

DATI RELATIVI AI NODI DELLA STRUTTURA

Convenzioni Adottate

- La terna di riferimento generale è destrorsa.
- I nodi vengono numerati, con riferimento a una sezione orizzontale, da sinistra a destra, dal basso verso l'alto e per quote crescenti.
- I nodi aventi numerazione compresa tra 1 e 9999 sono nodi reali della struttura, mentre i nodi con numerazione superiore (10000 e oltre) vengono utilizzati dal programma di calcolo esclusivamente per definire l'orientamento, nello spazio, della sezione delle aste (vedi elementi tipo Pilastro-Trave).
- L'impalcato di appartenenza di un nodo è definito, in generale, dalla prima delle tre cifre che ne definiscono il numero, possono tuttavia presentarsi casi in cui si hanno più di 100 nodi per solaio nel qual caso il solaio di appartenenza è specificato dall'ultimo valore stampato nella riga dei dati relativi al nodo.
- La maschera dei vincoli è costituita dai valori 0 e 1. Il valore 1 indica che per il nodo in riferimento il grado di libertà correlativo è soppresso mentre il valore 0 indica che è libero.

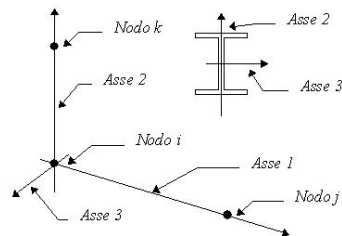
- Nel caso di edifici civili multipiano l'asse z generale coincide con l'asse verticale rivolto verso l'alto.

| Nodo | x | y | z | Ux | Uy | Uz | Rx | Ry | Rz | Solaio |
|------|-------|-------|------|----|----|----|----|----|----|--------|
| | [m] | [m] | [m] | | | | | | | |
| 1011 | 0.00 | 0.47 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1012 | 2.22 | 0.47 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1013 | 7.57 | 0.47 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1014 | 10.80 | 0.47 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1022 | 10.80 | 3.45 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1027 | 2.22 | 4.00 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1028 | 4.90 | 4.00 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1029 | 7.57 | 4.00 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1030 | 10.80 | 4.55 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1039 | 10.40 | 7.37 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1040 | 10.80 | 7.37 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1045 | 2.22 | 7.65 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1046 | 5.95 | 7.65 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1047 | 7.57 | 7.65 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1048 | 9.40 | 7.65 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1049 | 10.40 | 7.65 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1061 | 2.22 | 10.00 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1062 | 5.95 | 10.00 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1063 | 9.40 | 10.00 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1077 | 2.22 | 12.50 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1078 | 5.95 | 12.50 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1079 | 9.40 | 12.50 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1094 | 0.00 | 15.80 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1095 | 2.22 | 15.80 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1096 | 4.70 | 15.80 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1097 | 6.69 | 15.80 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1098 | 9.40 | 15.80 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1099 | 10.40 | 15.80 | 3.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

ELEMENTI TIPO TRAVE

Convenzioni Adottate

La terna di riferimento locale della trave risulta essere così disposta:



Caratteristiche dei Materiali:

| Tipo | Modulo Elastico [kg/cm²] | v | alfa [1/°C] | Peso Specifico [kg/m³] | Commento |
|------|-----------------------------|-------|----------------|---------------------------|----------|
| 1 | 300000.0 | 0.120 | 0.000012 | 2500.0 | Rbk 300 |
| 2 | 285000.0 | 0.120 | 0.000010 | 2500.0 | Rbk 250 |

Sezioni Impiegate:

| Sezione | Materiale | Tipo di Sezione | Parametri Dimensionali Commenti |
|---------|-----------|-----------------|------------------------------------|
| 1 | 1 | a T | B= 115 H= 54 b= 30 h= 24 T 115x54 |
| 2 | 1 | a T | B= 95 H= 54 b= 30 h= 24 T 95x54 |
| 3 | 1 | a T | B= 60 H= 54 b= 30 h= 24 T 60x54 |
| 4 | 1 | a T | B= 90 H= 54 b= 30 h= 27 T 90x54 |
| 6 | 1 | a T | B= 65 H= 54 b= 30 h= 24 T 65x54 |
| 7 | 1 | Rett. | B= 30 H= 40 B30xH40 |
| 8 | 1 | a T | B= 140 H= 54 b= 30 h= 24 T 140x54 |
| 9 | 1 | a T | B= 130 H= 54 b= 30 h= 24 T 130x54 |

Caratteristiche Inerziali:

| Sezione | Materiale | Area [cm²] | Jt [cm⁴] | J2 [cm⁴] | J3 [cm⁴] | J23 [cm⁴] | Xx | Xy |
|---------|-----------|---------------|-------------|-------------|-------------|--------------|-----|-----|
| 1 | 1 | 3660.00 | 1179300 | 694744 | 3109250 | -0 | 1.2 | 1.2 |
| 2 | 1 | 3180.00 | 1052237 | 647351 | 1782250 | -0 | 1.2 | 1.2 |
| 3 | 1 | 2340.00 | 720813 | 540374 | 499500 | 0 | 1.2 | 1.2 |
| 4 | 1 | 3240.00 | 1176995 | 639697 | 1701000 | -0 | 1.2 | 1.2 |
| 6 | 1 | 2460.00 | 779060 | 558443 | 616750 | -0 | 1.2 | 1.2 |
| 7 | 1 | 1200.00 | 186385 | 160000 | 90000 | -0 | 1.2 | 1.2 |
| 8 | 1 | 4260.00 | 1306520 | 746267 | 5555500 | -0 | 1.2 | 1.2 |
| 9 | 1 | 4020.00 | 1258480 | 726472 | 4461499 | -0 | 1.2 | 1.2 |

Sezioni con riduzione della resistenza flessionale-tagliante

| Sezione | Fattore di Efficacia |
|-----------------|----------------------|
| 5 Rett. cordolo | 42 |

| Travata | Trave | Nodo i | Nodo j | Nodo k | Materiale | Sezione | Luce [m] | Vi12 | Vj12 | Vi13 | Vj13 |
|---------|-------|-----------|-----------|-----------|-----------|---------|-------------|------|------|------|------|
| 1 | 1 | 1012 | 1011 | 10114 | 1 | 6 | 2.22 | 100 | 25 | 100 | 100 |
| 3 | 1 | 1013 | 1012 | 10113 | 1 | 6 | 5.35 | 100 | 100 | 100 | 100 |
| 5 | 1 | 1014 | 1013 | 10112 | 1 | 6 | 3.22 | 25 | 100 | 100 | 100 |
| 7 | 1 | 1027 | 1028 | 10016 | 1 | 8 | 2.67 | 25 | 100 | 100 | 100 |
| 7 | 2 | 1028 | 1029 | 10016 | 1 | 8 | 2.68 | 100 | 25 | 100 | 100 |
| 8 | 1 | 1045 | 1046 | 10116 | 1 | 4 | 3.72 | 25 | 100 | 100 | 100 |
| 8 | 2 | 1046 | 1047 | 10117 | 1 | 4 | 1.63 | 100 | 100 | 100 | 100 |
| 8 | 3 | 1047 | 1048 | 10118 | 1 | 4 | 1.82 | 100 | 100 | 100 | 100 |
| 8 | 4 | 1048 | 1049 | 10119 | 1 | 4 | 1.00 | 100 | 25 | 100 | 100 |
| 9 | 1 | 1039 | 1040 | 10054 | 2 | 5 | 0.40 | 100 | 100 | 100 | 100 |
| 11 | 1 | 1077 | 1078 | 10013 | 1 | 6 | 3.72 | 25 | 100 | 100 | 100 |
| 11 | 2 | 1078 | 1079 | 10115 | 1 | 6 | 3.45 | 100 | 25 | 100 | 100 |
| 13 | 1 | 1094 | 1095 | 10009 | 1 | 6 | 2.22 | 25 | 100 | 100 | 100 |
| 13 | 2 | 1095 | 1096 | 10008 | 1 | 6 | 2.47 | 100 | 100 | 100 | 100 |
| 13 | 3 | 1096 | 1097 | 10007 | 1 | 6 | 1.99 | 100 | 100 | 100 | 100 |
| 13 | 4 | 1097 | 1098 | 10006 | 1 | 6 | 2.70 | 100 | 100 | 100 | 100 |
| 13 | 5 | 1098 | 1099 | 10005 | 1 | 6 | 1.00 | 100 | 25 | 100 | 100 |
| 17 | 1 | 1012 | 1027 | 10017 | 1 | 1 | 3.53 | 100 | 100 | 100 | 100 |
| 17 | 2 | 1027 | 1045 | 10016 | 1 | 1 | 3.65 | 100 | 100 | 100 | 100 |
| 17 | 3 | 1045 | 1061 | 10015 | 1 | 1 | 2.35 | 100 | 100 | 100 | 100 |
| 17 | 4 | 1061 | 1077 | 10014 | 1 | 1 | 2.50 | 100 | 100 | 100 | 100 |
| 17 | 5 | 1077 | 1095 | 10013 | 1 | 1 | 3.30 | 100 | 25 | 100 | 100 |
| 18 | 1 | 1046 | 1062 | 10004 | 1 | 9 | 2.35 | 30 | 100 | 100 | 100 |
| 18 | 2 | 1062 | 1078 | 10003 | 1 | 9 | 2.50 | 100 | 30 | 100 | 100 |
| 19 | 1 | 1013 | 1029 | 10120 | 1 | 4 | 3.53 | 30 | 100 | 100 | 100 |
| 19 | 2 | 1029 | 1047 | 10121 | 1 | 4 | 3.65 | 100 | 100 | 100 | 100 |
| 20 | 1 | 1048 | 1063 | 10002 | 1 | 1 | 2.35 | 100 | 100 | 100 | 100 |
| 20 | 2 | 1063 | 1079 | 10001 | 1 | 1 | 2.50 | 100 | 100 | 100 | 100 |
| 20 | 3 | 1079 | 1098 | 10000 | 1 | 1 | 3.30 | 100 | 25 | 100 | 100 |
| 21 | 1 | 1014 | 1022 | 10012 | 1 | 1 | 2.97 | 25 | 100 | 100 | 100 |
| 21 | 2 | 1022 | 1030 | 10011 | 1 | 1 | 1.10 | 100 | 100 | 100 | 100 |
| 21 | 3 | 1030 | 1040 | 10010 | 1 | 1 | 2.82 | 100 | 25 | 100 | 100 |
| 22 | 1 | 1049 | 1039 | 10055 | 2 | 5 | 0.28 | 100 | 100 | 100 | 100 |

CONDIZIONI E COMBINAZIONI DI CARICO

Condizioni di carico definite:

- Cond. 1 peso proprio
- Cond. 2 pavim.
- Cond. 3 accid
- Cond. 4 macchine

Combinazioni agli Stati Limite Ultimi

Combinazione di carico numero

| | | | | | | | | | | | |
|------------|--|--------|--|--------|--|--------|--|--------|--|--|--|
| 1 | | | | 1 | | | | | | | |
| Comb.\Cond | | 1 | | 2 | | 3 | | 4 | | | |
| 1 | | 1.4000 | | 1.4000 | | 1.5000 | | 1.4000 | | | |

Combinazioni RARE Stati Limite di Esercizio

Combinazione di carico numero

| | | | | | | | | | | | |
|------------|--|--------|--|--------|--|--------|--|--------|--|--|--|
| 2 | | | | | | | | | | | |
| Comb.\Cond | | 1 | | 2 | | 3 | | 4 | | | |
| 2 | | 1.0000 | | 1.0000 | | 1.0000 | | 1.0000 | | | |

Combinazioni FREQUENTI Stati Limite di Esercizio

Combinazione di carico numero

| | | | | | | | | | | | |
|------------|--|--------|--|--------|--|--------|--|--------|--|--|--|
| 3 | | | | | | | | | | | |
| Comb.\Cond | | 1 | | 2 | | 3 | | 4 | | | |
| 3 | | 1.0000 | | 1.0000 | | 0.7000 | | 1.0000 | | | |

Combinazioni QUASI PERMANENTI Stati Limite di Esercizio

Combinazione di carico numero

| | | | | | | | | | | | |
|------------|--|--------|--|--------|--|--------|--|--------|--|--|--|
| 4 | | | | | | | | | | | |
| Comb.\Cond | | 1 | | 2 | | 3 | | 4 | | | |
| 4 | | 1.0000 | | 1.0000 | | 0.6000 | | 1.0000 | | | |

CARICHI APPLICATI ALLE ASTE

I carichi riportati sono da intendersi nel riferimento locale dell'asta.

Vengono distinti i seguenti tipi di carico:

| | |
|------|--|
| qc | Carico Distribuito Costante. |
| qc.p | Carico Distribuito Costante agente su una porzione di asta. |
| qv | Carico Distribuito Variabile Linearmente |
| qv.p | Carico Distribuito Variabile Linearmente agente su una porzione di asta |
| P.c. | Carico Concentrato in campata. La distanza del punto di applicazione del carico viene misurata a partire dal primo nodo. |
| M.c. | Coppia Concentrata in campata. La distanza del punto di applicazione del carico viene misurata a partire dal primo nodo. |
| Dt | Variazione termica assiale. |
| Dt12 | Variazione termica a farfalla nel piano 1-2 dell'asta. |
| Dt13 | Variazione termica a farfalla nel piao 1-3 dell'asta. |
| qSup | Carico Superficiale Uniformemente distribuito su tutto l'elemento. |

Poichè alcuni carichi distribuiti sull'elemento derivano da carichi di tipo superficiale i parametri q_x , q_y , q_z , riportano l'intensità del carico a m^2 applicato alla superficie di carico.

| Elemento (Lato) | L [m] | Tipo | Cond. | p1 | p2 | p3 | Da x [m] | A x [m] | qz [kg/m ²] |
|--------------------|----------|------|-------|------|--------|-----|----------------------------|----------------------------|----------------------------|
| D A | | | | p4 | p5 | p6 | qx [kg/m ²] | qy [kg/m ²] | |
| 1012-1011 | 2.22 | qc | 1 | 0.0 | 615.0 | 0.0 | 0.00 | 2.22 | |
| | | | | 0.0 | 615.0 | 0.0 | | | |
| | | qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 2.22 | |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| 1013-1012 | 5.35 | qc | 1 | 0.0 | 615.0 | 0.0 | 0.00 | 5.35 | |
| | | | | 0.0 | 615.0 | 0.0 | | | |
| | | qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 5.35 | |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| | | qv.p | 1 | 0.0 | 105.7 | 0.0 | 2.67 | 5.35 | |
| | | | | 0.0 | 105.7 | 0.0 | | | |
| | | qv.p | 3 | 0.0 | 3525.0 | 0.0 | 2.67 | 5.35 | |
| | | | | 0.0 | 3525.0 | 0.0 | | | |
| | | qv.p | 1 | -0.0 | 105.7 | 0.0 | 0.00 | 2.67 | 60.0 |
| | | | | -0.0 | 105.7 | 0.0 | | | |
| | | qv.p | 3 | 0.0 | 3525.0 | 0.0 | 0.00 | 2.67 | 2000.0 |
| | | | | 0.0 | 3525.0 | 0.0 | | | |
| 1014-1013 | 3.22 | qc | 1 | 0.0 | 615.0 | 0.0 | 0.00 | 3.22 | |
| | | | | 0.0 | 615.0 | 0.0 | | | |
| | | qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 3.22 | |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| 1027-1028 | 2.67 | qc | 1 | 0.0 | 1065.0 | 0.0 | 0.00 | 2.67 | |
| | | | | 0.0 | 1065.0 | 0.0 | | | |
| | | qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 2.67 | |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| | | qv | 1 | 0.0 | 109.5 | 0.0 | 0.00 | 2.67 | |
| | | | | 0.0 | 109.5 | 0.0 | | | |
| | | qv | 3 | 0.0 | 3650.0 | 0.0 | 0.00 | 2.67 | |
| | | | | 0.0 | 3650.0 | 0.0 | | | |
| | | qv | 1 | -0.0 | 105.7 | 0.0 | 0.00 | 2.67 | 60.0 |
| | | | | -0.0 | 105.7 | 0.0 | | | |
| | | qv | 3 | -0.0 | 3525.0 | 0.0 | 0.00 | 2.67 | 2000.0 |
| | | | | -0.0 | 3525.0 | 0.0 | | | |
| 1028-1029 | 2.68 | qc | 1 | 0.0 | 1065.0 | 0.0 | 0.00 | 2.68 | |
| | | | | 0.0 | 1065.0 | 0.0 | | | |
| | | qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 2.68 | |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| | | qv.p | 1 | 0.0 | 109.5 | 0.0 | 0.00 | 1.05 | |
| | | | | 0.0 | 109.5 | 0.0 | | | |
| | | qv.p | 3 | -0.0 | 3650.0 | 0.0 | 0.00 | 1.05 | 60.0 |
| | | | | -0.0 | 3650.0 | 0.0 | | | |
| | | qv.p | 1 | -0.0 | 109.5 | 0.0 | 1.05 | 2.68 | |
| | | | | -0.0 | 109.5 | 0.0 | | | |
| | | qv.p | 3 | -0.0 | 3650.0 | 0.0 | 1.05 | 2.68 | 60.0 |
| | | | | -0.0 | 3650.0 | 0.0 | | | |
| | | qv | 1 | -0.0 | 105.8 | 0.0 | 0.00 | 2.68 | |
| | | | | -0.0 | 105.8 | 0.0 | | | |
| | | qv | 3 | -0.0 | 3525.0 | 0.0 | 0.00 | 2.68 | 60.0 |
| | | | | -0.0 | 3525.0 | 0.0 | | | |
| 1045-1046 | 3.72 | qc | 1 | 0.0 | 810.0 | 0.0 | 0.00 | 3.72 | |
| | | | | 0.0 | 810.0 | 0.0 | | | |
| | | qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 3.72 | |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| | | qv.p | 1 | -0.0 | 109.5 | 0.0 | 2.67 | 3.72 | |
| | | | | -0.0 | 109.5 | 0.0 | | | |
| | | qv.p | 3 | -0.0 | 3650.0 | 0.0 | 2.67 | 3.72 | |
| | | | | -0.0 | 3650.0 | 0.0 | | | |
| | | qv.p | 1 | 0.0 | 109.5 | 0.0 | 0.00 | 2.67 | 60.0 |
| | | | | 0.0 | 109.5 | 0.0 | | | |
| | | qv.p | 3 | 0.0 | 3650.0 | 0.0 | 0.00 | 2.67 | 2000.0 |
| | | | | 0.0 | 3650.0 | 0.0 | | | |
| 1046-1047 | 1.63 | qc | 1 | 0.0 | 810.0 | 0.0 | 0.00 | 1.63 | |
| | | | | 0.0 | 810.0 | 0.0 | | | |
| | | qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 1.63 | |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| | | qv | 1 | 0.0 | 109.5 | 0.0 | 0.00 | 1.63 | |
| | | | | 0.0 | 109.5 | 0.0 | | | |
| | | qv | 3 | -0.0 | 3650.0 | 0.0 | 0.00 | 1.63 | 60.0 |
| | | | | -0.0 | 3650.0 | 0.0 | | | |
| 1047-1048 | 1.82 | qc | 1 | 0.0 | 810.0 | 0.0 | 0.00 | 1.82 | |
| | | | | 0.0 | 810.0 | 0.0 | | | |
| | | qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 1.82 | |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| 1048-1049 | 1.00 | qc | 1 | 0.0 | 810.0 | 0.0 | 0.00 | 1.00 | |
| | | | | 0.0 | 810.0 | 0.0 | | | |
| | | qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 1.00 | |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| 1077-1078 | 3.72 | qc | 1 | 0.0 | 615.0 | 0.0 | 0.00 | 3.72 | |

| | | | | | | | | | |
|-----------|------|--|--|------|--------|-----|------|------|--------|
| | | | | 0.0 | 615.0 | 0.0 | 0.00 | 3.72 | |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| | | | | -0.0 | 99.0 | 0.0 | | | |
| | | | | -0.0 | 99.0 | 0.0 | | | 60.0 |
| | | | | 0.0 | 3300.0 | 0.0 | | | 2000.0 |
| | | | | 0.0 | 3300.0 | 0.0 | | | |
| | | | | -0.0 | 99.0 | 0.0 | | | 60.0 |
| | | | | -0.0 | 99.0 | 0.0 | | | |
| | | | | 0.0 | 3300.0 | 0.0 | | | 2000.0 |
| | | | | 0.0 | 3300.0 | 0.0 | | | |
| | | | | 0.0 | 3300.0 | 0.0 | | | |
| 1078-1079 | 3.45 | | | 0.0 | 615.0 | 0.0 | 0.00 | 3.45 | |
| | | | | 0.0 | 615.0 | 0.0 | | | |
| | | | | 0.0 | 300.0 | 0.0 | | | 60.0 |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| | | | | -0.0 | 99.0 | 0.0 | | | 2000.0 |
| | | | | -0.0 | 99.0 | 0.0 | | | |
| | | | | 0.0 | 3300.0 | 0.0 | | | 60.0 |
| | | | | 0.0 | 3300.0 | 0.0 | | | |
| | | | | -0.0 | 99.0 | 0.0 | | | 2000.0 |
| | | | | -0.0 | 99.0 | 0.0 | | | |
| | | | | 0.0 | 3300.0 | 0.0 | | | 2000.0 |
| | | | | 0.0 | 3300.0 | 0.0 | | | |
| 1094-1095 | 2.22 | | | 0.0 | 615.0 | 0.0 | 0.00 | 2.22 | |
| | | | | 0.0 | 615.0 | 0.0 | | | |
| | | | | 0.0 | 300.0 | 0.0 | | | 600.0 |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| | | | | 0.0 | 1140.0 | 0.0 | | | 300.0 |
| | | | | 0.0 | 1140.0 | 0.0 | | | |
| | | | | 0.0 | 570.0 | 0.0 | | | 2000.0 |
| | | | | 0.0 | 570.0 | 0.0 | | | |
| | | | | -0.0 | 3800.0 | 0.0 | | | 600.0 |
| | | | | -0.0 | 3800.0 | 0.0 | | | |
| | | | | 0.0 | 1140.0 | 0.0 | | | 300.0 |
| | | | | 0.0 | 1140.0 | 0.0 | | | |
| 1095-1096 | 2.47 | | | 0.0 | 615.0 | 0.0 | 0.00 | 2.47 | |
| | | | | 0.0 | 615.0 | 0.0 | | | |
| | | | | 0.0 | 300.0 | 0.0 | | | 60.0 |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| | | | | -0.0 | 99.0 | 0.0 | | | 2000.0 |
| | | | | -0.0 | 99.0 | 0.0 | | | |
| | | | | 0.0 | 3300.0 | 0.0 | | | 600.0 |
| | | | | 0.0 | 3300.0 | 0.0 | | | |
| | | | | 0.0 | 1140.0 | 0.0 | | | 300.0 |
| | | | | 0.0 | 1140.0 | 0.0 | | | |
| | | | | 0.0 | 570.0 | 0.0 | | | 2000.0 |
| | | | | 0.0 | 570.0 | 0.0 | | | |
| 1096-1097 | 1.99 | | | 0.0 | 615.0 | 0.0 | 0.00 | 1.99 | |
| | | | | 0.0 | 615.0 | 0.0 | | | |
| | | | | 0.0 | 300.0 | 0.0 | | | 60.0 |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| | | | | -0.0 | 99.0 | 0.0 | | | 2000.0 |
| | | | | -0.0 | 99.0 | 0.0 | | | |
| | | | | 0.0 | 3300.0 | 0.0 | | | 60.0 |
| | | | | 0.0 | 3300.0 | 0.0 | | | |
| | | | | -0.0 | 99.0 | 0.0 | | | 2000.0 |
| | | | | -0.0 | 99.0 | 0.0 | | | |
| | | | | 0.0 | 3300.0 | 0.0 | | | 600.0 |
| | | | | 0.0 | 3300.0 | 0.0 | | | |

| | | | | | | | | | |
|-----------|------|------|---|------|--------|-----|------|------|--------|
| | | qv.p | 3 | -0.0 | 3800.0 | 0.0 | 1.19 | 1.99 | |
| | | | | -0.0 | 3800.0 | 0.0 | 0.0 | 0.0 | |
| 1097-1098 | 2.70 | qc | 1 | 0.0 | 615.0 | 0.0 | 0.00 | 2.70 | |
| | | | | 0.0 | 615.0 | 0.0 | | | |
| | | qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 2.70 | |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| | | qv | 1 | -0.0 | 99.0 | 0.0 | 0.00 | 2.70 | |
| | | | | -0.0 | 99.0 | 0.0 | 0.0 | 0.0 | 60.0 |
| | | qv | 3 | 0.0 | 3300.0 | 0.0 | 0.00 | 2.70 | |
| | | | | 0.0 | 3300.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv.p | 1 | 0.0 | 1140.0 | 0.0 | 0.00 | 0.86 | |
| | | | | 0.0 | 1140.0 | 0.0 | 0.0 | 0.0 | 600.0 |
| | | qv.p | 2 | 0.0 | 570.0 | 0.0 | 0.00 | 0.86 | |
| | | | | 0.0 | 570.0 | 0.0 | 0.0 | 0.0 | 300.0 |
| | | qv.p | 3 | -0.0 | 3800.0 | 0.0 | 0.00 | 0.86 | |
| | | | | -0.0 | 3800.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv.p | 1 | 0.0 | 1140.0 | 0.0 | 0.86 | 1.94 | |
| | | | | 0.0 | 1140.0 | 0.0 | 0.0 | 0.0 | 600.0 |
| | | qv.p | 2 | 0.0 | 570.0 | 0.0 | 0.86 | 1.94 | |
| | | | | 0.0 | 570.0 | 0.0 | 0.0 | 0.0 | 300.0 |
| | | qv.p | 3 | -0.0 | 3800.0 | 0.0 | 0.86 | 1.94 | |
| | | | | -0.0 | 3800.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv.p | 1 | 0.0 | 1140.0 | 0.0 | 1.94 | 2.70 | |
| | | | | 0.0 | 1140.0 | 0.0 | 0.0 | 0.0 | 600.0 |
| | | qv.p | 2 | 0.0 | 570.0 | 0.0 | 1.94 | 2.70 | |
| | | | | 0.0 | 570.0 | 0.0 | 0.0 | 0.0 | 300.0 |
| | | qv.p | 3 | -0.0 | 3800.0 | 0.0 | 1.94 | 2.70 | |
| | | | | -0.0 | 3800.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| 1098-1099 | 1.00 | qc | 1 | 0.0 | 615.0 | 0.0 | 0.00 | 1.00 | |
| | | | | 0.0 | 615.0 | 0.0 | | | |
| | | qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 1.00 | |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| | | qv | 1 | 0.0 | 1140.0 | 0.0 | 0.00 | 1.00 | |
| | | | | 0.0 | 1140.0 | 0.0 | 0.0 | 0.0 | 600.0 |
| | | qv | 2 | 0.0 | 570.0 | 0.0 | 0.00 | 1.00 | |
| | | | | 0.0 | 570.0 | 0.0 | 0.0 | 0.0 | 300.0 |
| | | qv | 3 | -0.0 | 3800.0 | 0.0 | 0.00 | 1.00 | |
| | | | | -0.0 | 3800.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| 1012-1027 | 3.53 | qc | 1 | 0.0 | 915.0 | 0.0 | 0.00 | 3.53 | |
| | | | | 0.0 | 915.0 | 0.0 | | | |
| | | qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 3.53 | |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| | | qv.p | 1 | 0.0 | 66.8 | 0.0 | 0.00 | 0.77 | |
| | | | | 0.0 | 66.8 | 0.0 | 0.0 | 0.0 | 60.0 |
| | | qv.p | 3 | 0.0 | 2225.0 | 0.0 | 0.00 | 0.77 | |
| | | | | 0.0 | 2225.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv.p | 1 | 0.0 | 66.8 | 0.0 | 0.77 | 1.54 | |
| | | | | 0.0 | 66.8 | 0.0 | 0.0 | 0.0 | 60.0 |
| | | qv.p | 3 | 0.0 | 2225.0 | 0.0 | 0.77 | 1.54 | |
| | | | | 0.0 | 2225.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv.p | 1 | 0.0 | 66.7 | 0.0 | 1.54 | 2.31 | |
| | | | | 0.0 | 66.7 | 0.0 | 0.0 | 0.0 | 60.0 |
| | | qv.p | 3 | 0.0 | 2225.0 | 0.0 | 1.54 | 2.31 | |
| | | | | 0.0 | 2225.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv.p | 1 | 0.0 | 66.7 | 0.0 | 2.31 | 3.07 | |
| | | | | 0.0 | 66.7 | 0.0 | 0.0 | 0.0 | 60.0 |
| | | qv.p | 3 | 0.0 | 2225.0 | 0.0 | 2.31 | 3.07 | |
| | | | | 0.0 | 2225.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv.p | 1 | 0.0 | 66.8 | 0.0 | 3.07 | 3.53 | |
| | | | | 0.0 | 66.8 | 0.0 | 0.0 | 0.0 | 60.0 |
| | | qv.p | 3 | 0.0 | 2225.0 | 0.0 | 3.07 | 3.53 | |
| | | | | 0.0 | 2225.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| 1027-1045 | 3.65 | qc | 1 | 0.0 | 915.0 | 0.0 | 0.00 | 3.65 | |
| | | | | 0.0 | 915.0 | 0.0 | | | |
| | | qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 3.65 | |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| | | qv.p | 1 | 0.0 | 66.8 | 0.0 | 0.00 | 0.55 | |
| | | | | 0.0 | 66.8 | 0.0 | 0.0 | 0.0 | 60.0 |
| | | qv.p | 3 | 0.0 | 2225.0 | 0.0 | 0.00 | 0.55 | |
| | | | | 0.0 | 2225.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv.p | 1 | 0.0 | 66.8 | 0.0 | 0.55 | 1.33 | |
| | | | | 0.0 | 66.8 | 0.0 | 0.0 | 0.0 | 60.0 |
| | | qv.p | 3 | 0.0 | 2225.0 | 0.0 | 0.55 | 1.33 | |
| | | | | 0.0 | 2225.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv.p | 1 | 0.0 | 66.7 | 0.0 | 1.33 | 2.10 | |
| | | | | 0.0 | 66.7 | 0.0 | 0.0 | 0.0 | 60.0 |
| | | qv.p | 3 | 0.0 | 2225.0 | 0.0 | 1.33 | 2.10 | |
| | | | | 0.0 | 2225.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv.p | 1 | 0.0 | 66.7 | 0.0 | 2.10 | 2.88 | |
| | | | | 0.0 | 66.7 | 0.0 | 0.0 | 0.0 | 60.0 |
| | | qv.p | 3 | 0.0 | 2225.0 | 0.0 | 2.10 | 2.88 | |
| | | | | 0.0 | 2225.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv.p | 1 | 0.0 | 66.8 | 0.0 | 2.88 | 3.65 | |
| | | | | 0.0 | 66.8 | 0.0 | 0.0 | 0.0 | 60.0 |
| | | qv.p | 3 | 0.0 | 2225.0 | 0.0 | 2.88 | 3.65 | |
| | | | | 0.0 | 2225.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| 1045-1061 | 2.35 | qc | 1 | 0.0 | 915.0 | 0.0 | 0.00 | 2.35 | |
| | | | | 0.0 | 915.0 | 0.0 | | | |
| | | qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 2.35 | |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| | | qv | 1 | 0.0 | 111.8 | 0.0 | 0.00 | 2.35 | |
| | | | | 0.0 | 111.8 | 0.0 | 0.0 | 0.0 | 60.0 |

| | | | | | | | | | | |
|-----------|--------|-----|-----------|--------|--------|--------|------|-------|------|--|
| | | | qv | 3 | 0.0 | 3725.0 | 0.0 | 0.00 | 2.35 | |
| | | | 0.0 | 3725.0 | 0.0 | 0.0 | 0.0 | | | |
| | | | qv.p | 1 | 0.0 | 66.7 | 0.0 | 0.00 | 0.78 | |
| | | | 0.0 | 66.7 | 0.0 | 0.0 | 0.0 | | | |
| | | | qv.p | 3 | 0.0 | 2225.0 | 0.0 | 0.00 | 0.78 | |
| | | | 0.0 | 2225.0 | 0.0 | 0.0 | 0.0 | | | |
| | | | qv.p | 1 | 0.0 | 66.8 | 0.0 | 0.78 | 1.57 | |
| | | | 0.0 | 66.8 | 0.0 | 0.0 | 0.0 | | | |
| | | | qv.p | 3 | 0.0 | 2225.0 | 0.0 | 0.78 | 1.57 | |
| | | | 0.0 | 2225.0 | 0.0 | 0.0 | 0.0 | | | |
| | | | qv.p | 1 | 0.0 | 66.7 | 0.0 | 1.57 | 2.35 | |
| | | | 0.0 | 66.7 | 0.0 | 0.0 | 0.0 | | | |
| | | | qv.p | 3 | 0.0 | 2225.0 | 0.0 | 1.57 | 2.35 | |
| | | | 0.0 | 2225.0 | 0.0 | 0.0 | 0.0 | | | |
| | | | 0.0 | 2225.0 | 0.0 | 0.0 | 0.0 | | | |
| | | | 1061-1077 | 2.50 | qc | 1 | 0.0 | 915.0 | 0.0 | |
| 0.0 | 915.0 | 0.0 | | | | | | | | |
| qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 2.50 | | | | |
| 0.0 | 300.0 | 0.0 | | | | | | | | |
| qv | 1 | 0.0 | 111.7 | 0.0 | 0.00 | 2.50 | | | | |
| 0.0 | 111.7 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv | 3 | 0.0 | 3725.0 | 0.0 | 0.00 | 2.50 | | | | |
| 0.0 | 3725.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv.p | 1 | 0.0 | 66.8 | 0.0 | 0.00 | 0.78 | | | | |
| 0.0 | 66.8 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv.p | 3 | 0.0 | 2225.0 | 0.0 | 0.00 | 0.78 | | | | |
| 0.0 | 2225.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv.p | 1 | 0.0 | 66.8 | 0.0 | 0.78 | 1.57 | | | | |
| 0.0 | 66.8 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv.p | 3 | 0.0 | 2225.0 | 0.0 | 0.78 | 1.57 | | | | |
| 0.0 | 2225.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv.p | 1 | 0.0 | 66.8 | 0.0 | 1.57 | 2.50 | | | | |
| 0.0 | 66.8 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv.p | 3 | 0.0 | 2225.0 | 0.0 | 1.57 | 2.50 | | | | |
| 0.0 | 2225.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| 1077-1095 | 3.30 | qc | 1 | 0.0 | 915.0 | 0.0 | 0.00 | 3.30 | | |
| 0.0 | 915.0 | 0.0 | | | | | | | | |
| qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 3.30 | | | | |
| 0.0 | 300.0 | 0.0 | | | | | | | | |
| qv.p | 1 | 0.0 | 66.8 | 0.0 | 0.00 | 0.68 | | | | |
| 0.0 | 66.8 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv.p | 3 | 0.0 | 2225.0 | 0.0 | 0.00 | 0.68 | | | | |
| 0.0 | 2225.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv.p | 1 | 0.0 | 66.7 | 0.0 | 0.68 | 1.50 | | | | |
| 0.0 | 66.7 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv.p | 3 | 0.0 | 2225.0 | 0.0 | 0.68 | 1.50 | | | | |
| 0.0 | 2225.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv.p | 1 | 0.0 | 66.7 | 0.0 | 1.50 | 2.33 | | | | |
| 0.0 | 66.7 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv.p | 3 | 0.0 | 2225.0 | 0.0 | 1.50 | 2.33 | | | | |
| 0.0 | 2225.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv.p | 1 | 0.0 | 66.7 | 0.0 | 2.33 | 3.30 | | | | |
| 0.0 | 66.7 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv.p | 3 | 0.0 | 2225.0 | 0.0 | 2.33 | 3.30 | | | | |
| 0.0 | 2225.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| 1046-1062 | 2.35 | qc | 1 | 0.0 | 1005.0 | 0.0 | 0.00 | 2.35 | | |
| 0.0 | 1005.0 | 0.0 | | | | | | | | |
| qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 2.35 | | | | |
| 0.0 | 300.0 | 0.0 | | | | | | | | |
| qv | 1 | 0.0 | 103.5 | 0.0 | 0.00 | 2.35 | | | | |
| 0.0 | 103.5 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv | 3 | 0.0 | 3450.0 | 0.0 | 0.00 | 2.35 | | | | |
| 0.0 | 3450.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv | 1 | 0.0 | 111.8 | 0.0 | 0.00 | 2.35 | | | | |
| 0.0 | 111.8 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv | 3 | 0.0 | 3725.0 | 0.0 | 0.00 | 2.35 | | | | |
| 0.0 | 3725.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| 0.0 | 3725.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| 0.0 | 3725.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| 0.0 | 3725.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| 0.0 | 3725.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| 1062-1078 | 2.50 | qc | 1 | 0.0 | 1005.0 | 0.0 | 0.00 | 2.50 | | |
| 0.0 | 1005.0 | 0.0 | | | | | | | | |
| qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 2.50 | | | | |
| 0.0 | 300.0 | 0.0 | | | | | | | | |
| qv | 1 | 0.0 | 103.5 | 0.0 | 0.00 | 2.50 | | | | |
| 0.0 | 103.5 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv | 3 | 0.0 | 3450.0 | 0.0 | 0.00 | 2.50 | | | | |
| 0.0 | 3450.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv | 1 | 0.0 | 111.8 | 0.0 | 0.00 | 2.50 | | | | |
| 0.0 | 111.8 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv | 3 | 0.0 | 3725.0 | 0.0 | 0.00 | 2.50 | | | | |
| 0.0 | 3725.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| 0.0 | 3725.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| 0.0 | 3725.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| 0.0 | 3725.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| 0.0 | 3725.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| 1013-1029 | 3.53 | qc | 1 | 0.0 | 810.0 | 0.0 | 0.00 | 3.53 | | |
| 0.0 | 810.0 | 0.0 | | | | | | | | |
| qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 3.53 | | | | |
| 0.0 | 300.0 | 0.0 | | | | | | | | |
| qv.p | 1 | 0.0 | 96.7 | 0.0 | 2.97 | 3.53 | | | | |
| 0.0 | 96.7 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv.p | 3 | 0.0 | 3225.0 | 0.0 | 2.97 | 3.53 | | | | |
| 0.0 | 3225.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv.p | 1 | 0.0 | 96.7 | 0.0 | 0.00 | 2.97 | | | | |
| 0.0 | 96.7 | 0.0 | 0.0 | 0.0 | | | | | | |
| qv.p | 3 | 0.0 | 3225.0 | 0.0 | 0.00 | 2.97 | | | | |
| 0.0 | 3225.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| 0.0 | 3225.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| 0.0 | 3225.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| 0.0 | 3225.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| 0.0 | 3225.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| 1029-1047 | 3.65 | qc | 1 | 0.0 | 810.0 | 0.0 | 0.00 | 3.65 | | |
| 0.0 | 810.0 | 0.0 | | | | | | | | |

| | | | | | | | | | |
|-----------|------|------|---|-----|--------|-----|------|------|--------|
| 1048-1063 | 2.35 | | | 0.0 | 810.0 | 0.0 | | | |
| | | qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 3.65 | |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| | | qv.p | 1 | 0.0 | 84.8 | 0.0 | 3.37 | 3.65 | |
| | | | | 0.0 | 84.8 | 0.0 | 0.0 | 0.0 | 60.0 |
| | | qv.p | 3 | 0.0 | 2825.0 | 0.0 | 3.37 | 3.65 | |
| | | | | 0.0 | 2825.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv.p | 1 | 0.0 | 96.7 | 0.0 | 0.55 | 3.37 | |
| | | | | 0.0 | 96.7 | 0.0 | 0.0 | 0.0 | 60.0 |
| | | qv.p | 3 | 0.0 | 3225.0 | 0.0 | 0.55 | 3.37 | |
| | | | | 0.0 | 3225.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv.p | 1 | 0.0 | 96.7 | 0.0 | 0.00 | 0.55 | |
| | | | | 0.0 | 96.7 | 0.0 | 0.0 | 0.0 | 60.0 |
| | | qv.p | 3 | 0.0 | 3225.0 | 0.0 | 0.00 | 0.55 | |
| | | | | 0.0 | 3225.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| 1063-1079 | 2.50 | qc | 1 | 0.0 | 915.0 | 0.0 | 0.00 | 2.35 | |
| | | | | 0.0 | 915.0 | 0.0 | | | |
| | | qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 2.35 | |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| | | qv | 1 | 0.0 | 103.5 | 0.0 | 0.00 | 2.35 | |
| | | | | 0.0 | 103.5 | 0.0 | 0.0 | 0.0 | 60.0 |
| | | qv | 3 | 0.0 | 3450.0 | 0.0 | 0.00 | 2.35 | |
| | | | | 0.0 | 3450.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| 1079-1098 | 3.30 | qc | 1 | 0.0 | 915.0 | 0.0 | 0.00 | 2.50 | |
| | | | | 0.0 | 915.0 | 0.0 | | | |
| | | qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 2.50 | |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| | | qv | 1 | 0.0 | 103.5 | 0.0 | 0.00 | 2.50 | |
| | | | | 0.0 | 103.5 | 0.0 | 0.0 | 0.0 | 60.0 |
| | | qv | 3 | 0.0 | 3450.0 | 0.0 | 0.00 | 2.50 | |
| | | | | 0.0 | 3450.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| 1014-1022 | 2.97 | qc | 1 | 0.0 | 915.0 | 0.0 | 0.00 | 2.97 | |
| | | | | 0.0 | 915.0 | 0.0 | | | |
| | | qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 2.97 | |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| | | qv.p | 1 | 0.0 | 870.0 | 0.0 | 2.23 | 2.97 | |
| | | | | 0.0 | 870.0 | 0.0 | 0.0 | 0.0 | 600.0 |
| | | qv.p | 2 | 0.0 | 435.0 | 0.0 | 2.23 | 2.97 | |
| | | | | 0.0 | 435.0 | 0.0 | 0.0 | 0.0 | 300.0 |
| | | qv.p | 3 | 0.0 | 2900.0 | 0.0 | 2.23 | 2.97 | |
| | | | | 0.0 | 2900.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv.p | 1 | 0.0 | 870.0 | 0.0 | 1.49 | 2.23 | |
| | | | | 0.0 | 870.0 | 0.0 | 0.0 | 0.0 | 600.0 |
| | | qv.p | 2 | 0.0 | 435.0 | 0.0 | 1.49 | 2.23 | |
| | | | | 0.0 | 435.0 | 0.0 | 0.0 | 0.0 | 300.0 |
| | | qv.p | 3 | 0.0 | 2900.0 | 0.0 | 1.49 | 2.23 | |
| | | | | 0.0 | 2900.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| 1022-1030 | 1.10 | qv.p | 1 | 0.0 | 870.0 | 0.0 | 0.74 | 1.49 | |
| | | | | 0.0 | 870.0 | 0.0 | 0.0 | 0.0 | 600.0 |
| | | qv.p | 2 | 0.0 | 435.0 | 0.0 | 0.74 | 1.49 | |
| | | | | 0.0 | 435.0 | 0.0 | 0.0 | 0.0 | 300.0 |
| | | qv.p | 3 | 0.0 | 2900.0 | 0.0 | 0.74 | 1.49 | |
| | | | | 0.0 | 2900.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv.p | 1 | 0.0 | 870.0 | 0.0 | 0.00 | 0.74 | |
| | | | | 0.0 | 870.0 | 0.0 | 0.0 | 0.0 | 600.0 |
| | | qv.p | 2 | 0.0 | 435.0 | 0.0 | 0.00 | 0.74 | |
| | | | | 0.0 | 435.0 | 0.0 | 0.0 | 0.0 | 300.0 |
| | | qv.p | 3 | 0.0 | 2900.0 | 0.0 | 0.00 | 0.74 | |
| | | | | 0.0 | 2900.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv | 1 | 0.0 | 96.7 | 0.0 | 0.00 | 2.97 | |
| | | | | 0.0 | 96.7 | 0.0 | 0.0 | 0.0 | 60.0 |
| | | qv | 3 | 0.0 | 3225.0 | 0.0 | 0.00 | 2.97 | |
| | | | | 0.0 | 3225.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| 1048-1063 | 2.35 | qc | 1 | 0.0 | 915.0 | 0.0 | 0.00 | 1.10 | |
| | | | | 0.0 | 915.0 | 0.0 | | | |
| | | qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 1.10 | |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| | | qv.p | 1 | 0.0 | 870.0 | 0.0 | 0.55 | 1.10 | |
| | | | | 0.0 | 870.0 | 0.0 | 0.0 | 0.0 | 600.0 |
| | | qv.p | 2 | 0.0 | 435.0 | 0.0 | 0.55 | 1.10 | |
| | | | | 0.0 | 435.0 | 0.0 | 0.0 | 0.0 | 300.0 |
| | | qv.p | 3 | 0.0 | 2900.0 | 0.0 | 0.55 | 1.10 | |
| | | | | 0.0 | 2900.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv.p | 1 | 0.0 | 870.0 | 0.0 | 0.00 | 0.55 | |
| | | | | 0.0 | 870.0 | 0.0 | 0.0 | 0.0 | 600.0 |
| | | qv.p | 2 | 0.0 | 435.0 | 0.0 | 0.00 | 0.55 | |
| | | | | 0.0 | 435.0 | 0.0 | 0.0 | 0.0 | 300.0 |
| | | qv.p | 3 | 0.0 | 2900.0 | 0.0 | 0.00 | 0.55 | |
| | | | | 0.0 | 2900.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| 1063-1079 | 2.50 | qv.p | 1 | 0.0 | 96.8 | 0.0 | 0.00 | 0.55 | |
| | | | | 0.0 | 96.8 | 0.0 | 0.0 | 0.0 | 60.0 |
| | | qv.p | 3 | 0.0 | 3225.0 | 0.0 | 0.00 | 0.55 | |
| | | | | 0.0 | 3225.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv.p | 1 | 0.0 | 96.7 | 0.0 | 0.55 | 1.10 | |
| | | | | 0.0 | 96.7 | 0.0 | 0.0 | 0.0 | 60.0 |
| | | qv.p | 3 | 0.0 | 3225.0 | 0.0 | 0.55 | 1.10 | |
| | | | | 0.0 | 3225.0 | 0.0 | 0.0 | 0.0 | 2000.0 |

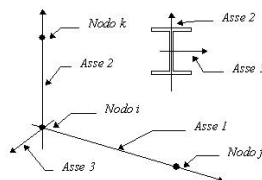
| | | | | | | | | | |
|-----------|------|------|---|-----|--------|-----|------|------|--------|
| 1030-1040 | 2.82 | qc | 1 | 0.0 | 915.0 | 0.0 | 0.00 | 2.82 | |
| | | | | 0.0 | 915.0 | 0.0 | | | |
| | | qc | 2 | 0.0 | 300.0 | 0.0 | 0.00 | 2.82 | |
| | | | | 0.0 | 300.0 | 0.0 | | | |
| | | qv.p | 1 | 0.0 | 870.0 | 0.0 | 2.12 | 2.82 | |
| | | | | 0.0 | 870.0 | 0.0 | 0.0 | 0.0 | 600.0 |
| | | qv.p | 2 | 0.0 | 435.0 | 0.0 | 2.12 | 2.82 | |
| | | | | 0.0 | 435.0 | 0.0 | 0.0 | 0.0 | 300.0 |
| | | qv.p | 3 | 0.0 | 2900.0 | 0.0 | 2.12 | 2.82 | |
| | | | | 0.0 | 2900.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv.p | 1 | 0.0 | 870.0 | 0.0 | 1.41 | 2.12 | |
| | | | | 0.0 | 870.0 | 0.0 | 0.0 | 0.0 | 600.0 |
| | | qv.p | 2 | 0.0 | 435.0 | 0.0 | 1.41 | 2.12 | |
| | | | | 0.0 | 435.0 | 0.0 | 0.0 | 0.0 | 300.0 |
| | | qv.p | 3 | 0.0 | 2900.0 | 0.0 | 1.41 | 2.12 | |
| | | | | 0.0 | 2900.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv.p | 1 | 0.0 | 870.0 | 0.0 | 0.70 | 1.41 | |
| | | | | 0.0 | 870.0 | 0.0 | 0.0 | 0.0 | 600.0 |
| | | qv.p | 2 | 0.0 | 435.0 | 0.0 | 0.70 | 1.41 | |
| | | | | 0.0 | 435.0 | 0.0 | 0.0 | 0.0 | 300.0 |
| | | qv.p | 3 | 0.0 | 2900.0 | 0.0 | 0.70 | 1.41 | |
| | | | | 0.0 | 2900.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv.p | 1 | 0.0 | 870.0 | 0.0 | 0.00 | 0.70 | |
| | | | | 0.0 | 870.0 | 0.0 | 0.0 | 0.0 | 600.0 |
| | | qv.p | 2 | 0.0 | 435.0 | 0.0 | 0.00 | 0.70 | |
| | | | | 0.0 | 435.0 | 0.0 | 0.0 | 0.0 | 300.0 |
| | | qv.p | 3 | 0.0 | 2900.0 | 0.0 | 0.00 | 0.70 | |
| | | | | 0.0 | 2900.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv | 1 | 0.0 | 96.7 | 0.0 | 0.00 | 2.82 | |
| | | | | 0.0 | 96.7 | 0.0 | 0.0 | 0.0 | 60.0 |
| | | qv | 3 | 0.0 | 3225.0 | 0.0 | 0.00 | 2.82 | |
| | | | | 0.0 | 3225.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| 1049-1039 | 0.28 | qv | 1 | 0.0 | 84.7 | 0.0 | 0.00 | 0.28 | |
| | | | | 0.0 | 84.7 | 0.0 | 0.0 | 0.0 | 60.0 |
| | | qv | 3 | 0.0 | 2825.0 | 0.0 | 0.00 | 0.28 | |
| | | | | 0.0 | 2825.0 | 0.0 | 0.0 | 0.0 | 2000.0 |
| | | qv | 1 | 0.0 | 990.0 | 0.0 | 0.00 | 0.28 | |
| | | | | 0.0 | 990.0 | 0.0 | 0.0 | 0.0 | 600.0 |
| | | qv | 2 | 0.0 | 495.0 | 0.0 | 0.00 | 0.28 | |
| | | | | 0.0 | 495.0 | 0.0 | 0.0 | 0.0 | 300.0 |
| | | qv | 3 | 0.0 | 3300.0 | 0.0 | 0.00 | 0.28 | |
| | | | | 0.0 | 3300.0 | 0.0 | 0.0 | 0.0 | 2000.0 |

SOLLECITAZIONI NELLE TRAVI

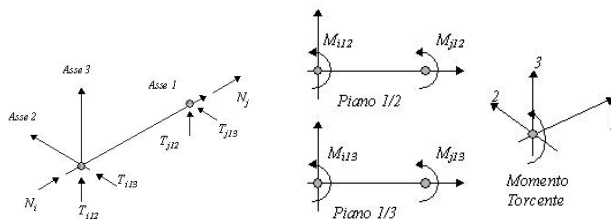
Convenzioni Adottate

Le sollecitazioni nelle travi sono da intendersi nel sistema di riferimento locale dell'elemento, e si riferiscono all'asta. L'orientamento della trave nello spazio è definito a mezzo del nodo K (rintracciabili nella tabella dei nodi in quanto aventi numerazione maggiore o uguale a 10000).

La terna di riferimento locale dell'asta è così disposta:



Per quanto concerne i segni positivi assunti per le varie componenti di sollecitazione si assumono come positivi i versi e le sollecitazioni se così diretti:



Per ogni trave vengono riportate, nelle varie combinazioni di carico, le componenti di sollecitazione alle estremità dell'asta.

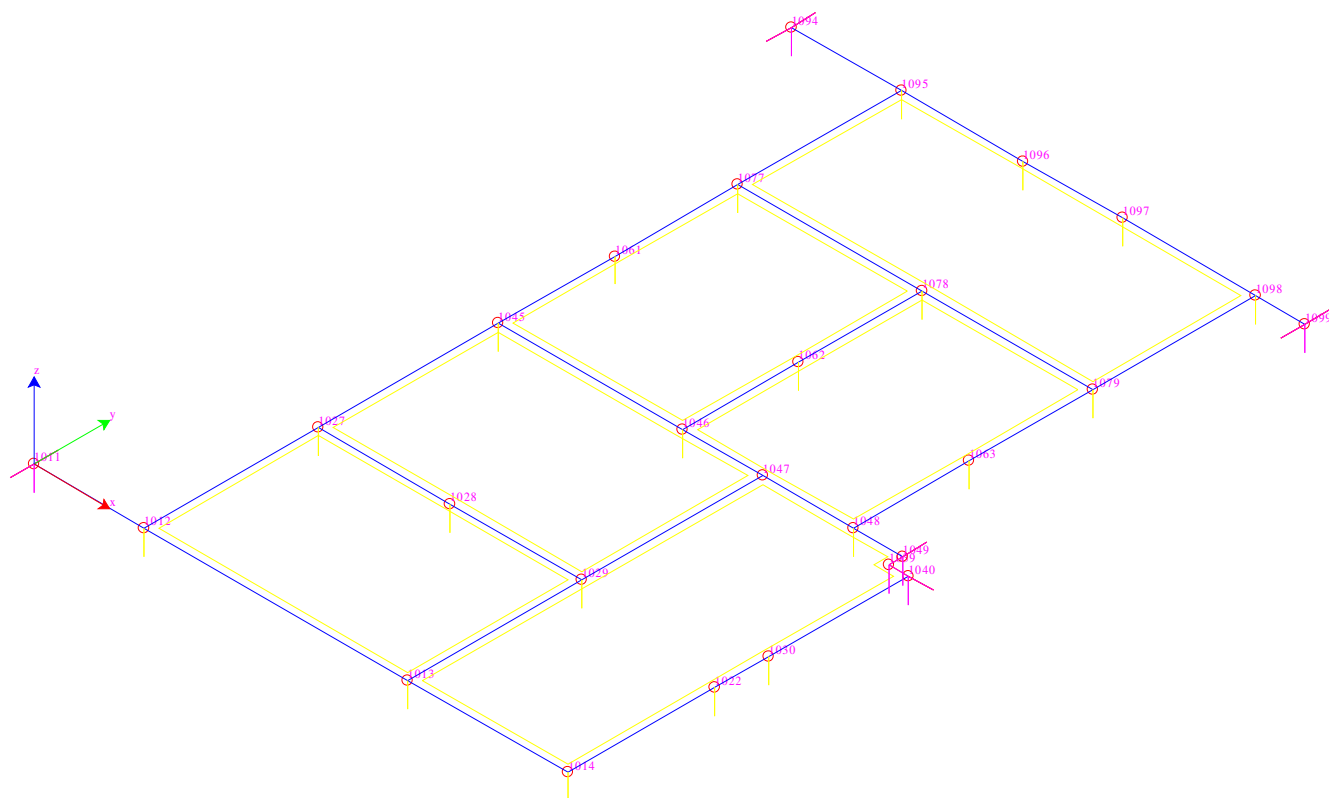
| Comb. | Nodo | N | T1-2 | T1-3 | Mt | M1-3 | M1-2 |
|-------|------|---------|---------|--------|--------|---------|----------|
| | | [kg] | [kg] | [kg] | [kgm] | [kgm] | [kgm] |
| 1 | 1012 | -2333.2 | 6050.0 | 663.6 | 494.1 | -1284.2 | 10021.1 |
| | 1011 | 2333.2 | -3199.8 | -663.6 | -494.1 | -192.2 | 269.4 |
| 2 | 1012 | -1659.3 | 4152.9 | 483.1 | 329.8 | -926.3 | 6791.0 |
| | 1011 | 1659.3 | -2117.0 | -483.1 | -329.8 | -148.6 | 184.2 |
| 3 | 1012 | -1628.5 | 3444.8 | 521.3 | 232.7 | -964.0 | 5249.9 |
| | 1011 | 1628.5 | -1408.9 | -521.3 | -232.7 | -196.0 | 149.9 |
| 4 | 1012 | -1618.2 | 3208.8 | 534.1 | 200.3 | -976.5 | 4736.2 |
| | 1011 | 1618.2 | -1172.9 | -534.1 | -200.3 | -211.8 | 138.4 |
| 1 | 1013 | -628.3 | 18002.8 | 192.6 | 134.5 | -483.6 | 12600.2 |
| | 1012 | 628.3 | 17930.8 | -192.6 | -134.5 | -546.6 | -12407.7 |
| 2 | 1013 | -468.9 | 12188.6 | 136.1 | 90.5 | -341.9 | 8551.3 |
| | 1012 | 468.9 | 12131.2 | -136.1 | -90.5 | -386.2 | -8397.9 |
| 3 | 1013 | -553.2 | 9372.2 | 130.0 | 67.0 | -327.3 | 6666.3 |
| | 1012 | 553.2 | 9289.9 | -130.0 | -67.0 | -368.5 | -6446.1 |
| 4 | 1013 | -581.3 | 8433.5 | 128.0 | 59.2 | -322.4 | 6038.0 |
| | 1012 | 581.3 | 8342.8 | -128.0 | -59.2 | -362.6 | -5795.6 |

| | | | | | | | |
|---|------|---------|---------|---------|---------|---------|----------|
| 1 | 1014 | -427.6 | -1007.0 | 728.4 | 262.9 | -1221.7 | -235.4 |
| | 1013 | 427.6 | 5138.2 | -728.4 | -262.9 | -1127.2 | -9673.7 |
| 2 | 1014 | -299.7 | -609.8 | 519.5 | 180.4 | -871.2 | -149.5 |
| | 1013 | 299.7 | 3560.7 | -519.5 | -180.4 | -804.2 | -6575.5 |
| 3 | 1014 | -275.6 | -150.2 | 516.4 | 149.3 | -864.8 | -71.1 |
| | 1013 | 275.6 | 3101.0 | -516.4 | -149.3 | -800.5 | -5171.5 |
| 4 | 1014 | -267.5 | 3.0 | 515.3 | 139.0 | -862.6 | -45.0 |
| | 1013 | 267.5 | 2947.8 | -515.3 | -139.0 | -799.2 | -4703.5 |
| 1 | 1027 | 371.7 | 12870.5 | 1394.0 | 224.4 | -4031.7 | -570.1 |
| | 1028 | -371.7 | 21837.2 | -1394.0 | -224.4 | 302.8 | -11422.9 |
| 2 | 1027 | 247.3 | 8657.0 | 992.1 | 155.9 | -2870.3 | -407.3 |
| | 1028 | -247.3 | 14763.3 | -992.1 | -155.9 | 216.5 | -7759.9 |
| 3 | 1027 | 170.9 | 6404.8 | 976.8 | 137.5 | -2830.5 | -407.6 |
| | 1028 | -170.9 | 11257.6 | -976.8 | -137.5 | 217.5 | -6083.0 |
| 4 | 1027 | 145.4 | 5654.0 | 971.8 | 131.4 | -2817.3 | -407.7 |
| | 1028 | -145.4 | 10089.0 | -971.8 | -131.4 | 217.8 | -5524.1 |
| 1 | 1028 | 170.2 | 21439.7 | 1495.7 | 56.5 | -303.2 | 11112.0 |
| | 1029 | -170.2 | 13268.0 | -1495.7 | -56.5 | -3697.8 | -182.3 |
| 2 | 1028 | 103.2 | 14480.4 | 1065.1 | 35.9 | -216.9 | 7537.4 |
| | 1029 | -103.2 | 8939.9 | -1065.1 | -35.9 | -2632.2 | -127.0 |
| 3 | 1028 | 26.3 | 10978.9 | 1051.3 | 17.0 | -218.3 | 5858.5 |
| | 1029 | -26.3 | 6683.5 | -1051.3 | -17.0 | -2594.0 | -113.3 |
| 4 | 1028 | 0.6 | 9811.7 | 1046.7 | 10.7 | -218.7 | 5298.8 |
| | 1029 | -0.6 | 5931.3 | -1046.7 | -10.7 | -2581.3 | -108.8 |
| 1 | 1045 | -2129.4 | 10609.1 | -103.9 | 56.3 | -232.1 | 565.6 |
| | 1046 | 2129.4 | 16145.0 | 103.9 | -56.3 | 618.9 | -10876.1 |
| 2 | 1045 | -1525.1 | 7176.0 | -66.6 | 42.0 | -176.9 | 370.3 |
| | 1046 | 1525.1 | 10962.9 | 66.6 | -42.0 | 425.0 | -7423.4 |
| 3 | 1045 | -1542.3 | 5487.8 | -34.8 | 49.7 | -223.5 | 228.6 |
| | 1046 | 1542.3 | 8572.2 | 34.8 | -49.7 | 353.0 | -5973.2 |
| 4 | 1045 | -1548.0 | 4925.1 | -24.2 | 52.3 | -239.1 | 181.3 |
| | 1046 | 1548.0 | 7775.3 | 24.2 | -52.3 | 329.0 | -5489.8 |
| 1 | 1046 | -3215.5 | 16303.9 | -230.2 | -1168.5 | 960.8 | 9963.7 |
| | 1047 | 3215.5 | -4632.6 | 230.2 | 1168.5 | -586.7 | 7047.2 |
| 2 | 1046 | -2280.1 | 11081.0 | -160.7 | -780.3 | 673.7 | 6791.7 |
| | 1047 | 2280.1 | -3168.0 | 160.7 | 780.3 | -412.6 | 4785.6 |
| 3 | 1046 | -2210.0 | 8709.5 | -144.9 | -552.3 | 620.7 | 5426.0 |
| | 1047 | 2210.0 | -2575.9 | 144.9 | 552.3 | -385.2 | 3743.4 |
| 4 | 1046 | -2186.7 | 7918.9 | -139.7 | -476.2 | 603.1 | 4970.7 |
| | 1047 | 2186.7 | -2378.5 | 139.7 | 476.2 | -376.1 | 3396.0 |
| 1 | 1047 | -4455.4 | -4888.9 | 930.0 | 1534.3 | -1863.8 | -6326.9 |
| | 1048 | 4455.4 | 7724.9 | -930.0 | -1534.3 | 166.5 | -5183.2 |
| 2 | 1047 | -3164.3 | -3281.0 | 674.4 | 1037.4 | -1334.8 | -4296.3 |
| | 1048 | 3164.3 | 5306.8 | -674.4 | -1037.4 | 104.0 | -3540.0 |
| 3 | 1047 | -3088.4 | -2394.5 | 717.1 | 791.6 | -1349.9 | -3360.2 |
| | 1048 | 3088.4 | 4420.3 | -717.1 | -791.6 | 41.1 | -2858.3 |
| 4 | 1047 | -3063.0 | -2099.1 | 731.4 | 709.6 | -1354.9 | -3048.2 |
| | 1048 | 3063.0 | 4124.8 | -731.4 | -709.6 | 20.1 | -2631.1 |
| 1 | 1048 | -5180.9 | 3669.2 | -939.5 | -560.9 | 355.2 | 4103.1 |
| | 1049 | 5180.9 | -2115.2 | 939.5 | 560.9 | 584.3 | -1210.9 |
| 2 | 1048 | -3657.7 | 2527.2 | -641.7 | -378.2 | 238.0 | 2798.0 |
| | 1049 | 3657.7 | -1417.2 | 641.7 | 378.2 | 403.7 | -825.8 |
| 3 | 1048 | -3477.3 | 2134.1 | -518.4 | -284.0 | 172.2 | 2240.4 |
| | 1049 | 3477.3 | -1024.1 | 518.4 | 284.0 | 346.2 | -661.3 |
| 4 | 1048 | -3417.1 | 2003.1 | -477.2 | -252.6 | 150.2 | 2054.6 |
| | 1049 | 3417.1 | -893.1 | 477.2 | 252.6 | 327.0 | -606.5 |
| 1 | 1039 | -2888.5 | 923.6 | -818.1 | -236.8 | 288.2 | 187.6 |
| | 1040 | 2888.5 | -923.6 | 818.1 | 236.8 | 39.1 | 181.9 |
| 2 | 1039 | -2028.7 | 633.3 | -561.7 | -160.5 | 200.9 | 129.2 |
| | 1040 | 2028.7 | -633.3 | 561.7 | 160.5 | 23.8 | 124.2 |
| 3 | 1039 | -1883.6 | 522.4 | -466.8 | -124.5 | 179.9 | 108.8 |
| | 1040 | 1883.6 | -522.4 | 466.8 | 124.5 | 6.8 | 100.2 |
| 4 | 1039 | -1835.3 | 485.5 | -435.1 | -112.5 | 173.0 | 102.0 |
| | 1040 | 1835.3 | -485.5 | 435.1 | 112.5 | 1.1 | 92.2 |
| 1 | 1077 | 24.5 | 9359.5 | -440.0 | -404.4 | 897.8 | 717.4 |
| | 1078 | -24.5 | 14367.2 | 440.0 | 404.4 | 741.0 | -10044.2 |
| 2 | 1077 | 7.9 | 6324.6 | -307.2 | -275.7 | 626.8 | 476.0 |
| | 1078 | -7.9 | 9745.0 | 307.2 | 275.7 | 517.5 | -6846.4 |
| 3 | 1077 | -32.5 | 4809.4 | -277.6 | -220.4 | 566.0 | 322.7 |
| | 1078 | 32.5 | 7572.5 | 277.6 | 220.4 | 467.9 | -5468.8 |
| 4 | 1077 | -45.9 | 4304.4 | -267.7 | -202.0 | 545.8 | 271.7 |
| | 1078 | 45.9 | 6848.3 | 267.7 | 202.0 | 451.4 | -5009.6 |
| 1 | 1078 | 125.1 | 13486.4 | -168.6 | 281.0 | 268.8 | 9335.1 |
| | 1079 | -125.1 | 8488.7 | 168.6 | -281.0 | 312.8 | -714.0 |
| 2 | 1078 | 78.2 | 9144.9 | -114.9 | 193.5 | 183.3 | 6355.2 |
| | 1079 | -78.2 | 5738.4 | 114.9 | -193.5 | 213.3 | -479.1 |
| 3 | 1078 | 31.5 | 7094.1 | -91.9 | 163.2 | 146.6 | 5041.9 |
| | 1079 | -31.5 | 4373.7 | 91.9 | -163.2 | 170.5 | -349.2 |
| 4 | 1078 | 16.0 | 6410.5 | -84.2 | 153.1 | 134.3 | 4604.1 |
| | 1079 | -16.0 | 3918.8 | 84.2 | -153.1 | 156.2 | -305.9 |
| 1 | 1094 | -3253.2 | 7486.4 | -47.5 | -302.6 | -507.8 | -323.0 |
| | 1095 | 3253.2 | 13372.9 | 47.5 | 302.6 | 613.4 | -6225.8 |
| 2 | 1094 | -2298.4 | 5115.5 | -32.1 | -206.8 | -357.7 | -250.3 |
| | 1095 | 2298.4 | 9180.1 | 32.1 | 206.8 | 429.0 | -4271.5 |
| 3 | 1094 | -2192.0 | 4141.4 | -24.3 | -167.8 | -336.4 | -332.7 |
| | 1095 | 2192.0 | 7617.7 | 24.3 | 167.8 | 390.5 | -3534.8 |

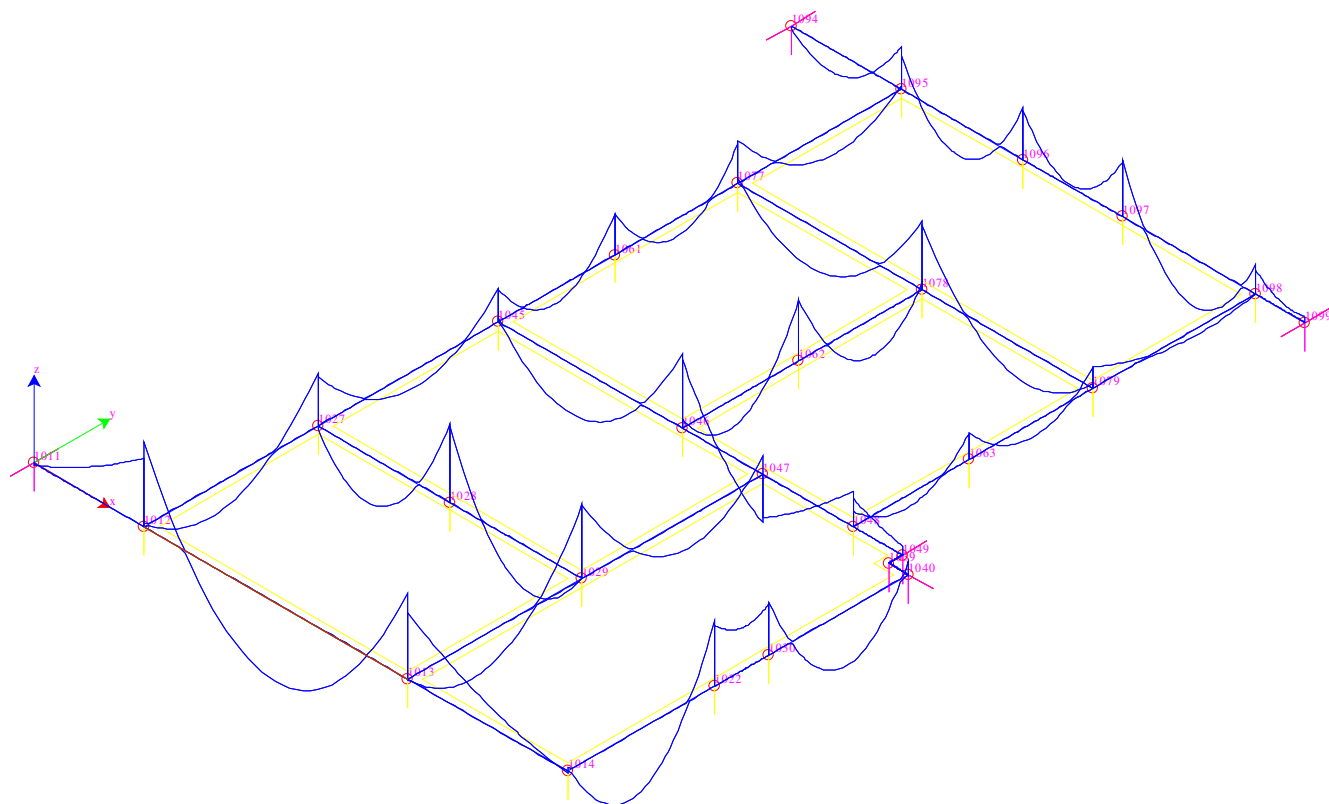
| | | | | | | | |
|---|------|---------|---------|---------|---------|---------|---------|
| 4 | 1094 | -2156.5 | 3816.7 | -21.8 | -154.8 | -329.3 | -360.1 |
| | 1095 | 2156.5 | 7096.9 | 21.8 | 154.8 | 377.7 | -3289.2 |
| 1 | 1095 | -3139.2 | 16761.9 | -110.0 | 145.7 | 346.4 | 4880.1 |
| | 1096 | 3139.2 | 19035.5 | 110.0 | -145.7 | -74.2 | -7693.8 |
| 2 | 1095 | -2226.9 | 11375.5 | -75.4 | 98.4 | 239.4 | 3321.3 |
| | 1096 | 2226.9 | 12938.9 | 75.4 | -98.4 | -52.7 | -5256.1 |
| 3 | 1095 | -2162.0 | 8866.9 | -62.2 | 74.7 | 205.8 | 2630.6 |
| | 1096 | 2162.0 | 10175.8 | 62.2 | -74.7 | -51.8 | -4250.3 |
| 4 | 1095 | -2140.4 | 8030.7 | -57.8 | 66.8 | 194.6 | 2400.4 |
| | 1096 | 2140.4 | 9254.7 | 57.8 | -66.8 | -51.5 | -3915.1 |
| 1 | 1096 | -3493.8 | 13958.1 | -85.3 | 76.5 | 77.5 | 7065.4 |
| | 1097 | 3493.8 | 14896.8 | 85.3 | -76.5 | 92.8 | -8001.8 |
| 2 | 1096 | -2475.1 | 9472.0 | -59.5 | 51.7 | 54.9 | 4817.8 |
| | 1097 | 2475.1 | 10126.9 | 59.5 | -51.7 | 63.8 | -5471.1 |
| 3 | 1096 | -2389.0 | 7380.0 | -53.4 | 39.3 | 53.3 | 3856.1 |
| | 1097 | 2389.0 | 7969.5 | 53.4 | -39.3 | 53.2 | -4444.2 |
| 4 | 1096 | -2360.3 | 6682.7 | -51.4 | 35.2 | 52.7 | 3535.6 |
| | 1097 | 2360.3 | 7250.4 | 51.4 | -35.2 | 49.7 | -4101.8 |
| 1 | 1097 | -3434.3 | 20985.8 | -93.6 | 66.7 | -89.8 | 8217.6 |
| | 1098 | 3434.3 | 18138.3 | 93.6 | -66.7 | 343.0 | -4366.4 |
| 2 | 1097 | -2435.5 | 14271.0 | -65.8 | 45.1 | -61.8 | 5616.9 |
| | 1098 | 2435.5 | 12303.0 | 65.8 | -45.1 | 239.9 | -2955.1 |
| 3 | 1097 | -2361.7 | 11251.8 | -61.6 | 34.5 | -51.8 | 4555.1 |
| | 1098 | 2361.7 | 9560.5 | 61.6 | -34.5 | 218.4 | -2267.7 |
| 4 | 1097 | -2337.1 | 10245.4 | -60.2 | 30.9 | -48.5 | 4201.1 |
| | 1098 | 2337.1 | 8646.4 | 60.2 | -30.9 | 211.3 | -2038.5 |
| 1 | 1098 | -3779.4 | 7328.2 | 1515.2 | 137.0 | -706.9 | 3503.4 |
| | 1099 | 3779.4 | 2046.8 | -1515.2 | -137.0 | -808.4 | -862.6 |
| 2 | 1098 | -2668.7 | 5029.1 | 1070.6 | 102.3 | -500.4 | 2380.5 |
| | 1099 | 2668.7 | 1395.9 | -1070.6 | -102.3 | -570.2 | -563.9 |
| 3 | 1098 | -2539.0 | 4166.9 | 1021.3 | 121.0 | -481.3 | 1868.5 |
| | 1099 | 2539.0 | 1118.1 | -1021.3 | -121.0 | -540.0 | -344.1 |
| 4 | 1098 | -2495.8 | 3879.4 | 1004.9 | 127.3 | -474.9 | 1697.8 |
| | 1099 | 2495.8 | 1025.6 | -1004.9 | -127.3 | -530.0 | -270.9 |
| 1 | 1012 | -565.7 | 6970.2 | -1078.4 | 1029.2 | 1848.6 | 420.4 |
| | 1027 | 565.7 | 11119.9 | 1078.4 | -1029.2 | 1952.6 | -7734.4 |
| 2 | 1012 | -420.7 | 4748.8 | -770.0 | 694.3 | 1325.0 | 268.1 |
| | 1027 | 420.7 | 7612.5 | 770.0 | -694.3 | 1389.1 | -5315.6 |
| 3 | 1012 | -490.7 | 3782.9 | -768.7 | 522.8 | 1344.0 | 133.1 |
| | 1027 | 490.7 | 6225.4 | 768.7 | -522.8 | 1365.6 | -4437.9 |
| 4 | 1012 | -514.0 | 3461.0 | -768.3 | 465.7 | 1350.4 | 88.0 |
| | 1027 | 514.0 | 5763.0 | 768.3 | -465.7 | 1357.7 | -4145.4 |
| 1 | 1027 | 664.9 | 10014.4 | -1352.1 | 13.7 | 2096.0 | 7224.6 |
| | 1045 | -664.9 | 8717.2 | 1352.1 | -13.7 | 2839.3 | -4857.1 |
| 2 | 1027 | 455.8 | 6853.4 | -962.1 | 0.9 | 1493.1 | 4958.4 |
| | 1045 | -455.8 | 5946.3 | 962.1 | -0.9 | 2018.5 | -3303.0 |
| 3 | 1027 | 375.7 | 5594.2 | -946.5 | -36.8 | 1476.4 | 4109.9 |
| | 1045 | -375.7 | 4769.1 | 946.5 | 36.8 | 1978.3 | -2604.0 |
| 4 | 1027 | 349.0 | 5174.5 | -941.3 | -49.3 | 1470.8 | 3827.0 |
| | 1045 | -349.0 | 4376.7 | 941.3 | 49.3 | 1965.0 | -2371.0 |
| 1 | 1045 | 546.0 | 12272.5 | 705.5 | 381.8 | -2597.6 | 4745.8 |
| | 1061 | -546.0 | 13285.8 | -705.5 | -381.8 | 939.6 | -5936.4 |
| 2 | 1045 | 376.7 | 8289.3 | 501.5 | 254.3 | -1834.8 | 3219.2 |
| | 1061 | -376.7 | 8967.9 | -501.5 | -254.3 | 656.3 | -4016.6 |
| 3 | 1045 | 320.7 | 6286.7 | 491.1 | 176.9 | -1748.3 | 2502.8 |
| | 1061 | -320.7 | 6775.8 | -491.1 | -176.9 | 594.2 | -3077.5 |
| 4 | 1045 | 302.0 | 5619.2 | 487.7 | 151.1 | -1719.5 | 2264.0 |
| | 1061 | -302.0 | 6045.1 | -487.7 | -151.1 | 573.5 | -2764.4 |
| 1 | 1061 | 546.3 | 13652.6 | 580.5 | 304.8 | -952.1 | 5947.1 |
| | 1077 | -546.3 | 13537.1 | -580.5 | -304.8 | -499.3 | -5802.7 |
| 2 | 1061 | 376.4 | 9209.0 | 405.2 | 216.8 | -665.1 | 4023.1 |
| | 1077 | -376.4 | 9149.7 | -405.2 | -216.8 | -347.8 | -3949.0 |
| 3 | 1061 | 318.4 | 6929.0 | 365.2 | 212.8 | -602.4 | 3078.9 |
| | 1077 | -318.4 | 6967.2 | -365.2 | -212.8 | -310.7 | -3126.7 |
| 4 | 1061 | 299.1 | 6169.0 | 351.9 | 211.4 | -581.5 | 2764.2 |
| | 1077 | -299.1 | 6239.7 | -351.9 | -211.4 | -298.3 | -2852.5 |
| 1 | 1077 | 126.3 | 10186.8 | 419.5 | 985.1 | -414.1 | 6271.6 |
| | 1095 | -126.3 | 6748.6 | -419.5 | -985.1 | -970.4 | -598.5 |
| 2 | 1077 | 85.6 | 6958.2 | 292.7 | 684.0 | -289.9 | 4273.9 |
| | 1095 | -85.6 | 4614.1 | -292.7 | -684.0 | -675.9 | -406.2 |
| 3 | 1077 | 66.0 | 5621.9 | 263.3 | 601.5 | -265.5 | 3409.5 |
| | 1095 | -66.0 | 3747.6 | -263.3 | -601.5 | -603.4 | -316.8 |
| 4 | 1077 | 59.5 | 5176.5 | 253.5 | 574.0 | -257.3 | 3121.3 |
| | 1095 | -59.5 | 3458.7 | -253.5 | -574.0 | -579.3 | -287.0 |
| 1 | 1046 | -88.0 | 11868.5 | 692.3 | -264.4 | -1585.6 | 1251.4 |
| | 1062 | 88.0 | 18425.0 | -692.3 | 264.4 | -41.5 | -8955.2 |
| 2 | 1046 | -68.9 | 7996.4 | 481.1 | -182.3 | -1102.8 | 838.9 |
| | 1062 | 68.9 | 12437.4 | -481.1 | 182.3 | -27.9 | -6057.0 |
| 3 | 1046 | -94.4 | 5975.9 | 424.8 | -154.9 | -977.7 | 607.9 |
| | 1062 | 94.4 | 9399.6 | -424.8 | 154.9 | -20.5 | -4630.7 |
| 4 | 1046 | -102.9 | 5302.4 | 406.0 | -145.7 | -936.0 | 530.9 |
| | 1062 | 102.9 | 8387.0 | -406.0 | 145.7 | -18.1 | -4155.3 |
| 1 | 1062 | -96.5 | 19295.9 | 395.5 | 214.6 | 28.9 | 8955.0 |
| | 1078 | 96.5 | 12931.2 | -395.5 | -214.6 | -1017.5 | -999.1 |
| 2 | 1062 | -75.4 | 13020.0 | 274.9 | 149.3 | 19.1 | 6055.5 |
| | 1078 | 75.4 | 8718.1 | -274.9 | -149.3 | -706.2 | -678.2 |

| | | | | | | | |
|---|------|---------|---------|---------|---------|--------|----------|
| 3 | 1062 | -102.8 | 9816.1 | 242.9 | 132.6 | 12.4 | 4623.6 |
| | 1078 | 102.8 | 6540.8 | -242.9 | -132.6 | -619.7 | -529.5 |
| | 1062 | -111.9 | 8748.1 | 232.3 | 127.0 | 10.2 | 4146.4 |
| 4 | 1078 | 111.9 | 5815.0 | -232.3 | -127.0 | -590.9 | -480.0 |
| | 1013 | 425.2 | 8416.4 | -924.7 | -1436.1 | 1624.1 | 20.6 |
| | 1029 | -425.2 | 14591.1 | 924.7 | 1436.1 | 1635.6 | -10903.6 |
| 2 | 1013 | 295.1 | 5692.9 | -657.3 | -971.6 | 1155.5 | -5.5 |
| | 1029 | -295.1 | 9929.0 | 657.3 | 971.6 | 1161.3 | -7460.5 |
| | 1013 | 258.9 | 4354.1 | -643.5 | -744.1 | 1136.4 | -90.8 |
| 3 | 1029 | -258.9 | 7857.4 | 643.5 | 744.1 | 1131.9 | -6083.9 |
| | 1013 | 246.8 | 3907.8 | -638.9 | -668.3 | 1130.0 | -119.2 |
| | 1029 | -246.8 | 7166.9 | 638.9 | 668.3 | 1122.1 | -5625.0 |
| 1 | 1029 | -1160.2 | 14129.1 | -1239.9 | -720.3 | 2075.2 | 10820.6 |
| | 1047 | 1160.2 | 9521.5 | 1239.9 | 720.3 | 2450.5 | -2702.8 |
| | 1029 | -835.1 | 9611.5 | -884.2 | -489.3 | 1480.1 | 7394.8 |
| 2 | 1047 | 835.1 | 6449.1 | 884.2 | 489.3 | 1747.4 | -1817.7 |
| | 1029 | -862.1 | 7592.3 | -878.3 | -383.2 | 1470.8 | 5991.0 |
| | 1047 | 862.1 | 4970.4 | 878.3 | 383.2 | 1735.1 | -1343.8 |
| 4 | 1029 | -871.1 | 6919.3 | -876.4 | -347.8 | 1467.7 | 5523.0 |
| | 1047 | 871.1 | 4477.6 | 876.4 | 347.8 | 1731.0 | -1185.9 |
| 1 | 1048 | -1771.5 | 7602.6 | 330.6 | -285.5 | -533.3 | 2249.0 |
| | 1063 | 1771.5 | 8896.5 | -330.6 | 285.5 | -243.5 | -3769.3 |
| | 1048 | -1249.1 | 5158.6 | 222.8 | -198.1 | -350.3 | 1520.5 |
| 2 | 1063 | 1249.1 | 6047.4 | -222.8 | 198.1 | -173.3 | -2564.9 |
| | 1048 | -1180.5 | 4016.7 | 166.8 | -173.6 | -221.6 | 1159.5 |
| | 1063 | 1180.5 | 4757.1 | -166.8 | 173.6 | -170.4 | -2029.5 |
| 4 | 1048 | -1157.7 | 3636.0 | 148.2 | -165.4 | -178.7 | 1039.2 |
| | 1063 | 1157.7 | 4327.0 | -148.2 | 165.4 | -169.4 | -1851.0 |
| 1 | 1063 | -1750.4 | 9124.7 | 37.7 | 322.2 | 230.1 | 3810.8 |
| | 1079 | 1750.4 | 8427.5 | -37.7 | -322.2 | -324.4 | -2939.3 |
| | 1063 | -1235.0 | 6185.6 | 24.3 | 214.5 | 163.9 | 2592.5 |
| 2 | 1079 | 1235.0 | 5735.6 | -24.3 | -214.5 | -224.5 | -2030.0 |
| | 1063 | -1170.6 | 4791.1 | 13.1 | 149.0 | 161.7 | 2048.6 |
| | 1079 | 1170.6 | 4542.7 | -13.1 | -149.0 | -194.4 | -1738.0 |
| 4 | 1063 | -1149.1 | 4326.2 | 9.3 | 127.2 | 161.0 | 1867.2 |
| | 1079 | 1149.1 | 4145.0 | -9.3 | -127.2 | -184.3 | -1640.7 |
| 1 | 1079 | -1622.8 | 3744.2 | -106.9 | 234.4 | 1.8 | 3152.9 |
| | 1098 | 1622.8 | 1869.1 | 106.9 | -234.4 | 351.1 | -59.0 |
| | 1079 | -1145.5 | 2650.7 | -77.6 | 156.5 | 4.4 | 2182.7 |
| 2 | 1098 | 1145.5 | 1358.8 | 77.6 | -156.5 | 251.5 | -51.0 |
| | 1079 | -1088.1 | 2551.2 | -82.4 | 110.4 | 17.6 | 1891.4 |
| | 1098 | 1088.1 | 1458.3 | 82.4 | -110.4 | 254.5 | -88.1 |
| 4 | 1079 | -1069.0 | 2518.0 | -84.1 | 95.0 | 22.0 | 1794.3 |
| | 1098 | 1069.0 | 1491.5 | 84.1 | -95.0 | 255.5 | -100.5 |
| 1 | 1014 | -718.1 | 16108.4 | -313.2 | 22.8 | 1239.1 | 633.1 |
| | 1022 | 718.1 | 22123.2 | 313.2 | -22.8 | -307.4 | -9580.1 |
| | 1014 | -524.4 | 10935.6 | -222.5 | 6.6 | 883.4 | 416.3 |
| 2 | 1022 | 524.4 | 15071.1 | 222.5 | -6.6 | -221.3 | -6567.9 |
| | 1014 | -572.7 | 8539.8 | -217.7 | -33.9 | 876.2 | 265.3 |
| | 1022 | 572.7 | 12000.3 | 217.7 | 33.9 | -228.6 | -5412.8 |
| 4 | 1014 | -588.8 | 7741.2 | -216.1 | -47.4 | 873.8 | 215.0 |
| | 1022 | 588.8 | 10976.7 | 216.1 | 47.4 | -231.0 | -5027.8 |
| 1 | 1022 | -1037.9 | 8344.0 | -243.1 | -74.7 | 337.0 | 8912.0 |
| | 1030 | 1037.9 | 5792.0 | 243.1 | 74.7 | -69.6 | -7508.4 |
| | 1022 | -747.3 | 5684.7 | -173.8 | -60.2 | 242.3 | 6104.9 |
| 2 | 1030 | 747.3 | 3931.2 | 173.8 | 60.2 | -51.1 | -5140.5 |
| | 1022 | -772.2 | 4528.5 | -174.7 | -88.7 | 248.7 | 5009.4 |
| | 1030 | 772.2 | 3066.2 | 174.7 | 88.7 | -56.6 | -4205.1 |
| 4 | 1022 | -780.4 | 4143.0 | -175.0 | -98.2 | 250.9 | 4644.2 |
| | 1030 | 780.4 | 2777.9 | 175.0 | 98.2 | -58.4 | -3893.4 |
| 1 | 1030 | -969.7 | 20184.6 | -206.9 | -115.6 | 100.5 | 7713.3 |
| | 1040 | 969.7 | 16055.1 | 206.9 | 115.6 | 482.9 | -1890.7 |
| | 1030 | -702.0 | 13744.2 | -148.5 | -88.2 | 72.9 | 5278.1 |
| 2 | 1040 | 702.0 | 10907.6 | 148.5 | 88.2 | 345.9 | -1278.5 |
| | 1030 | -741.1 | 10915.9 | -151.6 | -111.7 | 77.6 | 4306.4 |
| | 1040 | 741.1 | 8554.1 | 151.6 | 111.7 | 349.9 | -976.2 |
| 4 | 1030 | -754.2 | 9973.2 | -152.6 | -119.5 | 79.2 | 3982.5 |
| | 1040 | 754.2 | 7769.6 | 152.6 | 119.5 | 351.2 | -875.5 |
| 1 | 1049 | -2928.5 | 1936.2 | 2359.8 | 250.8 | -319.3 | 184.4 |
| | 1039 | 2928.5 | 1251.7 | -2359.8 | -250.8 | -341.5 | -88.6 |
| | 1049 | -2004.2 | 1308.8 | 1648.0 | 172.0 | -222.9 | 125.0 |
| 2 | 1039 | 2004.2 | 845.7 | -1648.0 | -172.0 | -238.6 | -60.2 |
| | 1049 | -1636.6 | 997.3 | 1490.4 | 141.7 | -201.3 | 96.6 |
| | 1039 | 1636.6 | 642.7 | -1490.4 | -141.7 | -216.0 | -47.0 |
| 4 | 1049 | -1514.1 | 893.5 | 1437.8 | 131.6 | -194.1 | 87.1 |
| | 1039 | 1514.1 | 575.0 | -1437.8 | -131.6 | -208.5 | -42.6 |

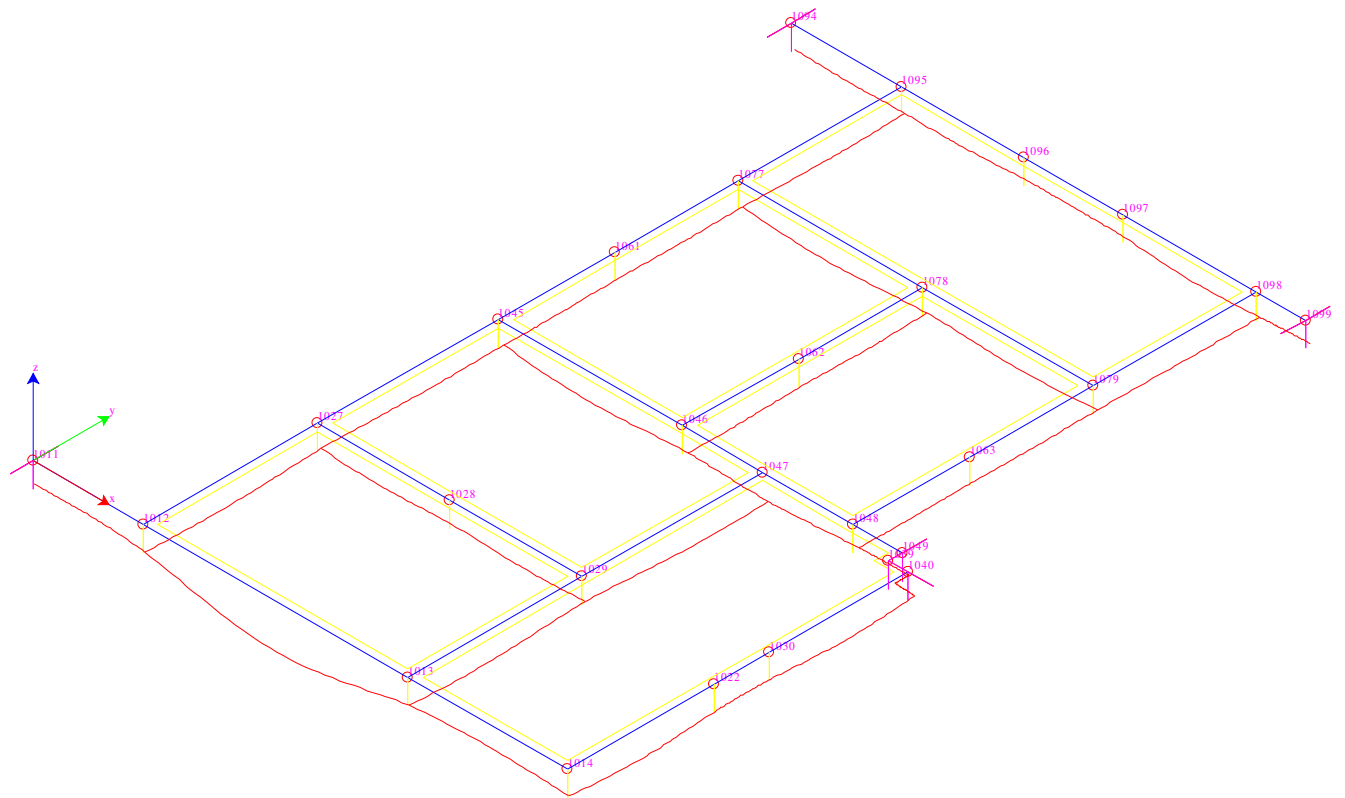
Numerazione nodi delle travi



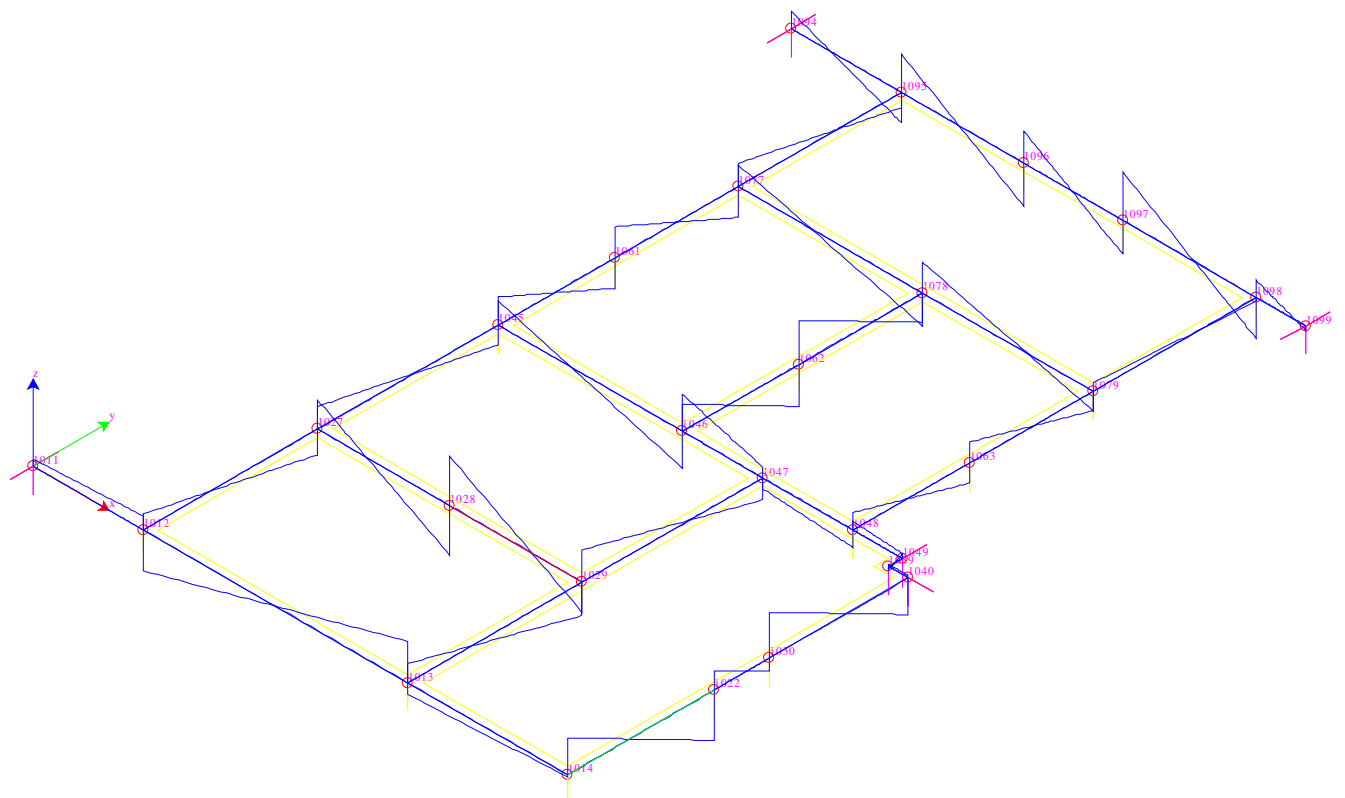
Momenti flettenti allo S.L.U.

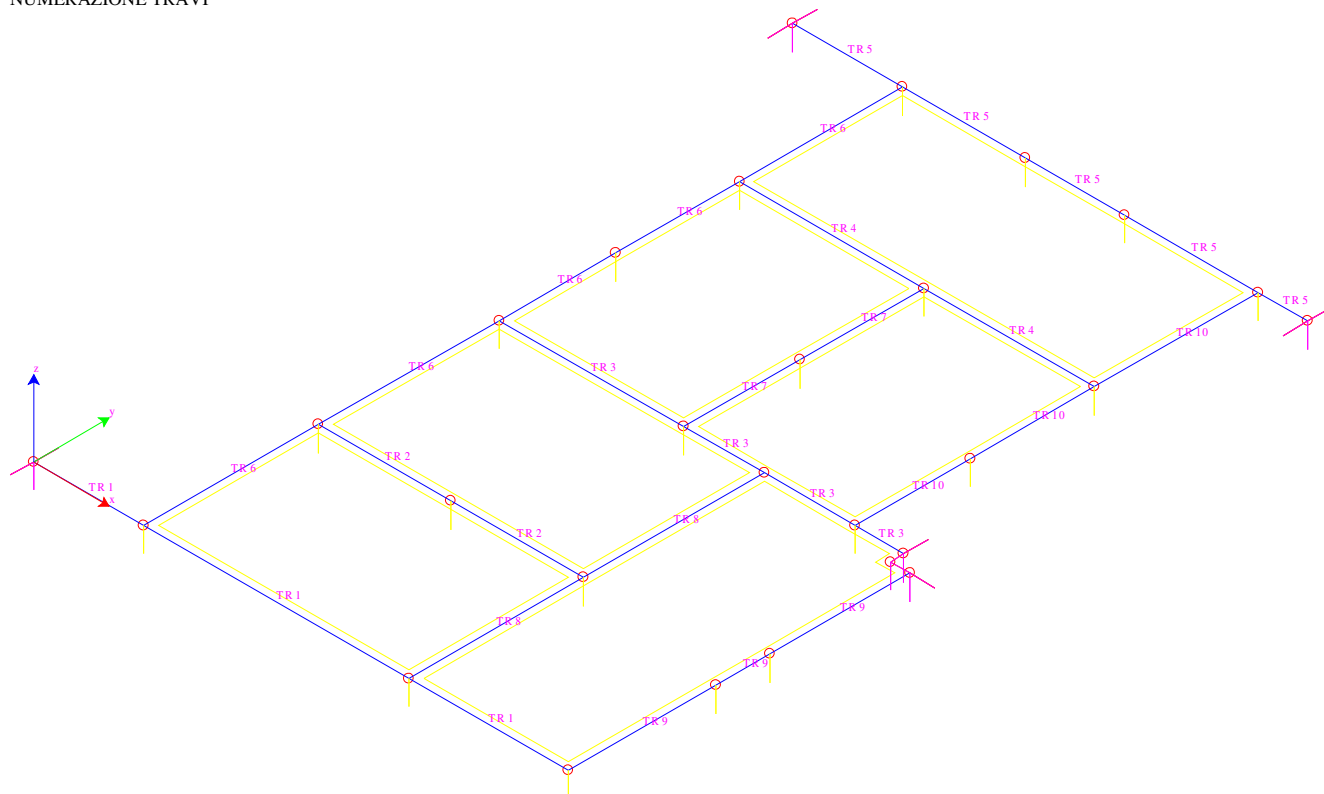


Deformate



Taglio allo S.L.U.





VERIFICHE TRAVI

Modalità di Verifica

Le travi vengono progettate-verificate a flessione retta e taglio nel piano longitudinale della trave sulla base dell'involuppo delle sollecitazioni, in conformità al Decreto Legge del 26 Marzo 1980 e successivi aggiornamenti.

Viene comunque sempre predisposta l'armatura minima mentre gli sforzi di taglio vengono integralmente assorbiti dalle staffe.

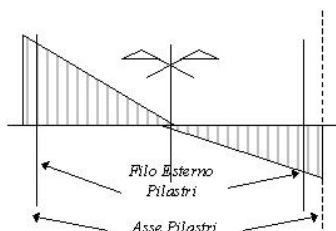
Le operazioni di progetto-verifica vengono condotte, per ogni asta, in tre diverse sezioni e precisamente in corrispondenza dei fili esterni dei pilastri e della sezione in campata nella quale viene riscontrato il massimo momento positivo (negativo).

I momenti si intendono positivi se tendono le fibre di intradosso (inferiori).

Per quanto concerne le verifiche a taglio esse vengono condotte suddividendo la trave in cinque conci:

due tronchi in prossimità degli appoggi di lunghezza pari all'altezza della sezione; due altri (eventuali) tronchi dall'ascissa precedente a quella in cui il taglio può essere assorbito con la sola staffatura minima da regolamento; il restante (eventuale) concio di chiusura centrale.

1. L'armatura a taglio si intende simmetrica rispetto alla mezziera della trave e viene progettata considerando, rispetto alla mezziera, la zona della trave più sollecitata.



Simbologia utilizzata

Af Es

Area di ferro all'estradosso

Af In

Area di ferro all'intradosso

Sigb. Es.

Tensione del calcestruzzo estradosso

Sigb. In.

Tensione del calcestruzzo intradosso

Sigf. Es.

Tensione dell'acciaio estradosso

Sigf. In.

Tensione dell'acciaio intradosso

Verifica Travata : TR 1 Travata 1011 1012 1013 1014

Sezione 6 a T T 65x54 B 60-85 [cm] H 54 [cm] b 30 [cm] h 24 [cm]

- Calcestruzzo **Rbk 300** fcd 132.3 Taurd 2.8 Taub1 0.0 [kg/cm²]
- Tensione Amm. Combinazioni Rare 124.5 [kg/cm²]
- Tensione Amm. Combinazioni Frequenti 99.6 [kg/cm²]
- Tensione Amm. Combinazioni Quasi Permanenti 99.6 [kg/cm²]

- Acciaio **FeB 44k** fyd 3739.0 [kg/cm²]
- Tensione Amm. Combinazioni Rare 3010.0 [kg/cm²]
- Tensione Amm. Combinazioni Frequenti 4300.0 [kg/cm²]
- Tensione Amm. Combinazioni Quasi Permanenti 4300.0 [kg/cm²]

Criterio **Vertrav** Copriferrì : Estradosso 3.0 [cm] / Intradosso 3.0 [cm]

EC2. 4.3.2.4.4. Verifica a taglio con il metodo dell'inclinazione variabile del traliccio. cotg q = 1.00

| Nodo | x | q.T. | M.ref | Afe | Afi | Mde | Mre | x/d | Mdi | Mri | x/d | SbE | SbI | SfE | SfI |
|--|--------------|--------|-------|-------|-------|-------|---------|-----|---------|-------|--------|--------------|--------------|--------------|--------------|
| | [m] | [kg/m] | [kgm] | [cm²] | [cm²] | [kgm] | [kgm] | | [kgm] | [kgm] | | [kg/cm²] | [kg/cm²] | [kg/cm²] | [kg/cm²] |
| Trave Sez. 6 a T 65x54x30x24 [cm] T 65x54 | | | | | | | | | | | | | | | |
| 1011 | 0.05 | | | | 6.16 | 5.79 | 675.4 | | 10753.6 | 0.13 | -269.4 | -10338.9 | 0.09 | | |
| | S.L.E. Rare | 0.0 | | | | | -77.1 | | | | 0.5 | 0.0 | 3.7 | | 28.9 |
| | S.L.E. Freq. | 0.0 | | | | | -78.1 | | | | 0.5 | 0.0 | 3.7 | | 29.3 |
| | S.L.E. Q.P. | 0.0 | | | | | -78.4 | | | | 0.5 | 0.0 | 3.8 | | 29.4 |
| Camp. | 1.06 | 1281.0 | 396.4 | | 6.16 | 6.03 | 4934.4 | | 10752.5 | 0.13 | -394.5 | -10760.3 | 0.09 | | |
| | S.L.E. Rare | 2581.7 | | | | | -281.8 | | | | 1.7 | 22.4 | 930.3 | | 218.3 |
| | S.L.E. Freq. | 1863.8 | | | | | -281.8 | | | | 1.7 | 16.2 | 671.6 | | 157.6 |
| | S.L.E. Q.P. | 1624.5 | | | | | -281.8 | | | | 1.7 | 14.1 | 585.3 | | 137.3 |
| 1012 | 2.07 | | | | 12.32 | 5.68 | 10021.1 | | 21031.6 | 0.18 | 0.0 | -10145.6 | 0.09 | | |
| | S.L.E. Rare | 6178.7 | | | | | 0.0 | | | | 0.0 | 42.8 | 1144.9 | | 475.6 |
| | S.L.E. Freq. | 4743.9 | | | | | 0.0 | | | | 0.0 | 32.8 | 879.1 | | 365.1 |
| | S.L.E. Q.P. | 4265.6 | | | | | 0.0 | | | | 0.0 | 29.5 | 790.4 | | 328.3 |

| | | | | | | | | | | | | | | | |
|--|--------------|--------|---------|--|-------|-------|---------|--|---------|------|----------|----------|--------|--|--------|
| Trave Sez. 6 a T 65x54x30x24 [cm] T 65x54 | | | | | | | | | | | | | | | |
| 1012 | 0.15 | | | | 12.32 | 6.75 | 12348.2 | | 21047.1 | 0.18 | 0.0 | -11970.4 | 0.10 | | |
| | S.L.E. Rare | 6632.1 | | | | | 0.0 | | | | 0.0 | 44.8 | 1226.3 | | 495.7 |
| | S.L.E. Freq. | 5094.0 | | | | | 0.0 | | | | 0.0 | 34.4 | 941.9 | | 380.7 |
| | S.L.E. Q.P. | 4581.3 | | | | | 0.0 | | | | 0.0 | 30.9 | 847.1 | | 342.4 |
| Camp. | 2.67 | 6716.5 | 12015.3 | | 6.16 | 10.18 | 0.0 | | 10731.1 | 0.12 | -12151.8 | -17865.7 | 0.12 | | |
| | S.L.E. Rare | 0.0 | | | | | -8213.0 | | | | 39.7 | 0.0 | 377.4 | | 1787.3 |
| | S.L.E. Freq. | 0.0 | | | | | -6251.9 | | | | 30.2 | 0.0 | 287.3 | | 1360.5 |
| | S.L.E. Q.P. | 0.0 | | | | | -5609.6 | | | | 27.1 | 0.0 | 257.8 | | 1220.7 |
| 1013 | 5.20 | | | | 12.32 | 6.83 | 12540.5 | | 21048.4 | 0.18 | 0.0 | -12107.8 | 0.10 | | |
| | S.L.E. Rare | 6776.9 | | | | | 0.0 | | | | 0.0 | 45.7 | 1252.9 | | 505.3 |
| | S.L.E. Freq. | 5301.9 | | | | | 0.0 | | | | 0.0 | 35.8 | 980.2 | | 395.4 |
| | S.L.E. Q.P. | 4810.2 | | | | | 0.0 | | | | 0.0 | 32.4 | 889.3 | | 358.7 |

| | | | | | | | | | | | | | | | |
|--|--------------|--------|-------|--|-------|------|--------|--|---------|------|--------|----------|--------|--|-------|
| Trave Sez. 6 a T 65x54x30x24 [cm] T 65x54 | | | | | | | | | | | | | | | |
| 1013 | 0.15 | | | | 12.32 | 5.76 | 9673.7 | | 21033.5 | 0.18 | 0.0 | -10283.2 | 0.09 | | |
| | S.L.E. Rare | 6052.3 | | | | | 0.0 | | | | 0.0 | 41.8 | 1121.3 | | 464.8 |
| | S.L.E. Freq. | 4717.2 | | | | | 0.0 | | | | 0.0 | 32.6 | 874.0 | | 362.2 |
| | S.L.E. Q.P. | 4272.2 | | | | | 0.0 | | | | 0.0 | 29.5 | 791.5 | | 328.1 |
| Camp. | 1.61 | 1281.0 | 832.7 | | 6.16 | 6.03 | 3793.6 | | 10752.5 | 0.13 | -832.7 | -10760.3 | 0.09 | | |
| | S.L.E. Rare | 2023.5 | | | | | -594.8 | | | | 3.5 | 17.6 | 729.1 | | 214.5 |
| | S.L.E. Freq. | 1360.6 | | | | | -594.8 | | | | 3.5 | 11.8 | 490.3 | | 214.5 |
| | S.L.E. Q.P. | 1139.7 | | | | | -594.8 | | | | 3.5 | 9.9 | 410.6 | | 214.5 |
| 1014 | 3.07 | | | | 6.16 | 6.03 | 240.8 | | 10752.5 | 0.13 | -235.4 | -10760.3 | 0.09 | | |
| | S.L.E. Rare | 0.0 | | | | | -55.3 | | | | 0.3 | 0.0 | 2.6 | | 19.9 |
| | S.L.E. Freq. | 0.0 | | | | | -46.3 | | | | 0.3 | 0.0 | 2.2 | | 16.7 |
| | S.L.E. Q.P. | 0.0 | | | | | -43.4 | | | | 0.3 | 0.0 | 2.1 | | 15.6 |

| Da | A | Dx | VSd | Vrd1 | Vrd2 | Vrd3 | TSd | Trd1 | Trd2 | Staffe |
|--|------|------|---------|--------|---------|---------|-------|--------|--------|----------------|
| [m] | [m] | [m] | [kg] | [kg] | [kg] | [kg] | [kgm] | [kgm] | [kgm] | |
| Trave 1011 1012 Sez. 6 a T 65x54x30x24 [cm] T 65x54 | | | | | | | | | | |
| 0.05 | 2.07 | 2.02 | 5857.9 | 6136.0 | 59970.8 | 16779.5 | 494.1 | 1891.9 | 1721.8 | ø 8 2br. 10.0' |
| Trave 1012 1013 Sez. 6 a T 65x54x30x24 [cm] T 65x54 | | | | | | | | | | |
| 0.15 | 0.65 | 0.50 | 16923.3 | 6349.5 | 59970.8 | 22372.7 | 134.5 | 1891.9 | 2295.7 | ø 8 2br. 7.5' |
| 0.65 | 4.70 | 4.06 | 13663.9 | 6748.8 | 59970.8 | 16779.5 | 134.5 | 1891.9 | 1721.8 | ø 8 2br. 10.0' |
| 4.70 | 5.20 | 0.50 | 16995.3 | 6359.4 | 59970.8 | 22372.7 | 134.5 | 1891.9 | 2295.7 | ø 8 2br. 7.5' |
| Trave 1013 1014 Sez. 6 a T 65x54x30x24 [cm] T 65x54 | | | | | | | | | | |
| 0.15 | 3.08 | 2.93 | 4946.0 | 6144.4 | 59970.8 | 16779.5 | 262.9 | 1891.9 | 1721.8 | ø 8 2br. 10.0' |

Verifica Travata : TR 2 Travata 1027 1028 1029

Sezione **8 a T T 140x54** B 140 [cm] H 54 [cm] b 30 [cm] h 24 [cm]

- Calcestruzzo **Rbk 300** fcd 132.3 Taurd 2.8 Taub1 0.0 [kg/cm²]
- Tensione Amm. Combinazioni Rare 124.5 [kg/cm²]
- Tensione Amm. Combinazioni Frequenti 99.6 [kg/cm²]
- Tensione Amm. Combinazioni Quasi Permanenti 99.6 [kg/cm²]

- Acciaio **FeB 44k** fyd 3739.0 [kg/cm²]
- Tensione Amm. Combinazioni Rare 3010.0 [kg/cm²]
- Tensione Amm. Combinazioni Frequenti 4300.0 [kg/cm²]
- Tensione Amm. Combinazioni Quasi Permanenti 4300.0 [kg/cm²]

EC2. 4.3.2.4.4. Verifica a taglio con il metodo dell'inclinazione variabile del traliccio. cotg q = 1.00

| Nodo | x | q.T. | M.ref | Afe | Afi | Mde | Mre | x/d | Mdi | Mri | x/d | SbE | SbI | SfE | SfI |
|--|--------------|---------|--------|-------|-------|-------|---------|-----|---------|-------|---------|--------------|--------------|--------------|--------------|
| | [m] | [kg/m] | [kgm] | [cm²] | [cm²] | [kgm] | [kgm] | | [kgm] | [kgm] | | [kg/cm²] | [kg/cm²] | [kg/cm²] | [kg/cm²] |
| Trave Sez. 8 a T 140x54x30x24 [cm] T 140x54 | | | | | | | | | | | | | | | |
| 1027 | 0.15 | | | | 12.32 | 8.04 | 4.2 | | 21080.8 | 0.17 | -4510.3 | -14563.4 | 0.08 | | |
| | S.L.E. Rare | 0.0 | | | | | -1607.4 | | | | 5.5 | 0.0 | 35.3 | | 429.5 |
| | S.L.E. Freq. | 0.0 | | | | | -1292.9 | | | | 4.4 | 0.0 | 28.4 | | 345.5 |
| | S.L.E. Q.P. | 0.0 | | | | | -1188.4 | | | | 4.0 | 0.0 | 26.1 | | 317.6 |
| Camp. | 1.34 | 12974.8 | 5802.7 | | 12.32 | 8.04 | 0.0 | | 21080.8 | 0.17 | -6860.0 | -14563.4 | 0.08 | | |
| | S.L.E. Rare | 0.0 | | | | | -4338.6 | | | | 14.7 | 0.0 | 95.2 | | 1159.4 |
| | S.L.E. Freq. | 0.0 | | | | | -3210.0 | | | | 10.9 | 0.0 | 70.4 | | 857.8 |
| | S.L.E. Q.P. | 0.0 | | | | | -2833.8 | | | | 9.6 | 0.0 | 62.2 | | 757.3 |
| 1028 | 2.52 | | | | 24.63 | 10.05 | 11422.9 | | 40862.1 | 0.27 | 0.0 | -18083.0 | 0.09 | | |
| | S.L.E. Rare | 5646.4 | | | | | 0.0 | | | | 0.0 | 29.1 | 535.2 | | 346.2 |
| | S.L.E. Freq. | 4470.5 | | | | | 0.0 | | | | 0.0 | 23.0 | 423.8 | | 274.1 |
| | S.L.E. Q.P. | 4078.6 | | | | | 0.0 | | | | 0.0 | 21.0 | 386.6 | | 250.1 |
| Trave Sez. 8 a T 140x54x30x24 [cm] T 140x54 | | | | | | | | | | | | | | | |
| 1028 | 0.15 | | | | 24.63 | 10.05 | 11112.0 | | 40862.1 | 0.27 | 0.0 | -18083.0 | 0.09 | | |
| | S.L.E. Rare | 5466.5 | | | | | 0.0 | | | | 0.0 | 28.2 | 518.2 | | 335.1 |

| | | | | | | | | | | | |
|--|--------------|---------|---------|--------|---------|---------|---------|--------|---------|----------------|-------|
| | S.L.E. Freq. | 4287.9 | | | 0.0 | | | 0.0 | 22.1 | 406.5 | 262.9 |
| | S.L.E. Q.P. | 3895.0 | | | 0.0 | | | 0.0 | 20.1 | 369.2 | 238.8 |
| Camp. | 1.34 | 12974.8 | 5802.7 | 12.32 | 8.04 | 0.0 | 21080.8 | 0.17 | -6548.1 | -14563.4 | 0.08 |
| | S.L.E. Rare | 0.0 | | | | -4190.6 | | | 14.2 | 0.0 | 91.9 |
| | S.L.E. Freq. | 0.0 | | | | -3069.3 | | | 10.4 | 0.0 | 67.3 |
| | S.L.E. Q.P. | 0.0 | | | | -2695.5 | | | 9.2 | 0.0 | 59.1 |
| 1029 | 2.52 | | | 12.32 | 8.04 | 182.3 | 21080.8 | 0.17 | -3908.7 | -14563.4 | 0.08 |
| | S.L.E. Rare | 0.0 | | | | -1140.2 | | | 3.9 | 0.0 | 25.0 |
| | S.L.E. Freq. | 0.0 | | | | -834.8 | | | 2.8 | 0.0 | 18.3 |
| | S.L.E. Q.P. | 0.0 | | | | -733.1 | | | 2.5 | 0.0 | 16.1 |
| Da | A | Dx | VSd | Vrd1 | Vrd2 | Vrd3 | TSd | Trd1 | Trd2 | Staffe | |
| [m] | [m] | [m] | [kg] | [kg] | [kg] | [kg] | [kgm] | [kgm] | [kgm] | | |
| Trave 1027 1028 Sez. 8 a T 140x54x30x24 [cm] T 140x54 | | | | | | | | | | | |
| 0.15 | 0.76 | 0.61 | 10924.3 | 6509.3 | 59970.8 | 22372.7 | 224.4 | 4336.9 | 3946.9 | ø 8 2br. 7.5' | |
| 0.76 | 1.91 | 1.15 | 11934.2 | 6509.3 | 59970.8 | 13423.6 | 224.4 | 4336.9 | 2368.2 | ø 8 2br. 12.5' | |
| 1.91 | 2.53 | 0.61 | 19891.0 | 6509.3 | 59970.8 | 22372.7 | 224.4 | 4336.9 | 3946.9 | ø 8 2br. 7.5' | |
| Trave 1028 1029 Sez. 8 a T 140x54x30x24 [cm] T 140x54 | | | | | | | | | | | |
| 0.15 | 0.73 | 0.58 | 19493.5 | 6509.3 | 59970.8 | 22372.7 | 56.5 | 4336.9 | 3946.9 | ø 8 2br. 7.5' | |
| 0.73 | 1.94 | 1.21 | 11934.2 | 6509.3 | 59970.8 | 13423.6 | 56.5 | 4336.9 | 2368.2 | ø 8 2br. 12.5' | |
| 1.94 | 2.52 | 0.58 | 11321.8 | 6509.3 | 59970.8 | 22372.7 | 56.5 | 4336.9 | 3946.9 | ø 8 2br. 7.5' | |

Verifica Travata : TR 3 Travata 1045 1046 1047 1048 1049
Sezione **4 a T T 90x54** B 90 [cm] H 54 [cm] b 30 [cm] h 27 [cm]

- Calcestruzzo **Rbk 300** fcd 132.3 Taurd 2.8 Taub1 0.0 [kg/cm²]
- Tensione Amm. Combinazioni Rare 124.5 [kg/cm²]
- Tensione Amm. Combinazioni Frequenti 99.6 [kg/cm²]
- Tensione Amm. Combinazioni Quasi Permanenti 99.6 [kg/cm²]

- Acciaio **FeB 44k** fyd 3739.0 [kg/cm²]
- Tensione Amm. Combinazioni Rare 3010.0 [kg/cm²]
- Tensione Amm. Combinazioni Frequenti 4300.0 [kg/cm²]
- Tensione Amm. Combinazioni Quasi Permanenti 4300.0 [kg/cm²]

Criterio **Vertrav** Copriferri : Estradosso 3.0 [cm] / Intradosso 3.0 [cm]

EC2. 4.3.2.4.4. Verifica a taglio con il metodo dell'inclinazione variabile del traliccio. cotg q = 1.00

| Nodo | x | q.T. | M.ref | Afe | Afi | Mde | Mre | x/d | Mdi | Mri | x/d | SbE | SbI | SfE | SfI |
|--|--------------|--------|--------|-------|-------|---------|---------|------|---------|-------|----------|----------|----------|----------|----------|
| | [m] | [kg/m] | [kgm] | [cm²] | [cm²] | [kgm] | [kgm] | | [kgm] | [kgm] | | [kg/cm²] | [kg/cm²] | [kg/cm²] | [kg/cm²] |
| Trave Sez. 4 a T 90x54x30x27 [cm] T 90x54 | | | | | | | | | | | | | | | |
| 1045 | 0.15 | | | | 7.70 | 8.04 | 716.2 | | 13352.8 | 0.14 | -2927.0 | -14362.9 | 0.09 | | |
| | S.L.E. Rare | 0.0 | | | | | -678.2 | | | 3.0 | 0.0 | 0.0 | 23.8 | | 183.2 |
| | S.L.E. Freq. | 0.0 | | | | | -570.6 | | | 2.5 | 0.0 | 0.0 | 20.0 | | 154.2 |
| | S.L.E. Q.P. | 0.0 | | | | | -534.8 | | | 2.3 | 0.0 | 0.0 | 18.8 | | 144.5 |
| Camp. | 1.86 | 7182.3 | 6228.7 | 7.70 | 8.04 | 0.0 | | | 13352.8 | 0.14 | -7174.8 | -14362.9 | 0.09 | | |
| | S.L.E. Rare | 0.0 | | | | | -4743.9 | | | 20.8 | 0.0 | 0.0 | 166.4 | | 1281.7 |
| | S.L.E. Freq. | 0.0 | | | | | -3600.9 | | | 15.8 | 0.0 | 0.0 | 126.3 | | 972.9 |
| | S.L.E. Q.P. | 0.0 | | | | | -3219.8 | | | 14.1 | 0.0 | 0.0 | 112.9 | | 869.9 |
| 1046 | 3.57 | | | 15.39 | 6.22 | 10876.1 | 26064.0 | 0.21 | 0.0 | | -11211.3 | 0.09 | | | |
| | S.L.E. Rare | 5839.2 | | | | 0.0 | | | 0.0 | | 37.3 | 873.5 | | 425.9 | |
| | S.L.E. Freq. | 4734.0 | | | | 0.0 | | | 0.0 | | 30.2 | 708.2 | | 345.3 | |
| | S.L.E. Q.P. | 4365.7 | | | | 0.0 | | | 0.0 | | 27.9 | 653.1 | | 318.4 | |
| Trave Sez. 4 a T 90x54x30x27 [cm] T 90x54 | | | | | | | | | | | | | | | |
| 1046 | 0.15 | | | 15.39 | 6.22 | 9963.7 | 26064.0 | 0.21 | 0.0 | | -11211.3 | 0.09 | | | |
| | S.L.E. Rare | 5190.3 | | | | 0.0 | | | 0.0 | | 33.1 | 776.5 | | 378.6 | |
| | S.L.E. Freq. | 4166.6 | | | | 0.0 | | | 0.0 | | 26.6 | 623.3 | | 303.9 | |
| | S.L.E. Q.P. | 3825.4 | | | | 0.0 | | | 0.0 | | 24.4 | 572.3 | | 279.0 | |
| Camp. | 0.89 | 7182.3 | 1185.4 | 7.70 | 8.04 | 796.0 | 13352.8 | 0.14 | -3762.7 | | -14362.9 | 0.09 | | | |
| | S.L.E. Rare | 0.0 | | | | -1146.0 | | | 5.0 | 0.0 | 0.0 | 40.2 | | 309.6 | |
| | S.L.E. Freq. | 0.0 | | | | -836.3 | | | 3.7 | 0.0 | 0.0 | 29.3 | | 225.9 | |
| | S.L.E. Q.P. | 0.0 | | | | -733.0 | | | 3.2 | 0.0 | 0.0 | 25.7 | | 198.0 | |
| 1047 | 1.63 | | | 15.10 | 6.34 | 1761.8 | 25598.6 | 0.20 | -7047.2 | | -11415.8 | 0.09 | | | |
| | S.L.E. Rare | 0.0 | | | | -4785.6 | | | 21.8 | 0.0 | 0.0 | 148.7 | | 1631.6 | |
| | S.L.E. Freq. | 0.0 | | | | -3743.4 | | | 17.1 | 0.0 | 0.0 | 116.3 | | 1276.3 | |
| | S.L.E. Q.P. | 0.0 | | | | -3396.0 | | | 15.5 | 0.0 | 0.0 | 105.5 | | 1157.8 | |
| Trave Sez. 4 a T 90x54x30x27 [cm] T 90x54 | | | | | | | | | | | | | | | |
| 1047 | 0.00 | | | 15.01 | 6.34 | 1581.7 | 25449.8 | 0.20 | -6326.9 | | -11415.6 | 0.09 | | | |
| | S.L.E. Rare | 0.0 | | | | -4296.3 | | | 19.6 | 0.0 | 0.0 | 133.7 | | 1464.8 | |
| | S.L.E. Freq. | 0.0 | | | | -3360.2 | | | 15.3 | 0.0 | 0.0 | 104.6 | | 1145.6 | |
| | S.L.E. Q.P. | 0.0 | | | | -3048.2 | | | 13.9 | 0.0 | 0.0 | 94.9 | | 1039.3 | |
| Camp. | 0.79 | 1554.0 | 323.5 | 7.70 | 8.04 | 0.0 | 13352.8 | 0.14 | -3090.5 | | -14362.9 | 0.09 | | | |
| | S.L.E. Rare | 0.0 | | | | -1176.3 | | | 5.1 | 0.0 | 0.0 | 41.3 | | 317.8 | |
| | S.L.E. Freq. | 0.0 | | | | -978.9 | | | 4.3 | 0.0 | 0.0 | 34.3 | | 264.5 | |
| | S.L.E. Q.P. | 0.0 | | | | -913.1 | | | 4.0 | 0.0 | 0.0 | 32.0 | | 246.7 | |
| 1048 | 1.58 | | | 7.70 | 8.04 | 5183.2 | 13352.8 | 0.14 | 0.0 | | -14362.9 | 0.09 | | | |
| | S.L.E. Rare | 2714.4 | | | | 0.0 | | | 0.0 | | 20.8 | 786.4 | | 209.3 | |
| | S.L.E. Freq. | 2173.0 | | | | 0.0 | | | 0.0 | | 16.6 | 629.6 | | 167.5 | |
| | S.L.E. Q.P. | 1992.6 | | | | 0.0 | | | 0.0 | | 15.2 | 577.3 | | 153.6 | |
| Trave Sez. 4 a T 90x54x30x27 [cm] T 90x54 | | | | | | | | | | | | | | | |
| 1048 | 0.15 | | | 7.70 | 8.04 | 4103.1 | 13352.8 | 0.14 | -4.3 | | -14362.9 | 0.09 | | | |
| | S.L.E. Rare | 2431.5 | | | | -3.1 | | | 0.0 | | 18.6 | 704.5 | | 187.5 | |
| | S.L.E. Freq. | 1932.9 | | | | -3.1 | | | 0.0 | | 14.8 | 560.0 | | 149.0 | |
| | S.L.E. Q.P. | 1766.7 | | | | -3.1 | | | 0.0 | | 13.5 | 511.9 | | 136.2 | |
| Camp. | 0.55 | 1554.0 | 97.1 | 7.70 | 8.04 | 3007.0 | 13352.8 | 0.14 | -95.1 | | -14362.9 | 0.09 | | | |
| | S.L.E. Rare | 1576.0 | | | | -68.0 | | | 0.3 | | 12.0 | 456.6 | | 121.5 | |
| | S.L.E. Freq. | 1234.6 | | | | -68.0 | | | 0.3 | | 9.4 | 357.7 | | 95.2 | |
| | S.L.E. Q.P. | 1120.8 | | | | -68.0 | | | 0.3 | | 8.6 | 324.7 | | 86.4 | |

| | | | | | | | | | | | |
|--|--------------|-------|---------|--------|---------|---------|--------|--------|----------|----------------|------|
| 1049 | 0.95 | | 7.70 | 8.04 | 1862.9 | 13352.8 | 0.14 | 0.0 | -14362.9 | 0.09 | |
| | S.L.E. Rare | 898.1 | | 0.0 | | | | 0.0 | 6.9 | 260.2 | 69.2 |
| | S.L.E. Freq. | 713.9 | | 0.0 | | | | 0.0 | 5.5 | 206.9 | 55.0 |
| | S.L.E. Q.P. | 652.6 | | 0.0 | | | | 0.0 | 5.0 | 189.1 | 50.3 |
| Da | A | Dx | VSd | Vrd1 | Vrd2 | Vrd3 | TSd | Trd1 | Trd2 | Staffe | |
| [m] | [m] | [m] | [kg] | [kg] | [kg] | [kg] | [kgm] | [kgm] | [kgm] | | |
| Trave 1045 1046 Sez. 4 a T 90x54x30x27 [cm] T 90x54 | | | | | | | | | | | |
| 0.15 | 0.65 | 0.50 | 9531.8 | 6509.3 | 59970.8 | 16779.5 | 56.3 | 3014.1 | 2272.8 | ø 8 2br. 10.0' | |
| 0.65 | 3.08 | 2.43 | 11505.2 | 6509.3 | 59970.8 | 13423.6 | 56.3 | 3014.1 | 1818.2 | ø 8 2br. 12.5' | |
| 3.08 | 3.57 | 0.50 | 15067.6 | 6284.2 | 59970.8 | 16779.5 | 56.3 | 3014.1 | 2272.8 | ø 8 2br. 10.0' | |
| Trave 1046 1047 Sez. 4 a T 90x54x30x27 [cm] T 90x54 | | | | | | | | | | | |
| 0.15 | 1.64 | 1.48 | 15229.8 | 6284.2 | 59970.8 | 16779.5 | 1168.5 | 3014.1 | 2272.8 | ø 8 2br. 10.0' | |
| Trave 1047 1048 Sez. 4 a T 90x54x30x27 [cm] T 90x54 | | | | | | | | | | | |
| 0.00 | 1.50 | 1.50 | 7479.0 | 6298.8 | 59970.8 | 13423.6 | 1534.3 | 3014.1 | 1818.2 | ø 8 2br. 12.5' | |
| Trave 1048 1049 Sez. 4 a T 90x54x30x27 [cm] T 90x54 | | | | | | | | | | | |
| 0.15 | 0.95 | 0.80 | 3436.1 | 6509.3 | 59970.8 | 13423.6 | 560.9 | 3014.1 | 1818.2 | ø 8 2br. 12.5' | |

Verifica Travata : TR 4 Travata 1077 1078 1079

Sezione **6 a T T 65x54** B 65 [cm] H 54 [cm] b 30 [cm] h 24 [cm]

- Calcestruzzo **Rbk 300** fcd 132.3 Taurd 2.8 Taub1 0.0 [kg/cm²]
- Tensione Amm. Combinazioni Rare 124.5 [kg/cm²]
- Tensione Amm. Combinazioni Frequenti 99.6 [kg/cm²]
- Tensione Amm. Combinazioni Quasi Permanenti 99.6 [kg/cm²]

- Acciaio **FeB 44k** fyd 3739.0 [kg/cm²]
- Tensione Amm. Combinazioni Rare 3010.0 [kg/cm²]
- Tensione Amm. Combinazioni Frequenti 4300.0 [kg/cm²]
- Tensione Amm. Combinazioni Quasi Permanenti 4300.0 [kg/cm²]

Criterio **Vertrav** Copriferrì : Estradosso 3.0 [cm] / Intradosso 3.0 [cm]

EC2. 4.3.2.4.4. Verifica a taglio con il metodo dell'inclinazione variabile del traliccio. cotg q = 1.00

| Nodo | x | q.T. | M.ref | Afe | Afi | Mde | Mre | x/d | Mdi | Mri | x/d | SbE | SbI | SfE | SfI |
|--|--------------|--------|--------|-------|-------|---------|---------|------|---------|----------|---------|----------|----------|----------|----------|
| | [m] | [kg/m] | [kgm] | [cm²] | [cm²] | [kgm] | [kgm] | | [kgm] | [kgm] | | [kg/cm²] | [kg/cm²] | [kg/cm²] | [kg/cm²] |
| Trave Sez. 6 a T 65x54x30x24 [cm] T 65x54 | | | | | | | | | | | | | | | |
| 1077 | 0.15 | | | | 6.16 | 8.04 | 733.1 | | 10743.5 | 0.12 | -2361.3 | -14235.0 | 0.11 | | |
| | S.L.E. Rare | 0.0 | | | | -455.7 | | | | 2.4 | 0.0 | 0.0 | 21.4 | 124.3 | |
| | S.L.E. Freq. | 0.0 | | | | -383.8 | | | | 2.0 | 0.0 | 0.0 | 18.1 | 104.7 | |
| | S.L.E. Q.P. | 0.0 | | | | -359.9 | | | | 1.9 | 0.0 | 0.0 | 16.9 | 98.1 | |
| Camp. | 1.86 | 6369.6 | 5523.9 | 6.16 | 8.04 | 0.0 | 10743.5 | 0.12 | -6067.0 | -14235.0 | 0.11 | | | | |
| | S.L.E. Rare | 0.0 | | | | -4004.3 | | | | 21.1 | 0.0 | 0.0 | 188.4 | 1092.1 | |
| | S.L.E. Freq. | 0.0 | | | | -3014.3 | | | | 15.9 | 0.0 | 0.0 | 141.8 | 822.1 | |
| | S.L.E. Q.P. | 0.0 | | | | -2684.3 | | | | 14.2 | 0.0 | 0.0 | 126.3 | 732.1 | |
| 1078 | 3.57 | | | 12.32 | 9.34 | 10044.2 | 21094.3 | 0.17 | 0.0 | -16431.5 | 0.11 | | | | |
| | S.L.E. Rare | 5438.1 | | | | 0.0 | | | 0.0 | 34.6 | 1000.0 | 378.1 | | | |
| | S.L.E. Freq. | 4374.1 | | | | 0.0 | | | 0.0 | 27.8 | 804.3 | 304.1 | | | |
| | S.L.E. Q.P. | 4019.5 | | | | 0.0 | | | 0.0 | 25.6 | 739.1 | 279.4 | | | |
| Trave Sez. 6 a T 65x54x30x24 [cm] T 65x54 | | | | | | | | | | | | | | | |
| 1078 | 0.15 | | | 12.32 | 9.34 | 9335.1 | 21094.3 | 0.17 | 0.0 | -16431.5 | 0.11 | | | | |
| | S.L.E. Rare | 5036.5 | | | | 0.0 | | | 0.0 | 32.1 | 926.1 | 350.2 | | | |
| | S.L.E. Freq. | 4018.6 | | | | 0.0 | | | 0.0 | 25.6 | 739.0 | 279.4 | | | |
| | S.L.E. Q.P. | 3679.3 | | | | 0.0 | | | 0.0 | 23.4 | 676.6 | 255.8 | | | |
| Camp. | 1.73 | 6369.6 | 4738.4 | 6.16 | 8.04 | 0.0 | 10743.5 | 0.12 | -4851.4 | -14235.0 | 0.11 | | | | |
| | S.L.E. Rare | 0.0 | | | | -3209.2 | | | | 16.9 | 0.0 | 151.0 | 875.2 | | |
| | S.L.E. Freq. | 0.0 | | | | -2472.7 | | | | 13.0 | 0.0 | 116.4 | 674.4 | | |
| | S.L.E. Q.P. | 0.0 | | | | -2227.3 | | | | 11.7 | 0.0 | 104.8 | 607.4 | | |
| 1079 | 3.30 | | | 6.16 | 8.04 | 714.0 | 10743.5 | 0.12 | -2036.3 | -14235.0 | 0.11 | | | | |
| | S.L.E. Rare | 0.0 | | | | -365.9 | | | 1.9 | 0.0 | 17.2 | 99.8 | | | |
| | S.L.E. Freq. | 0.0 | | | | -294.0 | | | 1.6 | 0.0 | 13.8 | 80.2 | | | |
| | S.L.E. Q.P. | 0.0 | | | | -270.1 | | | 1.4 | 0.0 | 12.7 | 73.7 | | | |

| | | | | | | | | | | | |
|--|------|------|---------|--------|---------|---------|-------|--------|--------|----------------|--|
| Da | A | Dx | VSd | Vrd1 | Vrd2 | Vrd3 | TSd | Trd1 | Trd2 | Staffe | |
| [m] | [m] | [m] | [kg] | [kg] | [kg] | [kg] | [kgm] | [kgm] | [kgm] | | |
| Trave 1077 1078 Sez. 6 a T 65x54x30x24 [cm] T 65x54 | | | | | | | | | | | |
| 0.15 | 3.57 | 3.42 | 13411.8 | 6509.3 | 59970.8 | 16779.5 | 404.4 | 1891.9 | 1721.8 | ø 8 2br. 10.0' | |
| Trave 1078 1079 Sez. 6 a T 65x54x30x24 [cm] T 65x54 | | | | | | | | | | | |
| 0.15 | 3.30 | 3.15 | 12531.0 | 6509.3 | 59970.8 | 16779.5 | 281.0 | 1891.9 | 1721.8 | ø 8 2br. 10.0' | |

Verifiche Travate : TR 5 Travata 1094 1095 1096 1097 1098 1099

Sezione **6 a T T 65x54** B 65 [cm] H 54 [cm] b 30 [cm] h 24 [cm]

- Calcestruzzo **Rbk 300** fcd 132.3 Taurd 2.8 Taub1 0.0 [kg/cm²]
- Tensione Amm. Combinazioni Rare 124.5 [kg/cm²]
- Tensione Amm. Combinazioni Frequenti 99.6 [kg/cm²]
- Tensione Amm. Combinazioni Quasi Permanenti 99.6 [kg/cm²]

- Acciaio **FeB 44k** fyd 3739.0 [kg/cm²]
- Tensione Amm. Combinazioni Rare 3010.0 [kg/cm²]
- Tensione Amm. Combinazioni Frequenti 4300.0 [kg/cm²]
- Tensione Amm. Combinazioni Quasi Permanenti 4300.0 [kg/cm²]

Criterio **Vertrav** Copriferrì : Estradosso 3.0 [cm] / Intradosso 3.0 [cm]

| Nodo | x | q.T. | M.ref | Afe | Afi | Mde | Mre | x/d | Mdi | Mri | x/d | SbE | SbI | SfE | SfI |
|--|--------------|---------|--------|-------|---------|--------|---------|-----|---------|-------|---------|----------|----------|----------|----------------|
| | [m] | [kg/m] | [kgm] | [cm²] | [cm²] | [kgm] | [kgm] | | [kgm] | [kgm] | | [kg/cm²] | [kg/cm²] | [kg/cm²] | [kg/cm²] |
|]]]]]]]]]]]]]]]] | | | | | | | | | | | | | | | |
| Trave Sez. 6 a T 65x54x30x24 [cm] T 65x54 | | | | | | | | | | | | | | | |
| 1094 | 0.05 | | | | 6.16 | 5.79 | 466.2 | | 10753.6 | 0.13 | -2042.8 | -10338.9 | 0.09 | | |
| | S.L.E. Rare | 0.0 | | | | | -496.1 | | | | 3.0 | 0.0 | 23.8 | | 186.2 |
| | S.L.E. Freq. | 0.0 | | | | | -531.6 | | | | 3.2 | 0.0 | 25.5 | | 199.5 |
| | S.L.E. Q.P. | 0.0 | | | | | -543.4 | | | | 3.3 | 0.0 | 26.1 | | 203.9 |
| Camp. | 1.06 | 9375.0 | 2900.8 | 6.16 | 6.03 | 0.0 | | | 10752.5 | 0.13 | -3300.6 | -10760.3 | 0.09 | | |
| | S.L.E. Rare | 0.0 | | | | | -2152.5 | | | | 12.8 | 0.0 | 103.1 | | 776.2 |
| | S.L.E. Freq. | 0.0 | | | | | -1823.9 | | | | 10.8 | 0.0 | 87.4 | | 657.7 |
| | S.L.E. Q.P. | 0.0 | | | | | -1714.4 | | | | 10.2 | 0.0 | 82.1 | | 618.2 |
| 1095 | 2.07 | | | | 12.32 | 7.16 | 6225.8 | | 21068.0 | 0.18 | 0.0 | -12701.2 | 0.10 | | |
| | S.L.E. Rare | 2969.8 | | | | | 0.0 | | | | 0.0 | 19.8 | 548.4 | | 219.1 |
| | S.L.E. Freq. | 2454.0 | | | | | 0.0 | | | | 0.0 | 16.4 | 453.2 | | 181.0 |
| | S.L.E. Q.P. | 2282.1 | | | | | 0.0 | | | | 0.0 | 15.2 | 421.4 | | 168.3 |
| Trave Sez. 6 a T 65x54x30x24 [cm] T 65x54 | | | | | | | | | | | | | | | |
| 1095 | 0.15 | | | | 12.32 | 7.16 | 4880.1 | | 21068.0 | 0.18 | -426.7 | -12701.2 | 0.10 | | |
| | S.L.E. Rare | 1729.0 | | | | | 0.0 | | | | 0.0 | 11.6 | 319.3 | | 127.5 |
| | S.L.E. Freq. | 1389.9 | | | | | 0.0 | | | | 0.0 | 9.3 | 256.7 | | 102.5 |
| | S.L.E. Q.P. | 1276.9 | | | | | 0.0 | | | | 0.0 | 8.5 | 235.8 | | 94.2 |
| Camp. | 1.24 | 14463.6 | 5537.4 | 6.16 | 6.03 | 0.0 | | | 10752.5 | 0.13 | -5537.4 | -10760.3 | 0.09 | | |
| | S.L.E. Rare | 0.0 | | | | | -3761.1 | | | | 22.3 | 0.0 | 180.2 | | 1356.2 |
| | S.L.E. Freq. | 0.0 | | | | | -2945.7 | | | | 17.4 | 0.0 | 141.1 | | 1062.2 |
| | S.L.E. Q.P. | 0.0 | | | | | -2673.8 | | | | 15.8 | 0.0 | 128.1 | | 964.2 |
| 1096 | 2.32 | | | | 12.32 | 6.03 | 7693.8 | | 21046.0 | 0.18 | 0.0 | -10755.0 | 0.09 | | |
| | S.L.E. Rare | 3429.1 | | | | | 0.0 | | | | 0.0 | 23.5 | 634.8 | | 261.1 |
| | S.L.E. Freq. | 2813.1 | | | | | 0.0 | | | | 0.0 | 19.3 | 520.8 | | 214.2 |
| | S.L.E. Q.P. | 2607.8 | | | | | 0.0 | | | | 0.0 | 17.9 | 482.7 | | 198.6 |
| Trave Sez. 6 a T 65x54x30x24 [cm] T 65x54 | | | | | | | | | | | | | | | |
| 1096 | 0.15 | | | | 12.32 | 6.03 | 7065.4 | | 21046.0 | 0.18 | 0.0 | -10755.0 | 0.09 | | |
| | S.L.E. Rare | 3513.7 | | | | | 0.0 | | | | 0.0 | 24.1 | 650.4 | | 267.6 |
| | S.L.E. Freq. | 2840.5 | | | | | 0.0 | | | | 0.0 | 19.5 | 525.8 | | 216.3 |
| | S.L.E. Q.P. | 2616.1 | | | | | 0.0 | | | | 0.0 | 18.0 | 484.3 | | 199.2 |
| Camp. | 1.00 | 14463.6 | 3597.8 | 6.16 | 6.03 | 827.7 | | | 10752.5 | 0.13 | -3597.8 | -10760.3 | 0.09 | | |
| | S.L.E. Rare | 256.9 | | | | | -2443.7 | | | | 14.5 | 2.2 | 117.1 | | 881.2 |
| | S.L.E. Freq. | 322.4 | | | | | -1913.9 | | | | 11.3 | 2.8 | 116.2 | | 690.1 |
| | S.L.E. Q.P. | 344.2 | | | | | -1737.3 | | | | 10.3 | 3.0 | 124.0 | | 626.5 |
| 1097 | 1.85 | | | | 12.32 | 6.66 | 8001.8 | | 21053.4 | 0.18 | 0.0 | -11836.4 | 0.10 | | |
| | S.L.E. Rare | 4067.9 | | | | | 0.0 | | | | 0.0 | 27.5 | 752.1 | | 304.5 |
| | S.L.E. Freq. | 3339.5 | | | | | 0.0 | | | | 0.0 | 22.6 | 617.4 | | 250.0 |
| | S.L.E. Q.P. | 3096.7 | | | | | 0.0 | | | | 0.0 | 20.9 | 572.5 | | 231.8 |
| Trave Sez. 6 a T 65x54x30x24 [cm] T 65x54 | | | | | | | | | | | | | | | |
| 1097 | 0.15 | | | | 12.32 | 6.93 | 8217.6 | | 21052.3 | 0.18 | 0.0 | -12286.1 | 0.10 | | |
| | S.L.E. Rare | 3585.2 | | | | | 0.0 | | | | 0.0 | 24.1 | 662.6 | | 266.5 |
| | S.L.E. Freq. | 2952.6 | | | | | 0.0 | | | | 0.0 | 19.9 | 545.7 | | 219.5 |
| | S.L.E. Q.P. | 2741.8 | | | | | 0.0 | | | | 0.0 | 18.4 | 506.7 | | 203.8 |
| Camp. | 1.35 | 14463.6 | 6614.4 | 6.16 | 7.63 | 0.0 | | | 10741.7 | 0.13 | -7251.5 | -13502.9 | 0.10 | | |
| | S.L.E. Rare | 0.0 | | | | | -4913.6 | | | | 26.5 | 0.0 | 232.8 | | 1412.5 |
| | S.L.E. Freq. | 0.0 | | | | | -3796.4 | | | | 20.5 | 0.0 | 179.9 | | 1091.3 |
| | S.L.E. Q.P. | 0.0 | | | | | -3423.9 | | | | 18.5 | 0.0 | 162.2 | | 984.2 |
| 1098 | 2.55 | | | | 12.32 | 7.63 | 4366.4 | | 21056.9 | 0.18 | -1477.4 | -13483.7 | 0.10 | | |
| | S.L.E. Rare | 1217.8 | | | | | 0.0 | | | | 0.0 | 8.1 | 224.8 | | 88.2 |
| | S.L.E. Freq. | 918.3 | | | | | 0.0 | | | | 0.0 | 6.1 | 169.5 | | 66.5 |
| | S.L.E. Q.P. | 818.4 | | | | | 0.0 | | | | 0.0 | 5.4 | 151.1 | | 59.2 |
| Trave Sez. 6 a T 65x54x30x24 [cm] T 65x54 | | | | | | | | | | | | | | | |
| 1098 | 0.15 | | | | 12.32 | 7.63 | 3503.4 | | 21056.9 | 0.18 | -26.1 | -13483.7 | 0.10 | | |
| | S.L.E. Rare | 1698.9 | | | | | -17.9 | | | | 0.1 | 11.3 | 313.6 | | 123.0 |
| | S.L.E. Freq. | 1303.3 | | | | | -14.7 | | | | 0.1 | 8.6 | 240.6 | | 94.3 |
| | S.L.E. Q.P. | 1171.5 | | | | | -13.7 | | | | 0.1 | 7.8 | 216.3 | | 84.8 |
| Camp. | 0.55 | 9375.0 | 585.9 | 7.93 | 7.63 | 1636.7 | | | 13748.2 | 0.14 | -573.9 | -13496.6 | 0.10 | | |
| | S.L.E. Rare | 586.4 | | | | | -393.3 | | | | 2.1 | 4.5 | 165.2 | | 113.0 |
| | S.L.E. Freq. | 376.2 | | | | | -323.5 | | | | 1.7 | 2.9 | 106.0 | | 93.0 |
| | S.L.E. Q.P. | 306.2 | | | | | -300.3 | | | | 1.6 | 2.3 | 86.2 | | 86.3 |
| 1099 | 0.95 | | | | 6.16 | 6.51 | 862.6 | | 10746.8 | 0.13 | 0.0 | -11568.9 | 0.10 | | |
| | S.L.E. Rare | 502.3 | | | | | 0.0 | | | | 0.0 | 4.3 | 181.0 | | 41.4 |
| | S.L.E. Freq. | 295.0 | | | | | 0.0 | | | | 0.0 | 2.5 | 106.3 | | 24.3 |
| | S.L.E. Q.P. | 225.9 | | | | | 0.0 | | | | 0.0 | 1.9 | 81.4 | | 18.6 |
| Trave 1094 1095 Sez. 6 a T 65x54x30x24 [cm] T 65x54 | | | | | | | | | | | | | | | |
| 0.05 | 2.07 | 2.02 | | | 11966.7 | 6230.8 | 59970.8 | | 16779.5 | 302.6 | | 1891.9 | 1721.8 | | ø 8 2br. 10.0' |
| Trave 1095 1096 Sez. 6 a T 65x54x30x24 [cm] T 65x54 | | | | | | | | | | | | | | | |
| 0.15 | 0.65 | 0.50 | | | 14592.3 | 6260.9 | 59970.8 | | 22372.7 | 145.7 | | 1891.9 | 2295.7 | | ø 8 2br. 7.5' |
| 0.65 | 1.83 | 1.18 | | | 9692.1 | 6260.9 | 59970.8 | | 16779.5 | 145.7 | | 1891.9 | 1721.8 | | ø 8 2br. 10.0' |
| 1.83 | 2.32 | 0.50 | | | 16866.0 | 6260.9 | 59970.8 | | 22372.7 | 145.7 | | 1891.9 | 2295.7 | | ø 8 2br. 7.5' |
| Trave 1096 1097 Sez. 6 a T 65x54x30x24 [cm] T 65x54 | | | | | | | | | | | | | | | |
| 0.15 | 1.85 | 1.70 | | | 12732.7 | 6260.9 | 59970.8 | | 16779.5 | 76.5 | | 1891.9 | 1721.8 | | ø 8 2br. 10.0' |
| Trave 1097 1098 Sez. 6 a T 65x54x30x24 [cm] T 65x54 | | | | | | | | | | | | | | | |
| 0.15 | 0.64 | 0.50 | | | 18812.2 | 6372.0 | 59970.8 | | 22372.7 | 66.7 | | 1891.9 | 2295.7 | | ø 8 2br. 7.5' |
| 0.64 | 2.05 | 1.41 | | | 11625.0 | 6458.8 | 59970.8 | | 16779.5 | 66.7 | | 1891.9 | 1721.8 | | ø 8 2br. 10.0' |
| 2.05 | 2.55 | 0.50 | | | 15964.7 | 6458.8 | 59970.8 | | 22372.7 | 66.7 | | 1891.9 | 2295.7 | | ø 8 2br. 7.5' |
| Trave 1098 1099 Sez. 6 a T 65x54x30x24 [cm] T 65x54 | | | | | | | | | | | | | | | |
| 0.15 | 0.95 | 0.80 | | | 5922.0 | 6320.2 | 59970.8 | | 16779.5 | 137.0 | | 1891.9 | 1721.8 | | ø 8 2br. 10.0' |

Verifiche Travate : TR 7 Travata 1046 1062 1078

Sez. 9 a T 130x54x30x24 [cm] B 65 [cm] H 54 [cm] b 30 [cm] h 24 [cm]

EC2. 4.3.2.4.4. Verifica a taglio con il metodo dell'inclinazione variabile del traliccio. cotg q = 1.00

| Nodo | x | q.T. | M.ref | Afe | Afi | Mde | Mre | x/d | Mdi | Mri | x/d | SbE | SbI | SfE | SfI |
|---|--------------|---------|--------|---------|-------|--------|---------|-----|---------|-------|---------|--------------|--------------|--------------|----------------|
| | [m] | [kg/m] | [kgm] | [cm²] | [cm²] | [kgm] | [kgm] | | [kgm] | [kgm] | | [kg/cm²] | [kg/cm²] | [kg/cm²] | [kg/cm²] |
| Trave Sez. 9 a T 130x54x30x24 [cm] T 130x54 | | | | | | | | | | | | | | | |
| 1046 | 0.15 | | | | 12.32 | 8.04 | 1251.4 | | 21080.8 | 0.17 | -2313.3 | -14529.6 | 0.08 | | |
| | S.L.E. Rare | 0.0 | | | | | -317.3 | | | | 1.1 | 0.0 | 7.5 | | 84.9 |
| | S.L.E. Freq. | 0.0 | | | | | -255.1 | | | | 0.9 | 0.0 | 6.0 | | 68.3 |
| | S.L.E. Q.P. | 0.0 | | | | | -234.3 | | | | 0.8 | 0.0 | 5.5 | | 62.7 |
| Camp. | 1.17 | 12890.9 | 4449.4 | | 12.32 | 8.04 | 0.0 | | 21080.8 | 0.17 | -4449.4 | -14529.6 | 0.08 | | |
| | S.L.E. Rare | 0.0 | | | | | -3001.2 | | | | 10.6 | 0.0 | 70.9 | | 803.5 |
| | S.L.E. Freq. | 0.0 | | | | | -2258.3 | | | | 7.9 | 0.0 | 53.3 | | 604.6 |
| | S.L.E. Q.P. | 0.0 | | | | | -2010.6 | | | | 7.1 | 0.0 | 47.5 | | 538.3 |
| 1062 | 2.20 | | | | 24.63 | 8.15 | 8955.2 | | 40358.8 | 0.30 | 0.0 | -14758.2 | 0.08 | | |
| | S.L.E. Rare | 4293.3 | | | | | 0.0 | | | | 0.0 | 23.0 | 409.1 | | 275.4 |
| | S.L.E. Freq. | 3297.4 | | | | | 0.0 | | | | 0.0 | 17.7 | 314.2 | | 211.5 |
| | S.L.E. Q.P. | 2965.5 | | | | | 0.0 | | | | 0.0 | 15.9 | 282.6 | | 190.2 |
| Trave Sez. 9 a T 130x54x30x24 [cm] T 130x54 | | | | | | | | | | | | | | | |
| 1062 | 0.15 | | | | 24.63 | 8.15 | 8955.0 | | 40358.8 | 0.30 | 0.0 | -14758.2 | 0.08 | | |
| | S.L.E. Rare | 4204.2 | | | | | 0.0 | | | | 0.0 | 22.6 | 400.7 | | 269.7 |
| | S.L.E. Freq. | 3227.7 | | | | | 0.0 | | | | 0.0 | 17.3 | 307.6 | | 207.1 |
| | S.L.E. Q.P. | 2902.2 | | | | | 0.0 | | | | 0.0 | 15.6 | 276.6 | | 186.2 |
| Camp. | 1.25 | 12890.8 | 5035.5 | | 12.32 | 8.04 | 0.0 | | 21080.8 | 0.17 | -5477.8 | -14529.6 | 0.08 | | |
| | S.L.E. Rare | 0.0 | | | | | -3594.6 | | | | 12.7 | 0.0 | 84.9 | | 962.3 |
| | S.L.E. Freq. | 0.0 | | | | | -2663.8 | | | | 9.4 | 0.0 | 62.9 | | 713.1 |
| | S.L.E. Q.P. | 0.0 | | | | | -2353.5 | | | | 8.3 | 0.0 | 55.6 | | 630.0 |
| 1078 | 2.35 | | | | 12.32 | 8.04 | 999.1 | | 21080.8 | 0.17 | -2967.4 | -14529.6 | 0.08 | | |
| | S.L.E. Rare | 0.0 | | | | | -577.9 | | | | 2.0 | 0.0 | 13.6 | | 154.7 |
| | S.L.E. Freq. | 0.0 | | | | | -413.9 | | | | 1.5 | 0.0 | 9.8 | | 110.8 |
| | S.L.E. Q.P. | 0.0 | | | | | -359.2 | | | | 1.3 | 0.0 | 8.5 | | 96.2 |
| | | | | | | | | | | | | | | | |
| Da | A | Dx | | VSd | | Vrd1 | Vrd2 | | Vrd3 | | TSd | | Trd1 | Trd2 | Staffe |
| [m] | [m] | [m] | | [kg] | | [kg] | [kg] | | [kg] | | [kgm] | | [kgm] | [kgm] | |
| Trave 1046 1062 Sez. 9 a T 130x54x30x24 [cm] T 130x54 | | | | | | | | | | | | | | | |
| 0.15 | 0.65 | 0.50 | | 9934.9 | | 6509.3 | 59970.8 | | 16779.5 | | 264.4 | 4025.0 | 2799.7 | | ø 8 2br. 10.0' |
| 0.65 | 1.70 | 1.06 | | 10097.5 | | 6509.3 | 59970.8 | | 11186.3 | | 264.4 | 4025.0 | 1866.5 | | ø 8 2br. 15.0' |
| 1.70 | 2.20 | 0.50 | | 16491.3 | | 6509.3 | 59970.8 | | 16779.5 | | 264.4 | 4025.0 | 2799.7 | | ø 8 2br. 10.0' |
| Trave 1062 1078 Sez. 9 a T 130x54x30x24 [cm] T 130x54 | | | | | | | | | | | | | | | |
| 0.15 | 0.65 | 0.50 | | 17362.3 | | 6509.3 | 59970.8 | | 22372.7 | | 214.6 | 4025.0 | 3732.9 | | ø 8 2br. 7.5' |
| 0.65 | 1.85 | 1.21 | | 10968.5 | | 6509.3 | 59970.8 | | 11186.3 | | 214.6 | 4025.0 | 1866.5 | | ø 8 2br. 15.0' |
| 1.85 | 2.35 | 0.50 | | 10997.6 | | 6509.3 | 59970.8 | | 22372.7 | | 214.6 | 4025.0 | 3732.9 | | ø 8 2br. 7.5' |

Verifiche Travate : TR 8 Travata 1013 1029 1047

Sezione 4 a T T 90x54 B 90 [cm] H 54 [cm] b 30 [cm] h 24 [cm]

- Calcestruzzo **Rbk 300** fcd 132.3 Taurd 2.8 Taub1 0.0 [kg/cm²]
- Tensione Amm. Combinazioni Rare 124.5 [kg/cm²]
- Tensione Amm. Combinazioni Frequenti 99.6 [kg/cm²]
- Tensione Amm. Combinazioni Quasi Permanenti 99.6 [kg/cm²]

- Acciaio **FeB 44k** fyd 3739.0 [kg/cm²]
- Tensione Amm. Combinazioni Rare 3010.0 [kg/cm²]
- Tensione Amm. Combinazioni Frequenti 4300.0 [kg/cm²]
- Tensione Amm. Combinazioni Quasi Permanenti 4300.0 [kg/cm²]

Criterio **Vertrav** Copriferri : Estradosso 3.0 [cm] / Intradosso 3.0 [cm]

EC2. 4.3.2.4.4. Verifica a taglio con il metodo dell'inclinazione variabile del traliccio. cotg q = 1.00

| Nodo | x | q.T. | M.ref | Afe | Afi | Mde | Mre | x/d | Mdi | Mri | x/d | SbE | SbI | SfE | SfI |
|--|--------------|--------|--------|-------|-------|-------|---------|-----|---------|-------|---------|----------|----------|----------|----------|
| | [m] | [kg/m] | [kgm] | [cm²] | [cm²] | [kgm] | [kgm] | | [kgm] | [kgm] | | [kg/cm²] | [kg/cm²] | [kg/cm²] | [kg/cm²] |
| Trave Sez. 4 a T 90x54x30x27 [cm] T 90x54 | | | | | | | | | | | | | | | |
| 1013 | 0.15 | | | | 10.05 | 8.04 | 265.1 | | 17278.5 | 0.16 | -2689.7 | -14368.3 | 0.09 | | |
| | S.L.E. Rare | 0.0 | | | | | -820.7 | | | | 3.5 | 0.0 | 27.3 | | 221.8 |
| | S.L.E. Freq. | 0.0 | | | | | -710.0 | | | | 3.1 | 0.0 | 23.6 | | 191.9 |
| | S.L.E. Q.P. | 0.0 | | | | | -673.1 | | | | 2.9 | 0.0 | 22.4 | | 181.9 |
| Camp. | 1.76 | 6526.9 | 5068.8 | | 10.05 | 8.04 | 0.0 | | 17278.5 | 0.16 | -5205.2 | -14368.3 | 0.09 | | |
| | S.L.E. Rare | 0.0 | | | | | -3441.7 | | | | 14.8 | 0.0 | 114.5 | | 930.1 |
| | S.L.E. Freq. | 0.0 | | | | | -2690.3 | | | | 11.6 | 0.0 | 89.5 | | 727.1 |
| | S.L.E. Q.P. | 0.0 | | | | | -2439.9 | | | | 10.5 | 0.0 | 81.2 | | 659.4 |
| 1029 | 3.38 | | | | 20.11 | 10.76 | 10903.6 | | 33845.8 | 0.21 | 0.0 | -19028.7 | 0.10 | | |
| | S.L.E. Rare | 6025.3 | | | | | 0.0 | | | | 0.0 | 32.4 | 692.9 | | 375.9 |
| | S.L.E. Freq. | 4947.6 | | | | | 0.0 | | | | 0.0 | 26.6 | 569.0 | | 308.7 |
| | S.L.E. Q.P. | 4588.4 | | | | | 0.0 | | | | 0.0 | 24.7 | 527.7 | | 286.3 |
| Trave Sez. 4 a T 90x54x30x27 [cm] T 90x54 | | | | | | | | | | | | | | | |
| 1029 | 0.15 | | | | 20.11 | 10.76 | 10820.6 | | 33845.8 | 0.21 | 0.0 | -19028.7 | 0.10 | | |
| | S.L.E. Rare | 6007.2 | | | | | 0.0 | | | | 0.0 | 32.3 | 690.8 | | 374.8 |
| | S.L.E. Freq. | 4894.5 | | | | | 0.0 | | | | 0.0 | 26.3 | 562.9 | | 305.4 |
| | S.L.E. Q.P. | 4523.5 | | | | | 0.0 | | | | 0.0 | 24.3 | 520.2 | | 282.2 |
| Camp. | 1.88 | 6479.6 | 5395.3 | | 10.05 | 8.04 | 0.0 | | 17278.5 | 0.16 | -5378.6 | -14368.3 | 0.09 | | |
| | S.L.E. Rare | 0.0 | | | | | -3652.5 | | | | 15.7 | 0.0 | 121.5 | | 987.1 |
| | S.L.E. Freq. | 0.0 | | | | | -2857.0 | | | | 12.3 | 0.0 | 95.1 | | 772.1 |
| | S.L.E. Q.P. | 0.0 | | | | | -2591.9 | | | | 11.1 | 0.0 | 86.3 | | 700.4 |
| 1047 | 3.60 | | | | 10.05 | 7.38 | 2702.8 | | 17276.6 | 0.16 | -29.0 | -13220.8 | 0.09 | | |
| | S.L.E. Rare | 1504.7 | | | | | 0.0 | | | | 0.0 | 10.7 | 338.1 | | 114.2 |
| | S.L.E. Freq. | 1102.7 | | | | | 0.0 | | | | 0.0 | 7.8 | 247.8 | | 83.7 |

| | | | | | | | | | | |
|--|-------------|-------|---------|--------|---------|---------|--------|--------|--------|----------------|
| | S.L.E. Q.P. | 968.7 | | 0.0 | | 0.0 | 6.9 | 217.7 | 73.5 | |
| Da | A | Dx | VSd | Vrd1 | Vrd2 | Vrd3 | TSd | Trd1 | Trd2 | Staffe |
| [m] | [m] | [m] | [kg] | [kg] | [kg] | [kg] | [kgm] | [kgm] | [kgm] | |
| Trave 1013 1029 Sez. 4 a T 90x54x30x27 [cm] T 90x54 | | | | | | | | | | |
| 0.15 | 0.65 | 0.50 | 7437.3 | 6509.3 | 59970.8 | 16779.5 | 1436.1 | 3014.1 | 2272.8 | ø 8 2br. 10.0' |
| 0.65 | 2.88 | 2.23 | 10374.7 | 6509.3 | 59970.8 | 13423.6 | 1436.1 | 3014.1 | 1818.2 | ø 8 2br. 12.5' |
| 2.88 | 3.38 | 0.50 | 13612.1 | 6509.3 | 59970.8 | 16779.5 | 1436.1 | 3014.1 | 2272.8 | ø 8 2br. 10.0' |
| Trave 1029 1047 Sez. 4 a T 90x54x30x27 [cm] T 90x54 | | | | | | | | | | |
| 0.15 | 3.60 | 3.45 | 13150.1 | 6427.4 | 59970.8 | 13423.6 | 720.3 | 3014.1 | 1818.2 | ø 8 2br. 12.5' |

Verifiche Travata : TR 8 Travata 1013 1029 1047

Sezione 2 a T T 95x54 B 95 [cm] H 54 [cm] b 30 [cm] h 24 [cm]

- Calcestruzzo **Rbk 300** fcd 132.3 Taurd 2.8 Taub1 0.0 [kg/cm²]
- Tensione Amm. Combinazioni Rare 124.5 [kg/cm²]
- Tensione Amm. Combinazioni Frequenti 99.6 [kg/cm²]
- Tensione Amm. Combinazioni Quasi Permanenti 99.6 [kg/cm²]

- Acciaio **FeB 44k** fyd 3739.0 [kg/cm²]
- Tensione Amm. Combinazioni Rare 3010.0 [kg/cm²]
- Tensione Amm. Combinazioni Frequenti 4300.0 [kg/cm²]
- Tensione Amm. Combinazioni Quasi Permanenti 4300.0 [kg/cm²]

Criterio **Vertrav** Copriferrì : Estradosso 3.0 [cm] / Intradosso 3.0 [cm]

EC2. 4.3.2.4.4. Verifica a taglio con il metodo dell'inclinazione variabile del traliccio. cotg q = 1.00

| Nodo | x | q.T. | M.ref | Afe | Afi | Mde | Mre | x/d | Mdi | Mri | x/d | SbE | SbI | SfE | SfI |
|--|--------------|--------|--------|-------|-------|---------|---------|-----|---------|-------|---------|--------------|--------------|--------------|--------------|
| | [m] | [kg/m] | [kgm] | [cm²] | [cm²] | [kgm] | [kgm] | | [kgm] | [kgm] | | [kg/cm²] | [kg/cm²] | [kg/cm²] | [kg/cm²] |
| Trave Sez. 2 a T 95x54x30x24 [cm] T 95x54 | | | | | | | | | | | | | | | |
| 1013 | 0.15 | | | | 9.24 | 8.04 | 292.2 | | 15946.3 | 0.15 | -3399.1 | -14385.0 | 0.09 | | |
| | S.L.E. Rare | 0.0 | | | | | -1170.4 | | | | 4.9 | 0.0 | 38.3 | 315.8 | |
| | S.L.E. Freq. | 0.0 | | | | | -956.7 | | | | 4.0 | 0.0 | 31.3 | 258.1 | |
| | S.L.E. Q.P. | 0.0 | | | | | -885.5 | | | | 3.7 | 0.0 | 29.0 | 238.9 | |
| Camp. | 1.76 | 7719.4 | 5994.9 | 9.24 | 8.04 | 0.0 | | | 15946.3 | 0.15 | -5994.9 | -14385.0 | 0.09 | | |
| | S.L.E. Rare | 0.0 | | | | | -4059.1 | | | | 17.1 | 0.0 | 132.8 | 1095.1 | |
| | S.L.E. Freq. | 0.0 | | | | | -3122.5 | | | | 13.1 | 0.0 | 102.2 | 842.4 | |
| | S.L.E. Q.P. | 0.0 | | | | | -2810.3 | | | | 11.8 | 0.0 | 91.9 | 758.2 | |
| 1029 | 3.38 | | | 18.47 | 6.02 | 14126.2 | | | 30947.0 | 0.24 | 0.0 | -10893.1 | 0.08 | | |
| | S.L.E. Rare | 7871.7 | | | | 0.0 | | | | 0.0 | 47.9 | 991.1 | 559.4 | | |
| | S.L.E. Freq. | 6243.9 | | | | 0.0 | | | | 0.0 | 38.0 | 786.1 | 443.8 | | |
| | S.L.E. Q.P. | 5701.3 | | | | 0.0 | | | | 0.0 | 34.7 | 717.8 | 405.2 | | |
| Trave Sez. 2 a T 95x54x30x24 [cm] T 95x54 | | | | | | | | | | | | | | | |
| 1029 | 0.15 | | | 18.47 | 6.02 | 13855.2 | | | 30947.0 | 0.24 | 0.0 | -10893.1 | 0.08 | | |
| | S.L.E. Rare | 7740.5 | | | | 0.0 | | | | 0.0 | 47.1 | 974.6 | 550.1 | | |
| | S.L.E. Freq. | 6111.8 | | | | 0.0 | | | | 0.0 | 37.2 | 769.5 | 434.4 | | |
| | S.L.E. Q.P. | 5568.9 | | | | 0.0 | | | | 0.0 | 33.9 | 701.2 | 395.8 | | |
| Camp. | 1.88 | 7672.1 | 6388.2 | 9.24 | 8.04 | 0.0 | | | 15946.3 | 0.15 | -6368.5 | -14385.0 | 0.09 | | |
| | S.L.E. Rare | 0.0 | | | | | -4312.4 | | | | 18.1 | 0.0 | 141.1 | 1163.4 | |
| | S.L.E. Freq. | 0.0 | | | | | -3319.0 | | | | 13.9 | 0.0 | 108.6 | 895.4 | |
| | S.L.E. Q.P. | 0.0 | | | | | -2987.8 | | | | 12.6 | 0.0 | 97.8 | 806.1 | |
| 1047 | 3.60 | | | 9.24 | 7.72 | 2714.7 | | | 15946.3 | 0.15 | -221.7 | -13822.4 | 0.09 | | |
| | S.L.E. Rare | 1468.3 | | | | 0.0 | | | | 0.0 | 10.6 | 357.0 | 111.5 | | |
| | S.L.E. Freq. | 1072.1 | | | | 0.0 | | | | 0.0 | 7.8 | 260.6 | 81.4 | | |
| | S.L.E. Q.P. | 940.0 | | | | 0.0 | | | | 0.0 | 6.8 | 228.5 | 71.4 | | |

| | | | | | | | | | | |
|--|------|------|---------|--------|---------|---------|--------|--------|--------|----------------|
| Da | A | Dx | VSd | Vrd1 | Vrd2 | Vrd3 | TSd | Trd1 | Trd2 | Staffe |
| [m] | [m] | [m] | [kg] | [kg] | [kg] | [kg] | [kgm] | [kgm] | [kgm] | |
| Trave 1013 1029 Sez. 2 a T 95x54x30x24 [cm] T 95x54 | | | | | | | | | | |
| 0.15 | 0.75 | 0.60 | 8335.7 | 6509.3 | 59970.8 | 16779.5 | 1533.8 | 2904.6 | 2228.1 | ø 8 2br. 10.0' |
| 0.75 | 2.78 | 2.03 | 11934.2 | 6509.3 | 59970.8 | 13423.6 | 1533.8 | 2904.6 | 1782.5 | ø 8 2br. 12.5' |
| 2.78 | 3.38 | 0.60 | 16559.5 | 6259.3 | 59970.8 | 16779.5 | 1533.8 | 2904.6 | 2228.1 | ø 8 2br. 10.0' |
| Trave 1029 1047 Sez. 2 a T 95x54x30x24 [cm] T 95x54 | | | | | | | | | | |
| 0.15 | 0.67 | 0.52 | 15975.7 | 6259.3 | 59970.8 | 16779.5 | 772.0 | 2904.6 | 2228.1 | ø 8 2br. 10.0' |
| 0.67 | 3.08 | 2.40 | 11934.2 | 6509.3 | 59970.8 | 13423.6 | 772.0 | 2904.6 | 1782.5 | ø 8 2br. 12.5' |
| 3.08 | 3.60 | 0.52 | 10514.6 | 6469.3 | 59970.8 | 16779.5 | 772.0 | 2904.6 | 2228.1 | ø 8 2br. 10.0' |

VERIFICHE TRAVI : TR 9 rifatta Travata 4 5 6

Trave Sezioni Impiegate: Sezione 1 a T T115x54

B 115 [cm] H 54 [cm] b 30 [cm] h 24 [cm]

Simbologia utilizzata

| | | | |
|-----------|--------------------------------------|-----------|--------------------------------------|
| Af Es | Area di ferro all'estradosso | Af In | Area di ferro all'intradosso |
| Sigb. Es. | Tensione del calcestruzzo estradosso | Sigb. In. | Tensione del calcestruzzo intradosso |
| Sigf. Es. | Tensione dell'acciaio estradosso | Sigf. In. | Tensione dell'acciaio intradosso |

- Calcestruzzo **Rbk 300** fcd 132.3 Taurd 2.8 Taub1 0.0 [kg/cm²]
- Tensione Amm. Combinazioni Rare 124.5 [kg/cm²]
- Tensione Amm. Combinazioni Frequenti 99.6 [kg/cm²]
- Tensione Amm. Combinazioni Quasi Permanenti 99.6 [kg/cm²]

- Acciaio **FeB 44k** fyd 3739.0 [kg/cm²]
- Tensione Amm. Combinazioni Rare 2580.0 [kg/cm²]
- Tensione Amm. Combinazioni Frequenti 4300.0 [kg/cm²]
- Tensione Amm. Combinazioni Quasi Permanenti 4300.0 [kg/cm²]

Criterio **Vertrav** Copriferrì : Estradosso 3.0 [cm] / Intradosso 3.0 [cm]

Verifiche Travate :

EC2. 4.3.2.4.4. Verifica a taglio con il metodo dell'inclinazione variabile del traliccio. cotg q = 1.00

| Nodo | x | q.T. | M.ref | Afe | Afi | Mde | Mre | x/d | Mdi | Mri | x/d | SbE | SbI | SfE | SfI |
|---|------|--------------|--------|-------|-------|--------|---------|-----|---------|-------|----------|----------|----------|----------|----------|
| | [m] | [kg/m] | [kgm] | [cm²] | [cm²] | [kgm] | [kgm] | | [kgm] | [kgm] | | [kg/cm²] | [kg/cm²] | [kg/cm²] | [kg/cm²] |
| Trave Sez. 1 a T 115x54x30x24 [cm] T115x54 | | | | | | | | | | | | | | | |
| 4 | 0.15 | | | | 7.92 | 9.83 | 1111.5 | | 13739.8 | 0.14 | -4669.0 | -17528.2 | 0.09 | | |
| | | S.L.E. Rare | 0.0 | | | | -1051.2 | | | | 3.7 | 0.0 | 30.2 | | 232.6 |
| | | S.L.E. Freq. | 0.0 | | | | -808.1 | | | | 2.9 | 0.0 | 23.2 | | 178.8 |
| | | S.L.E. Q.P. | 0.0 | | | | -727.0 | | | | 2.6 | 0.0 | 20.9 | | 160.9 |
| Camp. | 1.76 | 11261.0 | 8720.5 | 7.92 | 10.18 | 0.0 | | | 13738.6 | 0.13 | -11761.3 | -18141.2 | 0.09 | | |
| | | S.L.E. Rare | 0.0 | | | | -7910.9 | | | | 27.6 | 0.0 | 226.6 | | 1691.6 |
| | | S.L.E. Freq. | 0.0 | | | | -6026.4 | | | | 21.1 | 0.0 | 172.6 | | 1288.7 |
| | | S.L.E. Q.P. | 0.0 | | | | -5398.3 | | | | 18.9 | 0.0 | 154.7 | | 1154.3 |
| 5 | 3.37 | | | | 15.83 | 11.04 | 11166.8 | | 26978.1 | 0.19 | 0.0 | -19628.5 | 0.09 | | |
| | | S.L.E. Rare | 5346.9 | | | | 0.0 | | | | 0.0 | 30.4 | 769.1 | | 342.4 |
| | | S.L.E. Freq. | 4119.2 | | | | 0.0 | | | | 0.0 | 23.4 | 592.5 | | 263.7 |
| | | S.L.E. Q.P. | 3709.9 | | | | 0.0 | | | | 0.0 | 21.1 | 533.7 | | 237.5 |
| Trave Sez. 1 a T 115x54x30x24 [cm] T115x54 | | | | | | | | | | | | | | | |
| 5 | 0.15 | | | | 15.65 | 9.97 | 10539.3 | | 26657.3 | 0.19 | 0.0 | -17795.6 | 0.09 | | |
| | | S.L.E. Rare | 5571.5 | | | | 0.0 | | | | 0.0 | 32.5 | 812.0 | | 366.7 |
| | | S.L.E. Freq. | 4291.8 | | | | 0.0 | | | | 0.0 | 25.0 | 625.5 | | 282.5 |
| | | S.L.E. Q.P. | 3865.2 | | | | 0.0 | | | | 0.0 | 22.5 | 563.3 | | 254.4 |
| Camp. | 0.96 | 11261.0 | 2621.6 | 7.92 | 6.03 | 1626.6 | | | 13758.6 | 0.14 | -2621.6 | -10934.5 | 0.07 | | |
| | | S.L.E. Rare | 63.4 | | | | -1772.8 | | | | 7.7 | 0.5 | 49.4 | | 630.0 |
| | | S.L.E. Freq. | 66.1 | | | | -1353.8 | | | | 5.9 | 0.5 | 37.8 | | 481.1 |
| | | S.L.E. Q.P. | 67.0 | | | | -1214.1 | | | | 5.3 | 0.5 | 33.9 | | 431.4 |
| 6 | 1.78 | | | | 7.92 | 6.03 | 122.8 | | 13758.6 | 0.14 | -1137.8 | -10934.5 | 0.07 | | |
| | | S.L.E. Rare | 0.0 | | | | -417.6 | | | | 1.8 | 0.0 | 11.6 | | 148.4 |
| | | S.L.E. Freq. | 0.0 | | | | -320.6 | | | | 1.4 | 0.0 | 8.9 | | 113.9 |
| | | S.L.E. Q.P. | 0.0 | | | | -288.2 | | | | 1.3 | 0.0 | 8.0 | | 102.4 |

| Da | A | Dx | VSd | Vrd1 | Vrd2 | Vrd3 | TSd | Trd1 | Trd2 | Staffe |
|---|------|------|---------|--------|---------|---------|-------|--------|--------|----------------|
| [m] | [m] | [m] | [kg] | [kg] | [kg] | [kg] | [kgm] | [kgm] | [kgm] | |
| Trave 4 5 Sez. 1 a T 115x54x30x24 [cm] T115x54 | | | | | | | | | | |
| 0.15 | 0.65 | 0.50 | 15217.1 | 6729.6 | 59970.8 | 22372.7 | 0.0 | 3551.0 | 3409.1 | ø 8 2br. 7.5' |
| 0.65 | 0.98 | 0.34 | 9631.6 | 6773.2 | 59970.8 | 16779.5 | 0.0 | 3551.0 | 2556.8 | ø 8 2br. 10.0' |
| 0.98 | 2.54 | 1.55 | 11652.7 | 6773.2 | 59970.8 | 13423.6 | 0.0 | 3551.0 | 2045.4 | ø 8 2br. 12.5' |
| 2.54 | 2.87 | 0.34 | 15457.9 | 6773.2 | 59970.8 | 16779.5 | 0.0 | 3551.0 | 2556.8 | ø 8 2br. 10.0' |
| 2.87 | 3.37 | 0.50 | 21043.3 | 6798.7 | 59970.8 | 22372.7 | 0.0 | 3551.0 | 3409.1 | ø 8 2br. 7.5' |
| Trave 5 6 Sez. 1 a T 115x54x30x24 [cm] T115x54 | | | | | | | | | | |
| 0.15 | 0.65 | 0.50 | 14574.9 | 6260.9 | 59970.8 | 16779.5 | 0.0 | 3551.0 | 2556.8 | ø 8 2br. 10.0' |
| 0.65 | 1.28 | 0.64 | 8989.4 | 6260.9 | 59970.8 | 13423.6 | 0.0 | 3551.0 | 2045.4 | ø 8 2br. 12.5' |
| 1.28 | 1.78 | 0.50 | 3780.6 | 6260.9 | 59970.8 | 16779.5 | 0.0 | 3551.0 | 2556.8 | ø 8 2br. 10.0' |

Verifiche Travata : TR 10 Travata 1048 1063 1079 1098

Sezione **1 a T T 115x54** B 115 [cm] H 54 [cm] b 30 [cm] h 24 [cm]

- Calcestruzzo **Rbk 300** fcd 132.3 Taurd 2.8 Taub1 0.0 [kg/cm²]
- Tensione Amm. Combinazioni Rare 124.5 [kg/cm²]
- Tensione Amm. Combinazioni Frequenti 99.6 [kg/cm²]
- Tensione Amm. Combinazioni Quasi Permanenti 99.6 [kg/cm²]

- Acciaio **FeB 44k** fyd 3739.0 [kg/cm²]
- Tensione Amm. Combinazioni Rare 3010.0 [kg/cm²]
- Tensione Amm. Combinazioni Frequenti 4300.0 [kg/cm²]
- Tensione Amm. Combinazioni Quasi Permanenti 4300.0 [kg/cm²]

Criterio **Vertrav** Copriferrì : Estradosso 3.0 [cm] / Intradosso 3.0 [cm]

EC2. 4.3.2.4.4. Verifica a taglio con il metodo dell'inclinazione variabile del traliccio. cotg q = 1.00

| Nodo | x | q.T. | M.ref | Afe | Afi | Mde | Mre | x/d | Mdi | Mri | x/d | SbE | SbI | SfE | SfI |
|--|------|--------------|--------|-------|-------|-------|---------|-----|---------|-------|---------|----------|----------|----------|----------|
| | [m] | [kg/m] | [kgm] | [cm²] | [cm²] | [kgm] | [kgm] | | [kgm] | [kgm] | | [kg/cm²] | [kg/cm²] | [kg/cm²] | [kg/cm²] |
| Trave Sez. 1 a T 115x54x30x24 [cm] T 115x54 | | | | | | | | | | | | | | | |
| 1048 | 0.15 | | | | 10.78 | 8.04 | 2464.2 | | 18522.8 | 0.16 | -326.4 | -14469.5 | 0.08 | | |
| | | S.L.E. Rare | 819.4 | | | | 0.0 | | | | 0.0 | 5.6 | 171.7 | | 60.2 |
| | | S.L.E. Freq. | 607.4 | | | | 0.0 | | | | 0.0 | 4.1 | 127.2 | | 44.6 |
| | | S.L.E. Q.P. | 536.7 | | | | 0.0 | | | | 0.0 | 3.7 | 112.4 | | 39.4 |
| Camp. | 1.17 | 8393.4 | 2897.0 | 10.78 | 8.04 | 0.0 | | | 18522.8 | 0.16 | -2897.0 | -14469.5 | 0.08 | | |
| | | S.L.E. Rare | 0.0 | | | | -1961.7 | | | | 7.4 | 0.0 | 53.0 | | 526.7 |
| | | S.L.E. Freq. | 0.0 | | | | -1509.7 | | | | 5.7 | 0.0 | 40.8 | | 405.3 |
| | | S.L.E. Q.P. | 0.0 | | | | -1359.1 | | | | 5.1 | 0.0 | 36.7 | | 364.9 |
| 1063 | 2.20 | | | | 21.55 | 10.57 | 4572.6 | | 36250.0 | 0.22 | 0.0 | -18850.5 | 0.09 | | |
| | | S.L.E. Rare | 2073.6 | | | | 0.0 | | | | 0.0 | 10.9 | 222.8 | | 128.2 |
| | | S.L.E. Freq. | 1611.9 | | | | 0.0 | | | | 0.0 | 8.5 | 173.2 | | 99.7 |
| | | S.L.E. Q.P. | 1458.0 | | | | 0.0 | | | | 0.0 | 7.7 | 156.7 | | 90.2 |
| Trave Sez. 1 a T 115x54x30x24 [cm] T 115x54 | | | | | | | | | | | | | | | |
| 1063 | 0.15 | | | | 21.25 | 10.57 | 4616.7 | | 35757.9 | 0.22 | 0.0 | -18850.7 | 0.09 | | |
| | | S.L.E. Rare | 2105.0 | | | | 0.0 | | | | 0.0 | 11.2 | 229.3 | | 130.4 |

| | | | | | | | | | | | |
|--|--------------|--------|--------|--------|---------|---------|---------|--------|---------|----------------|-------|
| | S.L.E. Freq. | 1643.4 | | | 0.0 | | | 0.0 | 8.7 | 179.0 | 101.8 |
| | S.L.E. Q.P. | 1489.5 | | | 0.0 | | | 0.0 | 7.9 | 162.2 | 92.3 |
| Camp. | 1.25 | 8393.4 | 3278.7 | 10.78 | 8.04 | 0.0 | 18522.8 | 0.16 | -3278.7 | -14469.5 | 0.08 |
| | S.L.E. Rare | 0.0 | | | | -2220.1 | | 8.4 | 0.0 | 60.0 | 596.1 |
| | S.L.E. Freq. | 0.0 | | | | -1708.6 | | 6.5 | 0.0 | 46.2 | 458.7 |
| | S.L.E. Q.P. | 0.0 | | | | -1538.1 | | 5.8 | 0.0 | 41.6 | 413.0 |
| 1079 | 2.35 | | | 21.25 | 10.85 | 3948.7 | 35774.0 | 0.22 | 0.0 | -19341.7 | 0.09 |
| | S.L.E. Rare | 1729.3 | | | | 0.0 | | 0.0 | 9.1 | 188.2 | 106.4 |
| | S.L.E. Freq. | 1453.1 | | | | 0.0 | | 0.0 | 7.7 | 158.2 | 89.4 |
| | S.L.E. Q.P. | 1361.0 | | | | 0.0 | | 0.0 | 7.2 | 148.2 | 83.8 |
| Trave Sez. 1 a T 115x54x30x24 [cm] T 115x54 | | | | | | | | | | | |
| 1079 | 0.15 | | | 21.55 | 10.85 | 4323.2 | 36266.7 | 0.22 | 0.0 | -19341.5 | 0.09 |
| | S.L.E. Rare | 2337.0 | | | | 0.0 | | 0.0 | 12.3 | 251.0 | 143.5 |
| | S.L.E. Freq. | 1899.5 | | | | 0.0 | | 0.0 | 10.0 | 204.0 | 116.7 |
| | S.L.E. Q.P. | 1753.7 | | | | 0.0 | | 0.0 | 9.2 | 188.3 | 107.7 |
| Camp. | 1.65 | 3073.5 | 2091.9 | 10.78 | 8.04 | 0.0 | 18522.8 | 0.16 | -2091.9 | -14469.5 | 0.08 |
| | S.L.E. Rare | 0.0 | | | | -1449.7 | | 5.5 | 0.0 | 39.2 | 389.2 |
| | S.L.E. Freq. | 0.0 | | | | -1266.9 | | 4.8 | 0.0 | 34.2 | 340.2 |
| | S.L.E. Q.P. | 0.0 | | | | -1228.1 | | 4.6 | 0.0 | 33.2 | 329.7 |
| 1098 | 3.15 | | | 10.78 | 8.04 | 325.8 | 18522.8 | 0.16 | -912.8 | -14469.5 | 0.08 |
| | S.L.E. Rare | 1.0 | | | | -166.2 | | 0.6 | 0.0 | 4.5 | 44.6 |
| | S.L.E. Freq. | 3.3 | | | | -138.9 | | 0.5 | 0.0 | 3.8 | 37.3 |
| | S.L.E. Q.P. | 4.1 | | | | -130.4 | | 0.5 | 0.0 | 3.5 | 35.0 |
| Da | A | Dx | VSd | Vrd1 | Vrd2 | Vrd3 | TSd | Trd1 | Trd2 | Staffe | |
| [m] | [m] | [m] | [kg] | [kg] | [kg] | [kg] | [kgm] | [kgm] | [kgm] | | |
| Trave 1048 1063 Sez. 1 a T 115x54x30x24 [cm] T 115x54 | | | | | | | | | | | |
| 0.15 | 2.20 | 2.05 | 9500.4 | 6509.3 | 59970.8 | 13423.6 | 475.2 | 3551.0 | 2045.4 | ø 8 2br. 12.5' | |
| Trave 1063 1079 Sez. 1 a T 115x54x30x24 [cm] T 115x54 | | | | | | | | | | | |
| 0.15 | 2.35 | 2.20 | 9500.0 | 6509.3 | 59970.8 | 13423.6 | 217.1 | 3551.0 | 2045.4 | ø 8 2br. 12.5' | |
| Trave 1079 1098 Sez. 1 a T 115x54x30x24 [cm] T 115x54 | | | | | | | | | | | |
| 0.15 | 3.15 | 3.00 | 5821.6 | 6509.3 | 59970.8 | 13423.6 | 46.8 | 3551.0 | 2045.4 | ø 8 2br. 12.5' | |