.54 | 2.71 | 40.66 |
| 86 | 2500.00 | 2 | SLE R | -28533.90 | 0.00 | 0.00 | 0.00 | 78.54 | 2.32 | 34.79 |
| 87 | 0.00 | 4 | SLE Q | -213163.00 | -21166.00 | 15267.70 | 0.00 | 78.54 | 30.83 | 443.61 |
| 88 | 59.52 | 4 | SLE Q | -212890.00 | -23012.70 | 16599.70 | 0.00 | 78.54 | 31.99 | 459.30 |
| 89 | 119.05 | 4 | SLE Q | -210666.00 | -24285.80 | 17518.10 | 0.00 | 78.54 | 32.62 | 467.64 |
| 90 | 178.57 | 4 | SLE Q | -208450.00 | -25064.60 | 18079.80 | 0.00 | 78.54 | 32.94 | 471.70 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|------------|-----------|----------|------|-------|-------|--------|
| 91 | 238.09 | 4 | SLE Q | -206239.00 | -25422.50 | 18338.00 | 0.00 | 78.54 | 32.99 | 472.11 |
| 92 | 297.62 | 4 | SLE Q | -204035.00 | -25427.30 | 18341.50 | 0.00 | 78.54 | 32.81 | 469.47 |
| 93 | 357.14 | 4 | SLE Q | -201838.00 | -25112.90 | 18114.70 | 0.00 | 78.54 | 32.43 | 464.06 |
| 94 | 416.67 | 4 | SLE Q | -196891.00 | -24429.80 | 17622.00 | 0.00 | 78.54 | 31.59 | 452.10 |
| 95 | 476.19 | 4 | SLE Q | -191954.00 | -23429.20 | 16900.20 | 0.00 | 78.54 | 30.56 | 437.39 |
| 96 | 535.71 | 4 | SLE Q | -187028.00 | -22187.00 | 16004.20 | 0.00 | 78.54 | 29.36 | 420.61 |
| 97 | 595.24 | 4 | SLE Q | -182112.00 | -20769.80 | 14981.90 | 0.00 | 78.54 | 28.06 | 402.31 |
| 98 | 654.76 | 4 | SLE Q | -177206.00 | -19235.20 | 13874.90 | 0.00 | 78.54 | 26.68 | 383.01 |
| 99 | 714.29 | 4 | SLE Q | -172309.00 | -17632.70 | 12719.00 | 0.00 | 78.54 | 25.26 | 363.13 |
| 100 | 773.81 | 4 | SLE Q | -167421.00 | -16004.10 | 11544.20 | 0.00 | 78.54 | 23.82 | 343.04 |
| 101 | 833.33 | 4 | SLE Q | -162542.00 | -14384.20 | 10375.70 | 0.00 | 78.54 | 22.39 | 323.03 |
| 102 | 892.86 | 4 | SLE Q | -157672.00 | -12801.30 | 9233.99 | 0.00 | 78.54 | 20.99 | 303.35 |
| 103 | 952.38 | 4 | SLE Q | -152811.00 | -11278.20 | 8135.32 | 0.00 | 78.54 | 19.62 | 284.20 |
| 104 | 1011.90 | 4 | SLE Q | -147958.00 | -9832.42 | 7092.42 | 0.00 | 78.54 | 18.30 | 265.74 |
| 105 | 1071.43 | 4 | SLE Q | -143112.00 | -8477.01 | 6114.72 | 0.00 | 78.54 | 17.04 | 248.06 |
| 106 | 1130.95 | 4 | SLE Q | -138275.00 | -7221.16 | 5208.84 | 0.00 | 78.54 | 15.85 | 231.27 |
| 107 | 1190.48 | 4 | SLE Q | -133444.00 | -6070.65 | 4378.94 | 0.00 | 78.54 | 14.72 | 215.39 |
| 108 | 1250.00 | 4 | SLE Q | -128621.00 | -5028.41 | 3627.14 | 0.00 | 78.54 | 13.66 | 200.47 |
| 109 | 1309.52 | 4 | SLE Q | -123805.00 | -4094.94 | 2953.80 | 0.00 | 78.54 | 12.68 | 186.49 |
| 110 | 1369.05 | 4 | SLE Q | -118999.00 | -3268.74 | 2357.84 | 0.00 | 78.54 | 11.76 | 173.46 |
| 111 | 1428.57 | 4 | SLE Q | -114192.00 | -2546.68 | 1836.99 | 0.00 | 78.54 | 10.91 | 161.33 |
| 112 | 1488.10 | 4 | SLE Q | -109395.00 | -1924.33 | 1388.07 | 0.00 | 78.54 | 10.12 | 150.08 |
| 113 | 1547.62 | 4 | SLE Q | -104604.00 | -1396.25 | 1007.15 | 0.00 | 78.54 | 9.39 | 139.66 |
| 114 | 1607.14 | 4 | SLE Q | -99818.40 | -956.23 | 689.75 | 0.00 | 78.54 | 8.72 | 130.00 |
| 115 | 1666.67 | 4 | SLE Q | -95038.20 | -597.51 | 431.00 | 0.00 | 78.54 | 8.11 | 121.06 |
| 116 | 1726.19 | 4 | SLE Q | -90263.00 | -312.95 | 225.74 | 0.00 | 78.54 | 7.54 | 112.77 |
| 117 | 1785.71 | 4 | SLE Q | -85492.80 | -95.18 | 68.66 | 0.00 | 78.54 | 7.01 | 105.06 |
| 118 | 1845.24 | 4 | SLE Q | -80727.00 | 63.30 | -45.66 | 0.00 | 78.54 | 6.60 | 98.97 |
| 119 | 1904.76 | 4 | SLE Q | -75965.70 | 170.03 | -122.65 | 0.00 | 78.54 | 6.28 | 94.09 |
| 120 | 1964.29 | 4 | SLE Q | -71208.40 | 232.52 | -167.72 | 0.00 | 78.54 | 5.94 | 88.82 |
| 121 | 2023.81 | 4 | SLE Q | -66454.90 | 258.20 | -186.25 | 0.00 | 78.54 | 5.57 | 83.25 |
| 122 | 2083.33 | 4 | SLE Q | -61705.00 | 254.43 | -183.53 | 0.00 | 78.54 | 5.18 | 77.43 |
| 123 | 2142.86 | 4 | SLE Q | -56958.30 | 228.43 | -164.78 | 0.00 | 78.54 | 4.78 | 71.41 |
| 124 | 2202.38 | 4 | SLE Q | -52214.80 | 187.36 | -135.15 | 0.00 | 78.54 | 4.36 | 65.28 |
| 125 | 2261.90 | 4 | SLE Q | -47474.00 | 138.24 | -99.72 | 0.00 | 78.54 | 3.95 | 59.07 |
| 126 | 2321.43 | 4 | SLE Q | -42735.80 | 88.05 | -63.51 | 0.00 | 78.54 | 3.53 | 52.86 |
| 127 | 2380.95 | 4 | SLE Q | -37999.90 | 43.70 | -31.52 | 0.00 | 78.54 | 3.12 | 46.71 |
| 128 | 2440.48 | 4 | SLE Q | -33266.00 | 12.07 | -8.70 | 0.00 | 78.54 | 2.71 | 40.66 |
| 129 | 2500.00 | 4 | SLE Q | -28533.90 | 0.00 | 0.00 | 0.00 | 78.54 | 2.32 | 34.79 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 1 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 6 | SLU N cost - min. sic. |
| 48 | C.Rare - Sc min (max compr.), C.Rare - Sf min (max compr.) |
| 49 | C.Rare - Sc max (min. compr.) |
| 51 | C.Rare - Sf max (max traz.) |
| 91 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf min (max compr.) |
| 92 | C.Q.Per. - Sc max (min. compr.) |
| 94 | C.Q.Per. - Sf max (max traz.) |

Palo n. 27

Caratteristiche del palo e dei materiali utilizzati

| R | CF | Cls | Fck | Fctk | Fcd | Fctd | Tp | Fyk | Fyd |
|-------|------|--------|-----------|-----------|-----------|-----------|-------|-----------|-----------|
| <cm> | <cm> | | <daN/cm²> | <daN/cm²> | <daN/cm²> | <daN/cm²> | | <daN/cm²> | <daN/cm²> |
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N | Mx | My | Mz |
|-----|-------|--------|--------|--------|
| | <daN> | <daNm> | <daNm> | <daNm> |
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 27 (-143)

| Caso | CC | TCC | Az | N | Tx | Ty | Mx | My |
|------|----|-------|-----|-----------|---------|--------|----------|----------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | RVN | 253546.00 | 6224.89 | 820.64 | 32975.90 | 32425.90 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 253546.00 | 6224.89 | 820.64 | 32975.90 | 32425.90 |
| 2 | 2 | SLE R | RVN | 187812.00 | 4611.03 | 607.88 | 24426.60 | 24019.20 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 187812.00 | 4611.03 | 607.88 | 24426.60 | 24019.20 |

Relazione di calcolo

| | | | | | | | | |
|---|---|-------|-----|-----------|---------|--------|----------|----------|
| 3 | 3 | SLE F | RVN | 187812.00 | 4611.03 | 607.88 | 24426.60 | 24019.20 |
| | | SLE F | TAG | | | | 0.00 | 0.00 |
| | | SLE F | ECC | | | | 0.00 | 0.00 |
| | | SLE F | TOT | 187812.00 | 4611.03 | 607.88 | 24426.60 | 24019.20 |
| 4 | 4 | SLE Q | RVN | 187812.00 | 4611.03 | 607.88 | 24426.60 | 24019.20 |
| | | SLE Q | TAG | | | | 0.00 | 0.00 |
| | | SLE Q | ECC | | | | 0.00 | 0.00 |
| | | SLE Q | TOT | 187812.00 | 4611.03 | 607.88 | 24426.60 | 24019.20 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|------|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | 1 | -253546.00 | -6224.89 | -820.64 | -32975.90 | -32425.90 |
| 2 | 2 | SLE R | 1 | -187812.00 | -4611.03 | -607.88 | -24426.60 | -24019.20 |
| 3 | 3 | SLE F | 1 | -187812.00 | -4611.03 | -607.88 | -24426.60 | -24019.20 |
| 4 | 4 | SLE Q | 1 | -187812.00 | -4611.03 | -607.88 | -24426.60 | -24019.20 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | a <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|--------|
| 1 | 0.00 | 1 | SLU | -253546.00 | 32830.80 | -32283.20 | -253546.00 | 172466.00 | -169357.00 | 2-3 | 224.38 | 5.250 |
| 2 | 59.52 | 1 | SLU | -252992.00 | 35060.50 | -34475.70 | -252992.00 | 172335.00 | -169241.00 | 2-3 | 224.38 | 4.912 |
| 3 | 119.05 | 1 | SLU | -250208.00 | 36499.30 | -35890.50 | -250208.00 | 171676.00 | -168660.00 | 2-3 | 224.38 | 4.701 |
| 4 | 178.57 | 1 | SLU | -247432.00 | 37259.90 | -36638.40 | -247432.00 | 171017.00 | -168079.00 | 2-3 | 224.38 | 4.589 |
| 5 | 238.09 | 1 | SLU | -244664.00 | 37446.60 | -36822.00 | -244664.00 | 170387.00 | -167429.00 | 2-3 | 224.38 | 4.549 |
| 6 | 297.62 | 1 | SLU | -241904.00 | 37154.90 | -36535.10 | -241904.00 | 169763.00 | -166769.00 | 2-3 | 224.38 | 4.567 |
| 7 | 357.14 | 1 | SLU | -239151.00 | 36434.70 | -35826.90 | -239151.00 | 169140.00 | -166111.00 | 2-3 | 224.38 | 4.639 |
| 8 | 416.67 | 1 | SLU | -233256.00 | 35224.40 | -34636.90 | -233256.00 | 167798.00 | -164687.00 | 2-3 | 224.38 | 4.759 |
| 9 | 476.19 | 1 | SLU | -227373.00 | 33597.20 | -33036.90 | -227373.00 | 166453.00 | -163260.00 | 2-3 | 224.38 | 4.948 |
| 10 | 535.71 | 1 | SLU | -221503.00 | 31658.50 | -31130.50 | -221503.00 | 165103.00 | -161826.00 | 2-3 | 224.38 | 5.207 |
| 11 | 595.24 | 1 | SLU | -215644.00 | 29500.20 | -29008.10 | -215644.00 | 162111.00 | -162183.00 | 2-3 | 225.00 | 5.543 |
| 12 | 654.76 | 1 | SLU | -209797.00 | 27201.60 | -26747.90 | -209797.00 | 160727.00 | -160747.00 | 2-3 | 225.00 | 5.959 |
| 13 | 714.29 | 1 | SLU | -203961.00 | 24830.40 | -24416.20 | -203961.00 | 159338.00 | -159303.00 | 2-3 | 225.00 | 6.470 |
| 14 | 773.81 | 1 | SLU | -198136.00 | 22443.30 | -22069.00 | -198136.00 | 157947.00 | -157857.00 | 2-3 | 225.00 | 7.095 |
| 15 | 833.33 | 1 | SLU | -192321.00 | 20087.30 | -19752.20 | -192321.00 | 156549.00 | -156402.00 | 2-3 | 225.00 | 7.855 |
| 16 | 892.86 | 1 | SLU | -186517.00 | 17800.30 | -17503.40 | -186517.00 | 155149.00 | -154945.00 | 2-3 | 225.00 | 8.783 |
| 17 | 952.38 | 1 | SLU | -180723.00 | 15612.20 | -15351.80 | -180723.00 | 153744.00 | -153483.00 | 2-3 | 225.00 | 9.922 |
| 18 | 1011.90 | 1 | SLU | -174939.00 | 13545.90 | -13320.00 | -174939.00 | 152335.00 | -152015.00 | 2-3 | 225.00 | 11.328 |
| 19 | 1071.43 | 1 | SLU | -169164.00 | 11618.10 | -11424.30 | -169164.00 | 150924.00 | -150544.00 | 2-3 | 225.00 | 13.083 |
| 20 | 1130.95 | 1 | SLU | -163398.00 | 9840.08 | -9675.95 | -163398.00 | 149508.00 | -149066.00 | 2-3 | 225.00 | 15.298 |
| 21 | 1190.48 | 1 | SLU | -157641.00 | 8218.40 | -8081.32 | -157641.00 | 148090.00 | -147586.00 | 2-3 | 225.00 | 16.311 |
| 22 | 1250.00 | 1 | SLU | -151892.00 | 6755.81 | -6643.13 | -151892.00 | 146667.00 | -146099.00 | 2-3 | 225.00 | 16.928 |
| 23 | 1309.52 | 1 | SLU | -146152.00 | 5451.76 | -5360.83 | -146152.00 | 145241.00 | -144609.00 | 2-3 | 225.00 | 17.593 |
| 24 | 1369.05 | 1 | SLU | -140419.00 | 4303.01 | -4231.23 | -140419.00 | 143812.00 | -143114.00 | 2-3 | 225.00 | 18.311 |
| 25 | 1428.57 | 1 | SLU | -134694.00 | 3304.14 | -3249.03 | -134694.00 | 142380.00 | -141615.00 | 2-3 | 225.00 | 19.090 |
| 26 | 1488.10 | 1 | SLU | -128976.00 | 2448.05 | -2407.22 | -128976.00 | 140945.00 | -140113.00 | 2-3 | 225.00 | 19.936 |
| 27 | 1547.62 | 1 | SLU | -123265.00 | 1726.29 | -1697.50 | -123265.00 | 139341.00 | -138693.00 | 2-3 | 225.00 | 20.860 |
| 28 | 1607.14 | 1 | SLU | -117560.00 | 1129.46 | -1110.62 | -117560.00 | 137710.00 | -137284.00 | 2-3 | 225.00 | 21.872 |
| 29 | 1666.67 | 1 | SLU | -111862.00 | 647.48 | -636.67 | -111862.00 | 136066.00 | -135872.00 | 2-3 | 225.00 | 22.986 |
| 30 | 1726.19 | 1 | SLU | -106170.00 | 269.79 | -265.29 | -106170.00 | 134417.00 | -134458.00 | 2-3 | 225.00 | 24.218 |
| 31 | 1785.71 | 1 | SLU | -100484.00 | -14.39 | 14.15 | -100484.00 | 132875.00 | 132701.00 | 2-3 | 45.00 | 25.589 |
| 32 | 1845.24 | 1 | SLU | -94802.70 | -215.96 | 212.36 | -94802.70 | 131383.00 | 131089.00 | 2-3 | 45.00 | 27.122 |
| 33 | 1904.76 | 1 | SLU | -89126.80 | -345.81 | 340.04 | -89126.80 | 129888.00 | 129473.00 | 2-3 | 45.00 | 28.849 |
| 34 | 1964.29 | 1 | SLU | -83455.60 | -414.74 | 407.82 | -83455.60 | 128382.00 | 127855.00 | 2-3 | 45.00 | 30.810 |
| 35 | 2023.81 | 1 | SLU | -77789.00 | -433.42 | 426.19 | -77789.00 | 126844.00 | 126243.00 | 2-3 | 45.00 | 33.054 |
| 36 | 2083.33 | 1 | SLU | -72126.50 | -412.32 | 405.45 | -72126.50 | 125304.00 | 124628.00 | 2-3 | 45.00 | 35.649 |
| 37 | 2142.86 | 1 | SLU | -66467.80 | -361.79 | 355.75 | -66467.80 | 123759.00 | 123005.00 | 2-3 | 45.00 | 38.684 |
| 38 | 2202.38 | 1 | SLU | -60812.70 | -291.95 | 287.08 | -60812.70 | 122212.00 | 121380.00 | 2-3 | 45.00 | 42.281 |
| 39 | 2261.90 | 1 | SLU | -55160.90 | -212.83 | 209.28 | -55160.90 | 120660.00 | 119747.00 | 2-3 | 45.00 | 46.614 |
| 40 | 2321.43 | 1 | SLU | -49512.10 | -134.30 | 132.06 | -49512.10 | 119020.00 | 118162.00 | 2-3 | 45.00 | 51.932 |
| 41 | 2380.95 | 1 | SLU | -43865.90 | -66.16 | 65.06 | -43865.90 | 117253.00 | 116641.00 | 2-3 | 45.00 | 58.616 |
| 42 | 2440.48 | 1 | SLU | -38222.00 | -18.16 | 17.86 | -38222.00 | 115475.00 | 115118.00 | 2-3 | 45.00 | 67.271 |
| 43 | 2500.00 | 1 | SLU | -32580.20 | 0.00 | 0.00 | -32580.20 | | | | | 78.921 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | CC | TCC | Ty <daN> | Tz <daN> | bw <m> | Asw <cmq> | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|-----------|--------------|---------------|------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SLU | 6224.89 | 820.64 | 0.85 | 11.31 | 6278.75 | 1.00 | 32294.70 | 367986.00 | 32294.70 | 5.144 |
| 2 | 59.52 | 1 | SLU | 4239.23 | 558.87 | 0.85 | 11.31 | 4275.91 | 1.00 | 32294.70 | 367906.00 | 32294.70 | 7.553 |
| 3 | 119.05 | 1 | SLU | 2526.60 | 333.09 | 0.85 | 11.31 | 2548.47 | 1.00 | 32294.70 | 367508.00 | 32294.70 | 12.672 |
| 4 | 178.57 | 1 | SLU | 1067.49 | 140.73 | 0.85 | 11.31 | 1076.73 | 1.00 | 32294.70 | 367110.00 | 32294.70 | 29.993 |
| 5 | 238.09 | 1 | SLU | -158.20 | -20.86 | 0.85 | 11.31 | 159.57 | 1.00 | 32294.70 | 366714.00 | 32294.70 | >100 |
| 6 | 297.62 | 1 | SLU | -1170.83 | -154.35 | 0.85 | 11.31 | 1180.96 | 1.00 | 32294.70 | 366318.00 | 32294.70 | 27.346 |
| 7 | 357.14 | 1 | SLU | -2249.97 | -296.62 | 0.85 | 11.31 | 2269.43 | 1.00 | 32294.70 | 365924.00 | 32294.70 | 14.230 |

Relazione di calcolo

| | | | | | | | | | | | | | |
|----|---------|---|-----|----------|---------|------|-------|---------|------|----------|-----------|----------|--------|
| 8 | 416.67 | 1 | SLU | -3357.71 | -442.66 | 0.85 | 11.31 | 3386.76 | 1.00 | 32294.70 | 365080.00 | 32294.70 | 9.536 |
| 9 | 476.19 | 1 | SLU | -4203.21 | -554.12 | 0.85 | 11.31 | 4239.58 | 1.00 | 32294.70 | 364237.00 | 32294.70 | 7.617 |
| 10 | 535.71 | 1 | SLU | -4818.54 | -635.24 | 0.85 | 11.31 | 4860.23 | 1.00 | 32294.70 | 363396.00 | 32294.70 | 6.645 |
| 11 | 595.24 | 1 | SLU | -5234.08 | -690.02 | 0.85 | 11.31 | 5279.37 | 1.00 | 32294.70 | 362557.00 | 32294.70 | 6.117 |
| 12 | 654.76 | 1 | SLU | -5478.32 | -722.22 | 0.85 | 11.31 | 5525.72 | 1.00 | 32294.70 | 361719.00 | 32294.70 | 5.844 |
| 13 | 714.29 | 1 | SLU | -5577.63 | -735.32 | 0.85 | 11.31 | 5625.89 | 1.00 | 32294.70 | 360883.00 | 32294.70 | 5.740 |
| 14 | 773.81 | 1 | SLU | -5556.23 | -732.49 | 0.85 | 11.31 | 5604.31 | 1.00 | 32294.70 | 360049.00 | 32294.70 | 5.762 |
| 15 | 833.33 | 1 | SLU | -5436.10 | -716.66 | 0.85 | 11.31 | 5483.14 | 1.00 | 32294.70 | 359216.00 | 32294.70 | 5.890 |
| 16 | 892.86 | 1 | SLU | -5237.01 | -690.41 | 0.85 | 11.31 | 5282.33 | 1.00 | 32294.70 | 358385.00 | 32294.70 | 6.114 |
| 17 | 952.38 | 1 | SLU | -4976.57 | -656.08 | 0.85 | 11.31 | 5019.63 | 1.00 | 32294.70 | 357555.00 | 32294.70 | 6.434 |
| 18 | 1011.90 | 1 | SLU | -4670.30 | -615.70 | 0.85 | 11.31 | 4710.71 | 1.00 | 32294.70 | 356726.00 | 32294.70 | 6.856 |
| 19 | 1071.43 | 1 | SLU | -4331.74 | -571.07 | 0.85 | 11.31 | 4369.22 | 1.00 | 32294.70 | 355899.00 | 32294.70 | 7.391 |
| 20 | 1130.95 | 1 | SLU | -3972.56 | -523.71 | 0.85 | 11.31 | 4006.93 | 1.00 | 32294.70 | 355073.00 | 32294.70 | 8.060 |
| 21 | 1190.48 | 1 | SLU | -3602.71 | -474.96 | 0.85 | 11.31 | 3633.89 | 1.00 | 32294.70 | 354248.00 | 32294.70 | 8.887 |
| 22 | 1250.00 | 1 | SLU | -3230.58 | -425.90 | 0.85 | 11.31 | 3258.53 | 1.00 | 32294.70 | 353425.00 | 32294.70 | 9.911 |
| 23 | 1309.52 | 1 | SLU | -2863.08 | -377.45 | 0.85 | 11.31 | 2887.86 | 1.00 | 32294.70 | 352603.00 | 32294.70 | 11.183 |
| 24 | 1369.05 | 1 | SLU | -2505.88 | -330.36 | 0.85 | 11.31 | 2527.56 | 1.00 | 32294.70 | 351782.00 | 32294.70 | 12.777 |
| 25 | 1428.57 | 1 | SLU | -2163.48 | -285.22 | 0.85 | 11.31 | 2182.20 | 1.00 | 32294.70 | 350962.00 | 32294.70 | 14.799 |
| 26 | 1488.10 | 1 | SLU | -1839.39 | -242.49 | 0.85 | 11.31 | 1855.30 | 1.00 | 32294.70 | 350143.00 | 32294.70 | 17.407 |
| 27 | 1547.62 | 1 | SLU | -1536.25 | -202.53 | 0.85 | 11.31 | 1549.55 | 1.00 | 32294.70 | 349324.00 | 32294.70 | 20.841 |
| 28 | 1607.14 | 1 | SLU | -1255.99 | -165.58 | 0.85 | 11.31 | 1266.86 | 1.00 | 32294.70 | 348507.00 | 32294.70 | 25.492 |
| 29 | 1666.67 | 1 | SLU | -999.91 | -131.82 | 0.85 | 11.31 | 1008.56 | 1.00 | 32294.70 | 347691.00 | 32294.70 | 32.021 |
| 30 | 1726.19 | 1 | SLU | -768.81 | -101.35 | 0.85 | 11.31 | 775.46 | 1.00 | 32294.70 | 346876.00 | 32294.70 | 41.646 |
| 31 | 1785.71 | 1 | SLU | -563.09 | -74.23 | 0.85 | 11.31 | 567.96 | 1.00 | 32294.70 | 346061.00 | 32294.70 | 56.861 |
| 32 | 1845.24 | 1 | SLU | -382.86 | -50.47 | 0.85 | 11.31 | 386.17 | 1.00 | 32294.70 | 345248.00 | 32294.70 | 83.628 |
| 33 | 1904.76 | 1 | SLU | -227.99 | -30.06 | 0.85 | 11.31 | 229.96 | 1.00 | 32294.70 | 344435.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -98.20 | -12.95 | 0.85 | 11.31 | 99.05 | 1.00 | 32294.70 | 343622.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | 6.87 | 0.91 | 0.85 | 11.31 | 6.93 | 1.00 | 32294.70 | 342811.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 87.64 | 11.55 | 0.85 | 11.31 | 88.40 | 1.00 | 32294.70 | 341999.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 144.51 | 19.05 | 0.85 | 11.31 | 145.76 | 1.00 | 32294.70 | 341189.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 177.85 | 23.45 | 0.85 | 11.31 | 179.38 | 1.00 | 32294.70 | 340379.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 187.96 | 24.78 | 0.85 | 11.31 | 189.59 | 1.00 | 32294.70 | 339569.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 175.10 | 23.08 | 0.85 | 11.31 | 176.62 | 1.00 | 32294.70 | 338760.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 139.44 | 18.38 | 0.85 | 11.31 | 140.64 | 1.00 | 32294.70 | 337951.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 81.05 | 10.69 | 0.85 | 11.31 | 81.76 | 1.00 | 32294.70 | 337143.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | OC | TCC | N <daN> | Mx <daNm> | My <daNm> | AfT <cmq> | AfC <cmq> | σ_c <daN/cmq> | σ_f <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-------------------------|-------------------------|
| 44 | 0.00 | 2 | SLE R | -187812.00 | -23913.50 | 24319.10 | 9.42 | 69.11 | 32.79 | 469.02 |
| 45 | 59.52 | 2 | SLE R | -187715.00 | -25537.60 | 25970.70 | 12.57 | 65.97 | 34.07 | 486.57 |
| 46 | 119.05 | 2 | SLE R | -185843.00 | -26585.60 | 27036.50 | 15.71 | 62.83 | 34.82 | 496.47 |
| 47 | 178.57 | 2 | SLE R | -183977.00 | -27139.60 | 27599.90 | 15.71 | 62.83 | 35.17 | 501.06 |
| 48 | 238.09 | 2 | SLE R | -182117.00 | -27275.50 | 27738.20 | 15.71 | 62.83 | 35.17 | 500.87 |
| 49 | 297.62 | 2 | SLE R | -180262.00 | -27063.10 | 27522.10 | 15.71 | 62.83 | 34.87 | 496.55 |
| 50 | 357.14 | 2 | SLE R | -178413.00 | -26538.50 | 26988.60 | 15.71 | 62.83 | 34.30 | 488.51 |
| 51 | 416.67 | 2 | SLE R | -174061.00 | -25656.90 | 26092.20 | 15.71 | 62.83 | 33.26 | 473.82 |
| 52 | 476.19 | 2 | SLE R | -169719.00 | -24471.70 | 24886.80 | 15.71 | 62.83 | 31.96 | 455.63 |
| 53 | 535.71 | 2 | SLE R | -165386.00 | -23059.60 | 23450.70 | 15.71 | 62.83 | 30.48 | 434.97 |
| 54 | 595.24 | 2 | SLE R | -161061.00 | -21487.50 | 21852.00 | 9.42 | 69.11 | 28.89 | 412.80 |
| 55 | 654.76 | 2 | SLE R | -156746.00 | -19813.20 | 20149.30 | 9.42 | 69.11 | 27.25 | 389.90 |
| 56 | 714.29 | 2 | SLE R | -152438.00 | -18086.10 | 18392.90 | 0.00 | 78.54 | 25.60 | 366.88 |
| 57 | 773.81 | 2 | SLE R | -148139.00 | -16347.40 | 16624.70 | 0.00 | 78.54 | 23.98 | 344.14 |
| 58 | 833.33 | 2 | SLE R | -143848.00 | -14631.30 | 14879.50 | 0.00 | 78.54 | 22.37 | 321.74 |
| 59 | 892.86 | 2 | SLE R | -139564.00 | -12965.50 | 13185.40 | 0.00 | 78.54 | 20.81 | 299.86 |
| 60 | 952.38 | 2 | SLE R | -135288.00 | -11371.70 | 11564.60 | 0.00 | 78.54 | 19.30 | 278.70 |
| 61 | 1011.90 | 2 | SLE R | -131019.00 | -9866.65 | 10034.00 | 0.00 | 78.54 | 17.85 | 258.44 |
| 62 | 1071.43 | 2 | SLE R | -126758.00 | -8462.48 | 8606.03 | 0.00 | 78.54 | 16.48 | 239.20 |
| 63 | 1130.95 | 2 | SLE R | -122503.00 | -7167.37 | 7288.95 | 0.00 | 78.54 | 15.19 | 221.06 |
| 64 | 1190.48 | 2 | SLE R | -118254.00 | -5986.16 | 6087.71 | 0.00 | 78.54 | 13.98 | 204.06 |
| 65 | 1250.00 | 2 | SLE R | -114012.00 | -4920.83 | 5004.31 | 0.00 | 78.54 | 12.86 | 188.23 |
| 66 | 1309.52 | 2 | SLE R | -109776.00 | -3970.98 | 4038.34 | 0.00 | 78.54 | 11.82 | 173.56 |
| 67 | 1369.05 | 2 | SLE R | -105546.00 | -3134.25 | 3187.41 | 0.00 | 78.54 | 10.87 | 160.04 |
| 68 | 1428.57 | 2 | SLE R | -101322.00 | -2406.69 | 2447.51 | 0.00 | 78.54 | 9.99 | 147.61 |
| 69 | 1488.10 | 2 | SLE R | -97102.80 | -1783.12 | 1813.37 | 0.00 | 78.54 | 9.19 | 136.23 |
| 70 | 1547.62 | 2 | SLE R | -92889.10 | -1257.40 | 1278.73 | 0.00 | 78.54 | 8.47 | 125.83 |
| 71 | 1607.14 | 2 | SLE R | -88680.30 | -822.68 | 836.64 | 0.00 | 78.54 | 7.81 | 116.35 |
| 72 | 1666.67 | 2 | SLE R | -84476.30 | -471.61 | 479.61 | 0.00 | 78.54 | 7.21 | 107.72 |
| 73 | 1726.19 | 2 | SLE R | -80276.80 | -196.51 | 199.84 | 0.00 | 78.54 | 6.67 | 99.84 |
| 74 | 1785.71 | 2 | SLE R | -76081.70 | 10.48 | -10.66 | 0.00 | 78.54 | 6.19 | 92.87 |
| 75 | 1845.24 | 2 | SLE R | -71890.60 | 157.30 | -159.97 | 0.00 | 78.54 | 5.96 | 89.23 |
| 76 | 1904.76 | 2 | SLE R | -67703.30 | 251.88 | -256.15 | 0.00 | 78.54 | 5.69 | 85.07 |
| 77 | 1964.29 | 2 | SLE R | -63519.70 | 302.09 | -307.21 | 0.00 | 78.54 | 5.38 | 80.48 |
| 78 | 2023.81 | 2 | SLE R | -59339.50 | 315.69 | -321.05 | 0.00 | 78.54 | 5.05 | 75.52 |
| 79 | 2083.33 | 2 | SLE R | -55162.50 | 300.33 | -305.43 | 0.00 | 78.54 | 4.70 | 70.27 |
| 80 | 2142.86 | 2 | SLE R | -50988.50 | 263.52 | -267.99 | 0.00 | 78.54 | 4.34 | 64.81 |
| 81 | 2202.38 | 2 | SLE R | -46817.10 | 212.66 | -216.26 | 0.00 | 78.54 | 3.96 | 59.21 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|------------|-----------|----------|-------|-------|-------|--------|
| 82 | 2261.90 | 2 | SLE R | -42648.30 | 155.02 | -157.65 | 0.00 | 78.54 | 3.58 | 53.55 |
| 83 | 2321.43 | 2 | SLE R | -38481.80 | 97.82 | -99.48 | 0.00 | 78.54 | 3.20 | 47.90 |
| 84 | 2380.95 | 2 | SLE R | -34317.40 | 48.19 | -49.01 | 0.00 | 78.54 | 2.82 | 42.32 |
| 85 | 2440.48 | 2 | SLE R | -30154.70 | 13.23 | -13.45 | 0.00 | 78.54 | 2.46 | 36.90 |
| 86 | 2500.00 | 2 | SLE R | -25993.70 | 0.00 | 0.00 | 0.00 | 78.54 | 2.11 | 31.69 |
| 87 | 0.00 | 4 | SLE Q | -187812.00 | -23913.50 | 24319.10 | 9.42 | 69.11 | 32.79 | 469.02 |
| 88 | 59.52 | 4 | SLE Q | -187715.00 | -25537.60 | 25970.70 | 12.57 | 65.97 | 34.07 | 486.57 |
| 89 | 119.05 | 4 | SLE Q | -185843.00 | -26585.60 | 27036.50 | 15.71 | 62.83 | 34.82 | 496.47 |
| 90 | 178.57 | 4 | SLE Q | -183977.00 | -27139.60 | 27599.90 | 15.71 | 62.83 | 35.17 | 501.06 |
| 91 | 238.09 | 4 | SLE Q | -182117.00 | -27275.50 | 27738.20 | 15.71 | 62.83 | 35.17 | 500.87 |
| 92 | 297.62 | 4 | SLE Q | -180262.00 | -27063.10 | 27522.10 | 15.71 | 62.83 | 34.87 | 496.55 |
| 93 | 357.14 | 4 | SLE Q | -178413.00 | -26538.50 | 26988.60 | 15.71 | 62.83 | 34.30 | 488.51 |
| 94 | 416.67 | 4 | SLE Q | -174061.00 | -25656.90 | 26092.20 | 15.71 | 62.83 | 33.26 | 473.82 |
| 95 | 476.19 | 4 | SLE Q | -169719.00 | -24471.70 | 24886.80 | 15.71 | 62.83 | 31.96 | 455.63 |
| 96 | 535.71 | 4 | SLE Q | -165386.00 | -23059.60 | 23450.70 | 15.71 | 62.83 | 30.48 | 434.97 |
| 97 | 595.24 | 4 | SLE Q | -161061.00 | -21487.50 | 21852.00 | 9.42 | 69.11 | 28.89 | 412.80 |
| 98 | 654.76 | 4 | SLE Q | -156746.00 | -19813.20 | 20149.30 | 9.42 | 69.11 | 27.25 | 389.90 |
| 99 | 714.29 | 4 | SLE Q | -152438.00 | -18086.10 | 18392.90 | 0.00 | 78.54 | 25.60 | 366.88 |
| 100 | 773.81 | 4 | SLE Q | -148139.00 | -16347.40 | 16624.70 | 0.00 | 78.54 | 23.98 | 344.14 |
| 101 | 833.33 | 4 | SLE Q | -143848.00 | -14631.30 | 14879.50 | 0.00 | 78.54 | 22.37 | 321.74 |
| 102 | 892.86 | 4 | SLE Q | -139564.00 | -12965.50 | 13185.40 | 0.00 | 78.54 | 20.81 | 299.86 |
| 103 | 952.38 | 4 | SLE Q | -135288.00 | -11371.70 | 11564.60 | 0.00 | 78.54 | 19.30 | 278.70 |
| 104 | 1011.90 | 4 | SLE Q | -131019.00 | -9866.65 | 10034.00 | 0.00 | 78.54 | 17.85 | 258.44 |
| 105 | 1071.43 | 4 | SLE Q | -126758.00 | -8462.48 | 8606.03 | 0.00 | 78.54 | 16.48 | 239.20 |
| 106 | 1130.95 | 4 | SLE Q | -122503.00 | -7167.37 | 7288.95 | 0.00 | 78.54 | 15.19 | 221.06 |
| 107 | 1190.48 | 4 | SLE Q | -118254.00 | -5986.16 | 6087.71 | 0.00 | 78.54 | 13.98 | 204.06 |
| 108 | 1250.00 | 4 | SLE Q | -114012.00 | -4920.83 | 5004.31 | 0.00 | 78.54 | 12.86 | 188.23 |
| 109 | 1309.52 | 4 | SLE Q | -109776.00 | -3970.98 | 4038.34 | 0.00 | 78.54 | 11.82 | 173.56 |
| 110 | 1369.05 | 4 | SLE Q | -105546.00 | -3134.25 | 3187.41 | 0.00 | 78.54 | 10.87 | 160.04 |
| 111 | 1428.57 | 4 | SLE Q | -101322.00 | -2406.69 | 2447.51 | 0.00 | 78.54 | 9.99 | 147.61 |
| 112 | 1488.10 | 4 | SLE Q | -97102.80 | -1783.12 | 1813.37 | 0.00 | 78.54 | 9.19 | 136.23 |
| 113 | 1547.62 | 4 | SLE Q | -92889.10 | -1257.40 | 1278.73 | 0.00 | 78.54 | 8.47 | 125.83 |
| 114 | 1607.14 | 4 | SLE Q | -88680.30 | -822.68 | 836.64 | 0.00 | 78.54 | 7.81 | 116.35 |
| 115 | 1666.67 | 4 | SLE Q | -84476.30 | -471.61 | 479.61 | 0.00 | 78.54 | 7.21 | 107.72 |
| 116 | 1726.19 | 4 | SLE Q | -80276.80 | -196.51 | 199.84 | 0.00 | 78.54 | 6.67 | 99.84 |
| 117 | 1785.71 | 4 | SLE Q | -76081.70 | 10.48 | -10.66 | 0.00 | 78.54 | 6.19 | 92.87 |
| 118 | 1845.24 | 4 | SLE Q | -71890.60 | 157.30 | -159.97 | 0.00 | 78.54 | 5.96 | 89.23 |
| 119 | 1904.76 | 4 | SLE Q | -67703.30 | 251.88 | -256.15 | 0.00 | 78.54 | 5.69 | 85.07 |
| 120 | 1964.29 | 4 | SLE Q | -63519.70 | 302.09 | -307.21 | 0.00 | 78.54 | 5.38 | 80.48 |
| 121 | 2023.81 | 4 | SLE Q | -59339.50 | 315.69 | -321.05 | 0.00 | 78.54 | 5.05 | 75.52 |
| 122 | 2083.33 | 4 | SLE Q | -55162.50 | 300.33 | -305.43 | 0.00 | 78.54 | 4.70 | 70.27 |
| 123 | 2142.86 | 4 | SLE Q | -50988.50 | 263.52 | -267.99 | 0.00 | 78.54 | 4.34 | 64.81 |
| 124 | 2202.38 | 4 | SLE Q | -46817.10 | 212.66 | -216.26 | 0.00 | 78.54 | 3.96 | 59.21 |
| 125 | 2261.90 | 4 | SLE Q | -42648.30 | 155.02 | -157.65 | 0.00 | 78.54 | 3.58 | 53.55 |
| 126 | 2321.43 | 4 | SLE Q | -38481.80 | 97.82 | -99.48 | 0.00 | 78.54 | 3.20 | 47.90 |
| 127 | 2380.95 | 4 | SLE Q | -34317.40 | 48.19 | -49.01 | 0.00 | 78.54 | 2.82 | 42.32 |
| 128 | 2440.48 | 4 | SLE Q | -30154.70 | 13.23 | -13.45 | 0.00 | 78.54 | 2.46 | 36.90 |
| 129 | 2500.00 | 4 | SLE Q | -25993.70 | 0.00 | 0.00 | 0.00 | 78.54 | 2.11 | 31.69 |

Stato limite d'esercizio - Verifiche a fessurazione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | c <mm> | s <mm> | K _z | φ _{eq} | Δ _{em} <mm> | A _s <cmq> | A _c eff <cmq> | σ _s <daN/cmq> | ε _{sm} | Wk <mm> |
|------|-----------|----|-------|------------|--------------|--------------|-----------|-----------|----------------|-----------------|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------|------------|
| 90 | 178.57 | 4 | SLE Q | -183977.00 | 27599.90 | -27139.60 | 46.00 | 136.36 | 0.50 | 20.00 | 212.54 | 3.14 | 189.34 | 58.47 | 0.02 | 0.01 |
| 91 | 238.09 | 4 | SLE Q | -182117.00 | 27738.20 | -27275.50 | 46.00 | 136.36 | 0.50 | 20.00 | 222.45 | 3.14 | 204.91 | 63.59 | 0.02 | 0.01 |
| 92 | 297.62 | 4 | SLE Q | -180262.00 | 27522.10 | -27063.10 | 46.00 | 136.36 | 0.50 | 20.00 | 224.06 | 3.14 | 207.44 | 63.87 | 0.02 | 0.01 |
| 93 | 357.14 | 4 | SLE Q | -178413.00 | 26988.60 | -26538.50 | 46.00 | 136.36 | 0.50 | 20.00 | 217.93 | 3.14 | 197.81 | 59.75 | 0.02 | 0.01 |
| 94 | 416.67 | 4 | SLE Q | -174061.00 | 26092.20 | -25656.90 | 46.00 | 136.36 | 0.50 | 20.00 | 212.04 | 3.14 | 188.56 | 55.05 | 0.02 | 0.01 |
| 95 | 476.19 | 4 | SLE Q | -169719.00 | 24886.80 | -24471.70 | 46.00 | 136.36 | 0.50 | 20.00 | 198.30 | 3.14 | 166.98 | 46.30 | 0.01 | 0.00 |
| 133 | 178.57 | 3 | SLE F | -183977.00 | 27599.90 | -27139.60 | 46.00 | 136.36 | 0.50 | 20.00 | 212.54 | 3.14 | 189.34 | 58.47 | 0.02 | 0.01 |
| 134 | 238.09 | 3 | SLE F | -182117.00 | 27738.20 | -27275.50 | 46.00 | 136.36 | 0.50 | 20.00 | 222.45 | 3.14 | 204.91 | 63.59 | 0.02 | 0.01 |
| 135 | 297.62 | 3 | SLE F | -180262.00 | 27522.10 | -27063.10 | 46.00 | 136.36 | 0.50 | 20.00 | 224.06 | 3.14 | 207.44 | 63.87 | 0.02 | 0.01 |
| 136 | 357.14 | 3 | SLE F | -178413.00 | 26988.60 | -26538.50 | 46.00 | 136.36 | 0.50 | 20.00 | 217.93 | 3.14 | 197.81 | 59.75 | 0.02 | 0.01 |
| 137 | 416.67 | 3 | SLE F | -174061.00 | 26092.20 | -25656.90 | 46.00 | 136.36 | 0.50 | 20.00 | 212.04 | 3.14 | 188.56 | 55.05 | 0.02 | 0.01 |
| 138 | 476.19 | 3 | SLE F | -169719.00 | 24886.80 | -24471.70 | 46.00 | 136.36 | 0.50 | 20.00 | 198.30 | 3.14 | 166.98 | 46.30 | 0.01 | 0.00 |

Verifiche principali

| Caso | Tipo |
|------|---|
| 1 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 5 | SLU N cost - min. sic. |
| 47 | C.Rare - Sf min (max compr.) |
| 48 | C.Rare - Sc min (max compr.) |
| 49 | C.Rare - Sf max (max traz.) |
| 57 | C.Rare - Sc max (min. compr.) |
| 90 | C.Q.Per. - Sf min (max compr.) |
| 91 | C.Q.Per. - Sc min (max compr.) |
| 92 | C.Q.Per. - Sf max (max traz.), C.Q.Per. - Wk Max |
| 100 | C.Q.Per. - Sc max (min. compr.) |

Relazione di calcolo

135 C.Freq - Wk Max

Palo n. 28

Caratteristiche del palo e dei materiali utilizzati

| R <cm> | Cf <cm> | Cls | Fck <daN/cm ² > | Fctk <daN/cm ² > | Fcd <daN/cm ² > | Fctd <daN/cm ² > | Tp | Fyk <daN/cm ² > | Fyd <daN/cm ² > |
|-----------|------------|--------|-------------------------------|--------------------------------|-------------------------------|--------------------------------|-------|-------------------------------|-------------------------------|
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | S450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N <daN> | Mx <daNm> | My <daNm> | Mz <daNm> |
|-----|------------|--------------|--------------|--------------|
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 28 (-127)

| Caso | CC | TCC | Az | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|-----|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | RVN | 212189.00 | 6476.40 | 929.59 | 44873.60 | 30881.60 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 212189.00 | 6476.40 | 929.59 | 44873.60 | 30881.60 |
| 2 | 2 | SLE R | RVN | 157177.00 | 4797.33 | 688.59 | 33239.70 | 22875.20 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 157177.00 | 4797.33 | 688.59 | 33239.70 | 22875.20 |
| 3 | 3 | SLE F | RVN | 157177.00 | 4797.33 | 688.59 | 33239.70 | 22875.20 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 157177.00 | 4797.33 | 688.59 | 33239.70 | 22875.20 |
| 4 | 4 | SLE Q | RVN | 157177.00 | 4797.33 | 688.59 | 33239.70 | 22875.20 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 157177.00 | 4797.33 | 688.59 | 33239.70 | 22875.20 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|------|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | 1 | -212189.00 | -6476.40 | -929.59 | -44873.60 | -30881.60 |
| 2 | 2 | SLE R | 1 | -157177.00 | -4797.33 | -688.59 | -33239.70 | -22875.20 |
| 3 | 3 | SLE F | 1 | -157177.00 | -4797.33 | -688.59 | -33239.70 | -22875.20 |
| 4 | 4 | SLE Q | 1 | -157177.00 | -4797.33 | -688.59 | -33239.70 | -22875.20 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|--------|
| 1 | 0.00 | 1 | SLU | -212189.00 | 44686.90 | -30753.10 | -212189.00 | 186851.00 | -130640.00 | 2-3 | 215.00 | 4.203 |
| 2 | 59.52 | 1 | SLU | -211922.00 | 47335.00 | -32575.50 | -211922.00 | 186776.00 | -130590.00 | 2-3 | 215.00 | 3.966 |
| 3 | 119.05 | 1 | SLU | -209712.00 | 48966.70 | -33698.50 | -209712.00 | 186147.00 | -130173.00 | 2-3 | 215.00 | 3.821 |
| 4 | 178.57 | 1 | SLU | -207509.00 | 49729.40 | -34223.30 | -207509.00 | 185516.00 | -129755.00 | 2-3 | 215.00 | 3.750 |
| 5 | 238.09 | 1 | SLU | -205312.00 | 49758.80 | -34243.50 | -205312.00 | 184887.00 | -129338.00 | 2-3 | 215.00 | 3.735 |
| 6 | 297.62 | 1 | SLU | -203122.00 | 49179.40 | -33844.80 | -203122.00 | 184261.00 | -128924.00 | 2-3 | 215.00 | 3.767 |
| 7 | 357.14 | 1 | SLU | -200938.00 | 48057.30 | -33072.60 | -200938.00 | 183633.00 | -128507.00 | 2-3 | 215.00 | 3.842 |
| 8 | 416.67 | 1 | SLU | -196013.00 | 46318.20 | -31875.70 | -196013.00 | 182211.00 | -127567.00 | 2-3 | 215.00 | 3.956 |
| 9 | 476.19 | 1 | SLU | -191100.00 | 44057.60 | -30320.00 | -191100.00 | 180790.00 | -126627.00 | 2-3 | 215.00 | 4.127 |
| 10 | 535.71 | 1 | SLU | -186196.00 | 41411.40 | -28499.00 | -186196.00 | 179362.00 | -125684.00 | 2-3 | 215.00 | 4.357 |
| 11 | 595.24 | 1 | SLU | -181303.00 | 38498.00 | -26494.00 | -181303.00 | 177933.00 | -124741.00 | 2-3 | 215.00 | 4.650 |
| 12 | 654.76 | 1 | SLU | -176419.00 | 35419.20 | -24375.20 | -176419.00 | 177837.00 | -123795.00 | 2-3 | 214.38 | 5.013 |
| 13 | 714.29 | 1 | SLU | -171545.00 | 32261.40 | -22202.00 | -171545.00 | 176397.00 | -120855.00 | 2-3 | 214.38 | 5.460 |
| 14 | 773.81 | 1 | SLU | -166680.00 | 29097.10 | -20024.30 | -166680.00 | 174953.00 | -119913.00 | 2-3 | 214.38 | 6.005 |
| 15 | 833.33 | 1 | SLU | -161824.00 | 25985.70 | -17883.10 | -161824.00 | 173506.00 | -118970.00 | 2-3 | 214.38 | 6.669 |
| 16 | 892.86 | 1 | SLU | -156976.00 | 22975.20 | -15811.30 | -156976.00 | 172056.00 | -118025.00 | 2-3 | 214.38 | 7.481 |
| 17 | 952.38 | 1 | SLU | -152137.00 | 20103.30 | -13834.90 | -152137.00 | 170602.00 | -117080.00 | 2-3 | 214.38 | 8.479 |
| 18 | 1011.90 | 1 | SLU | -147307.00 | 17398.30 | -11973.40 | -147307.00 | 169146.00 | -116134.00 | 2-3 | 214.38 | 9.715 |
| 19 | 1071.43 | 1 | SLU | -142484.00 | 14880.80 | -10240.80 | -142484.00 | 167686.00 | -115187.00 | 2-3 | 214.38 | 11.262 |
| 20 | 1130.95 | 1 | SLU | -137668.00 | 12564.20 | -8646.58 | -137668.00 | 166223.00 | -114239.00 | 2-3 | 214.38 | 13.224 |
| 21 | 1190.48 | 1 | SLU | -132860.00 | 10456.20 | -7195.85 | -132860.00 | 164757.00 | -113290.00 | 2-3 | 214.38 | 15.753 |
| 22 | 1250.00 | 1 | SLU | -128060.00 | 8559.30 | -5890.43 | -128060.00 | 163289.00 | -112340.00 | 2-3 | 214.38 | 19.076 |
| 23 | 1309.52 | 1 | SLU | -123266.00 | 6872.00 | -4729.25 | -123266.00 | 161816.00 | -111389.00 | 2-3 | 214.38 | 20.859 |
| 24 | 1369.05 | 1 | SLU | -118478.00 | 5389.33 | -3708.89 | -118478.00 | 160390.00 | -110283.00 | 2-3 | 214.38 | 21.702 |
| 25 | 1428.57 | 1 | SLU | -113698.00 | 4103.58 | -2824.05 | -113698.00 | 158964.00 | -109157.00 | 2-3 | 214.38 | 22.615 |

Relazione di calcolo

| | | | | | | | | | | |
|----|---------|---|---|------------|-----------|----------|-------|-------|-------|--------|
| 13 | 375,71 | 2 | 9 | 109233,00 | -21110,39 | 35073,10 | 21,13 | 33,41 | 35,04 | 402,04 |
| 14 | 375,24 | 2 | 9 | -127824,00 | -19022,29 | 23117,10 | 21,09 | 38,10 | 35,17 | 402,04 |
| 15 | 382,28 | 2 | 9 | 137042,00 | 18051,79 | 32334,90 | 31,09 | 38,09 | 35,06 | 389,19 |
| 16 | 377,29 | 2 | 9 | 117810,00 | 16111,90 | 32974,80 | 18,89 | 39,09 | 35,07 | 389,19 |
| 17 | 379,91 | 2 | 9 | -124898,00 | -14932,00 | 31653,40 | 18,11 | 37,09 | 35,09 | 389,19 |
| 18 | 383,03 | 2 | 9 | -121250,00 | -12141,00 | 18249,30 | 12,59 | 35,09 | 35,09 | 319,07 |
| 19 | 392,13 | 2 | 9 | -117680,00 | -11710,10 | 17118,70 | 3,14 | 75,40 | 25,07 | 319,07 |
| 20 | 392,33 | 2 | 9 | -114100,00 | -12248,10 | 14911,30 | 0,00 | 78,14 | 15,60 | 207,88 |
| 21 | 1000,14 | 2 | 9 | 110000,00 | 8882,77 | 12881,30 | 0,00 | 38,09 | 19,08 | 217,19 |
| 22 | 1000,14 | 2 | 9 | 106999,00 | 7881,80 | 10000,80 | 0,00 | 38,09 | 18,07 | 227,08 |
| 23 | 1100,95 | 2 | 9 | -103444,00 | -6404,00 | 9001,00 | 0,00 | 38,04 | 14,06 | 226,04 |
| 24 | 1190,48 | 2 | 9 | -99889,40 | -5700,70 | 7549,70 | 0,00 | 38,04 | 10,09 | 190,09 |
| 25 | 1270,20 | 2 | 9 | -96334,00 | -4997,29 | 6340,20 | 0,00 | 78,14 | 11,81 | 171,85 |
| 26 | 1300,20 | 2 | 9 | -92823,80 | -4302,15 | 5090,30 | 0,00 | 78,14 | 10,74 | 106,59 |
| 27 | 1369,09 | 2 | 9 | 89299,00 | 3711,40 | 3971,10 | 0,00 | 38,09 | 8,73 | 140,85 |
| 28 | 1478,03 | 2 | 9 | 85769,00 | 3016,89 | 3039,69 | 0,00 | 38,09 | 8,88 | 160,05 |
| 29 | 1480,10 | 2 | 9 | -82249,40 | -2321,00 | 2229,06 | 0,00 | 38,04 | 8,09 | 119,70 |
| 30 | 1540,60 | 2 | 9 | -78700,00 | -1626,70 | 1427,11 | 0,00 | 38,04 | 7,09 | 109,70 |
| 31 | 1607,14 | 2 | 9 | -75221,00 | -932,78 | 979,00 | 0,00 | 78,14 | 0,70 | 100,09 |
| 32 | 1666,07 | 2 | 9 | -71713,00 | -338,47 | 226,69 | 0,00 | 78,14 | 0,16 | 91,02 |
| 33 | 1776,19 | 2 | 9 | 68204,00 | 1201,9 | 117,89 | 0,00 | 38,09 | 0,69 | 87,85 |
| 34 | 1780,01 | 2 | 9 | 64704,00 | 601,88 | 87,89 | 0,00 | 38,09 | 0,37 | 29,87 |
| 35 | 1865,04 | 2 | 9 | -1000,00 | 181,44 | -600,80 | 0,00 | 38,04 | 0,16 | 31,85 |
| 36 | 1904,06 | 2 | 9 | -6719,00 | 262,45 | -698,30 | 0,00 | 38,04 | 4,09 | 29,60 |
| 37 | 1966,09 | 2 | 9 | -34223,80 | 304,58 | -440,51 | 0,00 | 78,14 | 4,69 | 39,09 |
| 38 | 2076,01 | 2 | 9 | 30711,00 | 110,98 | 410,89 | 0,00 | 38,09 | 4,17 | 60,00 |
| 39 | 2080,00 | 2 | 9 | 27200,00 | 210,09 | 410,00 | 0,00 | 38,09 | 4,17 | 67,00 |
| 40 | 2120,96 | 2 | 9 | -23739,40 | 281,05 | -298,14 | 0,00 | 38,04 | 3,09 | 21,50 |
| 41 | 2200,08 | 2 | 9 | -20289,40 | 352,89 | -298,89 | 0,00 | 38,04 | 3,49 | 27,05 |
| 42 | 2261,00 | 2 | 9 | -16810,00 | 147,18 | -110,37 | 0,00 | 78,14 | 3,10 | 46,72 |
| 43 | 2301,40 | 2 | 9 | -13341,00 | 82,48 | -124,31 | 0,00 | 78,14 | 2,79 | 41,89 |
| 44 | 2380,09 | 2 | 9 | 10880,00 | 411,0 | 61,90 | 0,00 | 38,09 | 2,17 | 33,98 |
| 45 | 2400,10 | 2 | 9 | 16399,00 | 111,8 | 18,09 | 0,00 | 38,09 | 2,16 | 37,87 |
| 46 | 2500,00 | 2 | 9 | -22804,00 | 0,00 | 0,00 | 0,00 | 38,04 | 1,00 | 21,85 |
| 47 | 0,00 | 2 | 9 | -18710,00 | -2020,70 | 10101,40 | 31,09 | 36,09 | 16,07 | 491,85 |
| 48 | 30,00 | 4 | 9 | -177203,00 | -24100,00 | 32060,00 | 20,13 | 33,41 | 30,80 | 213,70 |
| 49 | 120,00 | 4 | 9 | -157840,00 | -24901,80 | 30271,70 | 23,07 | 30,07 | 37,01 | 200,20 |
| 50 | 178,00 | 4 | 9 | 101099,00 | 26001,80 | 33336,80 | 32,07 | 30,07 | 36,07 | 366,90 |
| 51 | 238,04 | 4 | 9 | 101980,00 | 26981,80 | 33336,80 | 32,07 | 30,07 | 36,07 | 366,89 |
| 52 | 298,00 | 4 | 9 | -181599,00 | -36000,00 | 34290,00 | 39,07 | 30,07 | 39,00 | 390,50 |
| 53 | 358,14 | 4 | 9 | -161000,00 | -34990,00 | 33290,00 | 39,07 | 30,07 | 39,00 | 319,00 |
| 54 | 418,07 | 4 | 9 | -140674,00 | -23911,60 | 34309,70 | 23,07 | 30,07 | 32,84 | 201,03 |
| 55 | 478,19 | 4 | 9 | -140350,00 | -22409,30 | 30303,20 | 23,07 | 30,07 | 34,16 | 478,22 |
| 56 | 538,01 | 4 | 9 | 139680,00 | 21100,80 | 30650,10 | 32,03 | 38,01 | 32,07 | 467,07 |
| 57 | 598,04 | 4 | 9 | 138600,00 | 19620,00 | 30671,00 | 31,09 | 38,09 | 30,73 | 428,98 |
| 58 | 658,06 | 4 | 9 | -118200,00 | -18020,00 | 30000,40 | 31,09 | 36,09 | 29,09 | 389,19 |
| 59 | 718,09 | 4 | 9 | -128700,00 | -16420,80 | 28979,70 | 19,09 | 38,09 | 28,09 | 269,60 |
| 60 | 778,11 | 4 | 9 | -108330,00 | -14830,80 | 21070,60 | 10,71 | 62,00 | 23,00 | 339,12 |
| 61 | 838,13 | 4 | 9 | -101250,00 | -13246,80 | 19048,70 | 10,07 | 65,07 | 21,00 | 310,01 |
| 62 | 898,06 | 4 | 9 | 117680,00 | 11017,10 | 19018,40 | 0,00 | 38,00 | 30,07 | 288,80 |
| 63 | 958,08 | 4 | 9 | 117100,00 | 10248,10 | 1897,80 | 0,00 | 38,09 | 18,08 | 280,88 |
| 64 | 1018,00 | 4 | 9 | -110551,00 | -8969,70 | 10961,30 | 0,00 | 38,04 | 19,08 | 240,48 |
| 65 | 1078,03 | 4 | 9 | -106884,00 | -7980,00 | 10220,00 | 0,00 | 38,04 | 19,17 | 220,09 |
| 66 | 1138,05 | 4 | 9 | -103244,00 | -6494,87 | 9006,93 | 0,00 | 78,14 | 14,00 | 200,34 |
| 67 | 1198,08 | 4 | 9 | -99604,40 | -5530,20 | 7743,30 | 0,00 | 78,14 | 10,08 | 187,73 |
| 68 | 1258,00 | 4 | 9 | 98800,00 | 4681,08 | 6500,00 | 0,00 | 38,09 | 11,87 | 190,05 |
| 69 | 1318,02 | 4 | 9 | 97800,80 | 3681,05 | 6000,80 | 0,00 | 38,09 | 10,77 | 166,00 |
| 70 | 1378,05 | 4 | 9 | -94249,00 | -2704,70 | 4999,70 | 0,00 | 38,04 | 9,00 | 142,05 |
| 71 | 1438,08 | 4 | 9 | -90699,00 | -2091,08 | 3999,69 | 0,00 | 38,04 | 8,00 | 120,45 |
| 72 | 1498,10 | 4 | 9 | -87243,70 | -1511,82 | 2999,90 | 0,00 | 78,14 | 3,08 | 110,23 |
| 73 | 1558,02 | 4 | 9 | -83730,70 | -1000,27 | 1999,11 | 0,00 | 78,14 | 7,07 | 100,12 |
| 74 | 1618,04 | 4 | 9 | -80200,00 | -600,48 | 999,09 | 0,00 | 38,09 | 6,08 | 100,09 |
| 75 | 1678,06 | 4 | 9 | -76700,00 | -200,67 | 998,89 | 0,00 | 38,09 | 6,08 | 97,90 |
| 76 | 1738,09 | 4 | 9 | -73200,40 | -100,78 | 198,66 | 0,00 | 38,04 | 5,08 | 89,05 |
| 77 | 1798,11 | 4 | 9 | -69700,00 | 0,00 | -99,60 | 0,00 | 38,04 | 4,07 | 89,66 |
| 78 | 1858,14 | 4 | 9 | -66200,00 | 100,44 | -170,00 | 0,00 | 78,14 | 3,03 | 76,09 |
| 79 | 1918,16 | 4 | 9 | -62700,00 | 200,65 | -280,70 | 0,00 | 78,14 | 4,00 | 70,67 |
| 80 | 1978,19 | 4 | 9 | -59200,80 | 300,86 | -370,00 | 0,00 | 38,09 | 4,09 | 69,90 |
| 81 | 2038,21 | 4 | 9 | -55700,00 | 310,86 | -460,00 | 0,00 | 38,04 | 4,47 | 68,70 |
| 82 | 2098,23 | 4 | 9 | -52200,00 | 210,89 | -470,00 | 0,00 | 38,04 | 4,77 | 67,04 |
| 83 | 2158,26 | 4 | 9 | -48700,40 | 110,35 | -368,14 | 0,00 | 78,14 | 3,79 | 56,52 |
| 84 | 2218,28 | 4 | 9 | -45200,60 | 100,09 | -264,07 | 0,00 | 78,14 | 3,46 | 51,65 |
| 85 | 2278,30 | 4 | 9 | -41700,00 | 110,08 | -130,80 | 0,00 | 38,09 | 3,03 | 46,70 |
| 86 | 2338,33 | 4 | 9 | -38200,00 | 90,08 | 139,89 | 0,00 | 38,09 | 2,79 | 41,89 |
| 87 | 2398,35 | 4 | 9 | -34700,00 | 40,40 | -60,80 | 0,00 | 38,04 | 0,44 | 36,98 |
| 88 | 2458,38 | 4 | 9 | -31200,00 | 12,40 | -130,00 | 0,00 | 38,04 | 0,10 | 32,04 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|-----------|------|------|------|-------|------|-------|
| 129 | 2500.00 | 4 | SLE Q | -22924.20 | 0.00 | 0.00 | 0.00 | 78.54 | 1.86 | 27.95 |
|-----|---------|---|-------|-----------|------|------|------|-------|------|-------|

Stato limite d'esercizio - Verifiche a fessurazione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | c <mm> | s <mm> | K _c | φ _{eq} | Δ _{sm} <mm> | A _s <cmq> | A _c eff <cmq> | σ _s <daN/cmq> | ε _{sm} | Wk <mm> |
|------|-----------|----|-------|------------|--------------|--------------|-----------|-----------|----------------|-----------------|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------|------------|
| 87 | 0.00 | 4 | SLE Q | -157177.00 | 33101.40 | -22780.10 | 46.00 | 136.36 | 0.50 | 20.00 | 173.19 | 9.42 | 382.58 | 130.96 | 0.04 | 0.01 |
| 88 | 59.52 | 4 | SLE Q | -157293.00 | 35063.00 | -24130.00 | 46.00 | 136.36 | 0.50 | 20.00 | 188.62 | 9.42 | 455.31 | 163.83 | 0.05 | 0.02 |
| 89 | 119.05 | 4 | SLE Q | -155846.00 | 36271.70 | -24961.80 | 46.00 | 136.36 | 0.50 | 20.00 | 173.64 | 12.57 | 512.94 | 190.51 | 0.06 | 0.02 |
| 90 | 178.57 | 4 | SLE Q | -154404.00 | 36836.60 | -25350.60 | 46.00 | 136.36 | 0.50 | 20.00 | 179.00 | 12.57 | 546.66 | 206.29 | 0.06 | 0.02 |
| 91 | 238.09 | 4 | SLE Q | -152967.00 | 36858.40 | -25365.60 | 46.00 | 136.36 | 0.50 | 20.00 | 181.18 | 12.57 | 560.33 | 211.68 | 0.06 | 0.02 |
| 92 | 297.62 | 4 | SLE Q | -151534.00 | 36429.20 | -25070.20 | 46.00 | 136.36 | 0.50 | 20.00 | 180.67 | 12.57 | 557.16 | 208.00 | 0.06 | 0.02 |
| 93 | 357.14 | 4 | SLE Q | -150107.00 | 35598.00 | -24498.20 | 46.00 | 136.36 | 0.50 | 20.00 | 177.70 | 12.57 | 538.48 | 196.33 | 0.06 | 0.02 |
| 94 | 416.67 | 4 | SLE Q | -146474.00 | 34309.70 | -23611.60 | 46.00 | 136.36 | 0.50 | 20.00 | 175.02 | 12.57 | 521.63 | 183.26 | 0.05 | 0.02 |
| 95 | 476.19 | 4 | SLE Q | -142850.00 | 32635.20 | -22459.30 | 46.00 | 136.36 | 0.50 | 20.00 | 195.54 | 9.42 | 487.94 | 163.13 | 0.05 | 0.02 |
| 96 | 535.71 | 4 | SLE Q | -139233.00 | 30675.10 | -21110.30 | 46.00 | 136.36 | 0.50 | 20.00 | 185.36 | 9.42 | 439.94 | 138.66 | 0.04 | 0.01 |
| 97 | 595.24 | 4 | SLE Q | -135624.00 | 28517.10 | -19625.20 | 46.00 | 136.36 | 0.50 | 20.00 | 172.77 | 9.42 | 380.62 | 112.28 | 0.03 | 0.01 |
| 98 | 654.76 | 4 | SLE Q | -132022.00 | 26236.40 | -18055.70 | 46.00 | 136.36 | 0.50 | 20.00 | 158.46 | 9.42 | 313.20 | 85.96 | 0.03 | 0.01 |
| 99 | 714.29 | 4 | SLE Q | -128427.00 | 23897.30 | -16445.90 | 46.00 | 136.36 | 0.50 | 20.00 | 168.69 | 6.28 | 240.94 | 61.15 | 0.02 | 0.01 |
| 130 | 0.00 | 3 | SLE F | -157177.00 | 33101.40 | -22780.10 | 46.00 | 136.36 | 0.50 | 20.00 | 173.19 | 9.42 | 382.58 | 130.96 | 0.04 | 0.01 |
| 131 | 59.52 | 3 | SLE F | -157293.00 | 35063.00 | -24130.00 | 46.00 | 136.36 | 0.50 | 20.00 | 188.62 | 9.42 | 455.31 | 163.83 | 0.05 | 0.02 |
| 132 | 119.05 | 3 | SLE F | -155846.00 | 36271.70 | -24961.80 | 46.00 | 136.36 | 0.50 | 20.00 | 173.64 | 12.57 | 512.94 | 190.51 | 0.06 | 0.02 |
| 133 | 178.57 | 3 | SLE F | -154404.00 | 36836.60 | -25350.60 | 46.00 | 136.36 | 0.50 | 20.00 | 179.00 | 12.57 | 546.66 | 206.29 | 0.06 | 0.02 |
| 134 | 238.09 | 3 | SLE F | -152967.00 | 36858.40 | -25365.60 | 46.00 | 136.36 | 0.50 | 20.00 | 181.18 | 12.57 | 560.33 | 211.68 | 0.06 | 0.02 |
| 135 | 297.62 | 3 | SLE F | -151534.00 | 36429.20 | -25070.20 | 46.00 | 136.36 | 0.50 | 20.00 | 180.67 | 12.57 | 557.16 | 208.00 | 0.06 | 0.02 |
| 136 | 357.14 | 3 | SLE F | -150107.00 | 35598.00 | -24498.20 | 46.00 | 136.36 | 0.50 | 20.00 | 177.70 | 12.57 | 538.48 | 196.33 | 0.06 | 0.02 |
| 137 | 416.67 | 3 | SLE F | -146474.00 | 34309.70 | -23611.60 | 46.00 | 136.36 | 0.50 | 20.00 | 175.02 | 12.57 | 521.63 | 183.26 | 0.05 | 0.02 |
| 138 | 476.19 | 3 | SLE F | -142850.00 | 32635.20 | -22459.30 | 46.00 | 136.36 | 0.50 | 20.00 | 195.54 | 9.42 | 487.94 | 163.13 | 0.05 | 0.02 |
| 139 | 535.71 | 3 | SLE F | -139233.00 | 30675.10 | -21110.30 | 46.00 | 136.36 | 0.50 | 20.00 | 185.36 | 9.42 | 439.94 | 138.66 | 0.04 | 0.01 |
| 140 | 595.24 | 3 | SLE F | -135624.00 | 28517.10 | -19625.20 | 46.00 | 136.36 | 0.50 | 20.00 | 172.77 | 9.42 | 380.62 | 112.28 | 0.03 | 0.01 |
| 141 | 654.76 | 3 | SLE F | -132022.00 | 26236.40 | -18055.70 | 46.00 | 136.36 | 0.50 | 20.00 | 158.46 | 9.42 | 313.20 | 85.96 | 0.03 | 0.01 |
| 142 | 714.29 | 3 | SLE F | -128427.00 | 23897.30 | -16445.90 | 46.00 | 136.36 | 0.50 | 20.00 | 168.69 | 6.28 | 240.94 | 61.15 | 0.02 | 0.01 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 1 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 5 | SLU N cost - min. sic. |
| 47 | C.Rare - Sf min (max compr.) |
| 48 | C.Rare - Sc min (max compr.), C.Rare - Sf max (max traz.) |
| 61 | C.Rare - Sc max (min. compr.) |
| 90 | C.Q.Per. - Sf min (max compr.) |
| 91 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf max (max traz.), C.Q.Per. - Wk Max |
| 104 | C.Q.Per. - Sc max (min. compr.) |
| 134 | C.Freq - Wk Max |

Palo n. 29

Caratteristiche del palo e dei materiali utilizzati

| R <cm> | Cf <cm> | Cls | Fck <daN/cmq> | Fctk <daN/cmq> | Fcd <daN/cmq> | Fctd <daN/cmq> | Tp | Fyk <daN/cmq> | Fyd <daN/cmq> |
|-----------|------------|--------|------------------|-------------------|------------------|-------------------|-------|------------------|------------------|
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N <daN> | Mx <daNm> | My <daNm> | Mz <daNm> |
|-----|------------|--------------|--------------|--------------|
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 29 (-81)

| Caso | CC | TCC | Az | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|-----|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | RVN | 166267.00 | 6757.66 | 963.45 | 54146.30 | 25252.60 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 166267.00 | 6757.66 | 963.45 | 54146.30 | 25252.60 |
| 2 | 2 | SLE R | RVN | 123161.00 | 5005.68 | 713.67 | 40108.40 | 18705.60 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 123161.00 | 5005.68 | 713.67 | 40108.40 | 18705.60 |
| 3 | 3 | SLE F | RVN | 123161.00 | 5005.68 | 713.67 | 40108.40 | 18705.60 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 123161.00 | 5005.68 | 713.67 | 40108.40 | 18705.60 |
| 4 | 4 | SLE Q | RVN | 123161.00 | 5005.68 | 713.67 | 40108.40 | 18705.60 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |

Relazione di calcolo

| | | | | | | | |
|---|-------|-----|-----------|---------|--------|----------|----------|
| 4 | SLE Q | TOT | 123161.00 | 5005.68 | 713.67 | 40108.40 | 18705.60 |
|---|-------|-----|-----------|---------|--------|----------|----------|

Sollecitazioni nei pali

| Caso | OC | TCC | Palo | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|------|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLE | 1 | -166267.00 | -6757.66 | -963.45 | -54146.30 | -25252.60 |
| 2 | 2 | SLE R | 1 | -123161.00 | -5005.68 | -713.67 | -40108.40 | -18705.60 |
| 3 | 3 | SLE F | 1 | -123161.00 | -5005.68 | -713.67 | -40108.40 | -18705.60 |
| 4 | 4 | SLE Q | 1 | -123161.00 | -5005.68 | -713.67 | -40108.40 | -18705.60 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | OC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|--------|
| 1 | 0.00 | 1 | SLE | -166267.00 | 53926.00 | -25149.80 | -166267.00 | 192445.00 | -89846.80 | 2-3 | 205.00 | 3.569 |
| 2 | 59.52 | 1 | SLE | -166320.00 | 56947.00 | -26558.70 | -166320.00 | 192462.00 | -89854.90 | 2-3 | 205.00 | 3.380 |
| 3 | 119.05 | 1 | SLE | -164747.00 | 58768.50 | -27408.20 | -164747.00 | 191946.00 | -89612.80 | 2-3 | 205.00 | 3.267 |
| 4 | 178.57 | 1 | SLE | -163179.00 | 59565.70 | -27780.00 | -163179.00 | 191432.00 | -89371.40 | 2-3 | 205.00 | 3.214 |
| 5 | 238.09 | 1 | SLE | -161616.00 | 59499.80 | -27749.30 | -161616.00 | 190917.00 | -89129.60 | 2-3 | 205.00 | 3.209 |
| 6 | 297.62 | 1 | SLE | -160059.00 | 58718.30 | -27384.80 | -160059.00 | 190402.00 | -88887.70 | 2-3 | 205.00 | 3.243 |
| 7 | 357.14 | 1 | SLE | -158506.00 | 57300.20 | -26723.40 | -158506.00 | 189889.00 | -88646.60 | 2-3 | 205.00 | 3.315 |
| 8 | 416.67 | 1 | SLE | -154660.00 | 55160.00 | -25725.30 | -154660.00 | 188616.00 | -88049.00 | 2-3 | 205.00 | 3.420 |
| 9 | 476.19 | 1 | SLE | -150823.00 | 52411.30 | -24443.40 | -150823.00 | 187340.00 | -87449.30 | 2-3 | 205.00 | 3.575 |
| 10 | 535.71 | 1 | SLE | -146993.00 | 49214.80 | -22952.60 | -146993.00 | 186063.00 | -86848.90 | 2-3 | 205.00 | 3.781 |
| 11 | 595.24 | 1 | SLE | -143172.00 | 45710.10 | -21318.10 | -143172.00 | 184785.00 | -86248.30 | 2-3 | 205.00 | 4.043 |
| 12 | 654.76 | 1 | SLE | -139358.00 | 42017.20 | -19595.80 | -139358.00 | 183503.00 | -85645.10 | 2-3 | 205.00 | 4.368 |
| 13 | 714.29 | 1 | SLE | -135551.00 | 38238.00 | -17833.30 | -135551.00 | 182222.00 | -85042.70 | 2-3 | 205.00 | 4.766 |
| 14 | 773.81 | 1 | SLE | -131752.00 | 34457.70 | -16070.20 | -131752.00 | 180936.00 | -84437.60 | 2-3 | 205.00 | 5.252 |
| 15 | 833.33 | 1 | SLE | -127960.00 | 30746.20 | -14339.30 | -127960.00 | 179651.00 | -83832.50 | 2-3 | 205.00 | 5.844 |
| 16 | 892.86 | 1 | SLE | -124175.00 | 27159.60 | -12666.60 | -124175.00 | 178364.00 | -83215.00 | 2-3 | 205.00 | 6.568 |
| 17 | 952.38 | 1 | SLE | -120397.00 | 23741.80 | -11072.60 | -120397.00 | 177076.00 | -82582.30 | 2-3 | 205.00 | 7.458 |
| 18 | 1011.90 | 1 | SLE | -116625.00 | 20526.20 | -9572.91 | -116625.00 | 175779.00 | -81960.30 | 2-3 | 205.00 | 8.563 |
| 19 | 1071.43 | 1 | SLE | -112859.00 | 17536.20 | -8178.45 | -112859.00 | 174469.00 | -81343.10 | 2-3 | 205.00 | 9.949 |
| 20 | 1130.95 | 1 | SLE | -109099.00 | 14787.40 | -6896.48 | -109099.00 | 173159.00 | -80725.90 | 2-3 | 205.00 | 11.709 |
| 21 | 1190.48 | 1 | SLE | -105345.00 | 12288.30 | -5730.99 | -105345.00 | 171849.00 | -80108.40 | 2-3 | 205.00 | 13.984 |
| 22 | 1250.00 | 1 | SLE | -101597.00 | 10041.70 | -4683.19 | -101597.00 | 170535.00 | -79488.80 | 2-3 | 205.00 | 16.981 |
| 23 | 1309.52 | 1 | SLE | -97854.00 | 8045.11 | -3752.05 | -97854.00 | 169224.00 | -78870.90 | 2-3 | 205.00 | 21.032 |
| 24 | 1369.05 | 1 | SLE | -94116.50 | 6292.44 | -2934.64 | -94116.50 | 167905.00 | -78248.70 | 2-3 | 205.00 | 26.680 |
| 25 | 1428.57 | 1 | SLE | -90384.00 | 4774.20 | -2226.57 | -90384.00 | 166586.00 | -77627.20 | 2-3 | 205.00 | 28.448 |
| 26 | 1488.10 | 1 | SLE | -86656.30 | 3478.45 | -1622.26 | -86656.30 | 165269.00 | -77006.00 | 2-3 | 205.00 | 29.672 |
| 27 | 1547.62 | 1 | SLE | -82933.30 | 2391.33 | -1115.26 | -82933.30 | 163946.00 | -76382.20 | 2-3 | 205.00 | 31.004 |
| 28 | 1607.14 | 1 | SLE | -79214.70 | 1497.63 | -698.46 | -79214.70 | 162623.00 | -75758.70 | 2-3 | 205.00 | 32.459 |
| 29 | 1666.67 | 1 | SLE | -75500.40 | 781.17 | -364.32 | -75500.40 | 161300.00 | -75134.60 | 2-3 | 205.00 | 34.056 |
| 30 | 1726.19 | 1 | SLE | -71790.20 | 225.18 | -105.02 | -71790.20 | 159973.00 | -74508.90 | 2-3 | 205.00 | 35.816 |
| 31 | 1785.71 | 1 | SLE | -68083.80 | -187.42 | 87.41 | -68083.80 | 158680.00 | -74011.40 | 2-3 | 25.00 | 37.766 |
| 32 | 1845.24 | 1 | SLE | -64381.00 | -473.77 | 220.96 | -64381.00 | 157320.00 | -73371.40 | 2-3 | 25.00 | 39.938 |
| 33 | 1904.76 | 1 | SLE | -60681.70 | -650.97 | 303.60 | -60681.70 | 155957.00 | -72730.10 | 2-3 | 25.00 | 42.373 |
| 34 | 1964.29 | 1 | SLE | -56985.60 | -735.89 | 343.20 | -56985.60 | 154594.00 | -72088.50 | 2-3 | 25.00 | 45.121 |
| 35 | 2023.81 | 1 | SLE | -53292.60 | -745.17 | 347.53 | -53292.60 | 153224.00 | -71444.10 | 2-3 | 25.00 | 48.248 |
| 36 | 2083.33 | 1 | SLE | -49602.50 | -695.13 | 324.19 | -49602.50 | 151854.00 | -70799.90 | 2-3 | 25.00 | 51.837 |
| 37 | 2142.86 | 1 | SLE | -45915.00 | -601.79 | 280.66 | -45915.00 | 150479.00 | -70153.60 | 2-3 | 25.00 | 56.000 |
| 38 | 2202.38 | 1 | SLE | -42230.00 | -480.91 | 224.28 | -42230.00 | 149102.00 | -69506.40 | 2-3 | 25.00 | 60.887 |
| 39 | 2261.90 | 1 | SLE | -38547.30 | -347.97 | 162.29 | -38547.30 | 147724.00 | -68858.50 | 2-3 | 25.00 | 66.704 |
| 40 | 2321.43 | 1 | SLE | -34866.60 | -218.29 | 101.81 | -34866.60 | 146340.00 | -68208.60 | 2-3 | 25.00 | 73.745 |
| 41 | 2380.95 | 1 | SLE | -31187.80 | -107.03 | 49.92 | -31187.80 | 144955.00 | -67558.50 | 2-3 | 25.00 | 82.444 |
| 42 | 2440.48 | 1 | SLE | -27510.70 | -29.26 | 13.65 | -27510.70 | 143566.00 | -66906.60 | 2-3 | 25.00 | 93.464 |
| 43 | 2500.00 | 1 | SLE | -23835.00 | 0.00 | 0.00 | -23835.00 | | | | | >100 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | OC | TCC | Ty <daN> | Tz <daN> | bw <cm> | Asw <cm²> | Vsdu <daN> | ctgθ | VRsd <daN> | VRod <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|------------|--------------|---------------|------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SLE | 6757.66 | 963.45 | 0.85 | 11.31 | 6826.00 | 1.00 | 32294.70 | 355484.00 | 32294.70 | 4.731 |
| 2 | 59.52 | 1 | SLE | 4387.84 | 625.58 | 0.85 | 11.31 | 4432.21 | 1.00 | 32294.70 | 355492.00 | 32294.70 | 7.286 |
| 3 | 119.05 | 1 | SLE | 2351.48 | 335.25 | 0.85 | 11.31 | 2375.26 | 1.00 | 32294.70 | 355266.00 | 32294.70 | 13.596 |
| 4 | 178.57 | 1 | SLE | 623.78 | 88.93 | 0.85 | 11.31 | 630.09 | 1.00 | 32294.70 | 355042.00 | 32294.70 | 51.254 |
| 5 | 238.09 | 1 | SLE | -820.56 | -116.99 | 0.85 | 11.31 | 828.86 | 1.00 | 32294.70 | 354818.00 | 32294.70 | 38.963 |
| 6 | 297.62 | 1 | SLE | -2007.04 | -286.15 | 0.85 | 11.31 | 2027.33 | 1.00 | 32294.70 | 354595.00 | 32294.70 | 15.930 |
| 7 | 357.14 | 1 | SLE | -3261.23 | -464.96 | 0.85 | 11.31 | 3294.20 | 1.00 | 32294.70 | 354372.00 | 32294.70 | 9.803 |
| 8 | 416.67 | 1 | SLE | -4538.37 | -647.04 | 0.85 | 11.31 | 4584.26 | 1.00 | 32294.70 | 353822.00 | 32294.70 | 7.045 |
| 9 | 476.19 | 1 | SLE | -5501.04 | -784.29 | 0.85 | 11.31 | 5556.67 | 1.00 | 32294.70 | 353272.00 | 32294.70 | 5.812 |
| 10 | 535.71 | 1 | SLE | -6188.62 | -882.32 | 0.85 | 11.31 | 6251.20 | 1.00 | 32294.70 | 352723.00 | 32294.70 | 5.166 |
| 11 | 595.24 | 1 | SLE | -6638.28 | -946.43 | 0.85 | 11.31 | 6705.41 | 1.00 | 32294.70 | 352176.00 | 32294.70 | 4.816 |
| 12 | 654.76 | 1 | SLE | -6884.74 | -981.57 | 0.85 | 11.31 | 6954.36 | 1.00 | 32294.70 | 351630.00 | 32294.70 | 4.644 |
| 13 | 714.29 | 1 | SLE | -6960.08 | -992.31 | 0.85 | 11.31 | 7030.46 | 1.00 | 32294.70 | 351084.00 | 32294.70 | 4.594 |

Relazione di calcolo

| | | | | | | | | | | | | | |
|----|---------|---|-----|----------|---------|------|-------|---------|------|----------|-----------|----------|--------|
| 14 | 773.81 | 1 | SLU | -6893.61 | -982.83 | 0.85 | 11.31 | 6963.32 | 1.00 | 32294.70 | 350540.00 | 32294.70 | 4.638 |
| 15 | 833.33 | 1 | SLU | -6711.90 | -956.92 | 0.85 | 11.31 | 6779.77 | 1.00 | 32294.70 | 349997.00 | 32294.70 | 4.763 |
| 16 | 892.86 | 1 | SLU | -6438.75 | -917.98 | 0.85 | 11.31 | 6503.86 | 1.00 | 32294.70 | 349455.00 | 32294.70 | 4.965 |
| 17 | 952.38 | 1 | SLU | -6095.31 | -869.02 | 0.85 | 11.31 | 6156.95 | 1.00 | 32294.70 | 348914.00 | 32294.70 | 5.245 |
| 18 | 1011.90 | 1 | SLU | -5700.15 | -812.68 | 0.85 | 11.31 | 5757.79 | 1.00 | 32294.70 | 348373.00 | 32294.70 | 5.609 |
| 19 | 1071.43 | 1 | SLU | -5269.41 | -751.27 | 0.85 | 11.31 | 5322.70 | 1.00 | 32294.70 | 347834.00 | 32294.70 | 6.067 |
| 20 | 1130.95 | 1 | SLU | -4816.97 | -686.76 | 0.85 | 11.31 | 4865.68 | 1.00 | 32294.70 | 347295.00 | 32294.70 | 6.637 |
| 21 | 1190.48 | 1 | SLU | -4354.60 | -620.84 | 0.85 | 11.31 | 4398.64 | 1.00 | 32294.70 | 346758.00 | 32294.70 | 7.342 |
| 22 | 1250.00 | 1 | SLU | -3892.17 | -554.91 | 0.85 | 11.31 | 3931.53 | 1.00 | 32294.70 | 346221.00 | 32294.70 | 8.214 |
| 23 | 1309.52 | 1 | SLU | -3437.79 | -490.13 | 0.85 | 11.31 | 3472.55 | 1.00 | 32294.70 | 345685.00 | 32294.70 | 9.300 |
| 24 | 1369.05 | 1 | SLU | -2998.03 | -427.43 | 0.85 | 11.31 | 3028.35 | 1.00 | 32294.70 | 345149.00 | 32294.70 | 10.664 |
| 25 | 1428.57 | 1 | SLU | -2578.10 | -367.56 | 0.85 | 11.31 | 2604.17 | 1.00 | 32294.70 | 344615.00 | 32294.70 | 12.401 |
| 26 | 1488.10 | 1 | SLU | -2182.01 | -311.09 | 0.85 | 11.31 | 2204.08 | 1.00 | 32294.70 | 344081.00 | 32294.70 | 14.652 |
| 27 | 1547.62 | 1 | SLU | -1812.74 | -258.44 | 0.85 | 11.31 | 1831.07 | 1.00 | 32294.70 | 343547.00 | 32294.70 | 17.637 |
| 28 | 1607.14 | 1 | SLU | -1472.41 | -209.92 | 0.85 | 11.31 | 1487.30 | 1.00 | 32294.70 | 343015.00 | 32294.70 | 21.714 |
| 29 | 1666.67 | 1 | SLU | -1162.39 | -165.72 | 0.85 | 11.31 | 1174.15 | 1.00 | 32294.70 | 342483.00 | 32294.70 | 27.505 |
| 30 | 1726.19 | 1 | SLU | -883.51 | -125.96 | 0.85 | 11.31 | 892.45 | 1.00 | 32294.70 | 341951.00 | 32294.70 | 36.187 |
| 31 | 1785.71 | 1 | SLU | -636.10 | -90.69 | 0.85 | 11.31 | 642.53 | 1.00 | 32294.70 | 341420.00 | 32294.70 | 50.262 |
| 32 | 1845.24 | 1 | SLU | -420.15 | -59.90 | 0.85 | 11.31 | 424.39 | 1.00 | 32294.70 | 340890.00 | 32294.70 | 76.096 |
| 33 | 1904.76 | 1 | SLU | -235.39 | -33.56 | 0.85 | 11.31 | 237.77 | 1.00 | 32294.70 | 340360.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -81.40 | -11.61 | 0.85 | 11.31 | 82.22 | 1.00 | 32294.70 | 339831.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | 42.35 | 6.04 | 0.85 | 11.31 | 42.78 | 1.00 | 32294.70 | 339302.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 136.42 | 19.45 | 0.85 | 11.31 | 137.80 | 1.00 | 32294.70 | 338773.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 201.34 | 28.71 | 0.85 | 11.31 | 203.38 | 1.00 | 32294.70 | 338245.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 237.61 | 33.88 | 0.85 | 11.31 | 240.01 | 1.00 | 32294.70 | 337717.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 245.63 | 35.02 | 0.85 | 11.31 | 248.11 | 1.00 | 32294.70 | 337190.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 225.70 | 32.18 | 0.85 | 11.31 | 227.99 | 1.00 | 32294.70 | 336662.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 178.05 | 25.39 | 0.85 | 11.31 | 179.85 | 1.00 | 32294.70 | 336135.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 102.80 | 14.66 | 0.85 | 11.31 | 103.84 | 1.00 | 32294.70 | 335609.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mz <daNm> | My <daNm> | AfT <cmq> | AfC <cmq> | σ_c <daN/cmq> | σ_f <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-------------------------|-------------------------|
| 44 | 0.00 | 2 | SLE R | -123161.00 | -18629.50 | 39945.20 | 31.42 | 47.12 | 37.87 | 527.45 |
| 45 | 59.52 | 2 | SLE R | -123513.00 | -19673.10 | 42182.90 | 37.70 | 40.84 | 40.20 | 558.37 |
| 46 | 119.05 | 2 | SLE R | -122538.00 | -20302.40 | 43532.20 | 37.70 | 40.84 | 41.69 | 577.72 |
| 47 | 178.57 | 2 | SLE R | -121567.00 | -20577.80 | 44122.70 | 37.70 | 40.84 | 42.38 | 586.50 |
| 48 | 238.09 | 2 | SLE R | -120599.00 | -20555.00 | 44073.90 | 37.70 | 40.84 | 42.37 | 586.17 |
| 49 | 297.62 | 2 | SLE R | -119636.00 | -20285.00 | 43495.00 | 37.70 | 40.84 | 41.78 | 578.23 |
| 50 | 357.14 | 2 | SLE R | -118676.00 | -19795.10 | 42444.60 | 37.70 | 40.84 | 40.69 | 563.56 |
| 51 | 416.67 | 2 | SLE R | -115842.00 | -19055.80 | 40859.20 | 37.70 | 40.84 | 39.10 | 541.97 |
| 52 | 476.19 | 2 | SLE R | -113015.00 | -18106.20 | 38823.20 | 37.70 | 40.84 | 37.03 | 514.07 |
| 53 | 535.71 | 2 | SLE R | -110194.00 | -17001.90 | 36455.40 | 31.42 | 47.12 | 34.63 | 481.76 |
| 54 | 595.24 | 2 | SLE R | -107378.00 | -15791.20 | 33859.30 | 31.42 | 47.12 | 32.02 | 446.73 |
| 55 | 654.76 | 2 | SLE R | -104569.00 | -14515.40 | 31123.80 | 31.42 | 47.12 | 29.34 | 410.53 |
| 56 | 714.29 | 2 | SLE R | -101765.00 | -13209.80 | 28324.40 | 31.42 | 47.12 | 26.68 | 374.49 |
| 57 | 773.81 | 2 | SLE R | -98966.10 | -11903.90 | 25524.20 | 25.13 | 53.41 | 24.11 | 339.73 |
| 58 | 833.33 | 2 | SLE R | -96172.90 | -10621.70 | 22774.90 | 25.13 | 53.41 | 21.72 | 307.11 |
| 59 | 892.86 | 2 | SLE R | -93384.80 | -9382.64 | 20118.20 | 18.85 | 59.69 | 19.53 | 277.16 |
| 60 | 952.38 | 2 | SLE R | -90601.80 | -8201.95 | 17586.50 | 18.85 | 59.69 | 17.57 | 250.13 |
| 61 | 1011.90 | 2 | SLE R | -87823.60 | -7091.04 | 15204.60 | 12.57 | 65.97 | 15.82 | 226.04 |
| 62 | 1071.43 | 2 | SLE R | -85050.10 | -6058.11 | 12989.80 | 0.00 | 78.54 | 14.28 | 204.64 |
| 63 | 1130.95 | 2 | SLE R | -82281.10 | -5108.51 | 10953.60 | 0.00 | 78.54 | 12.90 | 185.40 |
| 64 | 1190.48 | 2 | SLE R | -79516.60 | -4245.18 | 9102.47 | 0.00 | 78.54 | 11.62 | 167.65 |
| 65 | 1250.00 | 2 | SLE R | -76756.40 | -3469.03 | 7438.27 | 0.00 | 78.54 | 10.46 | 151.36 |
| 66 | 1309.52 | 2 | SLE R | -74000.20 | -2779.30 | 5959.34 | 0.00 | 78.54 | 9.39 | 136.51 |
| 67 | 1369.05 | 2 | SLE R | -71248.10 | -2173.81 | 4661.07 | 0.00 | 78.54 | 8.43 | 123.07 |
| 68 | 1428.57 | 2 | SLE R | -68499.70 | -1649.31 | 3536.45 | 0.00 | 78.54 | 7.57 | 110.99 |
| 69 | 1488.10 | 2 | SLE R | -65755.00 | -1201.68 | 2576.63 | 0.00 | 78.54 | 6.81 | 100.19 |
| 70 | 1547.62 | 2 | SLE R | -63013.90 | -826.12 | 1771.36 | 0.00 | 78.54 | 6.13 | 90.59 |
| 71 | 1607.14 | 2 | SLE R | -60276.10 | -517.38 | 1109.36 | 0.00 | 78.54 | 5.53 | 82.11 |
| 72 | 1666.67 | 2 | SLE R | -57541.60 | -269.87 | 578.64 | 0.00 | 78.54 | 5.01 | 74.65 |
| 73 | 1726.19 | 2 | SLE R | -54810.20 | -77.79 | 166.80 | 0.00 | 78.54 | 4.55 | 68.12 |
| 74 | 1785.71 | 2 | SLE R | -52081.70 | 64.75 | -138.83 | 0.00 | 78.54 | 4.31 | 64.57 |
| 75 | 1845.24 | 2 | SLE R | -49356.00 | 163.67 | -350.94 | 0.00 | 78.54 | 4.21 | 62.88 |
| 76 | 1904.76 | 2 | SLE R | -46632.90 | 224.88 | -482.20 | 0.00 | 78.54 | 4.06 | 60.57 |
| 77 | 1964.29 | 2 | SLE R | -43912.30 | 254.22 | -545.11 | 0.00 | 78.54 | 3.88 | 57.74 |
| 78 | 2023.81 | 2 | SLE R | -41194.10 | 257.43 | -551.98 | 0.00 | 78.54 | 3.66 | 54.48 |
| 79 | 2083.33 | 2 | SLE R | -38478.10 | 240.14 | -514.91 | 0.00 | 78.54 | 3.42 | 50.88 |
| 80 | 2142.86 | 2 | SLE R | -35764.20 | 207.90 | -445.77 | 0.00 | 78.54 | 3.16 | 47.04 |
| 81 | 2202.38 | 2 | SLE R | -33052.20 | 166.14 | -356.23 | 0.00 | 78.54 | 2.89 | 43.04 |
| 82 | 2261.90 | 2 | SLE R | -30341.90 | 120.21 | -257.76 | 0.00 | 78.54 | 2.61 | 38.98 |
| 83 | 2321.43 | 2 | SLE R | -27633.30 | 75.41 | -161.70 | 0.00 | 78.54 | 2.34 | 34.94 |
| 84 | 2380.95 | 2 | SLE R | -24926.20 | 36.98 | -79.28 | 0.00 | 78.54 | 2.07 | 31.00 |
| 85 | 2440.48 | 2 | SLE R | -22220.40 | 10.11 | -21.67 | 0.00 | 78.54 | 1.82 | 27.26 |
| 86 | 2500.00 | 2 | SLE R | -19515.80 | 0.00 | 0.00 | 0.00 | 78.54 | 1.59 | 23.79 |
| 87 | 0.00 | 4 | SLE Q | -123161.00 | -18629.50 | 39945.20 | 31.42 | 47.12 | 37.87 | 527.45 |

Relazione di calcolo

| | | | | | | | | | | | | | | | | |
|-----|--------|---|-------|-----------|----------|-----------|-------|--------|------|-------|--------|-------|--------|-------|------|------|
| 144 | 833.33 | 3 | SLE F | -96172.90 | 22774.90 | -10621.70 | 46.00 | 136.36 | 0.50 | 20.00 | 160.61 | 12.57 | 431.06 | 86.14 | 0.03 | 0.01 |
| 145 | 892.86 | 3 | SLE F | -93384.80 | 20118.20 | -9382.64 | 46.00 | 136.36 | 0.50 | 20.00 | 192.39 | 6.28 | 315.37 | 55.77 | 0.02 | 0.01 |
| 146 | 952.38 | 3 | SLE F | -90601.80 | 17586.50 | -8201.95 | 46.00 | 136.36 | 0.50 | 20.00 | 155.81 | 6.28 | 200.47 | 31.21 | 0.01 | 0.00 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 5 | SLU N cost - min. sic. |
| 13 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 47 | C.Rare - Sc min (max compr.), C.Rare - Sf min (max compr.) |
| 48 | C.Rare - Sf max (max traz.) |
| 63 | C.Rare - Sc max (min. compr.) |
| 90 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf min (max compr.) |
| 91 | C.Q.Per. - Sf max (max traz.), C.Q.Per. - Wk Max |
| 106 | C.Q.Per. - Sc max (min. compr.) |
| 134 | C.Freq - Wk Max |

Palo n. 30

Caratteristiche del palo e dei materiali utilizzati

| R | Cf | Cls | Fck | Fctk | Fcd | Fctd | Tp | Fyk | Fyd |
|-------|------|--------|-----------|-----------|-----------|-----------|-------|-----------|-----------|
| <cm> | <cm> | | <daN/cm²> | <daN/cm²> | <daN/cm²> | <daN/cm²> | | <daN/cm²> | <daN/cm²> |
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N | Mx | My | Mz |
|-----|-------|--------|--------|--------|
| | <daN> | <daNm> | <daNm> | <daNm> |
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 30 (-45)

| Caso | CC | TCC | Az | N | Tx | Ty | Mx | My |
|------|----|-------|-----|-----------|---------|--------|----------|----------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | RVN | 122242.00 | 7017.10 | 919.22 | 59193.90 | 17945.20 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 122242.00 | 7017.10 | 919.22 | 59193.90 | 17945.20 |
| 2 | 2 | SLE R | RVN | 90549.90 | 5197.85 | 680.90 | 43847.30 | 13292.70 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 90549.90 | 5197.85 | 680.90 | 43847.30 | 13292.70 |
| 3 | 3 | SLE F | RVN | 90549.90 | 5197.85 | 680.90 | 43847.30 | 13292.70 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 90549.90 | 5197.85 | 680.90 | 43847.30 | 13292.70 |
| 4 | 4 | SLE Q | RVN | 90549.90 | 5197.85 | 680.90 | 43847.30 | 13292.70 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 90549.90 | 5197.85 | 680.90 | 43847.30 | 13292.70 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N | Tx | Ty | Mx | My |
|------|----|-------|------|------------|----------|---------|-----------|-----------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | 1 | -122242.00 | -7017.10 | -919.22 | -59193.90 | -17945.20 |
| 2 | 2 | SLE R | 1 | -90549.90 | -5197.85 | -680.90 | -43847.30 | -13292.70 |
| 3 | 3 | SLE F | 1 | -90549.90 | -5197.85 | -680.90 | -43847.30 | -13292.70 |
| 4 | 4 | SLE Q | 1 | -90549.90 | -5197.85 | -680.90 | -43847.30 | -13292.70 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X | CC | TCC | N | My | Mz | Nu | MRdy | MRdz | Rott. | α | Sic. |
|------|--------|----|-----|------------|----------|-----------|------------|-----------|-----------|-------|--------|-------|
| | <cm> | | | <daN> | <daNm> | <daNm> | <daN> | <daNm> | <daNm> | | <grad> | |
| 1 | 0.00 | 1 | SLU | -122242.00 | 58952.90 | -17872.10 | -122242.00 | 187689.00 | -56570.80 | 2-3 | 196.88 | 3.182 |
| 2 | 59.52 | 1 | SLU | -122601.00 | 62260.80 | -18874.90 | -122601.00 | 187814.00 | -56610.50 | 2-3 | 196.88 | 3.015 |
| 3 | 119.05 | 1 | SLU | -121638.00 | 64256.70 | -19480.00 | -121638.00 | 187478.00 | -56504.00 | 2-3 | 196.88 | 2.916 |
| 4 | 178.57 | 1 | SLU | -120680.00 | 65131.90 | -19745.30 | -120680.00 | 187144.00 | -56397.90 | 2-3 | 196.88 | 2.872 |
| 5 | 238.09 | 1 | SLU | -119725.00 | 65062.90 | -19724.40 | -119725.00 | 186811.00 | -56292.30 | 2-3 | 196.88 | 2.870 |
| 6 | 297.62 | 1 | SLU | -118774.00 | 64211.10 | -19466.20 | -118774.00 | 186477.00 | -56186.40 | 2-3 | 196.88 | 2.903 |
| 7 | 357.14 | 1 | SLU | -117827.00 | 62662.80 | -18996.80 | -117827.00 | 186145.00 | -56081.00 | 2-3 | 196.88 | 2.969 |
| 8 | 416.67 | 1 | SLU | -115015.00 | 60324.30 | -18287.80 | -115015.00 | 185159.00 | -55767.90 | 2-3 | 196.88 | 3.068 |
| 9 | 476.19 | 1 | SLU | -112209.00 | 57320.00 | -17377.10 | -112209.00 | 184160.00 | -55477.50 | 2-3 | 196.88 | 3.211 |
| 10 | 535.71 | 1 | SLU | -109409.00 | 53825.60 | -16317.70 | -109409.00 | 183119.00 | -55251.20 | 2-3 | 196.88 | 3.401 |
| 11 | 595.24 | 1 | SLU | -106616.00 | 49993.90 | -15156.10 | -106616.00 | 182074.00 | -55028.20 | 2-3 | 196.88 | 3.641 |

Relazione di calcolo

| | | | | | | | | | | | | |
|----|---------|---|-----|------------|----------|-----------|------------|-----------|-----------|-----|--------|--------|
| 12 | 654.76 | 1 | SLU | -103827.00 | 45956.10 | -13932.00 | -103827.00 | 181030.00 | -54804.60 | 2-3 | 196.88 | 3.939 |
| 13 | 714.29 | 1 | SLU | -101045.00 | 41823.60 | -12679.20 | -101045.00 | 179989.00 | -54580.40 | 2-3 | 196.88 | 4.304 |
| 14 | 773.81 | 1 | SLU | -98267.40 | 37689.80 | -11426.00 | -98267.40 | 178944.00 | -54358.80 | 2-3 | 196.88 | 4.749 |
| 15 | 833.33 | 1 | SLU | -95495.50 | 33630.90 | -10195.50 | -95495.50 | 177898.00 | -54138.00 | 2-3 | 196.88 | 5.291 |
| 16 | 892.86 | 1 | SLU | -92728.70 | 29708.60 | -9006.42 | -92728.70 | 176855.00 | -53916.50 | 2-3 | 196.88 | 5.956 |
| 17 | 952.38 | 1 | SLU | -89966.80 | 25970.80 | -7873.28 | -89966.80 | 175811.00 | -53695.40 | 2-3 | 196.88 | 6.774 |
| 18 | 1011.90 | 1 | SLU | -87209.80 | 22453.90 | -6807.09 | -87209.80 | 175279.00 | -51537.20 | 2-3 | 196.25 | 7.787 |
| 19 | 1071.43 | 1 | SLU | -84457.50 | 19183.70 | -5815.71 | -84457.50 | 174232.00 | -51322.90 | 2-3 | 196.25 | 9.061 |
| 20 | 1130.95 | 1 | SLU | -81709.60 | 16177.30 | -4904.28 | -81709.60 | 173185.00 | -51080.50 | 2-3 | 196.25 | 10.681 |
| 21 | 1190.48 | 1 | SLU | -78966.20 | 13443.90 | -4075.64 | -78966.20 | 172132.00 | -50757.20 | 2-3 | 196.25 | 12.775 |
| 22 | 1250.00 | 1 | SLU | -76227.00 | 10986.50 | -3330.65 | -76227.00 | 171080.00 | -50433.90 | 2-3 | 196.25 | 15.536 |
| 23 | 1309.52 | 1 | SLU | -73491.90 | 8802.62 | -2668.59 | -73491.90 | 170028.00 | -50111.20 | 2-3 | 196.25 | 19.271 |
| 24 | 1369.05 | 1 | SLU | -70760.70 | 6885.45 | -2087.39 | -70760.70 | 168974.00 | -49786.60 | 2-3 | 196.25 | 24.483 |
| 25 | 1428.57 | 1 | SLU | -68033.40 | 5224.67 | -1583.90 | -68033.40 | 167918.00 | -49461.10 | 2-3 | 196.25 | 32.064 |
| 26 | 1488.10 | 1 | SLU | -65309.60 | 3807.21 | -1154.19 | -65309.60 | 166864.00 | -49136.00 | 2-3 | 196.25 | 39.370 |
| 27 | 1547.62 | 1 | SLU | -62589.40 | 2617.94 | -793.65 | -62589.40 | 165808.00 | -48810.30 | 2-3 | 196.25 | 41.081 |
| 28 | 1607.14 | 1 | SLU | -59872.60 | 1640.21 | -497.24 | -59872.60 | 164749.00 | -48482.40 | 2-3 | 196.25 | 42.945 |
| 29 | 1666.67 | 1 | SLU | -57158.90 | 856.33 | -259.61 | -57158.90 | 163691.00 | -48155.00 | 2-3 | 196.25 | 44.984 |
| 30 | 1726.19 | 1 | SLU | -54448.30 | 247.98 | -75.18 | -54448.30 | 162633.00 | -47827.80 | 2-3 | 196.25 | 47.224 |
| 31 | 1785.71 | 1 | SLU | -51740.70 | -203.53 | 61.70 | -51740.70 | 161252.00 | -48570.30 | 2-3 | 16.88 | 49.695 |
| 32 | 1845.24 | 1 | SLU | -49035.80 | -516.95 | 156.72 | -49035.80 | 160218.00 | -48239.40 | 2-3 | 16.88 | 52.436 |
| 33 | 1904.76 | 1 | SLU | -46333.50 | -710.96 | 215.53 | -46333.50 | 159185.00 | -47908.70 | 2-3 | 16.88 | 55.494 |
| 34 | 1964.29 | 1 | SLU | -43633.70 | -804.04 | 243.75 | -43633.70 | 158152.00 | -47578.10 | 2-3 | 16.88 | 58.928 |
| 35 | 2023.81 | 1 | SLU | -40936.30 | -814.36 | 246.88 | -40936.30 | 157117.00 | -47245.60 | 2-3 | 16.88 | 62.811 |
| 36 | 2083.33 | 1 | SLU | -38241.10 | -759.78 | 230.33 | -38241.10 | 156082.00 | -46913.30 | 2-3 | 16.88 | 67.238 |
| 37 | 2142.86 | 1 | SLU | -35547.90 | -657.83 | 199.43 | -35547.90 | 155006.00 | -46647.40 | 2-3 | 16.88 | 72.332 |
| 38 | 2202.38 | 1 | SLU | -32856.60 | -525.73 | 159.38 | -32856.60 | 153910.00 | -46411.70 | 2-3 | 16.88 | 78.257 |
| 39 | 2261.90 | 1 | SLU | -30167.10 | -380.42 | 115.33 | -30167.10 | 152811.00 | -46178.00 | 2-3 | 16.88 | 85.234 |
| 40 | 2321.43 | 1 | SLU | -27479.20 | -238.66 | 72.35 | -27479.20 | 151712.00 | -45943.30 | 2-3 | 16.88 | 93.571 |
| 41 | 2380.95 | 1 | SLU | -24792.80 | -117.02 | 35.48 | -24792.80 | 150613.00 | -45707.50 | 2-3 | 16.88 | >100 |
| 42 | 2440.48 | 1 | SLU | -22107.70 | -31.99 | 9.70 | -22107.70 | 149508.00 | -45476.50 | 2-3 | 16.88 | >100 |
| 43 | 2500.00 | 1 | SLU | -19423.70 | 0.00 | 0.00 | -19423.70 | | | | | >100 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | CC | TCC | Ty <daN> | Tz <daN> | bw <m> | Asw <cmq> | Vsdu <daN> | ctgθ | VRsd <daN> | VRed <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|-----------|--------------|---------------|------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SLU | 7017.10 | 919.22 | 0.85 | 11.31 | 7077.05 | 1.00 | 32294.70 | 349178.00 | 32294.70 | 4.563 |
| 2 | 59.52 | 1 | SLU | 4598.30 | 597.12 | 0.85 | 11.31 | 4597.25 | 1.00 | 32294.70 | 349229.00 | 32294.70 | 7.025 |
| 3 | 119.05 | 1 | SLU | 2445.42 | 320.34 | 0.85 | 11.31 | 2466.31 | 1.00 | 32294.70 | 349091.00 | 32294.70 | 13.094 |
| 4 | 178.57 | 1 | SLU | 652.75 | 85.51 | 0.85 | 11.31 | 658.32 | 1.00 | 32294.70 | 348954.00 | 32294.70 | 49.056 |
| 5 | 238.09 | 1 | SLU | -845.99 | -110.82 | 0.85 | 11.31 | 853.21 | 1.00 | 32294.70 | 348817.00 | 32294.70 | 37.851 |
| 6 | 297.62 | 1 | SLU | -2077.20 | -272.11 | 0.85 | 11.31 | 2094.94 | 1.00 | 32294.70 | 348681.00 | 32294.70 | 15.416 |
| 7 | 357.14 | 1 | SLU | -3378.76 | -442.61 | 0.85 | 11.31 | 3407.63 | 1.00 | 32294.70 | 348546.00 | 32294.70 | 9.477 |
| 8 | 416.67 | 1 | SLU | -4704.23 | -616.24 | 0.85 | 11.31 | 4744.42 | 1.00 | 32294.70 | 348143.00 | 32294.70 | 6.807 |
| 9 | 476.19 | 1 | SLU | -5703.44 | -747.13 | 0.85 | 11.31 | 5752.17 | 1.00 | 32294.70 | 347741.00 | 32294.70 | 5.614 |
| 10 | 535.71 | 1 | SLU | -6417.24 | -840.64 | 0.85 | 11.31 | 6472.06 | 1.00 | 32294.70 | 347340.00 | 32294.70 | 4.990 |
| 11 | 595.24 | 1 | SLU | -6884.17 | -901.81 | 0.85 | 11.31 | 6942.99 | 1.00 | 32294.70 | 346940.00 | 32294.70 | 4.651 |
| 12 | 654.76 | 1 | SLU | -7140.27 | -935.36 | 0.85 | 11.31 | 7201.28 | 1.00 | 32294.70 | 346540.00 | 32294.70 | 4.485 |
| 13 | 714.29 | 1 | SLU | -7218.80 | -945.64 | 0.85 | 11.31 | 7280.48 | 1.00 | 32294.70 | 346142.00 | 32294.70 | 4.436 |
| 14 | 773.81 | 1 | SLU | -7150.19 | -936.65 | 0.85 | 11.31 | 7211.27 | 1.00 | 32294.70 | 345744.00 | 32294.70 | 4.478 |
| 15 | 833.33 | 1 | SLU | -6961.98 | -912.00 | 0.85 | 11.31 | 7021.46 | 1.00 | 32294.70 | 345347.00 | 32294.70 | 4.599 |
| 16 | 892.86 | 1 | SLU | -6678.88 | -874.91 | 0.85 | 11.31 | 6735.95 | 1.00 | 32294.70 | 344951.00 | 32294.70 | 4.794 |
| 17 | 952.38 | 1 | SLU | -6322.83 | -828.27 | 0.85 | 11.31 | 6376.85 | 1.00 | 32294.70 | 344555.00 | 32294.70 | 5.064 |
| 18 | 1011.90 | 1 | SLU | -5913.08 | -774.60 | 0.85 | 11.31 | 5963.60 | 1.00 | 32294.70 | 344160.00 | 32294.70 | 5.415 |
| 19 | 1071.43 | 1 | SLU | -5466.40 | -716.08 | 0.85 | 11.31 | 5513.10 | 1.00 | 32294.70 | 343766.00 | 32294.70 | 5.858 |
| 20 | 1130.95 | 1 | SLU | -4997.18 | -654.62 | 0.85 | 11.31 | 5039.87 | 1.00 | 32294.70 | 343372.00 | 32294.70 | 6.408 |
| 21 | 1190.48 | 1 | SLU | -4517.63 | -591.80 | 0.85 | 11.31 | 4556.22 | 1.00 | 32294.70 | 342979.00 | 32294.70 | 7.088 |
| 22 | 1250.00 | 1 | SLU | -4037.99 | -528.97 | 0.85 | 11.31 | 4072.48 | 1.00 | 32294.70 | 342587.00 | 32294.70 | 7.930 |
| 23 | 1309.52 | 1 | SLU | -3566.68 | -467.23 | 0.85 | 11.31 | 3597.15 | 1.00 | 32294.70 | 342195.00 | 32294.70 | 8.978 |
| 24 | 1369.05 | 1 | SLU | -3110.52 | -407.47 | 0.85 | 11.31 | 3137.10 | 1.00 | 32294.70 | 341804.00 | 32294.70 | 10.294 |
| 25 | 1428.57 | 1 | SLU | -2674.93 | -350.41 | 0.85 | 11.31 | 2697.78 | 1.00 | 32294.70 | 341413.00 | 32294.70 | 11.971 |
| 26 | 1488.10 | 1 | SLU | -2264.05 | -296.58 | 0.85 | 11.31 | 2283.39 | 1.00 | 32294.70 | 341023.00 | 32294.70 | 14.143 |
| 27 | 1547.62 | 1 | SLU | -1880.98 | -246.40 | 0.85 | 11.31 | 1897.05 | 1.00 | 32294.70 | 340633.00 | 32294.70 | 17.024 |
| 28 | 1607.14 | 1 | SLU | -1527.91 | -200.15 | 0.85 | 11.31 | 1540.97 | 1.00 | 32294.70 | 340244.00 | 32294.70 | 20.957 |
| 29 | 1666.67 | 1 | SLU | -1206.30 | -158.02 | 0.85 | 11.31 | 1216.61 | 1.00 | 32294.70 | 339855.00 | 32294.70 | 26.545 |
| 30 | 1726.19 | 1 | SLU | -916.97 | -120.12 | 0.85 | 11.31 | 924.81 | 1.00 | 32294.70 | 339467.00 | 32294.70 | 34.921 |
| 31 | 1785.71 | 1 | SLU | -660.29 | -86.50 | 0.85 | 11.31 | 665.93 | 1.00 | 32294.70 | 339079.00 | 32294.70 | 48.496 |
| 32 | 1845.24 | 1 | SLU | -436.23 | -57.15 | 0.85 | 11.31 | 439.96 | 1.00 | 32294.70 | 338692.00 | 32294.70 | 73.404 |
| 33 | 1904.76 | 1 | SLU | -244.54 | -32.03 | 0.85 | 11.31 | 246.63 | 1.00 | 32294.70 | 338305.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -84.76 | -11.10 | 0.85 | 11.31 | 85.48 | 1.00 | 32294.70 | 337918.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | 43.65 | 5.72 | 0.85 | 11.31 | 44.02 | 1.00 | 32294.70 | 337532.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 141.27 | 18.51 | 0.85 | 11.31 | 142.48 | 1.00 | 32294.70 | 337146.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 208.66 | 27.33 | 0.85 | 11.31 | 210.44 | 1.00 | 32294.70 | 336760.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 246.31 | 32.27 | 0.85 | 11.31 | 248.42 | 1.00 | 32294.70 | 336374.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 254.67 | 33.36 | 0.85 | 11.31 | 256.84 | 1.00 | 32294.70 | 335989.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 234.03 | 30.66 | 0.85 | 11.31 | 236.03 | 1.00 | 32294.70 | 335604.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 184.64 | 24.19 | 0.85 | 11.31 | 186.22 | 1.00 | 32294.70 | 335219.00 | 32294.70 | >100 |

Relazione di calcolo

| | | | | | | | | | | | | | |
|----|---------|---|-----|--------|-------|------|-------|--------|------|----------|-----------|----------|------|
| 42 | 2440.48 | 1 | SLU | 106.61 | 13.97 | 0.85 | 11.31 | 107.52 | 1.00 | 32294.70 | 334835.00 | 32294.70 | >100 |
|----|---------|---|-----|--------|-------|------|-------|--------|------|----------|-----------|----------|------|

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mz <daNm> | My <daNm> | Aft <cmq> | Afc <cmq> | σ_c <daN/cmq> | σ_f <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-------------------------|-------------------------|
| 44 | 0.00 | 2 | SLE R | -90549.90 | -13238.60 | 43668.80 | 40.84 | 37.70 | 41.46 | 607.54 |
| 45 | 59.52 | 2 | SLE R | -91128.60 | -13981.40 | 46119.10 | 40.84 | 37.70 | 44.12 | 683.53 |
| 46 | 119.05 | 2 | SLE R | -90605.90 | -14429.60 | 47597.50 | 40.84 | 37.70 | 45.80 | 738.78 |
| 47 | 178.57 | 2 | SLE R | -90086.00 | -14626.20 | 48245.90 | 40.84 | 37.70 | 46.56 | 766.23 |
| 48 | 238.09 | 2 | SLE R | -89568.90 | -14610.70 | 48194.80 | 40.84 | 37.70 | 46.54 | 769.64 |
| 49 | 297.62 | 2 | SLE R | -89054.70 | -14419.40 | 47563.80 | 40.84 | 37.70 | 45.88 | 752.98 |
| 50 | 357.14 | 2 | SLE R | -88543.20 | -14071.70 | 46416.90 | 40.84 | 37.70 | 44.65 | 718.64 |
| 51 | 416.67 | 2 | SLE R | -86475.50 | -13546.50 | 44684.70 | 40.84 | 37.70 | 42.89 | 679.75 |
| 52 | 476.19 | 2 | SLE R | -84412.40 | -12871.90 | 42459.30 | 40.84 | 37.70 | 40.58 | 624.40 |
| 53 | 535.71 | 2 | SLE R | -82353.80 | -12087.20 | 39870.80 | 40.84 | 37.70 | 37.87 | 557.62 |
| 54 | 595.24 | 2 | SLE R | -80299.60 | -11226.70 | 37032.50 | 40.84 | 37.70 | 34.90 | 484.04 |
| 55 | 654.76 | 2 | SLE R | -78249.80 | -10320.00 | 34041.50 | 40.84 | 37.70 | 31.78 | 431.12 |
| 56 | 714.29 | 2 | SLE R | -76204.10 | -9392.01 | 30980.50 | 37.70 | 40.84 | 28.61 | 389.93 |
| 57 | 773.81 | 2 | SLE R | -74162.50 | -8463.70 | 27918.40 | 34.56 | 43.98 | 25.50 | 349.25 |
| 58 | 833.33 | 2 | SLE R | -72124.90 | -7552.23 | 24911.80 | 34.56 | 43.98 | 22.52 | 310.19 |
| 59 | 892.86 | 2 | SLE R | -70091.20 | -6671.42 | 22006.40 | 31.42 | 47.12 | 19.76 | 273.72 |
| 60 | 952.38 | 2 | SLE R | -68061.20 | -5832.06 | 19237.60 | 28.27 | 50.27 | 17.27 | 240.62 |
| 61 | 1011.90 | 2 | SLE R | -66034.90 | -5042.29 | 16632.50 | 25.13 | 53.41 | 15.08 | 211.35 |
| 62 | 1071.43 | 2 | SLE R | -64012.10 | -4307.93 | 14210.20 | 21.99 | 56.55 | 13.20 | 186.02 |
| 63 | 1130.95 | 2 | SLE R | -61992.70 | -3632.80 | 11983.20 | 15.71 | 62.83 | 11.61 | 164.42 |
| 64 | 1190.48 | 2 | SLE R | -59976.70 | -3018.99 | 9958.44 | 3.14 | 75.40 | 10.27 | 146.06 |
| 65 | 1250.00 | 2 | SLE R | -57963.90 | -2467.15 | 8138.14 | 0.00 | 78.54 | 9.11 | 130.20 |
| 66 | 1309.52 | 2 | SLE R | -55954.20 | -1976.74 | 6520.46 | 0.00 | 78.54 | 8.07 | 115.92 |
| 67 | 1369.05 | 2 | SLE R | -53947.50 | -1546.21 | 5100.34 | 0.00 | 78.54 | 7.14 | 103.08 |
| 68 | 1428.57 | 2 | SLE R | -51943.70 | -1173.26 | 3870.13 | 0.00 | 78.54 | 6.31 | 91.64 |
| 69 | 1488.10 | 2 | SLE R | -49942.70 | -854.96 | 2820.16 | 0.00 | 78.54 | 5.58 | 81.52 |
| 70 | 1547.62 | 2 | SLE R | -47944.40 | -587.89 | 1939.21 | 0.00 | 78.54 | 4.95 | 72.64 |
| 71 | 1607.14 | 2 | SLE R | -45948.60 | -368.33 | 1214.97 | 0.00 | 78.54 | 4.39 | 64.91 |
| 72 | 1666.67 | 2 | SLE R | -43955.30 | -192.30 | 634.32 | 0.00 | 78.54 | 3.92 | 58.23 |
| 73 | 1726.19 | 2 | SLE R | -41964.40 | -55.69 | 183.69 | 0.00 | 78.54 | 3.51 | 52.51 |
| 74 | 1785.71 | 2 | SLE R | -39975.70 | 45.70 | -150.76 | 0.00 | 78.54 | 3.33 | 49.85 |
| 75 | 1845.24 | 2 | SLE R | -37989.10 | 116.09 | -382.92 | 0.00 | 78.54 | 3.29 | 49.13 |
| 76 | 1904.76 | 2 | SLE R | -36004.60 | 159.66 | -526.64 | 0.00 | 78.54 | 3.21 | 47.77 |
| 77 | 1964.29 | 2 | SLE R | -34022.00 | 180.56 | -595.58 | 0.00 | 78.54 | 3.09 | 45.86 |
| 78 | 2023.81 | 2 | SLE R | -32041.30 | 182.87 | -603.23 | 0.00 | 78.54 | 2.93 | 43.50 |
| 79 | 2083.33 | 2 | SLE R | -30062.20 | 170.62 | -562.80 | 0.00 | 78.54 | 2.75 | 40.79 |
| 80 | 2142.86 | 2 | SLE R | -28084.80 | 147.72 | -487.28 | 0.00 | 78.54 | 2.55 | 37.83 |
| 81 | 2202.38 | 2 | SLE R | -26108.90 | 118.06 | -389.43 | 0.00 | 78.54 | 2.33 | 34.70 |
| 82 | 2261.90 | 2 | SLE R | -24134.40 | 85.43 | -281.80 | 0.00 | 78.54 | 2.11 | 31.50 |
| 83 | 2321.43 | 2 | SLE R | -22161.20 | 53.59 | -176.79 | 0.00 | 78.54 | 1.90 | 28.32 |
| 84 | 2380.95 | 2 | SLE R | -20189.10 | 26.28 | -86.68 | 0.00 | 78.54 | 1.69 | 25.25 |
| 85 | 2440.48 | 2 | SLE R | -18218.20 | 7.18 | -23.70 | 0.00 | 78.54 | 1.49 | 22.39 |
| 86 | 2500.00 | 2 | SLE R | -16248.20 | 0.00 | 0.00 | 0.00 | 78.54 | 1.32 | 19.81 |
| 87 | 0.00 | 4 | SLE Q | -90549.90 | -13238.60 | 43668.80 | 40.84 | 37.70 | 41.46 | 607.54 |
| 88 | 59.52 | 4 | SLE Q | -91128.60 | -13981.40 | 46119.10 | 40.84 | 37.70 | 44.12 | 683.53 |
| 89 | 119.05 | 4 | SLE Q | -90605.90 | -14429.60 | 47597.50 | 40.84 | 37.70 | 45.80 | 738.78 |
| 90 | 178.57 | 4 | SLE Q | -90086.00 | -14626.20 | 48245.90 | 40.84 | 37.70 | 46.56 | 766.23 |
| 91 | 238.09 | 4 | SLE Q | -89568.90 | -14610.70 | 48194.80 | 40.84 | 37.70 | 46.54 | 769.64 |
| 92 | 297.62 | 4 | SLE Q | -89054.70 | -14419.40 | 47563.80 | 40.84 | 37.70 | 45.88 | 752.98 |
| 93 | 357.14 | 4 | SLE Q | -88543.20 | -14071.70 | 46416.90 | 40.84 | 37.70 | 44.65 | 718.64 |
| 94 | 416.67 | 4 | SLE Q | -86475.50 | -13546.50 | 44684.70 | 40.84 | 37.70 | 42.89 | 679.75 |
| 95 | 476.19 | 4 | SLE Q | -84412.40 | -12871.90 | 42459.30 | 40.84 | 37.70 | 40.58 | 624.40 |
| 96 | 535.71 | 4 | SLE Q | -82353.80 | -12087.20 | 39870.80 | 40.84 | 37.70 | 37.87 | 557.62 |
| 97 | 595.24 | 4 | SLE Q | -80299.60 | -11226.70 | 37032.50 | 40.84 | 37.70 | 34.90 | 484.04 |
| 98 | 654.76 | 4 | SLE Q | -78249.80 | -10320.00 | 34041.50 | 40.84 | 37.70 | 31.78 | 431.12 |
| 99 | 714.29 | 4 | SLE Q | -76204.10 | -9392.01 | 30980.50 | 37.70 | 40.84 | 28.61 | 389.93 |
| 100 | 773.81 | 4 | SLE Q | -74162.50 | -8463.70 | 27918.40 | 34.56 | 43.98 | 25.50 | 349.25 |
| 101 | 833.33 | 4 | SLE Q | -72124.90 | -7552.23 | 24911.80 | 34.56 | 43.98 | 22.52 | 310.19 |
| 102 | 892.86 | 4 | SLE Q | -70091.20 | -6671.42 | 22006.40 | 31.42 | 47.12 | 19.76 | 273.72 |
| 103 | 952.38 | 4 | SLE Q | -68061.20 | -5832.06 | 19237.60 | 28.27 | 50.27 | 17.27 | 240.62 |
| 104 | 1011.90 | 4 | SLE Q | -66034.90 | -5042.29 | 16632.50 | 25.13 | 53.41 | 15.08 | 211.35 |
| 105 | 1071.43 | 4 | SLE Q | -64012.10 | -4307.93 | 14210.20 | 21.99 | 56.55 | 13.20 | 186.02 |
| 106 | 1130.95 | 4 | SLE Q | -61992.70 | -3632.80 | 11983.20 | 15.71 | 62.83 | 11.61 | 164.42 |
| 107 | 1190.48 | 4 | SLE Q | -59976.70 | -3018.99 | 9958.44 | 3.14 | 75.40 | 10.27 | 146.06 |
| 108 | 1250.00 | 4 | SLE Q | -57963.90 | -2467.15 | 8138.14 | 0.00 | 78.54 | 9.11 | 130.20 |
| 109 | 1309.52 | 4 | SLE Q | -55954.20 | -1976.74 | 6520.46 | 0.00 | 78.54 | 8.07 | 115.92 |
| 110 | 1369.05 | 4 | SLE Q | -53947.50 | -1546.21 | 5100.34 | 0.00 | 78.54 | 7.14 | 103.08 |
| 111 | 1428.57 | 4 | SLE Q | -51943.70 | -1173.26 | 3870.13 | 0.00 | 78.54 | 6.31 | 91.64 |
| 112 | 1488.10 | 4 | SLE Q | -49942.70 | -854.96 | 2820.16 | 0.00 | 78.54 | 5.58 | 81.52 |
| 113 | 1547.62 | 4 | SLE Q | -47944.40 | -587.89 | 1939.21 | 0.00 | 78.54 | 4.95 | 72.64 |
| 114 | 1607.14 | 4 | SLE Q | -45948.60 | -368.33 | 1214.97 | 0.00 | 78.54 | 4.39 | 64.91 |
| 115 | 1666.67 | 4 | SLE Q | -43955.30 | -192.30 | 634.32 | 0.00 | 78.54 | 3.92 | 58.23 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|-----------|--------|---------|------|-------|------|-------|
| 116 | 1726.19 | 4 | SLE Q | -41964.40 | -55.69 | 183.69 | 0.00 | 78.54 | 3.51 | 52.51 |
| 117 | 1785.71 | 4 | SLE Q | -39975.70 | 45.70 | -150.76 | 0.00 | 78.54 | 3.33 | 49.85 |
| 118 | 1845.24 | 4 | SLE Q | -37989.10 | 116.09 | -382.92 | 0.00 | 78.54 | 3.29 | 49.13 |
| 119 | 1904.76 | 4 | SLE Q | -36004.60 | 159.66 | -526.64 | 0.00 | 78.54 | 3.21 | 47.77 |
| 120 | 1964.29 | 4 | SLE Q | -34022.00 | 180.56 | -595.58 | 0.00 | 78.54 | 3.09 | 45.86 |
| 121 | 2023.81 | 4 | SLE Q | -32041.30 | 182.87 | -603.23 | 0.00 | 78.54 | 2.93 | 43.50 |
| 122 | 2083.33 | 4 | SLE Q | -30062.20 | 170.62 | -562.80 | 0.00 | 78.54 | 2.75 | 40.79 |
| 123 | 2142.86 | 4 | SLE Q | -28084.80 | 147.72 | -487.28 | 0.00 | 78.54 | 2.55 | 37.83 |
| 124 | 2202.38 | 4 | SLE Q | -26108.90 | 118.06 | -389.43 | 0.00 | 78.54 | 2.33 | 34.70 |
| 125 | 2261.90 | 4 | SLE Q | -24134.40 | 85.43 | -281.80 | 0.00 | 78.54 | 2.11 | 31.50 |
| 126 | 2321.43 | 4 | SLE Q | -22161.20 | 53.59 | -176.79 | 0.00 | 78.54 | 1.90 | 28.32 |
| 127 | 2380.95 | 4 | SLE Q | -20189.10 | 26.28 | -86.68 | 0.00 | 78.54 | 1.69 | 25.25 |
| 128 | 2440.48 | 4 | SLE Q | -18218.20 | 7.18 | -23.70 | 0.00 | 78.54 | 1.49 | 22.39 |
| 129 | 2500.00 | 4 | SLE Q | -16248.20 | 0.00 | 0.00 | 0.00 | 78.54 | 1.32 | 19.81 |

Stato limite d'esercizio - Verifiche a fessurazione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | c <mm> | s <mm> | K_c | ϕ_{eq} | Δ_{sm} <mm> | A_{st} <cmq> | $A_{c\ eff}$ <cmq> | σ_{st} <daN/cmq> | ϵ_{sm} | Wk <mm> |
|------|-----------|----|-------|------------|--------------|--------------|-----------|-----------|-------|-------------|-----------------------|-------------------|-----------------------|----------------------------|-----------------|------------|
| 87 | 0.00 | 4 | SLE Q | -90549.90 | 43668.80 | -13238.60 | 46.00 | 136.36 | 0.50 | 20.00 | 203.81 | 18.85 | 1053.77 | 607.54 | 0.18 | 0.06 |
| 88 | 59.52 | 4 | SLE Q | -91128.60 | 46119.10 | -13981.40 | 46.00 | 136.36 | 0.50 | 20.00 | 189.89 | 21.99 | 1076.32 | 683.53 | 0.20 | 0.06 |
| 89 | 119.05 | 4 | SLE Q | -90605.90 | 47597.50 | -14429.60 | 46.00 | 136.36 | 0.50 | 20.00 | 191.34 | 21.99 | 1092.35 | 738.78 | 0.22 | 0.07 |
| 90 | 178.57 | 4 | SLE Q | -90086.00 | 48245.90 | -14626.20 | 46.00 | 136.36 | 0.50 | 20.00 | 192.06 | 21.99 | 1100.18 | 766.23 | 0.22 | 0.07 |
| 91 | 238.09 | 4 | SLE Q | -89568.90 | 48194.80 | -14610.70 | 46.00 | 136.36 | 0.50 | 20.00 | 192.23 | 21.99 | 1102.05 | 769.64 | 0.22 | 0.07 |
| 92 | 297.62 | 4 | SLE Q | -89054.70 | 47563.80 | -14419.40 | 46.00 | 136.36 | 0.50 | 20.00 | 191.96 | 21.99 | 1099.09 | 752.98 | 0.22 | 0.07 |
| 93 | 357.14 | 4 | SLE Q | -88543.20 | 46416.90 | -14071.70 | 46.00 | 136.36 | 0.50 | 20.00 | 191.27 | 21.99 | 1091.48 | 718.64 | 0.21 | 0.07 |
| 94 | 416.67 | 4 | SLE Q | -86475.50 | 44684.70 | -13546.50 | 46.00 | 136.36 | 0.50 | 20.00 | 190.71 | 21.99 | 1085.41 | 679.75 | 0.20 | 0.06 |
| 95 | 476.19 | 4 | SLE Q | -84412.40 | 42459.30 | -12871.90 | 46.00 | 136.36 | 0.50 | 20.00 | 189.64 | 21.99 | 1073.57 | 624.40 | 0.18 | 0.06 |
| 96 | 535.71 | 4 | SLE Q | -82353.80 | 39870.80 | -12087.20 | 46.00 | 136.36 | 0.50 | 20.00 | 204.01 | 18.85 | 1055.67 | 557.62 | 0.16 | 0.06 |
| 97 | 595.24 | 4 | SLE Q | -80299.60 | 37032.50 | -11226.70 | 46.00 | 136.36 | 0.50 | 20.00 | 201.38 | 18.85 | 1030.89 | 484.04 | 0.14 | 0.05 |
| 98 | 654.76 | 4 | SLE Q | -78249.80 | 34041.50 | -10320.00 | 46.00 | 136.36 | 0.50 | 20.00 | 219.05 | 15.71 | 997.87 | 407.83 | 0.12 | 0.04 |
| 99 | 714.29 | 4 | SLE Q | -76204.10 | 30980.50 | -9392.01 | 46.00 | 136.36 | 0.50 | 20.00 | 213.56 | 15.71 | 954.70 | 332.70 | 0.10 | 0.04 |
| 100 | 773.81 | 4 | SLE Q | -74162.50 | 27918.40 | -8463.70 | 46.00 | 136.36 | 0.50 | 20.00 | 206.44 | 15.71 | 898.81 | 261.85 | 0.08 | 0.03 |
| 101 | 833.33 | 4 | SLE Q | -72124.90 | 24911.80 | -7552.23 | 46.00 | 136.36 | 0.50 | 20.00 | 197.23 | 15.71 | 826.49 | 197.93 | 0.06 | 0.02 |
| 102 | 892.86 | 4 | SLE Q | -70091.20 | 22006.40 | -6671.42 | 46.00 | 136.36 | 0.50 | 20.00 | 183.57 | 15.71 | 719.20 | 142.83 | 0.04 | 0.01 |
| 103 | 952.38 | 4 | SLE Q | -68061.20 | 19237.60 | -5832.06 | 46.00 | 136.36 | 0.50 | 20.00 | 183.27 | 12.57 | 573.46 | 97.53 | 0.03 | 0.01 |
| 104 | 1011.90 | 4 | SLE Q | -66034.90 | 16632.50 | -5042.29 | 46.00 | 136.36 | 0.50 | 20.00 | 180.87 | 9.42 | 418.78 | 61.87 | 0.02 | 0.01 |
| 105 | 1071.43 | 4 | SLE Q | -64012.10 | 14210.20 | -4307.93 | 46.00 | 136.36 | 0.50 | 20.00 | 177.63 | 6.28 | 269.00 | 34.83 | 0.01 | 0.00 |
| 130 | 0.00 | 3 | SLE F | -90549.90 | 43668.80 | -13238.60 | 46.00 | 136.36 | 0.50 | 20.00 | 203.81 | 18.85 | 1053.77 | 607.54 | 0.18 | 0.06 |
| 131 | 59.52 | 3 | SLE F | -91128.60 | 46119.10 | -13981.40 | 46.00 | 136.36 | 0.50 | 20.00 | 189.89 | 21.99 | 1076.32 | 683.53 | 0.20 | 0.06 |
| 132 | 119.05 | 3 | SLE F | -90605.90 | 47597.50 | -14429.60 | 46.00 | 136.36 | 0.50 | 20.00 | 191.34 | 21.99 | 1092.35 | 738.78 | 0.22 | 0.07 |
| 133 | 178.57 | 3 | SLE F | -90086.00 | 48245.90 | -14626.20 | 46.00 | 136.36 | 0.50 | 20.00 | 192.06 | 21.99 | 1100.18 | 766.23 | 0.22 | 0.07 |
| 134 | 238.09 | 3 | SLE F | -89568.90 | 48194.80 | -14610.70 | 46.00 | 136.36 | 0.50 | 20.00 | 192.23 | 21.99 | 1102.05 | 769.64 | 0.22 | 0.07 |
| 135 | 297.62 | 3 | SLE F | -89054.70 | 47563.80 | -14419.40 | 46.00 | 136.36 | 0.50 | 20.00 | 191.96 | 21.99 | 1099.09 | 752.98 | 0.22 | 0.07 |
| 136 | 357.14 | 3 | SLE F | -88543.20 | 46416.90 | -14071.70 | 46.00 | 136.36 | 0.50 | 20.00 | 191.27 | 21.99 | 1091.48 | 718.64 | 0.21 | 0.07 |
| 137 | 416.67 | 3 | SLE F | -86475.50 | 44684.70 | -13546.50 | 46.00 | 136.36 | 0.50 | 20.00 | 190.71 | 21.99 | 1085.41 | 679.75 | 0.20 | 0.06 |
| 138 | 476.19 | 3 | SLE F | -84412.40 | 42459.30 | -12871.90 | 46.00 | 136.36 | 0.50 | 20.00 | 189.64 | 21.99 | 1073.57 | 624.40 | 0.18 | 0.06 |
| 139 | 535.71 | 3 | SLE F | -82353.80 | 39870.80 | -12087.20 | 46.00 | 136.36 | 0.50 | 20.00 | 204.01 | 18.85 | 1055.67 | 557.62 | 0.16 | 0.06 |
| 140 | 595.24 | 3 | SLE F | -80299.60 | 37032.50 | -11226.70 | 46.00 | 136.36 | 0.50 | 20.00 | 201.38 | 18.85 | 1030.89 | 484.04 | 0.14 | 0.05 |
| 141 | 654.76 | 3 | SLE F | -78249.80 | 34041.50 | -10320.00 | 46.00 | 136.36 | 0.50 | 20.00 | 219.05 | 15.71 | 997.87 | 407.83 | 0.12 | 0.04 |
| 142 | 714.29 | 3 | SLE F | -76204.10 | 30980.50 | -9392.01 | 46.00 | 136.36 | 0.50 | 20.00 | 213.56 | 15.71 | 954.70 | 332.70 | 0.10 | 0.04 |
| 143 | 773.81 | 3 | SLE F | -74162.50 | 27918.40 | -8463.70 | 46.00 | 136.36 | 0.50 | 20.00 | 206.44 | 15.71 | 898.81 | 261.85 | 0.08 | 0.03 |
| 144 | 833.33 | 3 | SLE F | -72124.90 | 24911.80 | -7552.23 | 46.00 | 136.36 | 0.50 | 20.00 | 197.23 | 15.71 | 826.49 | 197.93 | 0.06 | 0.02 |
| 145 | 892.86 | 3 | SLE F | -70091.20 | 22006.40 | -6671.42 | 46.00 | 136.36 | 0.50 | 20.00 | 183.57 | 15.71 | 719.20 | 142.83 | 0.04 | 0.01 |
| 146 | 952.38 | 3 | SLE F | -68061.20 | 19237.60 | -5832.06 | 46.00 | 136.36 | 0.50 | 20.00 | 183.27 | 12.57 | 573.46 | 97.53 | 0.03 | 0.01 |
| 147 | 1011.90 | 3 | SLE F | -66034.90 | 16632.50 | -5042.29 | 46.00 | 136.36 | 0.50 | 20.00 | 180.87 | 9.42 | 418.78 | 61.87 | 0.02 | 0.01 |
| 148 | 1071.43 | 3 | SLE F | -64012.10 | 14210.20 | -4307.93 | 46.00 | 136.36 | 0.50 | 20.00 | 177.63 | 6.28 | 269.00 | 34.83 | 0.01 | 0.00 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 5 | SLU N cost - min. sic. |
| 13 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 47 | C.Rare - Sc min (max compr.), C.Rare - Sf min (max compr.) |
| 48 | C.Rare - Sf max (max traz.) |
| 65 | C.Rare - Sc max (min. compr.) |
| 90 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf min (max compr.) |
| 91 | C.Q.Per. - Sf max (max traz.), C.Q.Per. - Wk Max |
| 108 | C.Q.Per. - Sc max (min. compr.) |
| 134 | C.Freq - Wk Max |

Palo n. 31

Caratteristiche del palo e dei materiali utilizzati

| R <cm> | Cf <cm> | Cls | Fck <daN/cmq> | Fctk <daN/cmq> | Fcd <daN/cmq> | Fctd <daN/cmq> | Tp | Fyk <daN/cmq> | Fyd <daN/cmq> |
|-----------|------------|--------|------------------|-------------------|------------------|-------------------|-------|------------------|------------------|
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti

Relazione di calcolo

effetti

Azioni ed effetti comuni

| Az | N <daN> | Mx <daNm> | My <daNm> | Mz <daNm> |
|-----|------------|--------------|--------------|--------------|
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 31 (-28)

| Caso | CC | TCC | Az | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|-----|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | RVN | 80635.20 | 7265.62 | 800.64 | 60527.60 | 10374.60 |
| | | | TAG | | | | 0.00 | 0.00 |
| | | | ECC | | | | 0.00 | 0.00 |
| | | | TOT | 80635.20 | 7265.62 | 800.64 | 60527.60 | 10374.60 |
| 2 | 2 | SLE R | RVN | 59729.80 | 5381.94 | 593.07 | 44835.20 | 7684.90 |
| | | | TAG | | | | 0.00 | 0.00 |
| | | | ECC | | | | 0.00 | 0.00 |
| | | | TOT | 59729.80 | 5381.94 | 593.07 | 44835.20 | 7684.90 |
| 3 | 3 | SLE F | RVN | 59729.80 | 5381.94 | 593.07 | 44835.20 | 7684.90 |
| | | | TAG | | | | 0.00 | 0.00 |
| | | | ECC | | | | 0.00 | 0.00 |
| | | | TOT | 59729.80 | 5381.94 | 593.07 | 44835.20 | 7684.90 |
| 4 | 4 | SLE Q | RVN | 59729.80 | 5381.94 | 593.07 | 44835.20 | 7684.90 |
| | | | TAG | | | | 0.00 | 0.00 |
| | | | ECC | | | | 0.00 | 0.00 |
| | | | TOT | 59729.80 | 5381.94 | 593.07 | 44835.20 | 7684.90 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|------|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SLU | 1 | -80635.20 | -7265.62 | -800.64 | -60527.60 | -10374.60 |
| 2 | 2 | SLE R | 1 | -59729.80 | -5381.94 | -593.07 | -44835.20 | -7684.90 |
| 3 | 3 | SLE F | 1 | -59729.80 | -5381.94 | -593.07 | -44835.20 | -7684.90 |
| 4 | 4 | SLE Q | 1 | -59729.80 | -5381.94 | -593.07 | -44835.20 | -7684.90 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|---------|
| 1 | 0.00 | 1 | SLU | -80635.20 | 60276.80 | -10331.60 | -80635.20 | 177270.00 | -31113.90 | 2-3 | 190.00 | 2.943 |
| 2 | 59.52 | 1 | SLU | -81282.80 | 63812.70 | -10937.70 | -81282.80 | 177521.00 | -31160.50 | 2-3 | 190.00 | 2.784 |
| 3 | 119.05 | 1 | SLU | -80897.60 | 65983.30 | -11309.70 | -80897.60 | 177372.00 | -31132.80 | 2-3 | 190.00 | 2.690 |
| 4 | 178.57 | 1 | SLU | -80515.00 | 66986.50 | -11481.70 | -80515.00 | 177224.00 | -31105.20 | 2-3 | 190.00 | 2.647 |
| 5 | 238.09 | 1 | SLU | -80134.80 | 67005.30 | -11484.90 | -80134.80 | 177077.00 | -31077.90 | 2-3 | 190.00 | 2.645 |
| 6 | 297.62 | 1 | SLU | -79757.20 | 66206.80 | -11348.10 | -79757.20 | 176931.00 | -31050.70 | 2-3 | 190.00 | 2.674 |
| 7 | 357.14 | 1 | SLU | -79382.10 | 64680.10 | -11086.40 | -79382.10 | 176786.00 | -31023.60 | 2-3 | 190.00 | 2.735 |
| 8 | 416.67 | 1 | SLU | -77547.20 | 62325.60 | -10682.80 | -77547.20 | 176076.00 | -30891.50 | 2-3 | 190.00 | 2.827 |
| 9 | 476.19 | 1 | SLU | -75716.40 | 59272.10 | -10159.40 | -75716.40 | 175367.00 | -30759.70 | 2-3 | 190.00 | 2.961 |
| 10 | 535.71 | 1 | SLU | -73889.70 | 55702.10 | -9547.52 | -73889.70 | 174659.00 | -30627.90 | 2-3 | 190.00 | 3.138 |
| 11 | 595.24 | 1 | SLU | -72067.00 | 51774.60 | -8874.33 | -72067.00 | 173950.00 | -30495.50 | 2-3 | 190.00 | 3.362 |
| 12 | 654.76 | 1 | SLU | -70248.10 | 47626.30 | -8163.30 | -70248.10 | 173242.00 | -30363.40 | 2-3 | 190.00 | 3.640 |
| 13 | 714.29 | 1 | SLU | -68433.00 | 43373.40 | -7434.33 | -68433.00 | 172536.00 | -30231.60 | 2-3 | 190.00 | 3.980 |
| 14 | 773.81 | 1 | SLU | -66621.50 | 39113.00 | -6704.09 | -66621.50 | 171830.00 | -30100.10 | 2-3 | 190.00 | 4.396 |
| 15 | 833.33 | 1 | SLU | -64813.60 | 34925.00 | -5986.26 | -64813.60 | 171126.00 | -29968.80 | 2-3 | 190.00 | 4.903 |
| 16 | 892.86 | 1 | SLU | -63009.30 | 30873.90 | -5291.88 | -63009.30 | 170421.00 | -29837.00 | 2-3 | 190.00 | 5.523 |
| 17 | 952.38 | 1 | SLU | -61208.20 | 27009.90 | -4629.58 | -61208.20 | 169716.00 | -29705.10 | 2-3 | 190.00 | 6.287 |
| 18 | 1011.90 | 1 | SLU | -59410.50 | 23371.30 | -4005.91 | -59410.50 | 169013.00 | -29573.50 | 2-3 | 190.00 | 7.236 |
| 19 | 1071.43 | 1 | SLU | -57616.60 | 19985.30 | -3425.55 | -57616.60 | 168310.00 | -29442.10 | 2-3 | 190.00 | 8.427 |
| 20 | 1130.95 | 1 | SLU | -55824.50 | 16870.20 | -2891.61 | -55824.50 | 167608.00 | -29310.90 | 2-3 | 190.00 | 9.941 |
| 21 | 1190.48 | 1 | SLU | -54036.00 | 14036.00 | -2405.82 | -54036.00 | 166907.00 | -29179.90 | 2-3 | 190.00 | 11.898 |
| 22 | 1250.00 | 1 | SLU | -52250.50 | 11486.10 | -1968.75 | -52250.50 | 166205.00 | -29048.10 | 2-3 | 190.00 | 14.478 |
| 23 | 1309.52 | 1 | SLU | -50467.70 | 9218.33 | -1580.05 | -50467.70 | 165504.00 | -28916.50 | 2-3 | 190.00 | 17.964 |
| 24 | 1369.05 | 1 | SLU | -48687.70 | 7225.94 | -1238.55 | -48687.70 | 164803.00 | -28785.10 | 2-3 | 190.00 | 22.820 |
| 25 | 1428.57 | 1 | SLU | -46910.20 | 5498.51 | -942.46 | -46910.20 | 164103.00 | -28653.80 | 2-3 | 190.00 | 29.861 |
| 26 | 1488.10 | 1 | SLU | -45135.30 | 4022.76 | -689.51 | -45135.30 | 163404.00 | -28522.80 | 2-3 | 190.00 | 40.641 |
| 27 | 1547.62 | 1 | SLU | -43362.80 | 2783.19 | -477.05 | -43362.80 | 162705.00 | -28391.60 | 2-3 | 190.00 | 58.490 |
| 28 | 1607.14 | 1 | SLU | -41592.60 | 1762.74 | -302.14 | -41592.60 | 162005.00 | -28259.90 | 2-3 | 190.00 | 81.820 |
| 29 | 1666.67 | 1 | SLU | -39824.70 | 943.24 | -161.67 | -39824.70 | 161306.00 | -28128.30 | 2-3 | 190.00 | 111.564 |
| 30 | 1726.19 | 1 | SLU | -38058.90 | 305.79 | -52.41 | -38058.90 | 160584.00 | -28048.80 | 2-3 | 190.00 | 147.560 |
| 31 | 1785.71 | 1 | SLU | -36295.10 | -168.84 | 28.94 | -36295.10 | 159862.00 | -27969.30 | 2-3 | 10.00 | 204.843 |
| 32 | 1845.24 | 1 | SLU | -34533.30 | -500.02 | 85.71 | -34533.30 | 159140.00 | -27889.80 | 2-3 | 10.00 | 273.457 |
| 33 | 1904.76 | 1 | SLU | -32773.30 | -707.04 | 121.19 | -32773.30 | 158418.00 | -27810.30 | 2-3 | 10.00 | 354.456 |
| 34 | 1964.29 | 1 | SLU | -31015.10 | -808.99 | 138.66 | -31015.10 | 157696.00 | -27730.80 | 2-3 | 10.00 | 449.456 |
| 35 | 2023.81 | 1 | SLU | -29258.50 | -824.67 | 141.35 | -29258.50 | 156974.00 | -27651.30 | 2-3 | 10.00 | 559.456 |

Relazione di calcolo

| | | | | | | | | | | | | |
|----|---------|---|-----|-----------|---------|--------|-------------|------------|----------|-----|-------|--------|
| 36 | 2083.33 | 1 | SLU | -27503.60 | -772.56 | 132.42 | -2571250.00 | -155970.00 | 27587.50 | 2-3 | 10.00 | 93.488 |
| 37 | 2142.86 | 1 | SLU | -25750.10 | -670.79 | 114.98 | -2571250.00 | -155248.00 | 27453.10 | 2-3 | 10.00 | 99.854 |
| 38 | 2202.38 | 1 | SLU | -23997.90 | -537.21 | 92.08 | -2571250.00 | -154528.00 | 27318.90 | 2-3 | 10.00 | >100 |
| 39 | 2261.90 | 1 | SLU | -22247.10 | -389.35 | 66.74 | -2571250.00 | -153807.00 | 27184.70 | 2-3 | 10.00 | >100 |
| 40 | 2321.43 | 1 | SLU | -20497.50 | -244.57 | 41.92 | -2571250.00 | -153087.00 | 27050.60 | 2-3 | 10.00 | >100 |
| 41 | 2380.95 | 1 | SLU | -18748.90 | -120.05 | 20.58 | -2571250.00 | -152366.00 | 26916.60 | 2-3 | 10.00 | >100 |
| 42 | 2440.48 | 1 | SLU | -17001.40 | -32.85 | 5.63 | -2571250.00 | -151644.00 | 26781.40 | 2-3 | 10.00 | >100 |
| 43 | 2500.00 | 1 | SLU | -15254.80 | 0.00 | 0.00 | -2571250.00 | | | | | >100 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | CC | TCC | Ty <daN> | Tz <daN> | bw <cm> | Asw <cmq> | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|---------|----|-----|----------|----------|---------|-----------|------------|------|------------|------------|------------|--------|
| 1 | 0.00 | 1 | SLU | 7265.62 | 800.64 | 0.85 | 11.31 | 7309.60 | 1.00 | 32294.70 | 343218.00 | 32294.70 | 4.418 |
| 2 | 59.52 | 1 | SLU | 4776.01 | 526.29 | 0.85 | 11.31 | 4804.92 | 1.00 | 32294.70 | 343311.00 | 32294.70 | 6.721 |
| 3 | 119.05 | 1 | SLU | 2634.82 | 290.35 | 0.85 | 11.31 | 2650.77 | 1.00 | 32294.70 | 343256.00 | 32294.70 | 12.183 |
| 4 | 178.57 | 1 | SLU | 816.40 | 89.96 | 0.85 | 11.31 | 821.34 | 1.00 | 32294.70 | 343201.00 | 32294.70 | 39.319 |
| 5 | 238.09 | 1 | SLU | -705.53 | -77.75 | 0.85 | 11.31 | 709.80 | 1.00 | 32294.70 | 343147.00 | 32294.70 | 45.498 |
| 6 | 297.62 | 1 | SLU | -1957.45 | -215.70 | 0.85 | 11.31 | 1969.30 | 1.00 | 32294.70 | 343092.00 | 32294.70 | 16.399 |
| 7 | 357.14 | 1 | SLU | -3283.39 | -361.81 | 0.85 | 11.31 | 3303.26 | 1.00 | 32294.70 | 343039.00 | 32294.70 | 9.777 |
| 8 | 416.67 | 1 | SLU | -4636.22 | -510.89 | 0.85 | 11.31 | 4664.28 | 1.00 | 32294.70 | 342776.00 | 32294.70 | 6.924 |
| 9 | 476.19 | 1 | SLU | -5659.05 | -623.60 | 0.85 | 11.31 | 5693.30 | 1.00 | 32294.70 | 342514.00 | 32294.70 | 5.672 |
| 10 | 535.71 | 1 | SLU | -6392.97 | -704.48 | 0.85 | 11.31 | 6431.67 | 1.00 | 32294.70 | 342252.00 | 32294.70 | 5.021 |
| 11 | 595.24 | 1 | SLU | -6876.83 | -757.80 | 0.85 | 11.31 | 6918.46 | 1.00 | 32294.70 | 341991.00 | 32294.70 | 4.668 |
| 12 | 654.76 | 1 | SLU | -7146.90 | -787.56 | 0.85 | 11.31 | 7190.17 | 1.00 | 32294.70 | 341730.00 | 32294.70 | 4.492 |
| 13 | 714.29 | 1 | SLU | -7236.75 | -797.46 | 0.85 | 11.31 | 7280.55 | 1.00 | 32294.70 | 341470.00 | 32294.70 | 4.436 |
| 14 | 773.81 | 1 | SLU | -7177.06 | -790.88 | 0.85 | 11.31 | 7220.50 | 1.00 | 32294.70 | 341211.00 | 32294.70 | 4.473 |
| 15 | 833.33 | 1 | SLU | -6995.66 | -770.89 | 0.85 | 11.31 | 7038.01 | 1.00 | 32294.70 | 340952.00 | 32294.70 | 4.589 |
| 16 | 892.86 | 1 | SLU | -6717.51 | -740.24 | 0.85 | 11.31 | 6758.18 | 1.00 | 32294.70 | 340693.00 | 32294.70 | 4.779 |
| 17 | 952.38 | 1 | SLU | -6364.79 | -701.37 | 0.85 | 11.31 | 6403.32 | 1.00 | 32294.70 | 340436.00 | 32294.70 | 5.043 |
| 18 | 1011.90 | 1 | SLU | -5957.00 | -656.43 | 0.85 | 11.31 | 5993.06 | 1.00 | 32294.70 | 340178.00 | 32294.70 | 5.389 |
| 19 | 1071.43 | 1 | SLU | -5511.09 | -607.30 | 0.85 | 11.31 | 5544.45 | 1.00 | 32294.70 | 339921.00 | 32294.70 | 5.825 |
| 20 | 1130.95 | 1 | SLU | -5041.67 | -555.57 | 0.85 | 11.31 | 5072.19 | 1.00 | 32294.70 | 339664.00 | 32294.70 | 6.367 |
| 21 | 1190.48 | 1 | SLU | -4561.13 | -502.62 | 0.85 | 11.31 | 4588.74 | 1.00 | 32294.70 | 339408.00 | 32294.70 | 7.038 |
| 22 | 1250.00 | 1 | SLU | -4079.85 | -449.58 | 0.85 | 11.31 | 4104.55 | 1.00 | 32294.70 | 339152.00 | 32294.70 | 7.868 |
| 23 | 1309.52 | 1 | SLU | -3606.41 | -397.41 | 0.85 | 11.31 | 3628.24 | 1.00 | 32294.70 | 338897.00 | 32294.70 | 8.901 |
| 24 | 1369.05 | 1 | SLU | -3147.76 | -346.87 | 0.85 | 11.31 | 3166.81 | 1.00 | 32294.70 | 338642.00 | 32294.70 | 10.198 |
| 25 | 1428.57 | 1 | SLU | -2709.40 | -298.56 | 0.85 | 11.31 | 2725.80 | 1.00 | 32294.70 | 338387.00 | 32294.70 | 11.848 |
| 26 | 1488.10 | 1 | SLU | -2295.59 | -252.96 | 0.85 | 11.31 | 2309.48 | 1.00 | 32294.70 | 338133.00 | 32294.70 | 13.983 |
| 27 | 1547.62 | 1 | SLU | -1909.51 | -210.42 | 0.85 | 11.31 | 1921.07 | 1.00 | 32294.70 | 337879.00 | 32294.70 | 16.811 |
| 28 | 1607.14 | 1 | SLU | -1553.42 | -171.18 | 0.85 | 11.31 | 1562.82 | 1.00 | 32294.70 | 337626.00 | 32294.70 | 20.664 |
| 29 | 1666.67 | 1 | SLU | -1228.82 | -135.41 | 0.85 | 11.31 | 1236.26 | 1.00 | 32294.70 | 337373.00 | 32294.70 | 26.123 |
| 30 | 1726.19 | 1 | SLU | -936.60 | -103.21 | 0.85 | 11.31 | 942.27 | 1.00 | 32294.70 | 337120.00 | 32294.70 | 34.273 |
| 31 | 1785.71 | 1 | SLU | -677.15 | -74.62 | 0.85 | 11.31 | 681.25 | 1.00 | 32294.70 | 336867.00 | 32294.70 | 47.405 |
| 32 | 1845.24 | 1 | SLU | -450.50 | -49.64 | 0.85 | 11.31 | 453.22 | 1.00 | 32294.70 | 336615.00 | 32294.70 | 71.256 |
| 33 | 1904.76 | 1 | SLU | -256.38 | -28.25 | 0.85 | 11.31 | 257.94 | 1.00 | 32294.70 | 336363.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -94.38 | -10.40 | 0.85 | 11.31 | 94.95 | 1.00 | 32294.70 | 336111.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | 36.03 | 3.97 | 0.85 | 11.31 | 36.25 | 1.00 | 32294.70 | 335859.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 135.43 | 14.92 | 0.85 | 11.31 | 136.25 | 1.00 | 32294.70 | 335608.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 204.37 | 22.52 | 0.85 | 11.31 | 205.60 | 1.00 | 32294.70 | 335356.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 243.34 | 26.81 | 0.85 | 11.31 | 244.81 | 1.00 | 32294.70 | 335106.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 252.77 | 27.85 | 0.85 | 11.31 | 254.30 | 1.00 | 32294.70 | 334855.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 232.97 | 25.67 | 0.85 | 11.31 | 234.38 | 1.00 | 32294.70 | 334604.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 184.17 | 20.29 | 0.85 | 11.31 | 185.29 | 1.00 | 32294.70 | 334354.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 106.50 | 11.74 | 0.85 | 11.31 | 107.14 | 1.00 | 32294.70 | 334103.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mz <daNm> | My <daNm> | AFT <cmq> | AFC <cmq> | σ _c <daN/cmq> | σ _f <daN/cmq> |
|------|---------|----|-------|-----------|-----------|-----------|-----------|-----------|--------------------------|--------------------------|
| 44 | 0.00 | 2 | SLE R | -59729.80 | -7653.06 | 44649.50 | 43.98 | 34.56 | 42.91 | 916.46 |
| 45 | 59.52 | 2 | SLE R | -60522.70 | -8102.00 | 47268.70 | 43.98 | 34.56 | 45.61 | 1002.42 |
| 46 | 119.05 | 2 | SLE R | -60427.50 | -8377.59 | 48876.50 | 43.98 | 34.56 | 47.31 | 1062.45 |
| 47 | 178.57 | 2 | SLE R | -60334.20 | -8504.97 | 49619.70 | 43.98 | 34.56 | 48.09 | 1090.89 |
| 48 | 238.09 | 2 | SLE R | -60242.70 | -8507.36 | 49633.60 | 43.98 | 34.56 | 48.11 | 1092.52 |
| 49 | 297.62 | 2 | SLE R | -60153.20 | -8405.97 | 49042.10 | 43.98 | 34.56 | 47.50 | 1071.86 |
| 50 | 357.14 | 2 | SLE R | -60065.50 | -8212.13 | 47911.20 | 43.98 | 34.56 | 46.32 | 1031.42 |
| 51 | 416.67 | 2 | SLE R | -58721.50 | -7913.19 | 46167.10 | 43.98 | 34.56 | 44.58 | 983.74 |
| 52 | 476.19 | 2 | SLE R | -57380.70 | -7525.50 | 43905.20 | 43.98 | 34.56 | 42.29 | 917.21 |
| 53 | 535.71 | 2 | SLE R | -56042.90 | -7072.24 | 41260.80 | 43.98 | 34.56 | 39.60 | 836.97 |
| 54 | 595.24 | 2 | SLE R | -54708.10 | -6573.58 | 38351.50 | 43.98 | 34.56 | 36.62 | 747.61 |
| 55 | 654.76 | 2 | SLE R | -53376.30 | -6046.89 | 35278.70 | 43.98 | 34.56 | 33.47 | 653.16 |
| 56 | 714.29 | 2 | SLE R | -52047.30 | -5506.91 | 32128.40 | 43.98 | 34.56 | 30.23 | 557.16 |
| 57 | 773.81 | 2 | SLE R | -50721.10 | -4965.99 | 28972.60 | 43.98 | 34.56 | 26.98 | 462.73 |
| 58 | 833.33 | 2 | SLE R | -49397.60 | -4434.27 | 25870.40 | 40.84 | 37.70 | 23.79 | 372.62 |
| 59 | 892.86 | 2 | SLE R | -48076.80 | -3919.91 | 22869.50 | 37.70 | 40.84 | 20.72 | 289.30 |
| 60 | 952.38 | 2 | SLE R | -46758.50 | -3429.32 | 20007.30 | 37.70 | 40.84 | 17.83 | 246.22 |
| 61 | 1011.90 | 2 | SLE R | -45442.80 | -2967.34 | 17312.00 | 37.70 | 40.84 | 15.18 | 211.01 |
| 62 | 1071.43 | 2 | SLE R | -44129.50 | -2537.45 | 14804.00 | 31.42 | 47.12 | 12.82 | 179.51 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|-----------|----------|----------|-------|-------|-------|---------|
| 63 | 1130.95 | 2 | SLE R | -42818.60 | -2141.93 | 12496.50 | 28.27 | 50.27 | 10.81 | 152.31 |
| 64 | 1190.48 | 2 | SLE R | -41509.90 | -1782.09 | 10397.00 | 25.13 | 53.41 | 9.14 | 129.62 |
| 65 | 1250.00 | 2 | SLE R | -40203.50 | -1458.34 | 8508.22 | 18.85 | 59.69 | 7.79 | 111.16 |
| 66 | 1309.52 | 2 | SLE R | -38899.30 | -1170.41 | 6828.39 | 6.28 | 72.26 | 6.72 | 96.30 |
| 67 | 1369.05 | 2 | SLE R | -37597.10 | -917.44 | 5352.55 | 0.00 | 78.54 | 5.84 | 84.06 |
| 68 | 1428.57 | 2 | SLE R | -36297.00 | -698.12 | 4072.97 | 0.00 | 78.54 | 5.07 | 73.34 |
| 69 | 1488.10 | 2 | SLE R | -34998.80 | -510.75 | 2979.82 | 0.00 | 78.54 | 4.39 | 63.95 |
| 70 | 1547.62 | 2 | SLE R | -33702.40 | -353.37 | 2061.62 | 0.00 | 78.54 | 3.81 | 55.81 |
| 71 | 1607.14 | 2 | SLE R | -32407.90 | -223.81 | 1305.74 | 0.00 | 78.54 | 3.31 | 48.84 |
| 72 | 1666.67 | 2 | SLE R | -31115.10 | -119.76 | 698.69 | 0.00 | 78.54 | 2.89 | 42.93 |
| 73 | 1726.19 | 2 | SLE R | -29824.00 | -38.82 | 226.51 | 0.00 | 78.54 | 2.54 | 37.98 |
| 74 | 1785.71 | 2 | SLE R | -28534.50 | 21.44 | -125.07 | 0.00 | 78.54 | 2.38 | 35.68 |
| 75 | 1845.24 | 2 | SLE R | -27246.50 | 63.49 | -370.39 | 0.00 | 78.54 | 2.41 | 35.85 |
| 76 | 1904.76 | 2 | SLE R | -25960.00 | 89.77 | -523.73 | 0.00 | 78.54 | 2.38 | 35.37 |
| 77 | 1964.29 | 2 | SLE R | -24674.90 | 102.71 | -599.25 | 0.00 | 78.54 | 2.32 | 34.34 |
| 78 | 2023.81 | 2 | SLE R | -23391.10 | 104.70 | -610.87 | 0.00 | 78.54 | 2.22 | 32.86 |
| 79 | 2083.33 | 2 | SLE R | -22108.50 | 98.09 | -572.27 | 0.00 | 78.54 | 2.09 | 31.02 |
| 80 | 2142.86 | 2 | SLE R | -20827.20 | 85.17 | -496.88 | 0.00 | 78.54 | 1.95 | 28.92 |
| 81 | 2202.38 | 2 | SLE R | -19546.90 | 68.21 | -397.93 | 0.00 | 78.54 | 1.80 | 26.66 |
| 82 | 2261.90 | 2 | SLE R | -18267.70 | 49.43 | -288.41 | 0.00 | 78.54 | 1.63 | 24.32 |
| 83 | 2321.43 | 2 | SLE R | -16989.50 | 31.05 | -181.16 | 0.00 | 78.54 | 1.48 | 22.00 |
| 84 | 2380.95 | 2 | SLE R | -15712.20 | 15.24 | -88.92 | 0.00 | 78.54 | 1.32 | 19.79 |
| 85 | 2440.48 | 2 | SLE R | -14435.70 | 4.17 | -24.33 | 0.00 | 78.54 | 1.19 | 17.77 |
| 86 | 2500.00 | 2 | SLE R | -13160.10 | 0.00 | 0.00 | 0.00 | 78.54 | 1.07 | 16.05 |
| 87 | 0.00 | 4 | SLE Q | -59729.80 | -7653.06 | 44649.50 | 43.98 | 34.56 | 42.91 | 916.46 |
| 88 | 59.52 | 4 | SLE Q | -60522.70 | -8102.00 | 47268.70 | 43.98 | 34.56 | 45.61 | 1002.42 |
| 89 | 119.05 | 4 | SLE Q | -60427.50 | -8377.59 | 48876.50 | 43.98 | 34.56 | 47.31 | 1062.45 |
| 90 | 178.57 | 4 | SLE Q | -60334.20 | -8504.97 | 49619.70 | 43.98 | 34.56 | 48.09 | 1090.89 |
| 91 | 238.09 | 4 | SLE Q | -60242.70 | -8507.36 | 49633.60 | 43.98 | 34.56 | 48.11 | 1092.52 |
| 92 | 297.62 | 4 | SLE Q | -60153.20 | -8405.97 | 49042.10 | 43.98 | 34.56 | 47.50 | 1071.86 |
| 93 | 357.14 | 4 | SLE Q | -60065.50 | -8212.13 | 47911.20 | 43.98 | 34.56 | 46.32 | 1031.42 |
| 94 | 416.67 | 4 | SLE Q | -58721.50 | -7913.19 | 46167.10 | 43.98 | 34.56 | 44.58 | 983.74 |
| 95 | 476.19 | 4 | SLE Q | -57380.70 | -7525.50 | 43905.20 | 43.98 | 34.56 | 42.29 | 917.21 |
| 96 | 535.71 | 4 | SLE Q | -56042.90 | -7072.24 | 41260.80 | 43.98 | 34.56 | 39.60 | 836.97 |
| 97 | 595.24 | 4 | SLE Q | -54708.10 | -6573.58 | 38351.50 | 43.98 | 34.56 | 36.62 | 747.61 |
| 98 | 654.76 | 4 | SLE Q | -53376.30 | -6046.89 | 35278.70 | 43.98 | 34.56 | 33.47 | 653.16 |
| 99 | 714.29 | 4 | SLE Q | -52047.30 | -5506.91 | 32128.40 | 43.98 | 34.56 | 30.23 | 557.16 |
| 100 | 773.81 | 4 | SLE Q | -50721.10 | -4965.99 | 28972.60 | 43.98 | 34.56 | 26.98 | 462.73 |
| 101 | 833.33 | 4 | SLE Q | -49397.60 | -4434.27 | 25870.40 | 40.84 | 37.70 | 23.79 | 372.62 |
| 102 | 892.86 | 4 | SLE Q | -48076.80 | -3919.91 | 22869.50 | 37.70 | 40.84 | 20.72 | 289.30 |
| 103 | 952.38 | 4 | SLE Q | -46758.50 | -3429.32 | 20007.30 | 37.70 | 40.84 | 17.83 | 246.22 |
| 104 | 1011.90 | 4 | SLE Q | -45442.80 | -2967.34 | 17312.00 | 37.70 | 40.84 | 15.18 | 211.01 |
| 105 | 1071.43 | 4 | SLE Q | -44129.50 | -2537.45 | 14804.00 | 31.42 | 47.12 | 12.82 | 179.51 |
| 106 | 1130.95 | 4 | SLE Q | -42818.60 | -2141.93 | 12496.50 | 28.27 | 50.27 | 10.81 | 152.31 |
| 107 | 1190.48 | 4 | SLE Q | -41509.90 | -1782.09 | 10397.00 | 25.13 | 53.41 | 9.14 | 129.62 |
| 108 | 1250.00 | 4 | SLE Q | -40203.50 | -1458.34 | 8508.22 | 18.85 | 59.69 | 7.79 | 111.16 |
| 109 | 1309.52 | 4 | SLE Q | -38899.30 | -1170.41 | 6828.39 | 6.28 | 72.26 | 6.72 | 96.30 |
| 110 | 1369.05 | 4 | SLE Q | -37597.10 | -917.44 | 5352.55 | 0.00 | 78.54 | 5.84 | 84.06 |
| 111 | 1428.57 | 4 | SLE Q | -36297.00 | -698.12 | 4072.97 | 0.00 | 78.54 | 5.07 | 73.34 |
| 112 | 1488.10 | 4 | SLE Q | -34998.80 | -510.75 | 2979.82 | 0.00 | 78.54 | 4.39 | 63.95 |
| 113 | 1547.62 | 4 | SLE Q | -33702.40 | -353.37 | 2061.62 | 0.00 | 78.54 | 3.81 | 55.81 |
| 114 | 1607.14 | 4 | SLE Q | -32407.90 | -223.81 | 1305.74 | 0.00 | 78.54 | 3.31 | 48.84 |
| 115 | 1666.67 | 4 | SLE Q | -31115.10 | -119.76 | 698.69 | 0.00 | 78.54 | 2.89 | 42.93 |
| 116 | 1726.19 | 4 | SLE Q | -29824.00 | -38.82 | 226.51 | 0.00 | 78.54 | 2.54 | 37.98 |
| 117 | 1785.71 | 4 | SLE Q | -28534.50 | 21.44 | -125.07 | 0.00 | 78.54 | 2.38 | 35.68 |
| 118 | 1845.24 | 4 | SLE Q | -27246.50 | 63.49 | -370.39 | 0.00 | 78.54 | 2.41 | 35.85 |
| 119 | 1904.76 | 4 | SLE Q | -25960.00 | 89.77 | -523.73 | 0.00 | 78.54 | 2.38 | 35.37 |
| 120 | 1964.29 | 4 | SLE Q | -24674.90 | 102.71 | -599.25 | 0.00 | 78.54 | 2.32 | 34.34 |
| 121 | 2023.81 | 4 | SLE Q | -23391.10 | 104.70 | -610.87 | 0.00 | 78.54 | 2.22 | 32.86 |
| 122 | 2083.33 | 4 | SLE Q | -22108.50 | 98.09 | -572.27 | 0.00 | 78.54 | 2.09 | 31.02 |
| 123 | 2142.86 | 4 | SLE Q | -20827.20 | 85.17 | -496.88 | 0.00 | 78.54 | 1.95 | 28.92 |
| 124 | 2202.38 | 4 | SLE Q | -19546.90 | 68.21 | -397.93 | 0.00 | 78.54 | 1.80 | 26.66 |
| 125 | 2261.90 | 4 | SLE Q | -18267.70 | 49.43 | -288.41 | 0.00 | 78.54 | 1.63 | 24.32 |
| 126 | 2321.43 | 4 | SLE Q | -16989.50 | 31.05 | -181.16 | 0.00 | 78.54 | 1.48 | 22.00 |
| 127 | 2380.95 | 4 | SLE Q | -15712.20 | 15.24 | -88.92 | 0.00 | 78.54 | 1.32 | 19.79 |
| 128 | 2440.48 | 4 | SLE Q | -14435.70 | 4.17 | -24.33 | 0.00 | 78.54 | 1.19 | 17.77 |
| 129 | 2500.00 | 4 | SLE Q | -13160.10 | 0.00 | 0.00 | 0.00 | 78.54 | 1.07 | 16.05 |

Stato limite d'esercizio - Verifiche a fessurazione

| Caso | X <mm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | c <mm> | s <mm> | K ₂ | φ _{eq} | Δ _{sm} <mm> | A _g <cmq> | A _{c,eff} <cmq> | σ _s <daN/cmq> | e _{sm} | W _k <mm> |
|------|-----------|----|-------|------------|--------------|--------------|-----------|-----------|----------------|-----------------|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------|------------------------|
| 87 | 0.00 | 4 | SLE Q | -59729.80 | 44649.50 | -7653.06 | 46.00 | 136.36 | 0.50 | 20.00 | 202.24 | 21.99 | 1212.19 | 916.46 | 0.27 | 0.09 |
| 88 | 59.52 | 4 | SLE Q | -60522.70 | 47268.70 | -8102.00 | 46.00 | 136.36 | 0.50 | 20.00 | 203.14 | 21.99 | 1222.06 | 1002.42 | 0.29 | 0.10 |
| 89 | 119.05 | 4 | SLE Q | -60427.50 | 48876.50 | -8377.59 | 46.00 | 136.36 | 0.50 | 20.00 | 203.81 | 21.99 | 1229.45 | 1062.45 | 0.31 | 0.11 |
| 90 | 178.57 | 4 | SLE Q | -60334.20 | 49619.70 | -8504.97 | 46.00 | 136.36 | 0.50 | 20.00 | 204.12 | 21.99 | 1232.81 | 1090.89 | 0.32 | 0.11 |
| 91 | 238.09 | 4 | SLE Q | -60242.70 | 49633.60 | -8507.36 | 46.00 | 136.36 | 0.50 | 20.00 | 204.15 | 21.99 | 1233.17 | 1092.52 | 0.32 | 0.11 |
| 92 | 297.62 | 4 | SLE Q | -60153.20 | 49042.10 | -8405.97 | 46.00 | 136.36 | 0.50 | 20.00 | 203.96 | 21.99 | 1231.07 | 1071.86 | 0.31 | 0.11 |

Relazione di calcolo

| | | | | | | | | | | | | | | | | |
|-----|---------|---|-------|-----------|----------|----------|-------|--------|------|-------|--------|-------|---------|---------|------|------|
| 93 | 357.14 | 4 | SLE Q | -60065.50 | 47911.20 | -8212.13 | 46.00 | 136.36 | 0.50 | 20.00 | 203.55 | 21.99 | 1226.56 | 1031.42 | 0.30 | 0.10 |
| 94 | 416.67 | 4 | SLE Q | -58721.50 | 46167.10 | -7913.19 | 46.00 | 136.36 | 0.50 | 20.00 | 203.27 | 21.99 | 1223.49 | 983.74 | 0.29 | 0.10 |
| 95 | 476.19 | 4 | SLE Q | -57380.70 | 43905.20 | -7525.50 | 46.00 | 136.36 | 0.50 | 20.00 | 202.73 | 21.99 | 1217.53 | 917.21 | 0.27 | 0.09 |
| 96 | 535.71 | 4 | SLE Q | -56042.90 | 41260.80 | -7072.24 | 46.00 | 136.36 | 0.50 | 20.00 | 220.24 | 18.85 | 1208.59 | 836.97 | 0.24 | 0.09 |
| 97 | 595.24 | 4 | SLE Q | -54708.10 | 38351.50 | -6573.58 | 46.00 | 136.36 | 0.50 | 20.00 | 218.94 | 18.85 | 1196.35 | 747.61 | 0.22 | 0.08 |
| 98 | 654.76 | 4 | SLE Q | -53376.30 | 35278.70 | -6046.89 | 46.00 | 136.36 | 0.50 | 20.00 | 217.22 | 18.85 | 1180.20 | 653.16 | 0.19 | 0.07 |
| 99 | 714.29 | 4 | SLE Q | -52047.30 | 32128.40 | -5506.91 | 46.00 | 136.36 | 0.50 | 20.00 | 215.00 | 18.85 | 1159.25 | 557.16 | 0.16 | 0.06 |
| 100 | 773.81 | 4 | SLE Q | -50721.10 | 28972.60 | -4965.99 | 46.00 | 136.36 | 0.50 | 20.00 | 212.12 | 18.85 | 1132.15 | 462.73 | 0.13 | 0.05 |
| 101 | 833.33 | 4 | SLE Q | -49397.60 | 25870.40 | -4434.27 | 46.00 | 136.36 | 0.50 | 20.00 | 208.39 | 18.85 | 1096.96 | 372.62 | 0.11 | 0.04 |
| 102 | 892.86 | 4 | SLE Q | -48076.80 | 22869.50 | -3919.91 | 46.00 | 136.36 | 0.50 | 20.00 | 203.50 | 18.85 | 1050.91 | 289.30 | 0.08 | 0.03 |
| 103 | 952.38 | 4 | SLE Q | -46758.50 | 20007.30 | -3429.32 | 46.00 | 136.36 | 0.50 | 20.00 | 197.07 | 18.85 | 990.23 | 214.99 | 0.06 | 0.02 |
| 104 | 1011.90 | 4 | SLE Q | -45442.80 | 17312.00 | -2967.34 | 46.00 | 136.36 | 0.50 | 20.00 | 188.17 | 18.85 | 906.36 | 151.57 | 0.04 | 0.01 |
| 105 | 1071.43 | 4 | SLE Q | -44129.50 | 14804.00 | -2537.45 | 46.00 | 136.36 | 0.50 | 20.00 | 217.13 | 12.57 | 786.19 | 100.32 | 0.03 | 0.01 |
| 106 | 1130.95 | 4 | SLE Q | -42818.60 | 12496.50 | -2141.93 | 46.00 | 136.36 | 0.50 | 20.00 | 188.28 | 12.57 | 604.95 | 61.31 | 0.02 | 0.01 |
| 107 | 1190.48 | 4 | SLE Q | -41509.90 | 10397.00 | -1782.09 | 46.00 | 136.36 | 0.50 | 20.00 | 177.68 | 9.42 | 403.74 | 33.34 | 0.01 | 0.00 |
| 108 | 1250.00 | 4 | SLE Q | -40203.50 | 8508.22 | -1458.34 | 46.00 | 136.36 | 0.50 | 20.00 | 158.53 | 6.28 | 209.00 | 14.17 | 0.00 | 0.00 |
| 130 | 0.00 | 3 | SLE F | -59729.80 | 44649.50 | -7653.06 | 46.00 | 136.36 | 0.50 | 20.00 | 202.24 | 21.99 | 1212.19 | 916.46 | 0.27 | 0.09 |
| 131 | 59.52 | 3 | SLE F | -60522.70 | 47268.70 | -8102.00 | 46.00 | 136.36 | 0.50 | 20.00 | 203.14 | 21.99 | 1222.06 | 1002.42 | 0.29 | 0.10 |
| 132 | 119.05 | 3 | SLE F | -60427.50 | 48876.50 | -8377.59 | 46.00 | 136.36 | 0.50 | 20.00 | 203.81 | 21.99 | 1229.45 | 1062.45 | 0.31 | 0.11 |
| 133 | 178.57 | 3 | SLE F | -60334.20 | 49619.70 | -8504.97 | 46.00 | 136.36 | 0.50 | 20.00 | 204.12 | 21.99 | 1232.81 | 1090.89 | 0.32 | 0.11 |
| 134 | 238.09 | 3 | SLE F | -60242.70 | 49633.60 | -8507.36 | 46.00 | 136.36 | 0.50 | 20.00 | 204.15 | 21.99 | 1233.17 | 1092.52 | 0.32 | 0.11 |
| 135 | 297.62 | 3 | SLE F | -60153.20 | 49042.10 | -8405.97 | 46.00 | 136.36 | 0.50 | 20.00 | 203.96 | 21.99 | 1231.07 | 1071.86 | 0.31 | 0.11 |
| 136 | 357.14 | 3 | SLE F | -60065.50 | 47911.20 | -8212.13 | 46.00 | 136.36 | 0.50 | 20.00 | 203.55 | 21.99 | 1226.56 | 1031.42 | 0.30 | 0.10 |
| 137 | 416.67 | 3 | SLE F | -58721.50 | 46167.10 | -7913.19 | 46.00 | 136.36 | 0.50 | 20.00 | 203.27 | 21.99 | 1223.49 | 983.74 | 0.29 | 0.10 |
| 138 | 476.19 | 3 | SLE F | -57380.70 | 43905.20 | -7525.50 | 46.00 | 136.36 | 0.50 | 20.00 | 202.73 | 21.99 | 1217.53 | 917.21 | 0.27 | 0.09 |
| 139 | 535.71 | 3 | SLE F | -56042.90 | 41260.80 | -7072.24 | 46.00 | 136.36 | 0.50 | 20.00 | 220.24 | 18.85 | 1208.59 | 836.97 | 0.24 | 0.09 |
| 140 | 595.24 | 3 | SLE F | -54708.10 | 38351.50 | -6573.58 | 46.00 | 136.36 | 0.50 | 20.00 | 218.94 | 18.85 | 1196.35 | 747.61 | 0.22 | 0.08 |
| 141 | 654.76 | 3 | SLE F | -53376.30 | 35278.70 | -6046.89 | 46.00 | 136.36 | 0.50 | 20.00 | 217.22 | 18.85 | 1180.20 | 653.16 | 0.19 | 0.07 |
| 142 | 714.29 | 3 | SLE F | -52047.30 | 32128.40 | -5506.91 | 46.00 | 136.36 | 0.50 | 20.00 | 215.00 | 18.85 | 1159.25 | 557.16 | 0.16 | 0.06 |
| 143 | 773.81 | 3 | SLE F | -50721.10 | 28972.60 | -4965.99 | 46.00 | 136.36 | 0.50 | 20.00 | 212.12 | 18.85 | 1132.15 | 462.73 | 0.13 | 0.05 |
| 144 | 833.33 | 3 | SLE F | -49397.60 | 25870.40 | -4434.27 | 46.00 | 136.36 | 0.50 | 20.00 | 208.39 | 18.85 | 1096.96 | 372.62 | 0.11 | 0.04 |
| 145 | 892.86 | 3 | SLE F | -48076.80 | 22869.50 | -3919.91 | 46.00 | 136.36 | 0.50 | 20.00 | 203.50 | 18.85 | 1050.91 | 289.30 | 0.08 | 0.03 |
| 146 | 952.38 | 3 | SLE F | -46758.50 | 20007.30 | -3429.32 | 46.00 | 136.36 | 0.50 | 20.00 | 197.07 | 18.85 | 990.23 | 214.99 | 0.06 | 0.02 |
| 147 | 1011.90 | 3 | SLE F | -45442.80 | 17312.00 | -2967.34 | 46.00 | 136.36 | 0.50 | 20.00 | 188.17 | 18.85 | 906.36 | 151.57 | 0.04 | 0.01 |
| 148 | 1071.43 | 3 | SLE F | -44129.50 | 14804.00 | -2537.45 | 46.00 | 136.36 | 0.50 | 20.00 | 217.13 | 12.57 | 786.19 | 100.32 | 0.03 | 0.01 |
| 149 | 1130.95 | 3 | SLE F | -42818.60 | 12496.50 | -2141.93 | 46.00 | 136.36 | 0.50 | 20.00 | 188.28 | 12.57 | 604.95 | 61.31 | 0.02 | 0.01 |
| 150 | 1190.48 | 3 | SLE F | -41509.90 | 10397.00 | -1782.09 | 46.00 | 136.36 | 0.50 | 20.00 | 177.68 | 9.42 | 403.74 | 33.34 | 0.01 | 0.00 |
| 151 | 1250.00 | 3 | SLE F | -40203.50 | 8508.22 | -1458.34 | 46.00 | 136.36 | 0.50 | 20.00 | 158.53 | 6.28 | 209.00 | 14.17 | 0.00 | 0.00 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 1 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 5 | SLU N cost - min. sic. |
| 48 | C.Rare - Sc min (max compr.), C.Rare - Sf max (max traz.), C.Rare - Sf min (max compr.) |
| 67 | C.Rare - Sc max (min. compr.) |
| 91 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf max (max traz.), C.Q.Per. - Sf min (max compr.), C.Q.Per. - Wk Max |
| 110 | C.Q.Per. - Sc max (min. compr.) |
| 134 | C.Freq - Wk Max |

Palo n. 32

Caratteristiche del palo e dei materiali utilizzati

| R | Cf | Cls | Fck | Fctk | Fcd | Fctd | tp | Fyk | Fyd |
|-------|------|--------|-----------|-----------|-----------|-----------|-------|-----------|-----------|
| <cm> | <cm> | | <daN/cm²> | <daN/cm²> | <daN/cm²> | <daN/cm²> | | <daN/cm²> | <daN/cm²> |
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N | Mx | My | Mz |
|-----|-------|--------|--------|--------|
| | <daN> | <daNm> | <daNm> | <daNm> |
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 32 (-16)

| Caso | CC | TCC | Az | N | Tx | Ty | Mx | My |
|------|----|-------|-----|----------|---------|--------|----------|---------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | RVN | 46634.90 | 7464.38 | 623.03 | 59187.90 | 4732.68 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 46634.90 | 7464.38 | 623.03 | 59187.90 | 4732.68 |
| 2 | 2 | SLE R | RVN | 34544.40 | 5529.17 | 461.50 | 43842.90 | 3505.69 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 34544.40 | 5529.17 | 461.50 | 43842.90 | 3505.69 |
| 3 | 3 | SLE F | RVN | 34544.40 | 5529.17 | 461.50 | 43842.90 | 3505.69 |

Relazione di calcolo

| | | | | | | | |
|---|-------|-----|----------|---------|--------|----------|---------|
| 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| 3 | SLE F | TOT | 34544.40 | 5529.17 | 461.50 | 43842.90 | 3505.69 |
| 4 | SLE Q | RVN | 34544.40 | 5529.17 | 461.50 | 43842.90 | 3505.69 |
| 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| 4 | SLE Q | TOT | 34544.40 | 5529.17 | 461.50 | 43842.90 | 3505.69 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N <daN> | Tx <daN> | Ty <daN> | Mx <daNm> | My <daNm> |
|------|----|-------|------|------------|-------------|-------------|--------------|--------------|
| 1 | 1 | SIU | 1 | -46634.90 | -7464.38 | -623.03 | -59187.90 | -4732.68 |
| 2 | 2 | SLE R | 1 | -34544.40 | -5529.17 | -461.50 | -43842.90 | -3505.69 |
| 3 | 3 | SLE F | 1 | -34544.40 | -5529.17 | -461.50 | -43842.90 | -3505.69 |
| 4 | 4 | SLE Q | 1 | -34544.40 | -5529.17 | -461.50 | -43842.90 | -3505.69 |

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|--------|
| 1 | 0.00 | 1 | SIU | -46634.90 | 58936.20 | -4712.55 | -46634.90 | 165723.00 | -14208.90 | 2-3 | 185.00 | 2.813 |
| 2 | 59.52 | 1 | SIU | -47518.90 | 62625.50 | -5007.55 | -47518.90 | 166086.00 | -14235.80 | 2-3 | 185.00 | 2.653 |
| 3 | 119.05 | 1 | SIU | -47605.30 | 64943.70 | -5192.91 | -47605.30 | 166122.00 | -14238.40 | 2-3 | 185.00 | 2.559 |
| 4 | 178.57 | 1 | SIU | -47693.20 | 66088.30 | -5284.43 | -47693.20 | 166158.00 | -14241.10 | 2-3 | 185.00 | 2.515 |
| 5 | 238.09 | 1 | SIU | -47782.60 | 66241.40 | -5296.67 | -47782.60 | 166194.00 | -14243.80 | 2-3 | 185.00 | 2.510 |
| 6 | 297.62 | 1 | SIU | -47873.50 | 65570.00 | -5242.99 | -47873.50 | 166232.00 | -14246.60 | 2-3 | 185.00 | 2.536 |
| 7 | 357.14 | 1 | SIU | -47965.90 | 64162.20 | -5130.42 | -47965.90 | 166270.00 | -14249.40 | 2-3 | 185.00 | 2.593 |
| 8 | 416.67 | 1 | SIU | -46929.40 | 61915.20 | -4950.75 | -46929.40 | 165844.00 | -14217.80 | 2-3 | 185.00 | 2.680 |
| 9 | 476.19 | 1 | SIU | -45895.40 | 58957.10 | -4714.22 | -45895.40 | 165419.00 | -14186.30 | 2-3 | 185.00 | 2.807 |
| 10 | 535.71 | 1 | SIU | -44863.90 | 55470.90 | -4435.46 | -44863.90 | 164995.00 | -14154.90 | 2-3 | 185.00 | 2.976 |
| 11 | 595.24 | 1 | SIU | -43834.80 | 51616.10 | -4127.23 | -43834.80 | 164572.00 | -14123.50 | 2-3 | 185.00 | 3.190 |
| 12 | 654.76 | 1 | SIU | -42808.00 | 47530.20 | -3800.52 | -42808.00 | 164150.00 | -14092.10 | 2-3 | 185.00 | 3.455 |
| 13 | 714.29 | 1 | SIU | -41783.50 | 43330.00 | -3464.67 | -41783.50 | 163727.00 | -14061.50 | 2-3 | 185.00 | 3.780 |
| 14 | 773.81 | 1 | SIU | -40761.30 | 39113.50 | -3127.52 | -40761.30 | 163304.00 | -14030.90 | 2-3 | 185.00 | 4.177 |
| 15 | 833.33 | 1 | SIU | -39741.20 | 34961.40 | -2795.52 | -39741.20 | 162883.00 | -14000.30 | 2-3 | 185.00 | 4.661 |
| 16 | 892.86 | 1 | SIU | -38723.30 | 30938.90 | -2473.88 | -38723.30 | 162462.00 | -13969.80 | 2-3 | 185.00 | 5.254 |
| 17 | 952.38 | 1 | SIU | -37707.50 | 27097.10 | -2166.69 | -37707.50 | 162041.00 | -13939.20 | 2-3 | 185.00 | 5.983 |
| 18 | 1011.90 | 1 | SIU | -36693.60 | 23474.90 | -1877.06 | -36693.60 | 161622.00 | -13908.70 | 2-3 | 185.00 | 6.888 |
| 19 | 1071.43 | 1 | SIU | -35681.80 | 20100.50 | -1607.24 | -35681.80 | 161203.00 | -13878.30 | 2-3 | 185.00 | 8.024 |
| 20 | 1130.95 | 1 | SIU | -34671.80 | 16992.50 | -1358.72 | -34671.80 | 160785.00 | -13847.80 | 2-3 | 185.00 | 9.467 |
| 21 | 1190.48 | 1 | SIU | -33663.80 | 14161.80 | -1132.38 | -33663.80 | 160368.00 | -13817.40 | 2-3 | 185.00 | 11.330 |
| 22 | 1250.00 | 1 | SIU | -32657.50 | 11612.30 | -928.52 | -32657.50 | 159949.00 | -13787.80 | 2-3 | 185.00 | 13.781 |
| 23 | 1309.52 | 1 | SIU | -31653.00 | 9342.34 | -747.01 | -31653.00 | 159531.00 | -13758.20 | 2-3 | 185.00 | 17.085 |
| 24 | 1369.05 | 1 | SIU | -30650.10 | 7345.72 | -587.37 | -30650.10 | 159113.00 | -13730.80 | 2-3 | 185.00 | 21.672 |
| 25 | 1428.57 | 1 | SIU | -29649.00 | 5612.42 | -448.77 | -29649.00 | 158693.00 | -13707.00 | 2-3 | 185.00 | 28.290 |
| 26 | 1488.10 | 1 | SIU | -28649.40 | 4129.55 | -330.20 | -28649.40 | 158274.00 | -13683.30 | 2-3 | 185.00 | 38.348 |
| 27 | 1547.62 | 1 | SIU | -27651.30 | 2881.96 | -230.44 | -27651.30 | 157855.00 | -13659.40 | 2-3 | 185.00 | 54.803 |
| 28 | 1607.14 | 1 | SIU | -26654.70 | 1852.87 | -148.16 | -26654.70 | 157438.00 | -13635.60 | 2-3 | 185.00 | 85.016 |
| 29 | 1666.67 | 1 | SIU | -25659.60 | 1024.38 | -81.91 | -2571250.00 | 157020.00 | -13611.70 | 2-3 | 185.00 | >100 |
| 30 | 1726.19 | 1 | SIU | -24665.80 | 377.83 | -30.21 | -2571250.00 | 156603.00 | -13587.90 | 2-3 | 185.00 | >100 |
| 31 | 1785.71 | 1 | SIU | -23673.40 | -105.84 | 8.46 | -2571250.00 | -156368.00 | 13524.80 | 2-3 | 5.00 | >100 |
| 32 | 1845.24 | 1 | SIU | -22682.20 | -445.84 | 35.65 | -2571250.00 | -155958.00 | 13454.90 | 2-3 | 5.00 | >100 |
| 33 | 1904.76 | 1 | SIU | -21692.30 | -661.31 | 52.88 | -2571250.00 | -155549.00 | 13385.30 | 2-3 | 5.00 | >100 |
| 34 | 1964.29 | 1 | SIU | -20703.50 | -771.23 | 61.67 | -2571250.00 | -155139.00 | 13313.60 | 2-3 | 5.00 | >100 |
| 35 | 2023.81 | 1 | SIU | -19715.80 | -794.30 | 63.51 | -2571250.00 | -154730.00 | 13243.80 | 2-3 | 5.00 | >100 |
| 36 | 2083.33 | 1 | SIU | -18729.20 | -748.91 | 59.88 | -2571250.00 | -154322.00 | 13170.20 | 2-3 | 5.00 | >100 |
| 37 | 2142.86 | 1 | SIU | -17743.50 | -653.15 | 52.23 | -2571250.00 | -153914.00 | 13098.90 | 2-3 | 5.00 | >100 |
| 38 | 2202.38 | 1 | SIU | -16758.90 | -524.77 | 41.96 | -2571250.00 | -153502.00 | 13027.20 | 2-3 | 5.00 | >100 |
| 39 | 2261.90 | 1 | SIU | -15775.10 | -381.27 | 30.49 | -2571250.00 | -153094.00 | 12956.10 | 2-3 | 5.00 | >100 |
| 40 | 2321.43 | 1 | SIU | -14792.20 | -239.97 | 19.19 | -2571250.00 | -152686.00 | 12885.20 | 2-3 | 5.00 | >100 |
| 41 | 2380.95 | 1 | SIU | -13810.10 | -117.97 | 9.43 | -2571250.00 | -152263.00 | 12852.40 | 2-3 | 5.00 | >100 |
| 42 | 2440.48 | 1 | SIU | -12828.70 | -32.32 | 2.58 | -2571250.00 | -151840.00 | 12821.60 | 2-3 | 5.00 | >100 |
| 43 | 2500.00 | 1 | SIU | -11848.00 | 0.00 | 0.00 | -2571250.00 | | | | | >100 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | CC | TCC | Ty <daN> | Tz <daN> | bw <m> | Asw <cmq> | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|-----------|--------------|---------------|------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SIU | 7464.38 | 623.03 | 0.85 | 11.31 | 7490.34 | 1.00 | 32294.70 | 338348.00 | 32294.70 | 4.312 |
| 2 | 59.52 | 1 | SIU | 4987.57 | 416.30 | 0.85 | 11.31 | 5004.91 | 1.00 | 32294.70 | 338475.00 | 32294.70 | 6.453 |
| 3 | 119.05 | 1 | SIU | 2854.72 | 238.27 | 0.85 | 11.31 | 2864.64 | 1.00 | 32294.70 | 338487.00 | 32294.70 | 11.274 |
| 4 | 178.57 | 1 | SIU | 1040.82 | 86.87 | 0.85 | 11.31 | 1044.44 | 1.00 | 32294.70 | 338500.00 | 32294.70 | 30.921 |
| 5 | 238.09 | 1 | SIU | -479.79 | -40.05 | 0.85 | 11.31 | 481.46 | 1.00 | 32294.70 | 338512.00 | 32294.70 | 67.076 |
| 6 | 297.62 | 1 | SIU | -1733.03 | -144.65 | 0.85 | 11.31 | 1739.06 | 1.00 | 32294.70 | 338525.00 | 32294.70 | 18.570 |
| 7 | 357.14 | 1 | SIU | -3064.02 | -255.74 | 0.85 | 11.31 | 3074.67 | 1.00 | 32294.70 | 338539.00 | 32294.70 | 10.504 |
| 8 | 416.67 | 1 | SIU | -4425.68 | -369.40 | 0.85 | 11.31 | 4441.07 | 1.00 | 32294.70 | 338390.00 | 32294.70 | 7.272 |

Relazione di calcolo

| | | | | | | | | | | | | | |
|----|---------|---|-----|----------|---------|------|-------|---------|------|----------|-----------|----------|--------|
| 9 | 476.19 | 1 | SLU | -5459.57 | -455.69 | 0.85 | 11.31 | 5478.56 | 1.00 | 32294.70 | 338242.00 | 32294.70 | 5.895 |
| 10 | 535.71 | 1 | SLU | -6206.18 | -518.01 | 0.85 | 11.31 | 6227.76 | 1.00 | 32294.70 | 338094.00 | 32294.70 | 5.186 |
| 11 | 595.24 | 1 | SLU | -6703.82 | -559.55 | 0.85 | 11.31 | 6727.13 | 1.00 | 32294.70 | 337947.00 | 32294.70 | 4.801 |
| 12 | 654.76 | 1 | SLU | -6988.34 | -583.29 | 0.85 | 11.31 | 7012.64 | 1.00 | 32294.70 | 337800.00 | 32294.70 | 4.605 |
| 13 | 714.29 | 1 | SLU | -7092.90 | -592.02 | 0.85 | 11.31 | 7117.57 | 1.00 | 32294.70 | 337653.00 | 32294.70 | 4.537 |
| 14 | 773.81 | 1 | SLU | -7047.91 | -588.27 | 0.85 | 11.31 | 7072.42 | 1.00 | 32294.70 | 337507.00 | 32294.70 | 4.566 |
| 15 | 833.33 | 1 | SLU | -6880.93 | -574.33 | 0.85 | 11.31 | 6904.85 | 1.00 | 32294.70 | 337361.00 | 32294.70 | 4.677 |
| 16 | 892.86 | 1 | SLU | -6616.70 | -552.27 | 0.85 | 11.31 | 6639.71 | 1.00 | 32294.70 | 337215.00 | 32294.70 | 4.864 |
| 17 | 952.38 | 1 | SLU | -6277.26 | -523.94 | 0.85 | 11.31 | 6299.09 | 1.00 | 32294.70 | 337069.00 | 32294.70 | 5.127 |
| 18 | 1011.90 | 1 | SLU | -5881.98 | -490.95 | 0.85 | 11.31 | 5902.43 | 1.00 | 32294.70 | 336924.00 | 32294.70 | 5.471 |
| 19 | 1071.43 | 1 | SLU | -5447.75 | -454.71 | 0.85 | 11.31 | 5466.69 | 1.00 | 32294.70 | 336779.00 | 32294.70 | 5.908 |
| 20 | 1130.95 | 1 | SLU | -4989.09 | -416.42 | 0.85 | 11.31 | 5006.44 | 1.00 | 32294.70 | 336634.00 | 32294.70 | 6.451 |
| 21 | 1190.48 | 1 | SLU | -4518.39 | -377.14 | 0.85 | 11.31 | 4534.10 | 1.00 | 32294.70 | 336490.00 | 32294.70 | 7.123 |
| 22 | 1250.00 | 1 | SLU | -4046.02 | -337.71 | 0.85 | 11.31 | 4060.09 | 1.00 | 32294.70 | 336346.00 | 32294.70 | 7.954 |
| 23 | 1309.52 | 1 | SLU | -3580.57 | -298.86 | 0.85 | 11.31 | 3593.02 | 1.00 | 32294.70 | 336202.00 | 32294.70 | 8.988 |
| 24 | 1369.05 | 1 | SLU | -3129.00 | -261.17 | 0.85 | 11.31 | 3139.88 | 1.00 | 32294.70 | 336058.00 | 32294.70 | 10.285 |
| 25 | 1428.57 | 1 | SLU | -2696.86 | -225.10 | 0.85 | 11.31 | 2706.24 | 1.00 | 32294.70 | 335915.00 | 32294.70 | 11.933 |
| 26 | 1488.10 | 1 | SLU | -2288.45 | -191.01 | 0.85 | 11.31 | 2296.40 | 1.00 | 32294.70 | 335772.00 | 32294.70 | 14.063 |
| 27 | 1547.62 | 1 | SLU | -1906.98 | -159.17 | 0.85 | 11.31 | 1913.61 | 1.00 | 32294.70 | 335629.00 | 32294.70 | 16.876 |
| 28 | 1607.14 | 1 | SLU | -1554.78 | -129.77 | 0.85 | 11.31 | 1560.19 | 1.00 | 32294.70 | 335486.00 | 32294.70 | 20.699 |
| 29 | 1666.67 | 1 | SLU | -1233.39 | -102.95 | 0.85 | 11.31 | 1237.68 | 1.00 | 32294.70 | 335344.00 | 32294.70 | 26.093 |
| 30 | 1726.19 | 1 | SLU | -943.76 | -78.77 | 0.85 | 11.31 | 947.04 | 1.00 | 32294.70 | 335201.00 | 32294.70 | 34.101 |
| 31 | 1785.71 | 1 | SLU | -686.31 | -57.28 | 0.85 | 11.31 | 688.69 | 1.00 | 32294.70 | 335059.00 | 32294.70 | 46.893 |
| 32 | 1845.24 | 1 | SLU | -461.12 | -38.49 | 0.85 | 11.31 | 462.72 | 1.00 | 32294.70 | 334917.00 | 32294.70 | 69.793 |
| 33 | 1904.76 | 1 | SLU | -267.97 | -22.37 | 0.85 | 11.31 | 268.90 | 1.00 | 32294.70 | 334775.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -106.48 | -8.89 | 0.85 | 11.31 | 106.86 | 1.00 | 32294.70 | 334634.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | 23.84 | 1.99 | 0.85 | 11.31 | 23.92 | 1.00 | 32294.70 | 334492.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 123.55 | 10.31 | 0.85 | 11.31 | 123.98 | 1.00 | 32294.70 | 334351.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 193.16 | 16.12 | 0.85 | 11.31 | 193.84 | 1.00 | 32294.70 | 334210.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 233.17 | 19.46 | 0.85 | 11.31 | 233.99 | 1.00 | 32294.70 | 334069.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 243.98 | 20.36 | 0.85 | 11.31 | 244.83 | 1.00 | 32294.70 | 333928.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 225.89 | 18.85 | 0.85 | 11.31 | 226.68 | 1.00 | 32294.70 | 333787.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 179.13 | 14.95 | 0.85 | 11.31 | 179.75 | 1.00 | 32294.70 | 333646.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 103.81 | 8.67 | 0.85 | 11.31 | 104.18 | 1.00 | 32294.70 | 333506.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mz <daNm> | My <daNm> | AFT <cmq> | AFC <cmq> | σ_c <daN/cmq> | σ_f <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-------------------------|-------------------------|
| 44 | 0.00 | 2 | SLE R | -34544.40 | -3490.78 | 43656.40 | 47.12 | 31.42 | 43.31 | 1182.42 |
| 45 | 59.52 | 2 | SLE R | -35512.40 | -3709.29 | 46389.30 | 47.12 | 31.42 | 46.08 | 1272.34 |
| 46 | 119.05 | 2 | SLE R | -35766.50 | -3846.60 | 48106.50 | 47.12 | 31.42 | 47.83 | 1333.61 |
| 47 | 178.57 | 2 | SLE R | -36021.80 | -3914.39 | 48954.30 | 47.12 | 31.42 | 48.70 | 1362.14 |
| 48 | 238.09 | 2 | SLE R | -36278.10 | -3923.46 | 49067.70 | 47.12 | 31.42 | 48.80 | 1362.98 |
| 49 | 297.62 | 2 | SLE R | -36535.70 | -3883.69 | 48570.30 | 47.12 | 31.42 | 48.28 | 1340.79 |
| 50 | 357.14 | 2 | SLE R | -36794.30 | -3800.31 | 47527.60 | 47.12 | 31.42 | 47.19 | 1298.09 |
| 51 | 416.67 | 2 | SLE R | -36041.70 | -3667.22 | 45863.10 | 47.12 | 31.42 | 45.51 | 1245.50 |
| 52 | 476.19 | 2 | SLE R | -35291.10 | -3492.01 | 43671.90 | 47.12 | 31.42 | 43.29 | 1173.10 |
| 53 | 535.71 | 2 | SLE R | -34542.30 | -3285.53 | 41089.50 | 47.12 | 31.42 | 40.66 | 1086.06 |
| 54 | 595.24 | 2 | SLE R | -33795.40 | -3057.21 | 38234.10 | 47.12 | 31.42 | 37.75 | 988.89 |
| 55 | 654.76 | 2 | SLE R | -33050.30 | -2815.20 | 35207.50 | 47.12 | 31.42 | 34.65 | 885.50 |
| 56 | 714.29 | 2 | SLE R | -32306.90 | -2566.43 | 32096.30 | 47.12 | 31.42 | 31.46 | 779.27 |
| 57 | 773.81 | 2 | SLE R | -31565.30 | -2316.68 | 28973.00 | 47.12 | 31.42 | 28.25 | 673.05 |
| 58 | 833.33 | 2 | SLE R | -30825.40 | -2070.76 | 25897.40 | 47.12 | 31.42 | 25.08 | 569.25 |
| 59 | 892.86 | 2 | SLE R | -30087.20 | -1832.50 | 22917.70 | 47.12 | 31.42 | 22.00 | 469.93 |
| 60 | 952.38 | 2 | SLE R | -29350.60 | -1604.95 | 20071.90 | 43.98 | 34.56 | 19.04 | 376.82 |
| 61 | 1011.90 | 2 | SLE R | -28615.50 | -1390.41 | 17388.80 | 40.84 | 37.70 | 16.25 | 291.47 |
| 62 | 1071.43 | 2 | SLE R | -27882.00 | -1190.55 | 14889.20 | 40.84 | 37.70 | 13.66 | 215.35 |
| 63 | 1130.95 | 2 | SLE R | -27149.90 | -1006.46 | 12587.00 | 40.84 | 37.70 | 11.29 | 153.32 |
| 64 | 1190.48 | 2 | SLE R | -26419.40 | -838.80 | 10490.20 | 34.56 | 43.98 | 9.19 | 126.06 |
| 65 | 1250.00 | 2 | SLE R | -25690.20 | -687.79 | 8601.68 | 34.56 | 43.98 | 7.40 | 102.67 |
| 66 | 1309.52 | 2 | SLE R | -24962.40 | -553.34 | 6920.25 | 28.27 | 50.27 | 5.97 | 83.66 |
| 67 | 1369.05 | 2 | SLE R | -24236.00 | -435.08 | 5441.27 | 21.99 | 56.55 | 4.88 | 68.98 |
| 68 | 1428.57 | 2 | SLE R | -23510.80 | -332.42 | 4157.35 | 6.28 | 72.26 | 4.07 | 57.91 |
| 69 | 1488.10 | 2 | SLE R | -22786.90 | -244.59 | 3058.92 | 0.00 | 78.54 | 3.44 | 49.26 |
| 70 | 1547.62 | 2 | SLE R | -22064.30 | -170.70 | 2134.78 | 0.00 | 78.54 | 2.90 | 41.89 |
| 71 | 1607.14 | 2 | SLE R | -21342.80 | -109.75 | 1372.50 | 0.00 | 78.54 | 2.45 | 35.66 |
| 72 | 1666.67 | 2 | SLE R | -20622.50 | -60.67 | 758.80 | 0.00 | 78.54 | 2.07 | 30.47 |
| 73 | 1726.19 | 2 | SLE R | -19903.30 | -22.38 | 279.87 | 0.00 | 78.54 | 1.76 | 26.23 |
| 74 | 1785.71 | 2 | SLE R | -19185.10 | 6.27 | -78.40 | 0.00 | 78.54 | 1.60 | 23.94 |
| 75 | 1845.24 | 2 | SLE R | -18468.00 | 26.41 | -330.25 | 0.00 | 78.54 | 1.67 | 24.85 |
| 76 | 1904.76 | 2 | SLE R | -17751.80 | 39.17 | -489.86 | 0.00 | 78.54 | 1.70 | 25.10 |
| 77 | 1964.29 | 2 | SLE R | -17036.60 | 45.68 | -571.28 | 0.00 | 78.54 | 1.68 | 24.81 |
| 78 | 2023.81 | 2 | SLE R | -16322.40 | 47.05 | -588.37 | 0.00 | 78.54 | 1.63 | 24.06 |
| 79 | 2083.33 | 2 | SLE R | -15609.00 | 44.36 | -554.75 | 0.00 | 78.54 | 1.56 | 22.95 |
| 80 | 2142.86 | 2 | SLE R | -14896.40 | 38.69 | -483.81 | 0.00 | 78.54 | 1.46 | 21.58 |
| 81 | 2202.38 | 2 | SLE R | -14184.70 | 31.08 | -388.72 | 0.00 | 78.54 | 1.35 | 20.04 |
| 82 | 2261.90 | 2 | SLE R | -13473.70 | 22.58 | -282.43 | 0.00 | 78.54 | 1.24 | 18.42 |

Relazione di calcolo

| | | | | | | | | | | |
|-----|---------|---|-------|-----------|----------|----------|-------|-------|-------|---------|
| 83 | 2321.43 | 2 | SLE R | -12763.40 | 14.21 | -177.75 | 0.00 | 78.54 | 1.13 | 16.82 |
| 84 | 2380.93 | 2 | SLE R | -12053.80 | 6.99 | -87.38 | 0.00 | 78.54 | 1.02 | 15.31 |
| 85 | 2440.48 | 2 | SLE R | -11344.80 | 1.91 | -23.94 | 0.00 | 78.54 | 0.93 | 14.00 |
| 86 | 2500.00 | 2 | SLE R | -10636.50 | 0.00 | 0.00 | 0.00 | 78.54 | 0.86 | 12.97 |
| 87 | 0.00 | 4 | SLE Q | -34544.40 | -3490.78 | 43656.40 | 47.12 | 31.42 | 43.31 | 1182.42 |
| 88 | 59.52 | 4 | SLE Q | -35512.40 | -3709.29 | 46389.30 | 47.12 | 31.42 | 46.08 | 1272.34 |
| 89 | 119.05 | 4 | SLE Q | -35766.50 | -3846.60 | 48106.50 | 47.12 | 31.42 | 47.83 | 1333.61 |
| 90 | 178.57 | 4 | SLE Q | -36021.80 | -3914.39 | 48954.30 | 47.12 | 31.42 | 48.70 | 1362.14 |
| 91 | 238.09 | 4 | SLE Q | -36278.10 | -3923.46 | 49067.70 | 47.12 | 31.42 | 48.80 | 1362.98 |
| 92 | 297.62 | 4 | SLE Q | -36535.70 | -3883.69 | 48570.30 | 47.12 | 31.42 | 48.28 | 1340.79 |
| 93 | 357.14 | 4 | SLE Q | -36794.30 | -3800.31 | 47527.60 | 47.12 | 31.42 | 47.19 | 1298.09 |
| 94 | 416.67 | 4 | SLE Q | -36041.70 | -3667.22 | 45863.10 | 47.12 | 31.42 | 45.51 | 1245.50 |
| 95 | 476.19 | 4 | SLE Q | -35291.10 | -3492.01 | 43671.90 | 47.12 | 31.42 | 43.29 | 1173.10 |
| 96 | 535.71 | 4 | SLE Q | -34542.30 | -3285.53 | 41089.50 | 47.12 | 31.42 | 40.66 | 1086.06 |
| 97 | 595.24 | 4 | SLE Q | -33795.40 | -3057.21 | 38234.10 | 47.12 | 31.42 | 37.75 | 988.89 |
| 98 | 654.76 | 4 | SLE Q | -33050.30 | -2815.20 | 35207.50 | 47.12 | 31.42 | 34.65 | 885.50 |
| 99 | 714.29 | 4 | SLE Q | -32306.90 | -2566.43 | 32096.30 | 47.12 | 31.42 | 31.46 | 779.27 |
| 100 | 773.81 | 4 | SLE Q | -31565.30 | -2316.68 | 28973.00 | 47.12 | 31.42 | 28.25 | 673.05 |
| 101 | 833.33 | 4 | SLE Q | -30825.40 | -2070.76 | 25897.40 | 47.12 | 31.42 | 25.08 | 569.25 |
| 102 | 892.86 | 4 | SLE Q | -30087.20 | -1832.50 | 22917.70 | 47.12 | 31.42 | 22.00 | 469.93 |
| 103 | 952.38 | 4 | SLE Q | -29350.60 | -1604.95 | 20071.90 | 43.98 | 34.56 | 19.04 | 376.82 |
| 104 | 1011.90 | 4 | SLE Q | -28615.50 | -1390.41 | 17388.80 | 40.84 | 37.70 | 16.25 | 291.47 |
| 105 | 1071.43 | 4 | SLE Q | -27882.00 | -1190.55 | 14889.20 | 40.84 | 37.70 | 13.66 | 215.35 |
| 106 | 1130.95 | 4 | SLE Q | -27149.90 | -1006.46 | 12587.00 | 40.84 | 37.70 | 11.29 | 153.32 |
| 107 | 1190.48 | 4 | SLE Q | -26419.40 | -838.80 | 10490.20 | 34.56 | 43.98 | 9.19 | 126.06 |
| 108 | 1250.00 | 4 | SLE Q | -25690.20 | -687.79 | 8601.68 | 34.56 | 43.98 | 7.40 | 102.67 |
| 109 | 1309.52 | 4 | SLE Q | -24962.40 | -553.34 | 6920.25 | 28.27 | 50.27 | 5.97 | 83.66 |
| 110 | 1369.05 | 4 | SLE Q | -24236.00 | -435.08 | 5441.27 | 21.99 | 56.55 | 4.88 | 68.98 |
| 111 | 1428.57 | 4 | SLE Q | -23510.80 | -332.42 | 4157.35 | 6.28 | 72.26 | 4.07 | 57.91 |
| 112 | 1488.10 | 4 | SLE Q | -22786.90 | -244.59 | 3058.92 | 0.00 | 78.54 | 3.44 | 49.26 |
| 113 | 1547.62 | 4 | SLE Q | -22064.30 | -170.70 | 2134.78 | 0.00 | 78.54 | 2.90 | 41.89 |
| 114 | 1607.14 | 4 | SLE Q | -21342.80 | -109.75 | 1372.50 | 0.00 | 78.54 | 2.45 | 35.66 |
| 115 | 1666.67 | 4 | SLE Q | -20622.50 | -60.67 | 758.80 | 0.00 | 78.54 | 2.07 | 30.47 |
| 116 | 1726.19 | 4 | SLE Q | -19903.30 | -22.38 | 279.87 | 0.00 | 78.54 | 1.76 | 26.23 |
| 117 | 1785.71 | 4 | SLE Q | -19185.10 | 6.27 | -78.40 | 0.00 | 78.54 | 1.60 | 23.94 |
| 118 | 1845.24 | 4 | SLE Q | -18468.00 | 26.41 | -330.25 | 0.00 | 78.54 | 1.67 | 24.85 |
| 119 | 1904.76 | 4 | SLE Q | -17751.80 | 39.17 | -489.86 | 0.00 | 78.54 | 1.70 | 25.10 |
| 120 | 1964.29 | 4 | SLE Q | -17036.60 | 45.68 | -571.28 | 0.00 | 78.54 | 1.68 | 24.81 |
| 121 | 2023.81 | 4 | SLE Q | -16322.40 | 47.05 | -588.37 | 0.00 | 78.54 | 1.63 | 24.06 |
| 122 | 2083.33 | 4 | SLE Q | -15609.00 | 44.36 | -554.75 | 0.00 | 78.54 | 1.56 | 22.95 |
| 123 | 2142.86 | 4 | SLE Q | -14896.40 | 38.69 | -483.81 | 0.00 | 78.54 | 1.46 | 21.58 |
| 124 | 2202.38 | 4 | SLE Q | -14184.70 | 31.08 | -388.72 | 0.00 | 78.54 | 1.35 | 20.04 |
| 125 | 2261.90 | 4 | SLE Q | -13473.70 | 22.58 | -282.43 | 0.00 | 78.54 | 1.24 | 18.42 |
| 126 | 2321.43 | 4 | SLE Q | -12763.40 | 14.21 | -177.75 | 0.00 | 78.54 | 1.13 | 16.82 |
| 127 | 2380.93 | 4 | SLE Q | -12053.80 | 6.99 | -87.38 | 0.00 | 78.54 | 1.02 | 15.31 |
| 128 | 2440.48 | 4 | SLE Q | -11344.80 | 1.91 | -23.94 | 0.00 | 78.54 | 0.93 | 14.00 |
| 129 | 2500.00 | 4 | SLE Q | -10636.50 | 0.00 | 0.00 | 0.00 | 78.54 | 0.86 | 12.97 |

Stato limite d'esercizio - Verifiche a fessurazione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | c <mm> | s <mm> | K ₂ | φ _{eq} | Δ _{sm} <mm> | A _s <cmq> | A _c eff <cmq> | σ _s <daN/cmq> | e _{sm} | Wk <mm> |
|------|-----------|----|-------|------------|--------------|--------------|-----------|-----------|----------------|-----------------|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------|------------|
| 87 | 0.00 | 4 | SLE Q | -34544.40 | 43656.40 | -3490.78 | 46.00 | 136.36 | 0.50 | 20.00 | 208.75 | 21.99 | 1283.77 | 1182.42 | 0.34 | 0.12 |
| 88 | 59.52 | 4 | SLE Q | -35512.40 | 46389.30 | -3709.29 | 46.00 | 136.36 | 0.50 | 20.00 | 209.08 | 21.99 | 1287.34 | 1272.34 | 0.37 | 0.13 |
| 89 | 119.05 | 4 | SLE Q | -35766.50 | 48106.50 | -3846.60 | 46.00 | 136.36 | 0.50 | 20.00 | 209.35 | 21.99 | 1290.37 | 1333.61 | 0.39 | 0.14 |
| 90 | 178.57 | 4 | SLE Q | -36021.80 | 48954.30 | -3914.39 | 46.00 | 136.36 | 0.50 | 20.00 | 209.45 | 21.99 | 1291.42 | 1362.14 | 0.40 | 0.14 |
| 91 | 238.09 | 4 | SLE Q | -36278.10 | 49067.70 | -3923.46 | 46.00 | 136.36 | 0.50 | 20.00 | 209.41 | 21.99 | 1290.94 | 1362.98 | 0.40 | 0.14 |
| 92 | 297.62 | 4 | SLE Q | -36535.70 | 48570.30 | -3883.69 | 46.00 | 136.36 | 0.50 | 20.00 | 209.25 | 21.99 | 1289.18 | 1340.79 | 0.39 | 0.14 |
| 93 | 357.14 | 4 | SLE Q | -36794.30 | 47527.60 | -3800.31 | 46.00 | 136.36 | 0.50 | 20.00 | 208.97 | 21.99 | 1286.15 | 1298.09 | 0.38 | 0.13 |
| 94 | 416.67 | 4 | SLE Q | -36041.70 | 45863.10 | -3667.22 | 46.00 | 136.36 | 0.50 | 20.00 | 208.82 | 21.99 | 1284.52 | 1245.50 | 0.36 | 0.13 |
| 95 | 476.19 | 4 | SLE Q | -35291.10 | 43671.90 | -3492.01 | 46.00 | 136.36 | 0.50 | 20.00 | 208.54 | 21.99 | 1281.41 | 1173.10 | 0.34 | 0.12 |
| 96 | 535.71 | 4 | SLE Q | -34542.30 | 41089.50 | -3285.53 | 46.00 | 136.36 | 0.50 | 20.00 | 208.12 | 21.99 | 1276.80 | 1086.06 | 0.32 | 0.11 |
| 97 | 595.24 | 4 | SLE Q | -33795.40 | 38234.10 | -3057.21 | 46.00 | 136.36 | 0.50 | 20.00 | 207.55 | 21.99 | 1270.58 | 988.89 | 0.29 | 0.10 |
| 98 | 654.76 | 4 | SLE Q | -33050.30 | 35207.50 | -2815.20 | 46.00 | 136.36 | 0.50 | 20.00 | 206.82 | 21.99 | 1262.53 | 885.50 | 0.26 | 0.09 |
| 99 | 714.29 | 4 | SLE Q | -32306.90 | 32096.30 | -2566.43 | 46.00 | 136.36 | 0.50 | 20.00 | 205.89 | 21.99 | 1252.31 | 779.27 | 0.23 | 0.08 |
| 100 | 773.81 | 4 | SLE Q | -31565.30 | 28973.00 | -2316.68 | 46.00 | 136.36 | 0.50 | 20.00 | 204.72 | 21.99 | 1239.40 | 673.05 | 0.20 | 0.07 |
| 101 | 833.33 | 4 | SLE Q | -30825.40 | 25897.40 | -2070.76 | 46.00 | 136.36 | 0.50 | 20.00 | 203.23 | 21.99 | 1223.06 | 569.25 | 0.17 | 0.06 |
| 102 | 892.86 | 4 | SLE Q | -30087.20 | 22917.70 | -1832.50 | 46.00 | 136.36 | 0.50 | 20.00 | 201.32 | 21.99 | 1202.06 | 469.93 | 0.14 | 0.05 |
| 103 | 952.38 | 4 | SLE Q | -29350.60 | 20071.90 | -1604.95 | 46.00 | 136.36 | 0.50 | 20.00 | 198.82 | 21.99 | 1174.58 | 376.82 | 0.11 | 0.04 |
| 104 | 1011.90 | 4 | SLE Q | -28615.50 | 17388.80 | -1390.41 | 46.00 | 136.36 | 0.50 | 20.00 | 195.48 | 21.99 | 1137.87 | 291.47 | 0.08 | 0.03 |
| 105 | 1071.43 | 4 | SLE Q | -27882.00 | 14889.20 | -1190.55 | 46.00 | 136.36 | 0.50 | 20.00 | 190.92 | 21.99 | 1087.68 | 215.35 | 0.06 | 0.02 |
| 106 | 1130.95 | 4 | SLE Q | -27149.90 | 12587.00 | -1006.46 | 46.00 | 136.36 | 0.50 | 20.00 | 199.94 | 18.85 | 1017.31 | 149.93 | 0.04 | 0.01 |
| 107 | 1190.48 | 4 | SLE Q | -26419.40 | 10490.20 | -838.80 | 46.00 | 136.36 | 0.50 | 20.00 | 208.50 | 15.71 | 915.00 | 96.65 | 0.03 | 0.01 |
| 108 | 1250.00 | 4 | SLE Q | -25690.20 | 8601.68 | -687.79 | 46.00 | 136.36 | 0.50 | 20.00 | 188.28 | 15.71 | 756.19 | 56.45 | 0.02 | 0.01 |
| 109 | 1309.52 | 4 | SLE Q | -24962.40 | 6920.25 | -553.34 | 46.00 | 136.36 | 0.50 | 20.00 | 198.13 | 9.42 | 500.15 | 28.83 | 0.01 | 0.00 |
| 110 | 1369.05 | 4 | SLE Q | -24236.00 | 5441.27 | -435.08 | 46.00 | 136.36 | 0.50 | 20.00 | 169.67 | 6.28 | 244.00 | 11.39 | 0.00 | 0.00 |
| 130 | 0.00 | 3 | SLE F | -34544.40 | 43656.40 | -3490.78 | 46.00 | 136.36 | 0.50 | 20.00 | 208.75 | 21.99 | 1283.77 | 1182.42 | 0.34 | 0.12 |
| 131 | 59.52 | 3 | SLE F | -35512.40 | 46389.30 | -3709.29 | 46.00 | 136.36 | 0.50 | 20.00 | 209.08 | 21.99 | 1287.34 | 1272.34 | 0.37 | 0.13 |

Relazione di calcolo

| | | | | | | | | | | | | | | | | |
|-----|---------|---|-------|-----------|----------|----------|-------|--------|------|-------|--------|-------|---------|---------|------|------|
| 132 | 119.05 | 3 | SLE F | -35766.50 | 48106.50 | -3846.60 | 46.00 | 136.36 | 0.50 | 20.00 | 209.35 | 21.99 | 1290.37 | 1333.61 | 0.39 | 0.14 |
| 133 | 178.57 | 3 | SLE F | -36021.80 | 48954.30 | -3914.39 | 46.00 | 136.36 | 0.50 | 20.00 | 209.45 | 21.99 | 1291.42 | 1362.14 | 0.40 | 0.14 |
| 134 | 238.09 | 3 | SLE F | -36278.10 | 49067.70 | -3923.46 | 46.00 | 136.36 | 0.50 | 20.00 | 209.41 | 21.99 | 1290.94 | 1362.98 | 0.40 | 0.14 |
| 135 | 297.62 | 3 | SLE F | -36535.70 | 48570.30 | -3883.69 | 46.00 | 136.36 | 0.50 | 20.00 | 209.25 | 21.99 | 1289.18 | 1340.79 | 0.39 | 0.14 |
| 136 | 357.14 | 3 | SLE F | -36794.30 | 47527.60 | -3800.31 | 46.00 | 136.36 | 0.50 | 20.00 | 208.97 | 21.99 | 1286.15 | 1298.09 | 0.38 | 0.13 |
| 137 | 416.67 | 3 | SLE F | -36041.70 | 45863.10 | -3667.22 | 46.00 | 136.36 | 0.50 | 20.00 | 208.82 | 21.99 | 1284.52 | 1245.50 | 0.36 | 0.13 |
| 138 | 476.19 | 3 | SLE F | -35291.10 | 43671.90 | -3492.01 | 46.00 | 136.36 | 0.50 | 20.00 | 208.54 | 21.99 | 1281.41 | 1173.10 | 0.34 | 0.12 |
| 139 | 535.71 | 3 | SLE F | -34542.30 | 41089.50 | -3285.53 | 46.00 | 136.36 | 0.50 | 20.00 | 208.12 | 21.99 | 1276.80 | 1086.06 | 0.32 | 0.11 |
| 140 | 595.24 | 3 | SLE F | -33795.40 | 38234.10 | -3057.21 | 46.00 | 136.36 | 0.50 | 20.00 | 207.55 | 21.99 | 1270.58 | 988.89 | 0.29 | 0.10 |
| 141 | 654.76 | 3 | SLE F | -33050.30 | 35207.50 | -2815.20 | 46.00 | 136.36 | 0.50 | 20.00 | 206.82 | 21.99 | 1262.53 | 885.50 | 0.26 | 0.09 |
| 142 | 714.29 | 3 | SLE F | -32306.90 | 32096.30 | -2566.43 | 46.00 | 136.36 | 0.50 | 20.00 | 205.89 | 21.99 | 1252.31 | 779.27 | 0.23 | 0.08 |
| 143 | 773.81 | 3 | SLE F | -31565.30 | 28973.00 | -2316.68 | 46.00 | 136.36 | 0.50 | 20.00 | 204.72 | 21.99 | 1239.40 | 673.05 | 0.20 | 0.07 |
| 144 | 833.33 | 3 | SLE F | -30825.40 | 25897.40 | -2070.76 | 46.00 | 136.36 | 0.50 | 20.00 | 203.23 | 21.99 | 1223.06 | 569.25 | 0.17 | 0.06 |
| 145 | 892.86 | 3 | SLE F | -30087.20 | 22917.70 | -1832.50 | 46.00 | 136.36 | 0.50 | 20.00 | 201.32 | 21.99 | 1202.06 | 469.93 | 0.14 | 0.05 |
| 146 | 952.38 | 3 | SLE F | -29350.60 | 20071.90 | -1604.95 | 46.00 | 136.36 | 0.50 | 20.00 | 198.82 | 21.99 | 1174.58 | 376.82 | 0.11 | 0.04 |
| 147 | 1011.90 | 3 | SLE F | -28615.50 | 17388.80 | -1390.41 | 46.00 | 136.36 | 0.50 | 20.00 | 195.48 | 21.99 | 1137.87 | 291.47 | 0.08 | 0.03 |
| 148 | 1071.43 | 3 | SLE F | -27882.00 | 14889.20 | -1190.55 | 46.00 | 136.36 | 0.50 | 20.00 | 190.92 | 21.99 | 1087.68 | 215.35 | 0.06 | 0.02 |
| 149 | 1130.95 | 3 | SLE F | -27149.90 | 12587.00 | -1006.46 | 46.00 | 136.36 | 0.50 | 20.00 | 199.94 | 18.85 | 1017.31 | 149.93 | 0.04 | 0.01 |
| 150 | 1190.48 | 3 | SLE F | -26419.40 | 10490.20 | -838.80 | 46.00 | 136.36 | 0.50 | 20.00 | 208.50 | 15.71 | 915.00 | 96.65 | 0.03 | 0.01 |
| 151 | 1250.00 | 3 | SLE F | -25690.20 | 8601.68 | -687.79 | 46.00 | 136.36 | 0.50 | 20.00 | 188.28 | 15.71 | 756.19 | 56.45 | 0.02 | 0.01 |
| 152 | 1309.52 | 3 | SLE F | -24962.40 | 6920.25 | -553.34 | 46.00 | 136.36 | 0.50 | 20.00 | 198.13 | 9.42 | 500.15 | 28.83 | 0.01 | 0.00 |
| 153 | 1369.05 | 3 | SLE F | -24236.00 | 5441.27 | -435.08 | 46.00 | 136.36 | 0.50 | 20.00 | 169.67 | 6.28 | 244.00 | 11.39 | 0.00 | 0.00 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 1 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 5 | SLU N cost - min. sic. |
| 48 | C.Rare - Sc min (max compr.), C.Rare - Sf max (max trax.), C.Rare - Sf min (max compr.) |
| 69 | C.Rare - Sc max (min. compr.) |
| 91 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf max (max trax.), C.Q.Per. - Sf min (max compr.), C.Q.Per. - Wk Max |
| 112 | C.Q.Per. - Sc max (min. compr.) |
| 134 | C.Freq - Wk Max |

Palo n. 33

Caratteristiche del palo e dei materiali utilizzati

| R | Cf | Cls | Fck | Fctk | Fcd | Fctd | TP | Fyk | Fyd |
|-------|------|--------|-----------|-----------|-----------|-----------|-------|-----------|-----------|
| <cm> | <cm> | | <daN/cm²> | <daN/cm²> | <daN/cm²> | <daN/cm²> | | <daN/cm²> | <daN/cm²> |
| 60.00 | 6.00 | C30/37 | 307.10 | 20.59 | 174.02 | 13.73 | B450C | 4300.00 | 3913.04 |

Le sollecitazioni nei pali vengono calcolate oltre che per l'effetto delle reazioni vincolari anche considerando i seguenti effetti

Azioni ed effetti comuni

| Az | N | Mx | My | Mz |
|-------|--------|--------|--------|--------|
| <daN> | <daNm> | <daNm> | <daNm> | <daNm> |
| PP | 0.00 | 0.00 | 0.00 | |
| SVR | 0.00 | | | |

Azioni ed effetti - Plinto/Palo n. 33 (-8)

| Caso | CC | TCC | Az | N | Tx | Ty | Mx | My |
|------|----|-------|-----|----------|---------|--------|----------|---------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | RVN | 22207.30 | 7608.59 | 392.10 | 56863.60 | 1420.21 |
| | 1 | SLU | TAG | | | | 0.00 | 0.00 |
| | 1 | SLU | ECC | | | | 0.00 | 0.00 |
| | 1 | SLU | TOT | 22207.30 | 7608.59 | 392.10 | 56863.60 | 1420.21 |
| 2 | 2 | SLE R | RVN | 16449.90 | 5636.00 | 290.44 | 42121.10 | 1052.01 |
| | 2 | SLE R | TAG | | | | 0.00 | 0.00 |
| | 2 | SLE R | ECC | | | | 0.00 | 0.00 |
| | 2 | SLE R | TOT | 16449.90 | 5636.00 | 290.44 | 42121.10 | 1052.01 |
| 3 | 3 | SLE F | RVN | 16449.90 | 5636.00 | 290.44 | 42121.10 | 1052.01 |
| | 3 | SLE F | TAG | | | | 0.00 | 0.00 |
| | 3 | SLE F | ECC | | | | 0.00 | 0.00 |
| | 3 | SLE F | TOT | 16449.90 | 5636.00 | 290.44 | 42121.10 | 1052.01 |
| 4 | 4 | SLE Q | RVN | 16449.90 | 5636.00 | 290.44 | 42121.10 | 1052.01 |
| | 4 | SLE Q | TAG | | | | 0.00 | 0.00 |
| | 4 | SLE Q | ECC | | | | 0.00 | 0.00 |
| | 4 | SLE Q | TOT | 16449.90 | 5636.00 | 290.44 | 42121.10 | 1052.01 |

Sollecitazioni nei pali

| Caso | CC | TCC | Palo | N | Tx | Ty | Mx | My |
|------|----|-------|------|-----------|----------|---------|-----------|----------|
| | | | | <daN> | <daN> | <daN> | <daNm> | <daNm> |
| 1 | 1 | SLU | 1 | -22207.30 | -7608.59 | -392.10 | -56863.60 | -1420.21 |
| 2 | 2 | SLE R | 1 | -16449.90 | -5636.00 | -290.44 | -42121.10 | -1052.01 |
| 3 | 3 | SLE F | 1 | -16449.90 | -5636.00 | -290.44 | -42121.10 | -1052.01 |
| 4 | 4 | SLE Q | 1 | -16449.90 | -5636.00 | -290.44 | -42121.10 | -1052.01 |

Relazione di calcolo

Da 0 a -25

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|-----------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|--------|
| 1 | 0.00 | 1 | SLU | -22207.30 | 56614.80 | -1414.00 | -22207.30 | 156076.00 | -3387.27 | 2-3 | 181.25 | 2.757 |
| 2 | 59.52 | 1 | SLU | -23261.10 | 60402.80 | -1508.61 | -23261.10 | 156519.00 | -3415.44 | 2-3 | 181.25 | 2.591 |
| 3 | 119.05 | 1 | SLU | -23686.30 | 62835.70 | -1569.37 | -23686.30 | 156698.00 | -3426.84 | 2-3 | 181.25 | 2.494 |
| 4 | 178.57 | 1 | SLU | -24112.30 | 64107.10 | -1601.13 | -24112.30 | 156878.00 | -3438.27 | 2-3 | 181.25 | 2.447 |
| 5 | 238.09 | 1 | SLU | -24539.10 | 64395.80 | -1608.34 | -24539.10 | 157057.00 | -3449.73 | 2-3 | 181.25 | 2.439 |
| 6 | 297.62 | 1 | SLU | -24966.60 | 63865.90 | -1595.10 | -24966.60 | 157237.00 | -3461.23 | 2-3 | 181.25 | 2.462 |
| 7 | 357.14 | 1 | SLU | -25394.90 | 62603.00 | -1563.56 | -25394.90 | 157417.00 | -3472.77 | 2-3 | 181.25 | 2.514 |
| 8 | 416.67 | 1 | SLU | -24932.00 | 60502.40 | -1511.10 | -24932.00 | 157222.00 | -3460.30 | 2-3 | 181.25 | 2.598 |
| 9 | 476.19 | 1 | SLU | -24470.40 | 57689.70 | -1440.85 | -24470.40 | 157028.00 | -3447.89 | 2-3 | 181.25 | 2.722 |
| 10 | 535.71 | 1 | SLU | -24010.20 | 54345.40 | -1357.32 | -24010.20 | 156835.00 | -3435.53 | 2-3 | 181.25 | 2.886 |
| 11 | 595.24 | 1 | SLU | -23551.30 | 50627.10 | -1264.45 | -23551.30 | 156641.00 | -3423.22 | 2-3 | 181.25 | 3.094 |
| 12 | 654.76 | 1 | SLU | -23093.60 | 46670.60 | -1165.64 | -23093.60 | 156449.00 | -3410.96 | 2-3 | 181.25 | 3.352 |
| 13 | 714.29 | 1 | SLU | -22637.10 | 42591.90 | -1063.77 | -22637.10 | 156257.00 | -3398.75 | 2-3 | 181.25 | 3.668 |
| 14 | 773.81 | 1 | SLU | -22181.90 | 38488.10 | -961.27 | -22181.90 | 156065.00 | -3386.59 | 2-3 | 181.25 | 4.055 |
| 15 | 833.33 | 1 | SLU | -21727.80 | 34439.30 | -860.15 | -21727.80 | 155874.00 | -3374.47 | 2-3 | 181.25 | 4.526 |
| 16 | 892.86 | 1 | SLU | -21275.00 | 30510.60 | -762.03 | -21275.00 | 155683.00 | -3362.41 | 2-3 | 181.25 | 5.102 |
| 17 | 952.38 | 1 | SLU | -20823.20 | 26753.10 | -668.18 | -20823.20 | 155493.00 | -3350.38 | 2-3 | 181.25 | 5.812 |
| 18 | 1011.90 | 1 | SLU | -20372.60 | 23205.80 | -579.58 | -20372.60 | 155303.00 | -3338.41 | 2-3 | 181.25 | 6.692 |
| 19 | 1071.43 | 1 | SLU | -19923.10 | 19897.10 | -496.95 | -19923.10 | 155114.00 | -3326.48 | 2-3 | 181.25 | 7.795 |
| 20 | 1130.95 | 1 | SLU | -19474.60 | 16846.30 | -420.75 | -19474.60 | 154925.00 | -3314.60 | 2-3 | 181.25 | 9.196 |
| 21 | 1190.48 | 1 | SLU | -19027.20 | 14064.40 | -351.27 | -19027.20 | 154737.00 | -3302.76 | 2-3 | 181.25 | 11.001 |
| 22 | 1250.00 | 1 | SLU | -18580.80 | 11556.10 | -288.62 | -18580.80 | 154549.00 | -3290.97 | 2-3 | 181.25 | 13.373 |
| 23 | 1309.52 | 1 | SLU | -18135.40 | 9320.29 | -232.78 | -18135.40 | 154361.00 | -3279.16 | 2-3 | 181.25 | 16.560 |
| 24 | 1369.05 | 1 | SLU | -17691.00 | 7351.28 | -183.60 | -17691.00 | 154173.00 | -3267.17 | 2-3 | 181.25 | 20.971 |
| 25 | 1428.57 | 1 | SLU | -17247.50 | 5639.69 | -140.86 | -17247.50 | 153986.00 | -3254.83 | 2-3 | 181.25 | 27.302 |
| 26 | 1488.10 | 1 | SLU | -16805.00 | 4173.23 | -104.23 | -16805.00 | 153799.00 | -3242.52 | 2-3 | 181.25 | 36.850 |
| 27 | 1547.62 | 1 | SLU | -16363.30 | 2937.36 | -73.36 | -16363.30 | 153612.00 | -3230.26 | 2-3 | 181.25 | 52.291 |
| 28 | 1607.14 | 1 | SLU | -15922.60 | 1915.87 | -47.85 | -15922.60 | 153425.00 | -3218.05 | 2-3 | 181.25 | 80.074 |
| 29 | 1666.67 | 1 | SLU | -15482.60 | 1091.41 | -27.26 | -15482.60 | 153239.00 | -3205.86 | 2-3 | 181.25 | >100 |
| 30 | 1726.19 | 1 | SLU | -15043.60 | 445.84 | -11.14 | -2571250.00 | 153053.00 | -3193.72 | 2-3 | 181.25 | >100 |
| 31 | 1785.71 | 1 | SLU | -14605.30 | -39.39 | 0.98 | -2571250.00 | -152975.00 | 3603.97 | 2-3 | 1.25 | >100 |
| 32 | 1845.24 | 1 | SLU | -14167.80 | -383.01 | 9.57 | -2571250.00 | -152790.00 | 3614.24 | 2-3 | 1.25 | >100 |
| 33 | 1904.76 | 1 | SLU | -13731.00 | -603.71 | 15.08 | -2571250.00 | -152605.00 | 3624.45 | 2-3 | 1.25 | >100 |
| 34 | 1964.29 | 1 | SLU | -13295.00 | -720.06 | 17.98 | -2571250.00 | -152421.00 | 3634.63 | 2-3 | 1.25 | >100 |
| 35 | 2023.81 | 1 | SLU | -12859.80 | -750.36 | 18.74 | -2571250.00 | -152237.00 | 3644.77 | 2-3 | 1.25 | >100 |
| 36 | 2083.33 | 1 | SLU | -12425.20 | -712.62 | 17.80 | -2571250.00 | -152053.00 | 3654.86 | 2-3 | 1.25 | >100 |
| 37 | 2142.86 | 1 | SLU | -11991.20 | -624.55 | 15.60 | -2571250.00 | -151869.00 | 3664.90 | 2-3 | 1.25 | >100 |
| 38 | 2202.38 | 1 | SLU | -11557.90 | -503.58 | 12.58 | -2571250.00 | -151686.00 | 3674.91 | 2-3 | 1.25 | >100 |
| 39 | 2261.90 | 1 | SLU | -11125.30 | -366.87 | 9.16 | -2571250.00 | -151503.00 | 3684.88 | 2-3 | 1.25 | >100 |
| 40 | 2321.43 | 1 | SLU | -10693.20 | -231.39 | 5.78 | -2571250.00 | -151320.00 | 3694.80 | 2-3 | 1.25 | >100 |
| 41 | 2380.95 | 1 | SLU | -10261.70 | -113.95 | 2.85 | -2571250.00 | -151138.00 | 3704.69 | 2-3 | 1.25 | >100 |
| 42 | 2440.48 | 1 | SLU | -9830.76 | -31.26 | 0.78 | -2571250.00 | -150955.00 | 3714.54 | 2-3 | 1.25 | >100 |
| 43 | 2500.00 | 1 | SLU | -9400.35 | 0.00 | 0.00 | -2571250.00 | | | | | >100 |

Stato limite ultimo - Verifiche a taglio

| Caso | X <cm> | CC | TCC | Ty <daN> | Tz <daN> | bw <m> | Asw <cmq> | Vedu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-----------|----|-----|-------------|-------------|-----------|--------------|---------------|------|---------------|---------------|---------------|--------|
| 1 | 0.00 | 1 | SLU | 7608.59 | 392.10 | 0.85 | 11.31 | 7618.69 | 1.00 | 32294.70 | 334849.00 | 32294.70 | 4.239 |
| 2 | 59.52 | 1 | SLU | 5164.12 | 266.13 | 0.85 | 11.31 | 5170.97 | 1.00 | 32294.70 | 335000.00 | 32294.70 | 6.245 |
| 3 | 119.05 | 1 | SLU | 3056.38 | 157.51 | 0.85 | 11.31 | 3060.44 | 1.00 | 32294.70 | 335061.00 | 32294.70 | 10.552 |
| 4 | 178.57 | 1 | SLU | 1261.23 | 65.00 | 0.85 | 11.31 | 1262.90 | 1.00 | 32294.70 | 335122.00 | 32294.70 | 25.572 |
| 5 | 238.09 | 1 | SLU | -246.18 | -12.69 | 0.85 | 11.31 | 246.51 | 1.00 | 32294.70 | 335183.00 | 32294.70 | >100 |
| 6 | 297.62 | 1 | SLU | -1491.00 | -76.84 | 0.85 | 11.31 | 1492.98 | 1.00 | 32294.70 | 335244.00 | 32294.70 | 21.631 |
| 7 | 357.14 | 1 | SLU | -2816.74 | -145.16 | 0.85 | 11.31 | 2820.48 | 1.00 | 32294.70 | 335306.00 | 32294.70 | 11.450 |
| 8 | 416.67 | 1 | SLU | -4176.79 | -215.25 | 0.85 | 11.31 | 4182.33 | 1.00 | 32294.70 | 335239.00 | 32294.70 | 7.722 |
| 9 | 476.19 | 1 | SLU | -5213.88 | -268.69 | 0.85 | 11.31 | 5220.80 | 1.00 | 32294.70 | 335173.00 | 32294.70 | 6.186 |
| 10 | 535.71 | 1 | SLU | -5967.58 | -307.53 | 0.85 | 11.31 | 5975.50 | 1.00 | 32294.70 | 335107.00 | 32294.70 | 5.405 |
| 11 | 595.24 | 1 | SLU | -6475.38 | -333.70 | 0.85 | 11.31 | 6483.97 | 1.00 | 32294.70 | 335042.00 | 32294.70 | 4.981 |
| 12 | 654.76 | 1 | SLU | -6772.39 | -349.01 | 0.85 | 11.31 | 6781.37 | 1.00 | 32294.70 | 334976.00 | 32294.70 | 4.762 |
| 13 | 714.29 | 1 | SLU | -6891.13 | -355.13 | 0.85 | 11.31 | 6900.28 | 1.00 | 32294.70 | 334911.00 | 32294.70 | 4.680 |
| 14 | 773.81 | 1 | SLU | -6861.46 | -353.60 | 0.85 | 11.31 | 6870.56 | 1.00 | 32294.70 | 334845.00 | 32294.70 | 4.700 |
| 15 | 833.33 | 1 | SLU | -6710.45 | -345.82 | 0.85 | 11.31 | 6719.35 | 1.00 | 32294.70 | 334780.00 | 32294.70 | 4.806 |
| 16 | 892.86 | 1 | SLU | -6462.46 | -333.04 | 0.85 | 11.31 | 6471.04 | 1.00 | 32294.70 | 334716.00 | 32294.70 | 4.991 |
| 17 | 952.38 | 1 | SLU | -6139.19 | -316.38 | 0.85 | 11.31 | 6147.34 | 1.00 | 32294.70 | 334651.00 | 32294.70 | 5.253 |
| 18 | 1011.90 | 1 | SLU | -5759.74 | -296.82 | 0.85 | 11.31 | 5767.38 | 1.00 | 32294.70 | 334586.00 | 32294.70 | 5.600 |
| 19 | 1071.43 | 1 | SLU | -5340.77 | -275.23 | 0.85 | 11.31 | 5347.86 | 1.00 | 32294.70 | 334522.00 | 32294.70 | 6.039 |
| 20 | 1130.95 | 1 | SLU | -4896.66 | -252.34 | 0.85 | 11.31 | 4903.16 | 1.00 | 32294.70 | 334458.00 | 32294.70 | 6.587 |
| 21 | 1190.48 | 1 | SLU | -4439.65 | -228.79 | 0.85 | 11.31 | 4445.54 | 1.00 | 32294.70 | 334394.00 | 32294.70 | 7.265 |
| 22 | 1250.00 | 1 | SLU | -3980.04 | -205.11 | 0.85 | 11.31 | 3985.32 | 1.00 | 32294.70 | 334330.00 | 32294.70 | 8.103 |
| 23 | 1309.52 | 1 | SLU | -3526.34 | -181.73 | 0.85 | 11.31 | 3531.02 | 1.00 | 32294.70 | 334266.00 | 32294.70 | 9.146 |
| 24 | 1369.05 | 1 | SLU | -3085.51 | -159.01 | 0.85 | 11.31 | 3089.60 | 1.00 | 32294.70 | 334202.00 | 32294.70 | 10.453 |
| 25 | 1428.57 | 1 | SLU | -2663.07 | -137.24 | 0.85 | 11.31 | 2666.60 | 1.00 | 32294.70 | 334139.00 | 32294.70 | 12.111 |

Relazione di calcolo

| | | | | | | | | | | | | | |
|----|---------|---|-----|----------|---------|------|-------|---------|------|----------|-----------|----------|--------|
| 26 | 1488.10 | 1 | SLU | -2263.33 | -116.64 | 0.85 | 11.31 | 2266.34 | 1.00 | 32294.70 | 334075.00 | 32294.70 | 14.250 |
| 27 | 1547.62 | 1 | SLU | -1889.54 | -97.38 | 0.85 | 11.31 | 1892.05 | 1.00 | 32294.70 | 334012.00 | 32294.70 | 17.069 |
| 28 | 1607.14 | 1 | SLU | -1544.05 | -79.57 | 0.85 | 11.31 | 1546.10 | 1.00 | 32294.70 | 333949.00 | 32294.70 | 20.888 |
| 29 | 1666.67 | 1 | SLU | -1228.43 | -63.31 | 0.85 | 11.31 | 1230.07 | 1.00 | 32294.70 | 333886.00 | 32294.70 | 26.255 |
| 30 | 1726.19 | 1 | SLU | -943.68 | -48.63 | 0.85 | 11.31 | 944.93 | 1.00 | 32294.70 | 333823.00 | 32294.70 | 34.177 |
| 31 | 1785.71 | 1 | SLU | -690.28 | -35.57 | 0.85 | 11.31 | 691.19 | 1.00 | 32294.70 | 333760.00 | 32294.70 | 46.723 |
| 32 | 1845.24 | 1 | SLU | -468.33 | -24.14 | 0.85 | 11.31 | 468.95 | 1.00 | 32294.70 | 333697.00 | 32294.70 | 68.865 |
| 33 | 1904.76 | 1 | SLU | -277.68 | -14.31 | 0.85 | 11.31 | 278.05 | 1.00 | 32294.70 | 333635.00 | 32294.70 | >100 |
| 34 | 1964.29 | 1 | SLU | -117.98 | -6.08 | 0.85 | 11.31 | 118.14 | 1.00 | 32294.70 | 333572.00 | 32294.70 | >100 |
| 35 | 2023.81 | 1 | SLU | 11.24 | 0.58 | 0.85 | 11.31 | 11.26 | 1.00 | 32294.70 | 333510.00 | 32294.70 | >100 |
| 36 | 2083.33 | 1 | SLU | 110.48 | 5.69 | 0.85 | 11.31 | 110.63 | 1.00 | 32294.70 | 333448.00 | 32294.70 | >100 |
| 37 | 2142.86 | 1 | SLU | 180.25 | 9.29 | 0.85 | 11.31 | 180.49 | 1.00 | 32294.70 | 333386.00 | 32294.70 | >100 |
| 38 | 2202.38 | 1 | SLU | 221.00 | 11.39 | 0.85 | 11.31 | 221.30 | 1.00 | 32294.70 | 333324.00 | 32294.70 | >100 |
| 39 | 2261.90 | 1 | SLU | 233.13 | 12.01 | 0.85 | 11.31 | 233.44 | 1.00 | 32294.70 | 333262.00 | 32294.70 | >100 |
| 40 | 2321.43 | 1 | SLU | 216.93 | 11.18 | 0.85 | 11.31 | 217.22 | 1.00 | 32294.70 | 333200.00 | 32294.70 | >100 |
| 41 | 2380.95 | 1 | SLU | 172.60 | 8.89 | 0.85 | 11.31 | 172.83 | 1.00 | 32294.70 | 333138.00 | 32294.70 | >100 |
| 42 | 2440.48 | 1 | SLU | 100.28 | 5.17 | 0.85 | 11.31 | 100.41 | 1.00 | 32294.70 | 333076.00 | 32294.70 | >100 |

Verifiche stato limite d'esercizio

| Caso | X <cm> | CC | TCC | N <daN> | Mz <daNm> | My <daNm> | AFT <cmq> | AFC <cmq> | σ_c <daN/cmq> | σ_s <daN/cmq> |
|------|-----------|----|-------|------------|--------------|--------------|--------------|--------------|-------------------------|-------------------------|
| 44 | 0.00 | 2 | SLE R | -16449.90 | -1047.41 | 41936.90 | 50.27 | 28.27 | 42.31 | 1359.62 |
| 45 | 59.52 | 2 | SLE R | -17543.60 | -1117.49 | 44742.80 | 50.27 | 28.27 | 45.15 | 1450.68 |
| 46 | 119.05 | 2 | SLE R | -18048.70 | -1162.50 | 46545.00 | 50.27 | 28.27 | 46.97 | 1511.94 |
| 47 | 178.57 | 2 | SLE R | -18554.40 | -1186.02 | 47486.80 | 50.27 | 28.27 | 47.92 | 1540.56 |
| 48 | 238.09 | 2 | SLE R | -19060.70 | -1191.36 | 47700.60 | 50.27 | 28.27 | 48.12 | 1541.58 |
| 49 | 297.62 | 2 | SLE R | -19567.50 | -1181.56 | 47308.10 | 50.27 | 28.27 | 47.71 | 1519.59 |
| 50 | 357.14 | 2 | SLE R | -20075.00 | -1158.19 | 46372.60 | 50.27 | 28.27 | 46.74 | 1477.05 |
| 51 | 416.67 | 2 | SLE R | -19747.30 | -1119.33 | 44816.60 | 50.27 | 28.27 | 45.16 | 1422.66 |
| 52 | 476.19 | 2 | SLE R | -19420.70 | -1067.30 | 42733.10 | 50.27 | 28.27 | 43.04 | 1348.28 |
| 53 | 535.71 | 2 | SLE R | -19095.10 | -1005.42 | 40255.90 | 50.27 | 28.27 | 40.52 | 1258.99 |
| 54 | 595.24 | 2 | SLE R | -18770.50 | -936.63 | 37501.50 | 50.27 | 28.27 | 37.72 | 1159.22 |
| 55 | 654.76 | 2 | SLE R | -18447.00 | -863.44 | 34570.90 | 50.27 | 28.27 | 34.73 | 1052.83 |
| 56 | 714.29 | 2 | SLE R | -18124.40 | -787.98 | 31549.60 | 50.27 | 28.27 | 31.65 | 943.09 |
| 57 | 773.81 | 2 | SLE R | -17802.80 | -712.05 | 28509.70 | 47.12 | 31.42 | 28.54 | 832.74 |
| 58 | 833.33 | 2 | SLE R | -17482.20 | -637.15 | 25510.60 | 47.12 | 31.42 | 25.47 | 724.09 |
| 59 | 892.86 | 2 | SLE R | -17162.50 | -564.47 | 22600.40 | 47.12 | 31.42 | 22.49 | 619.01 |
| 60 | 952.38 | 2 | SLE R | -16843.70 | -494.95 | 19817.10 | 47.12 | 31.42 | 19.62 | 519.00 |
| 61 | 1011.90 | 2 | SLE R | -16525.80 | -429.32 | 17189.50 | 47.12 | 31.42 | 16.91 | 425.27 |
| 62 | 1071.43 | 2 | SLE R | -16208.80 | -368.11 | 14738.60 | 47.12 | 31.42 | 14.37 | 338.77 |
| 63 | 1130.95 | 2 | SLE R | -15892.70 | -311.67 | 12478.70 | 47.12 | 31.42 | 12.02 | 260.30 |
| 64 | 1190.48 | 2 | SLE R | -15577.50 | -260.20 | 10418.10 | 43.98 | 34.56 | 9.86 | 190.58 |
| 65 | 1250.00 | 2 | SLE R | -15263.00 | -213.79 | 8560.09 | 40.84 | 37.70 | 7.91 | 130.46 |
| 66 | 1309.52 | 2 | SLE R | -14949.40 | -172.43 | 6903.92 | 40.84 | 37.70 | 6.19 | 83.97 |
| 67 | 1369.05 | 2 | SLE R | -14636.60 | -136.00 | 5445.39 | 34.56 | 43.98 | 4.73 | 65.09 |
| 68 | 1428.57 | 2 | SLE R | -14324.60 | -104.34 | 4177.55 | 28.27 | 50.27 | 3.59 | 50.14 |
| 69 | 1488.10 | 2 | SLE R | -14013.30 | -77.21 | 3091.28 | 18.85 | 59.69 | 2.79 | 39.38 |
| 70 | 1547.62 | 2 | SLE R | -13702.80 | -54.34 | 2175.82 | 0.00 | 78.54 | 2.24 | 31.97 |
| 71 | 1607.14 | 2 | SLE R | -13393.00 | -35.44 | 1419.16 | 0.00 | 78.54 | 1.82 | 26.28 |
| 72 | 1666.67 | 2 | SLE R | -13084.00 | -20.19 | 808.45 | 0.00 | 78.54 | 1.48 | 21.62 |
| 73 | 1726.19 | 2 | SLE R | -12775.60 | -8.25 | 330.25 | 0.00 | 78.54 | 1.21 | 17.89 |
| 74 | 1785.71 | 2 | SLE R | -12468.00 | 0.73 | -29.18 | 0.00 | 78.54 | 1.03 | 15.41 |
| 75 | 1845.24 | 2 | SLE R | -12161.00 | 7.09 | -283.71 | 0.00 | 78.54 | 1.14 | 16.82 |
| 76 | 1904.76 | 2 | SLE R | -11854.60 | 11.17 | -447.19 | 0.00 | 78.54 | 1.20 | 17.60 |
| 77 | 1964.29 | 2 | SLE R | -11548.90 | 13.32 | -533.38 | 0.00 | 78.54 | 1.21 | 17.83 |
| 78 | 2023.81 | 2 | SLE R | -11243.80 | 13.88 | -555.82 | 0.00 | 78.54 | 1.20 | 17.62 |
| 79 | 2083.33 | 2 | SLE R | -10939.30 | 13.18 | -527.87 | 0.00 | 78.54 | 1.16 | 17.05 |
| 80 | 2142.86 | 2 | SLE R | -10635.40 | 11.55 | -462.63 | 0.00 | 78.54 | 1.10 | 16.22 |
| 81 | 2202.38 | 2 | SLE R | -10332.10 | 9.32 | -373.02 | 0.00 | 78.54 | 1.03 | 15.22 |
| 82 | 2261.90 | 2 | SLE R | -10029.30 | 6.79 | -271.76 | 0.00 | 78.54 | 0.96 | 14.14 |
| 83 | 2321.43 | 2 | SLE R | -9727.10 | 4.28 | -171.40 | 0.00 | 78.54 | 0.88 | 13.07 |
| 84 | 2380.95 | 2 | SLE R | -9425.39 | 2.11 | -84.41 | 0.00 | 78.54 | 0.81 | 12.09 |
| 85 | 2440.48 | 2 | SLE R | -9124.17 | 0.58 | -23.16 | 0.00 | 78.54 | 0.75 | 11.29 |
| 86 | 2500.00 | 2 | SLE R | -8823.46 | 0.00 | 0.00 | 0.00 | 78.54 | 0.72 | 10.76 |
| 87 | 0.00 | 4 | SLE Q | -16449.90 | -1047.41 | 41936.90 | 50.27 | 28.27 | 42.31 | 1359.62 |
| 88 | 59.52 | 4 | SLE Q | -17543.60 | -1117.49 | 44742.80 | 50.27 | 28.27 | 45.15 | 1450.68 |
| 89 | 119.05 | 4 | SLE Q | -18048.70 | -1162.50 | 46545.00 | 50.27 | 28.27 | 46.97 | 1511.94 |
| 90 | 178.57 | 4 | SLE Q | -18554.40 | -1186.02 | 47486.80 | 50.27 | 28.27 | 47.92 | 1540.56 |
| 91 | 238.09 | 4 | SLE Q | -19060.70 | -1191.36 | 47700.60 | 50.27 | 28.27 | 48.12 | 1541.58 |
| 92 | 297.62 | 4 | SLE Q | -19567.50 | -1181.56 | 47308.10 | 50.27 | 28.27 | 47.71 | 1519.59 |
| 93 | 357.14 | 4 | SLE Q | -20075.00 | -1158.19 | 46372.60 | 50.27 | 28.27 | 46.74 | 1477.05 |
| 94 | 416.67 | 4 | SLE Q | -19747.30 | -1119.33 | 44816.60 | 50.27 | 28.27 | 45.16 | 1422.66 |
| 95 | 476.19 | 4 | SLE Q | -19420.70 | -1067.30 | 42733.10 | 50.27 | 28.27 | 43.04 | 1348.28 |
| 96 | 535.71 | 4 | SLE Q | -19095.10 | -1005.42 | 40255.90 | 50.27 | 28.27 | 40.52 | 1258.99 |
| 97 | 595.24 | 4 | SLE Q | -18770.50 | -936.63 | 37501.50 | 50.27 | 28.27 | 37.72 | 1159.22 |
| 98 | 654.76 | 4 | SLE Q | -18447.00 | -863.44 | 34570.90 | 50.27 | 28.27 | 34.73 | 1052.83 |
| 99 | 714.29 | 4 | SLE Q | -18124.40 | -787.98 | 31549.60 | 50.27 | 28.27 | 31.65 | 943.09 |

Relazione di calcolo

| | | | | | | | | | | | | | | | | |
|-----|---------|---|-------|-----------|---------|----------|-------|-------|-------|--------|--|--|--|--|--|--|
| 100 | 773.81 | 4 | SLE Q | -17802.80 | -712.05 | 28509.70 | 47.12 | 31.42 | 28.54 | 832.74 | | | | | | |
| 101 | 833.33 | 4 | SLE Q | -17482.20 | -637.15 | 25510.60 | 47.12 | 31.42 | 25.47 | 724.09 | | | | | | |
| 102 | 892.86 | 4 | SLE Q | -17162.50 | -564.47 | 22600.40 | 47.12 | 31.42 | 22.49 | 619.01 | | | | | | |
| 103 | 952.38 | 4 | SLE Q | -16843.70 | -494.95 | 19817.10 | 47.12 | 31.42 | 19.62 | 519.00 | | | | | | |
| 104 | 1011.90 | 4 | SLE Q | -16525.80 | -429.32 | 17189.50 | 47.12 | 31.42 | 16.91 | 425.27 | | | | | | |
| 105 | 1071.43 | 4 | SLE Q | -16208.80 | -368.11 | 14738.60 | 47.12 | 31.42 | 14.37 | 338.77 | | | | | | |
| 106 | 1130.95 | 4 | SLE Q | -15892.70 | -311.67 | 12478.70 | 47.12 | 31.42 | 12.02 | 260.30 | | | | | | |
| 107 | 1190.48 | 4 | SLE Q | -15577.50 | -260.20 | 10418.10 | 43.98 | 34.56 | 9.86 | 190.58 | | | | | | |
| 108 | 1250.00 | 4 | SLE Q | -15263.00 | -213.79 | 8560.09 | 40.84 | 37.70 | 7.91 | 130.46 | | | | | | |
| 109 | 1309.52 | 4 | SLE Q | -14949.40 | -172.43 | 6903.92 | 40.84 | 37.70 | 6.19 | 83.97 | | | | | | |
| 110 | 1369.05 | 4 | SLE Q | -14636.60 | -136.00 | 5445.39 | 34.56 | 43.98 | 4.73 | 65.09 | | | | | | |
| 111 | 1428.57 | 4 | SLE Q | -14324.60 | -104.34 | 4177.55 | 28.27 | 50.27 | 3.59 | 50.14 | | | | | | |
| 112 | 1488.10 | 4 | SLE Q | -14013.30 | -77.21 | 3091.28 | 18.85 | 59.69 | 2.79 | 39.38 | | | | | | |
| 113 | 1547.62 | 4 | SLE Q | -13702.80 | -54.34 | 2175.82 | 0.00 | 78.54 | 2.24 | 31.97 | | | | | | |
| 114 | 1607.14 | 4 | SLE Q | -13393.00 | -35.44 | 1419.16 | 0.00 | 78.54 | 1.82 | 26.28 | | | | | | |
| 115 | 1666.67 | 4 | SLE Q | -13084.00 | -20.19 | 808.45 | 0.00 | 78.54 | 1.48 | 21.62 | | | | | | |
| 116 | 1726.19 | 4 | SLE Q | -12775.60 | -8.25 | 330.25 | 0.00 | 78.54 | 1.21 | 17.89 | | | | | | |
| 117 | 1785.71 | 4 | SLE Q | -12468.00 | 0.73 | -29.18 | 0.00 | 78.54 | 1.03 | 15.41 | | | | | | |
| 118 | 1845.24 | 4 | SLE Q | -12161.00 | 7.09 | -283.71 | 0.00 | 78.54 | 1.14 | 16.82 | | | | | | |
| 119 | 1904.76 | 4 | SLE Q | -11854.60 | 11.17 | -447.19 | 0.00 | 78.54 | 1.20 | 17.60 | | | | | | |
| 120 | 1964.29 | 4 | SLE Q | -11548.90 | 13.32 | -533.38 | 0.00 | 78.54 | 1.21 | 17.83 | | | | | | |
| 121 | 2023.81 | 4 | SLE Q | -11243.80 | 13.88 | -555.82 | 0.00 | 78.54 | 1.20 | 17.62 | | | | | | |
| 122 | 2083.33 | 4 | SLE Q | -10939.30 | 13.18 | -527.87 | 0.00 | 78.54 | 1.16 | 17.05 | | | | | | |
| 123 | 2142.86 | 4 | SLE Q | -10635.40 | 11.55 | -462.63 | 0.00 | 78.54 | 1.10 | 16.22 | | | | | | |
| 124 | 2202.38 | 4 | SLE Q | -10332.10 | 9.32 | -373.02 | 0.00 | 78.54 | 1.03 | 15.22 | | | | | | |
| 125 | 2261.90 | 4 | SLE Q | -10029.30 | 6.79 | -271.76 | 0.00 | 78.54 | 0.96 | 14.14 | | | | | | |
| 126 | 2321.43 | 4 | SLE Q | -9727.10 | 4.28 | -171.40 | 0.00 | 78.54 | 0.88 | 13.07 | | | | | | |
| 127 | 2380.95 | 4 | SLE Q | -9425.39 | 2.11 | -84.41 | 0.00 | 78.54 | 0.81 | 12.09 | | | | | | |
| 128 | 2440.48 | 4 | SLE Q | -9124.17 | 0.58 | -23.16 | 0.00 | 78.54 | 0.75 | 11.29 | | | | | | |
| 129 | 2500.00 | 4 | SLE Q | -8823.46 | 0.00 | 0.00 | 0.00 | 78.54 | 0.72 | 10.76 | | | | | | |

Stato limite d'esercizio - Verifiche a fessurazione

| Caso | X <cm> | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | c <mm> | s <mm> | K _c | φ _{req} | Δ _{sm} <mm> | A _s <cmq> | A _c eff <cmq> | σ _s <daN/cmq> | e _{sm} | Wk <mm> |
|------|-----------|----|-------|------------|--------------|--------------|-----------|-----------|----------------|------------------|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------|------------|
| 87 | 0.00 | 4 | SLE Q | -16449.90 | 41936.90 | -1047.41 | 46.00 | 136.36 | 0.50 | 20.00 | 213.20 | 21.99 | 1332.71 | 1359.62 | 0.40 | 0.14 |
| 88 | 59.52 | 4 | SLE Q | -17543.60 | 44742.80 | -1117.49 | 46.00 | 136.36 | 0.50 | 20.00 | 213.21 | 21.99 | 1332.72 | 1450.68 | 0.42 | 0.15 |
| 89 | 119.05 | 4 | SLE Q | -18048.70 | 46545.00 | -1162.50 | 46.00 | 136.36 | 0.50 | 20.00 | 213.25 | 21.99 | 1333.25 | 1511.94 | 0.44 | 0.16 |
| 90 | 178.57 | 4 | SLE Q | -18554.40 | 47486.80 | -1186.02 | 46.00 | 136.36 | 0.50 | 20.00 | 213.22 | 21.99 | 1332.89 | 1540.56 | 0.45 | 0.16 |
| 91 | 238.09 | 4 | SLE Q | -19060.70 | 47700.60 | -1191.36 | 46.00 | 136.36 | 0.50 | 20.00 | 213.12 | 21.99 | 1331.82 | 1541.58 | 0.45 | 0.16 |
| 92 | 297.62 | 4 | SLE Q | -19567.50 | 47308.10 | -1181.56 | 46.00 | 136.36 | 0.50 | 20.00 | 212.97 | 21.99 | 1330.11 | 1519.59 | 0.44 | 0.16 |
| 93 | 357.14 | 4 | SLE Q | -20075.00 | 46372.60 | -1158.19 | 46.00 | 136.36 | 0.50 | 20.00 | 212.75 | 21.99 | 1327.75 | 1477.05 | 0.43 | 0.16 |
| 94 | 416.67 | 4 | SLE Q | -19747.30 | 44816.60 | -1119.33 | 46.00 | 136.36 | 0.50 | 20.00 | 212.67 | 21.99 | 1326.80 | 1422.66 | 0.41 | 0.15 |
| 95 | 476.19 | 4 | SLE Q | -19420.70 | 42733.10 | -1067.30 | 46.00 | 136.36 | 0.50 | 20.00 | 212.51 | 21.99 | 1325.08 | 1348.28 | 0.39 | 0.14 |
| 96 | 535.71 | 4 | SLE Q | -19095.10 | 40255.90 | -1005.42 | 46.00 | 136.36 | 0.50 | 20.00 | 212.28 | 21.99 | 1322.60 | 1258.99 | 0.37 | 0.13 |
| 97 | 595.24 | 4 | SLE Q | -18770.50 | 37501.50 | -936.63 | 46.00 | 136.36 | 0.50 | 20.00 | 211.99 | 21.99 | 1319.30 | 1159.22 | 0.34 | 0.12 |
| 98 | 654.76 | 4 | SLE Q | -18447.00 | 34570.90 | -863.44 | 46.00 | 136.36 | 0.50 | 20.00 | 211.60 | 21.99 | 1315.09 | 1052.83 | 0.31 | 0.11 |
| 99 | 714.29 | 4 | SLE Q | -18124.40 | 31549.60 | -787.98 | 46.00 | 136.36 | 0.50 | 20.00 | 211.12 | 21.99 | 1309.79 | 943.09 | 0.27 | 0.10 |
| 100 | 773.81 | 4 | SLE Q | -17802.80 | 28509.70 | -712.05 | 46.00 | 136.36 | 0.50 | 20.00 | 210.92 | 21.99 | 1303.18 | 832.74 | 0.24 | 0.09 |
| 101 | 833.33 | 4 | SLE Q | -17482.20 | 25510.60 | -637.15 | 46.00 | 136.36 | 0.50 | 20.00 | 209.77 | 21.99 | 1294.93 | 724.09 | 0.21 | 0.08 |
| 102 | 892.86 | 4 | SLE Q | -17162.50 | 22600.40 | -564.47 | 46.00 | 136.36 | 0.50 | 20.00 | 208.83 | 21.99 | 1284.57 | 619.01 | 0.18 | 0.06 |
| 103 | 952.38 | 4 | SLE Q | -16843.70 | 19817.10 | -494.95 | 46.00 | 136.36 | 0.50 | 20.00 | 207.63 | 21.99 | 1271.43 | 519.00 | 0.15 | 0.05 |
| 104 | 1011.90 | 4 | SLE Q | -16525.80 | 17189.50 | -429.32 | 46.00 | 136.36 | 0.50 | 20.00 | 206.09 | 21.99 | 1254.49 | 425.27 | 0.12 | 0.04 |
| 105 | 1071.43 | 4 | SLE Q | -16208.80 | 14738.60 | -368.11 | 46.00 | 136.36 | 0.50 | 20.00 | 204.07 | 21.99 | 1232.30 | 338.77 | 0.10 | 0.03 |
| 106 | 1130.95 | 4 | SLE Q | -15892.70 | 12478.70 | -311.67 | 46.00 | 136.36 | 0.50 | 20.00 | 201.36 | 21.99 | 1202.51 | 260.30 | 0.08 | 0.03 |
| 107 | 1190.48 | 4 | SLE Q | -15577.50 | 10418.10 | -260.20 | 46.00 | 136.36 | 0.50 | 20.00 | 197.61 | 21.99 | 1161.24 | 190.58 | 0.06 | 0.02 |
| 108 | 1250.00 | 4 | SLE Q | -15263.00 | 8560.09 | -213.79 | 46.00 | 136.36 | 0.50 | 20.00 | 192.16 | 21.99 | 1101.37 | 130.46 | 0.04 | 0.01 |
| 109 | 1309.52 | 4 | SLE Q | -14949.40 | 6903.92 | -172.43 | 46.00 | 136.36 | 0.50 | 20.00 | 198.91 | 18.85 | 1007.58 | 81.11 | 0.02 | 0.01 |
| 110 | 1369.05 | 4 | SLE Q | -14636.60 | 5445.39 | -136.00 | 46.00 | 136.36 | 0.50 | 20.00 | 200.73 | 15.71 | 853.99 | 43.99 | 0.01 | 0.00 |
| 111 | 1428.57 | 4 | SLE Q | -14324.60 | 4177.55 | -104.34 | 46.00 | 136.36 | 0.50 | 20.00 | 180.59 | 12.57 | 556.63 | 19.64 | 0.01 | 0.00 |
| 112 | 1488.10 | 4 | SLE Q | -14013.30 | 3091.28 | -77.21 | 46.00 | 136.36 | 0.50 | 20.00 | 230.07 | 3.14 | 216.88 | 5.90 | 0.00 | 0.00 |
| 130 | 0.00 | 3 | SLE F | -16449.90 | 41936.90 | -1047.41 | 46.00 | 136.36 | 0.50 | 20.00 | 213.20 | 21.99 | 1332.71 | 1359.62 | 0.40 | 0.14 |
| 131 | 59.52 | 3 | SLE F | -17543.60 | 44742.80 | -1117.49 | 46.00 | 136.36 | 0.50 | 20.00 | 213.21 | 21.99 | 1332.72 | 1450.68 | 0.42 | 0.15 |
| 132 | 119.05 | 3 | SLE F | -18048.70 | 46545.00 | -1162.50 | 46.00 | 136.36 | 0.50 | 20.00 | 213.25 | 21.99 | 1333.25 | 1511.94 | 0.44 | 0.16 |
| 133 | 178.57 | 3 | SLE F | -18554.40 | 47486.80 | -1186.02 | 46.00 | 136.36 | 0.50 | 20.00 | 213.22 | 21.99 | 1332.89 | 1540.56 | 0.45 | 0.16 |
| 134 | 238.09 | 3 | SLE F | -19060.70 | 47700.60 | -1191.36 | 46.00 | 136.36 | 0.50 | 20.00 | 213.12 | 21.99 | 1331.82 | 1541.58 | 0.45 | 0.16 |
| 135 | 297.62 | 3 | SLE F | -19567.50 | 47308.10 | -1181.56 | 46.00 | 136.36 | 0.50 | 20.00 | 212.97 | 21.99 | 1330.11 | 1519.59 | 0.44 | 0.16 |
| 136 | 357.14 | 3 | SLE F | -20075.00 | 46372.60 | -1158.19 | 46.00 | 136.36 | 0.50 | 20.00 | 212.75 | 21.99 | 1327.75 | 1477.05 | 0.43 | 0.16 |
| 137 | 416.67 | 3 | SLE F | -19747.30 | 44816.60 | -1119.33 | 46.00 | 136.36 | 0.50 | 20.00 | 212.67 | 21.99 | 1326.80 | 1422.66 | 0.41 | 0.15 |
| 138 | 476.19 | 3 | SLE F | -19420.70 | 42733.10 | -1067.30 | 46.00 | 136.36 | 0.50 | 20.00 | 212.51 | 21.99 | 1325.08 | 1348.28 | 0.39 | 0.14 |
| 139 | 535.71 | 3 | SLE F | -19095.10 | 40255.90 | -1005.42 | 46.00 | 136.36 | 0.50 | 20.00 | 212.28 | 21.99 | 1322.60 | 1258.99 | 0.37 | 0.13 |
| 140 | 595.24 | 3 | SLE F | -18770.50 | 37501.50 | -936.63 | 46.00 | 136.36 | 0.50 | 20.00 | 211.99 | 21.99 | 1319.30 | 1159.22 | 0.34 | 0.12 |
| 141 | 654.76 | 3 | SLE F | -18447.00 | 34570.90 | -863.44 | 46.00 | 136.36 | 0.50 | 20.00 | 211.60 | 21.99 | 1315.09 | 1052.83 | 0.31 | 0.11 |
| 142 | 714.29 | 3 | SLE F | -18124.40 | 31549.60 | -787.98 | 46.00 | 136.36 | 0.50 | 20.00 | 211.12 | 21.99 | 1309.79 | 943.09 | 0.27 | 0.10 |
| 143 | 773.81 | 3 | SLE F | -17802.80 | 28509.70 | -712.05 | 46.00 | 136.36 | 0.50 | 20.00 | 210.92 | 21.99 | 1303.18 | 832.74 | 0.24 | 0.09 |
| 144 | 833.33 | 3 | SLE F | -17482.20 | 25510.60 | -637.15 | 46.00 | 136.36 | 0.50 | 20.00 | 209.77 | 21.99 | 1294.93 | 724.09 | 0.21 | 0.08 |
| 145 | 892.86 | 3 | SLE F | -17162.50 | 22600.40 | -564.47 | 46.00 | 136.36 | 0.50 | 20.00 | 208.83 | 21.99 | 1284.57 | 619.01 | 0.18 | 0.06 |
| 146 | 952.38 | 3 | SLE F | -16843.70 | 19817.10 | -494.95 | 46.00 | 136.36 | 0.50 | 20.00 | 207.63 | 21.99 | 1271.43 | 519.00 | 0.15 | 0.05 |

Relazione di calcolo

| | | | | | | | | | | | | | | | | |
|-----|---------|---|-------|-----------|----------|---------|-------|--------|------|-------|--------|-------|---------|--------|------|------|
| 147 | 1011.90 | 3 | SLE F | -16525.80 | 17189.50 | -429.32 | 46.00 | 136.36 | 0.50 | 20.00 | 206.09 | 21.99 | 1254.49 | 425.27 | 0.12 | 0.04 |
| 148 | 1071.43 | 3 | SLE F | -16208.80 | 14738.60 | -368.11 | 46.00 | 136.36 | 0.50 | 20.00 | 204.07 | 21.99 | 1232.30 | 338.77 | 0.10 | 0.03 |
| 149 | 1130.95 | 3 | SLE F | -15892.70 | 12478.70 | -311.67 | 46.00 | 136.36 | 0.50 | 20.00 | 201.36 | 21.99 | 1202.51 | 260.30 | 0.08 | 0.03 |
| 150 | 1190.48 | 3 | SLE F | -15577.50 | 10418.10 | -260.20 | 46.00 | 136.36 | 0.50 | 20.00 | 197.61 | 21.99 | 1161.24 | 190.58 | 0.06 | 0.02 |
| 151 | 1250.00 | 3 | SLE F | -15263.00 | 8560.09 | -213.79 | 46.00 | 136.36 | 0.50 | 20.00 | 192.16 | 21.99 | 1101.37 | 130.46 | 0.04 | 0.01 |
| 152 | 1309.52 | 3 | SLE F | -14949.40 | 6903.92 | -172.43 | 46.00 | 136.36 | 0.50 | 20.00 | 198.91 | 18.85 | 1007.58 | 81.11 | 0.02 | 0.01 |
| 153 | 1369.05 | 3 | SLE F | -14636.60 | 5445.39 | -136.00 | 46.00 | 136.36 | 0.50 | 20.00 | 200.73 | 15.71 | 853.99 | 43.99 | 0.01 | 0.00 |
| 154 | 1428.57 | 3 | SLE F | -14324.60 | 4177.55 | -104.34 | 46.00 | 136.36 | 0.50 | 20.00 | 180.59 | 12.57 | 556.63 | 19.64 | 0.01 | 0.00 |
| 155 | 1488.10 | 3 | SLE F | -14013.30 | 3091.28 | -77.21 | 46.00 | 136.36 | 0.50 | 20.00 | 230.07 | 3.14 | 216.88 | 5.90 | 0.00 | 0.00 |

Verifiche principali

| Caso | Tipo |
|------|--|
| 1 | SLU Taglio - min. sic. c.a., SLU Taglio - min. sic. acciaio |
| 5 | SLU N cost - min. sic. |
| 48 | C.Rare - Sc min (max compr.), C.Rare - Sf max (max traz.), C.Rare - Sf min (max compr.) |
| 71 | C.Rare - Sc max (min. compr.) |
| 91 | C.Q.Per. - Sc min (max compr.), C.Q.Per. - Sf max (max traz.), C.Q.Per. - Sf min (max compr.), C.Q.Per. - Wk Max |
| 114 | C.Q.Per. - Sc max (min. compr.) |
| 134 | C.Freq - Wk Max |

Verifiche sezioni aste

Simbologia

Δ_{sm} = Distanza media tra le fessure
 Φ_{eq} = Diametro equivalente delle barre
 α = Angolo asse neutro a rottura
 ϵ_{sm} = Deformazione unitaria media dell'armatura (*1000)
 σ_s = Tensione nell'acciaio nella sezione fessurata
 $A_{c\ eff}$ = Area di calcestruzzo efficace
 A_g = Area complessiva dei ferri nell'area di calcestruzzo efficace
 A_{sw} = Area armatura trasversale
 B = Base
 CC = Numero della combinazione delle condizioni di carico elementari
 Caso = Caso di verifica
 C_f = Copriferro
 cls = Tipo di calcestruzzo
 F_{cd} = Resistenza di calcolo a compressione del calcestruzzo
 F_{ck} = Resistenza caratteristica cilindrica a compressione del calcestruzzo
 F_{ctd} = Resistenza di calcolo a trazione del calcestruzzo
 F_{ctk} = Resistenza caratteristica a trazione del calcestruzzo
 F_{yd} = Resistenza di calcolo dell'acciaio
 F_{yk} = Tensione caratteristica di snervamento dell'acciaio
 H = Altezza
 K_2 = Coefficiente per distribuzione deformazioni
 M'_{ydy} = Momento resistente massimo in campo sostanzialmente elastico intorno all'asse Y
 M'_{ydz} = Momento resistente massimo in campo sostanzialmente elastico intorno all'asse Z
 M_{Rdy} = Momento resistente allo stato limite ultimo intorno all'asse Y
 M_{Rdz} = Momento resistente allo stato limite ultimo intorno all'asse Z
 M_y = Momento flettente intorno all'asse Y
 M_z = Momento flettente intorno all'asse Z
 N = Sforzo normale
 N_u = Sforzo normale ultimo
 $Rott.$ = Tipo di rottura
 1-2 = Rott. acciaio: $\epsilon_y = \epsilon_{yd}$, $\epsilon_c < \epsilon_{cu}$
 2-3 = Rott. cls: $\epsilon_y < \epsilon_{yd}$, $\epsilon_c = \epsilon_{cu}$
 3-4 = Rott. cls: $\epsilon_c < \epsilon_c < \epsilon_{cu}$
 $Sez.$ = Numero della sezione
 $Sic.$ = Sicurezza
 TCC = Tipo di combinazione di carico
 SLU = Stato limite ultimo
 $SLE R$ = Stato limite d'esercizio, combinazione rara
 $SLE F$ = Stato limite d'esercizio, combinazione frequente
 $SLE Q$ = Stato limite d'esercizio, combinazione quasi permanente
 $Tipo$ = Tipo di verifica effettuata
 Tp = Tipo di acciaio
 T_y = Taglio in dir. Y
 T_z = Taglio in dir. Z
 VR_{cd} = Taglio ultimo lato calcestruzzo
 VR_{sd} = Taglio ultimo lato armatura
 VR_{du} = Taglio ultimo resistente
 VS_{du} = Taglio agente nella direzione del momento ultimo
 w_k = Ampiezza caratteristica delle fessure
 b_w = Larghezza membratura resistente al taglio
 c = Ricoprimento dell'armatura
 $ctg\theta$ = Cotangente dell'angolo di inclinazione dei puntoni di calcestruzzo
 s = Distanza massima tra le barre

SEZIONE N.10

Sezione: Rettangolare - Dati geometrici della sezione

| | | |
|-------------|---|------|
| Base <m> | = | 2.58 |
| Altezza <m> | = | 2.60 |

Relazione di calcolo

Caratteristiche delle sezioni e dei materiali utilizzati

| Sez. | Tipo | B <cm> | H <cm> | Cf <cm> | Cls | Fck <daN/cm ² > | Fctk <daN/cm ² > | Fcd <daN/cm ² > | Fctd <daN/cm ² > | Tp | Fyk <daN/cm ² > | Fyd <daN/cm ² > |
|------|------|-----------|-----------|------------|--------|-------------------------------|--------------------------------|-------------------------------|--------------------------------|-------|-------------------------------|-------------------------------|
| 10 | R | 258.00 | 260.00 | 3.00 | C40/50 | 415.00 | 25.17 | 235.17 | 16.78 | B450C | 4500.00 | 3913.04 |

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | OC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|-------|
| 1 | | SLV | 0.00 | 1152480.00 | 0.00 | 0.00 | 1179210.00 | 19.52 | 1-2 | 179.79 | 1.023 |

Stato limite ultimo - Verifiche a taglio

| Caso | Ty <daN> | Tz <daN> | bw <cm> | Asw <cm ² > | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-------------|-------------|------------|---------------------------|---------------|------|---------------|---------------|---------------|------|
| 1 | 0.00 | 0.00 | 2.58 | 40.21 | 0.00 | 2.50 | 913262.00 | 2428570.00 | 913262.00 | --- |

Verifiche principali

| Caso | Tipo |
|------|------------------------|
| 1 | SLU N cost - min. sic. |

SEZIONE N.2

Sezione: Rettangolare - Dati geometrici della sezione

| | | |
|-------------|---|------|
| Base <m> | = | 1.20 |
| Altezza <m> | = | 1.50 |

Caratteristiche delle sezioni e dei materiali utilizzati

| Sez. | Tipo | B <cm> | H <cm> | Cf <cm> | Cls | Fck <daN/cm ² > | Fctk <daN/cm ² > | Fcd <daN/cm ² > | Fctd <daN/cm ² > | Tp | Fyk <daN/cm ² > | Fyd <daN/cm ² > |
|------|------|-----------|-----------|------------|--------|-------------------------------|--------------------------------|-------------------------------|--------------------------------|-------|-------------------------------|-------------------------------|
| 2 | R | 120.00 | 150.00 | 3.00 | C40/50 | 415.00 | 25.17 | 235.17 | 16.78 | B450C | 4500.00 | 3913.04 |

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | OC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|-------|
| 1 | | SLU | 0.00 | 118798.00 | 0.00 | 0.00 | 176901.00 | 0.00 | 1-2 | 180.00 | 1.489 |

Stato limite ultimo - Verifiche a taglio

| Caso | Ty <daN> | Tz <daN> | bw <cm> | Asw <cm ² > | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-------------|-------------|------------|---------------------------|---------------|------|---------------|---------------|---------------|------|
| 1 | 0.00 | 0.00 | 1.20 | 40.21 | 0.00 | 2.50 | 520445.00 | 643708.00 | 520445.00 | --- |

Verifiche principali

| Caso | Tipo |
|------|------------------------|
| 1 | SLU N cost - min. sic. |

SEZIONE N.3

Sezione: Rettangolare - Dati geometrici della sezione

| | | |
|-------------|---|------|
| Base <m> | = | 2.58 |
| Altezza <m> | = | 1.50 |

Caratteristiche delle sezioni e dei materiali utilizzati

| Sez. | Tipo | B <cm> | H <cm> | Cf <cm> | Cls | Fck <daN/cm ² > | Fctk <daN/cm ² > | Fcd <daN/cm ² > | Fctd <daN/cm ² > | Tp | Fyk <daN/cm ² > | Fyd <daN/cm ² > |
|------|------|-----------|-----------|------------|--------|-------------------------------|--------------------------------|-------------------------------|--------------------------------|-------|-------------------------------|-------------------------------|
| 3 | R | 258.00 | 150.00 | 3.00 | C40/50 | 415.00 | 25.17 | 235.17 | 16.78 | B450C | 4500.00 | 3913.04 |

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | OC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|-------|
| 1 | | SLU | 0.00 | 777000.00 | 0.00 | 0.00 | 822417.00 | -4.17 | 1-2 | 179.75 | 1.058 |

Stato limite ultimo - Verifiche a taglio

| Caso | Ty <daN> | Tz <daN> | bw <cm> | Asw <cm ² > | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-------------|-------------|------------|---------------------------|---------------|------|---------------|---------------|---------------|------|
| 1 | 0.00 | 0.00 | 2.58 | 20.11 | 0.00 | 2.50 | 262187.00 | 1394430.00 | 262187.00 | --- |

Verifiche principali

| Caso | Tipo |
|------|------------------------|
| 1 | SLU N cost - min. sic. |

SEZIONE N.4

Sezione: Rettangolare - Dati geometrici della sezione

| | | |
|-------------|---|------|
| Base <m> | = | 1.20 |
| Altezza <m> | = | 1.50 |

Relazione di calcolo

Caratteristiche delle sezioni e dei materiali utilizzati

| Sez. | Tipo | B <cm> | H <cm> | Cf <cm> | Cls | Fck <daN/cm ² > | Fctk <daN/cm ² > | Fcd <daN/cm ² > | Fctd <daN/cm ² > | Tp | Fyk <daN/cm ² > | Fyd <daN/cm ² > |
|------|------|-----------|-----------|------------|--------|-------------------------------|--------------------------------|-------------------------------|--------------------------------|-------|-------------------------------|-------------------------------|
| 4 | R | 120.00 | 150.00 | 3.00 | C40/50 | 415.00 | 25.17 | 235.17 | 16.78 | B450C | 4500.00 | 3913.04 |

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|-------|
| 1 | | SLU | 0.00 | 284471.00 | 0.00 | 0.00 | 304398.00 | -0.28 | 1-2 | 179.63 | 1.070 |

Stato limite ultimo - Verifiche a taglio

| Caso | Ty <daN> | Tz <daN> | bw <cm> | Asw <cm ² > | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-------------|-------------|------------|---------------------------|---------------|------|---------------|---------------|---------------|------|
| 1 | 0.00 | 0.00 | 1.20 | 20.11 | 0.00 | 2.50 | 261556.00 | 647021.00 | 261556.00 | --- |

Verifiche principali

| Caso | Tipo |
|------|------------------------|
| 1 | SLU N cost - min. sic. |

SEZIONE N.5

Sezione: Rettangolare - Dati geometrici della sezione

| | | |
|-------------|---|------|
| Base <m> | = | 1.14 |
| Altezza <m> | = | 2.60 |

Caratteristiche delle sezioni e dei materiali utilizzati

| Sez. | Tipo | B <cm> | H <cm> | Cf <cm> | Cls | Fck <daN/cm ² > | Fctk <daN/cm ² > | Fcd <daN/cm ² > | Fctd <daN/cm ² > | Tp | Fyk <daN/cm ² > | Fyd <daN/cm ² > |
|------|------|-----------|-----------|------------|--------|-------------------------------|--------------------------------|-------------------------------|--------------------------------|-------|-------------------------------|-------------------------------|
| 5 | R | 114.00 | 260.00 | 3.00 | C40/50 | 415.00 | 25.17 | 235.17 | 16.78 | B450C | 4500.00 | 3913.04 |

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|-------|
| 1 | | SLU | 0.00 | 1531750.00 | 0.00 | 0.00 | 1573580.00 | -0.00 | 1-2 | 180.00 | 1.027 |

Stato limite ultimo - Verifiche a taglio

| Caso | Ty <daN> | Tz <daN> | bw <cm> | Asw <cm ² > | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-------------|-------------|------------|---------------------------|---------------|------|---------------|---------------|---------------|------|
| 1 | 0.00 | 0.00 | 1.14 | 40.21 | 0.00 | 2.50 | 909893.00 | 1069120.00 | 909893.00 | --- |

Verifiche principali

| Caso | Tipo |
|------|------------------------|
| 1 | SLU N cost - min. sic. |

SEZIONE N.6

Sezione: Rettangolare - Dati geometrici della sezione

| | | |
|-------------|---|------|
| Base <m> | = | 1.00 |
| Altezza <m> | = | 2.60 |

Caratteristiche delle sezioni e dei materiali utilizzati

| Sez. | Tipo | B <cm> | H <cm> | Cf <cm> | Cls | Fck <daN/cm ² > | Fctk <daN/cm ² > | Fcd <daN/cm ² > | Fctd <daN/cm ² > | Tp | Fyk <daN/cm ² > | Fyd <daN/cm ² > |
|------|------|-----------|-----------|------------|--------|-------------------------------|--------------------------------|-------------------------------|--------------------------------|-------|-------------------------------|-------------------------------|
| 6 | R | 100.00 | 260.00 | 3.00 | C40/50 | 415.00 | 25.17 | 235.17 | 16.78 | B450C | 4500.00 | 3913.04 |

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|-------|
| 1 | | SLU | 0.00 | 995994.00 | 0.00 | 0.00 | 1024820.00 | 0.00 | 1-2 | 180.00 | 1.029 |

Stato limite ultimo - Verifiche a taglio

| Caso | Ty <daN> | Tz <daN> | bw <cm> | Asw <cm ² > | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-------------|-------------|------------|---------------------------|---------------|------|---------------|---------------|---------------|------|
| 1 | 0.00 | 0.00 | 1.00 | 40.21 | 0.00 | 2.50 | 909893.00 | 937828.00 | 909893.00 | --- |

Verifiche principali

| Caso | Tipo |
|------|------------------------|
| 1 | SLU N cost - min. sic. |

SEZIONE N.7

Sezione: Rettangolare - Dati geometrici della sezione

| | | |
|-------------|---|------|
| Base <m> | = | 1.14 |
| Altezza <m> | = | 3.50 |

Caratteristiche delle sezioni e dei materiali utilizzati

Relazione di calcolo

| Sez. | Tipo | B <cm> | H <cm> | Cf <cm> | Cls | Fck <daN/cm ² > | Fctk <daN/cm ² > | Fcd <daN/cm ² > | Fctd <daN/cm ² > | TP | Fyk <daN/cm ² > | Fyd <daN/cm ² > |
|------|------|-----------|-----------|------------|--------|-------------------------------|--------------------------------|-------------------------------|--------------------------------|-------|-------------------------------|-------------------------------|
| 7 | R | 114.00 | 350.00 | 3.00 | C40/50 | 415.00 | 25.17 | 235.17 | 16.78 | B450C | 4500.00 | 3913.04 |

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|-------|
| 1 | | SLU | 0.00 | 1531750.00 | 0.00 | 0.00 | 1615800.00 | 0.00 | 1-2 | 180.00 | 1.055 |

Stato limite ultimo - Verifiche a taglio

| Caso | Ty <daN> | Tz <daN> | bw <cm> | Asw <cm ² > | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-------------|-------------|------------|---------------------------|---------------|------|---------------|---------------|---------------|------|
| 1 | 0.00 | 0.00 | 1.14 | 40.21 | 0.00 | 2.50 | 1228530.00 | 1443530.00 | 1228530.00 | --- |

Verifiche principali

| Caso | Tipo |
|------|------------------------|
| 1 | SLU N cost - min. sic. |

SEZIONE N.8

Sezione: Rettangolare - Dati geometrici della sezione

| | | |
|-------------|---|------|
| Base <m> | = | 0.67 |
| Altezza <m> | = | 3.50 |

Caratteristiche delle sezioni e dei materiali utilizzati

| Sez. | Tipo | B <cm> | H <cm> | Cf <cm> | Cls | Fck <daN/cm ² > | Fctk <daN/cm ² > | Fcd <daN/cm ² > | Fctd <daN/cm ² > | TP | Fyk <daN/cm ² > | Fyd <daN/cm ² > |
|------|------|-----------|-----------|------------|--------|-------------------------------|--------------------------------|-------------------------------|--------------------------------|-------|-------------------------------|-------------------------------|
| 8 | R | 67.00 | 350.00 | 3.00 | C40/50 | 415.00 | 25.17 | 235.17 | 16.78 | B450C | 4500.00 | 3913.04 |

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|-------|
| 1 | | SLU | 0.00 | 2133810.00 | 0.00 | 0.00 | 2166050.00 | -22.97 | 1-2 | 180.39 | 1.015 |

Stato limite ultimo - Verifiche a taglio

| Caso | Ty <daN> | Tz <daN> | bw <cm> | Asw <cm ² > | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-------------|-------------|------------|---------------------------|---------------|------|---------------|---------------|---------------|------|
| 1 | 0.00 | 0.00 | 0.67 | 7.85 | 0.00 | 2.50 | 240244.00 | 849455.00 | 240244.00 | --- |

Verifiche principali

| Caso | Tipo |
|------|------------------------|
| 1 | SLU N cost - min. sic. |

SEZIONE N.9

Sezione: Rettangolare - Dati geometrici della sezione

| | | |
|-------------|---|------|
| Base <m> | = | 1.00 |
| Altezza <m> | = | 3.50 |

Caratteristiche delle sezioni e dei materiali utilizzati

| Sez. | Tipo | B <cm> | H <cm> | Cf <cm> | Cls | Fck <daN/cm ² > | Fctk <daN/cm ² > | Fcd <daN/cm ² > | Fctd <daN/cm ² > | TP | Fyk <daN/cm ² > | Fyd <daN/cm ² > |
|------|------|-----------|-----------|------------|--------|-------------------------------|--------------------------------|-------------------------------|--------------------------------|-------|-------------------------------|-------------------------------|
| 9 | R | 100.00 | 350.00 | 3.00 | C40/50 | 415.00 | 25.17 | 235.17 | 16.78 | B450C | 4500.00 | 3913.04 |

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|-------|
| 1 | | SLU | 0.00 | 1963830.00 | 0.00 | 0.00 | 2008400.00 | 3.22 | 1-2 | 179.13 | 1.023 |

Stato limite ultimo - Verifiche a taglio

| Caso | Ty <daN> | Tz <daN> | bw <cm> | Asw <cm ² > | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-------------|-------------|------------|---------------------------|---------------|------|---------------|---------------|---------------|------|
| 1 | 0.00 | 0.00 | 1.00 | 20.11 | 0.00 | 2.50 | 616800.00 | 1271620.00 | 616800.00 | --- |

Verifiche principali

| Caso | Tipo |
|------|------------------------|
| 1 | SLU N cost - min. sic. |

SEZIONE.1 BIS

Sezione: Rettangolare - Dati geometrici della sezione

| | | |
|-------------|---|------|
| Base <m> | = | 3.19 |
| Altezza <m> | = | 1.50 |

Caratteristiche delle sezioni e dei materiali utilizzati

| Sez. | Tipo | B <cm> | H <cm> | Cf <cm> | Cls | Fck <daN/cm ² > | Fctk <daN/cm ² > | Fcd <daN/cm ² > | Fctd <daN/cm ² > | TP | Fyk <daN/cm ² > | Fyd <daN/cm ² > |
|------|------|-----------|-----------|------------|-----|-------------------------------|--------------------------------|-------------------------------|--------------------------------|----|-------------------------------|-------------------------------|
|------|------|-----------|-----------|------------|-----|-------------------------------|--------------------------------|-------------------------------|--------------------------------|----|-------------------------------|-------------------------------|

Relazione di calcolo

| | | | | | | | | | | | | |
|---|---|--------|--------|------|--------|--------|-------|--------|-------|-------|---------|---------|
| 1 | R | 319.00 | 150.00 | 3.00 | C40/50 | 415.00 | 25.17 | 235.17 | 16.78 | B450C | 4500.00 | 3913.04 |
|---|---|--------|--------|------|--------|--------|-------|--------|-------|-------|---------|---------|

Stato limite ultimo - Verifiche a flessione/pressoflessione

| Caso | CC | TCC | N <daN> | My <daNm> | Mz <daNm> | Nu <daN> | MRdy <daNm> | MRdz <daNm> | Rott. | α <grad> | Sic. |
|------|----|-----|------------|--------------|--------------|-------------|----------------|----------------|-------|-------------|-------|
| 1 | | SLV | 0.00 | 296794.00 | 0.00 | 0.00 | 388399.00 | 12.35 | 1-2 | 179.74 | 1.309 |

Stato limite ultimo - Verifiche a taglio

| Caso | Ty <daN> | Tz <daN> | bw <m> | Asw <cmq> | Vsdu <daN> | ctgθ | VRsd <daN> | VRcd <daN> | Vrdu <daN> | Sic. |
|------|-------------|-------------|-----------|--------------|---------------|------|---------------|---------------|---------------|------|
| 1 | 0.00 | 0.00 | 3.19 | 20.11 | 0.00 | 2.50 | 262800.00 | 1728160.00 | 262800.00 | --- |

Verifiche principali

| Caso | Tipo |
|------|------------------------|
| 1 | SLU N cost - min. sic. |

Computo armature, cls e acciaio nelle sezioni

| Sezione | ϕ10 <daN> | ϕ16 <daN> | ϕ20 <daN> | ϕ26 <daN> | ϕ30 <daN> | Peso <daN> | Vol. <mc> | ρ <daN/mc> |
|--|--------------|----------------|---------------|---------------|----------------|----------------|--------------|---------------|
| Sezione 10 (SEZIONE ATTACCO POST. DEL PALO POSTERIORE: 258X260) - Soll. man. | -- | 138.48 | 44.39 | 145.87 | -- | 328.75 | 6.71 | 49.01 |
| Sezione 2 (Sezione attacco testa pali ext concentr. 120x150) - Soll. man. | -- | 73.14 | 49.32 | -- | -- | 122.46 | 1.80 | 68.04 |
| Sezione 3 (Sezione attacco pali int. radiale 258x150) - Soll. man. | -- | 102.18 | -- | -- | 233.05 | 335.23 | 3.87 | 86.62 |
| Sezione 4 (Sezione attacco pali int. concentr. 120x150) - Soll. man. | -- | 73.14 | 29.59 | -- | 55.49 | 158.22 | 1.80 | 87.90 |
| Sezione 5 (Sezione attacco al nucleo radiale 114x260) - Soll. man. | -- | 106.60 | -- | 83.36 | 177.56 | 367.52 | 2.96 | 123.99 |
| Sezione 6 (Sezione attacco al nucleo concentrica 100x260) - Soll. man. | -- | 103.66 | -- | 75.02 | 88.78 | 267.46 | 2.60 | 102.87 |
| Sezione 7 (Sezione attacco al nucleo concentrica H=350 114x350) - Soll. man. | -- | 135.01 | -- | 50.01 | 144.27 | 329.29 | 3.99 | 82.53 |
| Sezione 8 (Sezione attacco al nucleo radiale H=350: 67x350) - Soll. man. | 9.60 | 65.74 | -- | 50.01 | 210.86 | 336.21 | 2.35 | 143.37 |
| Sezione 9 (Sezione attacco al nucleo, concentrica H=350: 100x350) - Soll. man. | -- | 132.06 | -- | 75.02 | 166.47 | 373.55 | 3.50 | 106.73 |
| Sezione 1 (Sezione d'attacco pali ext radiale 319x150) - Soll. man. | -- | 115.02 | 24.66 | 83.36 | -- | 223.04 | 4.79 | 46.61 |
| Peso totale ferri | 9.60 | 1045.03 | 147.97 | 562.65 | 1076.47 | 2841.73 | 34.36 | 82.70 |

Computo armature, cls e acciaio nei plinti/pali

| Plinto/Palo | ϕ12 <daN> | ϕ20 <daN> | Peso <daN> | Vol. <mc> | ρ <daN/mc> |
|--------------------------|-----------------|-----------------|-----------------|---------------|---------------|
| Palo 1 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 2 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 3 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 4 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 5 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 6 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 7 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 8 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 9 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 10 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 11 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 12 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 13 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 14 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 15 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 16 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 17 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 18 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 19 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 20 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 21 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 22 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 23 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 24 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 25 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 26 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 27 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 28 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 29 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 30 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 31 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 32 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Palo 33 | 391.99 | 1584.50 | 1976.49 | 28.27 | 69.90 |
| Peso totale ferri | 12935.60 | 52288.60 | 65224.20 | 933.05 | 69.90 |

Relazione di calcolo

Computo armature, cls e acciaio nelle solette/platee

| Elem. | §12 <daN> | §14 <daN> | §16 <daN> | Peso <daN> | Vol. <mc> | ρ <daN/mc> |
|-------------------------------|--------------|--------------|--------------|---------------|--------------|---------------|
| Armatura soletta a quota 0.00 | 807.65 | 1315.55 | 16705.90 | 18829.10 | 917.77 | 20.52 |

Criteria di analisi geotecnica e progetto delle fondazioni

Fondazioni profonde

| Generali | | |
|--|--|--|
| Generali | | |
| Calcolo capacità portante per carichi verticali | | Secondo formule statiche |
| Considera capacità portante | | Entrambe |
| Condizioni di calcolo per terreni coesivi | | Sia drenate che non drenate |
| Calcolo della profondità critica | | No |
| Effettua calcolo elasto-plastico per cedimenti | | Si |
| Effettua calcolo elasto-plastico per spostamenti orizzontali | | Si |
| Rapporto di elasticità trazione/compressione pari a | | 1.00 |
| Fattori di correlazione | | 1.70 |
| Considera fattori di correlazione anche per carichi orizzontali | | No |
| Considera peso del palo | | No |
| Divisore del raggio del palo per lunghezza conci | | 1.00 |
| Max numero conci palo | | 50.00 |
| Attrito laterale limite da prove in sito | | |
| Correlato con prove CPT | | No |
| Correlato con prove SPT | | No |
| Fattore di riduzione attrito laterale per pali trivellati | | No |
| Pressione limite alla base da prove in sito | | |
| Correlata con prove CPT | | No |
| Correlata con prove SPT | | No |
| Fattore di riduzione pressione limite alla base per pali trivellati | | No |
| Spostamenti orizzontali | | |
| Spostamenti orizzontali | | Risposta elastica in funzione della stratigrafia |
| Specifici | | 1 |
| Attrito laterale limite | | |
| Calcolo dell'attrito laterale limite | | Si |
| -Condizioni non drenate | | |
| -Calcolo di α | | |
| -Pari a | | |
| -A.G.I. (1984) | | x |
| -A.P.I. (1984) | | |
| -Viggiani (1999) | | |
| -Olson e Dennis (1982) | | |
| -Stas e Kulhavy (1984) | | |
| -Skempton (1986) | | |
| -Reese e O'Neill (1989) | | |
| -Metodo di Bustamante e Doix (1985) per micropali | | No |
| -Iniezioni ripetute | | x |
| -Unica iniezione | | |
| -Condizioni drenate | | |
| -Calcolo di β | | |
| -Pari a | | 0.25 |
| -Reese e O'Neill (1989) | | |
| -Calcolato | | |
| -Calcolo di k | | |
| -Pari a | | |
| -Dal rapporto con k ₀ pari a | | 0.00 |
| -Fleming (1985) | | |
| -Calcolo di δ | | |
| -Pari a <grad> | | |
| -Dal rapporto con φ' pari a | | 0.00 |
| -Calcolo di a' dal rapporto con c' | | 1.00 |
| Calcolo dell'attrito laterale limite per trazione | | |
| -Considera i risultati del calcolo per l'attrito laterale limite per compressione con un fattore di riduzione pari a | | 0.66 |
| -Sowa (1970) | | No |
| -Bowles (1991) | | No |
| Considera l'effetto dell'attrito negativo | | No |
| -Coefficiente di Lambe | | |

Relazione di calcolo

| | |
|---|------|
| Pressione limite alla base | |
| C. Terzaghi (1949) - permeabile (m) e (H) in base (per c) | 3i |
| -Terzaghi (1949) | x |
| -Meyerhof (1963) | |
| -Lambe (1970) | |
| -Vesic (1969) | |
| -Renzetti (1971) | |
| -Renzetti (1975) | |
| -Stagg e Rankiewicz (1969) | |
| -Relazione generale, coefficienti di capacità portante | |
| -Coeff. di influenza | |
| N_c | |
| N_q | |
| -Coeff. di influenza desante | |
| N_c | |
| -Fattore di riduzione per forme di capote (avanz. capote) | No |
| Cedimenti | |
| Risposta elastica (Lambe) | |
| -Calcolo della rigidità del terreno | |
| -Coefficiente di influenza | 4,00 |
| -Fattore κ_{dab}/σ_{d0} | |
| Risposta elastica alla base | |
| -Calcolo della rigidità del terreno | x |
| -Fattore κ_{dab}/σ_{d0} | |
| Spostamenti orizzontali | |
| Risposta elastica | |
| -Vesic (1969) | |
| -Dromi (1964) | |
| -Gilles (1978) | |
| -Gren (1978) | |
| -Fattore κ_{dab}/σ_{d0} | |
| -Fattore di riduzione | |
| -Coefficiente effetto tridimensionale | 0,30 |
| Resistenza limite | |
| -Calcolo della resistenza (elastica) | x |
| -Coefficiente effetto tridimensionale e resistenza per attività | 3,00 |
| -Coefficiente effetto tridimensionale e resistenza per attività | 4,00 |
| -Fattore κ_{dab}/σ_{d0} | |

Geotecnica

Elenco unità geotecniche

1 ARGILLE BRECCIATE DI COLORE NOCCIOLA:

Classe II - classe Sottivo

Pesi:

- Peso sp. nat. (satur.) terreno: $\gamma_{sat} = 1947,00 \text{ daN/m}^3$
- Peso sp. nat. (satur.) terreno: $\gamma_{sat} = 1947,00 \text{ daN/m}^3$

Parametri di resistenza:

- Angolo di attrito efficace: $\phi' = 14,18 \text{ grad}$
- Coesione efficace: $c' = 218,00 \text{ daN/m}^2$
- Coesione non drenata: $c_u = 610,00 \text{ daN/m}^2$

Caratteristiche di deformazione:

- Peso di sversamento: $\sigma_{d0} = 1,00$
- Coeff. di spinta a riposo: $\sigma_0 = 0,36$

Parametri elastici:

- Modulo elastico (satur.) $E = 31700,00 \text{ daN/m}^2$
- Modulo elastico (satur.) $E = 31700,00 \text{ daN/m}^2$
- Esponente del parametro tensionale: $k_f = 0,00$
- Coeff. di Poisson: $\nu = 0,35$
- Modulo volumetrico: $\sigma_{d0} = 50000,00 \text{ daN/m}^2$
- Modulo elastico non drenato: $k_f = 34620,00 \text{ daN/m}^2$

2 ARGILLE BRECCIATE GRIGIO-AZZURRE:

Classe II - classe Sottivo

Pesi:

- Peso sp. nat. (satur.) terreno: $\gamma_{sat} = 1947,00 \text{ daN/m}^3$
- Peso sp. nat. (satur.) terreno: $\gamma_{sat} = 1947,00 \text{ daN/m}^3$

Parametri di resistenza:

- Angolo di attrito efficace: $\phi' = 10,03 \text{ grad}$
- Coesione efficace: $c' = 470,00 \text{ daN/m}^2$
- Coesione non drenata: $c_u = 1000,00 \text{ daN/m}^2$

Caratteristiche di deformazione:

Relazione di calcolo

- Grado di sovraconsolidazione: OCR = 1.00
- Coeff. di spinta a riposo: $\kappa_0 = 0.66$

Parametri elastici:

- Modulo elastico normale: E = 533200.00 daN/mq
- Modulo elastico tangenziale: G = 359900.00 daN/mq
- Esponente del parametro tensionale: $k_j = 0.00$
- Coeff. di Poisson: $\nu = 0.35$
- Modulo edometrico: $E_{ed} = 855800.00$ daN/mq
- Modulo elastico non drenato: $E_u = 592400.00$ daN/mq

Elenco colonne stratigrafiche

Colonna stratigrafica numero 1

Posizione: X=0.00 <m> Y=0.00 <m> Z=1.00 <m>
Falda non presente

Simbologia

- ϕ' = Angolo di attrito efficace
- γ = Peso specifico del terreno naturale
- γ_{sat} = Peso specifico del terreno saturo
- κ_0 = Coeff. di spinta a riposo
- Class. = Classificazione
- Coes. = Coesivo
- Crit. = Criterio di progetto
- D_r = Densità relativa
- I_p = Indice di plasticità
- OCR = Grado di sovraconsolidazione
- St. = Strato
- Unità geotecnica = Unità geotecnica
- c_u = Coesione non drenata
- c' = Coesione efficace
- z = Profondità della superficie superiore dello strato

| St. | z <m> | Unità geotecnica | Class. | γ <daN/mc> | γ_{sat} <daN/mc> | D_r | I_p | ϕ' <grad> | c' <daN/mq> | c_u <daN/mq> | OCR | κ_0 | Crit. |
|-----|----------|--|--------|----------------------|----------------------------|-------|-------|-------------------|------------------|-------------------|------|------------|-------|
| 1 | 0.00 | 1 ARGILLE BRECCIATE DI COLORE NOCCIOLA | Coes. | 1947.00 | 2030.00 | | | 19.18 | 3190.00 | 6110.00 | 1.00 | 0.66 | 1 |
| 2 | 4.50 | 2 ARGILLE BRECCIATE GRIGIO-AZZURRE | Coes. | 1997.00 | 2130.00 | | | 22.23 | 4710.00 | 13090.00 | 1.00 | 0.66 | 1 |

Simbologia

- ν = Coeff. di Poisson
- Crit. = Criterio di progetto
- E = Modulo elastico normale
- E_{ed} = Modulo edometrico
- E_u = Modulo elastico non drenato
- G = Modulo elastico tangenziale
- St. = Strato
- k_j = Esponente del parametro tensionale
- z = Profondità della superficie superiore dello strato

| St. | z <m> | E <daN/mq> | G <daN/mq> | k_j | ν | E_{ed} <daN/mq> | E_u <daN/mq> | Crit. |
|-----|----------|---------------|---------------|-------|-------|----------------------|-------------------|-------|
| 1 | 0.00 | 311500.00 | 210300.00 | 0.00 | 0.35 | 500000.00 | 346200.00 | 1 |
| 2 | 4.50 | 533200.00 | 359900.00 | 0.00 | 0.35 | 855800.00 | 592400.00 | 1 |

Relazione di calcolo

Strati Commenti Pressioni litostatiche

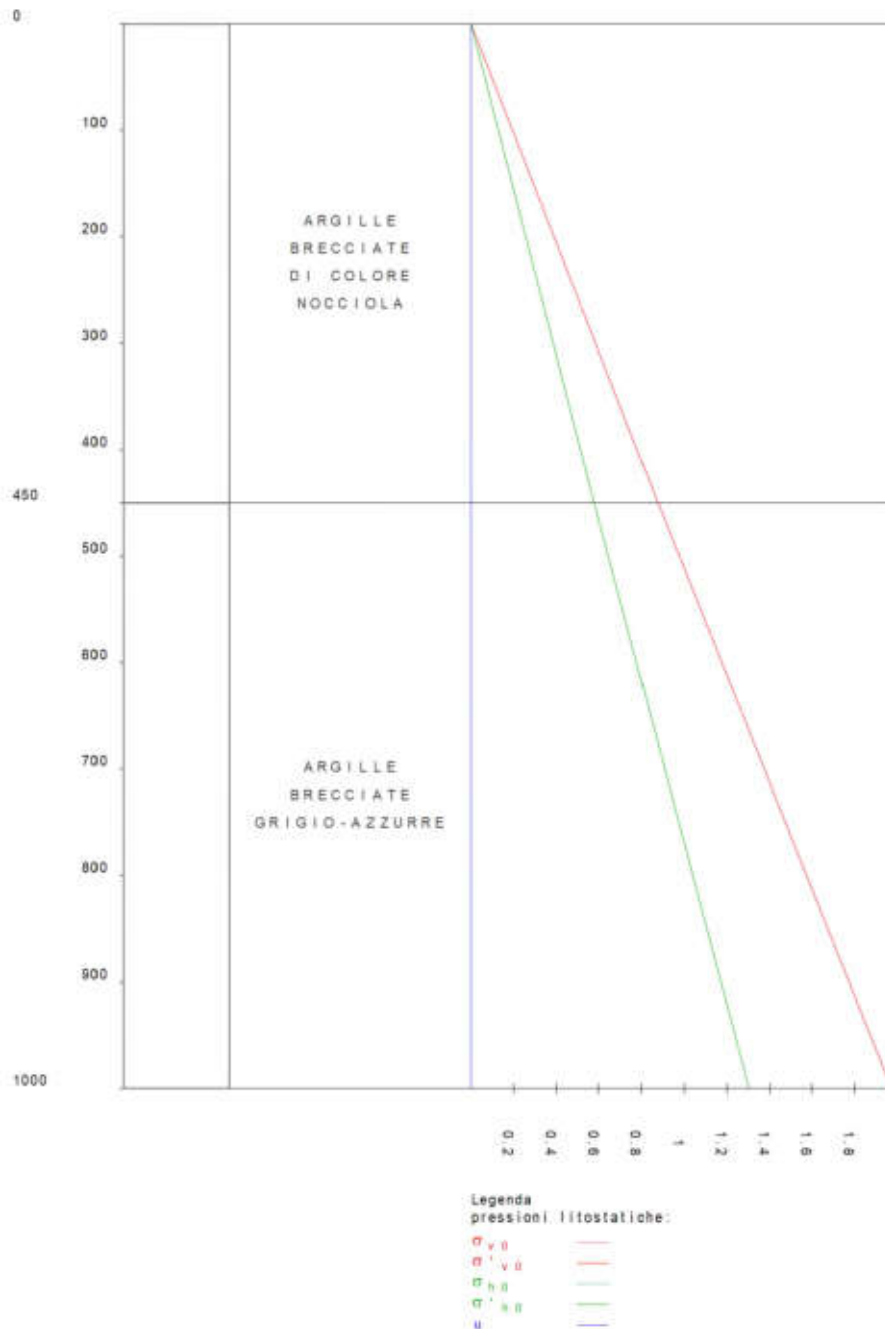


Figura numero 1: Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA

Le verifiche degli elementi di fondazione sono state effettuate utilizzando l'approccio 2.

Coefficienti parziali per le azioni, per verifiche in condizioni statiche:

- Permanenti strutturali, sicurezza a favore $\gamma_A = 1.00$;
- Permanenti strutturali, sicurezza a sfavore $\gamma_A = 1.30$;
- Permanenti non strutturali, sicurezza a favore $\gamma_A = 0.00$;
- Permanenti non strutturali, sicurezza a sfavore $\gamma_A = 1.50$;
- Variabili, sicurezza a favore $\gamma_A = 0.00$;
- Variabili, sicurezza a sfavore $\gamma_A = 1.50$.

I coefficienti parziali per le azioni sono posti pari all'unità per le verifiche in condizioni sismiche.

Tali coefficienti sono comunque desumibili dalla tabella delle combinazioni delle CCE (Parametri di calcolo).

Coefficienti parziali per i parametri geotecnici:

- Tangente dell'angolo di attrito $\gamma_M = 1.00$;
- Coesione efficace $\gamma_M = 1.00$;
- Coesione non drenata $\gamma_M = 1.00$;

Coefficienti parziali per la resistenza delle fondazioni superficiali:

- Capacità portante $\gamma_R = 2.30$;
- Scorrimento $\gamma_R = 1.10$;
- Coefficienti parziali per la resistenza delle fondazioni profonde:

Relazione di calcolo

Per pali infissi:

Resistenza alla base $\gamma_{R,b} = 1.15$;

Resistenza laterale in compressione $\gamma_{R,s} = 1.15$;

Resistenza laterale in trazione $\gamma_{R,t} = 1.25$;

Per pali trivellati:

Resistenza alla base $\gamma_{R,b} = 1.35$;

Resistenza laterale in compressione $\gamma_{R,s} = 1.15$;

Resistenza laterale in trazione $\gamma_{R,t} = 1.25$;

Per pali ad elica continua:

Resistenza alla base $\gamma_{R,b} = 1.30$;

Resistenza laterale in compressione $\gamma_{R,s} = 1.15$;

Resistenza laterale in trazione $\gamma_{R,t} = 1.25$;

Fattore di correlazione per la determinazione della resistenza caratteristica desumibile dai criteri di progetto.

Fondazioni profonde

Simbologia

σ_h = Pressione limite per carichi orizzontali

τ_s = Attrito laterale limite per compressione

CC = Numero della combinazione delle condizioni di carico elementari

Caso = Caso di verifica

Ced = Cedimento calcolato

D = Profondità della testa del palo

Dp = Diametro pali

Ip = Lunghezza pali

M = Momento flettente

N = Sforzo normale

QP_{lim} = Resistenza di progetto alla base del palo

QS_{lim} = Resistenza laterale di progetto per compressione

Sic.O = Sicurezza a rottura orizzontale

Sic.V = Sicurezza a rottura verticale

Sps = Spostamento

T = Taglio in testa

Wp = Peso del palo

Zp = Profondità del tratto di integrazione

k_h = Risposta elastica per carichi orizzontali

k_p = Risposta elastica alla base del palo

k_s = Risposta elastica laterale per compressione

q_p = Pressione limite alla base del palo

Verifiche capacità portante e cedimenti

Palo n. 1

Tipo palo=Trivellato

Rotazione testa libera

Coefficiente di efficienza=1.00

Ep=1.200000 <m> Ip=25.000000 <m> Wp=70685.80 <daN> D=1.00 <m>

Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA

Verifiche in condizioni drenate

| Zp <m> | τ_s <daN/cmq> | k _s <daN/cm> | σ_h <daN/cmq> | k _h <daN/cm> |
|-----------|-----------------------|----------------------------|-------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

QS_{lim}=1054060.00 <daN>

q_p=61.31 <daN/cmq>

QP_{lim}=693364.00 <daN>

k_p=1.17 <daN/cm>

Verifiche in condizioni non drenate

| Zp <m> | τ_s <daN/cmq> | k _s <daN/cm> | σ_h <daN/cmq> | k _h <daN/cm> |
|-----------|-----------------------|----------------------------|-------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

QS_{lim}=472754.00 <daN>

q_p=13.92 <daN/cmq>

QP_{lim}=157422.00 <daN>

k_p=1.17 <daN/cm>

Verifiche in condizioni drenate

Relazione di calcolo

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -128741.00 | 0.91 | 6.53 | 7086.36 | 65401.70 | 0.74 | >1 |
| 3 | 2 | -95363.70 | 0.67 | -- | 5249.16 | 48445.70 | 0.55 | -- |
| 5 | 3 | -95363.70 | 0.67 | -- | 5249.16 | 48445.70 | 0.55 | -- |
| 7 | 4 | -95363.70 | 0.67 | -- | 5249.16 | 48445.70 | 0.55 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -128741.00 | 0.91 | 2.41 | 7086.36 | 65401.70 | 0.74 | >1 |
| 4 | 2 | -95363.70 | 0.67 | -- | 5249.16 | 48445.70 | 0.55 | -- |
| 6 | 3 | -95363.70 | 0.67 | -- | 5249.16 | 48445.70 | 0.55 | -- |
| 8 | 4 | -95363.70 | 0.67 | -- | 5249.16 | 48445.70 | 0.55 | -- |

Palo n. 2

Tipo palo=Trivellato
 Rotazione testa libera
 Coefficiente di efficienza=1.00
 Dp=1.200000 <m> Lp=25.000000 <m> Wp=70685.80 <daN> D=1.00 <m>
 Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA
 Verifiche in condizioni drenate

| Zp <m> | τ_{B} <daN/cmq> | k_{B} <daN/cm> | σ_{H} <daN/cmq> | k_{H} <daN/cm> |
|-----------|--------------------------------|----------------------------|----------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

QS_{lim}=1054060.00 <daN>
 q_p=61.31 <daN/cmq>
 QP_{lim}=693364.00 <daN>
 k_p=1.17 <daN/cm>

Verifiche in condizioni non drenate

| Zp <m> | τ_{B} <daN/cmq> | k_{B} <daN/cm> | σ_{H} <daN/cmq> | k_{H} <daN/cm> |
|-----------|--------------------------------|----------------------------|----------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

QS_{lim}=472754.00 <daN>
 q_p=13.92 <daN/cmq>
 QP_{lim}=157422.00 <daN>
 k_p=1.17 <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -204703.00 | 1.45 | 4.11 | 6687.11 | 60353.10 | 0.69 | >1 |
| 3 | 2 | -151632.00 | 1.07 | -- | 4953.41 | 44706.00 | 0.51 | -- |
| 5 | 3 | -151632.00 | 1.07 | -- | 4953.41 | 44706.00 | 0.51 | -- |
| 7 | 4 | -151632.00 | 1.07 | -- | 4953.41 | 44706.00 | 0.51 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -204703.00 | 1.45 | 1.52 | 6687.11 | 60353.10 | 0.69 | >1 |
| 4 | 2 | -151632.00 | 1.07 | -- | 4953.41 | 44706.00 | 0.51 | -- |
| 6 | 3 | -151632.00 | 1.07 | -- | 4953.41 | 44706.00 | 0.51 | -- |
| 8 | 4 | -151632.00 | 1.07 | -- | 4953.41 | 44706.00 | 0.51 | -- |

Palo n. 3

Tipo palo=Trivellato
 Rotazione testa libera
 Coefficiente di efficienza=1.00
 Dp=1.200000 <m> Lp=25.000000 <m> Wp=70685.80 <daN> D=1.00 <m>
 Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA
 Verifiche in condizioni drenate

| Zp <m> | τ_{B} <daN/cmq> | k_{B} <daN/cm> | σ_{H} <daN/cmq> | k_{H} <daN/cm> |
|-----------|--------------------------------|----------------------------|----------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |

Relazione di calcolo

| | | | | |
|-------|------|------|-------|------|
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |
|-------|------|------|-------|------|

$QS_{lim}=1054060.00$ <daN>
 $q_p=61.31$ <daN/cmq>
 $QF_{lim}=693364.00$ <daN>
 $k_p=1.17$ <daN/cm>

Verifiche in condizioni non drenate

| z_p <m> | τ_{α} <daN/cmq> | k_{α} <daN/cm> | σ_{α} <daN/cmq> | k_{β} <daN/cm> |
|--------------|------------------------------|--------------------------|--------------------------------|-------------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

$QS_{lim}=472754.00$ <daN>
 $q_p=13.92$ <daN/cmq>
 $QF_{lim}=157422.00$ <daN>
 $k_p=1.17$ <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -274379.00 | 1.94 | 3.07 | 6293.40 | 44922.90 | 0.57 | >1 |
| 3 | 2 | -203244.00 | 1.44 | -- | 4661.78 | 33276.20 | 0.42 | -- |
| 5 | 3 | -203244.00 | 1.44 | -- | 4661.78 | 33276.20 | 0.42 | -- |
| 7 | 4 | -203244.00 | 1.44 | -- | 4661.78 | 33276.20 | 0.42 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -274379.00 | 1.94 | 1.13 | 6293.40 | 44922.90 | 0.57 | >1 |
| 4 | 2 | -203244.00 | 1.44 | -- | 4661.78 | 33276.20 | 0.42 | -- |
| 6 | 3 | -203244.00 | 1.44 | -- | 4661.78 | 33276.20 | 0.42 | -- |
| 8 | 4 | -203244.00 | 1.44 | -- | 4661.78 | 33276.20 | 0.42 | -- |

Palo n. 4

Tipo palo=Trivellato
 Rotazione testa libera
 Coefficiente di efficienza=1.00
 $D_p=1.200000$ <m> $I_p=25.000000$ <m> $W_p=70685.80$ <daN> $D=1.00$ <m>
 Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA
 Verifiche in condizioni drenate

| z_p <m> | τ_{α} <daN/cmq> | k_{α} <daN/cm> | σ_{α} <daN/cmq> | k_{β} <daN/cm> |
|--------------|------------------------------|--------------------------|--------------------------------|-------------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

$QS_{lim}=1054060.00$ <daN>
 $q_p=61.31$ <daN/cmq>
 $QF_{lim}=693364.00$ <daN>
 $k_p=1.17$ <daN/cm>

Verifiche in condizioni non drenate

| z_p <m> | τ_{α} <daN/cmq> | k_{α} <daN/cm> | σ_{α} <daN/cmq> | k_{β} <daN/cm> |
|--------------|------------------------------|--------------------------|--------------------------------|-------------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

$QS_{lim}=472754.00$ <daN>
 $q_p=13.92$ <daN/cmq>
 $QF_{lim}=157422.00$ <daN>
 $k_p=1.17$ <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -315710.00 | 2.23 | 2.66 | 6046.37 | 23929.60 | 0.42 | >1 |
| 3 | 2 | -233859.00 | 1.65 | -- | 4478.79 | 17725.60 | 0.31 | -- |
| 5 | 3 | -233859.00 | 1.65 | -- | 4478.79 | 17725.60 | 0.31 | -- |
| 7 | 4 | -233859.00 | 1.65 | -- | 4478.79 | 17725.60 | 0.31 | -- |

Relazione di calcolo

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -315710.00 | 2.23 | <1 | 6046.37 | 23929.60 | 0.42 | >1 |
| 4 | 2 | -233859.00 | 1.65 | -- | 4478.79 | 17725.60 | 0.31 | -- |
| 6 | 3 | -233859.00 | 1.65 | -- | 4478.79 | 17725.60 | 0.31 | -- |
| 8 | 4 | -233859.00 | 1.65 | -- | 4478.79 | 17725.60 | 0.31 | -- |

Palo n. 5

Tipo palo=Trivellato

Rotazione testa libera

Coefficiente di efficienza=1.00

Dp=1.200000 <m> Ip=25.000000 <m> Wp=70685.80 <daN> D=1.00 <m>

Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA

Verifiche in condizioni drenate

| Zp <m> | τ_{cs} <daN/cm ² > | k_{cs} <daN/cm ² > | σ_{cs} <daN/cm ² > | k_{cs} <daN/cm ² > |
|-----------|---------------------------------------|------------------------------------|---|------------------------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

QS_{lim}=1054060.00 <daN>

q_p=61.31 <daN/cm²>

QP_{lim}=693364.00 <daN>

k_p=1.17 <daN/cm²>

Verifiche in condizioni non drenate

| Zp <m> | τ_{cs} <daN/cm ² > | k_{cs} <daN/cm ² > | σ_{cs} <daN/cm ² > | k_{cs} <daN/cm ² > |
|-----------|---------------------------------------|------------------------------------|---|------------------------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

QS_{lim}=472754.00 <daN>

q_p=13.92 <daN/cm²>

QP_{lim}=157422.00 <daN>

k_p=1.17 <daN/cm²>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -315619.00 | 2.23 | 2.67 | 6042.40 | 23993.40 | 0.42 | >1 |
| 3 | 2 | -233792.00 | 1.65 | -- | 4475.85 | 17772.90 | 0.31 | -- |
| 5 | 3 | -233792.00 | 1.65 | -- | 4475.85 | 17772.90 | 0.31 | -- |
| 7 | 4 | -233792.00 | 1.65 | -- | 4475.85 | 17772.90 | 0.31 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -315619.00 | 2.23 | <1 | 6042.40 | 23993.40 | 0.42 | >1 |
| 4 | 2 | -233792.00 | 1.65 | -- | 4475.85 | 17772.90 | 0.31 | -- |
| 6 | 3 | -233792.00 | 1.65 | -- | 4475.85 | 17772.90 | 0.31 | -- |
| 8 | 4 | -233792.00 | 1.65 | -- | 4475.85 | 17772.90 | 0.31 | -- |

Palo n. 6

Tipo palo=Trivellato

Rotazione testa libera

Coefficiente di efficienza=1.00

Dp=1.200000 <m> Ip=25.000000 <m> Wp=70685.80 <daN> D=1.00 <m>

Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA

Verifiche in condizioni drenate

| Zp <m> | τ_{cs} <daN/cm ² > | k_{cs} <daN/cm ² > | σ_{cs} <daN/cm ² > | k_{cs} <daN/cm ² > |
|-----------|---------------------------------------|------------------------------------|---|------------------------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

QS_{lim}=1054060.00 <daN>

q_p=61.31 <daN/cm²>

QP_{lim}=693364.00 <daN>

k_p=1.17 <daN/cm²>

Relazione di calcolo

Verifiche in condizioni non drenate

| Zp <m> | τ_{S} <daN/cmq> | k_{S} <daN/cm> | σ_{D} <daN/cm> | k_{D} <daN/cm> |
|-----------|--------------------------------|----------------------------|---------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

QS_{lim}=472754.00 <daN>

q_p=13.92 <daN/cm>

QP_{lim}=157422.00 <daN>

k_p=1.17 <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -274241.00 | 1.94 | 3.07 | 6295.05 | 44648.90 | 0.57 | >1 |
| 3 | 2 | -203142.00 | 1.44 | -- | 4663.00 | 33073.30 | 0.42 | -- |
| 5 | 3 | -203142.00 | 1.44 | -- | 4663.00 | 33073.30 | 0.42 | -- |
| 7 | 4 | -203142.00 | 1.44 | -- | 4663.00 | 33073.30 | 0.42 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -274241.00 | 1.94 | 1.13 | 6295.05 | 44648.90 | 0.57 | >1 |
| 4 | 2 | -203142.00 | 1.44 | -- | 4663.00 | 33073.30 | 0.42 | -- |
| 6 | 3 | -203142.00 | 1.44 | -- | 4663.00 | 33073.30 | 0.42 | -- |
| 8 | 4 | -203142.00 | 1.44 | -- | 4663.00 | 33073.30 | 0.42 | -- |

Palo n. 7

Tipo palo=Trivellato

Rotazione testa libera

Coefficiente di efficienza=1.00

Dp=1.200000 <m> Lp=25.000000 <m> Wp=70685.80 <daN> D=1.00 <m>

Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA

Verifiche in condizioni drenate

| Zp <m> | τ_{S} <daN/cm> | k_{S} <daN/cm> | σ_{D} <daN/cm> | k_{D} <daN/cm> |
|-----------|-------------------------------|----------------------------|---------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

QS_{lim}=1054060.00 <daN>

q_p=61.31 <daN/cm>

QP_{lim}=693364.00 <daN>

k_p=1.17 <daN/cm>

Verifiche in condizioni non drenate

| Zp <m> | τ_{S} <daN/cm> | k_{S} <daN/cm> | σ_{D} <daN/cm> | k_{D} <daN/cm> |
|-----------|-------------------------------|----------------------------|---------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

QS_{lim}=472754.00 <daN>

q_p=13.92 <daN/cm>

QP_{lim}=157422.00 <daN>

k_p=1.17 <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -204511.00 | 1.45 | 4.11 | 6688.75 | 60395.30 | 0.69 | >1 |
| 3 | 2 | -151490.00 | 1.07 | -- | 4954.63 | 44737.20 | 0.51 | -- |
| 5 | 3 | -151490.00 | 1.07 | -- | 4954.63 | 44737.20 | 0.51 | -- |
| 7 | 4 | -151490.00 | 1.07 | -- | 4954.63 | 44737.20 | 0.51 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -204511.00 | 1.45 | 1.52 | 6688.75 | 60395.30 | 0.69 | >1 |
| 4 | 2 | -151490.00 | 1.07 | -- | 4954.63 | 44737.20 | 0.51 | -- |
| 6 | 3 | -151490.00 | 1.07 | -- | 4954.63 | 44737.20 | 0.51 | -- |

Relazione di calcolo

| | | | | | | | | |
|---|---|------------|------|----|---------|----------|------|----|
| 8 | 4 | -151490.00 | 1.07 | -- | 4954.63 | 44737.20 | 0.51 | -- |
|---|---|------------|------|----|---------|----------|------|----|

Palo n. 8

Tipo palo=Trivellato
 Rotazione testa libera
 Coefficiente di efficienza=1.00
 Dp=1.200000 <m> Ip=25.000000 <m> Wp=70685.80 <daN> D=1.00 <m>
 Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA
 Verifiche in condizioni drenate

| Zp <m> | τ_{B} <daN/cmq> | k_{B} <daN/cm> | σ_{D} <daN/cmq> | k_{D} <daN/cm> |
|-----------|--------------------------------|----------------------------|----------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

QS_{lim}=1054060.00 <daN>
 q_p=61.31 <daN/cmq>
 QF_{lim}=693364.00 <daN>
 k_p=1.17 <daN/cm>

Verifiche in condizioni non drenate

| Zp <m> | τ_{B} <daN/cmq> | k_{B} <daN/cm> | σ_{D} <daN/cmq> | k_{D} <daN/cm> |
|-----------|--------------------------------|----------------------------|----------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

QS_{lim}=472754.00 <daN>
 q_p=13.92 <daN/cmq>
 QF_{lim}=157422.00 <daN>
 k_p=1.17 <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -128535.00 | 0.91 | 6.55 | 7082.39 | 65411.00 | 0.74 | >1 |
| 3 | 2 | -95211.30 | 0.67 | -- | 5246.21 | 48452.60 | 0.55 | -- |
| 5 | 3 | -95211.30 | 0.67 | -- | 5246.21 | 48452.60 | 0.55 | -- |
| 7 | 4 | -95211.30 | 0.67 | -- | 5246.21 | 48452.60 | 0.55 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -128535.00 | 0.91 | 2.41 | 7082.39 | 65411.00 | 0.74 | >1 |
| 4 | 2 | -95211.30 | 0.67 | -- | 5246.21 | 48452.60 | 0.55 | -- |
| 6 | 3 | -95211.30 | 0.67 | -- | 5246.21 | 48452.60 | 0.55 | -- |
| 8 | 4 | -95211.30 | 0.67 | -- | 5246.21 | 48452.60 | 0.55 | -- |

Palo n. 9

Tipo palo=Trivellato
 Rotazione testa libera
 Coefficiente di efficienza=1.00
 Dp=1.200000 <m> Ip=25.000000 <m> Wp=70685.80 <daN> D=1.00 <m>
 Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA
 Verifiche in condizioni drenate

| Zp <m> | τ_{B} <daN/cmq> | k_{B} <daN/cm> | σ_{D} <daN/cmq> | k_{D} <daN/cm> |
|-----------|--------------------------------|----------------------------|----------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

QS_{lim}=1054060.00 <daN>
 q_p=61.31 <daN/cmq>
 QF_{lim}=693364.00 <daN>
 k_p=1.17 <daN/cm>

Verifiche in condizioni non drenate

| Zp <m> | τ_{B} <daN/cmq> | k_{B} <daN/cm> | σ_{D} <daN/cmq> | k_{D} <daN/cm> |
|-----------|--------------------------------|----------------------------|----------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |

Relazione di calcolo

| | | | | |
|-------|------|------|-------|------|
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |
|-------|------|------|-------|------|

$QS_{lim}=472754.00$ <daN>
 $q_p=13.92$ <daN/cmq>
 $QP_{lim}=157422.00$ <daN>
 $k_p=1.17$ <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic. V | T <daN> | M <daNm> | Sps <cm> | Sic. O |
|------|----|------------|-------------|--------|------------|-------------|-------------|--------|
| 1 | 1 | -70710.80 | 0.50 | 11.90 | 7364.87 | 62472.80 | 0.73 | >1 |
| 3 | 2 | -52378.40 | 0.37 | -- | 5455.46 | 46276.10 | 0.54 | -- |
| 5 | 3 | -52378.40 | 0.37 | -- | 5455.46 | 46276.10 | 0.54 | -- |
| 7 | 4 | -52378.40 | 0.37 | -- | 5455.46 | 46276.10 | 0.54 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic. V | T <daN> | M <daNm> | Sps <cm> | Sic. O |
|------|----|------------|-------------|--------|------------|-------------|-------------|--------|
| 2 | 1 | -70710.80 | 0.50 | 4.39 | 7364.87 | 62472.80 | 0.73 | >1 |
| 4 | 2 | -52378.40 | 0.37 | -- | 5455.46 | 46276.10 | 0.54 | -- |
| 6 | 3 | -52378.40 | 0.37 | -- | 5455.46 | 46276.10 | 0.54 | -- |
| 8 | 4 | -52378.40 | 0.37 | -- | 5455.46 | 46276.10 | 0.54 | -- |

Palo n. 10

Tipo palo=Trivellato
 Rotazione testa libera
 Coefficiente di efficienza=1.00
 $D_p=1.200000$ <m> $I_p=25.000000$ <m> $W_p=70685.80$ <daN> $D=1.00$ <cm>
 Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA
 Verifiche in condizioni drenate

| z_p <m> | τ_{cs} <daN/cm> | k_{cs} <daN/cm> | σ_{cs} <daN/cm> | k_{cs} <daN/cm> |
|--------------|-------------------------|----------------------|---------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

$QS_{lim}=1054060.00$ <daN>
 $q_p=61.31$ <daN/cm>
 $QP_{lim}=693364.00$ <daN>
 $k_p=1.17$ <daN/cm>

Verifiche in condizioni non drenate

| z_p <m> | τ_{cs} <daN/cm> | k_{cs} <daN/cm> | σ_{cs} <daN/cm> | k_{cs} <daN/cm> |
|--------------|-------------------------|----------------------|---------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

$QS_{lim}=472754.00$ <daN>
 $q_p=13.92$ <daN/cm>
 $QP_{lim}=157422.00$ <daN>
 $k_p=1.17$ <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic. V | T <daN> | M <daNm> | Sps <cm> | Sic. O |
|------|----|------------|-------------|--------|------------|-------------|-------------|--------|
| 1 | 1 | -49182.60 | 0.35 | 17.11 | 7463.04 | 59871.30 | 0.72 | >1 |
| 3 | 2 | -36431.60 | 0.26 | -- | 5528.18 | 44349.10 | 0.53 | -- |
| 5 | 3 | -36431.60 | 0.26 | -- | 5528.18 | 44349.10 | 0.53 | -- |
| 7 | 4 | -36431.60 | 0.26 | -- | 5528.18 | 44349.10 | 0.53 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic. V | T <daN> | M <daNm> | Sps <cm> | Sic. O |
|------|----|------------|-------------|--------|------------|-------------|-------------|--------|
| 2 | 1 | -49182.60 | 0.35 | 6.31 | 7463.04 | 59871.30 | 0.72 | >1 |
| 4 | 2 | -36431.60 | 0.26 | -- | 5528.18 | 44349.10 | 0.53 | -- |
| 6 | 3 | -36431.60 | 0.26 | -- | 5528.18 | 44349.10 | 0.53 | -- |
| 8 | 4 | -36431.60 | 0.26 | -- | 5528.18 | 44349.10 | 0.53 | -- |

Palo n. 11

Tipo palo=Trivellato
 Rotazione testa libera
 Coefficiente di efficienza=1.00

Relazione di calcolo

Dp=1.200000 <m> Ip=25.000000 <m> Wp=70685.80 <daN> D=1.00 <m>

Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA

Verifiche in condizioni drenate

| Zp <m> | τ_{B} <daN/cmq> | k_{B} <daN/cm> | σ_{H} <daN/cmq> | k_{H} <daN/cm> |
|-----------|--------------------------------|----------------------------|----------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

QS_{lim}=1054060.00 <daN>

q_p=61.31 <daN/cmq>

QP_{lim}=693364.00 <daN>

k_p=1.17 <daN/cm>

Verifiche in condizioni non drenate

| Zp <m> | τ_{B} <daN/cmq> | k_{B} <daN/cm> | σ_{H} <daN/cmq> | k_{H} <daN/cm> |
|-----------|--------------------------------|----------------------------|----------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

QS_{lim}=472754.00 <daN>

q_p=13.92 <daN/cmq>

QP_{lim}=157422.00 <daN>

k_p=1.17 <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic. V | T <daN> | M <daNm> | Sps <cm> | Sic. O |
|------|----|------------|-------------|--------|------------|-------------|-------------|--------|
| 1 | 1 | -70857.90 | 0.50 | 11.87 | 7366.75 | 62507.80 | 0.73 | >1 |
| 3 | 2 | -52487.40 | 0.37 | -- | 5456.85 | 46302.10 | 0.54 | -- |
| 5 | 3 | -52487.40 | 0.37 | -- | 5456.85 | 46302.10 | 0.54 | -- |
| 7 | 4 | -52487.40 | 0.37 | -- | 5456.85 | 46302.10 | 0.54 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic. V | T <daN> | M <daNm> | Sps <cm> | Sic. O |
|------|----|------------|-------------|--------|------------|-------------|-------------|--------|
| 2 | 1 | -70857.90 | 0.50 | 4.38 | 7366.75 | 62507.80 | 0.73 | >1 |
| 4 | 2 | -52487.40 | 0.37 | -- | 5456.85 | 46302.10 | 0.54 | -- |
| 6 | 3 | -52487.40 | 0.37 | -- | 5456.85 | 46302.10 | 0.54 | -- |
| 8 | 4 | -52487.40 | 0.37 | -- | 5456.85 | 46302.10 | 0.54 | -- |

Palo n. 12

Tipo palo=Trivellato

Rotazione testa libera

Coefficiente di efficienza=1.00

Dp=1.200000 <m> Ip=25.000000 <m> Wp=70685.80 <daN> D=1.00 <m>

Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA

Verifiche in condizioni drenate

| Zp <m> | τ_{B} <daN/cmq> | k_{B} <daN/cm> | σ_{H} <daN/cmq> | k_{H} <daN/cm> |
|-----------|--------------------------------|----------------------------|----------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

QS_{lim}=1054060.00 <daN>

q_p=61.31 <daN/cmq>

QP_{lim}=693364.00 <daN>

k_p=1.17 <daN/cm>

Verifiche in condizioni non drenate

| Zp <m> | τ_{B} <daN/cmq> | k_{B} <daN/cm> | σ_{H} <daN/cmq> | k_{H} <daN/cm> |
|-----------|--------------------------------|----------------------------|----------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

QS_{lim}=472754.00 <daN>

q_p=13.92 <daN/cmq>

QP_{lim}=157422.00 <daN>

k_p=1.17 <daN/cm>

Relazione di calcolo

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.v | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -9426.53 | 0.07 | 89.25 | 7685.04 | 55211.00 | 0.70 | >1 |
| 3 | 2 | -6982.62 | 0.05 | -- | 5692.63 | 40897.00 | 0.52 | -- |
| 5 | 3 | -6982.62 | 0.05 | -- | 5692.63 | 40897.00 | 0.52 | -- |
| 7 | 4 | -6982.62 | 0.05 | -- | 5692.63 | 40897.00 | 0.52 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.v | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -9426.53 | 0.07 | 32.93 | 7685.04 | 55211.00 | 0.70 | >1 |
| 4 | 2 | -6982.62 | 0.05 | -- | 5692.63 | 40897.00 | 0.52 | -- |
| 6 | 3 | -6982.62 | 0.05 | -- | 5692.63 | 40897.00 | 0.52 | -- |
| 8 | 4 | -6982.62 | 0.05 | -- | 5692.63 | 40897.00 | 0.52 | -- |

Palo n. 13

Tipo palo=Trivellato

Rotazione testa libera

Coefficiente di efficienza=1.00

Dp=1.200000 <m> Ip=25.000000 <m> Wp=70685.80 <daN> D=1.00 <m>

Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA

Verifiche in condizioni drenate

| z _p <m> | τ _g <daN/cmq> | k _g <daN/cm> | σ _n <daN/cmq> | k _n <daN/cm> |
|-----------------------|-----------------------------|----------------------------|-----------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

QS_{lim}=1054060.00 <daN>

q_p=61.31 <daN/cmq>

QF_{lim}=693364.00 <daN>

k_p=1.17 <daN/cm>

Verifiche in condizioni non drenate

| z _p <m> | τ _g <daN/cmq> | k _g <daN/cm> | σ _n <daN/cmq> | k _n <daN/cm> |
|-----------------------|-----------------------------|----------------------------|-----------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

QS_{lim}=472754.00 <daN>

q_p=13.92 <daN/cmq>

QF_{lim}=157422.00 <daN>

k_p=1.17 <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.v | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -9469.03 | 0.07 | 88.85 | 7683.96 | 55220.60 | 0.70 | >1 |
| 3 | 2 | -7014.10 | 0.05 | -- | 5691.82 | 40904.10 | 0.52 | -- |
| 5 | 3 | -7014.10 | 0.05 | -- | 5691.82 | 40904.10 | 0.52 | -- |
| 7 | 4 | -7014.10 | 0.05 | -- | 5691.82 | 40904.10 | 0.52 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.v | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -9469.03 | 0.07 | 32.78 | 7683.96 | 55220.60 | 0.70 | >1 |
| 4 | 2 | -7014.10 | 0.05 | -- | 5691.82 | 40904.10 | 0.52 | -- |
| 6 | 3 | -7014.10 | 0.05 | -- | 5691.82 | 40904.10 | 0.52 | -- |
| 8 | 4 | -7014.10 | 0.05 | -- | 5691.82 | 40904.10 | 0.52 | -- |

Palo n. 14

Tipo palo=Trivellato

Rotazione testa libera

Coefficiente di efficienza=1.00

Dp=1.200000 <m> Ip=25.000000 <m> Wp=70685.80 <daN> D=1.00 <m>

Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA

Verifiche in condizioni drenate

| z _p <m> | τ _g <daN/cmq> | k _g <daN/cm> | σ _n <daN/cmq> | k _n <daN/cm> |
|-----------------------|-----------------------------|----------------------------|-----------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |

Relazione di calcolo

| | | | | |
|-------|------|------|-------|------|
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

$QS_{lim}=1054060.00$ <daN>
 $q_p=61.31$ <daN/cmq>
 $QP_{lim}=693364.00$ <daN>
 $k_p=1.17$ <daN/cm>

Verifiche in condizioni non drenate

| z_p <m> | τ_{ss} <daN/cmq> | k_{ss} <daN/cm> | σ_{T1} <daN/cmq> | k_{T1} <daN/cm> |
|--------------|--------------------------|----------------------|----------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

$QS_{lim}=472754.00$ <daN>
 $q_p=13.92$ <daN/cmq>
 $QP_{lim}=157422.00$ <daN>
 $k_p=1.17$ <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic. V | T <daN> | M <daNm> | Sps <cm> | Sic. O |
|------|----|------------|-------------|--------|------------|-------------|-------------|--------|
| 1 | 1 | -22330.90 | 0.16 | 37.67 | 7621.21 | 56900.50 | 0.71 | >1 |
| 3 | 2 | -16541.40 | 0.12 | -- | 5645.34 | 42148.50 | 0.52 | -- |
| 5 | 3 | -16541.40 | 0.12 | -- | 5645.34 | 42148.50 | 0.52 | -- |
| 7 | 4 | -16541.40 | 0.12 | -- | 5645.34 | 42148.50 | 0.52 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic. V | T <daN> | M <daNm> | Sps <cm> | Sic. O |
|------|----|------------|-------------|--------|------------|-------------|-------------|--------|
| 2 | 1 | -22330.90 | 0.16 | 13.90 | 7621.21 | 56900.50 | 0.71 | >1 |
| 4 | 2 | -16541.40 | 0.12 | -- | 5645.34 | 42148.50 | 0.52 | -- |
| 6 | 3 | -16541.40 | 0.12 | -- | 5645.34 | 42148.50 | 0.52 | -- |
| 8 | 4 | -16541.40 | 0.12 | -- | 5645.34 | 42148.50 | 0.52 | -- |

Palo n. 15

Tipo palo=Trivellato
 Rotazione testa libera
 Coefficiente di efficienza=1.00
 $D_p=1.200000$ <m> $I_p=25.000000$ <m> $W_p=70685.80$ <daN> $D=1.00$ <cm>
 Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA
 Verifiche in condizioni drenate

| z_p <m> | τ_{ss} <daN/cmq> | k_{ss} <daN/cm> | σ_{T1} <daN/cmq> | k_{T1} <daN/cm> |
|--------------|--------------------------|----------------------|----------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

$QS_{lim}=1054060.00$ <daN>
 $q_p=61.31$ <daN/cmq>
 $QP_{lim}=693364.00$ <daN>
 $k_p=1.17$ <daN/cm>

Verifiche in condizioni non drenate

| z_p <m> | τ_{ss} <daN/cmq> | k_{ss} <daN/cm> | σ_{T1} <daN/cmq> | k_{T1} <daN/cm> |
|--------------|--------------------------|----------------------|----------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

$QS_{lim}=472754.00$ <daN>
 $q_p=13.92$ <daN/cmq>
 $QP_{lim}=157422.00$ <daN>
 $k_p=1.17$ <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic. V | T <daN> | M <daNm> | Sps <cm> | Sic. O |
|------|----|------------|-------------|--------|------------|-------------|-------------|--------|
| 1 | 1 | -46827.10 | 0.33 | 17.97 | 7490.69 | 59399.20 | 0.72 | >1 |
| 3 | 2 | -34686.80 | 0.25 | -- | 5548.66 | 43999.40 | 0.53 | -- |
| 5 | 3 | -34686.80 | 0.25 | -- | 5548.66 | 43999.40 | 0.53 | -- |

Relazione di calcolo

| | | | | | | | | |
|---|---|-----------|------|----|---------|----------|------|----|
| 7 | 4 | -34686.80 | 0.25 | -- | 5548.66 | 43999.40 | 0.53 | -- |
|---|---|-----------|------|----|---------|----------|------|----|

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -46827.10 | 0.33 | 6.63 | 7490.69 | 59399.20 | 0.72 | >1 |
| 4 | 2 | -34686.80 | 0.25 | -- | 5548.66 | 43999.40 | 0.53 | -- |
| 6 | 3 | -34686.80 | 0.25 | -- | 5548.66 | 43999.40 | 0.53 | -- |
| 8 | 4 | -34686.80 | 0.25 | -- | 5548.66 | 43999.40 | 0.53 | -- |

Palo n. 16

Tipo palo=Trivellato
 Rotazione testa libera
 Coefficiente di efficienza=1.00
 $D_p=1.200000$ <m> $I_p=25.000000$ <m> $W_p=70685.80$ <daN> $D=1.00$ <m>
 Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA
 Verifiche in condizioni drenate

| Zp <m> | τ_{cs} <daN/cmq> | k_{cs} <daN/cm> | σ_{cs} <daN/cm> | k_{cs} <daN/cm> |
|-----------|--------------------------|----------------------|---------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

$QS_{lim}=1054060.00$ <daN>
 $q_p=61.31$ <daN/cmq>
 $QF_{lim}=693364.00$ <daN>
 $k_p=1.17$ <daN/cm>

Verifiche in condizioni non drenate

| Zp <m> | τ_{cs} <daN/cmq> | k_{cs} <daN/cm> | σ_{cs} <daN/cm> | k_{cs} <daN/cm> |
|-----------|--------------------------|----------------------|---------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

$QS_{lim}=472754.00$ <daN>
 $q_p=13.92$ <daN/cmq>
 $QF_{lim}=157422.00$ <daN>
 $k_p=1.17$ <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -81184.60 | 0.57 | 10.36 | 7310.74 | 61392.50 | 0.72 | >1 |
| 3 | 2 | -60136.70 | 0.43 | -- | 5415.36 | 45475.90 | 0.54 | -- |
| 5 | 3 | -60136.70 | 0.43 | -- | 5415.36 | 45475.90 | 0.54 | -- |
| 7 | 4 | -60136.70 | 0.43 | -- | 5415.36 | 45475.90 | 0.54 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -81184.60 | 0.57 | 3.82 | 7310.74 | 61392.50 | 0.72 | >1 |
| 4 | 2 | -60136.70 | 0.43 | -- | 5415.36 | 45475.90 | 0.54 | -- |
| 6 | 3 | -60136.70 | 0.43 | -- | 5415.36 | 45475.90 | 0.54 | -- |
| 8 | 4 | -60136.70 | 0.43 | -- | 5415.36 | 45475.90 | 0.54 | -- |

Palo n. 17

Tipo palo=Trivellato
 Rotazione testa libera
 Coefficiente di efficienza=1.00
 $D_p=1.200000$ <m> $I_p=25.000000$ <m> $W_p=70685.80$ <daN> $D=1.00$ <m>
 Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA
 Verifiche in condizioni drenate

| Zp <m> | τ_{cs} <daN/cmq> | k_{cs} <daN/cm> | σ_{cs} <daN/cm> | k_{cs} <daN/cm> |
|-----------|--------------------------|----------------------|---------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

$QS_{lim}=1054060.00$ <daN>
 $q_p=61.31$ <daN/cmq>
 $QF_{lim}=693364.00$ <daN>

Relazione di calcolo

$k_p=1.17$ <daN/cm>

Verifiche in condizioni non drenate

| Zp <m> | τ_{B} <daN/cm> | k_{B} <daN/cm> | σ_{H} <daN/cm> | k_{H} <daN/cm> |
|-----------|-------------------------------|----------------------------|---------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

QS_{lim}=472754.00 <daN>

q_p=13.92 <daN/cm>

QP_{lim}=157422.00 <daN>

$k_p=1.17$ <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -122467.00 | 0.87 | 6.87 | 7078.60 | 61763.00 | 0.72 | >1 |
| 3 | 2 | -90716.20 | 0.64 | -- | 5243.41 | 45750.40 | 0.53 | -- |
| 5 | 3 | -90716.20 | 0.64 | -- | 5243.41 | 45750.40 | 0.53 | -- |
| 7 | 4 | -90716.20 | 0.64 | -- | 5243.41 | 45750.40 | 0.53 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -122467.00 | 0.87 | 2.53 | 7078.60 | 61763.00 | 0.72 | >1 |
| 4 | 2 | -90716.20 | 0.64 | -- | 5243.41 | 45750.40 | 0.53 | -- |
| 6 | 3 | -90716.20 | 0.64 | -- | 5243.41 | 45750.40 | 0.53 | -- |
| 8 | 4 | -90716.20 | 0.64 | -- | 5243.41 | 45750.40 | 0.53 | -- |

Palo n. 18

Tipo palo=Trivellato

Rotazione testa libera

Coefficiente di efficienza=1.00

Dp=1.200000 <m> Ip=25.000000 <m> Wp=70685.80 <daN> D=1.00 <m>

Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA

Verifiche in condizioni drenate

| Zp <m> | τ_{B} <daN/cm> | k_{B} <daN/cm> | σ_{H} <daN/cm> | k_{H} <daN/cm> |
|-----------|-------------------------------|----------------------------|---------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

QS_{lim}=1054060.00 <daN>

q_p=61.31 <daN/cm>

QP_{lim}=693364.00 <daN>

$k_p=1.17$ <daN/cm>

Verifiche in condizioni non drenate

| Zp <m> | τ_{B} <daN/cm> | k_{B} <daN/cm> | σ_{H} <daN/cm> | k_{H} <daN/cm> |
|-----------|-------------------------------|----------------------------|---------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

QS_{lim}=472754.00 <daN>

q_p=13.92 <daN/cm>

QP_{lim}=157422.00 <daN>

$k_p=1.17$ <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -166477.00 | 1.18 | 5.05 | 6825.85 | 59718.20 | 0.69 | >1 |
| 3 | 2 | -123316.00 | 0.87 | -- | 5056.18 | 44235.70 | 0.51 | -- |
| 5 | 3 | -123316.00 | 0.87 | -- | 5056.18 | 44235.70 | 0.51 | -- |
| 7 | 4 | -123316.00 | 0.87 | -- | 5056.18 | 44235.70 | 0.51 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -166477.00 | 1.18 | 1.86 | 6825.85 | 59718.20 | 0.69 | >1 |

Relazione di calcolo

| | | | | | | | | |
|---|---|------------|------|----|---------|----------|------|----|
| 4 | 2 | -123316.00 | 0.87 | -- | 5056.18 | 44235.70 | 0.51 | -- |
| 6 | 3 | -123316.00 | 0.87 | -- | 5056.18 | 44235.70 | 0.51 | -- |
| 8 | 4 | -123316.00 | 0.87 | -- | 5056.18 | 44235.70 | 0.51 | -- |

Palo n. 19

Tipo palo=Trivellato
 Rotazione testa libera
 Coefficiente di efficienza=1.00
 Dp=1.200000 <m> Ip=25.000000 <m> Wp=70685.80 <daN> D=1.00 <m>
 Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA
 Verifiche in condizioni drenate

| Zp <m> | τ_{B} <daN/cm ² > | k_{B} <daN/cm< | σ_{D} <daN/cm< | k_{D} <daN/cm< |
|-----------|---|----------------------------|---------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

QS_{lim}=1054060.00 <daN>

q_p=61.31 <daN/cm<

QF_{lim}=693364.00 <daN>

k_p=1.17 <daN/cm<

Verifiche in condizioni non drenate

| Zp <m> | τ_{B} <daN/cm< | k_{B} <daN/cm< | σ_{D} <daN/cm< | k_{D} <daN/cm< |
|-----------|-------------------------------|----------------------------|---------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

QS_{lim}=472754.00 <daN>

q_p=13.92 <daN/cm<

QF_{lim}=157422.00 <daN>

k_p=1.17 <daN/cm<

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.v | T <daN> | M <daNm> | Sps <cm> | Sic.o |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -212368.00 | 1.50 | 3.96 | 6542.33 | 54441.50 | 0.64 | >1 |
| 3 | 2 | -157310.00 | 1.11 | -- | 4846.17 | 40327.00 | 0.48 | -- |
| 5 | 3 | -157310.00 | 1.11 | -- | 4846.17 | 40327.00 | 0.48 | -- |
| 7 | 4 | -157310.00 | 1.11 | -- | 4846.17 | 40327.00 | 0.48 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.v | T <daN> | M <daNm> | Sps <cm> | Sic.o |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -212368.00 | 1.50 | 1.46 | 6542.33 | 54441.50 | 0.64 | >1 |
| 4 | 2 | -157310.00 | 1.11 | -- | 4846.17 | 40327.00 | 0.48 | -- |
| 6 | 3 | -157310.00 | 1.11 | -- | 4846.17 | 40327.00 | 0.48 | -- |
| 8 | 4 | -157310.00 | 1.11 | -- | 4846.17 | 40327.00 | 0.48 | -- |

Palo n. 20

Tipo palo=Trivellato
 Rotazione testa libera
 Coefficiente di efficienza=1.00
 Dp=1.200000 <m> Ip=25.000000 <m> Wp=70685.80 <daN> D=1.00 <m>
 Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA
 Verifiche in condizioni drenate

| Zp <m> | τ_{B} <daN/cm< | k_{B} <daN/cm< | σ_{D} <daN/cm< | k_{D} <daN/cm< |
|-----------|-------------------------------|----------------------------|---------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

QS_{lim}=1054060.00 <daN>

q_p=61.31 <daN/cm<

QF_{lim}=693364.00 <daN>

k_p=1.17 <daN/cm<

Verifiche in condizioni non drenate

| Zp <m> | τ_{B} <daN/cm< | k_{B} <daN/cm< | σ_{D} <daN/cm< | k_{D} <daN/cm< |
|-----------|-------------------------------|----------------------------|---------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

Relazione di calcolo

| | | | | |
|-------|------|------|-------|------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

QS_{lim}=472754.00 <daN>

q_p=13.92 <daN/cmq>

QP_{lim}=157422.00 <daN>

k_p=1.17 <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -253743.00 | 1.79 | 3.32 | 6276.62 | 46241.50 | 0.58 | >1 |
| 3 | 2 | -187958.00 | 1.33 | -- | 4649.35 | 34252.90 | 0.43 | -- |
| 5 | 3 | -187958.00 | 1.33 | -- | 4649.35 | 34252.90 | 0.43 | -- |
| 7 | 4 | -187958.00 | 1.33 | -- | 4649.35 | 34252.90 | 0.43 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -253743.00 | 1.79 | 1.22 | 6276.62 | 46241.50 | 0.58 | >1 |
| 4 | 2 | -187958.00 | 1.33 | -- | 4649.35 | 34252.90 | 0.43 | -- |
| 6 | 3 | -187958.00 | 1.33 | -- | 4649.35 | 34252.90 | 0.43 | -- |
| 8 | 4 | -187958.00 | 1.33 | -- | 4649.35 | 34252.90 | 0.43 | -- |

Palo n. 21

Tipo palo=Trivellato

Rotazione testa libera

Coefficiente di efficienza=1.00

D_p=1.200000 <m> l_p=25.000000 <m> W_p=70685.80 <daN> D=1.00 <m>

Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA

Verifiche in condizioni drenate

| Z _p <m> | τ _s <daN/cm> | k _s <daN/cm> | σ _n <daN/cm> | k _n <daN/cm> |
|-----------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

QS_{lim}=1054060.00 <daN>

q_p=61.31 <daN/cm>

QP_{lim}=693364.00 <daN>

k_p=1.17 <daN/cm>

Verifiche in condizioni non drenate

| Z _p <m> | τ _s <daN/cm> | k _s <daN/cm> | σ _n <daN/cm> | k _n <daN/cm> |
|-----------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

QS_{lim}=472754.00 <daN>

q_p=13.92 <daN/cm>

QP_{lim}=157422.00 <daN>

k_p=1.17 <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -287981.00 | 2.04 | 2.92 | 6041.15 | 35402.70 | 0.50 | >1 |
| 3 | 2 | -213319.00 | 1.51 | -- | 4474.93 | 26224.20 | 0.37 | -- |
| 5 | 3 | -213319.00 | 1.51 | -- | 4474.93 | 26224.20 | 0.37 | -- |
| 7 | 4 | -213319.00 | 1.51 | -- | 4474.93 | 26224.20 | 0.37 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -287981.00 | 2.04 | 1.08 | 6041.15 | 35402.70 | 0.50 | >1 |
| 4 | 2 | -213319.00 | 1.51 | -- | 4474.93 | 26224.20 | 0.37 | -- |
| 6 | 3 | -213319.00 | 1.51 | -- | 4474.93 | 26224.20 | 0.37 | -- |
| 8 | 4 | -213319.00 | 1.51 | -- | 4474.93 | 26224.20 | 0.37 | -- |

Palo n. 22

Tipo palo=Trivellato

Relazione di calcolo

Rotazione testa libera

Coefficiente di efficienza=1.00

Dp=1.200000 <m> Ip=25.000000 <m> Wp=70685.80 <daN> D=1.00 <m>

Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA

Verifiche in condizioni drenate

| Zp <m> | τ_{cs} <daN/cmq> | k_{cs} <daN/cm> | σ_{T1} <daN/cmq> | k_{T1} <daN/cm> |
|-----------|--------------------------|----------------------|----------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

QS_{lim}=1054060.00 <daN>

q_p=61.31 <daN/cmq>

QP_{lim}=693364.00 <daN>

k_p=1.17 <daN/cm>

Verifiche in condizioni non drenate

| Zp <m> | τ_{cs} <daN/cmq> | k_{cs} <daN/cm> | σ_{T1} <daN/cmq> | k_{T1} <daN/cm> |
|-----------|--------------------------|----------------------|----------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

QS_{lim}=472754.00 <daN>

q_p=13.92 <daN/cmq>

QP_{lim}=157422.00 <daN>

k_p=1.17 <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -312560.00 | 2.21 | 2.69 | 5870.52 | 22391.20 | 0.40 | >1 |
| 3 | 2 | -231526.00 | 1.64 | -- | 4348.53 | 16586.10 | 0.30 | -- |
| 5 | 3 | -231526.00 | 1.64 | -- | 4348.53 | 16586.10 | 0.30 | -- |
| 7 | 4 | -231526.00 | 1.64 | -- | 4348.53 | 16586.10 | 0.30 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -312560.00 | 2.21 | <1 | 5870.52 | 22391.20 | 0.40 | >1 |
| 4 | 2 | -231526.00 | 1.64 | -- | 4348.53 | 16586.10 | 0.30 | -- |
| 6 | 3 | -231526.00 | 1.64 | -- | 4348.53 | 16586.10 | 0.30 | -- |
| 8 | 4 | -231526.00 | 1.64 | -- | 4348.53 | 16586.10 | 0.30 | -- |

Palo n. 23

Tipo palo=Trivellato

Rotazione testa libera

Coefficiente di efficienza=1.00

Dp=1.200000 <m> Ip=25.000000 <m> Wp=70685.80 <daN> D=1.00 <m>

Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA

Verifiche in condizioni drenate

| Zp <m> | τ_{cs} <daN/cmq> | k_{cs} <daN/cm> | σ_{T1} <daN/cmq> | k_{T1} <daN/cm> |
|-----------|--------------------------|----------------------|----------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

QS_{lim}=1054060.00 <daN>

q_p=61.31 <daN/cmq>

QP_{lim}=693364.00 <daN>

k_p=1.17 <daN/cm>

Verifiche in condizioni non drenate

| Zp <m> | τ_{cs} <daN/cmq> | k_{cs} <daN/cm> | σ_{T1} <daN/cmq> | k_{T1} <daN/cm> |
|-----------|--------------------------|----------------------|----------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

QS_{lim}=472754.00 <daN>

q_p=13.92 <daN/cmq>

QP_{lim}=157422.00 <daN>

Relazione di calcolo

$k_p=1.17$ <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -325273.00 | 2.30 | 2.59 | 5776.64 | 8448.83 | 0.30 | >1 |
| 3 | 2 | -240943.00 | 1.70 | -- | 4278.99 | 6258.39 | 0.22 | -- |
| 5 | 3 | -240943.00 | 1.70 | -- | 4278.99 | 6258.39 | 0.22 | -- |
| 7 | 4 | -240943.00 | 1.70 | -- | 4278.99 | 6258.39 | 0.22 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -325273.00 | 2.30 | <1 | 5776.64 | 8448.83 | 0.30 | >1 |
| 4 | 2 | -240943.00 | 1.70 | -- | 4278.99 | 6258.39 | 0.22 | -- |
| 6 | 3 | -240943.00 | 1.70 | -- | 4278.99 | 6258.39 | 0.22 | -- |
| 8 | 4 | -240943.00 | 1.70 | -- | 4278.99 | 6258.39 | 0.22 | -- |

Palo n. 24

Tipo palo=Trivellato

Rotazione testa libera

Coefficiente di efficienza=1.00

$D_p=1.200000$ <m> $I_p=25.000000$ <m> $W_p=70685.80$ <daN> $D=1.00$ <m>

Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA

Verifiche in condizioni drenate

| Z_p <m> | τ_s <daN/cm> | k_s <daN/cm> | σ_n <daN/cm> | k_n <daN/cm> |
|--------------|----------------------|-------------------|------------------------|-------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

$Q_{lim}=1054060.00$ <daN>

$q_p=61.31$ <daN/cm>

$Q_{p,lim}=693364.00$ <daN>

$k_p=1.17$ <daN/cm>

Verifiche in condizioni non drenate

| Z_p <m> | τ_s <daN/cm> | k_s <daN/cm> | σ_n <daN/cm> | k_n <daN/cm> |
|--------------|----------------------|-------------------|------------------------|-------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

$Q_{lim}=472754.00$ <daN>

$q_p=13.92$ <daN/cm>

$Q_{p,lim}=157422.00$ <daN>

$k_p=1.17$ <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -325212.00 | 2.30 | 2.59 | 5777.46 | 8572.34 | 0.30 | >1 |
| 3 | 2 | -240898.00 | 1.70 | -- | 4279.60 | 6349.88 | 0.23 | -- |
| 5 | 3 | -240898.00 | 1.70 | -- | 4279.60 | 6349.88 | 0.23 | -- |
| 7 | 4 | -240898.00 | 1.70 | -- | 4279.60 | 6349.88 | 0.23 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -325212.00 | 2.30 | <1 | 5777.46 | 8572.34 | 0.30 | >1 |
| 4 | 2 | -240898.00 | 1.70 | -- | 4279.60 | 6349.88 | 0.23 | -- |
| 6 | 3 | -240898.00 | 1.70 | -- | 4279.60 | 6349.88 | 0.23 | -- |
| 8 | 4 | -240898.00 | 1.70 | -- | 4279.60 | 6349.88 | 0.23 | -- |

Palo n. 25

Tipo palo=Trivellato

Rotazione testa libera

Coefficiente di efficienza=1.00

$D_p=1.200000$ <m> $I_p=25.000000$ <m> $W_p=70685.80$ <daN> $D=1.00$ <m>

Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA

Verifiche in condizioni drenate

Relazione di calcolo

| z _p <m> | τ _z <daN/cmq> | k _z <daN/cm> | σ _z <daN/cm> | k _z <daN/cm> |
|-----------------------|-----------------------------|----------------------------|----------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

QS_{lim}=1054060.00 <daN>
 q_p=61.31 <daN/cm>
 QF_{lim}=693364.00 <daN>
 k_p=1.17 <daN/cm>

Verifiche in condizioni non drenate

| z _p <m> | τ _z <daN/cm> | k _z <daN/cm> | σ _z <daN/cm> | k _z <daN/cm> |
|-----------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

QS_{lim}=472754.00 <daN>
 q_p=13.92 <daN/cm>
 QF_{lim}=157422.00 <daN>
 k_p=1.17 <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -312389.00 | 2.21 | 2.69 | 5871.78 | 22486.70 | 0.40 | >1 |
| 3 | 2 | -231400.00 | 1.64 | -- | 4349.47 | 16656.80 | 0.30 | -- |
| 5 | 3 | -231400.00 | 1.64 | -- | 4349.47 | 16656.80 | 0.30 | -- |
| 7 | 4 | -231400.00 | 1.64 | -- | 4349.47 | 16656.80 | 0.30 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -312389.00 | 2.21 | <1 | 5871.78 | 22486.70 | 0.40 | >1 |
| 4 | 2 | -231400.00 | 1.64 | -- | 4349.47 | 16656.80 | 0.30 | -- |
| 6 | 3 | -231400.00 | 1.64 | -- | 4349.47 | 16656.80 | 0.30 | -- |
| 8 | 4 | -231400.00 | 1.64 | -- | 4349.47 | 16656.80 | 0.30 | -- |

Palo n. 26

Tipo palo=Trivellato
 Rotazione testa libera
 Coefficiente di efficienza=1.00
 D_p=1.200000 <m> I_p=25.000000 <m> W_p=70685.80 <daN> D=1.00 <m>
 Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA
 Verifiche in condizioni drenate

| z _p <m> | τ _z <daN/cm> | k _z <daN/cm> | σ _z <daN/cm> | k _z <daN/cm> |
|-----------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

QS_{lim}=1054060.00 <daN>
 q_p=61.31 <daN/cm>
 QF_{lim}=693364.00 <daN>
 k_p=1.17 <daN/cm>

Verifiche in condizioni non drenate

| z _p <m> | τ _z <daN/cm> | k _z <daN/cm> | σ _z <daN/cm> | k _z <daN/cm> |
|-----------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

QS_{lim}=472754.00 <daN>
 q_p=13.92 <daN/cm>
 QF_{lim}=157422.00 <daN>
 k_p=1.17 <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|

Relazione di calcolo

| | | | | | | | | |
|---|---|------------|------|------|---------|----------|------|----|
| 1 | 1 | -287771.00 | 2.03 | 2.92 | 6043.66 | 35407.20 | 0.50 | >1 |
| 3 | 2 | -213163.00 | 1.51 | -- | 4476.78 | 26227.60 | 0.37 | -- |
| 5 | 3 | -213163.00 | 1.51 | -- | 4476.78 | 26227.60 | 0.37 | -- |
| 7 | 4 | -213163.00 | 1.51 | -- | 4476.78 | 26227.60 | 0.37 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -287771.00 | 2.03 | 1.08 | 6043.66 | 35407.20 | 0.50 | >1 |
| 4 | 2 | -213163.00 | 1.51 | -- | 4476.78 | 26227.60 | 0.37 | -- |
| 6 | 3 | -213163.00 | 1.51 | -- | 4476.78 | 26227.60 | 0.37 | -- |
| 8 | 4 | -213163.00 | 1.51 | -- | 4476.78 | 26227.60 | 0.37 | -- |

Palo n. 27

Tipo palo=Trivellato

Rotazione testa libera

Coefficiente di efficienza=1.00

Dp=1.200000 <m> Ip=25.000000 <m> Wp=70685.80 <daN> D=1.00 <m>

Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA

Verifiche in condizioni drenate

| Zp <m> | τ_{cs} <daN/cmq> | k_{cs} <daN/cm> | σ_{cs} <daN/cmq> | k_{cs} <daN/cm> |
|-----------|--------------------------|----------------------|----------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

QS_{lim}=1054060.00 <daN>

q_p=61.31 <daN/cmq>

QF_{lim}=693364.00 <daN>

k_p=1.17 <daN/cm>

Verifiche in condizioni non drenate

| Zp <m> | τ_{cs} <daN/cmq> | k_{cs} <daN/cm> | σ_{cs} <daN/cmq> | k_{cs} <daN/cm> |
|-----------|--------------------------|----------------------|----------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

QS_{lim}=472754.00 <daN>

q_p=13.92 <daN/cmq>

QF_{lim}=157422.00 <daN>

k_p=1.17 <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -253546.00 | 1.79 | 3.32 | 6278.75 | 46247.70 | 0.58 | >1 |
| 3 | 2 | -187812.00 | 1.33 | -- | 4650.92 | 34257.60 | 0.43 | -- |
| 5 | 3 | -187812.00 | 1.33 | -- | 4650.92 | 34257.60 | 0.43 | -- |
| 7 | 4 | -187812.00 | 1.33 | -- | 4650.92 | 34257.60 | 0.43 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -253546.00 | 1.79 | 1.22 | 6278.75 | 46247.70 | 0.58 | >1 |
| 4 | 2 | -187812.00 | 1.33 | -- | 4650.92 | 34257.60 | 0.43 | -- |
| 6 | 3 | -187812.00 | 1.33 | -- | 4650.92 | 34257.60 | 0.43 | -- |
| 8 | 4 | -187812.00 | 1.33 | -- | 4650.92 | 34257.60 | 0.43 | -- |

Palo n. 28

Tipo palo=Trivellato

Rotazione testa libera

Coefficiente di efficienza=1.00

Dp=1.200000 <m> Ip=25.000000 <m> Wp=70685.80 <daN> D=1.00 <m>

Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA

Verifiche in condizioni drenate

| Zp <m> | τ_{cs} <daN/cmq> | k_{cs} <daN/cm> | σ_{cs} <daN/cmq> | k_{cs} <daN/cm> |
|-----------|--------------------------|----------------------|----------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

Relazione di calcolo

$QS_{lim}=1054060.00$ <daN>
 $q_p=61.31$ <daN/cmq>
 $QP_{lim}=693364.00$ <daN>
 $k_p=1.17$ <daN/cm>

Verifiche in condizioni non drenate

| z_p <m> | τ_{cs} <daN/cmq> | k_{cs} <daN/cm> | σ_{cs} <daN/cmq> | k_{cs} <daN/cm> |
|--------------|--------------------------|----------------------|----------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

$QS_{lim}=472754.00$ <daN>
 $q_p=13.92$ <daN/cmq>
 $QP_{lim}=157422.00$ <daN>
 $k_p=1.17$ <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -212189.00 | 1.50 | 3.96 | 6542.77 | 54473.00 | 0.65 | >1 |
| 3 | 2 | -157177.00 | 1.11 | -- | 4846.50 | 40350.40 | 0.48 | -- |
| 5 | 3 | -157177.00 | 1.11 | -- | 4846.50 | 40350.40 | 0.48 | -- |
| 7 | 4 | -157177.00 | 1.11 | -- | 4846.50 | 40350.40 | 0.48 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -212189.00 | 1.50 | 1.46 | 6542.77 | 54473.00 | 0.65 | >1 |
| 4 | 2 | -157177.00 | 1.11 | -- | 4846.50 | 40350.40 | 0.48 | -- |
| 6 | 3 | -157177.00 | 1.11 | -- | 4846.50 | 40350.40 | 0.48 | -- |
| 8 | 4 | -157177.00 | 1.11 | -- | 4846.50 | 40350.40 | 0.48 | -- |

Palo n. 29

Tipo palo=Trivellato
 Rotazione testa libera
 Coefficiente di efficienza=1.00
 $D_p=1.200000$ <m> $I_p=25.000000$ <m> $W_p=70685.80$ <daN> $D=1.00$ <m>
 Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA
 Verifiche in condizioni drenate

| z_p <m> | τ_{cs} <daN/cmq> | k_{cs} <daN/cm> | σ_{cs} <daN/cmq> | k_{cs} <daN/cm> |
|--------------|--------------------------|----------------------|----------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

$QS_{lim}=1054060.00$ <daN>
 $q_p=61.31$ <daN/cmq>
 $QP_{lim}=693364.00$ <daN>
 $k_p=1.17$ <daN/cm>

Verifiche in condizioni non drenate

| z_p <m> | τ_{cs} <daN/cmq> | k_{cs} <daN/cm> | σ_{cs} <daN/cmq> | k_{cs} <daN/cm> |
|--------------|--------------------------|----------------------|----------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

$QS_{lim}=472754.00$ <daN>
 $q_p=13.92$ <daN/cmq>
 $QP_{lim}=157422.00$ <daN>
 $k_p=1.17$ <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -166267.00 | 1.18 | 5.06 | 6826.00 | 59745.40 | 0.69 | >1 |
| 3 | 2 | -123161.00 | 0.87 | -- | 5056.29 | 44255.90 | 0.51 | -- |
| 5 | 3 | -123161.00 | 0.87 | -- | 5056.29 | 44255.90 | 0.51 | -- |
| 7 | 4 | -123161.00 | 0.87 | -- | 5056.29 | 44255.90 | 0.51 | -- |

Verifiche in condizioni non drenate

Relazione di calcolo

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -166267.00 | 1.18 | 1.87 | 6826.00 | 59745.40 | 0.69 | >1 |
| 4 | 2 | -123161.00 | 0.87 | -- | 5056.29 | 44255.90 | 0.51 | -- |
| 6 | 3 | -123161.00 | 0.87 | -- | 5056.29 | 44255.90 | 0.51 | -- |
| 8 | 4 | -123161.00 | 0.87 | -- | 5056.29 | 44255.90 | 0.51 | -- |

Palo n. 30

Tipo palo=Trivellato
 Rotazione testa libera
 Coefficiente di efficienza=1.00
 Ep=1.200000 <m> Ip=25.000000 <m> Wp=70685.80 <daN> D=1.00 <m>
 Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA
 Verifiche in condizioni drenate

| Zp <m> | τ_{cs} <daN/cmq> | k_{cs} <daN/cm> | σ_{cs} <daN/cmq> | k_{cs} <daN/cm> |
|-----------|--------------------------|----------------------|----------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

QS_{lim}=1054060.00 <daN>
 qp=61.31 <daN/cmq>
 QF_{lim}=693364.00 <daN>
 kp=1.17 <daN/cm>

Verifiche in condizioni non drenate

| Zp <m> | τ_{cs} <daN/cmq> | k_{cs} <daN/cm> | σ_{cs} <daN/cmq> | k_{cs} <daN/cm> |
|-----------|--------------------------|----------------------|----------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

QS_{lim}=472754.00 <daN>
 qp=13.92 <daN/cmq>
 QF_{lim}=157422.00 <daN>
 kp=1.17 <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -122242.00 | 0.86 | 6.88 | 7077.05 | 61854.20 | 0.72 | >1 |
| 3 | 2 | -90549.90 | 0.64 | -- | 5242.26 | 45818.00 | 0.53 | -- |
| 5 | 3 | -90549.90 | 0.64 | -- | 5242.26 | 45818.00 | 0.53 | -- |
| 7 | 4 | -90549.90 | 0.64 | -- | 5242.26 | 45818.00 | 0.53 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -122242.00 | 0.86 | 2.54 | 7077.05 | 61854.20 | 0.72 | >1 |
| 4 | 2 | -90549.90 | 0.64 | -- | 5242.26 | 45818.00 | 0.53 | -- |
| 6 | 3 | -90549.90 | 0.64 | -- | 5242.26 | 45818.00 | 0.53 | -- |
| 8 | 4 | -90549.90 | 0.64 | -- | 5242.26 | 45818.00 | 0.53 | -- |

Palo n. 31

Tipo palo=Trivellato
 Rotazione testa libera
 Coefficiente di efficienza=1.00
 Ep=1.200000 <m> Ip=25.000000 <m> Wp=70685.80 <daN> D=1.00 <m>
 Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA
 Verifiche in condizioni drenate

| Zp <m> | τ_{cs} <daN/cmq> | k_{cs} <daN/cm> | σ_{cs} <daN/cmq> | k_{cs} <daN/cm> |
|-----------|--------------------------|----------------------|----------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

QS_{lim}=1054060.00 <daN>
 qp=61.31 <daN/cmq>
 QF_{lim}=693364.00 <daN>
 kp=1.17 <daN/cm>

Verifiche in condizioni non drenate

Relazione di calcolo

| Z_p <m> | τ_{23} <daN/cmq> | k_{23} <daN/cm> | σ_{21} <daN/cm> | k_{21} <daN/cm> |
|--------------|--------------------------|----------------------|---------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

$QS_{lim}=472754.00$ <daN>
 $q_p=13.92$ <daN/cm>
 $QP_{lim}=157422.00$ <daN>
 $k_p=1.17$ <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -80635.20 | 0.57 | 10.43 | 7309.60 | 61410.20 | 0.72 | >1 |
| 3 | 2 | -59729.80 | 0.42 | -- | 5414.52 | 45489.10 | 0.54 | -- |
| 5 | 3 | -59729.80 | 0.42 | -- | 5414.52 | 45489.10 | 0.54 | -- |
| 7 | 4 | -59729.80 | 0.42 | -- | 5414.52 | 45489.10 | 0.54 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -80635.20 | 0.57 | 3.85 | 7309.60 | 61410.20 | 0.72 | >1 |
| 4 | 2 | -59729.80 | 0.42 | -- | 5414.52 | 45489.10 | 0.54 | -- |
| 6 | 3 | -59729.80 | 0.42 | -- | 5414.52 | 45489.10 | 0.54 | -- |
| 8 | 4 | -59729.80 | 0.42 | -- | 5414.52 | 45489.10 | 0.54 | -- |

Palo n. 32

Tipo palo=Trivellato
 Rotazione testa libera
 Coefficiente di efficienza=1.00
 $D_p=1.200000$ <m> $L_p=25.000000$ <m> $W_p=70685.80$ <daN> $D=1.00$ <m>
 Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA
 Verifiche in condizioni drenate

| Z_p <m> | τ_{23} <daN/cm> | k_{23} <daN/cm> | σ_{21} <daN/cm> | k_{21} <daN/cm> |
|--------------|-------------------------|----------------------|---------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

$QS_{lim}=1054060.00$ <daN>
 $q_p=61.31$ <daN/cm>
 $QP_{lim}=693364.00$ <daN>
 $k_p=1.17$ <daN/cm>

Verifiche in condizioni non drenate

| Z_p <m> | τ_{23} <daN/cm> | k_{23} <daN/cm> | σ_{21} <daN/cm> | k_{21} <daN/cm> |
|--------------|-------------------------|----------------------|---------------------------|----------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

$QS_{lim}=472754.00$ <daN>
 $q_p=13.92$ <daN/cm>
 $QP_{lim}=157422.00$ <daN>
 $k_p=1.17$ <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 1 | 1 | -46634.90 | 0.33 | 18.04 | 7490.34 | 59376.80 | 0.72 | >1 |
| 3 | 2 | -34544.40 | 0.24 | -- | 5548.40 | 43982.80 | 0.53 | -- |
| 5 | 3 | -34544.40 | 0.24 | -- | 5548.40 | 43982.80 | 0.53 | -- |
| 7 | 4 | -34544.40 | 0.24 | -- | 5548.40 | 43982.80 | 0.53 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic.V | T <daN> | M <daNm> | Sps <cm> | Sic.O |
|------|----|------------|-------------|-------|------------|-------------|-------------|-------|
| 2 | 1 | -46634.90 | 0.33 | 6.66 | 7490.34 | 59376.80 | 0.72 | >1 |
| 4 | 2 | -34544.40 | 0.24 | -- | 5548.40 | 43982.80 | 0.53 | -- |
| 6 | 3 | -34544.40 | 0.24 | -- | 5548.40 | 43982.80 | 0.53 | -- |
| 8 | 4 | -34544.40 | 0.24 | -- | 5548.40 | 43982.80 | 0.53 | -- |

Relazione di calcolo

Palo n. 33

Tipo palo=Trivellato
 Rotazione testa libera
 Coefficiente di efficienza=1.00
 Dp=1.200000 <m> Ip=25.000000 <m> Wp=70685.80 <daN> D=1.00 <m>
 Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA
 Verifiche in condizioni drenate

| Zp <m> | τ_{S} <daN/cmq> | k_{S} <daN/cm> | σ_{H} <daN/cmq> | k_{H} <daN/cm> |
|-----------|--------------------------------|----------------------------|----------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.75 | 0.52 |
| 4.50 | 0.69 | 0.15 | 11.44 | 0.89 |
| 26.00 | 1.76 | 0.15 | 40.00 | 0.89 |

QS_{lim}=1054060.00 <daN>
 q_p=61.31 <daN/cmq>
 QP_{lim}=693364.00 <daN>
 k_p=1.17 <daN/cm>

Verifiche in condizioni non drenate

| Zp <m> | τ_{S} <daN/cmq> | k_{S} <daN/cm> | σ_{H} <daN/cmq> | k_{H} <daN/cm> |
|-----------|--------------------------------|----------------------------|----------------------------------|----------------------------|
| 1.00 | 0.37 | 0.09 | 4.89 | 0.52 |
| 4.50 | 0.52 | 0.15 | 10.47 | 0.89 |
| 26.00 | 0.52 | 0.15 | 10.47 | 0.89 |

QS_{lim}=472754.00 <daN>
 q_p=13.92 <daN/cmq>
 QP_{lim}=157422.00 <daN>
 k_p=1.17 <daN/cm>

Verifiche in condizioni drenate

| Caso | CC | N <daN> | Ced <cm> | Sic. V | T <daN> | M <daNm> | Sps <cm> | Sic. O |
|------|----|------------|-------------|--------|------------|-------------|-------------|--------|
| 1 | 1 | -22207.30 | 0.16 | 37.88 | 7618.69 | 56881.30 | 0.71 | >1 |
| 3 | 2 | -16449.90 | 0.12 | -- | 5643.47 | 42134.30 | 0.52 | -- |
| 5 | 3 | -16449.90 | 0.12 | -- | 5643.47 | 42134.30 | 0.52 | -- |
| 7 | 4 | -16449.90 | 0.12 | -- | 5643.47 | 42134.30 | 0.52 | -- |

Verifiche in condizioni non drenate

| Caso | CC | N <daN> | Ced <cm> | Sic. V | T <daN> | M <daNm> | Sps <cm> | Sic. O |
|------|----|------------|-------------|--------|------------|-------------|-------------|--------|
| 2 | 1 | -22207.30 | 0.16 | 13.98 | 7618.69 | 56881.30 | 0.71 | >1 |
| 4 | 2 | -16449.90 | 0.12 | -- | 5643.47 | 42134.30 | 0.52 | -- |
| 6 | 3 | -16449.90 | 0.12 | -- | 5643.47 | 42134.30 | 0.52 | -- |
| 8 | 4 | -16449.90 | 0.12 | -- | 5643.47 | 42134.30 | 0.52 | -- |

Sintesi

Tipo di normativa: stati limite D.M. 18
 Tipo di calcolo: statico

Dati generali della struttura

- Sito di costruzione: sconosciuto
- Edificio esistente: No
- Tipo di opera: Grande opera
- Vita nominale V_n: 100.00
- Classe d'uso: Classe III
- Coefficiente d'uso CU: 1.50
- Periodo di riferimento VR: 150.00

Condizioni di carico elementari

Simbologia

- CCE = Numero della condizione di carico elementare
- Comm. = Commento
- Dir. = Direzione del vento
- J_{px} = Moltiplicatore del momento d'inerzia intorno all'asse X
- J_{py} = Moltiplicatore del momento d'inerzia intorno all'asse Y
- J_{pz} = Moltiplicatore del momento d'inerzia intorno all'asse Z
- M_x = Moltiplicatore della massa in dir. X
- M_y = Moltiplicatore della massa in dir. Y
- M_z = Moltiplicatore della massa in dir. Z
- Sic. = Contributo alla sicurezza
- S = a sfavore
- Tipo = Tipologia di pressione vento
- M = Massimizzata
- E = Esterna
- I = Interna

Relazione di calcolo

Tipo CCE = Tipo di CCE per calcolo agli stati limite
 Var. = Tipo di variabilità
 S = di base
 s = Coeff. di riduzione (T.A. o S.L. D.M. 96)

| CCE | Comm. | Tipo CCE | Sic. | Var. | s | Dir. <grad> | Tipo | Mx | My | Mz | Jpx | Jpy | Jpz |
|-----|-------|----------|------|------|------|----------------|------|------|------|------|------|------|------|
| 1 | | 1 | S | -- | 1.00 | -- | -- | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 |

Materiali

Cemento armato

Elenco dei criteri di progetto e delle loro principali caratteristiche meccaniche utilizzate:
 Sezioni generiche: 3 Solo normativa generica
 Solette/Platee: 3

Calcestruzzo

Tipo di calcestruzzo: C40/50
 Rck calcestruzzo (Rck calcestruzzo): 500.00 <daN/cm²>
 Resistenza caratteristica cilindrica a compressione del calcestruzzo (Fck): 415.00 <daN/cm²>
 Resistenza caratteristica a trazione del calcestruzzo (Fctk): 25.17 <daN/cm²>
 α_{cc} : 0.85
 γ_c : 1.50
 Resistenza di calcolo a compressione del calcestruzzo (Fcd): 235.17 <daN/cm²>
 Resistenza di calcolo a trazione del calcestruzzo (Fctd): 16.78 <daN/cm²>

Acciaio

Tipo di acciaio: B450C
 Tensione caratteristica di snervamento dell'acciaio (Fyk): 4500.00 <daN/cm²>
 γ_s : 1.15
 Resistenza di calcolo dell'acciaio (Fyd): 3913.04 <daN/cm²>

Piinti/Pali: 3

Calcestruzzo

Tipo di calcestruzzo: C30/37
 Rck calcestruzzo (Rck calcestruzzo): 370.00 <daN/cm²>
 Resistenza caratteristica cilindrica a compressione del calcestruzzo (Fck): 307.10 <daN/cm²>
 Resistenza caratteristica a trazione del calcestruzzo (Fctk): 20.59 <daN/cm²>
 α_{cc} : 0.85
 γ_c : 1.50
 Resistenza di calcolo a compressione del calcestruzzo (Fcd): 174.02 <daN/cm²>
 Resistenza di calcolo a trazione del calcestruzzo (Fctd): 13.73 <daN/cm²>

Acciaio

Tipo di acciaio: B450C
 Tensione caratteristica di snervamento dell'acciaio (Fyk): 4500.00 <daN/cm²>
 γ_s : 1.15
 Resistenza di calcolo dell'acciaio (Fyd): 3913.04 <daN/cm²>

Prove in sito

Elenco colonne stratigrafiche

Simbologia

ϕ' = Angolo di attrito efficace
 γ = Peso specifico del terreno naturale
 γ_{sat} = Peso specifico del terreno saturo
 Class. = Classificazione
 Coes. = Coesivo
 E = Modulo elastico normale
 E_{ed} = Modulo edometrico
 G = Modulo elastico tangenziale
 Spess. = Spessore
 St. = Strato
 Unità geotecnica = Unità geotecnica
 c_u = Coesione non drenata
 c' = Coesione efficace
 z = Profondità della superficie superiore dello strato

Colonna stratigrafica numero 1 COLONNA STRATIGRAFICA

| St. | z <m> | Spess. <cm> | Unità geotecnica | Class. | γ <daN/mc> | γ_{sat} <daN/mc> | ϕ' <grad> | c' <daN/mq> | c_u <daN/mq> | E <daN/mq> | G <daN/mq> | E_{ed} <daN/mq> |
|-----|----------|----------------|--|--------|----------------------|----------------------------|-------------------|------------------|-------------------|---------------|---------------|----------------------|
| 1 | 0.00 | 4.50 | 1 ARGILLE BRECCIATE DI COLORE NOCCIOLA | Coes. | 1947.00 | 2030.00 | 19.18 | 3190.00 | 6110.00 | 311500.00 | 210300.00 | 500000.00 |
| 2 | 4.50 | -- | 2 ARGILLE BRECCIATE GRIGIO-AZZURRE | Coes. | 1997.00 | 2130.00 | 22.23 | 4710.00 | 13090.00 | 533200.00 | 359900.00 | 855800.00 |

Le verifiche degli elementi di fondazione sono state effettuate utilizzando l'approccio 2 - Combinazione 1.

Coefficienti parziali per le azioni, per verifiche in condizioni statiche:

Permanenti strutturali, sicurezza a favore $\gamma_A = 1.00$;

Permanenti strutturali, sicurezza a sfavore $\gamma_A = 1.30$;

Permanenti non strutturali, sicurezza a favore $\gamma_A = 0.00$;

Relazione di calcolo

Permanenti non strutturali, sicurezza a sfavore $\gamma_A = 1.50$;

Variabili, sicurezza a favore $\gamma_A = 0.00$;

Variabili, sicurezza a sfavore $\gamma_A = 1.50$.

I coefficienti parziali per le azioni sono posti pari all'unità per le verifiche in condizioni sismiche.

Tali coefficienti sono comunque desumibili dalla tabella delle combinazioni delle CCE (Parametri di calcolo).

Coefficienti parziali per i parametri geotecnici:

Tangente dell'angolo di attrito $\gamma_M = 1.00$;

Coesione efficace $\gamma_M = 1.00$;

Coesione non drenata $\gamma_M = 1.00$;

Coefficienti parziali per la resistenza delle fondazioni superficiali:

Capacità portante $\gamma_R = 2.30$;

Scorrimento $\gamma_R = 1.10$;

Coefficienti parziali per la resistenza delle fondazioni profonde:

Per pali infissi:

Resistenza alla base $\gamma_{R,b} = 1.15$;

Resistenza laterale in compressione $\gamma_{R,s} = 1.15$;

Resistenza laterale in trazione $\gamma_{R,t} = 1.25$;

Per pali trivellati:

Resistenza alla base $\gamma_{R,b} = 1.35$;

Resistenza laterale in compressione $\gamma_{R,s} = 1.15$;

Resistenza laterale in trazione $\gamma_{R,t} = 1.25$;

Per pali ad elica continua:

Resistenza alla base $\gamma_{R,b} = 1.30$;

Resistenza laterale in compressione $\gamma_{R,s} = 1.15$;

Resistenza laterale in trazione $\gamma_{R,t} = 1.25$;

Fattore di correlazione per la determinazione della resistenza caratteristica desumibile dai criteri di progetto.

Minimo coefficiente di sicurezza

Simbologia

CC = Numero della combinazione delle condizioni di carico elementari

Elem. = Elemento

Sic. = Sicurezza

TCC = Tipo di combinazione di carico

SLU = Stato limite ultimo

SLE R = Stato limite d'esercizio, combinazione rara

SLE F = Stato limite d'esercizio, combinazione frequente

SLE Q = Stato limite d'esercizio, combinazione quasi permanente

TV = Tipo di verifica

PRFL = Flessione e pressoflessione

TAG = Taglio o altre rotture fragili

NOD = Nodi in c.a. e collegamenti in acciaio

STAB = Stabilità

CP = Capacità portante

RNP = Resistenza nel piano

RFP = Resistenza fuori piano

CIN = Cinematismi

CON = Connessioni

Tabella elementi e minimo coefficiente di sicurezza

| Elem. | CC | TCC | TV | Sic. |
|----------------------|----|-------|------|--------|
| Platea a quota 0 | 1 | SLU | PRFL | 0.030 |
| Platea a quota 0 | 1 | SLU | TAG | 0.074 |
| Plinto/Palo n. 12 | 2 | SLE R | PRFL | 2.112 |
| Plinto/Palo n. 12 | 1 | SLU | TAG | 4.202 |
| Sezione SEZIONE N.8 | | SLU | PRFL | 1.015 |
| Sezione SEZIONE N.10 | | SLV | TAG | >100.0 |

Minimo coefficiente di sicurezza:0.030