
REGIONE PIEMONTE
Comune di Venaus

Città Metropolitana di Torino

RELAZIONE TECNICA

**FABBRICATO MICROCENTRALE ELETTRICA A SERVIZIO DEL NUOVO
EDIFICIO SCOLASTICO COMUNALE**

PROGETTO ESECUTIVO

IL TECNICO INCARICATO:

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A handwritten signature in black ink, appearing to read 'Marina Cancia'.

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DESCRIZIONE DELL'OPERA IN PROGETTO

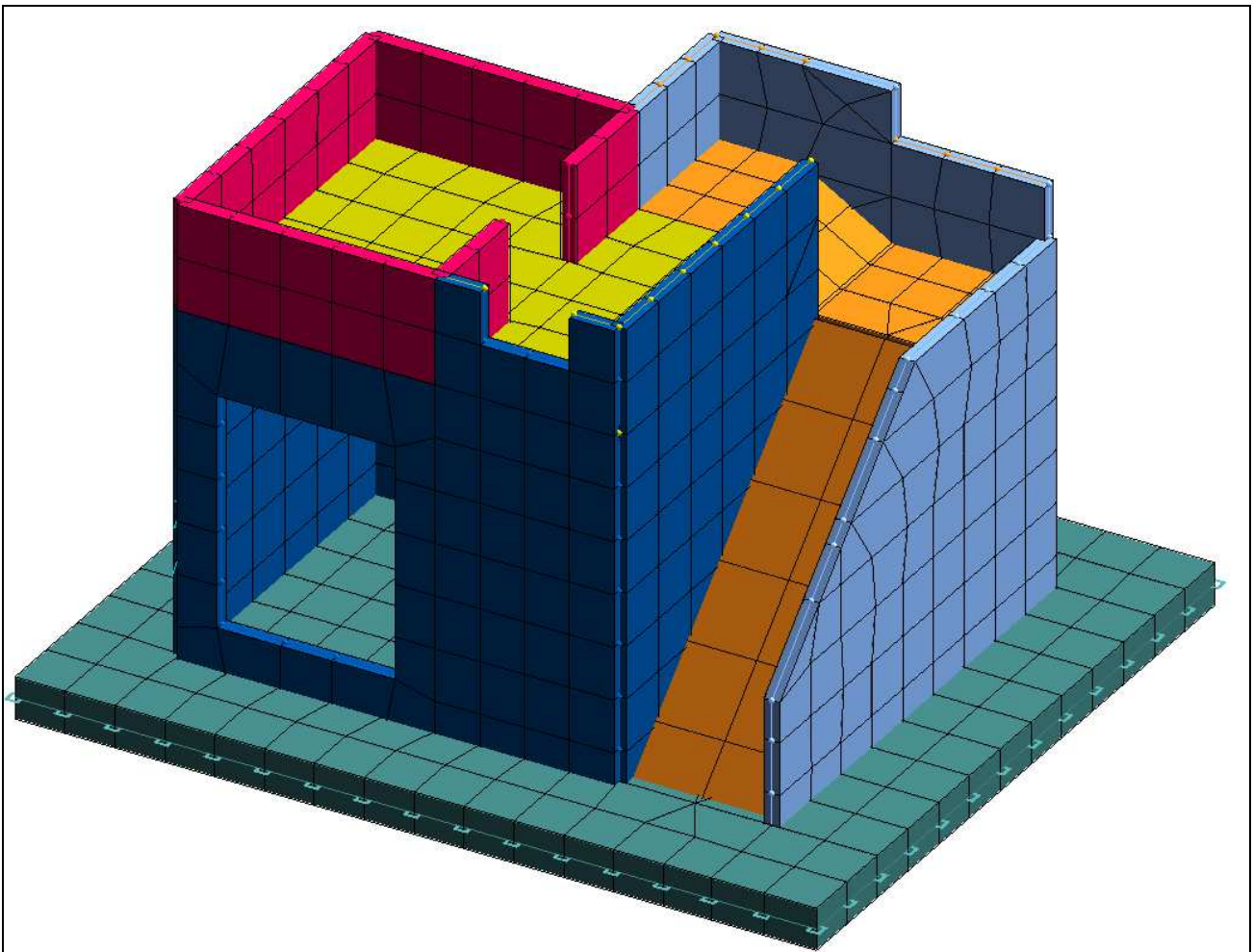
La presente relazione, redatta ai sensi del D.M. 14.01.2008 si riferisce al progetto per la realizzazione di una microcentrale elettrica da costruire sul mappale n° 767 del foglio 17 a servizio del nuovo edificio scolastico in corso di costruzione.

La nuova struttura, avrà destinazione d'uso di centrale elettrica e sarà composta dai seguenti elementi, previsti in calcestruzzo gettato in opera:

FONDAZIONI: platea di fondazione di dimensione 7,75 m x 6,75 m con spessore 40 cm in cemento armato gettato in opera, con getto di magrone di spessore 10 cm.

STRUTTURE VERTICALI: n. 7 setti verticali con spessore 15 cm in cemento armato gettato in opera;

STRUTTURE ORIZZONTALI: n. 1 soletta orizzontale con spessore 15 cm in cemento armato gettato in opera; n. 1 solette inclinate a formare la scala con spessore 12 cm in cemento armato gettato in opera;



Modello della struttura.

INQUADRAMENTO NORMATIVO

L'analisi della struttura in oggetto è stata sviluppata utilizzando i metodi usuali della Scienza delle Costruzioni ed in conformità alle normative e leggi vigenti applicate agli edifici di NUOVA COSTRUZIONE:

- D.M. 14/1/2008: Norme tecniche per le costruzioni.
- Circolare esplicativa n. 617/2009.

DEFINIZIONE DEI PARAMETRI DI PROGETTO AI SENSI DEL D.M. 14/01/2008

Secondo quanto previsto dal cap. 2 ed ai fini della definizione dei livelli di sicurezza e delle prestazioni attese, alla costruzione sono stati attribuiti i seguenti parametri:

- vita nominale $V_n = 50$ anni
- classe d'uso II
- periodo di riferimento $VR = 50.0$

In riferimento alle prescrizioni di cui al par. 3.2 si sono definiti i seguenti parametri:

- categoria del sottosuolo B
- categoria topografica T2
- amplificazione topografica $ST = 1.200$
- zona sismica del sito 3 classe
- coordinate del sito $long. = 7.005600$ $lat. = 45.156900$

RISPONDENZA DEI MATERIALI STRUTTURALI AI REQUISITI PREVISTI DALLA NORMATIVA TECNICA VIGENTE:

CALCESTRUZZO PER STRUTTURE IN FONDAZIONE ED ELEVAZIONE C25/30:

Per tutti gli elementi in cemento armato è previsto l'utilizzo di un calcestruzzo C25/30 che presenta le seguenti caratteristiche e parametri di calcolo:

$R_{ck} = 300 \text{ daN/cm}^2$
(Valore caratteristico della resistenza a compressione cubica del calcestruzzo a 28 giorni)

$f_{ck} = 249 \text{ daN/cm}^2$
(Valore caratteristico della resistenza a compressione cilindrica del calcestruzzo a 28 giorni)

$\gamma_c = 1.6$
(Coefficiente parziale per il calcestruzzo)

$f_{cd} = 155.6 \text{ daN/cm}^2$

(Valore di progetto della resistenza a compressione del calcestruzzo)

$$0.85 f_{cd} = 132.26 \text{ daN/cm}^2$$

$$f_{ctk} = 18.2 \text{ daN/cm}^2$$

(Valore caratteristico della resistenza a trazione assiale del calcestruzzo)

$$f_{ctd} = 11.4 \text{ daN/cm}^2$$

(Valore di progetto della resistenza a trazione assiale del calcestruzzo)

Classe di esposizione XC2

ACCIAIO PER ARMATURE DELLE STRUTTURE IN CALCESTRUZZO ARMATO ORDINARIO: B450C

In progetto è previsto sia per le strutture in fondazione che per le strutture in elevazione l'utilizzo di un acciaio tipo B450C controllato in stabilimento che presenta le seguenti caratteristiche e parametri di calcolo:

$$f_{yk} = 4500 \text{ daN/cm}^2$$

(Valore caratteristico della tensione di snervamento dell'armatura ordinaria)

$$\gamma_a = 1.15$$

(Coefficiente parziale per l'acciaio ordinario)

$$f_{yd} = 3913 \text{ daN/cm}^2$$

(Valore di progetto della tensione di snervamento dell'armatura ordinaria)

Al fine del rispetto del par. 7.2 di seguito si precisano i criteri di progettazione e modellazione adottati:

- classe di duttilità bassa (CD" B")
- struttura regolare in pianta
- struttura regolare in altezza
- tipologia strutturale: a pareti accoppiate
- fattore di struttura: 1
- le fondazioni progettate rispettano i requisiti richiesti al punto 7.2.5 e 7.2.5.1 del D.M. 14/01/2008
- Il modello realizzato è conforme con quanto specificato nel paragrafo 7.2.6 del D.M. 14/01/2008.
La struttura è stata schematizzata escludendo il contributo degli elementi aventi rigidezza e resistenza trascurabili a fronte dei principali. E' quindi stata considerata l'orditura a telaio tridimensionale, i solai ed i setti verticali ad elevata rigidezza.

La struttura è modellata con il metodo degli elementi finiti, applicato a sistemi tridimensionali. Gli elementi utilizzati sono bidimensionali (piastre e membrane triangolari e quadrangolari). I vincoli sono considerati puntuali ed inseriti tramite le sei costanti di rigidezza elastica, oppure come elementi asta poggianti su suolo elastico.

Il metodo di analisi adottato è quello dell'analisi lineare dinamica come indicato al punto 7.3.3.1 del D.M. 14/01/2008.

Al fine di rispettare le verifiche da effettuare ai vari stati limite ultimi e di esercizio si sono seguiti i vincoli imposti dalla Norma ai paragrafi ai punti 7.3.6 e 7.3.7. Nello specifico, trattandosi di una struttura di classe d'uso II, si è considerata una probabilità di superamento P_{VR} nel periodo di riferimento V_R del 10% dello SLV e del 63% dello SLD come indicato in tab. 3.2.1 del D.M. 14/01/2008.

Le verifiche agli stati limite ultimi e di esercizio sono state effettuate su tutti i setti, le solette e la fondazione e sono allegate alla presente relazione.

Inoltre per effettuare le calcolazioni relative alla struttura sono state rispettate tutte le prescrizioni riportate ai per. 7.4 delle NT relative alle strutture in C.A.

ANALISI DEI CARICHI

Carichi Permanenti:

- peso proprio dell'intera struttura;
- peso elementi non strutturali su fondazione (turbina): 300 daN/m²;
- peso elementi non strutturali soletta (pavimento): 150 daN/m²;
- peso elementi non strutturali su setti verticali (pietre): 750 daN/m²;

Carichi Variabili:

- peso Cat. C2, variabile scale su soletta e rampe scale: 400 daN/m²;
- peso neve, su soletta e rampe scale: 240 daN/m²;

INDIVIDUAZIONE DEL CODICE DI CALCOLO

Per il calcolo delle sollecitazioni e per la verifica di travi e pilastri in cemento armato si è fatto ricorso all'elaboratore elettronico utilizzando il seguente programma di calcolo:

DOLMEN WIN (R), versione 2012 del 2012 prodotto, distribuito ed assistito dalla CDM DOLMEN srl, con sede in Torino, Via Drovetti 9/F.

Questa procedura è sviluppata in ambiente Windows, ed è stata scritta utilizzando i linguaggi Fortran e C. DOLMEN WIN permette l'analisi elastica lineare di strutture tridimensionali con nodi a sei gradi di libertà utilizzando un solutore ad elementi finiti. Gli elementi considerati sono la trave, con eventuali svincoli interni o rotazione attorno al proprio asse, ed il guscio, sia rettangolare che triangolare, avente comportamento di membrana e di piastra. I carichi possono essere applicati sia ai nodi, come forze o coppie concentrate, sia sulle travi, come forze distribuite, trapezie, concentrate, come coppie e come distorsioni termiche. I vincoli sono forniti tramite le sei costanti di rigidità elastica.

A supporto del programma è fornito un ampio manuale d'uso contenente fra l'altro una vasta serie di test di validazione sia su esempi classici di Scienza delle Costruzioni, sia su strutture particolarmente impegnative e reperibili nella bibliografia specializzata.

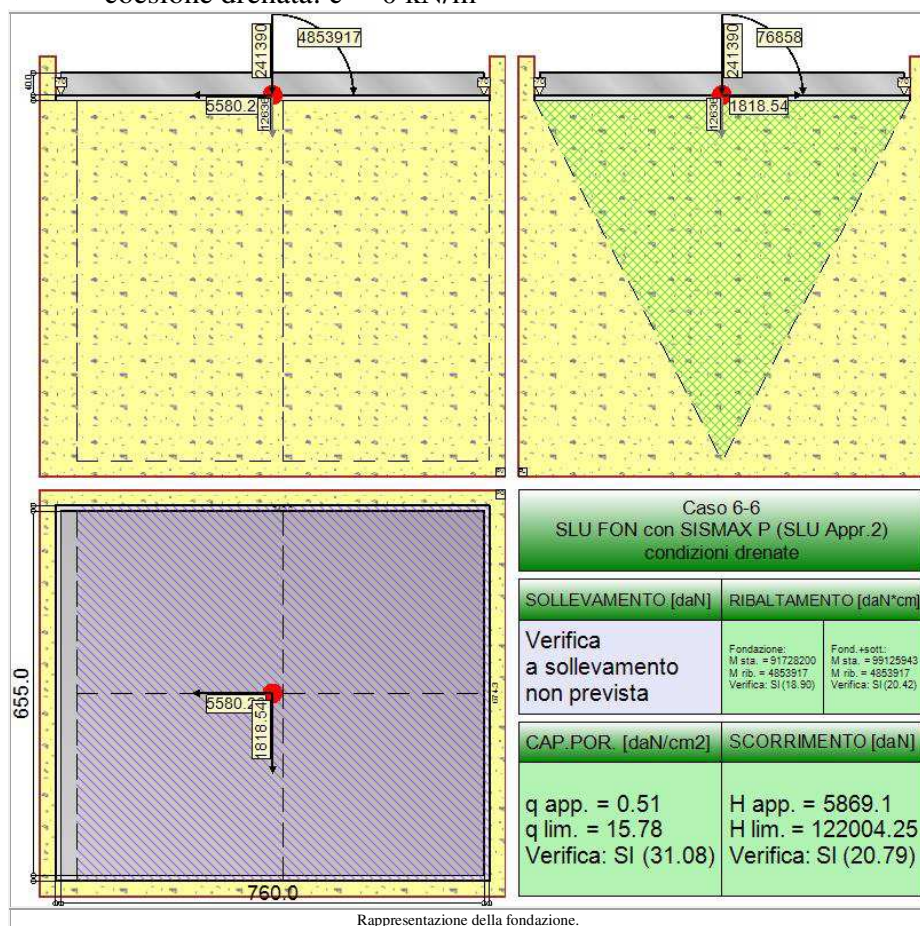
L'affidabilità del codice di calcolo è garantita dall'esistenza di un'ampia documentazione di supporto, come indicato nel paragrafo precedente. La presenza di un modulo CAD per l'introduzione di dati permette la visualizzazione dettagliata degli elementi introdotti. E' possibile inoltre ottenere rappresentazioni grafiche di deformate e sollecitazioni della struttura. Al termine dell'elaborazione viene inoltre valutata la qualità della soluzione, in base all'uguaglianza del lavoro esterno e dell'energia di deformazione.

DOLMEN WIN permette in campo elastico lineare un'analisi dettagliata del comportamento dell'intera struttura, tenendo conto del comportamento irrigidente di setti anche complessi e solai considerati con la loro effettiva rigidità. E' possibile inoltre scegliere il grado di affinamento dell'analisi di elementi complessi utilizzando mesh via via più dettagliate.

CAPACITA' PORTANTE E RESISTENZA A SCORRIMENTO DELLA FONDAZIONE

Da conoscenze acquisite dallo scrivente, in accordo con quanto individuato dalla relazione Geologico tecnica, redatta dal Geologo Dario Fontan, sulla zona in esame, il terreno di fondazione, nei primi metri è costituito da ciottoli e blocchi arrotondati in matrice limoso-sabbiosa con ottime caratteristiche geotecniche. Alla profondità raggiunta dalle fondazioni non è presente falda acquifera. Sulla base di questi dati si possono assumere, prudenzialmente, i seguenti parametri geotecnici:

- peso di volume del terreno: $\gamma = 19.00 \text{ kN/m}^3$
- angolo di resistenza al taglio: $\phi' = 35^\circ$
- coesione drenata: $c' = 0 \text{ kN/m}^2$



Descrizione dei Casi di calcolo e riassunto dei risultati.

Segue il riassunto dei Casi di calcolo analizzati. I dettagli di ciascun Caso (sollecitazioni, verifiche, ecc.) sono specificati nei paragrafi successivi.

| Indici e nomi dei casi di carico | | | Elenco delle verifiche eseguite per ciascun caso | | | | | Sisma |
|----------------------------------|--------------------------|-----------------|--|----------------|-----------|-----------|-------------|-------|
| Caso | Nome | Sestetti | Ver. dren. | Ver. non dren. | Ver. equ. | Ver. upl. | Coef. sism. | |
| 1 | SLU (SLU Appr.2) | I-1 | Si | No | Si | No | Non sismico | |
| 1-1 Caso 1-1 | | | | | | | | |
| 2 | SLU VENTOX (SLU Appr.2) | da 2-1 a 2-2 | Si | No | Si | No | Non sismico | |
| 2-1 Caso 2-1; 2-2 Caso 2-2 | | | | | | | | |
| 3 | SLU VENTTOY (SLU Appr.2) | da 3-1 a 3-2 | Si | No | Si | No | Non sismico | |
| 3-1 Caso 3-1; 3-2 Caso 3-2 | | | | | | | | |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | |
|--|-----------------------------------|------------------|----|----|----|----|---------------------------------|
| 4 | SLU con SISMAX PRINC (SLU Appr.2) | da 4-1 a 4-16 | Si | No | Si | No | $k_{h,s}=0.05$, $k_{h,y}=0.01$ |
| 4-1 Caso 6-1; 4-2 Caso 6-2; 4-3 Caso 6-3; 4-4 Caso 6-4; 4-5 Caso 6-5; 4-6 Caso 6-6; 4-7 Caso 6-7; 4-8 Caso 6-8; 4-9 Caso 6-9; 4-10 Caso 6-10; 4-11 Caso 6-11; 4-12 Caso 6-12; 4-13 Caso 6-13; 4-14 Caso 6-14; 4-15 Caso 6-15; 4-16 Caso 6-16 | | | | | | | |
| 5 | SLU con SISMAX PRINC (SLU Appr.2) | da 5-1 a 5-16 | Si | No | Si | No | $k_{h,s}=0.01$, $k_{h,y}=0.05$ |
| 5-1 Caso 7-1; 5-2 Caso 7-2; 5-3 Caso 7-3; 5-4 Caso 7-4; 5-5 Caso 7-5; 5-6 Caso 7-6; 5-7 Caso 7-7; 5-8 Caso 7-8; 5-9 Caso 7-9; 5-10 Caso 7-10; 5-11 Caso 7-11; 5-12 Caso 7-12; 5-13 Caso 7-13; 5-14 Caso 7-14; 5-15 Caso 7-15; 5-16 Caso 7-16 | | | | | | | |
| 6 | SLU FON con SISMAX P (SLU Appr.2) | da 6-1 a 6-16 | Si | No | Si | No | $k_{h,s}=0.05$, $k_{h,y}=0.01$ |
| 6-1 Caso 10-1; 6-2 Caso 10-2; 6-3 Caso 10-3; 6-4 Caso 10-4; 6-5 Caso 10-5; 6-6 Caso 10-6; 6-7 Caso 10-7; 6-8 Caso 10-8; 6-9 Caso 10-9; 6-10 Caso 10-10; 6-11 Caso 10-11; 6-12 Caso 10-12; 6-13 Caso 10-13; 6-14 Caso 10-14; 6-15 Caso 10-15; 6-16 Caso 10-16 | | | | | | | |
| 7 | SLU FON con SISMAX P (SLU Appr.2) | da 7-1 a 7-16 | Si | No | Si | No | $k_{h,s}=0.01$, $k_{h,y}=0.05$ |
| 7-1 Caso 11-1; 7-2 Caso 11-2; 7-3 Caso 11-3; 7-4 Caso 11-4; 7-5 Caso 11-5; 7-6 Caso 11-6; 7-7 Caso 11-7; 7-8 Caso 11-8; 7-9 Caso 11-9; 7-10 Caso 11-10; 7-11 Caso 11-11; 7-12 Caso 11-12; 7-13 Caso 11-13; 7-14 Caso 11-14; 7-15 Caso 11-15; 7-16 Caso 11-16 | | | | | | | |

La seguente tabella elenca i coefficienti di sicurezza parziali, applicati alle caratteristiche meccaniche del terreno, alla capacità portante, alla resistenza a scorrimento e del terreno, per ciascun Caso di calcolo.

| Caso | $\gamma_{G1,fas}$ | $\gamma_{G1,afa}$ | $\gamma_{G2,fas}$ | $\gamma_{G2,afa}$ | $\gamma_{Q1,fas}$ | $\gamma_{Q1,afa}$ |
|------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 1 | 1.00 | 1.30 | 0.00 | 1.50 | 0.00 | 1.50 |
| 2 | 1.00 | 1.30 | 0.00 | 1.50 | 0.00 | 1.50 |
| 3 | 1.00 | 1.30 | 0.00 | 1.50 | 0.00 | 1.50 |
| 4 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 5 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 6 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 7 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

| Caso | γ_f | γ_ϕ | γ_c | $\gamma_{R,v}$ | $\gamma_{R,h}$ | $\gamma_{R,e}$ | $\gamma_{R,eqn}$ | $\gamma_{R,upl}$ |
|------|------------|---------------|------------|----------------|----------------|----------------|------------------|------------------|
| 1 | 1.00 | 1.00 | 1.00 | 2.30 | 1.10 | 1.00 | - | - |
| 2 | 1.00 | 1.00 | 1.00 | 2.30 | 1.10 | 1.00 | - | - |
| 3 | 1.00 | 1.00 | 1.00 | 2.30 | 1.10 | 1.00 | - | - |
| 4 | 1.00 | 1.00 | 1.00 | 2.30 | 1.10 | 1.00 | - | - |
| 5 | 1.00 | 1.00 | 1.00 | 2.30 | 1.10 | 1.00 | - | - |
| 6 | 1.00 | 1.00 | 1.00 | 2.30 | 1.10 | 1.00 | - | - |
| 7 | 1.00 | 1.00 | 1.00 | 2.30 | 1.10 | 1.00 | - | - |

Segue la tabella riassuntiva di tutte le verifiche a **ribaltamento**.

| Fondazione | | | | Fondazione e Sottofondo | | | |
|------------|----------------|----------------|---------------------------------------|-------------------------|----------------|---------------------------------------|--|
| Caso | R_d [daN*cm] | E_d [daN*cm] | Verifica | R_d [daN*cm] | E_d [daN*cm] | Verifica | |
| 1-1 | 135449860 | 4202020 | SI (135449860/4202020 = 32.23 >= 1.0) | 145420780 | 4202020 | SI (145420780/4202020 = 34.61 >= 1.0) | |
| 2-1 | 135449860 | 4481620 | SI (135449860/4481620 = 30.22 >= 1.0) | 145420780 | 4488640 | SI (145420780/4488640 = 32.40 >= 1.0) | |
| 2-2 | 135449480 | 3922410 | SI (135449480/3922410 = 34.53 >= 1.0) | 145427410 | 3922410 | SI (145427410/3922410 = 37.08 >= 1.0) | |
| 3-1 | 135449480 | 4202040 | SI (135449480/4202040 = 32.23 >= 1.0) | 145420390 | 4202040 | SI (145420390/4202040 = 34.61 >= 1.0) | |
| 3-2 | 135449860 | 4202000 | SI (135449860/4202000 = 32.23 >= 1.0) | 145420780 | 4202000 | SI (145420780/4202000 = 34.61 >= 1.0) | |
| 4-1 | 91728200 | 4648060 | SI (91728200/4648060 = 19.73 >= 1.0) | 99121020 | 4648060 | SI (99121020/4648060 = 21.33 >= 1.0) | |
| 4-2 | 91728200 | 4648070 | SI (91728200/4648070 = 19.73 >= 1.0) | 99121020 | 4648070 | SI (99121020/4648070 = 21.33 >= 1.0) | |
| 4-3 | 91729720 | 4647980 | SI (91729720/4647980 = 19.74 >= 1.0) | 99122580 | 4647980 | SI (99122580/4647980 = 21.33 >= 1.0) | |
| 4-4 | 91729720 | 4647990 | SI (91729720/4647990 = 19.74 >= 1.0) | 99122580 | 4647990 | SI (99122580/4647990 = 21.33 >= 1.0) | |
| 4-5 | 91728200 | 4661430 | SI (91728200/4661430 = 19.68 >= 1.0) | 99120870 | 4661430 | SI (99120870/4661430 = 21.26 >= 1.0) | |
| 4-6 | 91728200 | 4661440 | SI (91728200/4661440 = 19.68 >= 1.0) | 99120870 | 4661440 | SI (99120870/4661440 = 21.26 >= 1.0) | |
| 4-7 | 91729720 | 4661350 | SI (91729720/4661350 = 19.68 >= 1.0) | 99122430 | 4661350 | SI (99122430/4661350 = 21.26 >= 1.0) | |
| 4-8 | 91729720 | 4661360 | SI (91729720/4661360 = 19.68 >= 1.0) | 99122430 | 4661360 | SI (99122430/4661360 = 21.26 >= 1.0) | |
| 4-9 | 91725920 | 812010 | SI (91725920/812010 > 100) | 99067800 | 862740 | SI (99067800/862740 > 100) | |
| 4-10 | 91725920 | 812020 | SI (91725920/812020 > 100) | 99067800 | 862750 | SI (99067800/862750 > 100) | |
| 4-11 | 79054240 | 1392870 | SI (79054240/1392870 = 56.76 >= 1.0) | 85749290 | 1392870 | SI (85749290/1392870 = 61.56 >= 1.0) | |
| 4-12 | 79054240 | 1387330 | SI (79054240/1387330 = 56.98 >= 1.0) | 85749350 | 1387330 | SI (85749350/1387330 = 61.81 >= 1.0) | |
| 4-13 | 91725920 | 825380 | SI (91725920/825380 > 100) | 99067800 | 876270 | SI (99067800/876270 > 100) | |
| 4-14 | 91725920 | 825390 | SI (91725920/825390 > 100) | 99067800 | 876270 | SI (99067800/876270 > 100) | |
| 4-15 | 79054240 | 1392870 | SI (79054240/1392870 = 56.76 >= 1.0) | 85749290 | 1392870 | SI (85749290/1392870 = 61.56 >= 1.0) | |
| 4-16 | 79054240 | 1387340 | SI (79054240/1387340 = 56.98 >= 1.0) | 85749350 | 1387340 | SI (85749350/1387340 = 61.81 >= 1.0) | |
| 5-1 | 91725920 | 3310200 | SI (91725920/3310200 = 27.71 >= 1.0) | 99083060 | 3310200 | SI (99083060/3310200 = 29.93 >= 1.0) | |
| 5-2 | 91725920 | 3314220 | SI (91725920/3314220 = 27.68 >= 1.0) | 99083020 | 3314220 | SI (99083020/3314220 = 29.90 >= 1.0) | |
| 5-3 | 91725160 | 2159390 | SI (91725160/2159390 = 42.48 >= 1.0) | 99067020 | 2174610 | SI (99067020/2174610 = 45.56 >= 1.0) | |
| 5-4 | 91725160 | 2163400 | SI (91725160/2163400 = 42.40 >= 1.0) | 99067020 | 2178670 | SI (99067020/2178670 = 45.47 >= 1.0) | |
| 5-5 | 91725920 | 3310230 | SI (91725920/3310230 = 27.71 >= 1.0) | 99083060 | 3310230 | SI (99083060/3310230 = 29.93 >= 1.0) | |
| 5-6 | 91725920 | 3314240 | SI (91725920/3314240 = 27.68 >= 1.0) | 99083020 | 3314240 | SI (99083020/3314240 = 29.90 >= 1.0) | |
| 5-7 | 91725160 | 2159420 | SI (91725160/2159420 = 42.48 >= 1.0) | 99067020 | 2174640 | SI (99067020/2174640 = 45.56 >= 1.0) | |
| 5-8 | 91725160 | 2163430 | SI (91725160/2163430 = 42.40 >= 1.0) | 99067020 | 2178690 | SI (99067020/2178690 = 45.47 >= 1.0) | |
| 5-9 | 79056860 | 2854210 | SI (79056860/2854210 = 27.70 >= 1.0) | 99087350 | 3309940 | SI (99087350/3309940 = 29.94 >= 1.0) | |
| 5-10 | 91730100 | 3313950 | SI (91730100/3313950 = 27.68 >= 1.0) | 99087310 | 3313950 | SI (99087310/3313950 = 29.90 >= 1.0) | |
| 5-11 | 79056210 | 2854360 | SI (79056210/2854360 = 27.70 >= 1.0) | 85789900 | 2854360 | SI (85789900/2854360 = 30.06 >= 1.0) | |
| 5-12 | 79056210 | 2854360 | SI (79056210/2854360 = 27.70 >= 1.0) | 85789900 | 2854360 | SI (85789900/2854360 = 30.06 >= 1.0) | |
| 5-13 | 91730100 | 3309970 | SI (91730100/3309970 = 27.71 >= 1.0) | 99087350 | 3309970 | SI (99087350/3309970 = 29.94 >= 1.0) | |
| 5-14 | 91730100 | 3313980 | SI (91730100/3313980 = 27.68 >= 1.0) | 99087310 | 3313980 | SI (99087310/3313980 = 29.90 >= 1.0) | |
| 5-15 | 79056210 | 2835920 | SI (79056210/2835920 = 27.88 >= 1.0) | 85790080 | 2835920 | SI (85790080/2835920 = 30.25 >= 1.0) | |
| 5-16 | 79056210 | 2835920 | SI (79056210/2835920 = 27.88 >= 1.0) | 85790080 | 2835920 | SI (85790080/2835920 = 30.25 >= 1.0) | |
| 6-1 | 91728580 | 4839200 | SI (91728580/4839200 = 18.96 >= 1.0) | 99126500 | 4839200 | SI (99126500/4839200 = 20.48 >= 1.0) | |
| 6-2 | 91728200 | 4839200 | SI (91728200/4839200 = 18.96 >= 1.0) | 99126110 | 4839200 | SI (99126110/4839200 = 20.48 >= 1.0) | |
| 6-3 | 91729720 | 4839110 | SI (91729720/4839110 = 18.96 >= 1.0) | 99127670 | 4839110 | SI (99127670/4839110 = 20.48 >= 1.0) | |

| | | | | | | |
|------|----------|---------|--------------------------------------|----------|---------|--------------------------------------|
| 6-4 | 91729720 | 4839120 | SI (91729720/4839120 = 18.96 >= 1.0) | 99127670 | 4839120 | SI (99127670/4839120 = 20.48 >= 1.0) |
| 6-5 | 91728200 | 4853910 | SI (91728200/4853910 = 18.90 >= 1.0) | 99125940 | 4853910 | SI (99125940/4853910 = 20.42 >= 1.0) |
| 6-6 | 91728200 | 4853920 | SI (91728200/4853920 = 18.90 >= 1.0) | 99125940 | 4853920 | SI (99125940/4853920 = 20.42 >= 1.0) |
| 6-7 | 91729720 | 4853820 | SI (91729720/4853820 = 18.90 >= 1.0) | 99127500 | 4853820 | SI (99127500/4853820 = 20.42 >= 1.0) |
| 6-8 | 91729720 | 4853830 | SI (91729720/4853830 = 18.90 >= 1.0) | 99127500 | 4853830 | SI (99127500/4853830 = 20.42 >= 1.0) |
| 6-9 | 91725540 | 619540 | SI (91725540/619540 > 100) | 99067410 | 675340 | SI (99067410/675340 > 100) |
| 6-10 | 91725540 | 619550 | SI (91725540/619550 > 100) | 99067410 | 675350 | SI (99067410/675350 > 100) |
| 6-11 | 79054240 | 1455530 | SI (79054240/1455530 = 54.31 >= 1.0) | 85750950 | 1455530 | SI (85750950/1455530 = 58.91 >= 1.0) |
| 6-12 | 79054240 | 1449450 | SI (79054240/1449450 = 54.54 >= 1.0) | 85751010 | 1449450 | SI (85751010/1449450 = 59.16 >= 1.0) |
| 6-13 | 91725540 | 634250 | SI (91725540/634250 > 100) | 99067410 | 690220 | SI (99067410/690220 > 100) |
| 6-14 | 91725540 | 634260 | SI (91725540/634260 > 100) | 99067410 | 690230 | SI (99067410/690230 > 100) |
| 6-15 | 79054240 | 1455540 | SI (79054240/1455540 = 54.31 >= 1.0) | 85750950 | 1455540 | SI (85750950/1455540 = 58.91 >= 1.0) |
| 6-16 | 79054240 | 1449450 | SI (79054240/1449450 = 54.54 >= 1.0) | 85751010 | 1449450 | SI (85751010/1449450 = 59.16 >= 1.0) |
| 7-1 | 91725920 | 3367560 | SI (91725920/3367560 = 27.24 >= 1.0) | 99084590 | 3367560 | SI (99084590/3367560 = 29.42 >= 1.0) |
| 7-2 | 91725920 | 3371970 | SI (91725920/3371970 = 27.20 >= 1.0) | 99084540 | 3371970 | SI (99084540/3371970 = 29.38 >= 1.0) |
| 7-3 | 91725160 | 2101660 | SI (91725160/2101660 = 43.64 >= 1.0) | 99067020 | 2118400 | SI (99067020/2118400 = 46.76 >= 1.0) |
| 7-4 | 91725160 | 2106070 | SI (91725160/2106070 = 43.55 >= 1.0) | 99067020 | 2122870 | SI (99067020/2122870 = 46.67 >= 1.0) |
| 7-5 | 91725920 | 3367590 | SI (91725920/3367590 = 27.24 >= 1.0) | 99084590 | 3367590 | SI (99084590/3367590 = 29.42 >= 1.0) |
| 7-6 | 91725920 | 3372000 | SI (91725920/3372000 = 27.20 >= 1.0) | 99084540 | 3372000 | SI (99084540/3372000 = 29.38 >= 1.0) |
| 7-7 | 91724780 | 2101690 | SI (91724780/2101690 = 43.64 >= 1.0) | 99066630 | 2118430 | SI (99066630/2118430 = 46.76 >= 1.0) |
| 7-8 | 91724780 | 2106100 | SI (91724780/2106100 = 43.55 >= 1.0) | 99066630 | 2122900 | SI (99066630/2122900 = 46.67 >= 1.0) |
| 7-9 | 79057190 | 3063010 | SI (79057190/3063010 = 25.81 >= 1.0) | 85796420 | 3063010 | SI (85796420/3063010 = 28.01 >= 1.0) |
| 7-10 | 79057190 | 3063020 | SI (79057190/3063020 = 25.81 >= 1.0) | 85796420 | 3063020 | SI (85796420/3063020 = 28.01 >= 1.0) |
| 7-11 | 79056210 | 3063180 | SI (79056210/3063180 = 25.81 >= 1.0) | 85795410 | 3063180 | SI (85795410/3063180 = 28.01 >= 1.0) |
| 7-12 | 79056210 | 3063180 | SI (79056210/3063180 = 25.81 >= 1.0) | 85795410 | 3063180 | SI (85795410/3063180 = 28.01 >= 1.0) |
| 7-13 | 79057190 | 3042720 | SI (79057190/3042720 = 25.98 >= 1.0) | 85796620 | 3042720 | SI (85796620/3042720 = 28.20 >= 1.0) |
| 7-14 | 79057190 | 3042730 | SI (79057190/3042730 = 25.98 >= 1.0) | 85796620 | 3042730 | SI (85796620/3042730 = 28.20 >= 1.0) |
| 7-15 | 79056210 | 3042890 | SI (79056210/3042890 = 25.98 >= 1.0) | 85795610 | 3042890 | SI (85795610/3042890 = 28.20 >= 1.0) |
| 7-16 | 79056210 | 3042890 | SI (79056210/3042890 = 25.98 >= 1.0) | 85795610 | 3042890 | SI (85795610/3042890 = 28.20 >= 1.0) |

Segue la tabella riassuntiva di tutte le verifiche di **capacità portante**, i dettagli sono riportati nei paragrafi successivi.

| Cond. drenate | | | | Cond. non drenate | | |
|---------------|----------------------|----------------------|---|-------------------------|----------------------|----------|
| Caso | E _d [daN] | R _d [daN] | Verifica | E _d [daN] | R _d [daN] | Verifica |
| 1-1 | 372873.8 | 10161950.1 | SI (10161950.1/372873.8 = 27.25 >= 1.0) | Verifica non richiesta. | | |
| 2-1 | 372873.8 | 10102243.1 | SI (10102243.1/372873.8 = 27.09 >= 1.0) | Verifica non richiesta. | | |
| 2-2 | 372872.8 | 10133283 | SI (10133283/372872.8 = 27.18 >= 1.0) | Verifica non richiesta. | | |
| 3-1 | 372872.8 | 10165070 | SI (10165070/372872.8 = 27.26 >= 1.0) | Verifica non richiesta. | | |
| 3-2 | 372873.8 | 10073413.9 | SI (10073413.9/372873.8 = 27.02 >= 1.0) | Verifica non richiesta. | | |
| 4-1 | 254026 | 7943625.1 | SI (7943625.1/254026 = 31.27 >= 1.0) | Verifica non richiesta. | | |
| 4-2 | 254026 | 7945098.7 | SI (7945098.7/254026 = 31.28 >= 1.0) | Verifica non richiesta. | | |
| 4-3 | 254030 | 7711851.1 | SI (7711851.1/254030 = 30.36 >= 1.0) | Verifica non richiesta. | | |
| 4-4 | 254030 | 7712525.1 | SI (7712525.1/254030 = 30.36 >= 1.0) | Verifica non richiesta. | | |
| 4-5 | 254026 | 7943887.7 | SI (7943887.7/254026 = 31.27 >= 1.0) | Verifica non richiesta. | | |
| 4-6 | 254026 | 7945361.3 | SI (7945361.3/254026 = 31.28 >= 1.0) | Verifica non richiesta. | | |
| 4-7 | 254030 | 7712100.3 | SI (7712100.3/254030 = 30.36 >= 1.0) | Verifica non richiesta. | | |
| 4-8 | 254030 | 7712774.3 | SI (7712774.3/254030 = 30.36 >= 1.0) | Verifica non richiesta. | | |
| 4-9 | 254020 | 8181479.2 | SI (8181479.2/254020 = 32.21 >= 1.0) | Verifica non richiesta. | | |
| 4-10 | 254020 | 8182993.9 | SI (8182993.9/254020 = 32.21 >= 1.0) | Verifica non richiesta. | | |
| 4-11 | 254023 | 7943598.1 | SI (7943598.1/254023 = 31.27 >= 1.0) | Verifica non richiesta. | | |
| 4-12 | 254023 | 7944286.3 | SI (7944286.3/254023 = 31.27 >= 1.0) | Verifica non richiesta. | | |
| 4-13 | 254020 | 8179470.3 | SI (8179470.3/254020 = 32.20 >= 1.0) | Verifica non richiesta. | | |
| 4-14 | 254020 | 8180984.7 | SI (8180984.7/254020 = 32.21 >= 1.0) | Verifica non richiesta. | | |
| 4-15 | 254023 | 7941647.6 | SI (7941647.6/254023 = 31.26 >= 1.0) | Verifica non richiesta. | | |
| 4-16 | 254023 | 7942335.7 | SI (7942335.7/254023 = 31.27 >= 1.0) | Verifica non richiesta. | | |
| 5-1 | 254020 | 7786450.7 | SI (7786450.7/254020 = 30.65 >= 1.0) | Verifica non richiesta. | | |
| 5-2 | 254020 | 7786527.3 | SI (7786527.3/254020 = 30.65 >= 1.0) | Verifica non richiesta. | | |
| 5-3 | 254018 | 7855268.9 | SI (7855268.9/254018 = 30.92 >= 1.0) | Verifica non richiesta. | | |
| 5-4 | 254018 | 7854695.3 | SI (7854695.3/254018 = 30.92 >= 1.0) | Verifica non richiesta. | | |
| 5-5 | 254020 | 7784198.6 | SI (7784198.6/254020 = 30.64 >= 1.0) | Verifica non richiesta. | | |
| 5-6 | 254020 | 7784274.9 | SI (7784274.9/254020 = 30.64 >= 1.0) | Verifica non richiesta. | | |
| 5-7 | 254018 | 7853002.2 | SI (7853002.2/254018 = 30.92 >= 1.0) | Verifica non richiesta. | | |
| 5-8 | 254018 | 7852428.6 | SI (7852428.6/254018 = 30.91 >= 1.0) | Verifica non richiesta. | | |
| 5-9 | 254031 | 7494091.8 | SI (7494091.8/254031 = 29.50 >= 1.0) | Verifica non richiesta. | | |
| 5-10 | 254031 | 7494162.2 | SI (7494162.2/254031 = 29.50 >= 1.0) | Verifica non richiesta. | | |
| 5-11 | 254029 | 7560575.6 | SI (7560575.6/254029 = 29.76 >= 1.0) | Verifica non richiesta. | | |
| 5-12 | 254029 | 7560022.2 | SI (7560022.2/254029 = 29.76 >= 1.0) | Verifica non richiesta. | | |
| 5-13 | 254031 | 7496308.9 | SI (7496308.9/254031 = 29.51 >= 1.0) | Verifica non richiesta. | | |
| 5-14 | 254031 | 7496379.2 | SI (7496379.2/254031 = 29.51 >= 1.0) | Verifica non richiesta. | | |
| 5-15 | 254029 | 7562807.2 | SI (7562807.2/254029 = 29.77 >= 1.0) | Verifica non richiesta. | | |
| 5-16 | 254029 | 7562253.5 | SI (7562253.5/254029 = 29.77 >= 1.0) | Verifica non richiesta. | | |
| 6-1 | 254027 | 7893890.1 | SI (7893890.1/254027 = 31.08 >= 1.0) | Verifica non richiesta. | | |
| 6-2 | 254026 | 7895496.5 | SI (7895496.5/254026 = 31.08 >= 1.0) | Verifica non richiesta. | | |
| 6-3 | 254030 | 7640948.7 | SI (7640948.7/254030 = 30.08 >= 1.0) | Verifica non richiesta. | | |
| 6-4 | 254030 | 7641683.3 | SI (7641683.3/254030 = 30.08 >= 1.0) | Verifica non richiesta. | | |
| 6-5 | 254026 | 7894174.4 | SI (7894174.4/254026 = 31.08 >= 1.0) | Verifica non richiesta. | | |
| 6-6 | 254026 | 7895784.1 | SI (7895784.1/254026 = 31.08 >= 1.0) | Verifica non richiesta. | | |
| 6-7 | 254030 | 7641220.4 | SI (7641220.4/254030 = 30.08 >= 1.0) | Verifica non richiesta. | | |
| 6-8 | 254030 | 7641954.9 | SI (7641954.9/254030 = 30.08 >= 1.0) | Verifica non richiesta. | | |
| 6-9 | 254019 | 8154352.6 | SI (8154352.6/254019 = 32.10 >= 1.0) | Verifica non richiesta. | | |

| | | | | |
|------|--------|-----------|--------------------------------------|-------------------------|
| 6-10 | 254019 | 8156012.7 | SI (8156012.7/254019 = 32.11 >= 1.0) | Verifica non richiesta. |
| 6-11 | 254023 | 7894071.1 | SI (7894071.1/254023 = 31.08 >= 1.0) | Verifica non richiesta. |
| 6-12 | 254023 | 7894823.5 | SI (7894823.5/254023 = 31.08 >= 1.0) | Verifica non richiesta. |
| 6-13 | 254019 | 8152149.4 | SI (8152149.4/254019 = 32.09 >= 1.0) | Verifica non richiesta. |
| 6-14 | 254019 | 8153809.2 | SI (8153809.2/254019 = 32.10 >= 1.0) | Verifica non richiesta. |
| 6-15 | 254023 | 7891938.1 | SI (7891938.1/254023 = 31.07 >= 1.0) | Verifica non richiesta. |
| 6-16 | 254023 | 7892690.5 | SI (7892690.5/254023 = 31.07 >= 1.0) | Verifica non richiesta. |
| 7-1 | 254020 | 7693276.2 | SI (7693276.2/254020 = 30.29 >= 1.0) | Verifica non richiesta. |
| 7-2 | 254020 | 7693358.6 | SI (7693358.6/254020 = 30.29 >= 1.0) | Verifica non richiesta. |
| 7-3 | 254018 | 7768108.9 | SI (7768108.9/254018 = 30.58 >= 1.0) | Verifica non richiesta. |
| 7-4 | 254018 | 7767484.2 | SI (7767484.2/254018 = 30.58 >= 1.0) | Verifica non richiesta. |
| 7-5 | 254020 | 7690823.3 | SI (7690823.3/254020 = 30.28 >= 1.0) | Verifica non richiesta. |
| 7-6 | 254020 | 7690905.7 | SI (7690905.7/254020 = 30.28 >= 1.0) | Verifica non richiesta. |
| 7-7 | 254017 | 7765634.7 | SI (7765634.7/254017 = 30.57 >= 1.0) | Verifica non richiesta. |
| 7-8 | 254017 | 7765010.2 | SI (7765010.2/254017 = 30.57 >= 1.0) | Verifica non richiesta. |
| 7-9 | 254032 | 7403626.1 | SI (7403626.1/254032 = 29.14 >= 1.0) | Verifica non richiesta. |
| 7-10 | 254032 | 7403703.2 | SI (7403703.2/254032 = 29.14 >= 1.0) | Verifica non richiesta. |
| 7-11 | 254029 | 7475907.9 | SI (7475907.9/254029 = 29.43 >= 1.0) | Verifica non richiesta. |
| 7-12 | 254029 | 7475306.4 | SI (7475306.4/254029 = 29.43 >= 1.0) | Verifica non richiesta. |
| 7-13 | 254032 | 7406040.7 | SI (7406040.7/254032 = 29.15 >= 1.0) | Verifica non richiesta. |
| 7-14 | 254032 | 7406117.8 | SI (7406117.8/254032 = 29.15 >= 1.0) | Verifica non richiesta. |
| 7-15 | 254029 | 7478339.8 | SI (7478339.8/254029 = 29.44 >= 1.0) | Verifica non richiesta. |
| 7-16 | 254029 | 7477738.2 | SI (7477738.2/254029 = 29.44 >= 1.0) | Verifica non richiesta. |

Segue la tabella riassuntiva di tutte le verifiche di **resistenza a scorrimento**, i dettagli sono riportati nei paragrafi successivi.

| Cond. drenate | | | | Cond. non drenate | | |
|---------------|----------------------|----------------------|-------------------------------------|----------------------|----------------------|-------------------------|
| Caso | E _d [daN] | R _d [daN] | Verifica | E _d [daN] | R _d [daN] | Verifica |
| 1-1 | 0 | 167164.6 | SI (167164.6/0 = 1.00 >= 1.0) | | | Verifica non richiesta. |
| 2-1 | 702 | 173364.2 | SI (173364.2/702 = 246.96 >= 1.0) | | | Verifica non richiesta. |
| 2-2 | 702 | 173363.7 | SI (173363.7/702 = 246.96 >= 1.0) | | | Verifica non richiesta. |
| 3-1 | 661.5 | 174349.3 | SI (174349.3/661.5 = 263.57 >= 1.0) | | | Verifica non richiesta. |
| 3-2 | 661.5 | 174349.8 | SI (174349.8/661.5 = 263.57 >= 1.0) | | | Verifica non richiesta. |
| 4-1 | 5351.7 | 122004.6 | SI (122004.6/5351.7 = 22.80 >= 1.0) | | | Verifica non richiesta. |
| 4-2 | 5350 | 121999.9 | SI (121999.9/5350 = 22.80 >= 1.0) | | | Verifica non richiesta. |
| 4-3 | 5350.1 | 122001.9 | SI (122001.9/5350.1 = 22.80 >= 1.0) | | | Verifica non richiesta. |
| 4-4 | 5351.8 | 122006.6 | SI (122006.6/5351.8 = 22.80 >= 1.0) | | | Verifica non richiesta. |
| 4-5 | 5337.2 | 122008.9 | SI (122008.9/5337.2 = 22.86 >= 1.0) | | | Verifica non richiesta. |
| 4-6 | 5335.5 | 122004.3 | SI (122004.3/5335.5 = 22.87 >= 1.0) | | | Verifica non richiesta. |
| 4-7 | 5335.6 | 122006.2 | SI (122006.2/5335.6 = 22.87 >= 1.0) | | | Verifica non richiesta. |
| 4-8 | 5337.3 | 122010.9 | SI (122010.9/5337.3 = 22.86 >= 1.0) | | | Verifica non richiesta. |
| 4-9 | 5337.3 | 122006.4 | SI (122006.4/5337.3 = 22.86 >= 1.0) | | | Verifica non richiesta. |
| 4-10 | 5335.6 | 122001.8 | SI (122001.8/5335.6 = 22.87 >= 1.0) | | | Verifica non richiesta. |
| 4-11 | 5335.5 | 122002.9 | SI (122002.9/5335.5 = 22.87 >= 1.0) | | | Verifica non richiesta. |
| 4-12 | 5337.2 | 122007.6 | SI (122007.6/5337.2 = 22.86 >= 1.0) | | | Verifica non richiesta. |
| 4-13 | 5351.8 | 122002.1 | SI (122002.1/5351.8 = 22.80 >= 1.0) | | | Verifica non richiesta. |
| 4-14 | 5350.1 | 121997.4 | SI (121997.4/5350.1 = 22.80 >= 1.0) | | | Verifica non richiesta. |
| 4-15 | 5350 | 121998.6 | SI (121998.6/5350 = 22.80 >= 1.0) | | | Verifica non richiesta. |
| 4-16 | 5351.7 | 122003.2 | SI (122003.2/5351.7 = 22.80 >= 1.0) | | | Verifica non richiesta. |
| 5-1 | 5735.7 | 122456.8 | SI (122456.8/5735.7 = 21.35 >= 1.0) | | | Verifica non richiesta. |
| 5-2 | 5734.5 | 122453.6 | SI (122453.6/5734.5 = 21.35 >= 1.0) | | | Verifica non richiesta. |
| 5-3 | 5734.6 | 122452.7 | SI (122452.7/5734.6 = 21.35 >= 1.0) | | | Verifica non richiesta. |
| 5-4 | 5735.8 | 122455.8 | SI (122455.8/5735.8 = 21.35 >= 1.0) | | | Verifica non richiesta. |
| 5-5 | 5718.6 | 122460.1 | SI (122460.1/5718.6 = 21.41 >= 1.0) | | | Verifica non richiesta. |
| 5-6 | 5717.3 | 122457 | SI (122457/5717.3 = 21.42 >= 1.0) | | | Verifica non richiesta. |
| 5-7 | 5717.4 | 122456.1 | SI (122456.1/5717.4 = 21.42 >= 1.0) | | | Verifica non richiesta. |
| 5-8 | 5718.6 | 122459.2 | SI (122459.2/5718.6 = 21.41 >= 1.0) | | | Verifica non richiesta. |
| 5-9 | 5718.6 | 122465 | SI (122465/5718.6 = 21.42 >= 1.0) | | | Verifica non richiesta. |
| 5-10 | 5717.4 | 122461.9 | SI (122461.9/5717.4 = 21.42 >= 1.0) | | | Verifica non richiesta. |
| 5-11 | 5717.3 | 122461 | SI (122461/5717.3 = 21.42 >= 1.0) | | | Verifica non richiesta. |
| 5-12 | 5718.6 | 122464.2 | SI (122464.2/5718.6 = 21.42 >= 1.0) | | | Verifica non richiesta. |
| 5-13 | 5735.8 | 122461.7 | SI (122461.7/5735.8 = 21.35 >= 1.0) | | | Verifica non richiesta. |
| 5-14 | 5734.6 | 122458.5 | SI (122458.5/5734.6 = 21.35 >= 1.0) | | | Verifica non richiesta. |
| 5-15 | 5734.5 | 122457.7 | SI (122457.7/5734.5 = 21.35 >= 1.0) | | | Verifica non richiesta. |
| 5-16 | 5735.7 | 122460.8 | SI (122460.8/5735.7 = 21.35 >= 1.0) | | | Verifica non richiesta. |
| 6-1 | 5886.9 | 122005 | SI (122005/5886.9 = 20.72 >= 1.0) | | | Verifica non richiesta. |
| 6-2 | 5885.1 | 121999.9 | SI (121999.9/5885.1 = 20.73 >= 1.0) | | | Verifica non richiesta. |
| 6-3 | 5885.1 | 122001.9 | SI (122001.9/5885.1 = 20.73 >= 1.0) | | | Verifica non richiesta. |
| 6-4 | 5886.9 | 122006.6 | SI (122006.6/5886.9 = 20.72 >= 1.0) | | | Verifica non richiesta. |
| 6-5 | 5870.9 | 122008.9 | SI (122008.9/5870.9 = 20.78 >= 1.0) | | | Verifica non richiesta. |
| 6-6 | 5869.1 | 122004.3 | SI (122004.3/5869.1 = 20.79 >= 1.0) | | | Verifica non richiesta. |
| 6-7 | 5869.2 | 122006.2 | SI (122006.2/5869.2 = 20.79 >= 1.0) | | | Verifica non richiesta. |
| 6-8 | 5871 | 122010.9 | SI (122010.9/5871 = 20.78 >= 1.0) | | | Verifica non richiesta. |
| 6-9 | 5871 | 122006 | SI (122006/5871 = 20.78 >= 1.0) | | | Verifica non richiesta. |
| 6-10 | 5869.2 | 122001.3 | SI (122001.3/5869.2 = 20.79 >= 1.0) | | | Verifica non richiesta. |
| 6-11 | 5869.1 | 122002.9 | SI (122002.9/5869.1 = 20.79 >= 1.0) | | | Verifica non richiesta. |
| 6-12 | 5870.9 | 122007.6 | SI (122007.6/5870.9 = 20.78 >= 1.0) | | | Verifica non richiesta. |
| 6-13 | 5886.9 | 122001.6 | SI (122001.6/5886.9 = 20.72 >= 1.0) | | | Verifica non richiesta. |
| 6-14 | 5885.1 | 121997 | SI (121997/5885.1 = 20.73 >= 1.0) | | | Verifica non richiesta. |
| 6-15 | 5885.1 | 121998.6 | SI (121998.6/5885.1 = 20.73 >= 1.0) | | | Verifica non richiesta. |

| | | | | |
|------|--------|----------|-------------------------------------|-------------------------|
| 6-16 | 5886.9 | 122003.2 | SI (122003.2/5886.9 = 20.72 >= 1.0) | Verifica non richiesta. |
| 7-1 | 6309.3 | 122456.7 | SI (122456.7/6309.3 = 19.41 >= 1.0) | Verifica non richiesta. |
| 7-2 | 6308 | 122453.6 | SI (122453.6/6308 = 19.41 >= 1.0) | Verifica non richiesta. |
| 7-3 | 6308 | 122452.7 | SI (122452.7/6308 = 19.41 >= 1.0) | Verifica non richiesta. |
| 7-4 | 6309.4 | 122455.8 | SI (122455.8/6309.4 = 19.41 >= 1.0) | Verifica non richiesta. |
| 7-5 | 6290.4 | 122460.1 | SI (122460.1/6290.4 = 19.47 >= 1.0) | Verifica non richiesta. |
| 7-6 | 6289.1 | 122457 | SI (122457/6289.1 = 19.47 >= 1.0) | Verifica non richiesta. |
| 7-7 | 6289.1 | 122455.6 | SI (122455.6/6289.1 = 19.47 >= 1.0) | Verifica non richiesta. |
| 7-8 | 6290.5 | 122458.8 | SI (122458.8/6290.5 = 19.47 >= 1.0) | Verifica non richiesta. |
| 7-9 | 6290.5 | 122465.5 | SI (122465.5/6290.5 = 19.47 >= 1.0) | Verifica non richiesta. |
| 7-10 | 6289.1 | 122462.3 | SI (122462.3/6289.1 = 19.47 >= 1.0) | Verifica non richiesta. |
| 7-11 | 6289.1 | 122461 | SI (122461/6289.1 = 19.47 >= 1.0) | Verifica non richiesta. |
| 7-12 | 6290.4 | 122464.1 | SI (122464.1/6290.4 = 19.47 >= 1.0) | Verifica non richiesta. |
| 7-13 | 6309.4 | 122462.1 | SI (122462.1/6309.4 = 19.41 >= 1.0) | Verifica non richiesta. |
| 7-14 | 6308 | 122459 | SI (122459/6308 = 19.41 >= 1.0) | Verifica non richiesta. |
| 7-15 | 6308 | 122457.7 | SI (122457.7/6308 = 19.41 >= 1.0) | Verifica non richiesta. |
| 7-16 | 6309.3 | 122460.8 | SI (122460.8/6309.3 = 19.41 >= 1.0) | Verifica non richiesta. |

Descrizione del metodo di calcolo.

Il calcolo della capacità portante viene eseguito secondo la formula trinomia, considerando separatamente i contributi dovuti alla coesione, al sovraccarico laterale ed al peso del terreno.

Per le verifiche in condizioni drenate, si utilizzano i coefficienti di capacità portante N_q (Prandtl, 1921), N_c (Reissner, 1924), N_γ (Vesic, 1973), i coefficienti correttivi dovuti alla forma della fondazione (s, Meyerhof, 1951 e 1963), all'approfondimento (d, Brinch Hansen, 1970), all'inclinazione del carico (i, Vesic, 1973), all'inclinazione del piano di posa (b, Vesic, 1973), all'inclinazione del piano campagna (g, Vesic, 1973), e all'azione sismica (h - Maugeri e Novità, 2004).

Nel caso di terreno eterogeneo (litologie differenti, presenza di falda), i parametri meccanici utilizzati nel calcolo sono ottenuti come media ponderata dei valori rinvenuti all'interno del cuneo di rottura.

La resistenza a scorrimento, viene ottenuta sommando i contributi del carico normale al piano di posa moltiplicato per il coefficiente d'attrito, e dell'area del piano di posa (eventualmente ridotta per carico verticale eccentrico) per l'adesione fondazione-terreno. In condizioni drenate, l'attrito fondazione terreno è assunto pari all'angolo di resistenza al taglio del terreno moltiplicato per il coefficiente 0.75, l'adesione fondazione terreno è trascurata (assunta pari a 0). Si considera il contributo della pressione del terreno a lato della fondazione. La resistenza laterale del terreno è assunta pari alla resistenza passiva disponibile moltiplicata per 0.50.

Descrizione della fondazione.

La fondazione ha piano di posa rettangolare, con lato X di 780 [cm], lato Y di 675 [cm], e centro alla quota $z = -80$ [cm]. Il piano di posa è orizzontale.

Descrizione del terreno.

| La stratigrafia è omogenea, presenta un solo strato | | | | | | | |
|---|----------------|------------|------------|-----------------------------------|-----------------------------------|-----------------------------|-------------|
| n. | nome | z_i [cm] | z_f [cm] | γ_d [daN/cm ³] | γ_s [daN/cm ³] | c' [daN/cm ²] | ϕ' [°] |
| 1 | Sabbia eghiaia | 0 | -1975 | 0.00185 | 0.00215 | 0 | 35 |

La stratigrafia non contiene una falda

Verifiche in condizioni drenate.

Sollecitazioni al piano di posa.

Si riportano di seguito le componenti della sollecitazione applicata e la distanza del punto di applicazione dal centro del piano di posa della fondazione.

| Rispetto al sistema di rif. globale: | | | | | | | | |
|--------------------------------------|-------------|-------------|-------------|----------------|----------------|------------|------------|------------|
| Caso | F_x [daN] | F_y [daN] | F_z [daN] | M_x [daN*cm] | M_y [daN*cm] | d_x [cm] | d_y [cm] | d_z [cm] |
| 1-1 | 0 | 0 | -372873.8 | 1389875 | 4202017 | 0 | 0 | 10 |
| 2-1 | 702 | 0 | -372873.8 | 1389840 | 4481621 | 0 | 0 | 10 |
| 2-2 | -702 | 0 | -372872.8 | 1389911 | 3922413 | 0 | 0 | 10 |
| 3-1 | 0 | 661.5 | -372872.8 | 1126865 | 4202036 | 0 | 0 | 10 |
| 3-2 | 0 | -661.5 | -372873.8 | 1652886 | 4201998 | 0 | 0 | 10 |
| 4-1 | -5088.21 | -1658.57 | -254026 | 145053 | 4648059 | 0 | 0 | 10 |
| 4-2 | -5088.21 | -1653.22 | -254026 | 139520 | 4648067 | 0 | 0 | 10 |
| 4-3 | -5088.21 | 1653.44 | -254030 | 1392374 | 4647979 | 0 | 0 | 10 |
| 4-4 | -5088.21 | 1658.78 | -254030 | 1386841 | 4647988 | 0 | 0 | 10 |
| 4-5 | -5072.96 | -1658.57 | -254026 | 145058 | 4661433 | 0 | 0 | 10 |
| 4-6 | -5072.96 | -1653.22 | -254026 | 139525 | 4661441 | 0 | 0 | 10 |
| 4-7 | -5072.96 | 1653.44 | -254030 | 1392379 | 4661354 | 0 | 0 | 10 |
| 4-8 | -5072.96 | 1658.78 | -254030 | 1386846 | 4661362 | 0 | 0 | 10 |

Relazione tecnica strutturale microcentrale elettrica

| 4-9 | 5072.96 | -1658.78 | -254020 | 145546 | 812008 | 0 | 0 | 10 |
|--|----------|----------|-----------|-------------|-------------|---------|---------|---------|
| 4-10 | 5072.96 | -1653.44 | -254020 | 140013 | 812017 | 0 | 0 | 10 |
| 4-11 | 5072.96 | 1653.22 | -254023 | 1392867 | 811929 | 0 | 0 | 10 |
| 4-12 | 5072.96 | 1658.57 | -254023 | 1387334 | 811937 | 0 | 0 | 10 |
| 4-13 | 5088.21 | -1658.78 | -254020 | 145551 | 825383 | 0 | 0 | 10 |
| 4-14 | 5088.21 | -1653.44 | -254020 | 140018 | 825391 | 0 | 0 | 10 |
| 4-15 | 5088.21 | 1653.22 | -254023 | 1392872 | 825303 | 0 | 0 | 10 |
| 4-16 | 5088.21 | 1658.57 | -254023 | 1387339 | 825311 | 0 | 0 | 10 |
| 5-1 | -1526.47 | -5528.88 | -254020 | -1303525 | 3310205 | 0 | 0 | 10 |
| 5-2 | -1521.89 | -5528.88 | -254020 | -1303523 | 3314217 | 0 | 0 | 10 |
| 5-3 | 1521.89 | -5528.95 | -254018 | -1303377 | 2159390 | 0 | 0 | 10 |
| 5-4 | 1526.46 | -5528.95 | -254018 | -1303375 | 2163402 | 0 | 0 | 10 |
| 5-5 | -1526.47 | -5511.06 | -254020 | -1321969 | 3310232 | 0 | 0 | 10 |
| 5-6 | -1521.89 | -5511.06 | -254020 | -1321968 | 3314245 | 0 | 0 | 10 |
| 5-7 | 1521.89 | -5511.13 | -254018 | -1321821 | 2159417 | 0 | 0 | 10 |
| 5-8 | 1526.46 | -5511.13 | -254018 | -1321820 | 2163430 | 0 | 0 | 10 |
| 5-9 | -1526.46 | 5511.13 | -254031 | 2854212 | 3309941 | 0 | 0 | 10 |
| 5-10 | -1521.89 | 5511.13 | -254031 | 2854213 | 3313953 | 0 | 0 | 10 |
| 5-11 | 1521.89 | 5511.06 | -254029 | 2854360 | 2159125 | 0 | 0 | 10 |
| 5-12 | 1526.47 | 5511.06 | -254029 | 2854361 | 2163138 | 0 | 0 | 10 |
| 5-13 | -1526.46 | 5528.95 | -254031 | 2835767 | 3309968 | 0 | 0 | 10 |
| 5-14 | -1521.89 | 5528.95 | -254031 | 2835769 | 3313980 | 0 | 0 | 10 |
| 5-15 | 1521.89 | 5528.88 | -254029 | 2835915 | 2159153 | 0 | 0 | 10 |
| 5-16 | 1526.47 | 5528.88 | -254029 | 2835917 | 2163165 | 0 | 0 | 10 |
| 6-1 | -5597.03 | -1824.42 | -254027 | 82939 | 4839196 | 0 | 0 | 10 |
| 6-2 | -5597.03 | -1818.54 | -254026 | 76852 | 4839205 | 0 | 0 | 10 |
| 6-3 | -5597.03 | 1818.78 | -254030 | 1454992 | 4839109 | 0 | 0 | 10 |
| 6-4 | -5597.03 | 1824.66 | -254030 | 1448905 | 4839118 | 0 | 0 | 10 |
| 6-5 | -5580.26 | -1824.42 | -254026 | 82944 | 4853908 | 0 | 0 | 10 |
| 6-6 | -5580.26 | -1818.54 | -254026 | 76858 | 4853917 | 0 | 0 | 10 |
| 6-7 | -5580.26 | 1818.78 | -254030 | 1454997 | 4853820 | 0 | 0 | 10 |
| 6-8 | -5580.26 | 1824.66 | -254030 | 1448911 | 4853829 | 0 | 0 | 10 |
| 6-9 | 5580.26 | -1824.66 | -254019 | 83481 | 619541 | 0 | 0 | 10 |
| 6-10 | 5580.26 | -1818.78 | -254019 | 77395 | 619550 | 0 | 0 | 10 |
| 6-11 | 5580.26 | 1818.54 | -254023 | 1455534 | 619453 | 0 | 0 | 10 |
| 6-12 | 5580.26 | 1824.42 | -254023 | 1449448 | 619462 | 0 | 0 | 10 |
| 6-13 | 5597.03 | -1824.66 | -254019 | 83487 | 634252 | 0 | 0 | 10 |
| 6-14 | 5597.03 | -1818.78 | -254019 | 77400 | 634261 | 0 | 0 | 10 |
| 6-15 | 5597.03 | 1818.54 | -254023 | 1455540 | 634165 | 0 | 0 | 10 |
| 6-16 | 5597.03 | 1824.42 | -254023 | 1449453 | 634174 | 0 | 0 | 10 |
| 7-1 | -1679.11 | -6081.77 | -254020 | -1510497 | 3367557 | 0 | 0 | 10 |
| 7-2 | -1674.08 | -6081.77 | -254020 | -1510495 | 3371971 | 0 | 0 | 10 |
| 7-3 | 1674.07 | -6081.84 | -254018 | -1510334 | 2101661 | 0 | 0 | 10 |
| 7-4 | 1679.11 | -6081.84 | -254018 | -1510332 | 2106074 | 0 | 0 | 10 |
| 7-5 | -1679.11 | -6062.17 | -254020 | -1530786 | 3367587 | 0 | 0 | 10 |
| 7-6 | -1674.08 | -6062.17 | -254020 | -1530784 | 3372001 | 0 | 0 | 10 |
| 7-7 | 1674.07 | -6062.24 | -254017 | -1530623 | 2101691 | 0 | 0 | 10 |
| 7-8 | 1679.11 | -6062.24 | -254017 | -1530621 | 2106104 | 0 | 0 | 10 |
| 7-9 | -1679.11 | 6062.24 | -254032 | 3063013 | 3367266 | 0 | 0 | 10 |
| 7-10 | -1674.07 | 6062.24 | -254032 | 3063015 | 3371680 | 0 | 0 | 10 |
| 7-11 | 1674.08 | 6062.17 | -254029 | 3063176 | 2101369 | 0 | 0 | 10 |
| 7-12 | 1679.11 | 6062.17 | -254029 | 3063178 | 2105783 | 0 | 0 | 10 |
| 7-13 | -1679.11 | 6081.84 | -254032 | 3042724 | 3367296 | 0 | 0 | 10 |
| 7-14 | -1674.07 | 6081.84 | -254032 | 3042726 | 3371710 | 0 | 0 | 10 |
| 7-15 | 1674.08 | 6081.77 | -254029 | 3042887 | 2101399 | 0 | 0 | 10 |
| 7-16 | 1679.11 | 6081.77 | -254029 | 3042889 | 2105813 | 0 | 0 | 10 |
| Rispetto al sistema di rif. locale (centro piano di posa): | | | | | | | | |
| Caso | Hx [daN] | Hy [daN] | Vz [daN] | Mx [daN*cm] | My [daN*cm] | dx [cm] | dy [cm] | dz [cm] |
| 1-1 | 0 | 0 | -372873.8 | 1389875 | 4202017 | - | - | - |
| 2-1 | 702 | 0 | -372873.8 | 1389840 | 4488641 | - | - | - |
| 2-2 | -702 | 0 | -372872.8 | 1389911 | 3915393 | - | - | - |
| 3-1 | 0 | 661.5 | -372872.8 | 1120250 | 4202036 | - | - | - |
| 3-2 | 0 | -661.5 | -372873.8 | 1659501 | 4201998 | - | - | - |
| 4-1 | -5088.21 | -1658.57 | -254026 | 161639 | 4597177 | - | - | - |
| 4-2 | -5088.21 | -1653.22 | -254026 | 156052 | 4597185 | - | - | - |
| 4-3 | -5088.21 | 1653.44 | -254030 | 1375840 | 4597097 | - | - | - |
| 4-4 | -5088.21 | 1658.78 | -254030 | 1370253 | 4597106 | - | - | - |
| 4-5 | -5072.96 | -1658.57 | -254026 | 161644 | 4610703 | - | - | - |
| 4-6 | -5072.96 | -1653.22 | -254026 | 156057 | 4610711 | - | - | - |
| 4-7 | -5072.96 | 1653.44 | -254030 | 1375845 | 4610624 | - | - | - |
| 4-8 | -5072.96 | 1658.78 | -254030 | 1370258 | 4610632 | - | - | - |
| 4-9 | 5072.96 | -1658.78 | -254020 | 162134 | 862738 | - | - | - |
| 4-10 | 5072.96 | -1653.44 | -254020 | 156547 | 862747 | - | - | - |
| 4-11 | 5072.96 | 1653.22 | -254023 | 1376335 | 862659 | - | - | - |
| 4-12 | 5072.96 | 1658.57 | -254023 | 1370748 | 862667 | - | - | - |
| 4-13 | 5088.21 | -1658.78 | -254020 | 162139 | 876265 | - | - | - |
| 4-14 | 5088.21 | -1653.44 | -254020 | 156552 | 876273 | - | - | - |
| 4-15 | 5088.21 | 1653.22 | -254023 | 1376340 | 876185 | - | - | - |
| 4-16 | 5088.21 | 1658.57 | -254023 | 1370753 | 876193 | - | - | - |

| | | | | | | | | |
|------|----------|----------|---------|----------|---------|---|---|---|
| 5-1 | -1526.47 | -5528.88 | -254020 | -1248236 | 3294940 | - | - | - |
| 5-2 | -1521.89 | -5528.88 | -254020 | -1248234 | 3298998 | - | - | - |
| 5-3 | 1521.89 | -5528.95 | -254018 | -1248088 | 2174609 | - | - | - |
| 5-4 | 1526.46 | -5528.95 | -254018 | -1248086 | 2178667 | - | - | - |
| 5-5 | -1526.47 | -5511.06 | -254020 | -1266858 | 3294967 | - | - | - |
| 5-6 | -1521.89 | -5511.06 | -254020 | -1266857 | 3299026 | - | - | - |
| 5-7 | 1521.89 | -5511.13 | -254018 | -1266710 | 2174636 | - | - | - |
| 5-8 | 1526.46 | -5511.13 | -254018 | -1266709 | 2178695 | - | - | - |
| 5-9 | -1526.46 | 5511.13 | -254031 | 2799101 | 3294676 | - | - | - |
| 5-10 | -1521.89 | 5511.13 | -254031 | 2799102 | 3298734 | - | - | - |
| 5-11 | 1521.89 | 5511.06 | -254029 | 2799249 | 2174344 | - | - | - |
| 5-12 | 1526.47 | 5511.06 | -254029 | 2799250 | 2178403 | - | - | - |
| 5-13 | -1526.46 | 5528.95 | -254031 | 2780478 | 3294703 | - | - | - |
| 5-14 | -1521.89 | 5528.95 | -254031 | 2780480 | 3298761 | - | - | - |
| 5-15 | 1521.89 | 5528.88 | -254029 | 2780626 | 2174372 | - | - | - |
| 5-16 | 1526.47 | 5528.88 | -254029 | 2780628 | 2178430 | - | - | - |
| 6-1 | -5597.03 | -1824.42 | -254027 | 101183 | 4783226 | - | - | - |
| 6-2 | -5597.03 | -1818.54 | -254026 | 95037 | 4783235 | - | - | - |
| 6-3 | -5597.03 | 1818.78 | -254030 | 1436804 | 4783139 | - | - | - |
| 6-4 | -5597.03 | 1824.66 | -254030 | 1430658 | 4783148 | - | - | - |
| 6-5 | -5580.26 | -1824.42 | -254026 | 101188 | 4798105 | - | - | - |
| 6-6 | -5580.26 | -1818.54 | -254026 | 95043 | 4798114 | - | - | - |
| 6-7 | -5580.26 | 1818.78 | -254030 | 1436809 | 4798017 | - | - | - |
| 6-8 | -5580.26 | 1824.66 | -254030 | 1430664 | 4798026 | - | - | - |
| 6-9 | 5580.26 | -1824.66 | -254019 | 101728 | 675344 | - | - | - |
| 6-10 | 5580.26 | -1818.78 | -254019 | 95583 | 675353 | - | - | - |
| 6-11 | 5580.26 | 1818.54 | -254023 | 1437349 | 675256 | - | - | - |
| 6-12 | 5580.26 | 1824.42 | -254023 | 1431204 | 675265 | - | - | - |
| 6-13 | 5597.03 | -1824.66 | -254019 | 101734 | 690222 | - | - | - |
| 6-14 | 5597.03 | -1818.78 | -254019 | 95588 | 690231 | - | - | - |
| 6-15 | 5597.03 | 1818.54 | -254023 | 1437355 | 690135 | - | - | - |
| 6-16 | 5597.03 | 1824.42 | -254023 | 1431209 | 690144 | - | - | - |
| 7-1 | -1679.11 | -6081.77 | -254020 | -1449679 | 3350766 | - | - | - |
| 7-2 | -1674.08 | -6081.77 | -254020 | -1449677 | 3355230 | - | - | - |
| 7-3 | 1674.07 | -6081.84 | -254018 | -1449516 | 2118402 | - | - | - |
| 7-4 | 1679.11 | -6081.84 | -254018 | -1449514 | 2122865 | - | - | - |
| 7-5 | -1679.11 | -6062.17 | -254020 | -1470164 | 3350796 | - | - | - |
| 7-6 | -1674.08 | -6062.17 | -254020 | -1470162 | 3355260 | - | - | - |
| 7-7 | 1674.07 | -6062.24 | -254017 | -1470001 | 2118432 | - | - | - |
| 7-8 | 1679.11 | -6062.24 | -254017 | -1469999 | 2122895 | - | - | - |
| 7-9 | -1679.11 | 6062.24 | -254032 | 3002391 | 3350475 | - | - | - |
| 7-10 | -1674.07 | 6062.24 | -254032 | 3002393 | 3354939 | - | - | - |
| 7-11 | 1674.08 | 6062.17 | -254029 | 3002554 | 2118110 | - | - | - |
| 7-12 | 1679.11 | 6062.17 | -254029 | 3002556 | 2122574 | - | - | - |
| 7-13 | -1679.11 | 6081.84 | -254032 | 2981906 | 3350505 | - | - | - |
| 7-14 | -1674.07 | 6081.84 | -254032 | 2981908 | 3354969 | - | - | - |
| 7-15 | 1674.08 | 6081.77 | -254029 | 2982069 | 2118140 | - | - | - |
| 7-16 | 1679.11 | 6081.77 | -254029 | 2982071 | 2122604 | - | - | - |

Le sollecitazioni applicate provocano un' eccentricità lungo X (max = 18.89 [cm]) e lungo Y (max = 11.82 [cm]), perciò le verifiche vengono eseguite sulla fondazione ridotta rettangolare.

| Caso | ecc. X [cm] | ecc. Y [cm] | Asse B | Asse L |
|------|-------------|-------------|--------|--------|
| 1-1 | 11.27 | 3.73 | asse Y | asse X |
| 2-1 | 12.04 | 3.73 | asse Y | asse X |
| 2-2 | 10.5 | 3.73 | asse Y | asse X |
| 3-1 | 11.27 | 3 | asse Y | asse X |
| 3-2 | 11.27 | 4.45 | asse Y | asse X |
| 4-1 | 18.1 | 0.64 | asse Y | asse X |
| 4-2 | 18.1 | 0.61 | asse Y | asse X |
| 4-3 | 18.1 | 5.42 | asse Y | asse X |
| 4-4 | 18.1 | 5.39 | asse Y | asse X |
| 4-5 | 18.15 | 0.64 | asse Y | asse X |
| 4-6 | 18.15 | 0.61 | asse Y | asse X |
| 4-7 | 18.15 | 5.42 | asse Y | asse X |
| 4-8 | 18.15 | 5.39 | asse Y | asse X |
| 4-9 | 3.4 | 0.64 | asse Y | asse X |
| 4-10 | 3.4 | 0.62 | asse Y | asse X |
| 4-11 | 3.4 | 5.42 | asse Y | asse X |
| 4-12 | 3.4 | 5.4 | asse Y | asse X |
| 4-13 | 3.45 | 0.64 | asse Y | asse X |
| 4-14 | 3.45 | 0.62 | asse Y | asse X |
| 4-15 | 3.45 | 5.42 | asse Y | asse X |
| 4-16 | 3.45 | 5.4 | asse Y | asse X |
| 5-1 | 12.97 | 4.91 | asse Y | asse X |
| 5-2 | 12.99 | 4.91 | asse Y | asse X |
| 5-3 | 8.56 | 4.91 | asse Y | asse X |
| 5-4 | 8.58 | 4.91 | asse Y | asse X |
| 5-5 | 12.97 | 4.99 | asse Y | asse X |

| | | | | |
|------|-------|-------|--------|--------|
| 5-6 | 12.99 | 4.99 | asse Y | asse X |
| 5-7 | 8.56 | 4.99 | asse Y | asse X |
| 5-8 | 8.58 | 4.99 | asse Y | asse X |
| 5-9 | 12.97 | 11.02 | asse Y | asse X |
| 5-10 | 12.99 | 11.02 | asse Y | asse X |
| 5-11 | 8.56 | 11.02 | asse Y | asse X |
| 5-12 | 8.58 | 11.02 | asse Y | asse X |
| 5-13 | 12.97 | 10.95 | asse Y | asse X |
| 5-14 | 12.99 | 10.95 | asse Y | asse X |
| 5-15 | 8.56 | 10.95 | asse Y | asse X |
| 5-16 | 8.58 | 10.95 | asse Y | asse X |
| 6-1 | 18.83 | 0.4 | asse Y | asse X |
| 6-2 | 18.83 | 0.37 | asse Y | asse X |
| 6-3 | 18.83 | 5.66 | asse Y | asse X |
| 6-4 | 18.83 | 5.63 | asse Y | asse X |
| 6-5 | 18.89 | 0.4 | asse Y | asse X |
| 6-6 | 18.89 | 0.37 | asse Y | asse X |
| 6-7 | 18.89 | 5.66 | asse Y | asse X |
| 6-8 | 18.89 | 5.63 | asse Y | asse X |
| 6-9 | 2.66 | 0.4 | asse Y | asse X |
| 6-10 | 2.66 | 0.38 | asse Y | asse X |
| 6-11 | 2.66 | 5.66 | asse Y | asse X |
| 6-12 | 2.66 | 5.63 | asse Y | asse X |
| 6-13 | 2.72 | 0.4 | asse Y | asse X |
| 6-14 | 2.72 | 0.38 | asse Y | asse X |
| 6-15 | 2.72 | 5.66 | asse Y | asse X |
| 6-16 | 2.72 | 5.63 | asse Y | asse X |
| 7-1 | 13.19 | 5.71 | asse Y | asse X |
| 7-2 | 13.21 | 5.71 | asse Y | asse X |
| 7-3 | 8.34 | 5.71 | asse Y | asse X |
| 7-4 | 8.36 | 5.71 | asse Y | asse X |
| 7-5 | 13.19 | 5.79 | asse Y | asse X |
| 7-6 | 13.21 | 5.79 | asse Y | asse X |
| 7-7 | 8.34 | 5.79 | asse Y | asse X |
| 7-8 | 8.36 | 5.79 | asse Y | asse X |
| 7-9 | 13.19 | 11.82 | asse Y | asse X |
| 7-10 | 13.21 | 11.82 | asse Y | asse X |
| 7-11 | 8.34 | 11.82 | asse Y | asse X |
| 7-12 | 8.36 | 11.82 | asse Y | asse X |
| 7-13 | 13.19 | 11.74 | asse Y | asse X |
| 7-14 | 13.21 | 11.74 | asse Y | asse X |
| 7-15 | 8.34 | 11.74 | asse Y | asse X |
| 7-16 | 8.36 | 11.74 | asse Y | asse X |

Capacità portante.

Le seguenti tabelle elencano il valore dell'angolo di resistenza al taglio, del peso di volume alleggerito, della coesione efficace, del sovraccarico alleggerito, e dei fattori e coefficienti introdotti nel calcolo della capacità portante.

| Caso | γ_ϕ | γ_r | ϕ [°] | γ' [daN/cm ³] | N_r | s_r | d_r | i_{br} | i_{tr} | b_r | g_r | h_r | $q'_{lim,r}$ [daN/cm ²] |
|------|---------------|------------|------------|----------------------------------|-------|-------|-------|----------|----------|-------|-------|-------|-------------------------------------|
| 1-1 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | - | 39.3 |
| 2-1 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | - | 39.14 |
| 2-2 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | - | 39.1 |
| 3-1 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | - | 39.23 |
| 3-2 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | - | 39.02 |
| 4-1 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.33 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 30.51 |
| 4-2 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.33 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 30.51 |
| 4-3 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.33 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 29.97 |
| 4-4 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.33 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 29.97 |
| 4-5 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.33 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 30.52 |
| 4-6 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.33 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 30.52 |
| 4-7 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.33 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 29.98 |
| 4-8 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.33 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 29.98 |
| 4-9 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 30.23 |
| 4-10 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 30.23 |
| 4-11 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 29.7 |
| 4-12 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 29.7 |
| 4-13 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 30.22 |
| 4-14 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 30.23 |
| 4-15 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 29.7 |
| 4-16 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 29.7 |
| 5-1 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.33 | 1.00 | 0.95 | 0.99 | 1.00 | 1.00 | 0.82 | 29.81 |
| 5-2 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.33 | 1.00 | 0.95 | 0.99 | 1.00 | 1.00 | 0.82 | 29.81 |
| 5-3 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.95 | 0.99 | 1.00 | 1.00 | 0.82 | 29.72 |
| 5-4 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.95 | 0.99 | 1.00 | 1.00 | 0.82 | 29.72 |
| 5-5 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.33 | 1.00 | 0.95 | 0.99 | 1.00 | 1.00 | 0.82 | 29.8 |
| 5-6 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.33 | 1.00 | 0.95 | 0.99 | 1.00 | 1.00 | 0.82 | 29.81 |
| 5-7 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.95 | 0.99 | 1.00 | 1.00 | 0.82 | 29.72 |

| | | | | | | | | | | | | | |
|------|------|------|----|---------|-------|------|------|------|------|------|------|------|-------|
| 5-8 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.95 | 0.99 | 1.00 | 1.00 | 0.82 | 29.72 |
| 5-9 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.95 | 0.99 | 1.00 | 1.00 | 0.82 | 29.13 |
| 5-10 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.95 | 0.99 | 1.00 | 1.00 | 0.82 | 29.13 |
| 5-11 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.95 | 0.99 | 1.00 | 1.00 | 0.82 | 29.05 |
| 5-12 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.95 | 0.99 | 1.00 | 1.00 | 0.82 | 29.05 |
| 5-13 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.95 | 0.99 | 1.00 | 1.00 | 0.82 | 29.13 |
| 5-14 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.95 | 0.99 | 1.00 | 1.00 | 0.82 | 29.14 |
| 5-15 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.95 | 0.99 | 1.00 | 1.00 | 0.82 | 29.05 |
| 5-16 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.95 | 0.99 | 1.00 | 1.00 | 0.82 | 29.05 |
| 6-1 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.34 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 30.35 |
| 6-2 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.34 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 30.35 |
| 6-3 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.33 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 29.76 |
| 6-4 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.33 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 29.76 |
| 6-5 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.34 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 30.35 |
| 6-6 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.34 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 30.36 |
| 6-7 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.33 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 29.77 |
| 6-8 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.33 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 29.77 |
| 6-9 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 30.04 |
| 6-10 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 30.04 |
| 6-11 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 29.46 |
| 6-12 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 29.46 |
| 6-13 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 30.04 |
| 6-14 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 30.04 |
| 6-15 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 29.46 |
| 6-16 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.98 | 0.95 | 1.00 | 1.00 | 0.82 | 29.46 |
| 7-1 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.94 | 0.98 | 1.00 | 1.00 | 0.82 | 29.51 |
| 7-2 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.94 | 0.98 | 1.00 | 1.00 | 0.82 | 29.51 |
| 7-3 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.94 | 0.98 | 1.00 | 1.00 | 0.82 | 29.42 |
| 7-4 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.94 | 0.98 | 1.00 | 1.00 | 0.82 | 29.42 |
| 7-5 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.94 | 0.98 | 1.00 | 1.00 | 0.82 | 29.51 |
| 7-6 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.94 | 0.98 | 1.00 | 1.00 | 0.82 | 29.51 |
| 7-7 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.94 | 0.98 | 1.00 | 1.00 | 0.82 | 29.42 |
| 7-8 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.94 | 0.98 | 1.00 | 1.00 | 0.82 | 29.42 |
| 7-9 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.94 | 0.98 | 1.00 | 1.00 | 0.82 | 28.84 |
| 7-10 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.94 | 0.98 | 1.00 | 1.00 | 0.82 | 28.84 |
| 7-11 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.31 | 1.00 | 0.94 | 0.98 | 1.00 | 1.00 | 0.82 | 28.75 |
| 7-12 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.31 | 1.00 | 0.94 | 0.98 | 1.00 | 1.00 | 0.82 | 28.75 |
| 7-13 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.94 | 0.98 | 1.00 | 1.00 | 0.82 | 28.84 |
| 7-14 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.32 | 1.00 | 0.94 | 0.98 | 1.00 | 1.00 | 0.82 | 28.85 |
| 7-15 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.31 | 1.00 | 0.94 | 0.98 | 1.00 | 1.00 | 0.82 | 28.76 |
| 7-16 | 1.00 | 1.00 | 35 | 0.00185 | 48.03 | 1.31 | 1.00 | 0.94 | 0.98 | 1.00 | 1.00 | 0.82 | 28.75 |

| Caso | γ_c | c' [daN/cm ²] | N_c | s_c | d_c | i_{bs} | i_{ls} | b_c | g_c | h_c | $q'_{lim,c}$ [daN/cm ²] |
|------|------------|-----------------------------|-------|-------|-------|----------|----------|-------|-------|-------|-------------------------------------|
| 1-1 | 1.00 | 0 | 46.12 | 1.65 | 1.03 | 1.00 | 1.00 | 1.00 | 1.00 | - | 0 |
| 2-1 | 1.00 | 0 | 46.12 | 1.65 | 1.03 | 1.00 | 1.00 | 1.00 | 1.00 | - | 0 |
| 2-2 | 1.00 | 0 | 46.12 | 1.65 | 1.03 | 1.00 | 1.00 | 1.00 | 1.00 | - | 0 |
| 3-1 | 1.00 | 0 | 46.12 | 1.65 | 1.03 | 1.00 | 1.00 | 1.00 | 1.00 | - | 0 |
| 3-2 | 1.00 | 0 | 46.12 | 1.65 | 1.03 | 1.00 | 1.00 | 1.00 | 1.00 | - | 0 |
| 4-1 | 1.00 | 0 | 46.12 | 1.67 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 4-2 | 1.00 | 0 | 46.12 | 1.67 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 4-3 | 1.00 | 0 | 46.12 | 1.66 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 4-4 | 1.00 | 0 | 46.12 | 1.66 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 4-5 | 1.00 | 0 | 46.12 | 1.67 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 4-6 | 1.00 | 0 | 46.12 | 1.67 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 4-7 | 1.00 | 0 | 46.12 | 1.66 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 4-8 | 1.00 | 0 | 46.12 | 1.66 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 4-9 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 4-10 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 4-11 | 1.00 | 0 | 46.12 | 1.63 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 4-12 | 1.00 | 0 | 46.12 | 1.63 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 4-13 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 4-14 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 4-15 | 1.00 | 0 | 46.12 | 1.63 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 4-16 | 1.00 | 0 | 46.12 | 1.63 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 5-1 | 1.00 | 0 | 46.12 | 1.65 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 5-2 | 1.00 | 0 | 46.12 | 1.65 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 5-3 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 5-4 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 5-5 | 1.00 | 0 | 46.12 | 1.65 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 5-6 | 1.00 | 0 | 46.12 | 1.65 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 5-7 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 5-8 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 5-9 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 5-10 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 5-11 | 1.00 | 0 | 46.12 | 1.63 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 5-12 | 1.00 | 0 | 46.12 | 1.63 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 5-13 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 5-14 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 5-15 | 1.00 | 0 | 46.12 | 1.63 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 5-16 | 1.00 | 0 | 46.12 | 1.63 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |

| | | | | | | | | | | | |
|------|------|---|-------|------|------|------|------|------|------|------|---|
| 6-1 | 1.00 | 0 | 46.12 | 1.67 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 6-2 | 1.00 | 0 | 46.12 | 1.67 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 6-3 | 1.00 | 0 | 46.12 | 1.66 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 6-4 | 1.00 | 0 | 46.12 | 1.66 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 6-5 | 1.00 | 0 | 46.12 | 1.67 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 6-6 | 1.00 | 0 | 46.12 | 1.67 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 6-7 | 1.00 | 0 | 46.12 | 1.66 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 6-8 | 1.00 | 0 | 46.12 | 1.66 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 6-9 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 6-10 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 6-11 | 1.00 | 0 | 46.12 | 1.63 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 6-12 | 1.00 | 0 | 46.12 | 1.63 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 6-13 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 6-14 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 6-15 | 1.00 | 0 | 46.12 | 1.63 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 6-16 | 1.00 | 0 | 46.12 | 1.63 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.91 | 0 |
| 7-1 | 1.00 | 0 | 46.12 | 1.65 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 7-2 | 1.00 | 0 | 46.12 | 1.65 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 7-3 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 7-4 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 7-5 | 1.00 | 0 | 46.12 | 1.65 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 7-6 | 1.00 | 0 | 46.12 | 1.65 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 7-7 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 7-8 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 7-9 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 7-10 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 7-11 | 1.00 | 0 | 46.12 | 1.63 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 7-12 | 1.00 | 0 | 46.12 | 1.63 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 7-13 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 7-14 | 1.00 | 0 | 46.12 | 1.64 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 7-15 | 1.00 | 0 | 46.12 | 1.63 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |
| 7-16 | 1.00 | 0 | 46.12 | 1.63 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.91 | 0 |

| Caso | q' [daN/cm²] | N _a | s _a | d _a | i _{ba} | i _{ta} | b _a | g _a | h _a | q'lim,q [daN/cm²] |
|------|--------------|----------------|----------------|----------------|-----------------|-----------------|----------------|----------------|----------------|-------------------|
| 1-1 | 0.15 | 33.30 | 1.33 | 1.03 | 1.00 | 1.00 | 1.00 | 1.00 | - | 6.73 |
| 2-1 | 0.15 | 33.30 | 1.33 | 1.03 | 1.00 | 1.00 | 1.00 | 1.00 | - | 6.71 |
| 2-2 | 0.15 | 33.30 | 1.32 | 1.03 | 1.00 | 1.00 | 1.00 | 1.00 | - | 6.71 |
| 3-1 | 0.15 | 33.30 | 1.33 | 1.03 | 1.00 | 1.00 | 1.00 | 1.00 | - | 6.71 |
| 3-2 | 0.15 | 33.30 | 1.32 | 1.03 | 1.00 | 1.00 | 1.00 | 1.00 | - | 6.71 |
| 4-1 | 0.15 | 33.30 | 1.33 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.76 |
| 4-2 | 0.15 | 33.30 | 1.33 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.76 |
| 4-3 | 0.15 | 33.30 | 1.33 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.74 |
| 4-4 | 0.15 | 33.30 | 1.33 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.74 |
| 4-5 | 0.15 | 33.30 | 1.33 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.76 |
| 4-6 | 0.15 | 33.30 | 1.33 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.76 |
| 4-7 | 0.15 | 33.30 | 1.33 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.74 |
| 4-8 | 0.15 | 33.30 | 1.33 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.74 |
| 4-9 | 0.15 | 33.30 | 1.32 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.7 |
| 4-10 | 0.15 | 33.30 | 1.32 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.7 |
| 4-11 | 0.15 | 33.30 | 1.32 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.69 |
| 4-12 | 0.15 | 33.30 | 1.32 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.69 |
| 4-13 | 0.15 | 33.30 | 1.32 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.7 |
| 4-14 | 0.15 | 33.30 | 1.32 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.7 |
| 4-15 | 0.15 | 33.30 | 1.32 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.69 |
| 4-16 | 0.15 | 33.30 | 1.32 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.68 |
| 5-1 | 0.15 | 33.30 | 1.33 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.88 | 5.7 |
| 5-2 | 0.15 | 33.30 | 1.33 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.88 | 5.7 |
| 5-3 | 0.15 | 33.30 | 1.32 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.88 | 5.69 |
| 5-4 | 0.15 | 33.30 | 1.32 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.88 | 5.69 |
| 5-5 | 0.15 | 33.30 | 1.33 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.88 | 5.71 |
| 5-6 | 0.15 | 33.30 | 1.33 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.88 | 5.71 |
| 5-7 | 0.15 | 33.30 | 1.32 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.88 | 5.69 |
| 5-8 | 0.15 | 33.30 | 1.32 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.88 | 5.69 |
| 5-9 | 0.15 | 33.30 | 1.32 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.88 | 5.68 |
| 5-10 | 0.15 | 33.30 | 1.32 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.88 | 5.68 |
| 5-11 | 0.15 | 33.30 | 1.32 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.88 | 5.67 |
| 5-12 | 0.15 | 33.30 | 1.32 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.88 | 5.67 |
| 5-13 | 0.15 | 33.30 | 1.32 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.88 | 5.68 |
| 5-14 | 0.15 | 33.30 | 1.32 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.88 | 5.68 |
| 5-15 | 0.15 | 33.30 | 1.32 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.88 | 5.67 |
| 5-16 | 0.15 | 33.30 | 1.32 | 1.03 | 0.97 | 0.99 | 1.00 | 1.00 | 0.88 | 5.67 |
| 6-1 | 0.15 | 33.30 | 1.34 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.74 |
| 6-2 | 0.15 | 33.30 | 1.34 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.74 |
| 6-3 | 0.15 | 33.30 | 1.33 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.72 |
| 6-4 | 0.15 | 33.30 | 1.33 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.72 |
| 6-5 | 0.15 | 33.30 | 1.34 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.74 |
| 6-6 | 0.15 | 33.30 | 1.34 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.74 |
| 6-7 | 0.15 | 33.30 | 1.33 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.72 |
| 6-8 | 0.15 | 33.30 | 1.33 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.72 |
| 6-9 | 0.15 | 33.30 | 1.32 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.68 |

| | | | | | | | | | | |
|------|------|-------|------|------|------|------|------|------|------|------|
| 6-10 | 0.15 | 33.30 | 1.32 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.68 |
| 6-11 | 0.15 | 33.30 | 1.32 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.66 |
| 6-12 | 0.15 | 33.30 | 1.32 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.66 |
| 6-13 | 0.15 | 33.30 | 1.32 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.68 |
| 6-14 | 0.15 | 33.30 | 1.32 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.68 |
| 6-15 | 0.15 | 33.30 | 1.32 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.66 |
| 6-16 | 0.15 | 33.30 | 1.32 | 1.03 | 0.99 | 0.97 | 1.00 | 1.00 | 0.88 | 5.66 |
| 7-1 | 0.15 | 33.30 | 1.32 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.88 | 5.68 |
| 7-2 | 0.15 | 33.30 | 1.32 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.88 | 5.68 |
| 7-3 | 0.15 | 33.30 | 1.32 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.88 | 5.66 |
| 7-4 | 0.15 | 33.30 | 1.32 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.88 | 5.66 |
| 7-5 | 0.15 | 33.30 | 1.32 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.88 | 5.68 |
| 7-6 | 0.15 | 33.30 | 1.32 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.88 | 5.68 |
| 7-7 | 0.15 | 33.30 | 1.32 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.88 | 5.66 |
| 7-8 | 0.15 | 33.30 | 1.32 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.88 | 5.66 |
| 7-9 | 0.15 | 33.30 | 1.32 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.88 | 5.66 |
| 7-10 | 0.15 | 33.30 | 1.32 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.88 | 5.66 |
| 7-11 | 0.15 | 33.30 | 1.31 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.88 | 5.64 |
| 7-12 | 0.15 | 33.30 | 1.31 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.88 | 5.64 |
| 7-13 | 0.15 | 33.30 | 1.32 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.88 | 5.66 |
| 7-14 | 0.15 | 33.30 | 1.32 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.88 | 5.66 |
| 7-15 | 0.15 | 33.30 | 1.31 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.88 | 5.64 |
| 7-16 | 0.15 | 33.30 | 1.31 | 1.03 | 0.96 | 0.99 | 1.00 | 1.00 | 0.88 | 5.64 |

Segue il confronto fra la pressione limite ed applicata.

| Caso | $\gamma_{R,v}$ | q_{lim} [daN/cm ²] | A [cm ²] | R_d [daN] | E_d [daN] | Verifica |
|------|----------------|----------------------------------|----------------------|-------------|-------------|---|
| 1-1 | 2.30 | 20.1 | 505639.65 | 10161950.1 | 372873.8 | SI (10161950.1/372873.8 = 27.25 >= 1.0) |
| 2-1 | 2.30 | 20.02 | 504613.53 | 10102243.1 | 372873.8 | SI (10102243.1/372873.8 = 27.09 >= 1.0) |
| 2-2 | 2.30 | 20 | 506665.72 | 10133283 | 372872.8 | SI (10133283/372872.8 = 27.18 >= 1.0) |
| 3-1 | 2.30 | 20.06 | 506734.97 | 10165070 | 372872.8 | SI (10165070/372872.8 = 27.26 >= 1.0) |
| 3-2 | 2.30 | 19.97 | 504544.28 | 10073413.9 | 372873.8 | SI (10073413.9/372873.8 = 27.02 >= 1.0) |
| 4-1 | 2.30 | 15.85 | 501122.11 | 7943625.1 | 254026 | SI (7943625.1/254026 = 31.27 >= 1.0) |
| 4-2 | 2.30 | 15.85 | 501154.78 | 7945098.7 | 254026 | SI (7945098.7/254026 = 31.28 >= 1.0) |
| 4-3 | 2.30 | 15.61 | 494012.51 | 7711851.1 | 254030 | SI (7711851.1/254030 = 30.36 >= 1.0) |
| 4-4 | 2.30 | 15.61 | 494045.17 | 7712525.1 | 254030 | SI (7712525.1/254030 = 30.36 >= 1.0) |
| 4-5 | 2.30 | 15.85 | 501050.33 | 7943887.7 | 254026 | SI (7943887.7/254026 = 31.27 >= 1.0) |
| 4-6 | 2.30 | 15.86 | 501083 | 7945361.3 | 254026 | SI (7945361.3/254026 = 31.28 >= 1.0) |
| 4-7 | 2.30 | 15.61 | 493941.74 | 7712100.3 | 254030 | SI (7712100.3/254030 = 30.36 >= 1.0) |
| 4-8 | 2.30 | 15.61 | 493974.41 | 7712774.3 | 254030 | SI (7712774.3/254030 = 30.36 >= 1.0) |
| 4-9 | 2.30 | 15.71 | 520927.91 | 8181479.2 | 254020 | SI (8181479.2/254020 = 32.21 >= 1.0) |
| 4-10 | 2.30 | 15.71 | 520961.87 | 8182993.9 | 254020 | SI (8182993.9/254020 = 32.21 >= 1.0) |
| 4-11 | 2.30 | 15.47 | 513536.7 | 7943598.1 | 254023 | SI (7943598.1/254023 = 31.27 >= 1.0) |
| 4-12 | 2.30 | 15.47 | 513570.67 | 7944286.3 | 254023 | SI (7944286.3/254023 = 31.27 >= 1.0) |
| 4-13 | 2.30 | 15.7 | 520856.12 | 8179470.3 | 254020 | SI (8179470.3/254020 = 32.20 >= 1.0) |
| 4-14 | 2.30 | 15.71 | 520890.09 | 8180984.7 | 254020 | SI (8180984.7/254020 = 32.21 >= 1.0) |
| 4-15 | 2.30 | 15.47 | 513465.94 | 7941647.6 | 254023 | SI (7941647.6/254023 = 31.26 >= 1.0) |
| 4-16 | 2.30 | 15.47 | 513499.9 | 7942335.7 | 254023 | SI (7942335.7/254023 = 31.27 >= 1.0) |
| 5-1 | 2.30 | 15.52 | 501578.13 | 7786450.7 | 254020 | SI (7786450.7/254020 = 30.65 >= 1.0) |
| 5-2 | 2.30 | 15.52 | 501556.89 | 7786527.3 | 254020 | SI (7786527.3/254020 = 30.65 >= 1.0) |
| 5-3 | 2.30 | 15.48 | 507446.23 | 7855268.9 | 254018 | SI (7855268.9/254018 = 30.92 >= 1.0) |
| 5-4 | 2.30 | 15.48 | 507424.99 | 7854695.3 | 254018 | SI (7854695.3/254018 = 30.92 >= 1.0) |
| 5-5 | 2.30 | 15.52 | 501467.43 | 7784198.6 | 254020 | SI (7784198.6/254020 = 30.64 >= 1.0) |
| 5-6 | 2.30 | 15.52 | 501446.18 | 7784274.9 | 254020 | SI (7784274.9/254020 = 30.64 >= 1.0) |
| 5-7 | 2.30 | 15.48 | 507334.24 | 7853002.2 | 254018 | SI (7853002.2/254018 = 30.92 >= 1.0) |
| 5-8 | 2.30 | 15.48 | 507312.99 | 7852428.6 | 254018 | SI (7852428.6/254018 = 30.91 >= 1.0) |
| 5-9 | 2.30 | 15.22 | 492373.47 | 7494091.8 | 254031 | SI (7494091.8/254031 = 29.50 >= 1.0) |
| 5-10 | 2.30 | 15.22 | 492352.6 | 7494162.2 | 254031 | SI (7494162.2/254031 = 29.50 >= 1.0) |
| 5-11 | 2.30 | 15.18 | 498131.77 | 7560575.6 | 254029 | SI (7560575.6/254029 = 29.76 >= 1.0) |
| 5-12 | 2.30 | 15.18 | 498110.9 | 7560022.2 | 254029 | SI (7560022.2/254029 = 29.76 >= 1.0) |
| 5-13 | 2.30 | 15.22 | 492483.89 | 7496308.9 | 254031 | SI (7496308.9/254031 = 29.51 >= 1.0) |
| 5-14 | 2.30 | 15.22 | 492463.01 | 7496379.2 | 254031 | SI (7496379.2/254031 = 29.51 >= 1.0) |
| 5-15 | 2.30 | 15.18 | 498243.48 | 7562807.2 | 254029 | SI (7562807.2/254029 = 29.77 >= 1.0) |
| 5-16 | 2.30 | 15.18 | 498222.6 | 7562253.5 | 254029 | SI (7562253.5/254029 = 29.77 >= 1.0) |
| 6-1 | 2.30 | 15.77 | 500488.67 | 7893890.1 | 254027 | SI (7893890.1/254027 = 31.08 >= 1.0) |
| 6-2 | 2.30 | 15.77 | 500524.44 | 7895496.5 | 254026 | SI (7895496.5/254026 = 31.08 >= 1.0) |
| 6-3 | 2.30 | 15.51 | 492683.37 | 7640948.7 | 254030 | SI (7640948.7/254030 = 30.08 >= 1.0) |
| 6-4 | 2.30 | 15.51 | 492719.25 | 7641683.3 | 254030 | SI (7641683.3/254030 = 30.08 >= 1.0) |
| 6-5 | 2.30 | 15.78 | 500409.56 | 7894174.4 | 254026 | SI (7894174.4/254026 = 31.08 >= 1.0) |
| 6-6 | 2.30 | 15.78 | 500445.42 | 7895784.1 | 254026 | SI (7895784.1/254026 = 31.08 >= 1.0) |
| 6-7 | 2.30 | 15.51 | 492605.6 | 7641220.4 | 254030 | SI (7641220.4/254030 = 30.08 >= 1.0) |
| 6-8 | 2.30 | 15.51 | 492641.46 | 7641954.9 | 254030 | SI (7641954.9/254030 = 30.08 >= 1.0) |
| 6-9 | 2.30 | 15.61 | 522290.37 | 8154352.6 | 254019 | SI (8154352.6/254019 = 32.10 >= 1.0) |
| 6-10 | 2.30 | 15.61 | 522327.8 | 8156012.7 | 254019 | SI (8156012.7/254019 = 32.11 >= 1.0) |
| 6-11 | 2.30 | 15.35 | 514144.52 | 7894071.1 | 254023 | SI (7894071.1/254023 = 31.08 >= 1.0) |
| 6-12 | 2.30 | 15.35 | 514181.95 | 7894823.5 | 254023 | SI (7894823.5/254023 = 31.08 >= 1.0) |
| 6-13 | 2.30 | 15.61 | 522211.35 | 8152149.4 | 254019 | SI (8152149.4/254019 = 32.09 >= 1.0) |
| 6-14 | 2.30 | 15.61 | 522248.78 | 8153809.2 | 254019 | SI (8153809.2/254019 = 32.10 >= 1.0) |
| 6-15 | 2.30 | 15.35 | 514066.73 | 7891938.1 | 254023 | SI (7891938.1/254023 = 31.07 >= 1.0) |
| 6-16 | 2.30 | 15.35 | 514104.17 | 7892690.5 | 254023 | SI (7892690.5/254023 = 31.07 >= 1.0) |

| | | | | | | | |
|------|------|-------|--|-----------|-----------|--------|--------------------------------------|
| 7-1 | 2.30 | 15.38 | | 500090.49 | 7693276.2 | 254020 | SI (7693276.2/254020 = 30.29 >= 1.0) |
| 7-2 | 2.30 | 15.38 | | 500067.18 | 7693358.6 | 254020 | SI (7693358.6/254020 = 30.29 >= 1.0) |
| 7-3 | 2.30 | 15.34 | | 506530.02 | 7768108.9 | 254018 | SI (7768108.9/254018 = 30.58 >= 1.0) |
| 7-4 | 2.30 | 15.34 | | 506506.72 | 7767484.2 | 254018 | SI (7767484.2/254018 = 30.58 >= 1.0) |
| 7-5 | 2.30 | 15.38 | | 499968.79 | 7690823.3 | 254020 | SI (7690823.3/254020 = 30.28 >= 1.0) |
| 7-6 | 2.30 | 15.38 | | 499945.48 | 7690905.7 | 254020 | SI (7690905.7/254020 = 30.28 >= 1.0) |
| 7-7 | 2.30 | 15.33 | | 506406.68 | 7765634.7 | 254017 | SI (7765634.7/254017 = 30.57 >= 1.0) |
| 7-8 | 2.30 | 15.33 | | 506383.37 | 7765010.2 | 254017 | SI (7765010.2/254017 = 30.57 >= 1.0) |
| 7-9 | 2.30 | 15.08 | | 490880.57 | 7403626.1 | 254032 | SI (7403626.1/254032 = 29.14 >= 1.0) |
| 7-10 | 2.30 | 15.08 | | 490857.67 | 7403703.2 | 254032 | SI (7403703.2/254032 = 29.14 >= 1.0) |
| 7-11 | 2.30 | 15.04 | | 497199.05 | 7475907.9 | 254029 | SI (7475907.9/254029 = 29.43 >= 1.0) |
| 7-12 | 2.30 | 15.04 | | 497176.14 | 7475306.4 | 254029 | SI (7475306.4/254029 = 29.43 >= 1.0) |
| 7-13 | 2.30 | 15.08 | | 491001.96 | 7406040.7 | 254032 | SI (7406040.7/254032 = 29.15 >= 1.0) |
| 7-14 | 2.30 | 15.08 | | 490979.05 | 7406117.8 | 254032 | SI (7406117.8/254032 = 29.15 >= 1.0) |
| 7-15 | 2.30 | 15.04 | | 497322.01 | 7478339.8 | 254029 | SI (7478339.8/254029 = 29.44 >= 1.0) |
| 7-16 | 2.30 | 15.04 | | 497299.09 | 7477738.2 | 254029 | SI (7477738.2/254029 = 29.44 >= 1.0) |

Scorrimento.

Le seguenti tabelle elencano il valore dell'angolo di resistenza al taglio, della coesione efficace, dell'attrito e dell'aderenza fondazione-terreno, e della resistenza disponibile sul piano di posa e sulle pareti laterali.

| Caso | γ_{ϕ} | γ_c | ϕ [°] | c' [daN/cm ²] | δ [°] | a [daN/cm ²] | $\gamma_{R_{th}}$ | $\gamma_{R_{se}}$ | R_h [daN] | R_e [daN] |
|------|-----------------|------------|------------|-----------------------------|--------------|----------------------------|-------------------|-------------------|-------------|-------------|
| 1-1 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 167164.55 | 0 |
| 2-1 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 167164.55 | 6199.6 |
| 2-2 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 167164.11 | 6199.6 |
| 3-1 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 167164.11 | 7185.23 |
| 3-2 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 167164.55 | 7185.23 |
| 4-1 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113883.42 | 8121.17 |
| 4-2 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113883.42 | 8116.5 |
| 4-3 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113885.21 | 8116.69 |
| 4-4 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113885.21 | 8121.35 |
| 4-5 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113883.42 | 8125.51 |
| 4-6 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113883.42 | 8120.84 |
| 4-7 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113885.21 | 8121.03 |
| 4-8 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113885.21 | 8125.7 |
| 4-9 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113880.73 | 8125.7 |
| 4-10 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113880.73 | 8121.03 |
| 4-11 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113882.07 | 8120.84 |
| 4-12 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113882.07 | 8125.51 |
| 4-13 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113880.73 | 8121.35 |
| 4-14 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113880.73 | 8116.69 |
| 4-15 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113882.07 | 8116.5 |
| 4-16 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113882.07 | 8121.17 |
| 5-1 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113880.73 | 8576.02 |
| 5-2 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113880.73 | 8572.89 |
| 5-3 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113879.83 | 8572.88 |
| 5-4 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113879.83 | 8576 |
| 5-5 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113880.73 | 8579.39 |
| 5-6 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113880.73 | 8576.26 |
| 5-7 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113879.83 | 8576.24 |
| 5-8 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113879.83 | 8579.37 |
| 5-9 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113885.66 | 8579.37 |
| 5-10 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113885.66 | 8576.24 |
| 5-11 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113884.76 | 8576.26 |
| 5-12 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113884.76 | 8579.39 |
| 5-13 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113885.66 | 8576 |
| 5-14 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113885.66 | 8572.88 |
| 5-15 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113884.76 | 8572.89 |
| 5-16 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113884.76 | 8576.02 |
| 6-1 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113883.87 | 8121.16 |
| 6-2 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113883.42 | 8116.5 |
| 6-3 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113885.21 | 8116.69 |
| 6-4 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113885.21 | 8121.35 |
| 6-5 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113883.42 | 8125.51 |
| 6-6 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113883.42 | 8120.83 |
| 6-7 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113885.21 | 8121.03 |
| 6-8 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113885.21 | 8125.7 |
| 6-9 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113880.28 | 8125.7 |
| 6-10 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113880.28 | 8121.03 |
| 6-11 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113882.07 | 8120.83 |
| 6-12 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113882.07 | 8125.51 |
| 6-13 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113880.28 | 8121.35 |
| 6-14 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113880.28 | 8116.69 |
| 6-15 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113882.07 | 8116.5 |
| 6-16 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113882.07 | 8121.16 |
| 7-1 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113880.73 | 8576.02 |
| 7-2 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113880.73 | 8572.89 |

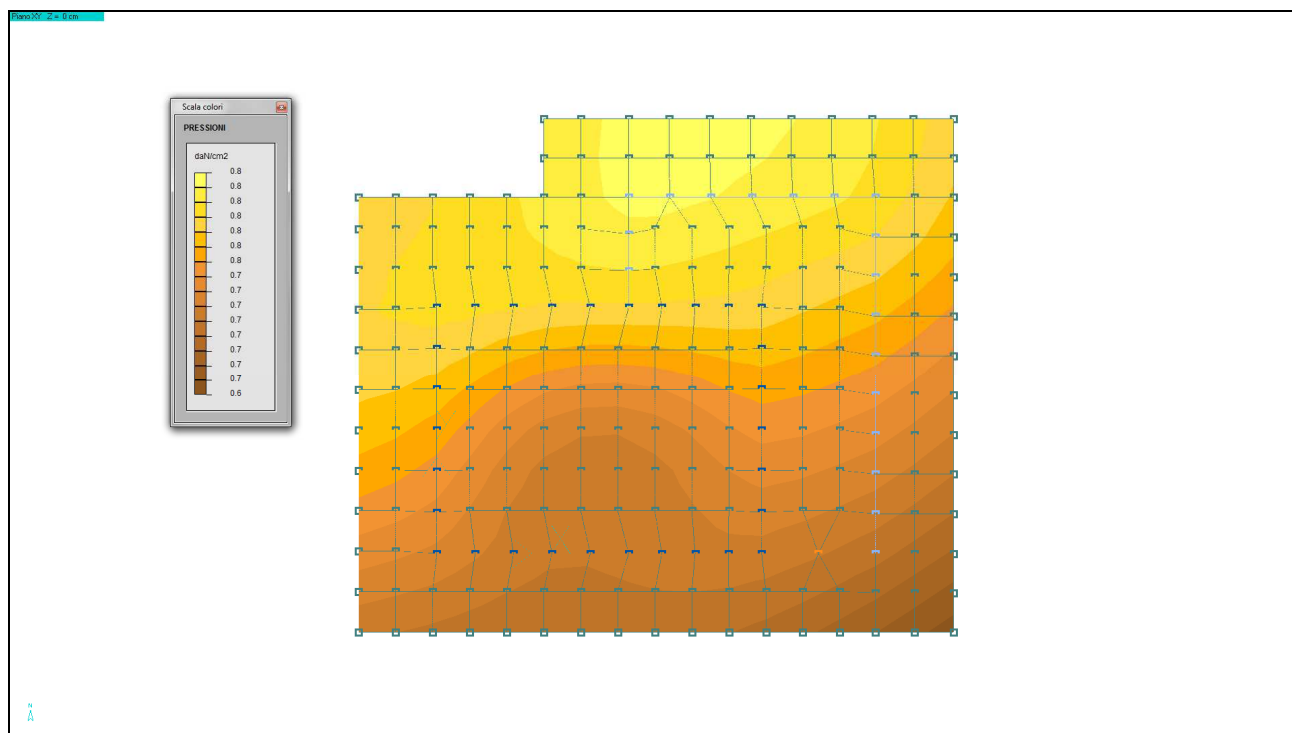
| | | | | | | | | | | |
|------|------|------|----|---|------|---|------|------|-----------|---------|
| 7-3 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113879.83 | 8572.87 |
| 7-4 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113879.83 | 8576.01 |
| 7-5 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113880.73 | 8579.38 |
| 7-6 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113880.73 | 8576.26 |
| 7-7 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113879.38 | 8576.24 |
| 7-8 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113879.38 | 8579.37 |
| 7-9 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113886.11 | 8579.37 |
| 7-10 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113886.11 | 8576.24 |
| 7-11 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113884.76 | 8576.26 |
| 7-12 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113884.76 | 8579.38 |
| 7-13 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113886.11 | 8576.01 |
| 7-14 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113886.11 | 8572.87 |
| 7-15 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113884.76 | 8572.89 |
| 7-16 | 1.00 | 1.00 | 35 | 0 | 26.2 | 0 | 1.10 | 1.00 | 113884.76 | 8576.02 |

Segue il confronto fra la resistenza a scorrimento e l'azione applicata.

| Caso | R _a [daN] | E _a [daN] | Verifica |
|------|----------------------|----------------------|-------------------------------------|
| 1-1 | 167164.6 | 0 | SI (167164.6/0 = 1.00 >= 1.0) |
| 2-1 | 173364.2 | 702 | SI (173364.2/702 = 246.96 >= 1.0) |
| 2-2 | 173363.7 | 702 | SI (173363.7/702 = 246.96 >= 1.0) |
| 3-1 | 174349.3 | 661.5 | SI (174349.3/661.5 = 263.57 >= 1.0) |
| 3-2 | 174349.8 | 661.5 | SI (174349.8/661.5 = 263.57 >= 1.0) |
| 4-1 | 122004.6 | 5351.7 | SI (122004.6/5351.7 = 22.80 >= 1.0) |
| 4-2 | 121999.9 | 5350 | SI (121999.9/5350 = 22.80 >= 1.0) |
| 4-3 | 122001.9 | 5350.1 | SI (122001.9/5350.1 = 22.80 >= 1.0) |
| 4-4 | 122006.6 | 5351.8 | SI (122006.6/5351.8 = 22.80 >= 1.0) |
| 4-5 | 122008.9 | 5337.2 | SI (122008.9/5337.2 = 22.86 >= 1.0) |
| 4-6 | 122004.3 | 5335.5 | SI (122004.3/5335.5 = 22.87 >= 1.0) |
| 4-7 | 122006.2 | 5335.6 | SI (122006.2/5335.6 = 22.87 >= 1.0) |
| 4-8 | 122010.9 | 5337.3 | SI (122010.9/5337.3 = 22.86 >= 1.0) |
| 4-9 | 122006.4 | 5337.3 | SI (122006.4/5337.3 = 22.86 >= 1.0) |
| 4-10 | 122001.8 | 5335.6 | SI (122001.8/5335.6 = 22.87 >= 1.0) |
| 4-11 | 122002.9 | 5335.5 | SI (122002.9/5335.5 = 22.87 >= 1.0) |
| 4-12 | 122007.6 | 5337.2 | SI (122007.6/5337.2 = 22.86 >= 1.0) |
| 4-13 | 122002.1 | 5351.8 | SI (122002.1/5351.8 = 22.80 >= 1.0) |
| 4-14 | 121997.4 | 5350.1 | SI (121997.4/5350.1 = 22.80 >= 1.0) |
| 4-15 | 121998.6 | 5350 | SI (121998.6/5350 = 22.80 >= 1.0) |
| 4-16 | 122003.2 | 5351.7 | SI (122003.2/5351.7 = 22.80 >= 1.0) |
| 5-1 | 122456.8 | 5735.7 | SI (122456.8/5735.7 = 21.35 >= 1.0) |
| 5-2 | 122453.6 | 5734.5 | SI (122453.6/5734.5 = 21.35 >= 1.0) |
| 5-3 | 122452.7 | 5734.6 | SI (122452.7/5734.6 = 21.35 >= 1.0) |
| 5-4 | 122455.8 | 5735.8 | SI (122455.8/5735.8 = 21.35 >= 1.0) |
| 5-5 | 122460.1 | 5718.6 | SI (122460.1/5718.6 = 21.41 >= 1.0) |
| 5-6 | 122457 | 5717.3 | SI (122457/5717.3 = 21.42 >= 1.0) |
| 5-7 | 122456.1 | 5717.4 | SI (122456.1/5717.4 = 21.42 >= 1.0) |
| 5-8 | 122459.2 | 5718.6 | SI (122459.2/5718.6 = 21.41 >= 1.0) |
| 5-9 | 122465 | 5718.6 | SI (122465/5718.6 = 21.42 >= 1.0) |
| 5-10 | 122461.9 | 5717.4 | SI (122461.9/5717.4 = 21.42 >= 1.0) |
| 5-11 | 122461 | 5717.3 | SI (122461/5717.3 = 21.42 >= 1.0) |
| 5-12 | 122464.2 | 5718.6 | SI (122464.2/5718.6 = 21.42 >= 1.0) |
| 5-13 | 122461.7 | 5735.8 | SI (122461.7/5735.8 = 21.35 >= 1.0) |
| 5-14 | 122458.5 | 5734.6 | SI (122458.5/5734.6 = 21.35 >= 1.0) |
| 5-15 | 122457.7 | 5734.5 | SI (122457.7/5734.5 = 21.35 >= 1.0) |
| 5-16 | 122460.8 | 5735.7 | SI (122460.8/5735.7 = 21.35 >= 1.0) |
| 6-1 | 122005 | 5886.9 | SI (122005/5886.9 = 20.72 >= 1.0) |
| 6-2 | 121999.9 | 5885.1 | SI (121999.9/5885.1 = 20.73 >= 1.0) |
| 6-3 | 122001.9 | 5885.1 | SI (122001.9/5885.1 = 20.73 >= 1.0) |
| 6-4 | 122006.6 | 5886.9 | SI (122006.6/5886.9 = 20.72 >= 1.0) |
| 6-5 | 122008.9 | 5870.9 | SI (122008.9/5870.9 = 20.78 >= 1.0) |
| 6-6 | 122004.3 | 5869.1 | SI (122004.3/5869.1 = 20.79 >= 1.0) |
| 6-7 | 122006.2 | 5869.2 | SI (122006.2/5869.2 = 20.79 >= 1.0) |
| 6-8 | 122010.9 | 5871 | SI (122010.9/5871 = 20.78 >= 1.0) |
| 6-9 | 122006 | 5871 | SI (122006/5871 = 20.78 >= 1.0) |
| 6-10 | 122001.3 | 5869.2 | SI (122001.3/5869.2 = 20.79 >= 1.0) |
| 6-11 | 122002.9 | 5869.1 | SI (122002.9/5869.1 = 20.79 >= 1.0) |
| 6-12 | 122007.6 | 5870.9 | SI (122007.6/5870.9 = 20.78 >= 1.0) |
| 6-13 | 122001.6 | 5886.9 | SI (122001.6/5886.9 = 20.72 >= 1.0) |
| 6-14 | 121997 | 5885.1 | SI (121997/5885.1 = 20.73 >= 1.0) |
| 6-15 | 121998.6 | 5885.1 | SI (121998.6/5885.1 = 20.73 >= 1.0) |
| 6-16 | 122003.2 | 5886.9 | SI (122003.2/5886.9 = 20.72 >= 1.0) |
| 7-1 | 122456.7 | 6309.3 | SI (122456.7/6309.3 = 19.41 >= 1.0) |
| 7-2 | 122453.6 | 6308 | SI (122453.6/6308 = 19.41 >= 1.0) |
| 7-3 | 122452.7 | 6308 | SI (122452.7/6308 = 19.41 >= 1.0) |
| 7-4 | 122455.8 | 6309.4 | SI (122455.8/6309.4 = 19.41 >= 1.0) |
| 7-5 | 122460.1 | 6290.4 | SI (122460.1/6290.4 = 19.47 >= 1.0) |
| 7-6 | 122457 | 6289.1 | SI (122457/6289.1 = 19.47 >= 1.0) |
| 7-7 | 122455.6 | 6289.1 | SI (122455.6/6289.1 = 19.47 >= 1.0) |
| 7-8 | 122458.8 | 6290.5 | SI (122458.8/6290.5 = 19.47 >= 1.0) |
| 7-9 | 122465.5 | 6290.5 | SI (122465.5/6290.5 = 19.47 >= 1.0) |

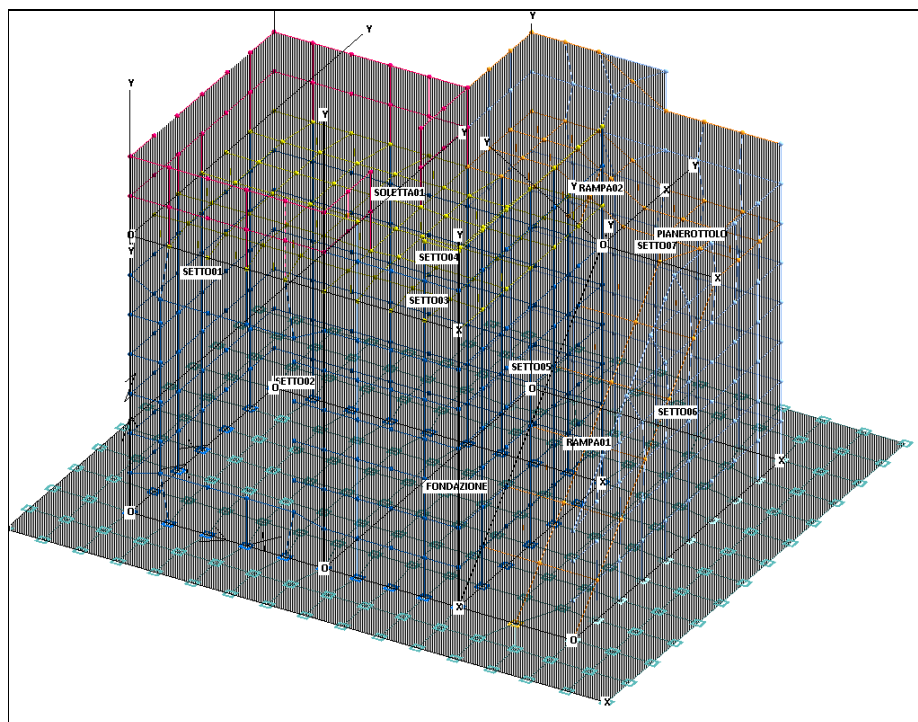
| | | | |
|------|----------|--------|-------------------------------------|
| 7-10 | 122462.3 | 6289.1 | SI (122462.3/6289.1 = 19.47 >= 1.0) |
| 7-11 | 122461 | 6289.1 | SI (122461/6289.1 = 19.47 >= 1.0) |
| 7-12 | 122464.1 | 6290.4 | SI (122464.1/6290.4 = 19.47 >= 1.0) |
| 7-13 | 122462.1 | 6309.4 | SI (122462.1/6309.4 = 19.41 >= 1.0) |
| 7-14 | 122459 | 6308 | SI (122459/6308 = 19.41 >= 1.0) |
| 7-15 | 122457.7 | 6308 | SI (122457.7/6308 = 19.41 >= 1.0) |
| 7-16 | 122460.8 | 6309.3 | SI (122460.8/6309.3 = 19.41 >= 1.0) |

Dalla verifica della costruzione in zona sismica si può leggere un valore massimo di tensione normale media verticale sul terreno dovuta alle diverse condizioni di carico di 80 KN/m² (0.8 daN/cm²) (vedi figura seguente).

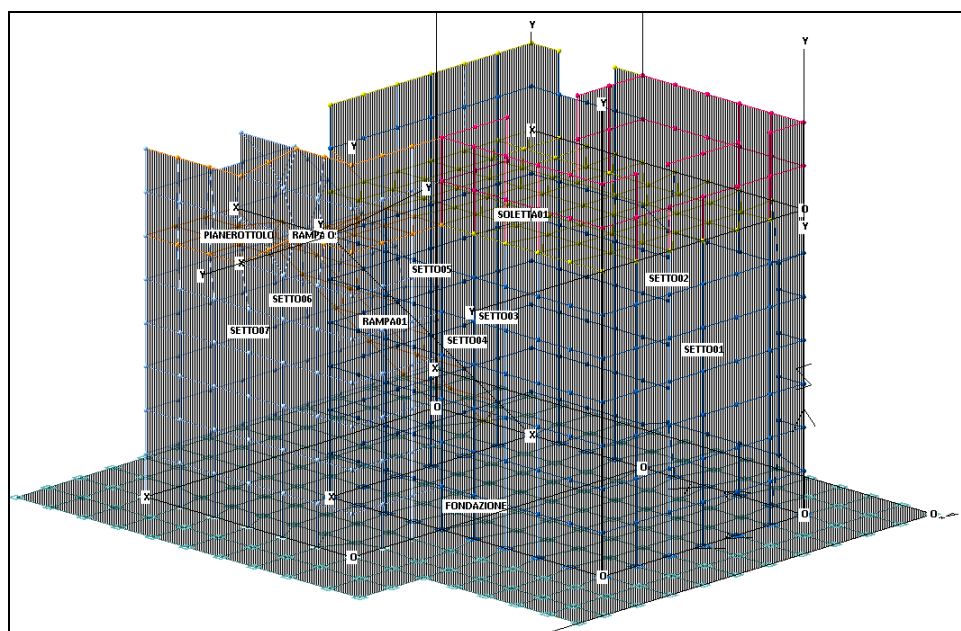


PRESSIONI SUL TERRENO DELLA FONDAZIONE AGLI SLU.

DATI DELLA STRUTTURA.



VISTA ASSONOMETRICA DEGLI ELEMENTI IN C.A. CHE COMPONGONO LA STRUTTURA.



VISTA ASSONOMETRICA DEGLI ELEMENTI IN C.A. CHE COMPONGONO LA STRUTTURA.

DATI ANALISI SISMICA:

ANALISI DINAMICA

lavoro : \TORRE3

PARAMETRI DI CALCOLO:

Calcolo secondo NTC 2008

Modello generale

Assi di vibrazione: X Y

Combinazione quadratica completa (CQC)

DATI PROGETTO

Edificio sito in località (long. 7.006 lat. 45.156900)

Categoria del suolo di fondazione = B

Coeff. di amplificazione stratigrafica $S_s = 1.200$ Coeff. di amplificazione topografica $S_T = 1.200$ $S = 1.440$

Vita nominale dell'opera VN = 50 anni

Coefficiente d'uso CU = 1.0

Periodo di riferimento VR = 50.0

PVR : probabilità di superamento in VR = 10 %

Tempo di ritorno = 474

Coeff. di smorzamento viscoso = 5.0

valori risultanti per :

ag 1.336 [g/10]

FO 2.460

TC* 0.260

Fattore di struttura q = 1.000

Rapporto spettro di esercizio / spettro di progetto = 0.384

| CONDIZIONI DI RIFERIMENTO | COEFFICIENTE | PESO RISULTANTE [daN] |
|---------------------------|--------------|--------------------------|
| 1. | 1.000 | 34692.7 |
| 2. | 1.000 | 54413.7 |
| 3. | 0.600 | 8904.1 |

*** TABELLA AUTOVETTORI ***

| n | PERIODO [sec] | MASSA ATTIVATA | | | COEFFICIENTI DI CORRELAZIONE | | | | | | |
|--------------|------------------|----------------|--------|-------|------------------------------|-------|-----|-----|-----|-----|-----|
| | | %X | %Y | %Z | n+1 | n+2 | n+3 | n+4 | n+5 | n+6 | n+7 |
| 1 | 0.228913 | 9.734 | 76.872 | 0.000 | 0.283 | 0.002 | | | | | |
| 2 | 0.195342 | 75.241 | 9.673 | 0.000 | 0.003 | | | | | | |
| 3 | 0.045666 | 0.089 | 0.003 | 0.000 | | | | | | | |
| MASSA TOTALE | | 85.064 | 86.549 | 0.000 | | | | | | | |

DESCRIZIONE CASI DI CARICO:

| NOME | DESCRIZIONE | VERIFICA | TIPO | CONDIZ. INSERITE | | | CASI INSERITI | |
|------|----------------------|-----------|-------|------------------|--------|--------|---------------|--------|
| | | | | Num. | Coeff. | Segno | Num. | Coeff. |
| 1 | SLU | S.L.U. | somma | 1 | 1.300 | + | | |
| | | | | 2 | 1.500 | + | | |
| | | | | 3 | 1.500 | + | | |
| | | | | 4 | 1.500 | + | | |
| | | | | 5 | 1.300 | + | | |
| | | | | 6 | 1.500 | + | | |
| 2 | SLU VENTOX | S.L.U. | somma | 1 | 1.300 | + | | |
| | | | | 2 | 1.500 | + | | |
| | | | | 3 | 1.500 | + | | |
| | | | | 4 | 1.500 | + | | |
| | | | | 5 | 1.300 | + | | |
| | | | | 6 | 1.500 | + | | |
| | | | | 7 | 1.500 | ± | | |
| 3 | SLU VENTOY | S.L.U. | somma | 1 | 1.300 | + | | |
| | | | | 2 | 1.500 | + | | |
| | | | | 3 | 1.500 | + | | |
| | | | | 4 | 1.500 | + | | |
| | | | | 5 | 1.300 | + | | |
| | | | | 6 | 1.500 | + | | |
| | | | | 8 | 1.500 | ± | | |
| 4 | SISMAX SLU | nessuna | somma | 9 | 1.000 | quadr. | | |
| | | | | 11 | 1.000 | quadr. | | |
| | | | | 13 | 1.000 | quadr. | | |
| | | | | 17 | 1.000 | ± | | |
| 5 | SISMAY SLU | nessuna | somma | 10 | 1.000 | quadr. | | |
| | | | | 12 | 1.000 | quadr. | | |
| | | | | 14 | 1.000 | quadr. | | |
| | | | | 18 | 1.000 | ± | | |
| 6 | SLU con SISMAX PRINC | S.L.U. | somma | 1 | 1.000 | + | 4 | 1.000 |
| | | | | 2 | 1.000 | + | 5 | 0.300 |
| | | | | 3 | 0.600 | + | | |
| | | | | 5 | 1.000 | + | | |
| | | | | 6 | 1.000 | + | | |
| 7 | SLU con SISMAY PRINC | S.L.U. | somma | 1 | 1.000 | + | 5 | 1.000 |
| | | | | 2 | 1.000 | + | 4 | 0.300 |
| | | | | 3 | 0.600 | + | | |
| | | | | 5 | 1.000 | + | | |
| | | | | 6 | 1.000 | + | | |
| 8 | SLD con SISMAX PRINC | S.L.Danno | somma | 1 | 1.000 | + | 4 | 0.384 |
| | | | | 2 | 1.000 | + | 5 | 0.115 |
| | | | | 3 | 0.600 | + | | |
| | | | | 5 | 1.000 | + | | |
| | | | | 6 | 1.000 | + | | |
| 9 | SLD con SISMAY PRINC | S.L.Danno | somma | 1 | 1.000 | + | 5 | 0.384 |
| | | | | 2 | 1.000 | + | 4 | 0.115 |
| | | | | 3 | 0.600 | + | | |
| | | | | 5 | 1.000 | + | | |
| | | | | 6 | 1.000 | + | | |
| 10 | SLU FON con SISMAX P | SLU_FON | somma | 1 | 1.000 | + | 4 | 1.100 |
| | | | | 2 | 1.000 | + | 5 | 0.330 |
| | | | | 3 | 0.600 | + | | |
| | | | | 5 | 1.000 | + | | |
| | | | | 6 | 1.000 | + | | |
| 11 | SLU FON con SISMAY P | SLU_FON | somma | 1 | 1.000 | + | 5 | 1.100 |
| | | | | 2 | 1.000 | + | 4 | 0.330 |
| | | | | 3 | 0.600 | + | | |
| | | | | 5 | 1.000 | + | | |
| | | | | 6 | 1.000 | + | | |
| 12 | Rara | Rara | somma | 1 | 1.000 | + | | |
| | | | | 2 | 1.000 | + | | |
| | | | | 3 | 1.000 | + | | |
| | | | | 4 | 1.000 | + | | |
| | | | | 5 | 1.000 | + | | |
| | | | | 6 | 1.000 | + | | |
| 13 | Rara ventox | Rara | somma | 1 | 1.000 | + | | |
| | | | | 2 | 1.000 | + | | |
| | | | | 3 | 1.000 | + | | |
| | | | | 4 | 1.000 | + | | |
| | | | | 5 | 1.000 | + | | |

| | | | | | | | | |
|----|------------------|------------|-------|---|-------|---|--|--|
| | | | | 6 | 1.000 | + | | |
| | | | | 7 | 1.000 | ± | | |
| 14 | Rara VentoY | Rara | somma | 1 | 1.000 | + | | |
| | | | | 2 | 1.000 | + | | |
| | | | | 3 | 1.000 | + | | |
| | | | | 4 | 1.000 | + | | |
| | | | | 5 | 1.000 | + | | |
| | | | | 6 | 1.000 | + | | |
| | | | | 8 | 1.000 | ± | | |
| 15 | Frequente | Freq. | somma | 1 | 1.000 | + | | |
| | | | | 2 | 1.000 | + | | |
| | | | | 3 | 0.700 | + | | |
| | | | | 4 | 0.200 | + | | |
| | | | | 5 | 1.000 | + | | |
| | | | | 6 | 1.000 | + | | |
| 16 | Frequente VentoX | Freq. | somma | 1 | 1.000 | + | | |
| | | | | 2 | 1.000 | + | | |
| | | | | 3 | 0.700 | + | | |
| | | | | 4 | 0.200 | + | | |
| | | | | 5 | 1.000 | + | | |
| | | | | 6 | 1.000 | + | | |
| | | | | 7 | 0.200 | ± | | |
| 17 | Frequente VentoY | Freq. | somma | 1 | 1.000 | + | | |
| | | | | 2 | 1.000 | + | | |
| | | | | 3 | 0.700 | + | | |
| | | | | 4 | 0.200 | + | | |
| | | | | 5 | 1.000 | + | | |
| | | | | 6 | 1.000 | + | | |
| | | | | 8 | 0.200 | ± | | |
| 18 | Quasi Perm | QuasiPerm. | somma | 1 | 1.000 | + | | |
| | | | | 2 | 1.000 | + | | |
| | | | | 3 | 0.600 | + | | |
| | | | | 5 | 1.000 | + | | |
| | | | | 6 | 1.000 | + | | |

VERIFICA PLATEA DI FONDAZIONE

MACROGUSCIO FONDAZIONE

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

| Nome | Descrizione |
|------|----------------------|
| 1 | SLU |
| 2 | SLU VENTOX |
| 3 | SLU VENTOY |
| 6 | SLU con SISMAX PRINC |
| 7 | SLU con SISMAY PRINC |
| 10 | SLU FON con SISMAX P |
| 11 | SLU FON con SISMAY P |

DATI:

tensione di snervamento acciaio (fyk): 4500 daN/cm2
 coefficiente sicurezza acciaio : 1.15
 deformazione ultima acciaio : 1.97 per mille
 deformazione ultima cls : 3.5 per mille
 rapporto rottura/snervamento (k): 1
 resistenza cilindrica cls (fck): 249 daN/cm2
 coefficiente sicurezza cls : 1.5
 coefficiente riduttivo (alfa): 0.85
 copriferro inferiore (asse armatura): 3 cm
 copriferro superiore (asse armatura): 3 cm
 moltiplicatore sollecitazioni : 1

LEGENDA:

spess = spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
 Af = area disposta al lembo teso, in cm2 al metro
 Afc = area disposta al lembo compresso, in cm2 al metro
 Mom = momento flettente [daNcm/cm]
 Nor = sforzo normale [daN]
 epsC = deformazione cls [per mille]
 epsF = deformazione acciaio [per mille]

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L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

Per gli elementi di fondazione la permanenza in campo elastico è ottenuta limitando

la deformazione dell'acciaio alla deformazione di snervamento (1.97 per mille).

| GUSCI | spess | INFERIORE ORIZZONTALE | | | | | | INFERIORE VERTICALE | | | | | |
|-------|-------|-----------------------|------|-------|-----|------|------|---------------------|------|-------|-----|------|------|
| | | Af | Afc | Mom | Nor | epsC | epsF | Af | Afc | Mom | Nor | epsC | epsF |
| 443 | 40 | 5.65 | 5.65 | 127. | 0. | 0.01 | 0.03 | 5.65 | 5.65 | 105. | 0. | 0.01 | 0.03 |
| 444 | 40 | 5.65 | 5.65 | 728. | 0. | 0.04 | 0.18 | 5.65 | 5.65 | 209. | 0. | 0.01 | 0.05 |
| 445 | 40 | 5.65 | 5.65 | 927. | 0. | 0.05 | 0.23 | 5.65 | 5.65 | 313. | 0. | 0.02 | 0.08 |
| 446 | 40 | 5.65 | 5.65 | 431. | 0. | 0.02 | 0.10 | 5.65 | 5.65 | 421. | 0. | 0.02 | 0.10 |
| 447 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 440. | 0. | 0.02 | 0.11 |
| 448 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 326. | 0. | 0.02 | 0.08 |
| 449 | 40 | 5.65 | 5.65 | 115. | 0. | 0.01 | 0.03 | 5.65 | 5.65 | 291. | 0. | 0.02 | 0.07 |
| 450 | 40 | 5.65 | 5.65 | 492. | 0. | 0.03 | 0.12 | 5.65 | 5.65 | 421. | 0. | 0.02 | 0.10 |
| 451 | 40 | 5.65 | 5.65 | 737. | 0. | 0.04 | 0.18 | 5.65 | 5.65 | 461. | 0. | 0.02 | 0.11 |
| 452 | 40 | 5.65 | 5.65 | 979. | 0. | 0.05 | 0.24 | 5.65 | 5.65 | 423. | 0. | 0.02 | 0.10 |
| 453 | 40 | 5.65 | 5.65 | 1170. | 0. | 0.06 | 0.28 | 5.65 | 5.65 | 348. | 0. | 0.02 | 0.08 |
| 454 | 40 | 5.65 | 5.65 | 821. | 0. | 0.04 | 0.20 | 5.65 | 5.65 | 271. | 0. | 0.01 | 0.07 |
| 455 | 40 | 5.65 | 5.65 | 441. | 0. | 0.02 | 0.11 | 5.65 | 5.65 | 186. | 0. | 0.01 | 0.05 |
| 456 | 40 | 5.65 | 5.65 | 188. | 0. | 0.01 | 0.05 | 5.65 | 5.65 | 647. | 0. | 0.03 | 0.16 |
| 457 | 40 | 5.65 | 5.65 | 240. | 0. | 0.01 | 0.06 | 5.65 | 5.65 | 748. | 0. | 0.04 | 0.18 |
| 458 | 40 | 5.65 | 5.65 | 274. | 0. | 0.01 | 0.07 | 5.65 | 5.65 | 430. | 0. | 0.02 | 0.10 |
| 459 | 40 | 5.65 | 5.65 | 242. | 0. | 0.01 | 0.06 | 5.65 | 5.65 | 88. | 0. | 0.00 | 0.02 |
| 460 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 461 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 462 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 463 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 464 | 40 | 5.65 | 5.65 | 181. | 0. | 0.01 | 0.04 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 465 | 40 | 5.65 | 5.65 | 930. | 0. | 0.05 | 0.23 | 5.65 | 5.65 | 114. | 0. | 0.01 | 0.03 |
| 466 | 40 | 5.65 | 5.65 | 272. | 0. | 0.01 | 0.07 | 5.65 | 5.65 | 274. | 0. | 0.01 | 0.07 |
| 467 | 40 | 5.65 | 5.65 | 465. | 0. | 0.02 | 0.11 | 5.65 | 5.65 | 339. | 0. | 0.02 | 0.08 |
| 468 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 469 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 470 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 471 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 472 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 473 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 474 | 40 | 5.65 | 5.65 | 508. | 0. | 0.03 | 0.12 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 475 | 40 | 5.65 | 5.65 | 188. | 0. | 0.01 | 0.05 | 5.65 | 5.65 | 94. | 0. | 0.01 | 0.02 |
| 476 | 40 | 5.65 | 5.65 | 625. | 0. | 0.03 | 0.15 | 5.65 | 5.65 | 707. | 0. | 0.04 | 0.17 |
| 477 | 40 | 5.65 | 5.65 | 448. | 0. | 0.02 | 0.11 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 478 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 479 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 480 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 481 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 482 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 483 | 40 | 5.65 | 5.65 | 715. | 0. | 0.04 | 0.17 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 484 | 40 | 5.65 | 5.65 | 174. | 0. | 0.01 | 0.04 | 5.65 | 5.65 | 159. | 0. | 0.01 | 0.04 |
| 485 | 40 | 5.65 | 5.65 | 653. | 0. | 0.04 | 0.16 | 5.65 | 5.65 | 1333. | 0. | 0.07 | 0.32 |
| 486 | 40 | 5.65 | 5.65 | 873. | 0. | 0.05 | 0.21 | 5.65 | 5.65 | 935. | 0. | 0.05 | 0.23 |
| 487 | 40 | 5.65 | 5.65 | 125. | 0. | 0.01 | 0.03 | 5.65 | 5.65 | 579. | 0. | 0.03 | 0.14 |
| 488 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 38. | 0. | 0.00 | 0.01 |
| 489 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 490 | 40 | 5.65 | 5.65 | 60. | 0. | 0.00 | 0.01 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 491 | 40 | 5.65 | 5.65 | 320. | 0. | 0.02 | 0.08 | 5.65 | 5.65 | 351. | 0. | 0.02 | 0.09 |
| 492 | 40 | 5.65 | 5.65 | 945. | 0. | 0.05 | 0.23 | 5.65 | 5.65 | 514. | 0. | 0.03 | 0.12 |
| 493 | 40 | 5.65 | 5.65 | 98. | 0. | 0.01 | 0.02 | 5.65 | 5.65 | 303. | 0. | 0.02 | 0.07 |
| 494 | 40 | 5.65 | 5.65 | 539. | 0. | 0.03 | 0.13 | 5.65 | 5.65 | 2076. | 0. | 0.11 | 0.50 |
| 495 | 40 | 5.65 | 5.65 | 75. | 0. | 0.00 | 0.02 | 5.65 | 5.65 | 491. | 0. | 0.03 | 0.12 |
| 496 | 40 | 5.65 | 5.65 | 351. | 0. | 0.02 | 0.09 | 5.65 | 5.65 | 1920. | 0. | 0.10 | 0.47 |
| 497 | 40 | 5.65 | 5.65 | 147. | 0. | 0.01 | 0.04 | 5.65 | 5.65 | 376. | 0. | 0.02 | 0.09 |
| 498 | 40 | 5.65 | 5.65 | 192. | 0. | 0.01 | 0.05 | 5.65 | 5.65 | 662. | 0. | 0.04 | 0.16 |
| 499 | 40 | 5.65 | 5.65 | 809. | 0. | 0.04 | 0.20 | 5.65 | 5.65 | 832. | 0. | 0.04 | 0.20 |
| 500 | 40 | 5.65 | 5.65 | 1201. | 0. | 0.06 | 0.29 | 5.65 | 5.65 | 1034. | 0. | 0.06 | 0.25 |
| 501 | 40 | 5.65 | 5.65 | 917. | 0. | 0.05 | 0.22 | 5.65 | 5.65 | 1306. | 0. | 0.07 | 0.32 |
| 502 | 40 | 5.65 | 5.65 | 642. | 0. | 0.03 | 0.16 | 5.65 | 5.65 | 1486. | 0. | 0.08 | 0.36 |
| 503 | 40 | 5.65 | 5.65 | 494. | 0. | 0.03 | 0.12 | 5.65 | 5.65 | 1485. | 0. | 0.08 | 0.36 |
| 504 | 40 | 5.65 | 5.65 | 591. | 0. | 0.03 | 0.14 | 5.65 | 5.65 | 789. | 0. | 0.04 | 0.19 |
| 505 | 40 | 5.65 | 5.65 | 508. | 0. | 0.03 | 0.12 | 5.65 | 5.65 | 473. | 0. | 0.03 | 0.11 |
| 506 | 40 | 5.65 | 5.65 | 572. | 0. | 0.03 | 0.14 | 5.65 | 5.65 | 318. | 0. | 0.02 | 0.08 |
| 507 | 40 | 5.65 | 5.65 | 420. | 0. | 0.02 | 0.10 | 5.65 | 5.65 | 332. | 0. | 0.02 | 0.08 |
| 508 | 40 | 5.65 | 5.65 | 280. | 0. | 0.02 | 0.07 | 5.65 | 5.65 | 405. | 0. | 0.02 | 0.10 |
| 509 | 40 | 5.65 | 5.65 | 1197. | 0. | 0.06 | 0.29 | 5.65 | 5.65 | 2227. | 0. | 0.12 | 0.54 |
| 510 | 40 | 5.65 | 5.65 | 1502. | 0. | 0.08 | 0.36 | 5.65 | 5.65 | 2547. | 0. | 0.14 | 0.62 |
| 511 | 40 | 5.65 | 5.65 | 1044. | 0. | 0.06 | 0.25 | 5.65 | 5.65 | 2787. | 0. | 0.15 | 0.68 |
| 512 | 40 | 5.65 | 5.65 | 1010. | 0. | 0.05 | 0.25 | 5.65 | 5.65 | 2891. | 0. | 0.15 | 0.70 |
| 513 | 40 | 5.65 | 5.65 | 449. | 0. | 0.02 | 0.11 | 5.65 | 5.65 | 2756. | 0. | 0.15 | 0.67 |
| 514 | 40 | 5.65 | 5.65 | 610. | 0. | 0.03 | 0.15 | 5.65 | 5.65 | 2913. | 0. | 0.16 | 0.71 |
| 515 | 40 | 5.65 | 5.65 | 216. | 0. | 0.01 | 0.05 | 5.65 | 5.65 | 2572. | 0. | 0.14 | 0.62 |
| 516 | 40 | 5.65 | 5.65 | 470. | 0. | 0.03 | 0.11 | 5.65 | 5.65 | 2623. | 0. | 0.14 | 0.64 |
| 517 | 40 | 5.65 | 5.65 | 250. | 0. | 0.01 | 0.06 | 5.65 | 5.65 | 2267. | 0. | 0.12 | 0.55 |
| 518 | 40 | 5.65 | 5.65 | 465. | 0. | 0.02 | 0.11 | 5.65 | 5.65 | 2392. | 0. | 0.13 | 0.58 |
| 519 | 40 | 5.65 | 5.65 | 531. | 0. | 0.03 | 0.13 | 5.65 | 5.65 | 2289. | 0. | 0.12 | 0.56 |
| 520 | 40 | 5.65 | 5.65 | 595. | 0. | 0.03 | 0.14 | 5.65 | 5.65 | 1800. | 0. | 0.10 | 0.44 |
| 521 | 40 | 5.65 | 5.65 | 873. | 0. | 0.05 | 0.21 | 5.65 | 5.65 | 1918. | 0. | 0.10 | 0.47 |
| 522 | 40 | 5.65 | 5.65 | 713. | 0. | 0.04 | 0.17 | 5.65 | 5.65 | 1539. | 0. | 0.08 | 0.37 |
| 523 | 40 | 5.65 | 5.65 | 706. | 0. | 0.04 | 0.17 | 5.65 | 5.65 | 719. | 0. | 0.04 | 0.17 |
| 524 | 40 | 5.65 | 5.65 | 1027. | 0. | 0.06 | 0.25 | 5.65 | 5.65 | 1127. | 0. | 0.06 | 0.27 |
| 525 | 40 | 5.65 | 5.65 | 972. | 0. | 0.05 | 0.24 | 5.65 | 5.65 | 808. | 0. | 0.04 | 0.20 |
| 526 | 40 | 5.65 | 5.65 | 1150. | 0. | 0.06 | 0.28 | 5.65 | 5.65 | 962. | 0. | 0.05 | 0.23 |
| 527 | 40 | 5.65 | 5.65 | 393. | 0. | 0.02 | 0.10 | 5.65 | 5.65 | 1151. | 0. | 0.06 | 0.28 |

| | | | | | | | | | | | | | |
|-----|----|------|------|-------|----|------|------|------|------|-------|----|------|------|
| 528 | 40 | 5.65 | 5.65 | 337. | 0. | 0.02 | 0.08 | 5.65 | 5.65 | 1060. | 0. | 0.06 | 0.26 |
| 529 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 1234. | 0. | 0.07 | 0.30 |
| 530 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 1083. | 0. | 0.06 | 0.26 |
| 531 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 1133. | 0. | 0.06 | 0.28 |
| 532 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 895. | 0. | 0.05 | 0.22 |
| 533 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 1180. | 0. | 0.06 | 0.29 |
| 534 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 910. | 0. | 0.05 | 0.22 |
| 535 | 40 | 5.65 | 5.65 | 348. | 0. | 0.02 | 0.08 | 5.65 | 5.65 | 1425. | 0. | 0.08 | 0.35 |
| 536 | 40 | 5.65 | 5.65 | 154. | 0. | 0.01 | 0.04 | 5.65 | 5.65 | 1251. | 0. | 0.07 | 0.30 |
| 537 | 40 | 5.65 | 5.65 | 680. | 0. | 0.04 | 0.17 | 5.65 | 5.65 | 1452. | 0. | 0.08 | 0.35 |
| 538 | 40 | 5.65 | 5.65 | 519. | 0. | 0.03 | 0.13 | 5.65 | 5.65 | 1377. | 0. | 0.07 | 0.33 |
| 539 | 40 | 5.65 | 5.65 | 1027. | 0. | 0.06 | 0.25 | 5.65 | 5.65 | 1289. | 0. | 0.07 | 0.31 |
| 540 | 40 | 5.65 | 5.65 | 1045. | 0. | 0.06 | 0.25 | 5.65 | 5.65 | 1283. | 0. | 0.07 | 0.31 |
| 541 | 40 | 5.65 | 5.65 | 1412. | 0. | 0.08 | 0.34 | 5.65 | 5.65 | 1050. | 0. | 0.06 | 0.25 |
| 542 | 40 | 5.65 | 5.65 | 1756. | 0. | 0.09 | 0.43 | 5.65 | 5.65 | 1069. | 0. | 0.06 | 0.26 |
| 543 | 40 | 5.65 | 5.65 | 2157. | 0. | 0.12 | 0.52 | 5.65 | 5.65 | 238. | 0. | 0.01 | 0.06 |
| 544 | 40 | 5.65 | 5.65 | 1450. | 0. | 0.08 | 0.35 | 5.65 | 5.65 | 284. | 0. | 0.02 | 0.07 |
| 545 | 40 | 5.65 | 5.65 | 2243. | 0. | 0.12 | 0.54 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 546 | 40 | 5.65 | 5.65 | 1537. | 0. | 0.08 | 0.37 | 5.65 | 5.65 | 40. | 0. | 0.00 | 0.01 |
| 547 | 40 | 5.65 | 5.65 | 2301. | 0. | 0.12 | 0.56 | 5.65 | 5.65 | 22. | 0. | 0.00 | 0.01 |
| 548 | 40 | 5.65 | 5.65 | 1678. | 0. | 0.09 | 0.41 | 5.65 | 5.65 | 145. | 0. | 0.01 | 0.04 |
| 549 | 40 | 5.65 | 5.65 | 1224. | 0. | 0.07 | 0.30 | 5.65 | 5.65 | 923. | 0. | 0.05 | 0.22 |
| 550 | 40 | 5.65 | 5.65 | 1575. | 0. | 0.08 | 0.38 | 5.65 | 5.65 | 1380. | 0. | 0.07 | 0.33 |
| 551 | 40 | 5.65 | 5.65 | 2070. | 0. | 0.11 | 0.50 | 5.65 | 5.65 | 526. | 0. | 0.03 | 0.13 |
| 552 | 40 | 5.65 | 5.65 | 1594. | 0. | 0.09 | 0.39 | 5.65 | 5.65 | 417. | 0. | 0.02 | 0.10 |
| 553 | 40 | 5.65 | 5.65 | 1652. | 0. | 0.09 | 0.40 | 5.65 | 5.65 | 2321. | 0. | 0.12 | 0.56 |
| 554 | 40 | 5.65 | 5.65 | 1866. | 0. | 0.10 | 0.45 | 5.65 | 5.65 | 2585. | 0. | 0.14 | 0.63 |
| 555 | 40 | 5.65 | 5.65 | 1898. | 0. | 0.10 | 0.46 | 5.65 | 5.65 | 1306. | 0. | 0.07 | 0.32 |
| 556 | 40 | 5.65 | 5.65 | 2074. | 0. | 0.11 | 0.50 | 5.65 | 5.65 | 1181. | 0. | 0.06 | 0.29 |
| 557 | 40 | 5.65 | 5.65 | 1824. | 0. | 0.10 | 0.44 | 5.65 | 5.65 | 537. | 0. | 0.03 | 0.13 |
| 558 | 40 | 5.65 | 5.65 | 1925. | 0. | 0.10 | 0.47 | 5.65 | 5.65 | 292. | 0. | 0.02 | 0.07 |
| 559 | 40 | 5.65 | 5.65 | 1529. | 0. | 0.08 | 0.37 | 5.65 | 5.65 | 165. | 0. | 0.01 | 0.04 |
| 560 | 40 | 5.65 | 5.65 | 1531. | 0. | 0.08 | 0.37 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 561 | 40 | 5.65 | 5.65 | 1231. | 0. | 0.07 | 0.30 | 5.65 | 5.65 | 819. | 0. | 0.04 | 0.20 |
| 562 | 40 | 5.65 | 5.65 | 1362. | 0. | 0.07 | 0.33 | 5.65 | 5.65 | 943. | 0. | 0.05 | 0.23 |
| 563 | 40 | 5.65 | 5.65 | 1404. | 0. | 0.08 | 0.34 | 5.65 | 5.65 | 378. | 0. | 0.02 | 0.09 |
| 564 | 40 | 5.65 | 5.65 | 1535. | 0. | 0.08 | 0.37 | 5.65 | 5.65 | 263. | 0. | 0.01 | 0.06 |
| 746 | 40 | 5.65 | 5.65 | 709. | 0. | 0.04 | 0.17 | 5.65 | 5.65 | 2174. | 0. | 0.12 | 0.53 |
| 747 | 40 | 5.65 | 5.65 | 756. | 0. | 0.04 | 0.18 | 5.65 | 5.65 | 1905. | 0. | 0.10 | 0.46 |
| 748 | 40 | 5.65 | 5.65 | 969. | 0. | 0.05 | 0.24 | 5.65 | 5.65 | 1338. | 0. | 0.07 | 0.32 |
| 749 | 40 | 5.65 | 5.65 | 1046. | 0. | 0.06 | 0.25 | 5.65 | 5.65 | 1035. | 0. | 0.06 | 0.25 |
| 750 | 40 | 5.65 | 5.65 | 1198. | 0. | 0.06 | 0.29 | 5.65 | 5.65 | 1459. | 0. | 0.08 | 0.35 |
| 751 | 40 | 5.65 | 5.65 | 360. | 0. | 0.02 | 0.09 | 5.65 | 5.65 | 1267. | 0. | 0.07 | 0.31 |
| 752 | 40 | 5.65 | 5.65 | 310. | 0. | 0.02 | 0.08 | 5.65 | 5.65 | 1217. | 0. | 0.07 | 0.30 |
| 753 | 40 | 5.65 | 5.65 | 259. | 0. | 0.01 | 0.06 | 5.65 | 5.65 | 1236. | 0. | 0.07 | 0.30 |
| 754 | 40 | 5.65 | 5.65 | 91. | 0. | 0.00 | 0.02 | 5.65 | 5.65 | 143. | 0. | 0.01 | 0.03 |
| 755 | 40 | 5.65 | 5.65 | 522. | 0. | 0.03 | 0.13 | 5.65 | 5.65 | 221. | 0. | 0.01 | 0.05 |
| 756 | 40 | 5.65 | 5.65 | 889. | 0. | 0.05 | 0.22 | 5.65 | 5.65 | 328. | 0. | 0.02 | 0.08 |
| 757 | 40 | 5.65 | 5.65 | 794. | 0. | 0.04 | 0.19 | 5.65 | 5.65 | 524. | 0. | 0.03 | 0.13 |
| 758 | 40 | 5.65 | 5.65 | 603. | 0. | 0.03 | 0.15 | 5.65 | 5.65 | 826. | 0. | 0.04 | 0.20 |
| 759 | 40 | 5.65 | 5.65 | 429. | 0. | 0.02 | 0.10 | 5.65 | 5.65 | 1148. | 0. | 0.06 | 0.28 |
| 760 | 40 | 5.65 | 5.65 | 1109. | 0. | 0.06 | 0.27 | 5.65 | 5.65 | 1342. | 0. | 0.07 | 0.33 |
| 761 | 40 | 5.65 | 5.65 | 1122. | 0. | 0.06 | 0.27 | 5.65 | 5.65 | 1323. | 0. | 0.07 | 0.32 |
| 762 | 40 | 5.65 | 5.65 | 1044. | 0. | 0.06 | 0.25 | 5.65 | 5.65 | 478. | 0. | 0.03 | 0.12 |
| 763 | 40 | 5.65 | 5.65 | 866. | 0. | 0.05 | 0.21 | 5.65 | 5.65 | 261. | 0. | 0.01 | 0.06 |
| 764 | 40 | 5.65 | 5.65 | 729. | 0. | 0.04 | 0.18 | 5.65 | 5.65 | 228. | 0. | 0.01 | 0.06 |
| 765 | 40 | 5.65 | 5.65 | 671. | 0. | 0.04 | 0.16 | 5.65 | 5.65 | 155. | 0. | 0.01 | 0.04 |
| 766 | 40 | 5.65 | 5.65 | 662. | 0. | 0.04 | 0.16 | 5.65 | 5.65 | 122. | 0. | 0.01 | 0.03 |
| 767 | 40 | 5.65 | 5.65 | 704. | 0. | 0.04 | 0.17 | 5.65 | 5.65 | 114. | 0. | 0.01 | 0.03 |
| 768 | 40 | 5.65 | 5.65 | 743. | 0. | 0.04 | 0.18 | 5.65 | 5.65 | 271. | 0. | 0.01 | 0.07 |
| 769 | 40 | 5.65 | 5.65 | 967. | 0. | 0.05 | 0.23 | 5.65 | 5.65 | 781. | 0. | 0.04 | 0.19 |
| 770 | 40 | 5.65 | 5.65 | 1194. | 0. | 0.06 | 0.29 | 5.65 | 5.65 | 781. | 0. | 0.04 | 0.19 |
| 771 | 40 | 5.65 | 5.65 | 713. | 0. | 0.04 | 0.17 | 5.65 | 5.65 | 561. | 0. | 0.03 | 0.14 |
| 772 | 40 | 5.65 | 5.65 | 360. | 0. | 0.02 | 0.09 | 5.65 | 5.65 | 435. | 0. | 0.02 | 0.11 |
| 773 | 40 | 5.65 | 5.65 | 288. | 0. | 0.02 | 0.07 | 5.65 | 5.65 | 573. | 0. | 0.03 | 0.14 |
| 774 | 40 | 5.65 | 5.65 | 475. | 0. | 0.03 | 0.12 | 5.65 | 5.65 | 1184. | 0. | 0.06 | 0.29 |
| 775 | 40 | 5.65 | 5.65 | 451. | 0. | 0.02 | 0.11 | 5.65 | 5.65 | 1378. | 0. | 0.07 | 0.33 |
| 852 | 40 | 5.65 | 5.65 | 1278. | 0. | 0.07 | 0.31 | 5.65 | 5.65 | 297. | 0. | 0.02 | 0.07 |
| 853 | 40 | 5.65 | 5.65 | 678. | 0. | 0.04 | 0.16 | 5.65 | 5.65 | 359. | 0. | 0.02 | 0.09 |
| 854 | 40 | 5.65 | 5.65 | 321. | 0. | 0.02 | 0.08 | 5.65 | 5.65 | 359. | 0. | 0.02 | 0.09 |
| 855 | 40 | 5.65 | 5.65 | 270. | 0. | 0.01 | 0.07 | 5.65 | 5.65 | 293. | 0. | 0.02 | 0.07 |
| 856 | 40 | 5.65 | 5.65 | 558. | 0. | 0.03 | 0.14 | 5.65 | 5.65 | 238. | 0. | 0.01 | 0.06 |
| 857 | 40 | 5.65 | 5.65 | 1096. | 0. | 0.06 | 0.27 | 5.65 | 5.65 | 225. | 0. | 0.01 | 0.05 |
| 858 | 40 | 5.65 | 5.65 | 1044. | 0. | 0.06 | 0.25 | 5.65 | 5.65 | 227. | 0. | 0.01 | 0.06 |
| 859 | 40 | 5.65 | 5.65 | 208. | 0. | 0.01 | 0.05 | 5.65 | 5.65 | 253. | 0. | 0.01 | 0.06 |
| 860 | 40 | 5.65 | 5.65 | 1280. | 0. | 0.07 | 0.31 | 5.65 | 5.65 | 1403. | 0. | 0.08 | 0.34 |
| 861 | 40 | 5.65 | 5.65 | 589. | 0. | 0.03 | 0.14 | 5.65 | 5.65 | 1451. | 0. | 0.08 | 0.35 |
| 862 | 40 | 5.65 | 5.65 | 281. | 0. | 0.02 | 0.07 | 5.65 | 5.65 | 1347. | 0. | 0.07 | 0.33 |
| 863 | 40 | 5.65 | 5.65 | 259. | 0. | 0.01 | 0.06 | 5.65 | 5.65 | 1246. | 0. | 0.07 | 0.30 |
| 864 | 40 | 5.65 | 5.65 | 442. | 0. | 0.02 | 0.11 | 5.65 | 5.65 | 1290. | 0. | 0.07 | 0.31 |
| 865 | 40 | 5.65 | 5.65 | 1134. | 0. | 0.06 | 0.28 | 5.65 | 5.65 | 1250. | 0. | 0.07 | 0.30 |
| 866 | 40 | 5.65 | 5.65 | 769. | 0. | 0.04 | 0.19 | 5.65 | 5.65 | 528. | 0. | 0.03 | 0.13 |
| 867 | 40 | 5.65 | 5.65 | 119. | 0. | 0.01 | 0.03 | 5.65 | 5.65 | 538. | 0. | 0.03 | 0.13 |
| 868 | 40 | 5.65 | 5.65 | 853. | 0. | 0.05 | 0.21 | 5.65 | 5.65 | 309. | 0. | 0.02 | 0.08 |
| 869 | 40 | 5.65 | 5.65 | 149. | 0. | 0.01 | 0.04 | 5.65 | 5.65 | 348. | 0. | 0.02 | 0.08 |
| 870 | 40 | 5.65 | 5.65 | 851. | 0. | 0.05 | 0.21 | 5.65 | 5.65 | 147. | 0. | 0.01 | 0.04 |
| 871 | 40 | 5.65 | 5.65 | 150. | 0. | 0.01 | 0.04 | 5.65 | 5.65 | 177. | 0. | 0.01 | 0.04 |
| 872 | 40 | 5.65 | 5.65 | 816. | 0. | 0.04 | 0.20 | 5.65 | 5.65 | 96. | 0. | 0.01 | 0.02 |
| 873 | 40 | 5.65 | 5.65 | 139. | 0. | 0.01 | 0.03 | 5.65 | 5.65 | 110. | 0. | 0.01 | 0.03 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|----|------|------|-------|----|------|------|------|------|-------|----|------|------|
| 874 | 40 | 5.65 | 5.65 | 838. | 0. | 0.04 | 0.20 | 5.65 | 5.65 | 89. | 0. | 0.00 | 0.02 |
| 875 | 40 | 5.65 | 5.65 | 175. | 0. | 0.01 | 0.04 | 5.65 | 5.65 | 95. | 0. | 0.01 | 0.02 |
| 876 | 40 | 5.65 | 5.65 | 898. | 0. | 0.05 | 0.22 | 5.65 | 5.65 | 120. | 0. | 0.01 | 0.03 |
| 877 | 40 | 5.65 | 5.65 | 220. | 0. | 0.01 | 0.05 | 5.65 | 5.65 | 145. | 0. | 0.01 | 0.04 |
| 878 | 40 | 5.65 | 5.65 | 1029. | 0. | 0.06 | 0.25 | 5.65 | 5.65 | 198. | 0. | 0.01 | 0.05 |
| 879 | 40 | 5.65 | 5.65 | 257. | 0. | 0.01 | 0.06 | 5.65 | 5.65 | 294. | 0. | 0.02 | 0.07 |
| 880 | 40 | 5.65 | 5.65 | 1143. | 0. | 0.06 | 0.28 | 5.65 | 5.65 | 601. | 0. | 0.03 | 0.15 |
| 881 | 40 | 5.65 | 5.65 | 250. | 0. | 0.01 | 0.06 | 5.65 | 5.65 | 717. | 0. | 0.04 | 0.17 |
| 882 | 40 | 5.65 | 5.65 | 1110. | 0. | 0.06 | 0.27 | 5.65 | 5.65 | 1317. | 0. | 0.07 | 0.32 |
| 883 | 40 | 5.65 | 5.65 | 202. | 0. | 0.01 | 0.05 | 5.65 | 5.65 | 1253. | 0. | 0.07 | 0.30 |
| 884 | 40 | 5.65 | 5.65 | 571. | 0. | 0.03 | 0.14 | 5.65 | 5.65 | 82. | 0. | 0.00 | 0.02 |
| 885 | 40 | 5.65 | 5.65 | 76. | 0. | 0.00 | 0.02 | 5.65 | 5.65 | 47. | 0. | 0.00 | 0.01 |
| 886 | 40 | 5.65 | 5.65 | 681. | 0. | 0.04 | 0.17 | 5.65 | 5.65 | 455. | 0. | 0.02 | 0.11 |
| 887 | 40 | 5.65 | 5.65 | 88. | 0. | 0.00 | 0.02 | 5.65 | 5.65 | 400. | 0. | 0.02 | 0.10 |
| 888 | 40 | 5.65 | 5.65 | 641. | 0. | 0.03 | 0.16 | 5.65 | 5.65 | 117. | 0. | 0.01 | 0.03 |
| 889 | 40 | 5.65 | 5.65 | 682. | 0. | 0.04 | 0.17 | 5.65 | 5.65 | 527. | 0. | 0.03 | 0.13 |
| 890 | 40 | 5.65 | 5.65 | 159. | 0. | 0.01 | 0.04 | 5.65 | 5.65 | 1087. | 0. | 0.06 | 0.26 |
| 891 | 40 | 5.65 | 5.65 | 1069. | 0. | 0.06 | 0.26 | 5.65 | 5.65 | 1173. | 0. | 0.06 | 0.28 |
| 974 | 40 | 5.65 | 5.65 | 1156. | 0. | 0.06 | 0.28 | 5.65 | 5.65 | 1265. | 0. | 0.07 | 0.31 |
| 975 | 40 | 5.65 | 5.65 | 325. | 0. | 0.02 | 0.08 | 5.65 | 5.65 | 1042. | 0. | 0.06 | 0.25 |
| 976 | 40 | 5.65 | 5.65 | 1042. | 0. | 0.06 | 0.25 | 5.65 | 5.65 | 219. | 0. | 0.01 | 0.05 |
| 977 | 40 | 5.65 | 5.65 | 170. | 0. | 0.01 | 0.04 | 5.65 | 5.65 | 131. | 0. | 0.01 | 0.03 |

| | | SUPERIORE ORIZZONTALE | | | | | | SUPERIORE VERTICALE | | | | | |
|-------|-------|-----------------------|------|-------|-----|------|------|---------------------|------|-------|-----|------|------|
| GUSCI | spess | Af | Afc | Mom | Nor | epsC | epsF | Af | Afc | Mom | Nor | epsC | epsF |
| 443 | 40 | 5.65 | 5.65 | 80. | 0. | 0.00 | 0.02 | 5.65 | 5.65 | 247. | 0. | 0.01 | 0.06 |
| 444 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 275. | 0. | 0.01 | 0.07 |
| 445 | 40 | 5.65 | 5.65 | 337. | 0. | 0.02 | 0.08 | 5.65 | 5.65 | 289. | 0. | 0.02 | 0.07 |
| 446 | 40 | 5.65 | 5.65 | 910. | 0. | 0.05 | 0.22 | 5.65 | 5.65 | 281. | 0. | 0.02 | 0.07 |
| 447 | 40 | 5.65 | 5.65 | 1124. | 0. | 0.06 | 0.27 | 5.65 | 5.65 | 197. | 0. | 0.01 | 0.05 |
| 448 | 40 | 5.65 | 5.65 | 822. | 0. | 0.04 | 0.20 | 5.65 | 5.65 | 70. | 0. | 0.00 | 0.02 |
| 449 | 40 | 5.65 | 5.65 | 421. | 0. | 0.02 | 0.10 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 450 | 40 | 5.65 | 5.65 | 179. | 0. | 0.01 | 0.04 | 5.65 | 5.65 | 82. | 0. | 0.00 | 0.02 |
| 451 | 40 | 5.65 | 5.65 | 71. | 0. | 0.00 | 0.02 | 5.65 | 5.65 | 173. | 0. | 0.01 | 0.04 |
| 452 | 40 | 5.65 | 5.65 | 80. | 0. | 0.00 | 0.02 | 5.65 | 5.65 | 187. | 0. | 0.01 | 0.05 |
| 453 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 194. | 0. | 0.01 | 0.05 |
| 454 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 194. | 0. | 0.01 | 0.05 |
| 455 | 40 | 5.65 | 5.65 | 77. | 0. | 0.00 | 0.02 | 5.65 | 5.65 | 167. | 0. | 0.01 | 0.04 |
| 456 | 40 | 5.65 | 5.65 | 63. | 0. | 0.00 | 0.02 | 5.65 | 5.65 | 219. | 0. | 0.01 | 0.05 |
| 457 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 90. | 0. | 0.00 | 0.02 |
| 458 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 459 | 40 | 5.65 | 5.65 | 1018. | 0. | 0.05 | 0.25 | 5.65 | 5.65 | 1125. | 0. | 0.06 | 0.27 |
| 460 | 40 | 5.65 | 5.65 | 1507. | 0. | 0.08 | 0.37 | 5.65 | 5.65 | 1456. | 0. | 0.08 | 0.35 |
| 461 | 40 | 5.65 | 5.65 | 1606. | 0. | 0.09 | 0.39 | 5.65 | 5.65 | 1590. | 0. | 0.09 | 0.39 |
| 462 | 40 | 5.65 | 5.65 | 1319. | 0. | 0.07 | 0.32 | 5.65 | 5.65 | 1529. | 0. | 0.08 | 0.37 |
| 463 | 40 | 5.65 | 5.65 | 1007. | 0. | 0.05 | 0.24 | 5.65 | 5.65 | 1519. | 0. | 0.08 | 0.37 |
| 464 | 40 | 5.65 | 5.65 | 776. | 0. | 0.04 | 0.19 | 5.65 | 5.65 | 1376. | 0. | 0.07 | 0.33 |
| 465 | 40 | 5.65 | 5.65 | 398. | 0. | 0.02 | 0.10 | 5.65 | 5.65 | 1109. | 0. | 0.06 | 0.27 |
| 466 | 40 | 5.65 | 5.65 | 66. | 0. | 0.00 | 0.02 | 5.65 | 5.65 | 5. | 0. | 0.00 | 0.00 |
| 467 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 468 | 40 | 5.65 | 5.65 | 701. | 0. | 0.04 | 0.17 | 5.65 | 5.65 | 1126. | 0. | 0.06 | 0.27 |
| 469 | 40 | 5.65 | 5.65 | 1412. | 0. | 0.08 | 0.34 | 5.65 | 5.65 | 1645. | 0. | 0.09 | 0.40 |
| 470 | 40 | 5.65 | 5.65 | 1618. | 0. | 0.09 | 0.39 | 5.65 | 5.65 | 1938. | 0. | 0.10 | 0.47 |
| 471 | 40 | 5.65 | 5.65 | 1427. | 0. | 0.08 | 0.35 | 5.65 | 5.65 | 1973. | 0. | 0.11 | 0.48 |
| 472 | 40 | 5.65 | 5.65 | 1180. | 0. | 0.06 | 0.29 | 5.65 | 5.65 | 1878. | 0. | 0.10 | 0.46 |
| 473 | 40 | 5.65 | 5.65 | 776. | 0. | 0.04 | 0.19 | 5.65 | 5.65 | 1594. | 0. | 0.09 | 0.39 |
| 474 | 40 | 5.65 | 5.65 | 209. | 0. | 0.01 | 0.05 | 5.65 | 5.65 | 1120. | 0. | 0.06 | 0.27 |
| 475 | 40 | 5.65 | 5.65 | 101. | 0. | 0.01 | 0.02 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 476 | 40 | 5.65 | 5.65 | 116. | 0. | 0.01 | 0.03 | 5.65 | 5.65 | 102. | 0. | 0.01 | 0.02 |
| 477 | 40 | 5.65 | 5.65 | 947. | 0. | 0.05 | 0.23 | 5.65 | 5.65 | 1334. | 0. | 0.07 | 0.32 |
| 478 | 40 | 5.65 | 5.65 | 1369. | 0. | 0.07 | 0.33 | 5.65 | 5.65 | 1694. | 0. | 0.09 | 0.41 |
| 479 | 40 | 5.65 | 5.65 | 1495. | 0. | 0.08 | 0.36 | 5.65 | 5.65 | 1809. | 0. | 0.10 | 0.44 |
| 480 | 40 | 5.65 | 5.65 | 1374. | 0. | 0.07 | 0.33 | 5.65 | 5.65 | 1846. | 0. | 0.10 | 0.45 |
| 481 | 40 | 5.65 | 5.65 | 1202. | 0. | 0.06 | 0.29 | 5.65 | 5.65 | 1860. | 0. | 0.10 | 0.45 |
| 482 | 40 | 5.65 | 5.65 | 942. | 0. | 0.05 | 0.23 | 5.65 | 5.65 | 1695. | 0. | 0.09 | 0.41 |
| 483 | 40 | 5.65 | 5.65 | 440. | 0. | 0.02 | 0.11 | 5.65 | 5.65 | 1256. | 0. | 0.07 | 0.30 |
| 484 | 40 | 5.65 | 5.65 | 142. | 0. | 0.01 | 0.03 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 485 | 40 | 5.65 | 5.65 | 209. | 0. | 0.01 | 0.05 | 5.65 | 5.65 | 230. | 0. | 0.01 | 0.06 |
| 486 | 40 | 5.65 | 5.65 | 968. | 0. | 0.05 | 0.24 | 5.65 | 5.65 | 970. | 0. | 0.05 | 0.24 |
| 487 | 40 | 5.65 | 5.65 | 1302. | 0. | 0.07 | 0.32 | 5.65 | 5.65 | 1218. | 0. | 0.07 | 0.30 |
| 488 | 40 | 5.65 | 5.65 | 1308. | 0. | 0.07 | 0.32 | 5.65 | 5.65 | 1262. | 0. | 0.07 | 0.31 |
| 489 | 40 | 5.65 | 5.65 | 1009. | 0. | 0.05 | 0.24 | 5.65 | 5.65 | 1089. | 0. | 0.06 | 0.26 |
| 490 | 40 | 5.65 | 5.65 | 976. | 0. | 0.05 | 0.24 | 5.65 | 5.65 | 1315. | 0. | 0.07 | 0.32 |
| 491 | 40 | 5.65 | 5.65 | 906. | 0. | 0.05 | 0.22 | 5.65 | 5.65 | 1285. | 0. | 0.07 | 0.31 |
| 492 | 40 | 5.65 | 5.65 | 571. | 0. | 0.03 | 0.14 | 5.65 | 5.65 | 997. | 0. | 0.05 | 0.24 |
| 493 | 40 | 5.65 | 5.65 | 175. | 0. | 0.01 | 0.04 | 5.65 | 5.65 | 3. | 0. | 0.00 | 0.00 |
| 494 | 40 | 5.65 | 5.65 | 237. | 0. | 0.01 | 0.06 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 495 | 40 | 5.65 | 5.65 | 209. | 0. | 0.01 | 0.05 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 496 | 40 | 5.65 | 5.65 | 222. | 0. | 0.01 | 0.05 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 497 | 40 | 5.65 | 5.65 | 198. | 0. | 0.01 | 0.05 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 498 | 40 | 5.65 | 5.65 | 192. | 0. | 0.01 | 0.05 | 5.65 | 5.65 | 98. | 0. | 0.01 | 0.02 |
| 499 | 40 | 5.65 | 5.65 | 81. | 0. | 0.00 | 0.02 | 5.65 | 5.65 | 110. | 0. | 0.01 | 0.03 |
| 500 | 40 | 5.65 | 5.65 | 3. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 90. | 0. | 0.00 | 0.02 |
| 501 | 40 | 5.65 | 5.65 | 233. | 0. | 0.01 | 0.06 | 5.65 | 5.65 | 44. | 0. | 0.00 | 0.01 |
| 502 | 40 | 5.65 | 5.65 | 252. | 0. | 0.01 | 0.06 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 503 | 40 | 5.65 | 5.65 | 191. | 0. | 0.01 | 0.05 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 504 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 505 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 506 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 29. | 0. | 0.00 | 0.01 |

Relazione tecnica strutturale microcentrale elettrica

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|-----|----|------|------|-------|----|------|------|------|------|------|----|------|------|
| 507 | 40 | 5.65 | 5.65 | 38. | 0. | 0.00 | 0.01 | 5.65 | 5.65 | 66. | 0. | 0.00 | 0.02 |
| 508 | 40 | 5.65 | 5.65 | 65. | 0. | 0.00 | 0.02 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 509 | 40 | 5.65 | 5.65 | 59. | 0. | 0.00 | 0.01 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 510 | 40 | 5.65 | 5.65 | 127. | 0. | 0.01 | 0.03 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 511 | 40 | 5.65 | 5.65 | 855. | 0. | 0.05 | 0.21 | 5.65 | 5.65 | 71. | 0. | 0.00 | 0.02 |
| 512 | 40 | 5.65 | 5.65 | 517. | 0. | 0.03 | 0.13 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 513 | 40 | 5.65 | 5.65 | 1014. | 0. | 0.05 | 0.25 | 5.65 | 5.65 | 17. | 0. | 0.00 | 0.00 |
| 514 | 40 | 5.65 | 5.65 | 547. | 0. | 0.03 | 0.13 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 515 | 40 | 5.65 | 5.65 | 928. | 0. | 0.05 | 0.23 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 516 | 40 | 5.65 | 5.65 | 375. | 0. | 0.02 | 0.09 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 517 | 40 | 5.65 | 5.65 | 496. | 0. | 0.03 | 0.12 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 518 | 40 | 5.65 | 5.65 | 497. | 0. | 0.03 | 0.12 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 519 | 40 | 5.65 | 5.65 | 645. | 0. | 0.03 | 0.16 | 5.65 | 5.65 | 72. | 0. | 0.00 | 0.02 |
| 520 | 40 | 5.65 | 5.65 | 216. | 0. | 0.01 | 0.05 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 521 | 40 | 5.65 | 5.65 | 448. | 0. | 0.02 | 0.11 | 5.65 | 5.65 | 154. | 0. | 0.01 | 0.04 |
| 522 | 40 | 5.65 | 5.65 | 248. | 0. | 0.01 | 0.06 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 523 | 40 | 5.65 | 5.65 | 14. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 524 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 525 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 241. | 0. | 0.01 | 0.06 |
| 526 | 40 | 5.65 | 5.65 | 325. | 0. | 0.02 | 0.08 | 5.65 | 5.65 | 203. | 0. | 0.01 | 0.05 |
| 527 | 40 | 5.65 | 5.65 | 1050. | 0. | 0.06 | 0.25 | 5.65 | 5.65 | 102. | 0. | 0.01 | 0.02 |
| 528 | 40 | 5.65 | 5.65 | 1127. | 0. | 0.06 | 0.27 | 5.65 | 5.65 | 573. | 0. | 0.03 | 0.14 |
| 529 | 40 | 5.65 | 5.65 | 1283. | 0. | 0.07 | 0.31 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 530 | 40 | 5.65 | 5.65 | 1475. | 0. | 0.08 | 0.36 | 5.65 | 5.65 | 700. | 0. | 0.04 | 0.17 |
| 531 | 40 | 5.65 | 5.65 | 1062. | 0. | 0.06 | 0.26 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 532 | 40 | 5.65 | 5.65 | 1390. | 0. | 0.07 | 0.34 | 5.65 | 5.65 | 605. | 0. | 0.03 | 0.15 |
| 533 | 40 | 5.65 | 5.65 | 524. | 0. | 0.03 | 0.13 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 534 | 40 | 5.65 | 5.65 | 930. | 0. | 0.05 | 0.23 | 5.65 | 5.65 | 367. | 0. | 0.02 | 0.09 |
| 535 | 40 | 5.65 | 5.65 | 393. | 0. | 0.02 | 0.10 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 536 | 40 | 5.65 | 5.65 | 721. | 0. | 0.04 | 0.17 | 5.65 | 5.65 | 498. | 0. | 0.03 | 0.12 |
| 537 | 40 | 5.65 | 5.65 | 322. | 0. | 0.02 | 0.08 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 538 | 40 | 5.65 | 5.65 | 598. | 0. | 0.03 | 0.15 | 5.65 | 5.65 | 603. | 0. | 0.03 | 0.15 |
| 539 | 40 | 5.65 | 5.65 | 199. | 0. | 0.01 | 0.05 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 540 | 40 | 5.65 | 5.65 | 330. | 0. | 0.02 | 0.08 | 5.65 | 5.65 | 548. | 0. | 0.03 | 0.13 |
| 541 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 65. | 0. | 0.00 | 0.02 |
| 542 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 411. | 0. | 0.02 | 0.10 |
| 543 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 754. | 0. | 0.04 | 0.18 |
| 544 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 332. | 0. | 0.02 | 0.08 |
| 545 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 590. | 0. | 0.03 | 0.14 |
| 546 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 242. | 0. | 0.01 | 0.06 |
| 547 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 712. | 0. | 0.04 | 0.17 |
| 548 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 279. | 0. | 0.01 | 0.07 |
| 549 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 49. | 0. | 0.00 | 0.01 |
| 550 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 140. | 0. | 0.01 | 0.03 |
| 551 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 707. | 0. | 0.04 | 0.17 |
| 552 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 417. | 0. | 0.02 | 0.10 |
| 553 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 1. | 0. | 0.00 | 0.00 |
| 554 | 40 | 5.65 | 5.65 | 241. | 0. | 0.01 | 0.06 | 5.65 | 5.65 | 42. | 0. | 0.00 | 0.01 |
| 555 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 436. | 0. | 0.02 | 0.11 |
| 556 | 40 | 5.65 | 5.65 | 136. | 0. | 0.01 | 0.03 | 5.65 | 5.65 | 682. | 0. | 0.04 | 0.17 |
| 557 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 524. | 0. | 0.03 | 0.13 |
| 558 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 894. | 0. | 0.05 | 0.22 |
| 559 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 214. | 0. | 0.01 | 0.05 |
| 560 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 592. | 0. | 0.03 | 0.14 |
| 561 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 198. | 0. | 0.01 | 0.05 |
| 562 | 40 | 5.65 | 5.65 | 230. | 0. | 0.01 | 0.06 | 5.65 | 5.65 | 356. | 0. | 0.02 | 0.09 |
| 563 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 318. | 0. | 0.02 | 0.08 |
| 564 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 687. | 0. | 0.04 | 0.17 |
| 746 | 40 | 5.65 | 5.65 | 8. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 747 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 748 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 749 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 750 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 751 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 752 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 753 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 754 | 40 | 5.65 | 5.65 | 182. | 0. | 0.01 | 0.04 | 5.65 | 5.65 | 208. | 0. | 0.01 | 0.05 |
| 755 | 40 | 5.65 | 5.65 | 117. | 0. | 0.01 | 0.03 | 5.65 | 5.65 | 231. | 0. | 0.01 | 0.06 |
| 756 | 40 | 5.65 | 5.65 | 103. | 0. | 0.01 | 0.03 | 5.65 | 5.65 | 240. | 0. | 0.01 | 0.06 |
| 757 | 40 | 5.65 | 5.65 | 260. | 0. | 0.01 | 0.06 | 5.65 | 5.65 | 210. | 0. | 0.01 | 0.05 |
| 758 | 40 | 5.65 | 5.65 | 244. | 0. | 0.01 | 0.06 | 5.65 | 5.65 | 112. | 0. | 0.01 | 0.03 |
| 759 | 40 | 5.65 | 5.65 | 122. | 0. | 0.01 | 0.03 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 760 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 761 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 762 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 763 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 764 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 765 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 766 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 767 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 768 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 769 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 145. | 0. | 0.01 | 0.04 |
| 770 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 243. | 0. | 0.01 | 0.06 |
| 771 | 40 | 5.65 | 5.65 | 59. | 0. | 0.00 | 0.01 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 772 | 40 | 5.65 | 5.65 | 76. | 0. | 0.00 | 0.02 | 5.65 | 5.65 | 23. | 0. | 0.00 | 0.01 |
| 773 | 40 | 5.65 | 5.65 | 66. | 0. | 0.00 | 0.02 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 774 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 775 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 852 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 36. | 0. | 0.00 | 0.01 |

| | | | | | | | | | | | | | |
|-----|----|------|------|------|----|------|------|------|------|------|----|------|------|
| 853 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 34. | 0. | 0.00 | 0.01 |
| 854 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 13. | 0. | 0.00 | 0.00 |
| 855 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 856 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 857 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 4. | 0. | 0.00 | 0.00 |
| 858 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 10. | 0. | 0.00 | 0.00 |
| 859 | 40 | 5.65 | 5.65 | 26. | 0. | 0.00 | 0.01 | 5.65 | 5.65 | 15. | 0. | 0.00 | 0.00 |
| 860 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 861 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 862 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 863 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 864 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 865 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 866 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 867 | 40 | 5.65 | 5.65 | 18. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 868 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 869 | 40 | 5.65 | 5.65 | 13. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 870 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 871 | 40 | 5.65 | 5.65 | 16. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 872 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 873 | 40 | 5.65 | 5.65 | 55. | 0. | 0.00 | 0.01 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 874 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 875 | 40 | 5.65 | 5.65 | 75. | 0. | 0.00 | 0.02 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 876 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 877 | 40 | 5.65 | 5.65 | 82. | 0. | 0.00 | 0.02 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 878 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 879 | 40 | 5.65 | 5.65 | 45. | 0. | 0.00 | 0.01 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 880 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 881 | 40 | 5.65 | 5.65 | 33. | 0. | 0.00 | 0.01 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 882 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 883 | 40 | 5.65 | 5.65 | 26. | 0. | 0.00 | 0.01 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 884 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 102. | 0. | 0.01 | 0.02 |
| 885 | 40 | 5.65 | 5.65 | 28. | 0. | 0.00 | 0.01 | 5.65 | 5.65 | 71. | 0. | 0.00 | 0.02 |
| 886 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 887 | 40 | 5.65 | 5.65 | 24. | 0. | 0.00 | 0.01 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 888 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 137. | 0. | 0.01 | 0.03 |
| 889 | 40 | 5.65 | 5.65 | 54. | 0. | 0.00 | 0.01 | 5.65 | 5.65 | 1. | 0. | 0.00 | 0.00 |
| 890 | 40 | 5.65 | 5.65 | 25. | 0. | 0.00 | 0.01 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 891 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 974 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 975 | 40 | 5.65 | 5.65 | 147. | 0. | 0.01 | 0.04 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 |
| 976 | 40 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0.00 | 5.65 | 5.65 | 32. | 0. | 0.00 | 0.01 |
| 977 | 40 | 5.65 | 5.65 | 77. | 0. | 0.00 | 0.02 | 5.65 | 5.65 | 21. | 0. | 0.00 | 0.01 |

L'ARMATURA È OVUNQUE > DELLA QUANTITÀ RICHIESTA: IL PUNTO 2.3 DELLE NTC È VERIFICATO ($R_d > E_d$)

MACROGUSCIO FONDAZIONE

VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

| Nome | Descrizione |
|------|-------------------------------|
| 12 | Rara (RARA) |
| 13 | Rara VentoX (RARA) |
| 14 | Rara VentoY (RARA) |
| 15 | Frequente (FREQUENTE) |
| 16 | Frequente VentoX (FREQUENTE) |
| 17 | Frequente VentoY (FREQUENTE) |
| 18 | Quasi Perm (QUASI PERMANENTE) |

DATI:

copriferro inferiore (asse armatura): 3 cm
copriferro superiore (asse armatura): 3 cm

Af = area effettiva tesa (cm² al metro)

Afc = area effettiva compressa (cm² al metro)

Mom = momento flettente [daNcm/cm]

Nor = sforzo normale [daN]

σ_c = tensione calcestruzzo [daN/cm²]
valore max per combinazione rara = 149.4 daN/cm²
quasi permanente = 112 daN/cm²

σ_f = tensione acciaio [daN/cm²]
valore max per combinazione rara = 3600 daN/cm²

wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm

wkP = apertura caratteristica per combinazione quasi permanente (mm) - valore max = 0.3 mm

<-

ARMATURA INFERIORE ORIZZONTALE

| GUSCI | | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------------|------------|-----------------|-----|-------|--|------------------------|-----|------------|-------|
| | Af | Afc | Mom | Nor | σ_c | σ_f | Mom | Nor | wkF | | Mom | Nor | σ_c | wkP |
| 443 | 5.65 | 5.65 | 61 | 0. | 0.46 | 31. | 56 | 0. | 0.002 | | 30 | 0. | 0.23 | 0.001 |
| 444 | 5.65 | 5.65 | 529 | 0. | 3.99 | 270. | 490 | 0. | 0.020 | | 326 | 0. | 2.46 | 0.013 |
| 445 | 5.65 | 5.65 | 668 | 0. | 5.03 | 341. | 655 | 0. | 0.027 | | 516 | 0. | 3.89 | 0.021 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|------|------|------|----|------|------|-----|----|-------|-----|----|------|-------|
| 446 | 5.65 | 5.65 | 147 | 0. | 1.11 | 75. | 136 | 0. | 0.006 | 164 | 0. | 1.23 | 0.007 |
| 447 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 448 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 449 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 450 | 5.65 | 5.65 | 333 | 0. | 2.51 | 170. | 311 | 0. | 0.013 | 283 | 0. | 2.14 | 0.012 |
| 451 | 5.65 | 5.65 | 543 | 0. | 4.09 | 277. | 516 | 0. | 0.021 | 488 | 0. | 3.68 | 0.020 |
| 452 | 5.65 | 5.65 | 703 | 0. | 5.30 | 358. | 662 | 0. | 0.027 | 616 | 0. | 4.64 | 0.025 |
| 453 | 5.65 | 5.65 | 901 | 0. | 6.79 | 460. | 834 | 0. | 0.034 | 662 | 0. | 4.99 | 0.027 |
| 454 | 5.65 | 5.65 | 588 | 0. | 4.43 | 300. | 510 | 0. | 0.021 | 393 | 0. | 2.96 | 0.016 |
| 455 | 5.65 | 5.65 | 333 | 0. | 2.51 | 170. | 272 | 0. | 0.011 | 216 | 0. | 1.63 | 0.009 |
| 456 | 5.65 | 5.65 | 101 | 0. | 0.77 | 52. | 94 | 0. | 0.004 | 60 | 0. | 0.45 | 0.002 |
| 457 | 5.65 | 5.65 | 134 | 0. | 1.01 | 68. | 125 | 0. | 0.005 | 84 | 0. | 0.63 | 0.003 |
| 458 | 5.65 | 5.65 | 178 | 0. | 1.34 | 91. | 182 | 0. | 0.007 | 126 | 0. | 0.95 | 0.005 |
| 459 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 460 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 461 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 462 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 463 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 464 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 465 | 5.65 | 5.65 | 481 | 0. | 3.62 | 245. | 450 | 0. | 0.018 | 444 | 0. | 3.35 | 0.018 |
| 466 | 5.65 | 5.65 | 195 | 0. | 1.47 | 99. | 146 | 0. | 0.006 | 91 | 0. | 0.68 | 0.004 |
| 467 | 5.65 | 5.65 | 303 | 0. | 2.28 | 154. | 303 | 0. | 0.012 | 243 | 0. | 1.83 | 0.010 |
| 468 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 469 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 470 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 471 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 472 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 473 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 474 | 5.65 | 5.65 | 90 | 0. | 0.68 | 46. | 71 | 0. | 0.003 | 93 | 0. | 0.70 | 0.004 |
| 475 | 5.65 | 5.65 | 120 | 0. | 0.90 | 61. | 71 | 0. | 0.003 | 34 | 0. | 0.26 | 0.001 |
| 476 | 5.65 | 5.65 | 426 | 0. | 3.21 | 217. | 407 | 0. | 0.017 | 341 | 0. | 2.57 | 0.014 |
| 477 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 3 | 0. | 0.02 | 0.000 |
| 478 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 479 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 480 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 481 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 482 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 483 | 5.65 | 5.65 | 138 | 0. | 1.04 | 70. | 114 | 0. | 0.005 | 194 | 0. | 1.46 | 0.008 |
| 484 | 5.65 | 5.65 | 95 | 0. | 0.72 | 49. | 29 | 0. | 0.001 | 9 | 0. | 0.07 | 0.000 |
| 485 | 5.65 | 5.65 | 456 | 0. | 3.44 | 233. | 435 | 0. | 0.018 | 357 | 0. | 2.69 | 0.015 |
| 486 | 5.65 | 5.65 | 290 | 0. | 2.19 | 148. | 266 | 0. | 0.011 | 391 | 0. | 2.95 | 0.016 |
| 487 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 488 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 489 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 490 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 491 | 5.65 | 5.65 | 40 | 0. | 0.30 | 20. | 31 | 0. | 0.001 | 77 | 0. | 0.58 | 0.003 |
| 492 | 5.65 | 5.65 | 401 | 0. | 3.02 | 205. | 374 | 0. | 0.015 | 482 | 0. | 3.63 | 0.020 |
| 493 | 5.65 | 5.65 | 16 | 0. | 0.12 | 8. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 494 | 5.65 | 5.65 | 382 | 0. | 2.88 | 195. | 365 | 0. | 0.015 | 297 | 0. | 2.24 | 0.012 |
| 495 | 5.65 | 5.65 | 29 | 0. | 0.22 | 15. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 496 | 5.65 | 5.65 | 257 | 0. | 1.94 | 131. | 246 | 0. | 0.010 | 192 | 0. | 1.44 | 0.008 |
| 497 | 5.65 | 5.65 | 95 | 0. | 0.72 | 49. | 42 | 0. | 0.002 | 14 | 0. | 0.10 | 0.001 |
| 498 | 5.65 | 5.65 | 144 | 0. | 1.08 | 73. | 138 | 0. | 0.006 | 96 | 0. | 0.72 | 0.004 |
| 499 | 5.65 | 5.65 | 635 | 0. | 4.79 | 324. | 591 | 0. | 0.024 | 381 | 0. | 2.87 | 0.016 |
| 500 | 5.65 | 5.65 | 809 | 0. | 6.10 | 413. | 756 | 0. | 0.031 | 707 | 0. | 5.33 | 0.029 |
| 501 | 5.65 | 5.65 | 653 | 0. | 4.92 | 333. | 613 | 0. | 0.025 | 575 | 0. | 4.33 | 0.024 |
| 502 | 5.65 | 5.65 | 461 | 0. | 3.48 | 235. | 435 | 0. | 0.018 | 412 | 0. | 3.11 | 0.017 |
| 503 | 5.65 | 5.65 | 393 | 0. | 2.97 | 201. | 372 | 0. | 0.015 | 327 | 0. | 2.46 | 0.013 |
| 504 | 5.65 | 5.65 | 374 | 0. | 2.82 | 191. | 344 | 0. | 0.014 | 321 | 0. | 2.42 | 0.013 |
| 505 | 5.65 | 5.65 | 365 | 0. | 2.75 | 186. | 334 | 0. | 0.014 | 258 | 0. | 1.94 | 0.011 |
| 506 | 5.65 | 5.65 | 374 | 0. | 2.82 | 191. | 335 | 0. | 0.014 | 265 | 0. | 2.00 | 0.011 |
| 507 | 5.65 | 5.65 | 322 | 0. | 2.43 | 164. | 275 | 0. | 0.011 | 193 | 0. | 1.45 | 0.008 |
| 508 | 5.65 | 5.65 | 173 | 0. | 1.30 | 88. | 127 | 0. | 0.005 | 107 | 0. | 0.81 | 0.004 |
| 509 | 5.65 | 5.65 | 839 | 0. | 6.32 | 428. | 786 | 0. | 0.032 | 611 | 0. | 4.61 | 0.025 |
| 510 | 5.65 | 5.65 | 1026 | 0. | 7.73 | 523. | 963 | 0. | 0.039 | 917 | 0. | 6.91 | 0.038 |
| 511 | 5.65 | 5.65 | 581 | 0. | 4.38 | 296. | 541 | 0. | 0.022 | 593 | 0. | 4.47 | 0.024 |
| 512 | 5.65 | 5.65 | 671 | 0. | 5.06 | 342. | 630 | 0. | 0.026 | 621 | 0. | 4.68 | 0.025 |
| 513 | 5.65 | 5.65 | 210 | 0. | 1.59 | 107. | 192 | 0. | 0.008 | 202 | 0. | 1.52 | 0.008 |
| 514 | 5.65 | 5.65 | 429 | 0. | 3.24 | 219. | 403 | 0. | 0.017 | 368 | 0. | 2.78 | 0.015 |
| 515 | 5.65 | 5.65 | 10 | 0. | 0.08 | 5. | 1 | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 516 | 5.65 | 5.65 | 330 | 0. | 2.49 | 169. | 309 | 0. | 0.013 | 266 | 0. | 2.01 | 0.011 |
| 517 | 5.65 | 5.65 | 3 | 0. | 0.03 | 2. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 518 | 5.65 | 5.65 | 242 | 0. | 1.82 | 123. | 228 | 0. | 0.009 | 181 | 0. | 1.36 | 0.007 |
| 519 | 5.65 | 5.65 | 298 | 0. | 2.25 | 152. | 279 | 0. | 0.011 | 301 | 0. | 2.27 | 0.012 |
| 520 | 5.65 | 5.65 | 427 | 0. | 3.22 | 218. | 399 | 0. | 0.016 | 373 | 0. | 2.81 | 0.015 |
| 521 | 5.65 | 5.65 | 479 | 0. | 3.61 | 244. | 446 | 0. | 0.018 | 516 | 0. | 3.89 | 0.021 |
| 522 | 5.65 | 5.65 | 452 | 0. | 3.41 | 231. | 418 | 0. | 0.017 | 412 | 0. | 3.10 | 0.017 |
| 523 | 5.65 | 5.65 | 555 | 0. | 4.18 | 283. | 492 | 0. | 0.020 | 251 | 0. | 1.89 | 0.010 |
| 524 | 5.65 | 5.65 | 726 | 0. | 5.47 | 370. | 669 | 0. | 0.027 | 538 | 0. | 4.06 | 0.022 |
| 525 | 5.65 | 5.65 | 670 | 0. | 5.05 | 342. | 625 | 0. | 0.026 | 462 | 0. | 3.48 | 0.019 |
| 526 | 5.65 | 5.65 | 782 | 0. | 5.90 | 399. | 762 | 0. | 0.031 | 630 | 0. | 4.75 | 0.026 |
| 527 | 5.65 | 5.65 | 95 | 0. | 0.72 | 48. | 85 | 0. | 0.003 | 124 | 0. | 0.93 | 0.005 |
| 528 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 43 | 0. | 0.32 | 0.002 |
| 529 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 530 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 531 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 532 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 533 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 534 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|------|------|------|----|-------|------|------|----|-------|------|----|------|-------|
| 535 | 5.65 | 5.65 | 132 | 0. | 0.99 | 67. | 118 | 0. | 0.005 | 159 | 0. | 1.20 | 0.007 |
| 536 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 537 | 5.65 | 5.65 | 453 | 0. | 3.42 | 231. | 387 | 0. | 0.016 | 415 | 0. | 3.13 | 0.017 |
| 538 | 5.65 | 5.65 | 227 | 0. | 1.71 | 116. | 173 | 0. | 0.007 | 242 | 0. | 1.82 | 0.010 |
| 539 | 5.65 | 5.65 | 711 | 0. | 5.36 | 363. | 671 | 0. | 0.027 | 640 | 0. | 4.82 | 0.026 |
| 540 | 5.65 | 5.65 | 714 | 0. | 5.38 | 364. | 675 | 0. | 0.028 | 599 | 0. | 4.52 | 0.025 |
| 541 | 5.65 | 5.65 | 1077 | 0. | 8.12 | 549. | 1009 | 0. | 0.041 | 849 | 0. | 6.40 | 0.035 |
| 542 | 5.65 | 5.65 | 1293 | 0. | 9.75 | 659. | 1222 | 0. | 0.050 | 1058 | 0. | 7.97 | 0.043 |
| 543 | 5.65 | 5.65 | 1486 | 0. | 11.21 | 758. | 1412 | 0. | 0.058 | 1246 | 0. | 9.39 | 0.051 |
| 544 | 5.65 | 5.65 | 973 | 0. | 7.33 | 496. | 899 | 0. | 0.037 | 686 | 0. | 5.17 | 0.028 |
| 545 | 5.65 | 5.65 | 1490 | 0. | 11.23 | 760. | 1416 | 0. | 0.058 | 1227 | 0. | 9.25 | 0.050 |
| 546 | 5.65 | 5.65 | 1030 | 0. | 7.76 | 525. | 957 | 0. | 0.039 | 732 | 0. | 5.52 | 0.030 |
| 547 | 5.65 | 5.65 | 1563 | 0. | 11.78 | 797. | 1481 | 0. | 0.061 | 1276 | 0. | 9.62 | 0.052 |
| 548 | 5.65 | 5.65 | 1120 | 0. | 8.44 | 571. | 1033 | 0. | 0.042 | 794 | 0. | 5.98 | 0.032 |
| 549 | 5.65 | 5.65 | 876 | 0. | 6.60 | 447. | 791 | 0. | 0.032 | 474 | 0. | 3.57 | 0.019 |
| 550 | 5.65 | 5.65 | 1147 | 0. | 8.65 | 585. | 1073 | 0. | 0.044 | 896 | 0. | 6.75 | 0.037 |
| 551 | 5.65 | 5.65 | 1488 | 0. | 11.22 | 759. | 1405 | 0. | 0.058 | 1198 | 0. | 9.03 | 0.049 |
| 552 | 5.65 | 5.65 | 1094 | 0. | 8.25 | 558. | 1001 | 0. | 0.041 | 716 | 0. | 5.40 | 0.029 |
| 553 | 5.65 | 5.65 | 1115 | 0. | 8.40 | 569. | 1050 | 0. | 0.043 | 879 | 0. | 6.62 | 0.036 |
| 554 | 5.65 | 5.65 | 1282 | 0. | 9.66 | 654. | 1211 | 0. | 0.050 | 1129 | 0. | 8.51 | 0.046 |
| 555 | 5.65 | 5.65 | 1262 | 0. | 9.52 | 644. | 1195 | 0. | 0.049 | 1047 | 0. | 7.89 | 0.043 |
| 556 | 5.65 | 5.65 | 1402 | 0. | 10.57 | 715. | 1331 | 0. | 0.054 | 1194 | 0. | 9.00 | 0.049 |
| 557 | 5.65 | 5.65 | 1197 | 0. | 9.02 | 611. | 1136 | 0. | 0.046 | 1022 | 0. | 7.71 | 0.042 |
| 558 | 5.65 | 5.65 | 1295 | 0. | 9.77 | 661. | 1234 | 0. | 0.050 | 1026 | 0. | 7.73 | 0.042 |
| 559 | 5.65 | 5.65 | 1041 | 0. | 7.85 | 531. | 986 | 0. | 0.040 | 846 | 0. | 6.38 | 0.035 |
| 560 | 5.65 | 5.65 | 1041 | 0. | 7.85 | 531. | 987 | 0. | 0.040 | 708 | 0. | 5.34 | 0.029 |
| 561 | 5.65 | 5.65 | 810 | 0. | 6.11 | 413. | 760 | 0. | 0.031 | 607 | 0. | 4.58 | 0.025 |
| 562 | 5.65 | 5.65 | 890 | 0. | 6.71 | 454. | 866 | 0. | 0.035 | 722 | 0. | 5.44 | 0.030 |
| 563 | 5.65 | 5.65 | 901 | 0. | 6.79 | 460. | 848 | 0. | 0.035 | 718 | 0. | 5.42 | 0.029 |
| 564 | 5.65 | 5.65 | 943 | 0. | 7.11 | 481. | 919 | 0. | 0.038 | 778 | 0. | 5.86 | 0.032 |
| 746 | 5.65 | 5.65 | 460 | 0. | 3.47 | 235. | 430 | 0. | 0.018 | 363 | 0. | 2.74 | 0.015 |
| 747 | 5.65 | 5.65 | 557 | 0. | 4.20 | 284. | 525 | 0. | 0.021 | 427 | 0. | 3.22 | 0.017 |
| 748 | 5.65 | 5.65 | 717 | 0. | 5.40 | 366. | 670 | 0. | 0.027 | 583 | 0. | 4.39 | 0.024 |
| 749 | 5.65 | 5.65 | 763 | 0. | 5.75 | 389. | 718 | 0. | 0.029 | 636 | 0. | 4.79 | 0.026 |
| 750 | 5.65 | 5.65 | 901 | 0. | 6.79 | 460. | 845 | 0. | 0.035 | 716 | 0. | 5.40 | 0.029 |
| 751 | 5.65 | 5.65 | 245 | 0. | 1.85 | 125. | 202 | 0. | 0.008 | 174 | 0. | 1.31 | 0.007 |
| 752 | 5.65 | 5.65 | 238 | 0. | 1.80 | 122. | 208 | 0. | 0.008 | 185 | 0. | 1.40 | 0.008 |
| 753 | 5.65 | 5.65 | 192 | 0. | 1.45 | 98. | 177 | 0. | 0.007 | 162 | 0. | 1.22 | 0.007 |
| 754 | 5.65 | 5.65 | 60 | 0. | 0.45 | 30. | 58 | 0. | 0.002 | 43 | 0. | 0.32 | 0.002 |
| 755 | 5.65 | 5.65 | 405 | 0. | 3.06 | 207. | 374 | 0. | 0.015 | 204 | 0. | 1.54 | 0.008 |
| 756 | 5.65 | 5.65 | 604 | 0. | 4.55 | 308. | 561 | 0. | 0.023 | 502 | 0. | 3.78 | 0.021 |
| 757 | 5.65 | 5.65 | 564 | 0. | 4.25 | 288. | 527 | 0. | 0.022 | 479 | 0. | 3.61 | 0.020 |
| 758 | 5.65 | 5.65 | 441 | 0. | 3.32 | 225. | 416 | 0. | 0.017 | 369 | 0. | 2.78 | 0.015 |
| 759 | 5.65 | 5.65 | 320 | 0. | 2.41 | 163. | 303 | 0. | 0.012 | 252 | 0. | 1.90 | 0.010 |
| 760 | 5.65 | 5.65 | 795 | 0. | 5.99 | 405. | 743 | 0. | 0.030 | 603 | 0. | 4.55 | 0.025 |
| 761 | 5.65 | 5.65 | 807 | 0. | 6.08 | 411. | 746 | 0. | 0.031 | 631 | 0. | 4.76 | 0.026 |
| 762 | 5.65 | 5.65 | 740 | 0. | 5.58 | 377. | 688 | 0. | 0.028 | 570 | 0. | 4.29 | 0.023 |
| 763 | 5.65 | 5.65 | 614 | 0. | 4.63 | 313. | 569 | 0. | 0.023 | 420 | 0. | 3.17 | 0.017 |
| 764 | 5.65 | 5.65 | 514 | 0. | 3.87 | 262. | 468 | 0. | 0.019 | 302 | 0. | 2.28 | 0.012 |
| 765 | 5.65 | 5.65 | 458 | 0. | 3.46 | 234. | 409 | 0. | 0.017 | 264 | 0. | 1.99 | 0.011 |
| 766 | 5.65 | 5.65 | 446 | 0. | 3.36 | 227. | 394 | 0. | 0.016 | 258 | 0. | 1.94 | 0.011 |
| 767 | 5.65 | 5.65 | 477 | 0. | 3.60 | 243. | 415 | 0. | 0.017 | 291 | 0. | 2.19 | 0.012 |
| 768 | 5.65 | 5.65 | 504 | 0. | 3.80 | 257. | 432 | 0. | 0.018 | 329 | 0. | 2.48 | 0.013 |
| 769 | 5.65 | 5.65 | 679 | 0. | 5.12 | 347. | 604 | 0. | 0.025 | 447 | 0. | 3.37 | 0.018 |
| 770 | 5.65 | 5.65 | 803 | 0. | 6.05 | 410. | 732 | 0. | 0.030 | 540 | 0. | 4.07 | 0.022 |
| 771 | 5.65 | 5.65 | 511 | 0. | 3.85 | 261. | 431 | 0. | 0.018 | 315 | 0. | 2.37 | 0.013 |
| 772 | 5.65 | 5.65 | 291 | 0. | 2.20 | 149. | 233 | 0. | 0.010 | 196 | 0. | 1.47 | 0.008 |
| 773 | 5.65 | 5.65 | 237 | 0. | 1.79 | 121. | 184 | 0. | 0.008 | 142 | 0. | 1.07 | 0.006 |
| 774 | 5.65 | 5.65 | 357 | 0. | 2.69 | 182. | 336 | 0. | 0.014 | 319 | 0. | 2.40 | 0.013 |
| 775 | 5.65 | 5.65 | 304 | 0. | 2.29 | 155. | 288 | 0. | 0.012 | 243 | 0. | 1.83 | 0.010 |
| 852 | 5.65 | 5.65 | 958 | 0. | 7.22 | 488. | 894 | 0. | 0.037 | 788 | 0. | 5.94 | 0.032 |
| 853 | 5.65 | 5.65 | 480 | 0. | 3.62 | 245. | 453 | 0. | 0.019 | 427 | 0. | 3.22 | 0.017 |
| 854 | 5.65 | 5.65 | 239 | 0. | 1.80 | 122. | 228 | 0. | 0.009 | 208 | 0. | 1.57 | 0.009 |
| 855 | 5.65 | 5.65 | 190 | 0. | 1.43 | 97. | 175 | 0. | 0.007 | 154 | 0. | 1.16 | 0.006 |
| 856 | 5.65 | 5.65 | 382 | 0. | 2.88 | 195. | 350 | 0. | 0.014 | 274 | 0. | 2.06 | 0.011 |
| 857 | 5.65 | 5.65 | 809 | 0. | 6.10 | 413. | 739 | 0. | 0.030 | 646 | 0. | 4.87 | 0.026 |
| 858 | 5.65 | 5.65 | 778 | 0. | 5.87 | 397. | 692 | 0. | 0.028 | 539 | 0. | 4.07 | 0.022 |
| 859 | 5.65 | 5.65 | 132 | 0. | 1.00 | 67. | 106 | 0. | 0.004 | 61 | 0. | 0.46 | 0.003 |
| 860 | 5.65 | 5.65 | 953 | 0. | 7.19 | 486. | 891 | 0. | 0.036 | 740 | 0. | 5.58 | 0.030 |
| 861 | 5.65 | 5.65 | 405 | 0. | 3.05 | 207. | 382 | 0. | 0.016 | 355 | 0. | 2.68 | 0.015 |
| 862 | 5.65 | 5.65 | 217 | 0. | 1.64 | 111. | 205 | 0. | 0.008 | 184 | 0. | 1.39 | 0.008 |
| 863 | 5.65 | 5.65 | 187 | 0. | 1.41 | 96. | 167 | 0. | 0.007 | 153 | 0. | 1.15 | 0.006 |
| 864 | 5.65 | 5.65 | 311 | 0. | 2.35 | 159. | 286 | 0. | 0.012 | 197 | 0. | 1.48 | 0.008 |
| 865 | 5.65 | 5.65 | 817 | 0. | 6.16 | 417. | 752 | 0. | 0.031 | 643 | 0. | 4.85 | 0.026 |
| 866 | 5.65 | 5.65 | 537 | 0. | 4.05 | 274. | 459 | 0. | 0.019 | 350 | 0. | 2.64 | 0.014 |
| 867 | 5.65 | 5.65 | 71 | 0. | 0.53 | 36. | 56 | 0. | 0.002 | 17 | 0. | 0.13 | 0.001 |
| 868 | 5.65 | 5.65 | 583 | 0. | 4.39 | 297. | 504 | 0. | 0.021 | 403 | 0. | 3.04 | 0.016 |
| 869 | 5.65 | 5.65 | 89 | 0. | 0.67 | 46. | 72 | 0. | 0.003 | 29 | 0. | 0.22 | 0.001 |
| 870 | 5.65 | 5.65 | 592 | 0. | 4.47 | 302. | 518 | 0. | 0.021 | 411 | 0. | 3.10 | 0.017 |
| 871 | 5.65 | 5.65 | 92 | 0. | 0.69 | 47. | 76 | 0. | 0.003 | 33 | 0. | 0.25 | 0.001 |
| 872 | 5.65 | 5.65 | 561 | 0. | 4.23 | 286. | 498 | 0. | 0.020 | 394 | 0. | 2.97 | 0.016 |
| 873 | 5.65 | 5.65 | 94 | 0. | 0.71 | 48. | 85 | 0. | 0.003 | 46 | 0. | 0.35 | 0.002 |
| 874 | 5.65 | 5.65 | 582 | 0. | 4.39 | 297. | 529 | 0. | 0.022 | 413 | 0. | 3.11 | 0.017 |
| 875 | 5.65 | 5.65 | 118 | 0. | 0.89 | 60. | 109 | 0. | 0.004 | 64 | 0. | 0.48 | 0.003 |
| 876 | 5.65 | 5.65 | 633 | 0. | 4.77 | 323. | 582 | 0. | 0.024 | 459 | 0. | 3.46 | 0.019 |
| 877 | 5.65 | 5.65 | 142 | 0. | 1.07 | 72. | 133 | 0. | 0.005 | 90 | 0. | 0.68 | 0.004 |
| 878 | 5.65 | 5.65 | 692 | 0. | 5.21 | 353. | 639 | 0. | 0.026 | 545 | 0. | 4.11 | 0.022 |
| 879 | 5.65 | 5.65 | 170 | 0. | 1.28 | 87. | 160 | 0. | 0.007 | 115 | 0. | 0.87 | 0.005 |
| 880 | 5.65 | 5.65 | 774 | 0. | 5.84 | 395. | 715 | 0. | 0.029 | 603 | 0. | 4.54 | 0.025 |

Relazione tecnica strutturale microcentrale elettrica

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|-----|------|------|-----|----|------|------|-----|----|-------|-----|----|------|-------|
| 881 | 5.65 | 5.65 | 170 | 0. | 1.28 | 87. | 160 | 0. | 0.007 | 107 | 0. | 0.81 | 0.004 |
| 882 | 5.65 | 5.65 | 768 | 0. | 5.79 | 392. | 706 | 0. | 0.029 | 567 | 0. | 4.27 | 0.023 |
| 883 | 5.65 | 5.65 | 133 | 0. | 1.00 | 68. | 125 | 0. | 0.005 | 78 | 0. | 0.59 | 0.003 |
| 884 | 5.65 | 5.65 | 389 | 0. | 2.93 | 198. | 328 | 0. | 0.013 | 229 | 0. | 1.73 | 0.009 |
| 885 | 5.65 | 5.65 | 49 | 0. | 0.37 | 25. | 30 | 0. | 0.001 | 8 | 0. | 0.06 | 0.000 |
| 886 | 5.65 | 5.65 | 472 | 0. | 3.56 | 241. | 400 | 0. | 0.016 | 295 | 0. | 2.23 | 0.012 |
| 887 | 5.65 | 5.65 | 46 | 0. | 0.35 | 23. | 36 | 0. | 0.001 | 8 | 0. | 0.06 | 0.000 |
| 888 | 5.65 | 5.65 | 460 | 0. | 3.47 | 235. | 386 | 0. | 0.016 | 335 | 0. | 2.53 | 0.014 |
| 889 | 5.65 | 5.65 | 489 | 0. | 3.69 | 250. | 408 | 0. | 0.017 | 328 | 0. | 2.48 | 0.013 |
| 890 | 5.65 | 5.65 | 108 | 0. | 0.82 | 55. | 101 | 0. | 0.004 | 52 | 0. | 0.39 | 0.002 |
| 891 | 5.65 | 5.65 | 734 | 0. | 5.53 | 374. | 670 | 0. | 0.027 | 534 | 0. | 4.02 | 0.022 |
| 974 | 5.65 | 5.65 | 799 | 0. | 6.02 | 408. | 746 | 0. | 0.031 | 570 | 0. | 4.30 | 0.023 |
| 975 | 5.65 | 5.65 | 238 | 0. | 1.79 | 121. | 225 | 0. | 0.009 | 159 | 0. | 1.20 | 0.007 |
| 976 | 5.65 | 5.65 | 756 | 0. | 5.70 | 386. | 704 | 0. | 0.029 | 472 | 0. | 3.56 | 0.019 |
| 977 | 5.65 | 5.65 | 126 | 0. | 0.95 | 64. | 120 | 0. | 0.005 | 65 | 0. | 0.49 | 0.003 |

ARMATURA INFERIORE VERTICALE

| GUSCI | Af | Afc | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|-------|------|-----------------|-----|-------|--|------------------------|-----|-------|-------|
| | | | Mom | Nor | σc | σf | Mom | Nor | wkF | | Mom | Nor | σc | wkP |
| 443 | 5.65 | 5.65 | 54 | 0. | 0.41 | 28. | 51 | 0. | 0.002 | | 34 | 0. | 0.26 | 0.001 |
| 444 | 5.65 | 5.65 | 130 | 0. | 0.98 | 66. | 121 | 0. | 0.005 | | 90 | 0. | 0.68 | 0.004 |
| 445 | 5.65 | 5.65 | 198 | 0. | 1.49 | 101. | 184 | 0. | 0.008 | | 146 | 0. | 1.10 | 0.006 |
| 446 | 5.65 | 5.65 | 269 | 0. | 2.03 | 137. | 250 | 0. | 0.010 | | 200 | 0. | 1.51 | 0.008 |
| 447 | 5.65 | 5.65 | 283 | 0. | 2.14 | 144. | 261 | 0. | 0.011 | | 208 | 0. | 1.57 | 0.009 |
| 448 | 5.65 | 5.65 | 213 | 0. | 1.61 | 109. | 196 | 0. | 0.008 | | 141 | 0. | 1.06 | 0.006 |
| 449 | 5.65 | 5.65 | 178 | 0. | 1.34 | 91. | 161 | 0. | 0.007 | | 104 | 0. | 0.79 | 0.004 |
| 450 | 5.65 | 5.65 | 261 | 0. | 1.97 | 133. | 242 | 0. | 0.010 | | 176 | 0. | 1.33 | 0.007 |
| 451 | 5.65 | 5.65 | 301 | 0. | 2.27 | 153. | 279 | 0. | 0.011 | | 210 | 0. | 1.58 | 0.009 |
| 452 | 5.65 | 5.65 | 286 | 0. | 2.15 | 146. | 262 | 0. | 0.011 | | 200 | 0. | 1.51 | 0.008 |
| 453 | 5.65 | 5.65 | 239 | 0. | 1.80 | 122. | 215 | 0. | 0.009 | | 169 | 0. | 1.27 | 0.007 |
| 454 | 5.65 | 5.65 | 181 | 0. | 1.37 | 93. | 161 | 0. | 0.007 | | 131 | 0. | 0.99 | 0.005 |
| 455 | 5.65 | 5.65 | 124 | 0. | 0.93 | 63. | 107 | 0. | 0.004 | | 84 | 0. | 0.63 | 0.003 |
| 456 | 5.65 | 5.65 | 418 | 0. | 3.15 | 213. | 359 | 0. | 0.015 | | 255 | 0. | 1.92 | 0.010 |
| 457 | 5.65 | 5.65 | 576 | 0. | 4.34 | 294. | 507 | 0. | 0.021 | | 428 | 0. | 3.23 | 0.018 |
| 458 | 5.65 | 5.65 | 302 | 0. | 2.28 | 154. | 267 | 0. | 0.011 | | 261 | 0. | 1.97 | 0.011 |
| 459 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 460 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 461 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 462 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 463 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 464 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 465 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 466 | 5.65 | 5.65 | 209 | 0. | 1.58 | 107. | 178 | 0. | 0.007 | | 142 | 0. | 1.07 | 0.006 |
| 467 | 5.65 | 5.65 | 157 | 0. | 1.18 | 80. | 144 | 0. | 0.006 | | 194 | 0. | 1.46 | 0.008 |
| 468 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 469 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 470 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 471 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 472 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 473 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 474 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 475 | 5.65 | 5.65 | 81 | 0. | 0.61 | 41. | 72 | 0. | 0.003 | | 53 | 0. | 0.40 | 0.002 |
| 476 | 5.65 | 5.65 | 430 | 0. | 3.24 | 219. | 409 | 0. | 0.017 | | 441 | 0. | 3.33 | 0.018 |
| 477 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 478 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 479 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 480 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 481 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 482 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 483 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 484 | 5.65 | 5.65 | 125 | 0. | 0.94 | 64. | 113 | 0. | 0.005 | | 102 | 0. | 0.77 | 0.004 |
| 485 | 5.65 | 5.65 | 894 | 0. | 6.74 | 456. | 846 | 0. | 0.035 | | 824 | 0. | 6.21 | 0.034 |
| 486 | 5.65 | 5.65 | 334 | 0. | 2.52 | 170. | 326 | 0. | 0.013 | | 408 | 0. | 3.08 | 0.017 |
| 487 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 93 | 0. | 0.70 | 0.004 |
| 488 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 489 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 490 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 491 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 492 | 5.65 | 5.65 | 109 | 0. | 0.82 | 56. | 97 | 0. | 0.004 | | 195 | 0. | 1.47 | 0.008 |
| 493 | 5.65 | 5.65 | 196 | 0. | 1.48 | 100. | 181 | 0. | 0.007 | | 163 | 0. | 1.23 | 0.007 |
| 494 | 5.65 | 5.65 | 1567 | 0. | 11.81 | 799. | 1470 | 0. | 0.060 | | 1310 | 0. | 9.88 | 0.054 |
| 495 | 5.65 | 5.65 | 292 | 0. | 2.20 | 149. | 269 | 0. | 0.011 | | 236 | 0. | 1.78 | 0.010 |
| 496 | 5.65 | 5.65 | 1365 | 0. | 10.29 | 696. | 1274 | 0. | 0.052 | | 1023 | 0. | 7.72 | 0.042 |
| 497 | 5.65 | 5.65 | 313 | 0. | 2.36 | 160. | 277 | 0. | 0.011 | | 177 | 0. | 1.34 | 0.007 |
| 498 | 5.65 | 5.65 | 452 | 0. | 3.41 | 231. | 425 | 0. | 0.017 | | 298 | 0. | 2.24 | 0.012 |
| 499 | 5.65 | 5.65 | 578 | 0. | 4.36 | 295. | 543 | 0. | 0.022 | | 399 | 0. | 3.01 | 0.016 |
| 500 | 5.65 | 5.65 | 729 | 0. | 5.49 | 372. | 687 | 0. | 0.028 | | 526 | 0. | 3.96 | 0.022 |
| 501 | 5.65 | 5.65 | 921 | 0. | 6.95 | 470. | 870 | 0. | 0.036 | | 705 | 0. | 5.32 | 0.029 |
| 502 | 5.65 | 5.65 | 1042 | 0. | 7.85 | 531. | 984 | 0. | 0.040 | | 874 | 0. | 6.59 | 0.036 |
| 503 | 5.65 | 5.65 | 1054 | 0. | 7.95 | 538. | 996 | 0. | 0.041 | | 930 | 0. | 7.01 | 0.038 |
| 504 | 5.65 | 5.65 | 475 | 0. | 3.58 | 242. | 443 | 0. | 0.018 | | 437 | 0. | 3.30 | 0.018 |
| 505 | 5.65 | 5.65 | 294 | 0. | 2.22 | 150. | 265 | 0. | 0.011 | | 246 | 0. | 1.85 | 0.010 |
| 506 | 5.65 | 5.65 | 206 | 0. | 1.55 | 105. | 175 | 0. | 0.007 | | 158 | 0. | 1.19 | 0.006 |
| 507 | 5.65 | 5.65 | 218 | 0. | 1.65 | 111. | 182 | 0. | 0.007 | | 153 | 0. | 1.15 | 0.006 |
| 508 | 5.65 | 5.65 | 270 | 0. | 2.03 | 138. | 228 | 0. | 0.009 | | 190 | 0. | 1.43 | 0.008 |
| 509 | 5.65 | 5.65 | 1558 | 0. | 11.75 | 795. | 1457 | 0. | 0.060 | | 1217 | 0. | 9.17 | 0.050 |
| 510 | 5.65 | 5.65 | 1769 | 0. | 13.34 | 902. | 1661 | 0. | 0.068 | | 1415 | 0. | 10.67 | 0.058 |
| 511 | 5.65 | 5.65 | 1874 | 0. | 14.13 | 956. | 1773 | 0. | 0.073 | | 1588 | 0. | 11.97 | 0.065 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|------|------|------|----|-------|-------|------|----|-------|------|----|-------|-------|
| 512 | 5.65 | 5.65 | 1990 | 0. | 15.00 | 1015. | 1876 | 0. | 0.077 | 1653 | 0. | 12.46 | 0.068 |
| 513 | 5.65 | 5.65 | 1828 | 0. | 13.78 | 932. | 1733 | 0. | 0.071 | 1475 | 0. | 11.12 | 0.060 |
| 514 | 5.65 | 5.65 | 2029 | 0. | 15.30 | 1035. | 1920 | 0. | 0.079 | 1724 | 0. | 13.00 | 0.071 |
| 515 | 5.65 | 5.65 | 1662 | 0. | 12.53 | 848. | 1582 | 0. | 0.065 | 1293 | 0. | 9.75 | 0.053 |
| 516 | 5.65 | 5.65 | 1860 | 0. | 14.03 | 949. | 1766 | 0. | 0.072 | 1564 | 0. | 11.79 | 0.064 |
| 517 | 5.65 | 5.65 | 1458 | 0. | 10.99 | 744. | 1390 | 0. | 0.057 | 1011 | 0. | 7.62 | 0.041 |
| 518 | 5.65 | 5.65 | 1556 | 0. | 11.73 | 794. | 1491 | 0. | 0.061 | 1122 | 0. | 8.46 | 0.046 |
| 519 | 5.65 | 5.65 | 1509 | 0. | 11.37 | 770. | 1445 | 0. | 0.059 | 1155 | 0. | 8.71 | 0.047 |
| 520 | 5.65 | 5.65 | 1227 | 0. | 9.25 | 626. | 1155 | 0. | 0.047 | 943 | 0. | 7.11 | 0.039 |
| 521 | 5.65 | 5.65 | 1295 | 0. | 9.76 | 660. | 1235 | 0. | 0.051 | 1032 | 0. | 7.78 | 0.042 |
| 522 | 5.65 | 5.65 | 1059 | 0. | 7.98 | 540. | 984 | 0. | 0.040 | 741 | 0. | 5.59 | 0.030 |
| 523 | 5.65 | 5.65 | 532 | 0. | 4.01 | 272. | 479 | 0. | 0.020 | 263 | 0. | 1.98 | 0.011 |
| 524 | 5.65 | 5.65 | 802 | 0. | 6.05 | 409. | 733 | 0. | 0.030 | 483 | 0. | 3.64 | 0.020 |
| 525 | 5.65 | 5.65 | 540 | 0. | 4.07 | 276. | 476 | 0. | 0.019 | 365 | 0. | 2.75 | 0.015 |
| 526 | 5.65 | 5.65 | 648 | 0. | 4.89 | 331. | 580 | 0. | 0.024 | 463 | 0. | 3.49 | 0.019 |
| 527 | 5.65 | 5.65 | 760 | 0. | 5.73 | 388. | 690 | 0. | 0.028 | 586 | 0. | 4.42 | 0.024 |
| 528 | 5.65 | 5.65 | 679 | 0. | 5.12 | 346. | 503 | 0. | 0.021 | 527 | 0. | 3.97 | 0.022 |
| 529 | 5.65 | 5.65 | 796 | 0. | 6.00 | 406. | 725 | 0. | 0.030 | 621 | 0. | 4.68 | 0.025 |
| 530 | 5.65 | 5.65 | 464 | 0. | 3.50 | 237. | 305 | 0. | 0.012 | 427 | 0. | 3.22 | 0.017 |
| 531 | 5.65 | 5.65 | 754 | 0. | 5.68 | 384. | 687 | 0. | 0.028 | 574 | 0. | 4.32 | 0.023 |
| 532 | 5.65 | 5.65 | 231 | 0. | 1.74 | 118. | 95 | 0. | 0.004 | 231 | 0. | 1.74 | 0.009 |
| 533 | 5.65 | 5.65 | 797 | 0. | 6.01 | 406. | 728 | 0. | 0.030 | 633 | 0. | 4.77 | 0.026 |
| 534 | 5.65 | 5.65 | 236 | 0. | 1.78 | 120. | 98 | 0. | 0.004 | 183 | 0. | 1.38 | 0.007 |
| 535 | 5.65 | 5.65 | 979 | 0. | 7.38 | 499. | 902 | 0. | 0.037 | 777 | 0. | 5.86 | 0.032 |
| 536 | 5.65 | 5.65 | 469 | 0. | 3.53 | 239. | 416 | 0. | 0.017 | 402 | 0. | 3.03 | 0.016 |
| 537 | 5.65 | 5.65 | 1016 | 0. | 7.66 | 518. | 932 | 0. | 0.038 | 774 | 0. | 5.84 | 0.032 |
| 538 | 5.65 | 5.65 | 725 | 0. | 5.47 | 370. | 661 | 0. | 0.027 | 570 | 0. | 4.29 | 0.023 |
| 539 | 5.65 | 5.65 | 921 | 0. | 6.94 | 470. | 834 | 0. | 0.034 | 673 | 0. | 5.07 | 0.028 |
| 540 | 5.65 | 5.65 | 852 | 0. | 6.43 | 435. | 779 | 0. | 0.032 | 604 | 0. | 4.55 | 0.025 |
| 541 | 5.65 | 5.65 | 763 | 0. | 5.75 | 389. | 676 | 0. | 0.028 | 524 | 0. | 3.95 | 0.021 |
| 542 | 5.65 | 5.65 | 709 | 0. | 5.35 | 362. | 638 | 0. | 0.026 | 541 | 0. | 4.08 | 0.022 |
| 543 | 5.65 | 5.65 | 92 | 0. | 0.69 | 47. | 76 | 0. | 0.003 | 67 | 0. | 0.51 | 0.003 |
| 544 | 5.65 | 5.65 | 216 | 0. | 1.63 | 110. | 191 | 0. | 0.008 | 139 | 0. | 1.05 | 0.006 |
| 545 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 546 | 5.65 | 5.65 | 13 | 0. | 0.10 | 7. | 8 | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 547 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 548 | 5.65 | 5.65 | 103 | 0. | 0.78 | 53. | 93 | 0. | 0.004 | 59 | 0. | 0.45 | 0.002 |
| 549 | 5.65 | 5.65 | 574 | 0. | 4.33 | 293. | 538 | 0. | 0.022 | 476 | 0. | 3.59 | 0.019 |
| 550 | 5.65 | 5.65 | 957 | 0. | 7.21 | 488. | 906 | 0. | 0.037 | 782 | 0. | 5.89 | 0.032 |
| 551 | 5.65 | 5.65 | 248 | 0. | 1.87 | 127. | 231 | 0. | 0.009 | 274 | 0. | 2.06 | 0.011 |
| 552 | 5.65 | 5.65 | 286 | 0. | 2.16 | 146. | 267 | 0. | 0.011 | 248 | 0. | 1.87 | 0.010 |
| 553 | 5.65 | 5.65 | 1689 | 0. | 12.73 | 862. | 1588 | 0. | 0.065 | 1432 | 0. | 10.79 | 0.059 |
| 554 | 5.65 | 5.65 | 1796 | 0. | 13.54 | 916. | 1694 | 0. | 0.069 | 1540 | 0. | 11.61 | 0.063 |
| 555 | 5.65 | 5.65 | 803 | 0. | 6.05 | 410. | 765 | 0. | 0.031 | 765 | 0. | 5.76 | 0.031 |
| 556 | 5.65 | 5.65 | 609 | 0. | 4.59 | 311. | 590 | 0. | 0.024 | 633 | 0. | 4.77 | 0.026 |
| 557 | 5.65 | 5.65 | 257 | 0. | 1.94 | 131. | 241 | 0. | 0.010 | 294 | 0. | 2.21 | 0.012 |
| 558 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 62 | 0. | 0.47 | 0.003 |
| 559 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 560 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 561 | 5.65 | 5.65 | 617 | 0. | 4.65 | 315. | 521 | 0. | 0.021 | 487 | 0. | 3.67 | 0.020 |
| 562 | 5.65 | 5.65 | 666 | 0. | 5.02 | 340. | 554 | 0. | 0.023 | 516 | 0. | 3.89 | 0.021 |
| 563 | 5.65 | 5.65 | 175 | 0. | 1.32 | 89. | 145 | 0. | 0.006 | 188 | 0. | 1.41 | 0.008 |
| 564 | 5.65 | 5.65 | 12 | 0. | 0.09 | 6. | 0. | 0. | 0.000 | 53 | 0. | 0.40 | 0.002 |
| 746 | 5.65 | 5.65 | 1557 | 0. | 11.74 | 794. | 1478 | 0. | 0.060 | 1273 | 0. | 9.60 | 0.052 |
| 747 | 5.65 | 5.65 | 1306 | 0. | 9.84 | 666. | 1239 | 0. | 0.051 | 1056 | 0. | 7.96 | 0.043 |
| 748 | 5.65 | 5.65 | 907 | 0. | 6.84 | 463. | 857 | 0. | 0.035 | 824 | 0. | 6.21 | 0.034 |
| 749 | 5.65 | 5.65 | 676 | 0. | 5.10 | 345. | 636 | 0. | 0.026 | 630 | 0. | 4.75 | 0.026 |
| 750 | 5.65 | 5.65 | 1095 | 0. | 8.26 | 559. | 1035 | 0. | 0.042 | 894 | 0. | 6.74 | 0.037 |
| 751 | 5.65 | 5.65 | 881 | 0. | 6.64 | 450. | 839 | 0. | 0.034 | 735 | 0. | 5.54 | 0.030 |
| 752 | 5.65 | 5.65 | 834 | 0. | 6.28 | 425. | 786 | 0. | 0.032 | 663 | 0. | 5.00 | 0.027 |
| 753 | 5.65 | 5.65 | 833 | 0. | 6.28 | 425. | 789 | 0. | 0.032 | 684 | 0. | 5.16 | 0.028 |
| 754 | 5.65 | 5.65 | 97 | 0. | 0.73 | 49. | 92 | 0. | 0.004 | 63 | 0. | 0.48 | 0.003 |
| 755 | 5.65 | 5.65 | 151 | 0. | 1.14 | 77. | 143 | 0. | 0.006 | 106 | 0. | 0.80 | 0.004 |
| 756 | 5.65 | 5.65 | 234 | 0. | 1.77 | 119. | 221 | 0. | 0.009 | 162 | 0. | 1.22 | 0.007 |
| 757 | 5.65 | 5.65 | 396 | 0. | 2.98 | 202. | 373 | 0. | 0.015 | 275 | 0. | 2.07 | 0.011 |
| 758 | 5.65 | 5.65 | 634 | 0. | 4.78 | 324. | 597 | 0. | 0.024 | 461 | 0. | 3.47 | 0.019 |
| 759 | 5.65 | 5.65 | 877 | 0. | 6.61 | 447. | 825 | 0. | 0.034 | 694 | 0. | 5.23 | 0.028 |
| 760 | 5.65 | 5.65 | 1050 | 0. | 7.91 | 535. | 988 | 0. | 0.040 | 850 | 0. | 6.41 | 0.035 |
| 761 | 5.65 | 5.65 | 935 | 0. | 7.04 | 477. | 884 | 0. | 0.036 | 754 | 0. | 5.69 | 0.031 |
| 762 | 5.65 | 5.65 | 340 | 0. | 2.57 | 174. | 322 | 0. | 0.013 | 218 | 0. | 1.64 | 0.009 |
| 763 | 5.65 | 5.65 | 202 | 0. | 1.52 | 103. | 168 | 0. | 0.007 | 132 | 0. | 1.00 | 0.005 |
| 764 | 5.65 | 5.65 | 140 | 0. | 1.05 | 71. | 128 | 0. | 0.005 | 99 | 0. | 0.74 | 0.004 |
| 765 | 5.65 | 5.65 | 102 | 0. | 0.77 | 52. | 94 | 0. | 0.004 | 78 | 0. | 0.59 | 0.003 |
| 766 | 5.65 | 5.65 | 78 | 0. | 0.59 | 40. | 71 | 0. | 0.003 | 63 | 0. | 0.47 | 0.003 |
| 767 | 5.65 | 5.65 | 75 | 0. | 0.56 | 38. | 62 | 0. | 0.003 | 46 | 0. | 0.35 | 0.002 |
| 768 | 5.65 | 5.65 | 195 | 0. | 1.47 | 99. | 157 | 0. | 0.006 | 119 | 0. | 0.90 | 0.005 |
| 769 | 5.65 | 5.65 | 575 | 0. | 4.34 | 293. | 479 | 0. | 0.020 | 372 | 0. | 2.81 | 0.015 |
| 770 | 5.65 | 5.65 | 566 | 0. | 4.27 | 289. | 492 | 0. | 0.020 | 421 | 0. | 3.17 | 0.017 |
| 771 | 5.65 | 5.65 | 430 | 0. | 3.25 | 220. | 351 | 0. | 0.014 | 291 | 0. | 2.20 | 0.012 |
| 772 | 5.65 | 5.65 | 466 | 0. | 3.52 | 238. | 370 | 0. | 0.015 | 241 | 0. | 1.82 | 0.010 |
| 773 | 5.65 | 5.65 | 475 | 0. | 3.58 | 242. | 397 | 0. | 0.016 | 325 | 0. | 2.45 | 0.013 |
| 774 | 5.65 | 5.65 | 1036 | 0. | 7.81 | 529. | 979 | 0. | 0.040 | 782 | 0. | 5.89 | 0.032 |
| 775 | 5.65 | 5.65 | 936 | 0. | 7.05 | 477. | 887 | 0. | 0.036 | 776 | 0. | 5.85 | 0.032 |
| 852 | 5.65 | 5.65 | 194 | 0. | 1.46 | 99. | 183 | 0. | 0.007 | 129 | 0. | 0.97 | 0.005 |
| 853 | 5.65 | 5.65 | 244 | 0. | 1.84 | 125. | 231 | 0. | 0.009 | 162 | 0. | 1.22 | 0.007 |
| 854 | 5.65 | 5.65 | 237 | 0. | 1.79 | 121. | 224 | 0. | 0.009 | 169 | 0. | 1.28 | 0.007 |
| 855 | 5.65 | 5.65 | 195 | 0. | 1.47 | 99. | 183 | 0. | 0.007 | 129 | 0. | 0.97 | 0.005 |
| 856 | 5.65 | 5.65 | 151 | 0. | 1.14 | 77. | 140 | 0. | 0.006 | 92 | 0. | 0.69 | 0.004 |
| 857 | 5.65 | 5.65 | 139 | 0. | 1.05 | 71. | 126 | 0. | 0.005 | 83 | 0. | 0.63 | 0.003 |

Relazione tecnica strutturale microcentrale elettrica

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|-----|------|------|-----|----|------|------|-----|----|-------|-----|----|------|-------|
| 858 | 5.65 | 5.65 | 149 | 0. | 1.12 | 76. | 133 | 0. | 0.005 | 82 | 0. | 0.61 | 0.003 |
| 859 | 5.65 | 5.65 | 165 | 0. | 1.24 | 84. | 146 | 0. | 0.006 | 93 | 0. | 0.70 | 0.004 |
| 860 | 5.65 | 5.65 | 947 | 0. | 7.14 | 483. | 896 | 0. | 0.037 | 747 | 0. | 5.63 | 0.031 |
| 861 | 5.65 | 5.65 | 965 | 0. | 7.27 | 492. | 915 | 0. | 0.037 | 808 | 0. | 6.09 | 0.033 |
| 862 | 5.65 | 5.65 | 928 | 0. | 6.99 | 473. | 880 | 0. | 0.036 | 760 | 0. | 5.73 | 0.031 |
| 863 | 5.65 | 5.65 | 836 | 0. | 6.30 | 427. | 793 | 0. | 0.032 | 684 | 0. | 5.16 | 0.028 |
| 864 | 5.65 | 5.65 | 874 | 0. | 6.59 | 446. | 831 | 0. | 0.034 | 668 | 0. | 5.03 | 0.027 |
| 865 | 5.65 | 5.65 | 858 | 0. | 6.47 | 438. | 812 | 0. | 0.033 | 642 | 0. | 4.84 | 0.026 |
| 866 | 5.65 | 5.65 | 421 | 0. | 3.17 | 215. | 338 | 0. | 0.014 | 281 | 0. | 2.12 | 0.012 |
| 867 | 5.65 | 5.65 | 407 | 0. | 3.07 | 208. | 328 | 0. | 0.013 | 299 | 0. | 2.25 | 0.012 |
| 868 | 5.65 | 5.65 | 228 | 0. | 1.72 | 116. | 181 | 0. | 0.007 | 141 | 0. | 1.06 | 0.006 |
| 869 | 5.65 | 5.65 | 255 | 0. | 1.92 | 130. | 204 | 0. | 0.008 | 177 | 0. | 1.33 | 0.007 |
| 870 | 5.65 | 5.65 | 99 | 0. | 0.75 | 51. | 81 | 0. | 0.003 | 57 | 0. | 0.43 | 0.002 |
| 871 | 5.65 | 5.65 | 118 | 0. | 0.89 | 60. | 96 | 0. | 0.004 | 81 | 0. | 0.61 | 0.003 |
| 872 | 5.65 | 5.65 | 73 | 0. | 0.55 | 37. | 67 | 0. | 0.003 | 52 | 0. | 0.39 | 0.002 |
| 873 | 5.65 | 5.65 | 77 | 0. | 0.58 | 39. | 73 | 0. | 0.003 | 63 | 0. | 0.48 | 0.003 |
| 874 | 5.65 | 5.65 | 70 | 0. | 0.52 | 35. | 65 | 0. | 0.003 | 50 | 0. | 0.38 | 0.002 |
| 875 | 5.65 | 5.65 | 66 | 0. | 0.50 | 34. | 65 | 0. | 0.003 | 57 | 0. | 0.43 | 0.002 |
| 876 | 5.65 | 5.65 | 89 | 0. | 0.67 | 45. | 80 | 0. | 0.003 | 60 | 0. | 0.45 | 0.002 |
| 877 | 5.65 | 5.65 | 92 | 0. | 0.69 | 47. | 91 | 0. | 0.004 | 75 | 0. | 0.56 | 0.003 |
| 878 | 5.65 | 5.65 | 142 | 0. | 1.07 | 73. | 135 | 0. | 0.006 | 96 | 0. | 0.73 | 0.004 |
| 879 | 5.65 | 5.65 | 187 | 0. | 1.41 | 96. | 181 | 0. | 0.007 | 153 | 0. | 1.15 | 0.006 |
| 880 | 5.65 | 5.65 | 433 | 0. | 3.26 | 221. | 411 | 0. | 0.017 | 295 | 0. | 2.22 | 0.012 |
| 881 | 5.65 | 5.65 | 492 | 0. | 3.71 | 251. | 465 | 0. | 0.019 | 383 | 0. | 2.88 | 0.016 |
| 882 | 5.65 | 5.65 | 931 | 0. | 7.02 | 475. | 878 | 0. | 0.036 | 754 | 0. | 5.69 | 0.031 |
| 883 | 5.65 | 5.65 | 918 | 0. | 6.92 | 468. | 861 | 0. | 0.035 | 749 | 0. | 5.65 | 0.031 |
| 884 | 5.65 | 5.65 | 42 | 0. | 0.31 | 21. | 30 | 0. | 0.001 | 21 | 0. | 0.16 | 0.001 |
| 885 | 5.65 | 5.65 | 28 | 0. | 0.21 | 14. | 16 | 0. | 0.001 | 0. | 0. | 0.00 | 0.000 |
| 886 | 5.65 | 5.65 | 318 | 0. | 2.40 | 162. | 227 | 0. | 0.009 | 172 | 0. | 1.30 | 0.007 |
| 887 | 5.65 | 5.65 | 308 | 0. | 2.32 | 157. | 214 | 0. | 0.009 | 145 | 0. | 1.09 | 0.006 |
| 888 | 5.65 | 5.65 | 68 | 0. | 0.51 | 35. | 56 | 0. | 0.002 | 44 | 0. | 0.33 | 0.002 |
| 889 | 5.65 | 5.65 | 369 | 0. | 2.78 | 188. | 274 | 0. | 0.011 | 210 | 0. | 1.59 | 0.009 |
| 890 | 5.65 | 5.65 | 802 | 0. | 6.05 | 409. | 735 | 0. | 0.030 | 577 | 0. | 4.35 | 0.024 |
| 891 | 5.65 | 5.65 | 811 | 0. | 6.11 | 414. | 760 | 0. | 0.031 | 594 | 0. | 4.48 | 0.024 |
| 974 | 5.65 | 5.65 | 855 | 0. | 6.45 | 436. | 806 | 0. | 0.033 | 648 | 0. | 4.88 | 0.026 |
| 975 | 5.65 | 5.65 | 705 | 0. | 5.31 | 359. | 664 | 0. | 0.027 | 519 | 0. | 3.91 | 0.021 |
| 976 | 5.65 | 5.65 | 133 | 0. | 1.00 | 68. | 125 | 0. | 0.005 | 83 | 0. | 0.63 | 0.003 |
| 977 | 5.65 | 5.65 | 71 | 0. | 0.54 | 36. | 67 | 0. | 0.003 | 36 | 0. | 0.27 | 0.001 |

ARMATURA SUPERIORE ORIZZONTALE

| GUSCI | | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------|------|-----------------|-----|-------|------------------------|-----|------|-------|
| | Af | Afc | Mom | Nor | σc | σf | Mom | Nor | wkF | Mom | Nor | σc | wkP |
| 443 | 5.65 | 5.65 | 5 | 0. | 0.04 | 3. | 18 | 0. | 0.001 | 44 | 0. | 0.33 | 0.002 |
| 444 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 445 | 5.65 | 5.65 | 5 | 0. | 0.04 | 2. | 4 | 0. | 0.000 | 83 | 0. | 0.63 | 0.003 |
| 446 | 5.65 | 5.65 | 624 | 0. | 4.70 | 318. | 608 | 0. | 0.025 | 530 | 0. | 4.00 | 0.022 |
| 447 | 5.65 | 5.65 | 716 | 0. | 5.40 | 365. | 796 | 0. | 0.033 | 671 | 0. | 5.06 | 0.027 |
| 448 | 5.65 | 5.65 | 550 | 0. | 4.14 | 280. | 532 | 0. | 0.022 | 406 | 0. | 3.06 | 0.017 |
| 449 | 5.65 | 5.65 | 188 | 0. | 1.42 | 96. | 183 | 0. | 0.008 | 104 | 0. | 0.78 | 0.004 |
| 450 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 451 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 452 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 2 | 0. | 0.000 | 10 | 0. | 0.07 | 0.000 |
| 453 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 454 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 455 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 456 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 457 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 458 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 459 | 5.65 | 5.65 | 661 | 0. | 4.98 | 337. | 649 | 0. | 0.027 | 537 | 0. | 4.05 | 0.022 |
| 460 | 5.65 | 5.65 | 1050 | 0. | 7.92 | 536. | 1040 | 0. | 0.043 | 994 | 0. | 7.49 | 0.041 |
| 461 | 5.65 | 5.65 | 1110 | 0. | 8.36 | 566. | 1073 | 0. | 0.044 | 1028 | 0. | 7.75 | 0.042 |
| 462 | 5.65 | 5.65 | 901 | 0. | 6.79 | 460. | 872 | 0. | 0.036 | 782 | 0. | 5.90 | 0.032 |
| 463 | 5.65 | 5.65 | 650 | 0. | 4.90 | 332. | 640 | 0. | 0.026 | 604 | 0. | 4.56 | 0.025 |
| 464 | 5.65 | 5.65 | 520 | 0. | 3.92 | 265. | 531 | 0. | 0.022 | 510 | 0. | 3.85 | 0.021 |
| 465 | 5.65 | 5.65 | 86 | 0. | 0.65 | 44. | 105 | 0. | 0.004 | 147 | 0. | 1.11 | 0.006 |
| 466 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 467 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 468 | 5.65 | 5.65 | 459 | 0. | 3.46 | 234. | 456 | 0. | 0.019 | 331 | 0. | 2.49 | 0.014 |
| 469 | 5.65 | 5.65 | 939 | 0. | 7.08 | 479. | 915 | 0. | 0.037 | 872 | 0. | 6.57 | 0.036 |
| 470 | 5.65 | 5.65 | 1084 | 0. | 8.17 | 553. | 1051 | 0. | 0.043 | 1040 | 0. | 7.84 | 0.043 |
| 471 | 5.65 | 5.65 | 1017 | 0. | 7.66 | 518. | 984 | 0. | 0.040 | 949 | 0. | 7.16 | 0.039 |
| 472 | 5.65 | 5.65 | 812 | 0. | 6.12 | 414. | 788 | 0. | 0.032 | 741 | 0. | 5.59 | 0.030 |
| 473 | 5.65 | 5.65 | 535 | 0. | 4.03 | 273. | 542 | 0. | 0.022 | 499 | 0. | 3.76 | 0.020 |
| 474 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 475 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 476 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 477 | 5.65 | 5.65 | 561 | 0. | 4.23 | 286. | 556 | 0. | 0.023 | 503 | 0. | 3.79 | 0.021 |
| 478 | 5.65 | 5.65 | 881 | 0. | 6.64 | 450. | 863 | 0. | 0.035 | 920 | 0. | 6.94 | 0.038 |
| 479 | 5.65 | 5.65 | 907 | 0. | 6.84 | 463. | 884 | 0. | 0.036 | 978 | 0. | 7.38 | 0.040 |
| 480 | 5.65 | 5.65 | 834 | 0. | 6.28 | 425. | 808 | 0. | 0.033 | 846 | 0. | 6.38 | 0.035 |
| 481 | 5.65 | 5.65 | 758 | 0. | 5.71 | 387. | 735 | 0. | 0.030 | 784 | 0. | 5.91 | 0.032 |
| 482 | 5.65 | 5.65 | 639 | 0. | 4.82 | 326. | 625 | 0. | 0.026 | 633 | 0. | 4.77 | 0.026 |
| 483 | 5.65 | 5.65 | 154 | 0. | 1.16 | 78. | 163 | 0. | 0.007 | 143 | 0. | 1.08 | 0.006 |
| 484 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 23 | 0. | 0.18 | 0.001 |
| 485 | 5.65 | 5.65 | 35 | 0. | 0.26 | 18. | 47 | 0. | 0.002 | 67 | 0. | 0.51 | 0.003 |
| 486 | 5.65 | 5.65 | 572 | 0. | 4.31 | 292. | 569 | 0. | 0.023 | 534 | 0. | 4.03 | 0.022 |
| 487 | 5.65 | 5.65 | 810 | 0. | 6.11 | 413. | 792 | 0. | 0.032 | 830 | 0. | 6.26 | 0.034 |
| 488 | 5.65 | 5.65 | 732 | 0. | 5.52 | 373. | 713 | 0. | 0.029 | 805 | 0. | 6.07 | 0.033 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|------|------|------|----|------|------|------|----|-------|-----|----|------|-------|
| 489 | 5.65 | 5.65 | 496 | 0. | 3.74 | 253. | 483 | 0. | 0.020 | 556 | 0. | 4.19 | 0.023 |
| 490 | 5.65 | 5.65 | 501 | 0. | 3.77 | 255. | 487 | 0. | 0.020 | 533 | 0. | 4.02 | 0.022 |
| 491 | 5.65 | 5.65 | 532 | 0. | 4.01 | 271. | 522 | 0. | 0.021 | 566 | 0. | 4.27 | 0.023 |
| 492 | 5.65 | 5.65 | 326 | 0. | 2.46 | 167. | 331 | 0. | 0.014 | 267 | 0. | 2.01 | 0.011 |
| 493 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 39 | 0. | 0.002 | 55 | 0. | 0.42 | 0.002 |
| 494 | 5.65 | 5.65 | 61 | 0. | 0.46 | 31. | 73 | 0. | 0.003 | 96 | 0. | 0.73 | 0.004 |
| 495 | 5.65 | 5.65 | 28 | 0. | 0.21 | 14. | 81 | 0. | 0.003 | 114 | 0. | 0.86 | 0.005 |
| 496 | 5.65 | 5.65 | 75 | 0. | 0.57 | 38. | 86 | 0. | 0.004 | 108 | 0. | 0.82 | 0.004 |
| 497 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 31 | 0. | 0.001 | 62 | 0. | 0.47 | 0.003 |
| 498 | 5.65 | 5.65 | 81 | 0. | 0.61 | 41. | 90 | 0. | 0.004 | 104 | 0. | 0.78 | 0.004 |
| 499 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 500 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 501 | 5.65 | 5.65 | 3 | 0. | 0.02 | 1. | 19 | 0. | 0.001 | 60 | 0. | 0.45 | 0.002 |
| 502 | 5.65 | 5.65 | 84 | 0. | 0.63 | 43. | 84 | 0. | 0.003 | 100 | 0. | 0.75 | 0.004 |
| 503 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 10 | 0. | 0.07 | 0.000 |
| 504 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 505 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 506 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 507 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 508 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 509 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 510 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 511 | 5.65 | 5.65 | 295 | 0. | 2.22 | 150. | 318 | 0. | 0.013 | 428 | 0. | 3.22 | 0.017 |
| 512 | 5.65 | 5.65 | 69 | 0. | 0.52 | 35. | 87 | 0. | 0.004 | 182 | 0. | 1.37 | 0.007 |
| 513 | 5.65 | 5.65 | 435 | 0. | 3.28 | 222. | 435 | 0. | 0.018 | 562 | 0. | 4.24 | 0.023 |
| 514 | 5.65 | 5.65 | 153 | 0. | 1.15 | 78. | 155 | 0. | 0.006 | 249 | 0. | 1.88 | 0.010 |
| 515 | 5.65 | 5.65 | 339 | 0. | 2.55 | 173. | 332 | 0. | 0.014 | 437 | 0. | 3.30 | 0.018 |
| 516 | 5.65 | 5.65 | 53 | 0. | 0.40 | 27. | 53 | 0. | 0.002 | 148 | 0. | 1.12 | 0.006 |
| 517 | 5.65 | 5.65 | 63 | 0. | 0.48 | 32. | 66 | 0. | 0.003 | 138 | 0. | 1.04 | 0.006 |
| 518 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 70 | 0. | 0.53 | 0.003 |
| 519 | 5.65 | 5.65 | 214 | 0. | 1.61 | 109. | 222 | 0. | 0.009 | 347 | 0. | 2.62 | 0.014 |
| 520 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 521 | 5.65 | 5.65 | 254 | 0. | 1.92 | 130. | 260 | 0. | 0.011 | 248 | 0. | 1.87 | 0.010 |
| 522 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 30 | 0. | 0.23 | 0.001 |
| 523 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 524 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 525 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 526 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 19 | 0. | 0.15 | 0.001 |
| 527 | 5.65 | 5.65 | 667 | 0. | 5.03 | 340. | 651 | 0. | 0.027 | 601 | 0. | 4.53 | 0.025 |
| 528 | 5.65 | 5.65 | 713 | 0. | 5.38 | 364. | 698 | 0. | 0.029 | 630 | 0. | 4.75 | 0.026 |
| 529 | 5.65 | 5.65 | 905 | 0. | 6.82 | 462. | 906 | 0. | 0.037 | 808 | 0. | 6.09 | 0.033 |
| 530 | 5.65 | 5.65 | 1009 | 0. | 7.61 | 515. | 1005 | 0. | 0.041 | 934 | 0. | 7.04 | 0.038 |
| 531 | 5.65 | 5.65 | 795 | 0. | 5.99 | 406. | 766 | 0. | 0.031 | 628 | 0. | 4.74 | 0.026 |
| 532 | 5.65 | 5.65 | 967 | 0. | 7.29 | 493. | 934 | 0. | 0.038 | 822 | 0. | 6.19 | 0.034 |
| 533 | 5.65 | 5.65 | 374 | 0. | 2.82 | 191. | 365 | 0. | 0.015 | 231 | 0. | 1.74 | 0.009 |
| 534 | 5.65 | 5.65 | 624 | 0. | 4.71 | 318. | 605 | 0. | 0.025 | 457 | 0. | 3.45 | 0.019 |
| 535 | 5.65 | 5.65 | 108 | 0. | 0.81 | 55. | 128 | 0. | 0.005 | 106 | 0. | 0.80 | 0.004 |
| 536 | 5.65 | 5.65 | 405 | 0. | 3.05 | 207. | 406 | 0. | 0.017 | 361 | 0. | 2.72 | 0.015 |
| 537 | 5.65 | 5.65 | 141 | 0. | 1.06 | 72. | 219 | 0. | 0.009 | 173 | 0. | 1.30 | 0.007 |
| 538 | 5.65 | 5.65 | 357 | 0. | 2.69 | 182. | 376 | 0. | 0.015 | 347 | 0. | 2.61 | 0.014 |
| 539 | 5.65 | 5.65 | 72 | 0. | 0.54 | 37. | 92 | 0. | 0.004 | 104 | 0. | 0.78 | 0.004 |
| 540 | 5.65 | 5.65 | 85 | 0. | 0.64 | 43. | 105 | 0. | 0.004 | 159 | 0. | 1.20 | 0.006 |
| 541 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 542 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 543 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 544 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 545 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 546 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 547 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 548 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 549 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 550 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 551 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 552 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 553 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 554 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 555 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 556 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 557 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 558 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 559 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 560 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 561 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 562 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 563 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 564 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 746 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 747 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 748 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 749 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 750 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 751 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 752 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 753 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 754 | 5.65 | 5.65 | 72 | 0. | 0.54 | 37. | 81 | 0. | 0.003 | 98 | 0. | 0.74 | 0.004 |
| 755 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 756 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 10 | 0. | 0.07 | 0.000 |
| 757 | 5.65 | 5.65 | 42 | 0. | 0.31 | 21. | 53 | 0. | 0.002 | 135 | 0. | 1.01 | 0.006 |
| 758 | 5.65 | 5.65 | 91 | 0. | 0.68 | 46. | 88 | 0. | 0.004 | 128 | 0. | 0.97 | 0.005 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|------|------|----|----|------|----|----|----|-------|----|----|------|-------|
| 759 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 10 | 0. | 0.08 | 0.000 |
| 760 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 761 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 762 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 763 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 764 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 765 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 766 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 767 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 768 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 769 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 770 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 771 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 772 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 773 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 774 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 775 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 852 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 853 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 854 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 855 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 856 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 857 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 858 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 859 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 860 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 861 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 862 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 863 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 864 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 865 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 866 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 867 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 868 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 869 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 870 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 871 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 872 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 873 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 874 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 875 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 876 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 877 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 878 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 879 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 880 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 881 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 882 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 883 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 884 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 885 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 3 | 0. | 0.02 | 0.000 |
| 886 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 887 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 888 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 889 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 890 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 891 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 974 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 975 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 19 | 0. | 0.15 | 0.001 |
| 976 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 977 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |

ARMATURA SUPERIORE VERTICALE

| GUSCI | | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | | |
|-------|------|------|-------------------|-----|------------|------------|-----------------|-----|-------|------------------------|-----|------------|-------|--|
| | | | Mom | Nor | σ_c | σ_f | Mom | Nor | wkF | Mom | Nor | σ_c | wkP | |
| 443 | 5.65 | 5.65 | 161 | 0. | 1.21 | 82. | 160 | 0. | 0.007 | 150 | 0. | 1.13 | 0.006 | |
| 444 | 5.65 | 5.65 | 174 | 0. | 1.31 | 89. | 172 | 0. | 0.007 | 179 | 0. | 1.35 | 0.007 | |
| 445 | 5.65 | 5.65 | 182 | 0. | 1.37 | 93. | 179 | 0. | 0.007 | 185 | 0. | 1.39 | 0.008 | |
| 446 | 5.65 | 5.65 | 149 | 0. | 1.12 | 76. | 152 | 0. | 0.006 | 166 | 0. | 1.25 | 0.007 | |
| 447 | 5.65 | 5.65 | 63 | 0. | 0.48 | 32. | 69 | 0. | 0.003 | 99 | 0. | 0.75 | 0.004 | |
| 448 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 | |
| 449 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 | |
| 450 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 | |
| 451 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 12 | 0. | 0.09 | 0.000 | |
| 452 | 5.65 | 5.65 | 13 | 0. | 0.09 | 6. | 35 | 0. | 0.001 | 54 | 0. | 0.41 | 0.002 | |
| 453 | 5.65 | 5.65 | 48 | 0. | 0.36 | 24. | 71 | 0. | 0.003 | 91 | 0. | 0.68 | 0.004 | |
| 454 | 5.65 | 5.65 | 61 | 0. | 0.46 | 31. | 84 | 0. | 0.003 | 108 | 0. | 0.82 | 0.004 | |
| 455 | 5.65 | 5.65 | 52 | 0. | 0.39 | 26. | 73 | 0. | 0.003 | 94 | 0. | 0.71 | 0.004 | |
| 456 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 | |
| 457 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 | |
| 458 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 | |
| 459 | 5.65 | 5.65 | 704 | 0. | 5.31 | 359. | 703 | 0. | 0.029 | 651 | 0. | 4.91 | 0.027 | |
| 460 | 5.65 | 5.65 | 972 | 0. | 7.33 | 496. | 960 | 0. | 0.039 | 906 | 0. | 6.83 | 0.037 | |
| 461 | 5.65 | 5.65 | 1107 | 0. | 8.35 | 565. | 1089 | 0. | 0.045 | 1012 | 0. | 7.63 | 0.041 | |
| 462 | 5.65 | 5.65 | 1046 | 0. | 7.89 | 534. | 1027 | 0. | 0.042 | 935 | 0. | 7.05 | 0.038 | |
| 463 | 5.65 | 5.65 | 974 | 0. | 7.34 | 497. | 965 | 0. | 0.039 | 941 | 0. | 7.09 | 0.038 | |
| 464 | 5.65 | 5.65 | 849 | 0. | 6.40 | 433. | 843 | 0. | 0.034 | 877 | 0. | 6.61 | 0.036 | |
| 465 | 5.65 | 5.65 | 531 | 0. | 4.00 | 271. | 544 | 0. | 0.022 | 668 | 0. | 5.04 | 0.027 | |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | |
|-----|------|------|------|----|-------|------|------|--------|------|----|------|-------|
| 466 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 467 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 468 | 5.65 | 5.65 | 713 | 0. | 5.37 | 363. | 700 | 0.0029 | 610 | 0. | 4.60 | 0.025 |
| 469 | 5.65 | 5.65 | 1087 | 0. | 8.19 | 554. | 1062 | 0.0043 | 980 | 0. | 7.39 | 0.040 |
| 470 | 5.65 | 5.65 | 1338 | 0. | 10.09 | 682. | 1304 | 0.0053 | 1237 | 0. | 9.32 | 0.051 |
| 471 | 5.65 | 5.65 | 1383 | 0. | 10.42 | 705. | 1346 | 0.0055 | 1306 | 0. | 9.84 | 0.053 |
| 472 | 5.65 | 5.65 | 1248 | 0. | 9.41 | 637. | 1215 | 0.0050 | 1197 | 0. | 9.02 | 0.049 |
| 473 | 5.65 | 5.65 | 921 | 0. | 6.94 | 470. | 903 | 0.0037 | 961 | 0. | 7.24 | 0.039 |
| 474 | 5.65 | 5.65 | 558 | 0. | 4.21 | 285. | 549 | 0.0022 | 583 | 0. | 4.40 | 0.024 |
| 475 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 476 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 477 | 5.65 | 5.65 | 879 | 0. | 6.63 | 449. | 862 | 0.0035 | 788 | 0. | 5.94 | 0.032 |
| 478 | 5.65 | 5.65 | 1132 | 0. | 8.53 | 577. | 1107 | 0.0045 | 1053 | 0. | 7.94 | 0.043 |
| 479 | 5.65 | 5.65 | 1262 | 0. | 9.51 | 643. | 1233 | 0.0050 | 1191 | 0. | 8.98 | 0.049 |
| 480 | 5.65 | 5.65 | 1276 | 0. | 9.62 | 651. | 1243 | 0.0051 | 1195 | 0. | 9.01 | 0.049 |
| 481 | 5.65 | 5.65 | 1274 | 0. | 9.61 | 650. | 1239 | 0.0051 | 1217 | 0. | 9.18 | 0.050 |
| 482 | 5.65 | 5.65 | 1029 | 0. | 7.76 | 525. | 1001 | 0.0041 | 1036 | 0. | 7.81 | 0.042 |
| 483 | 5.65 | 5.65 | 618 | 0. | 4.66 | 315. | 608 | 0.0025 | 686 | 0. | 5.17 | 0.028 |
| 484 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 485 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 486 | 5.65 | 5.65 | 606 | 0. | 4.57 | 309. | 592 | 0.0024 | 551 | 0. | 4.15 | 0.023 |
| 487 | 5.65 | 5.65 | 766 | 0. | 5.77 | 391. | 745 | 0.0030 | 677 | 0. | 5.10 | 0.028 |
| 488 | 5.65 | 5.65 | 816 | 0. | 6.15 | 416. | 790 | 0.0032 | 669 | 0. | 5.04 | 0.027 |
| 489 | 5.65 | 5.65 | 701 | 0. | 5.28 | 357. | 689 | 0.0028 | 530 | 0. | 4.00 | 0.022 |
| 490 | 5.65 | 5.65 | 843 | 0. | 6.36 | 430. | 826 | 0.0034 | 714 | 0. | 5.38 | 0.029 |
| 491 | 5.65 | 5.65 | 798 | 0. | 6.02 | 407. | 782 | 0.0032 | 741 | 0. | 5.58 | 0.030 |
| 492 | 5.65 | 5.65 | 624 | 0. | 4.70 | 318. | 613 | 0.0025 | 597 | 0. | 4.50 | 0.024 |
| 493 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 494 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 495 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 496 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 497 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 498 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 499 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 500 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 501 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 502 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 503 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 504 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 505 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 506 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 507 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 508 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 509 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 510 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 511 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 512 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 513 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 514 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 515 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 516 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 517 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 518 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 519 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 520 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 521 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 522 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 523 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 524 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 525 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 20 | 0. | 0.15 | 0.001 |
| 526 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 7 | 0. | 0.05 | 0.000 |
| 527 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 528 | 5.65 | 5.65 | 62 | 0. | 0.46 | 31. | 231 | 0.0009 | 225 | 0. | 1.69 | 0.009 |
| 529 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 530 | 5.65 | 5.65 | 143 | 0. | 1.08 | 73. | 303 | 0.0012 | 221 | 0. | 1.66 | 0.009 |
| 531 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 532 | 5.65 | 5.65 | 56 | 0. | 0.42 | 28. | 186 | 0.0008 | 73 | 0. | 0.55 | 0.003 |
| 533 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 534 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 535 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 536 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 537 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 538 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 89 | 0. | 0.67 | 0.004 |
| 539 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 540 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 136 | 0. | 1.02 | 0.006 |
| 541 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 542 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 110 | 0. | 0.83 | 0.004 |
| 543 | 5.65 | 5.65 | 215 | 0. | 1.62 | 110. | 231 | 0.0009 | 345 | 0. | 2.60 | 0.014 |
| 544 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 3 | 0.000 | 97 | 0. | 0.73 | 0.004 |
| 545 | 5.65 | 5.65 | 265 | 0. | 1.99 | 135. | 264 | 0.0011 | 294 | 0. | 2.22 | 0.012 |
| 546 | 5.65 | 5.65 | 14 | 0. | 0.11 | 7. | 22 | 0.0001 | 75 | 0. | 0.57 | 0.003 |
| 547 | 5.65 | 5.65 | 282 | 0. | 2.13 | 144. | 279 | 0.0011 | 326 | 0. | 2.46 | 0.013 |
| 548 | 5.65 | 5.65 | 21 | 0. | 0.16 | 11. | 25 | 0.0001 | 81 | 0. | 0.61 | 0.003 |
| 549 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 550 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 551 | 5.65 | 5.65 | 277 | 0. | 2.09 | 141. | 287 | 0.0012 | 403 | 0. | 3.04 | 0.016 |
| 552 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 9 | 0.000 | 104 | 0. | 0.78 | 0.004 |
| 553 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 554 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|------|------|-----|----|------|------|-----|----|-------|-----|----|------|-------|
| 555 | 5.65 | 5.65 | 214 | 0. | 1.62 | 109. | 244 | 0. | 0.010 | 202 | 0. | 1.52 | 0.008 |
| 556 | 5.65 | 5.65 | 416 | 0. | 3.14 | 212. | 409 | 0. | 0.017 | 365 | 0. | 2.75 | 0.015 |
| 557 | 5.65 | 5.65 | 216 | 0. | 1.63 | 110. | 224 | 0. | 0.009 | 179 | 0. | 1.35 | 0.007 |
| 558 | 5.65 | 5.65 | 601 | 0. | 4.53 | 306. | 592 | 0. | 0.024 | 506 | 0. | 3.81 | 0.021 |
| 559 | 5.65 | 5.65 | 112 | 0. | 0.85 | 57. | 119 | 0. | 0.005 | 51 | 0. | 0.38 | 0.002 |
| 560 | 5.65 | 5.65 | 376 | 0. | 2.84 | 192. | 376 | 0. | 0.015 | 289 | 0. | 2.18 | 0.012 |
| 561 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 55 | 0. | 0.41 | 0.002 |
| 562 | 5.65 | 5.65 | 11 | 0. | 0.08 | 6. | 108 | 0. | 0.004 | 141 | 0. | 1.06 | 0.006 |
| 563 | 5.65 | 5.65 | 60 | 0. | 0.45 | 31. | 83 | 0. | 0.003 | 53 | 0. | 0.40 | 0.002 |
| 564 | 5.65 | 5.65 | 413 | 0. | 3.12 | 211. | 429 | 0. | 0.018 | 370 | 0. | 2.79 | 0.015 |
| 746 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 747 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 748 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 749 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 750 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 751 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 752 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 753 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 754 | 5.65 | 5.65 | 149 | 0. | 1.12 | 76. | 146 | 0. | 0.006 | 134 | 0. | 1.01 | 0.005 |
| 755 | 5.65 | 5.65 | 154 | 0. | 1.16 | 78. | 149 | 0. | 0.006 | 152 | 0. | 1.15 | 0.006 |
| 756 | 5.65 | 5.65 | 131 | 0. | 0.99 | 67. | 127 | 0. | 0.005 | 150 | 0. | 1.13 | 0.006 |
| 757 | 5.65 | 5.65 | 50 | 0. | 0.38 | 26. | 49 | 0. | 0.002 | 105 | 0. | 0.79 | 0.004 |
| 758 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 759 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 760 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 761 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 762 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 763 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 764 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 765 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 766 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 767 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 768 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 769 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 770 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 771 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 772 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 773 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 774 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 775 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 852 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 853 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 854 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 855 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 856 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 857 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 858 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 859 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 860 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 861 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 862 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 863 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 864 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 865 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 866 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 867 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 868 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 869 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 870 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 871 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 872 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 873 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 874 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 875 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 876 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 877 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 878 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 879 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 880 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 881 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 882 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 883 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 884 | 5.65 | 5.65 | 18 | 0. | 0.13 | 9. | 38 | 0. | 0.002 | 54 | 0. | 0.40 | 0.002 |
| 885 | 5.65 | 5.65 | 2 | 0. | 0.01 | 1. | 23 | 0. | 0.001 | 39 | 0. | 0.29 | 0.002 |
| 886 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 887 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 888 | 5.65 | 5.65 | 32 | 0. | 0.24 | 16. | 51 | 0. | 0.002 | 71 | 0. | 0.53 | 0.003 |
| 889 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 890 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 891 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 974 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 975 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 976 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 977 | 5.65 | 5.65 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |

VERIFICA DEI SETTI VERTICALI

MACROGUSCIO SETT001

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

| Nome | Descrizione |
|------|----------------------|
| 1 | SLU |
| 2 | SLU VENTOX |
| 3 | SLU VENTOY |
| 6 | SLU con SISMAX PRINC |
| 7 | SLU con SISMAX PRINC |

DATI:

tensione di snervamento acciaio (fyk): 4500 daN/cm2
 coefficiente sicurezza acciaio : 1.15
 deformazione ultima acciaio : 1.97 per mille
 deformazione ultima cls : 3.5 per mille
 rapporto rottura/snervamento (k): 1
 resistenza cilindrica cls (fck): 249 daN/cm2
 coefficiente sicurezza cls : 1.5
 coefficiente riduttivo (alfa): 0.85
 copriferro inferiore (asse armatura): 3 cm
 copriferro superiore (asse armatura): 3 cm
 moltiplicatore sollecitazioni : 1

LEGENDA:

spess = spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
 Af = area disposta al lembo teso, in cm2 al metro
 Afc = area disposta al lembo compresso, in cm2 al metro
 Mom = momento flettente [daNcm/cm]
 Nor = sforzo normale [daN]
 epsC = deformazione cls [per mille]
 epsF = deformazione acciaio [per mille]

<-
 L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

| GUSCIO | spess | INFERIORE ORIZZONTALE | | | | | | INFERIORE VERTICALE | | | | | |
|--------|-------|-----------------------|------|------|-----|------|------|---------------------|------|------|------|------|-------|
| | | Af | Afc | Mom | Nor | epsC | epsF | Af | Afc | Mom | Nor | epsC | epsF |
| 30 | 15 | 3.99 | 3.99 | 0. | -5. | 0.00 | 0.00 | 5.74 | 5.74 | 16. | -54. | 0.03 | -0.02 |
| 31 | 15 | 3.99 | 3.99 | 10. | -3. | 0.01 | 0.01 | 5.74 | 5.74 | 32. | -57. | 0.03 | -0.01 |
| 32 | 15 | 3.99 | 3.99 | 15. | -5. | 0.01 | 0.02 | 5.74 | 5.74 | 42. | -58. | 0.04 | 0.01 |
| 33 | 15 | 3.99 | 3.99 | 18. | -8. | 0.01 | 0.02 | 5.74 | 5.74 | 44. | -54. | 0.04 | 0.01 |
| 34 | 15 | 3.99 | 3.99 | 19. | -6. | 0.01 | 0.03 | 5.74 | 5.74 | 32. | -42. | 0.03 | -0.01 |
| 35 | 15 | 3.99 | 3.99 | 0. | -5. | 0.00 | 0.00 | 5.74 | 5.74 | 3. | -52. | 0.02 | -0.02 |
| 36 | 15 | 3.99 | 3.99 | 0. | 1. | 0.00 | 0.01 | 5.74 | 5.74 | 33. | -50. | 0.03 | 0.00 |
| 37 | 15 | 3.99 | 3.99 | 10. | -3. | 0.01 | 0.01 | 5.74 | 5.74 | 29. | -51. | 0.03 | 0.00 |
| 38 | 15 | 3.99 | 3.99 | 21. | -3. | 0.01 | 0.02 | 5.74 | 5.74 | 25. | -52. | 0.03 | -0.01 |
| 39 | 15 | 3.99 | 3.99 | 15. | -7. | 0.01 | 0.01 | 5.74 | 5.74 | 21. | -48. | 0.03 | -0.01 |
| 40 | 15 | 3.99 | 3.99 | 11. | -1. | 0.00 | 0.01 | 5.74 | 5.74 | 16. | -43. | 0.02 | -0.01 |
| 41 | 15 | 3.99 | 3.99 | 0. | -3. | 0.00 | 0.00 | 5.74 | 5.74 | 7. | -47. | 0.02 | -0.02 |
| 42 | 15 | 3.99 | 3.99 | 1. | 1. | 0.00 | 0.01 | 5.74 | 5.74 | 35. | -48. | 0.03 | 0.00 |
| 43 | 15 | 3.99 | 3.99 | 9. | 0. | 0.00 | 0.01 | 5.74 | 5.74 | 27. | -48. | 0.03 | 0.00 |
| 44 | 15 | 3.99 | 3.99 | 31. | -1. | 0.01 | 0.03 | 5.74 | 5.74 | 17. | -46. | 0.03 | -0.01 |
| 45 | 15 | 3.99 | 3.99 | 24. | -3. | 0.01 | 0.03 | 5.74 | 5.74 | 10. | -43. | 0.02 | -0.01 |
| 46 | 15 | 3.99 | 3.99 | 7. | -1. | 0.00 | 0.01 | 5.74 | 5.74 | 7. | -39. | 0.02 | -0.01 |
| 47 | 15 | 3.99 | 3.99 | 0. | 1. | 0.00 | 0.01 | 5.74 | 5.74 | 2. | -37. | 0.02 | -0.02 |
| 48 | 15 | 3.99 | 3.99 | 0. | 0. | 0.00 | 0.00 | 5.74 | 5.74 | 27. | -45. | 0.03 | 0.00 |
| 49 | 15 | 3.99 | 3.99 | 25. | 0. | 0.01 | 0.03 | 5.74 | 5.74 | 24. | -44. | 0.03 | 0.00 |
| 50 | 15 | 3.99 | 3.99 | 48. | 1. | 0.02 | 0.06 | 5.74 | 5.74 | 17. | -41. | 0.02 | -0.01 |
| 51 | 15 | 3.99 | 3.99 | 38. | 0. | 0.01 | 0.04 | 5.74 | 5.74 | 9. | -37. | 0.02 | -0.01 |
| 52 | 15 | 3.99 | 3.99 | 19. | 0. | 0.01 | 0.02 | 5.74 | 5.74 | 4. | -34. | 0.02 | -0.01 |
| 53 | 15 | 3.99 | 3.99 | 0. | 2. | 0.00 | 0.01 | 5.74 | 5.74 | 0. | -29. | 0.01 | -0.01 |
| 54 | 15 | 3.99 | 3.99 | 0. | 1. | 0.00 | 0.01 | 5.74 | 5.74 | 20. | -41. | 0.02 | -0.02 |
| 55 | 15 | 3.99 | 3.99 | 39. | 1. | 0.01 | 0.05 | 5.74 | 5.74 | 18. | -39. | 0.02 | 0.00 |
| 56 | 15 | 3.99 | 3.99 | 65. | 1. | 0.02 | 0.08 | 5.74 | 5.74 | 20. | -35. | 0.02 | 0.00 |
| 57 | 15 | 3.99 | 3.99 | 57. | 2. | 0.01 | 0.07 | 5.74 | 5.74 | 17. | -31. | 0.02 | -0.01 |
| 58 | 15 | 3.99 | 3.99 | 24. | 2. | 0.00 | 0.04 | 5.74 | 5.74 | 7. | -27. | 0.01 | -0.01 |
| 59 | 15 | 3.99 | 3.99 | 0. | 4. | 0.00 | 0.02 | 5.74 | 5.74 | 1. | -22. | 0.01 | -0.01 |
| 60 | 15 | 3.99 | 3.99 | 0. | 4. | 0.00 | 0.03 | 5.74 | 5.74 | 0. | -41. | 0.02 | -0.02 |
| 61 | 15 | 3.99 | 3.99 | 45. | 1. | 0.01 | 0.06 | 5.74 | 5.74 | 24. | -30. | 0.02 | -0.01 |
| 62 | 15 | 3.99 | 3.99 | 75. | 1. | 0.03 | 0.09 | 5.74 | 5.74 | 38. | -27. | 0.02 | 0.02 |
| 63 | 15 | 3.99 | 3.99 | 82. | 2. | 0.02 | 0.10 | 5.74 | 5.74 | 44. | -24. | 0.02 | 0.02 |
| 64 | 15 | 3.99 | 3.99 | 53. | 3. | 0.01 | 0.07 | 5.74 | 5.74 | 31. | -21. | 0.02 | 0.02 |
| 65 | 15 | 3.99 | 3.99 | 0. | 5. | 0.00 | 0.03 | 5.74 | 5.74 | 8. | -16. | 0.01 | 0.00 |
| 66 | 15 | 3.99 | 3.99 | 35. | 2. | 0.00 | 0.05 | 5.74 | 5.74 | 64. | -31. | 0.03 | 0.03 |
| 67 | 15 | 3.99 | 3.99 | 78. | -1. | 0.03 | 0.09 | 5.74 | 5.74 | 211. | -40. | 0.09 | 0.13 |
| 68 | 15 | 3.99 | 3.99 | 78. | 0. | 0.03 | 0.09 | 5.74 | 5.74 | 264. | -42. | 0.11 | 0.17 |
| 69 | 15 | 3.99 | 3.99 | 85. | 1. | 0.03 | 0.10 | 5.74 | 5.74 | 270. | -39. | 0.11 | 0.18 |
| 70 | 15 | 3.99 | 3.99 | 82. | 2. | 0.02 | 0.10 | 5.74 | 5.74 | 207. | -32. | 0.08 | 0.14 |
| 71 | 15 | 3.99 | 3.99 | 47. | 3. | 0.00 | 0.07 | 5.74 | 5.74 | 111. | -20. | 0.05 | 0.07 |
| 72 | 15 | 3.99 | 3.99 | 123. | -2. | 0.05 | 0.13 | 5.74 | 5.74 | 0. | -15. | 0.01 | -0.01 |
| 73 | 15 | 3.99 | 3.99 | 55. | -1. | 0.02 | 0.06 | 5.74 | 5.74 | 0. | -12. | 0.01 | -0.01 |
| 74 | 15 | 3.99 | 3.99 | 19. | 0. | 0.01 | 0.03 | 5.74 | 5.74 | 0. | -6. | 0.00 | 0.00 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|----|------|------|------|-----|------|------|------|------|----|-----|------|------|
| 75 | 15 | 3.99 | 3.99 | 25. | 0. | 0.01 | 0.03 | 5.74 | 5.74 | 0. | -4. | 0.00 | 0.00 |
| 76 | 15 | 3.99 | 3.99 | 55. | 1. | 0.02 | 0.07 | 5.74 | 5.74 | 0. | -4. | 0.00 | 0.00 |
| 77 | 15 | 3.99 | 3.99 | 104. | -2. | 0.04 | 0.11 | 5.74 | 5.74 | 0. | -9. | 0.00 | 0.00 |
| 78 | 15 | 3.99 | 3.99 | 200. | -2. | 0.08 | 0.22 | 5.74 | 5.74 | 4. | -4. | 0.00 | 0.00 |
| 79 | 15 | 3.99 | 3.99 | 163. | -4. | 0.07 | 0.18 | 5.74 | 5.74 | 6. | -4. | 0.00 | 0.00 |
| 262 | 15 | 3.99 | 3.99 | 20. | 4. | 0.00 | 0.04 | 5.74 | 5.74 | 0. | -4. | 0.00 | 0.00 |
| 263 | 15 | 3.99 | 3.99 | 3. | 4. | 0.00 | 0.03 | 5.74 | 5.74 | 3. | -2. | 0.00 | 0.00 |
| 264 | 15 | 3.99 | 3.99 | 0. | 6. | 0.00 | 0.03 | 5.74 | 5.74 | 0. | -1. | 0.00 | 0.00 |
| 265 | 15 | 3.99 | 3.99 | 0. | 3. | 0.00 | 0.02 | 5.74 | 5.74 | 0. | -2. | 0.00 | 0.00 |

| GUSCI | spess | SUPERIORE ORIZZONTALE | | | | SUPERIORE VERTICALE | | | | Mom | Nor | epsC | epsF |
|-------|-------|-----------------------|------|------|------|---------------------|------|------|------|------|------|------|-------|
| | | Af | Afc | Mom | epsF | Af | Afc | Mom | epsC | | | | |
| 30 | 15 | 3.99 | 3.99 | 16. | -3. | 0.01 | 0.02 | 5.74 | 5.74 | 12. | -51. | 0.03 | -0.02 |
| 31 | 15 | 3.99 | 3.99 | 0. | -3. | 0.00 | 0.00 | 5.74 | 5.74 | 0. | -57. | 0.02 | -0.02 |
| 32 | 15 | 3.99 | 3.99 | 0. | -5. | 0.00 | 0.00 | 5.74 | 5.74 | 0. | -59. | 0.02 | -0.02 |
| 33 | 15 | 3.99 | 3.99 | 0. | -8. | 0.00 | 0.00 | 5.74 | 5.74 | 0. | -54. | 0.02 | -0.02 |
| 34 | 15 | 3.99 | 3.99 | 21. | -2. | 0.01 | 0.02 | 5.74 | 5.74 | 7. | -42. | 0.02 | -0.02 |
| 35 | 15 | 3.99 | 3.99 | 31. | -3. | 0.01 | 0.04 | 5.74 | 5.74 | 44. | -47. | 0.03 | -0.02 |
| 36 | 15 | 3.99 | 3.99 | 3. | 1. | 0.00 | 0.01 | 5.74 | 5.74 | 0. | -51. | 0.02 | -0.02 |
| 37 | 15 | 3.99 | 3.99 | 0. | -3. | 0.00 | 0.00 | 5.74 | 5.74 | 0. | -52. | 0.02 | -0.02 |
| 38 | 15 | 3.99 | 3.99 | 0. | -3. | 0.00 | 0.00 | 5.74 | 5.74 | 0. | -52. | 0.02 | -0.02 |
| 39 | 15 | 3.99 | 3.99 | 0. | -7. | 0.00 | 0.00 | 5.74 | 5.74 | 0. | -48. | 0.02 | -0.02 |
| 40 | 15 | 3.99 | 3.99 | 6. | -1. | 0.00 | 0.01 | 5.74 | 5.74 | 0. | -44. | 0.02 | -0.02 |
| 41 | 15 | 3.99 | 3.99 | 26. | -2. | 0.01 | 0.03 | 5.74 | 5.74 | 0. | -47. | 0.02 | -0.02 |
| 42 | 15 | 3.99 | 3.99 | 6. | 1. | 0.00 | 0.01 | 5.74 | 5.74 | 0. | -48. | 0.02 | -0.02 |
| 43 | 15 | 3.99 | 3.99 | 0. | -1. | 0.00 | 0.00 | 5.74 | 5.74 | 0. | -48. | 0.02 | -0.02 |
| 44 | 15 | 3.99 | 3.99 | 0. | -1. | 0.00 | 0.00 | 5.74 | 5.74 | 0. | -46. | 0.02 | -0.02 |
| 45 | 15 | 3.99 | 3.99 | 0. | -5. | 0.00 | 0.00 | 5.74 | 5.74 | 0. | -43. | 0.02 | -0.02 |
| 46 | 15 | 3.99 | 3.99 | 6. | -2. | 0.00 | 0.01 | 5.74 | 5.74 | 0. | -39. | 0.02 | -0.02 |
| 47 | 15 | 3.99 | 3.99 | 35. | 1. | 0.01 | 0.04 | 5.74 | 5.74 | 2. | -37. | 0.02 | -0.01 |
| 48 | 15 | 3.99 | 3.99 | 37. | 0. | 0.01 | 0.04 | 5.74 | 5.74 | 0. | -46. | 0.02 | -0.02 |
| 49 | 15 | 3.99 | 3.99 | 4. | 1. | 0.00 | 0.01 | 5.74 | 5.74 | 0. | -44. | 0.02 | -0.02 |
| 50 | 15 | 3.99 | 3.99 | 0. | 1. | 0.00 | 0.00 | 5.74 | 5.74 | 0. | -41. | 0.02 | -0.02 |
| 51 | 15 | 3.99 | 3.99 | 0. | -1. | 0.00 | 0.00 | 5.74 | 5.74 | 0. | -37. | 0.02 | -0.02 |
| 52 | 15 | 3.99 | 3.99 | 8. | 0. | 0.00 | 0.01 | 5.74 | 5.74 | 0. | -34. | 0.01 | -0.01 |
| 53 | 15 | 3.99 | 3.99 | 46. | 2. | 0.01 | 0.06 | 5.74 | 5.74 | 3. | -29. | 0.01 | -0.01 |
| 54 | 15 | 3.99 | 3.99 | 80. | 1. | 0.03 | 0.09 | 5.74 | 5.74 | 16. | -42. | 0.02 | -0.01 |
| 55 | 15 | 3.99 | 3.99 | 3. | 2. | 0.00 | 0.01 | 5.74 | 5.74 | 9. | -39. | 0.02 | -0.01 |
| 56 | 15 | 3.99 | 3.99 | 0. | 1. | 0.00 | 0.01 | 5.74 | 5.74 | 0. | -35. | 0.01 | -0.01 |
| 57 | 15 | 3.99 | 3.99 | 0. | 2. | 0.00 | 0.01 | 5.74 | 5.74 | 0. | -31. | 0.01 | -0.01 |
| 58 | 15 | 3.99 | 3.99 | 0. | 3. | 0.00 | 0.01 | 5.74 | 5.74 | 0. | -27. | 0.01 | -0.01 |
| 59 | 15 | 3.99 | 3.99 | 63. | 3. | 0.01 | 0.08 | 5.74 | 5.74 | 1. | -22. | 0.01 | -0.01 |
| 60 | 15 | 3.99 | 3.99 | 111. | 3. | 0.02 | 0.14 | 5.74 | 5.74 | 22. | -41. | 0.02 | -0.01 |
| 61 | 15 | 3.99 | 3.99 | 0. | 2. | 0.00 | 0.01 | 5.74 | 5.74 | 1. | -33. | 0.01 | -0.01 |
| 62 | 15 | 3.99 | 3.99 | 0. | 1. | 0.00 | 0.01 | 5.74 | 5.74 | 0. | -28. | 0.01 | -0.01 |
| 63 | 15 | 3.99 | 3.99 | 0. | 2. | 0.00 | 0.01 | 5.74 | 5.74 | 0. | -24. | 0.01 | -0.01 |
| 64 | 15 | 3.99 | 3.99 | 0. | 3. | 0.00 | 0.02 | 5.74 | 5.74 | 0. | -21. | 0.01 | -0.01 |
| 65 | 15 | 3.99 | 3.99 | 79. | 4. | 0.01 | 0.11 | 5.74 | 5.74 | 0. | -16. | 0.01 | -0.01 |
| 66 | 15 | 3.99 | 3.99 | 94. | 3. | 0.03 | 0.12 | 5.74 | 5.74 | 14. | -31. | 0.02 | -0.01 |
| 67 | 15 | 3.99 | 3.99 | 52. | -1. | 0.02 | 0.06 | 5.74 | 5.74 | 0. | -40. | 0.02 | -0.02 |
| 68 | 15 | 3.99 | 3.99 | 15. | 0. | 0.01 | 0.02 | 5.74 | 5.74 | 0. | -42. | 0.02 | -0.02 |
| 69 | 15 | 3.99 | 3.99 | 21. | 1. | 0.01 | 0.03 | 5.74 | 5.74 | 0. | -40. | 0.02 | -0.02 |
| 70 | 15 | 3.99 | 3.99 | 46. | 2. | 0.01 | 0.06 | 5.74 | 5.74 | 0. | -34. | 0.01 | -0.01 |
| 71 | 15 | 3.99 | 3.99 | 72. | 4. | 0.01 | 0.10 | 5.74 | 5.74 | 0. | -20. | 0.01 | -0.01 |
| 72 | 15 | 3.99 | 3.99 | 47. | -2. | 0.02 | 0.05 | 5.74 | 5.74 | 171. | -15. | 0.06 | 0.12 |
| 73 | 15 | 3.99 | 3.99 | 101. | 1. | 0.04 | 0.11 | 5.74 | 5.74 | 245. | -9. | 0.09 | 0.18 |
| 74 | 15 | 3.99 | 3.99 | 96. | 4. | 0.02 | 0.13 | 5.74 | 5.74 | 240. | -5. | 0.08 | 0.18 |
| 75 | 15 | 3.99 | 3.99 | 86. | 4. | 0.02 | 0.12 | 5.74 | 5.74 | 232. | -4. | 0.08 | 0.18 |
| 76 | 15 | 3.99 | 3.99 | 65. | 1. | 0.02 | 0.08 | 5.74 | 5.74 | 202. | -3. | 0.07 | 0.15 |
| 77 | 15 | 3.99 | 3.99 | 47. | 0. | 0.02 | 0.05 | 5.74 | 5.74 | 123. | -5. | 0.04 | 0.09 |
| 78 | 15 | 3.99 | 3.99 | 0. | -2. | 0.00 | 0.00 | 5.74 | 5.74 | 15. | -5. | 0.01 | 0.01 |
| 79 | 15 | 3.99 | 3.99 | 16. | -4. | 0.01 | 0.02 | 5.74 | 5.74 | 0. | -4. | 0.00 | 0.00 |
| 262 | 15 | 3.99 | 3.99 | 77. | 3. | 0.01 | 0.10 | 5.74 | 5.74 | 66. | -2. | 0.02 | 0.05 |
| 263 | 15 | 3.99 | 3.99 | 0. | 4. | 0.00 | 0.02 | 5.74 | 5.74 | 58. | -2. | 0.02 | 0.04 |
| 264 | 15 | 3.99 | 3.99 | 83. | 5. | 0.01 | 0.12 | 5.74 | 5.74 | 73. | 0. | 0.02 | 0.06 |
| 265 | 15 | 3.99 | 3.99 | 74. | 3. | 0.01 | 0.10 | 5.74 | 5.74 | 62. | -1. | 0.02 | 0.05 |

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

MACROGUSCIO SETTO01

VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

| Nome | Descrizione |
|------|-------------------------------|
| 12 | Rara (RARA) |
| 13 | Rara VentoX (RARA) |
| 14 | Rara VentoY (RARA) |
| 15 | Frequente (FREQUENTE) |
| 16 | Frequente VentoX (FREQUENTE) |
| 17 | Frequente VentoY (FREQUENTE) |
| 18 | Quasi Perm (QUASI PERMANENTE) |

DATI:

copriferro inferiore (asse armatura): 3 cm
 copriferro superiore (asse armatura): 3 cm

Af = area effettiva tesa (cm2 al metro)

Afc = area effettiva compressa (cm2 al metro)

Mom = momento flettente [daNcm/cm]

Nor = sforzo normale [daN]

σ_c = tensione calcestruzzo [daN/cm2]

valore max per combinazione rara = 149.4 daN/cm2

quasi permanente = 112 daN/cm2

σ_f = tensione acciaio [daN/cm2]

valore max per combinazione rara = 3600 daN/cm2

wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm

wkP = apertura caratteristica per combinazione quasi permanente (mm) - valore max = 0.3 mm

<-

ARMATURA INFERIORE ORIZZONTALE

| GUSCI | | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------------|------------|-----------------|-----|-------|------------------------|-----|------------|-------|
| | Af | Afc | Mom | Nor | σ_c | σ_f | Mom | Nor | wkF | Mom | Nor | σ_c | wkP |
| 30 | 3.99 | 3.99 | 0. | -5 | 0.29 | -4. | 1 | -2 | 0.000 | 0. | -3 | 0.22 | 0.000 |
| 31 | 3.99 | 3.99 | 11 | -6 | 0.65 | -3. | 11 | -6 | 0.000 | 11 | -5 | 0.58 | 0.000 |
| 32 | 3.99 | 3.99 | 13 | -5 | 0.64 | -2. | 13 | -5 | 0.000 | 14 | -4 | 0.60 | 0.000 |
| 33 | 3.99 | 3.99 | 19 | -1 | 1.03 | 27. | 19 | -2 | 0.001 | 20 | -2 | 0.98 | 0.001 |
| 34 | 3.99 | 3.99 | 21 | -5 | 0.91 | 2. | 21 | -5 | 0.000 | 17 | -7 | 0.84 | 0.000 |
| 35 | 3.99 | 3.99 | 0. | -3 | 0.16 | -2. | 0. | -3 | 0.000 | 0. | -5 | 0.33 | 0.000 |
| 36 | 3.99 | 3.99 | 0. | -1 | 0.07 | -1. | 0. | -1 | 0.000 | 0. | 0. | 0.02 | 0.000 |
| 37 | 3.99 | 3.99 | 9 | -2 | 0.39 | 1. | 8 | -2 | 0.000 | 7 | -1 | 0.31 | 0.000 |
| 38 | 3.99 | 3.99 | 14 | -2 | 0.69 | 11. | 14 | -2 | 0.000 | 14 | -1 | 0.73 | 0.001 |
| 39 | 3.99 | 3.99 | 18 | -2 | 0.96 | 22. | 16 | -2 | 0.001 | 16 | -2 | 0.76 | 0.000 |
| 40 | 3.99 | 3.99 | 13 | -8 | 0.80 | -4. | 11 | -7 | 0.000 | 8 | -6 | 0.59 | 0.000 |
| 41 | 3.99 | 3.99 | 0. | -4 | 0.26 | -4. | 0. | -3 | 0.000 | 0. | -4 | 0.24 | 0.000 |
| 42 | 3.99 | 3.99 | 0. | 0. | 0.01 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 43 | 3.99 | 3.99 | 13 | -1 | 0.71 | 20. | 10 | -1 | 0.001 | 8 | 0. | 0.46 | 0.001 |
| 44 | 3.99 | 3.99 | 22 | -1 | 1.21 | 43. | 17 | -1 | 0.001 | 15 | -1 | 0.79 | 0.001 |
| 45 | 3.99 | 3.99 | 21 | -2 | 1.12 | 28. | 16 | -2 | 0.001 | 14 | -2 | 0.67 | 0.000 |
| 46 | 3.99 | 3.99 | 14 | -2 | 0.63 | 6. | 9 | -3 | 0.000 | 6 | -2 | 0.27 | 0.000 |
| 47 | 3.99 | 3.99 | 0. | -1 | 0.06 | -1. | 0. | -1 | 0.000 | 0. | -1 | 0.07 | 0.000 |
| 48 | 3.99 | 3.99 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 49 | 3.99 | 3.99 | 23 | 0. | 1.28 | 51. | 18 | 0. | 0.002 | 15 | 0. | 0.83 | 0.002 |
| 50 | 3.99 | 3.99 | 36 | 0. | 1.99 | 81. | 27 | 0. | 0.003 | 22 | 0. | 1.23 | 0.002 |
| 51 | 3.99 | 3.99 | 29 | 0. | 1.61 | 63. | 22 | -1 | 0.002 | 17 | -1 | 0.91 | 0.001 |
| 52 | 3.99 | 3.99 | 18 | 0. | 0.98 | 35. | 12 | -1 | 0.001 | 8 | -1 | 0.39 | 0.000 |
| 53 | 3.99 | 3.99 | 0. | 0. | 0.01 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.01 | 0.000 |
| 54 | 3.99 | 3.99 | 0. | 1 | 0.00 | 13. | 0. | 1 | 0.001 | 0. | 0. | 0.00 | 0.000 |
| 55 | 3.99 | 3.99 | 29 | 0. | 1.65 | 71. | 22 | 0. | 0.002 | 19 | 0. | 1.07 | 0.002 |
| 56 | 3.99 | 3.99 | 46 | 0. | 2.59 | 112. | 35 | 0. | 0.004 | 30 | 0. | 1.69 | 0.003 |
| 57 | 3.99 | 3.99 | 41 | 1 | 2.30 | 105. | 31 | 0. | 0.004 | 25 | 0. | 1.41 | 0.003 |
| 58 | 3.99 | 3.99 | 20 | 1 | 1.08 | 61. | 13 | 1 | 0.002 | 9 | 0. | 0.50 | 0.002 |
| 59 | 3.99 | 3.99 | 0. | 1 | 0.00 | 10. | 0. | 0. | 0.001 | 0. | 1 | 0.00 | 0.001 |
| 60 | 3.99 | 3.99 | 0. | 2 | 0.00 | 22. | 0. | 1 | 0.001 | 0. | 1 | 0.00 | 0.001 |
| 61 | 3.99 | 3.99 | 36 | 0. | 2.03 | 82. | 26 | 0. | 0.003 | 14 | 0. | 0.79 | 0.001 |
| 62 | 3.99 | 3.99 | 48 | 0. | 2.69 | 109. | 35 | 0. | 0.004 | 33 | 0. | 1.86 | 0.004 |
| 63 | 3.99 | 3.99 | 54 | 0. | 3.00 | 129. | 40 | 0. | 0.004 | 35 | 0. | 1.99 | 0.005 |
| 64 | 3.99 | 3.99 | 41 | 2 | 2.30 | 116. | 30 | 1 | 0.005 | 19 | 1 | 1.08 | 0.004 |
| 65 | 3.99 | 3.99 | 0. | 1 | 0.00 | 17. | 0. | 1 | 0.001 | 0. | 2 | 0.00 | 0.002 |
| 66 | 3.99 | 3.99 | 33 | 0. | 1.86 | 82. | 24 | 0. | 0.003 | 2 | 1 | 0.00 | 0.001 |
| 67 | 3.99 | 3.99 | 65 | -1 | 3.63 | 137. | 47 | -1 | 0.005 | 37 | 0. | 2.05 | 0.004 |
| 68 | 3.99 | 3.99 | 41 | -1 | 2.28 | 79. | 30 | -1 | 0.002 | 30 | -1 | 1.65 | 0.003 |
| 69 | 3.99 | 3.99 | 49 | 0. | 2.72 | 107. | 36 | -1 | 0.003 | 35 | 0. | 1.95 | 0.004 |
| 70 | 3.99 | 3.99 | 68 | 1 | 3.80 | 170. | 49 | 1 | 0.006 | 39 | 1 | 2.21 | 0.005 |
| 71 | 3.99 | 3.99 | 39 | 1 | 2.21 | 110. | 28 | 1 | 0.004 | 12 | 1 | 0.65 | 0.003 |
| 72 | 3.99 | 3.99 | 67 | -1 | 3.75 | 139. | 47 | -1 | 0.005 | 50 | -1 | 2.80 | 0.005 |
| 73 | 3.99 | 3.99 | 21 | -1 | 1.12 | 33. | 13 | -1 | 0.001 | 23 | -1 | 1.27 | 0.002 |
| 74 | 3.99 | 3.99 | 0. | -1 | 0.04 | -1. | 0. | 0. | 0.000 | 0. | 0. | 0.03 | 0.000 |
| 75 | 3.99 | 3.99 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.03 | 0.000 |
| 76 | 3.99 | 3.99 | 34 | 0. | 1.88 | 83. | 25 | 0. | 0.003 | 25 | 0. | 1.41 | 0.003 |
| 77 | 3.99 | 3.99 | 64 | 0. | 3.59 | 147. | 43 | 0. | 0.005 | 45 | -1 | 2.49 | 0.004 |
| 78 | 3.99 | 3.99 | 136 | -1 | 7.60 | 295. | 97 | -2 | 0.009 | 80 | -1 | 4.47 | 0.008 |
| 79 | 3.99 | 3.99 | 107 | -2 | 5.97 | 216. | 71 | -2 | 0.007 | 59 | -2 | 3.25 | 0.005 |
| 262 | 3.99 | 3.99 | 0. | -2 | 0.13 | -2. | 0. | -1 | 0.000 | 9 | -1 | 0.50 | 0.001 |
| 263 | 3.99 | 3.99 | 0. | -2 | 0.12 | -2. | 0. | -1 | 0.000 | 7 | -2 | 0.32 | 0.000 |
| 264 | 3.99 | 3.99 | 0. | -2 | 0.10 | -2. | 0. | 0. | 0.000 | 0. | 0. | 0.01 | 0.000 |
| 265 | 3.99 | 3.99 | 0. | -2 | 0.13 | -2. | 0. | -1 | 0.000 | 0. | -1 | 0.05 | 0.000 |

ARMATURA INFERIORE VERTICALE

| GUSCI | | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------------|------------|-----------------|-----|-------|------------------------|-----|------------|-------|
| | Af | Afc | Mom | Nor | σ_c | σ_f | Mom | Nor | wkF | Mom | Nor | σ_c | wkP |
| 30 | 5.74 | 5.74 | 2 | -55 | 3.32 | -49. | 11 | -51 | 0.000 | 9 | -48 | 3.07 | 0.000 |
| 31 | 5.74 | 5.74 | 28 | -60 | 4.26 | -48. | 34 | -58 | 0.000 | 29 | -56 | 4.03 | 0.000 |
| 32 | 5.74 | 5.74 | 35 | -62 | 4.53 | -48. | 39 | -60 | 0.000 | 40 | -60 | 4.51 | 0.000 |
| 33 | 5.74 | 5.74 | 40 | -56 | 4.30 | -41. | 45 | -54 | 0.000 | 41 | -53 | 4.13 | 0.000 |
| 34 | 5.74 | 5.74 | 24 | -57 | 3.99 | -46. | 28 | -55 | 0.000 | 23 | -45 | 3.22 | 0.000 |
| 35 | 5.74 | 5.74 | 0. | -62 | 3.68 | -55. | 0. | -57 | 0.000 | 0. | -47 | 2.80 | 0.000 |
| 36 | 5.74 | 5.74 | 24 | -51 | 3.64 | -41. | 25 | -47 | 0.000 | 25 | -47 | 3.37 | 0.000 |
| 37 | 5.74 | 5.74 | 20 | -55 | 3.76 | -45. | 22 | -53 | 0.000 | 23 | -52 | 3.65 | 0.000 |
| 38 | 5.74 | 5.74 | 19 | -55 | 3.74 | -45. | 21 | -53 | 0.000 | 21 | -53 | 3.67 | 0.000 |
| 39 | 5.74 | 5.74 | 19 | -52 | 3.55 | -43. | 20 | -50 | 0.000 | 19 | -49 | 3.39 | 0.000 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|------|------|-----|-----|------|------|-----|-----|-------|-----|-----|------|-------|
| 40 | 5.74 | 5.74 | 16 | -50 | 3.38 | -42. | 16 | -48 | 0.000 | 14 | -46 | 3.11 | 0.000 |
| 41 | 5.74 | 5.74 | 13 | -48 | 3.16 | -40. | 12 | -45 | 0.000 | 9 | -47 | 3.04 | 0.000 |
| 42 | 5.74 | 5.74 | 30 | -49 | 3.68 | -38. | 27 | -46 | 0.000 | 26 | -45 | 3.29 | 0.000 |
| 43 | 5.74 | 5.74 | 24 | -51 | 3.61 | -40. | 22 | -48 | 0.000 | 20 | -47 | 3.29 | 0.000 |
| 44 | 5.74 | 5.74 | 14 | -51 | 3.37 | -42. | 14 | -49 | 0.000 | 12 | -47 | 3.12 | 0.000 |
| 45 | 5.74 | 5.74 | 7 | -49 | 3.13 | -43. | 9 | -47 | 0.000 | 9 | -46 | 2.93 | 0.000 |
| 46 | 5.74 | 5.74 | 8 | -48 | 3.04 | -41. | 7 | -45 | 0.000 | 8 | -44 | 2.79 | 0.000 |
| 47 | 5.74 | 5.74 | 0. | -49 | 2.92 | -44. | 0. | -46 | 0.000 | 2 | -44 | 2.69 | 0.000 |
| 48 | 5.74 | 5.74 | 20 | -46 | 3.23 | -37. | 18 | -43 | 0.000 | 21 | -42 | 3.01 | 0.000 |
| 49 | 5.74 | 5.74 | 24 | -46 | 3.33 | -36. | 20 | -43 | 0.000 | 21 | -42 | 3.02 | 0.000 |
| 50 | 5.74 | 5.74 | 19 | -46 | 3.21 | -37. | 16 | -42 | 0.000 | 13 | -41 | 2.77 | 0.000 |
| 51 | 5.74 | 5.74 | 7 | -45 | 2.84 | -38. | 7 | -41 | 0.000 | 6 | -40 | 2.50 | 0.000 |
| 52 | 5.74 | 5.74 | 8 | -42 | 2.73 | -36. | 6 | -39 | 0.000 | 5 | -38 | 2.43 | 0.000 |
| 53 | 5.74 | 5.74 | 0. | -39 | 2.34 | -35. | 0. | -38 | 0.000 | 0. | -38 | 2.27 | 0.000 |
| 54 | 5.74 | 5.74 | 4 | -43 | 2.64 | -38. | 3 | -40 | 0.000 | 8 | -39 | 2.52 | 0.000 |
| 55 | 5.74 | 5.74 | 27 | -41 | 3.08 | -31. | 21 | -38 | 0.000 | 21 | -37 | 2.73 | 0.000 |
| 56 | 5.74 | 5.74 | 29 | -40 | 3.11 | -30. | 23 | -37 | 0.000 | 21 | -36 | 2.61 | 0.000 |
| 57 | 5.74 | 5.74 | 25 | -39 | 2.92 | -30. | 19 | -35 | 0.000 | 15 | -34 | 2.39 | 0.000 |
| 58 | 5.74 | 5.74 | 16 | -36 | 2.53 | -29. | 11 | -33 | 0.000 | 9 | -32 | 2.14 | 0.000 |
| 59 | 5.74 | 5.74 | 0. | -30 | 1.78 | -27. | 0. | -29 | 0.000 | 0. | -30 | 1.79 | 0.000 |
| 60 | 5.74 | 5.74 | 0. | -40 | 2.39 | -36. | 0. | -38 | 0.000 | 0. | -36 | 2.15 | 0.000 |
| 61 | 5.74 | 5.74 | 45 | -36 | 3.21 | -23. | 32 | -33 | 0.000 | 22 | -32 | 2.44 | 0.000 |
| 62 | 5.74 | 5.74 | 68 | -35 | 3.68 | -17. | 50 | -31 | 0.000 | 41 | -30 | 2.79 | 0.000 |
| 63 | 5.74 | 5.74 | 73 | -34 | 3.76 | -15. | 54 | -30 | 0.000 | 43 | -29 | 2.75 | 0.000 |
| 64 | 5.74 | 5.74 | 54 | -29 | 3.03 | -15. | 40 | -27 | 0.000 | 28 | -26 | 2.25 | 0.000 |
| 65 | 5.74 | 5.74 | 2 | -20 | 1.26 | -18. | 2 | -20 | 0.000 | 5 | -22 | 1.46 | 0.000 |
| 66 | 5.74 | 5.74 | 115 | -30 | 4.76 | 5. | 84 | -26 | 0.000 | 37 | -25 | 2.35 | 0.000 |
| 67 | 5.74 | 5.74 | 160 | -30 | 6.68 | 40. | 118 | -26 | 0.001 | 91 | -25 | 3.82 | 0.000 |
| 68 | 5.74 | 5.74 | 179 | -28 | 7.64 | 69. | 131 | -26 | 0.001 | 109 | -25 | 4.49 | 0.000 |
| 69 | 5.74 | 5.74 | 184 | -28 | 7.96 | 82. | 136 | -25 | 0.001 | 114 | -23 | 4.69 | 0.001 |
| 70 | 5.74 | 5.74 | 171 | -24 | 7.43 | 83. | 126 | -22 | 0.002 | 93 | -20 | 3.84 | 0.001 |
| 71 | 5.74 | 5.74 | 119 | -18 | 5.14 | 51. | 89 | -17 | 0.001 | 48 | -15 | 2.01 | 0.000 |
| 72 | 5.74 | 5.74 | 0. | -12 | 0.70 | -10. | 0. | -11 | 0.000 | 0. | -12 | 0.71 | 0.000 |
| 73 | 5.74 | 5.74 | 0. | -11 | 0.63 | -9. | 0. | -10 | 0.000 | 0. | -10 | 0.58 | 0.000 |
| 74 | 5.74 | 5.74 | 0. | -9 | 0.54 | -8. | 0. | -9 | 0.000 | 0. | -8 | 0.50 | 0.000 |
| 75 | 5.74 | 5.74 | 0. | -8 | 0.48 | -7. | 0. | -8 | 0.000 | 0. | -8 | 0.45 | 0.000 |
| 76 | 5.74 | 5.74 | 0. | -8 | 0.48 | -7. | 0. | -8 | 0.000 | 0. | -7 | 0.44 | 0.000 |
| 77 | 5.74 | 5.74 | 0. | -8 | 0.50 | -7. | 0. | -8 | 0.000 | 7 | -8 | 0.63 | 0.000 |
| 78 | 5.74 | 5.74 | 6 | -3 | 0.30 | -1. | 4 | -2 | 0.000 | 7 | -3 | 0.32 | 0.000 |
| 79 | 5.74 | 5.74 | 14 | -3 | 0.56 | 3. | 7 | -3 | 0.000 | 11 | -3 | 0.46 | 0.000 |
| 262 | 5.74 | 5.74 | 0. | -3 | 0.19 | -3. | 0. | -3 | 0.000 | 6 | -3 | 0.35 | 0.000 |
| 263 | 5.74 | 5.74 | 0. | -3 | 0.17 | -3. | 0. | -3 | 0.000 | 5 | -2 | 0.26 | 0.000 |
| 264 | 5.74 | 5.74 | 0. | -2 | 0.12 | -2. | 0. | -2 | 0.000 | 0. | -2 | 0.14 | 0.000 |
| 265 | 5.74 | 5.74 | 0. | -3 | 0.15 | -2. | 0. | -2 | 0.000 | 0. | -2 | 0.13 | 0.000 |

ARMATURA SUPERIORE ORIZZONTALE

| GUSCI | COMBINAZIONE RARA | | | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|-------------------|------|-----|-----|------|------|-----------------|-----|-------|------------------------|-----|------|-------|
| | Af | Afc | Mom | Nor | σc | σf | Mom | Nor | wkF | Mom | Nor | σc | wkP |
| 30 | 3.99 | 3.99 | 15 | -5 | 0.07 | -8. | 2 | -2 | 0.000 | 5 | -3 | 0.08 | 0.000 |
| 31 | 3.99 | 3.99 | 0. | -6 | 0.37 | -6. | 0. | -6 | 0.000 | 0. | -5 | 0.32 | 0.000 |
| 32 | 3.99 | 3.99 | 0. | -5 | 0.33 | -5. | 0. | -5 | 0.000 | 0. | -4 | 0.26 | 0.000 |
| 33 | 3.99 | 3.99 | 0. | -1 | 0.08 | -1. | 0. | -2 | 0.000 | 0. | -2 | 0.14 | 0.000 |
| 34 | 3.99 | 3.99 | 13 | -5 | 0.01 | -8. | 11 | -5 | 0.000 | 12 | -7 | 0.12 | 0.000 |
| 35 | 3.99 | 3.99 | 30 | -3 | 1.54 | 35. | 28 | -3 | 0.002 | 21 | -5 | 0.91 | 0.000 |
| 36 | 3.99 | 3.99 | 8 | -1 | 0.40 | 6. | 5 | -1 | 0.000 | 6 | 0. | 0.34 | 0.000 |
| 37 | 3.99 | 3.99 | 0. | -2 | 0.12 | -2. | 0. | -2 | 0.000 | 0. | -1 | 0.09 | 0.000 |
| 38 | 3.99 | 3.99 | 0. | -2 | 0.11 | -2. | 0. | -2 | 0.000 | 0. | -1 | 0.09 | 0.000 |
| 39 | 3.99 | 3.99 | 0. | -2 | 0.10 | -1. | 0. | -2 | 0.000 | 0. | -2 | 0.15 | 0.000 |
| 40 | 3.99 | 3.99 | 5 | -8 | 0.36 | -8. | 1 | -7 | 0.000 | 3 | -6 | 0.31 | 0.000 |
| 41 | 3.99 | 3.99 | 20 | -4 | 0.89 | 4. | 18 | -3 | 0.000 | 15 | -4 | 0.63 | 0.000 |
| 42 | 3.99 | 3.99 | 10 | 0. | 0.53 | 19. | 8 | 0. | 0.001 | 5 | 0. | 0.27 | 0.001 |
| 43 | 3.99 | 3.99 | 0. | -1 | 0.05 | -1. | 0. | -1 | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 44 | 3.99 | 3.99 | 0. | -1 | 0.03 | -1. | 0. | -1 | 0.000 | 0. | -1 | 0.05 | 0.000 |
| 45 | 3.99 | 3.99 | 0. | -2 | 0.10 | -1. | 0. | -2 | 0.000 | 0. | -2 | 0.14 | 0.000 |
| 46 | 3.99 | 3.99 | 1 | -2 | 0.11 | -2. | 0. | -3 | 0.000 | 2 | -2 | 0.04 | 0.000 |
| 47 | 3.99 | 3.99 | 26 | -1 | 1.42 | 47. | 20 | -1 | 0.001 | 17 | -1 | 0.91 | 0.001 |
| 48 | 3.99 | 3.99 | 33 | 0. | 1.84 | 76. | 21 | 0. | 0.002 | 13 | 0. | 0.70 | 0.001 |
| 49 | 3.99 | 3.99 | 5 | 0. | 0.27 | 9. | 3 | 0. | 0.000 | 2 | 0. | 0.11 | 0.000 |
| 50 | 3.99 | 3.99 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.02 | 0.000 |
| 51 | 3.99 | 3.99 | 0. | 0. | 0.02 | 0. | 0. | -1 | 0.000 | 0. | -1 | 0.04 | 0.000 |
| 52 | 3.99 | 3.99 | 0. | 0. | 0.03 | 0. | 0. | -1 | 0.000 | 0. | -1 | 0.04 | 0.000 |
| 53 | 3.99 | 3.99 | 35 | 0. | 1.94 | 77. | 26 | 0. | 0.003 | 20 | 0. | 1.13 | 0.002 |
| 54 | 3.99 | 3.99 | 58 | 1 | 3.24 | 147. | 43 | 1 | 0.006 | 34 | 0. | 1.92 | 0.004 |
| 55 | 3.99 | 3.99 | 0. | 0. | 0.00 | 3. | 0. | 0. | 0.000 | 3 | 0. | 0.14 | 0.000 |
| 56 | 3.99 | 3.99 | 0. | 0. | 0.00 | 5. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 57 | 3.99 | 3.99 | 0. | 1 | 0.00 | 10. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 58 | 3.99 | 3.99 | 0. | 1 | 0.00 | 15. | 0. | 1 | 0.001 | 0. | 0. | 0.00 | 0.001 |
| 59 | 3.99 | 3.99 | 42 | 1 | 2.38 | 108. | 32 | 0. | 0.004 | 25 | 1 | 1.39 | 0.004 |
| 60 | 3.99 | 3.99 | 68 | 2 | 3.79 | 179. | 49 | 1 | 0.007 | 41 | 1 | 2.29 | 0.006 |
| 61 | 3.99 | 3.99 | 0. | 0. | 0.01 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.01 | 0.000 |
| 62 | 3.99 | 3.99 | 0. | 0. | 0.01 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 63 | 3.99 | 3.99 | 0. | 0. | 0.00 | 5. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.001 |
| 64 | 3.99 | 3.99 | 0. | 2 | 0.00 | 20. | 0. | 1 | 0.001 | 0. | 1 | 0.00 | 0.001 |
| 65 | 3.99 | 3.99 | 57 | 1 | 3.19 | 149. | 42 | 1 | 0.006 | 31 | 2 | 1.73 | 0.006 |
| 66 | 3.99 | 3.99 | 49 | 0. | 2.75 | 118. | 36 | 0. | 0.004 | 41 | 1 | 2.30 | 0.006 |
| 67 | 3.99 | 3.99 | 0. | -1 | 0.06 | -1. | 0. | -1 | 0.000 | 9 | 0. | 0.50 | 0.001 |
| 68 | 3.99 | 3.99 | 0. | -1 | 0.08 | -1. | 0. | -1 | 0.000 | 0. | -1 | 0.04 | 0.000 |
| 69 | 3.99 | 3.99 | 0. | 0. | 0.02 | 0. | 0. | -1 | 0.000 | 0. | 0. | 0.00 | 0.000 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|------|------|----|----|------|------|----|----|-------|----|----|------|-------|
| 70 | 3.99 | 3.99 | 0. | 1 | 0.00 | 13. | 0. | 1 | 0.001 | 10 | 1 | 0.55 | 0.002 |
| 71 | 3.99 | 3.99 | 45 | 1 | 2.51 | 122. | 33 | 1 | 0.005 | 35 | 1 | 1.98 | 0.006 |
| 72 | 3.99 | 3.99 | 30 | -1 | 1.64 | 53. | 21 | -1 | 0.002 | 2 | -1 | 0.02 | 0.000 |
| 73 | 3.99 | 3.99 | 64 | -1 | 3.55 | 132. | 47 | -1 | 0.005 | 46 | -1 | 2.55 | 0.004 |
| 74 | 3.99 | 3.99 | 47 | -1 | 2.62 | 100. | 34 | 0. | 0.004 | 34 | 0. | 1.92 | 0.003 |
| 75 | 3.99 | 3.99 | 42 | 0. | 2.34 | 96. | 31 | 0. | 0.003 | 33 | 0. | 1.85 | 0.003 |
| 76 | 3.99 | 3.99 | 58 | 0. | 3.28 | 141. | 43 | 0. | 0.005 | 40 | 0. | 2.24 | 0.004 |
| 77 | 3.99 | 3.99 | 38 | 0. | 2.11 | 86. | 26 | 0. | 0.003 | 10 | -1 | 0.53 | 0.001 |
| 78 | 3.99 | 3.99 | 0. | -1 | 0.09 | -1. | 0. | -2 | 0.000 | 0. | -1 | 0.06 | 0.000 |
| 79 | 3.99 | 3.99 | 0. | -2 | 0.15 | -2. | 0. | -2 | 0.000 | 0. | -2 | 0.11 | 0.000 |
| 262 | 3.99 | 3.99 | 75 | -2 | 4.15 | 145. | 51 | -1 | 0.005 | 38 | -1 | 2.11 | 0.004 |
| 263 | 3.99 | 3.99 | 66 | -2 | 3.68 | 128. | 44 | -1 | 0.004 | 34 | -2 | 1.85 | 0.003 |
| 264 | 3.99 | 3.99 | 77 | -2 | 4.26 | 155. | 52 | 0. | 0.005 | 52 | 0. | 2.94 | 0.006 |
| 265 | 3.99 | 3.99 | 62 | -2 | 3.40 | 114. | 43 | -1 | 0.004 | 46 | -1 | 2.57 | 0.004 |

ARMATURA SUPERIORE VERTICALE

| GUSCI | COMBINAZIONE RARA | | | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|-------------------|------|-----|-----|------|------|-----------------|-----|-------|------------------------|-----|------|-------|
| | Af | AfC | Mom | Nor | σC | σf | Mom | Nor | wkF | Mom | Nor | σC | wkP |
| 30 | 5.74 | 5.74 | 9 | -55 | 3.05 | -51. | 0. | -51 | 0.000 | 0. | -48 | 2.86 | 0.000 |
| 31 | 5.74 | 5.74 | 0. | -60 | 3.60 | -54. | 0. | -58 | 0.000 | 0. | -56 | 3.33 | 0.000 |
| 32 | 5.74 | 5.74 | 0. | -62 | 3.70 | -56. | 0. | -60 | 0.000 | 0. | -60 | 3.57 | 0.000 |
| 33 | 5.74 | 5.74 | 0. | -56 | 3.34 | -50. | 0. | -54 | 0.000 | 0. | -53 | 3.16 | 0.000 |
| 34 | 5.74 | 5.74 | 11 | -57 | 3.16 | -54. | 6 | -55 | 0.000 | 2 | -45 | 2.63 | 0.000 |
| 35 | 5.74 | 5.74 | 60 | -62 | 2.26 | -68. | 52 | -57 | 0.000 | 29 | -47 | 2.10 | 0.000 |
| 36 | 5.74 | 5.74 | 0. | -51 | 3.07 | -46. | 0. | -47 | 0.000 | 0. | -47 | 2.79 | 0.000 |
| 37 | 5.74 | 5.74 | 0. | -55 | 3.29 | -49. | 0. | -53 | 0.000 | 0. | -52 | 3.11 | 0.000 |
| 38 | 5.74 | 5.74 | 0. | -55 | 3.29 | -49. | 0. | -53 | 0.000 | 0. | -53 | 3.16 | 0.000 |
| 39 | 5.74 | 5.74 | 0. | -52 | 3.11 | -47. | 0. | -50 | 0.000 | 0. | -49 | 2.94 | 0.000 |
| 40 | 5.74 | 5.74 | 0. | -50 | 3.01 | -45. | 0. | -48 | 0.000 | 0. | -46 | 2.78 | 0.000 |
| 41 | 5.74 | 5.74 | 0. | -48 | 2.86 | -43. | 0. | -45 | 0.000 | 0. | -47 | 2.83 | 0.000 |
| 42 | 5.74 | 5.74 | 0. | -49 | 2.96 | -44. | 0. | -46 | 0.000 | 0. | -45 | 2.67 | 0.000 |
| 43 | 5.74 | 5.74 | 0. | -51 | 3.03 | -46. | 0. | -48 | 0.000 | 0. | -47 | 2.83 | 0.000 |
| 44 | 5.74 | 5.74 | 0. | -51 | 3.03 | -45. | 0. | -49 | 0.000 | 0. | -47 | 2.83 | 0.000 |
| 45 | 5.74 | 5.74 | 0. | -49 | 2.96 | -44. | 0. | -47 | 0.000 | 0. | -46 | 2.72 | 0.000 |
| 46 | 5.74 | 5.74 | 4 | -48 | 2.76 | -43. | 1 | -45 | 0.000 | 0. | -44 | 2.61 | 0.000 |
| 47 | 5.74 | 5.74 | 6 | -49 | 2.77 | -45. | 4 | -46 | 0.000 | 3 | -44 | 2.58 | 0.000 |
| 48 | 5.74 | 5.74 | 0. | -46 | 2.76 | -41. | 0. | -43 | 0.000 | 0. | -42 | 2.50 | 0.000 |
| 49 | 5.74 | 5.74 | 1 | -46 | 2.73 | -42. | 0. | -43 | 0.000 | 0. | -42 | 2.52 | 0.000 |
| 50 | 5.74 | 5.74 | 0. | -46 | 2.75 | -41. | 0. | -42 | 0.000 | 0. | -41 | 2.45 | 0.000 |
| 51 | 5.74 | 5.74 | 0. | -45 | 2.67 | -40. | 0. | -41 | 0.000 | 0. | -40 | 2.37 | 0.000 |
| 52 | 5.74 | 5.74 | 2 | -42 | 2.49 | -38. | 0. | -39 | 0.000 | 1 | -38 | 2.28 | 0.000 |
| 53 | 5.74 | 5.74 | 6 | -39 | 2.20 | -36. | 4 | -38 | 0.000 | 4 | -38 | 2.18 | 0.000 |
| 54 | 5.74 | 5.74 | 7 | -43 | 2.38 | -40. | 7 | -40 | 0.000 | 5 | -39 | 2.21 | 0.000 |
| 55 | 5.74 | 5.74 | 0. | -41 | 2.45 | -37. | 1 | -38 | 0.000 | 3 | -37 | 2.17 | 0.000 |
| 56 | 5.74 | 5.74 | 0. | -40 | 2.41 | -36. | 0. | -37 | 0.000 | 0. | -36 | 2.13 | 0.000 |
| 57 | 5.74 | 5.74 | 0. | -39 | 2.33 | -35. | 0. | -35 | 0.000 | 0. | -34 | 2.03 | 0.000 |
| 58 | 5.74 | 5.74 | 0. | -36 | 2.14 | -32. | 0. | -33 | 0.000 | 0. | -32 | 1.93 | 0.000 |
| 59 | 5.74 | 5.74 | 3 | -30 | 1.71 | -27. | 2 | -29 | 0.000 | 2 | -30 | 1.74 | 0.000 |
| 60 | 5.74 | 5.74 | 10 | -40 | 2.16 | -38. | 11 | -38 | 0.000 | 14 | -36 | 1.83 | 0.000 |
| 61 | 5.74 | 5.74 | 0. | -36 | 2.15 | -32. | 0. | -33 | 0.000 | 0. | -32 | 1.92 | 0.000 |
| 62 | 5.74 | 5.74 | 0. | -35 | 2.07 | -31. | 0. | -31 | 0.000 | 0. | -30 | 1.82 | 0.000 |
| 63 | 5.74 | 5.74 | 0. | -34 | 2.03 | -31. | 0. | -30 | 0.000 | 0. | -29 | 1.72 | 0.000 |
| 64 | 5.74 | 5.74 | 0. | -29 | 1.76 | -26. | 0. | -27 | 0.000 | 0. | -26 | 1.58 | 0.000 |
| 65 | 5.74 | 5.74 | 4 | -20 | 1.12 | -19. | 4 | -20 | 0.000 | 0. | -22 | 1.33 | 0.000 |
| 66 | 5.74 | 5.74 | 0. | -30 | 1.77 | -27. | 0. | -26 | 0.000 | 0. | -25 | 1.48 | 0.000 |
| 67 | 5.74 | 5.74 | 0. | -30 | 1.80 | -27. | 0. | -26 | 0.000 | 0. | -25 | 1.51 | 0.000 |
| 68 | 5.74 | 5.74 | 0. | -28 | 1.70 | -26. | 0. | -26 | 0.000 | 0. | -25 | 1.49 | 0.000 |
| 69 | 5.74 | 5.74 | 0. | -28 | 1.65 | -25. | 0. | -25 | 0.000 | 0. | -23 | 1.40 | 0.000 |
| 70 | 5.74 | 5.74 | 0. | -24 | 1.45 | -22. | 0. | -22 | 0.000 | 0. | -20 | 1.22 | 0.000 |
| 71 | 5.74 | 5.74 | 0. | -18 | 1.09 | -16. | 0. | -17 | 0.000 | 0. | -15 | 0.87 | 0.000 |
| 72 | 5.74 | 5.74 | 133 | -12 | 6.11 | 117. | 102 | -11 | 0.003 | 51 | -12 | 2.09 | 0.000 |
| 73 | 5.74 | 5.74 | 172 | -11 | 8.04 | 188. | 127 | -10 | 0.005 | 97 | -10 | 4.42 | 0.003 |
| 74 | 5.74 | 5.74 | 171 | -9 | 8.03 | 199. | 122 | -9 | 0.005 | 94 | -8 | 4.30 | 0.003 |
| 75 | 5.74 | 5.74 | 157 | -8 | 7.39 | 185. | 109 | -8 | 0.004 | 89 | -8 | 4.10 | 0.003 |
| 76 | 5.74 | 5.74 | 148 | -8 | 6.97 | 172. | 106 | -8 | 0.004 | 78 | -7 | 3.55 | 0.003 |
| 77 | 5.74 | 5.74 | 108 | -8 | 5.02 | 105. | 79 | -8 | 0.002 | 40 | -8 | 1.66 | 0.000 |
| 78 | 5.74 | 5.74 | 2 | -3 | 0.11 | -3. | 1 | -2 | 0.000 | 0. | -3 | 0.15 | 0.000 |
| 79 | 5.74 | 5.74 | 7 | -3 | 0.01 | -4. | 2 | -3 | 0.000 | 3 | -3 | 0.08 | 0.000 |
| 262 | 5.74 | 5.74 | 42 | -3 | 1.95 | 41. | 32 | -3 | 0.001 | 25 | -3 | 1.10 | 0.001 |
| 263 | 5.74 | 5.74 | 42 | -3 | 1.94 | 43. | 31 | -3 | 0.001 | 24 | -2 | 1.09 | 0.001 |
| 264 | 5.74 | 5.74 | 46 | -2 | 2.19 | 58. | 35 | -2 | 0.002 | 30 | -2 | 1.37 | 0.001 |
| 265 | 5.74 | 5.74 | 39 | -3 | 1.83 | 42. | 29 | -2 | 0.001 | 23 | -2 | 1.07 | 0.001 |

MACROGUSCIO SETTO02

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

| Nome | Descrizione |
|------|-------------|
| 1 | SLU |
| 2 | SLU VENTOX |
| 3 | SLU VENTOX |

6 SLU con SISMAX PRINC
7 SLU con SISMAX PRINC

DATI:

tensione di snervamento acciaio (fyk): 4500 daN/cm2
coefficiente sicurezza acciaio : 1.15
deformazione ultima acciaio : 1.97 per mille
deformazione ultima cls : 3.5 per mille
rapporto rottura/snervamento (k): 1
resistenza cilindrica cls (fck): 249 daN/cm2
coefficiente sicurezza cls : 1.5
coefficiente riduttivo (alfa): 0.85
copriferro inferiore (asse armatura): 3 cm
copriferro superiore (asse armatura): 3 cm
moltiplicatore sollecitazioni : 1

LEGENDA:

spess = spessore guscio, verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
Af = area disposta al lembo teso, in cm2 al metro
Afc = area disposta al lembo compresso, in cm2 al metro
Mom = momento flettente [daNcm/cm]
Nor = sforzo normale [daN]
epsC = deformazione cls [per mille]
epsF = deformazione acciaio [per mille]

<-

L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

| GUSCI | spess | INFERIORE ORIZZONTALE | | | | | | INFERIORE VERTICALE | | | | | |
|-------|-------|-----------------------|------|------|------|------|------|---------------------|------|------|-------|------|-------|
| | | Af | Afc | Mom | Nor | epsC | epsF | Af | Afc | Mom | Nor | epsC | epsF |
| 1 | 15 | 4.19 | 4.19 | 82. | 11. | 0.00 | 0.15 | 6.00 | 6.00 | 158. | 5. | 0.04 | 0.14 |
| 2 | 15 | 4.19 | 4.19 | 128. | 6. | 0.02 | 0.17 | 6.00 | 6.00 | 230. | 13. | 0.03 | 0.22 |
| 3 | 15 | 4.19 | 4.19 | 153. | -15. | 0.07 | 0.15 | 6.00 | 6.00 | 241. | 3. | 0.07 | 0.20 |
| 4 | 15 | 4.19 | 4.19 | 102. | 11. | 0.00 | 0.17 | 6.00 | 6.00 | 189. | 7. | 0.04 | 0.17 |
| 5 | 15 | 4.19 | 4.19 | 87. | 5. | 0.01 | 0.13 | 6.00 | 6.00 | 62. | -5. | 0.02 | 0.04 |
| 6 | 15 | 4.19 | 4.19 | 19. | 8. | 0.00 | 0.06 | 6.00 | 6.00 | 76. | 2. | 0.02 | 0.06 |
| 7 | 15 | 4.19 | 4.19 | 55. | -7. | 0.02 | 0.05 | 6.00 | 6.00 | 130. | 0. | 0.04 | 0.10 |
| 8 | 15 | 4.19 | 4.19 | 144. | -28. | 0.07 | 0.13 | 6.00 | 6.00 | 142. | -2. | 0.05 | 0.11 |
| 9 | 15 | 4.19 | 4.19 | 133. | -14. | 0.06 | 0.13 | 6.00 | 6.00 | 128. | -3. | 0.04 | 0.10 |
| 10 | 15 | 4.19 | 4.19 | 132. | 2. | 0.05 | 0.15 | 6.00 | 6.00 | 97. | -3. | 0.03 | 0.07 |
| 210 | 15 | 4.04 | 4.04 | 132. | 14. | 0.00 | 0.23 | 5.72 | 5.72 | 14. | -11. | 0.01 | 0.03 |
| 211 | 15 | 4.04 | 4.04 | 0. | 22. | 0.00 | 0.13 | 5.72 | 5.72 | 0. | -39. | 0.02 | -0.02 |
| 212 | 15 | 4.04 | 4.04 | 30. | 7. | 0.01 | 0.07 | 5.72 | 5.72 | 24. | -54. | 0.03 | 0.01 |
| 213 | 15 | 4.04 | 4.04 | 0. | 20. | 0.00 | 0.12 | 5.72 | 5.72 | 4. | -60. | 0.03 | -0.02 |
| 214 | 15 | 4.04 | 4.04 | 154. | 55. | 0.00 | 0.49 | 5.72 | 5.72 | 69. | 0. | 0.02 | 0.06 |
| 215 | 15 | 4.04 | 4.04 | 0. | 57. | 0.00 | 0.34 | 5.72 | 5.72 | 0. | -13. | 0.01 | 0.01 |
| 216 | 15 | 4.04 | 4.04 | 52. | 40. | 0.00 | 0.32 | 5.72 | 5.72 | 0. | 7. | 0.00 | 0.03 |
| 217 | 15 | 4.04 | 4.04 | 36. | 63. | 0.00 | 0.41 | 5.72 | 5.72 | 19. | -20. | 0.01 | 0.02 |
| 218 | 15 | 4.04 | 4.04 | 13. | 63. | 0.00 | 0.38 | 5.72 | 5.72 | 4. | -28. | 0.01 | -0.01 |
| 219 | 15 | 4.04 | 4.04 | 18. | 70. | 0.00 | 0.43 | 5.72 | 5.72 | 17. | -14. | 0.01 | 0.04 |
| 220 | 15 | 4.04 | 4.04 | 20. | 8. | 0.01 | 0.08 | 5.72 | 5.72 | 0. | -102. | 0.04 | -0.04 |
| 221 | 15 | 4.04 | 4.04 | 8. | 9. | 0.00 | 0.06 | 5.72 | 5.72 | 3. | -86. | 0.04 | -0.03 |
| 222 | 15 | 4.04 | 4.04 | 13. | 6. | 0.01 | 0.05 | 5.72 | 5.72 | 6. | -70. | 0.03 | -0.03 |
| 223 | 15 | 4.04 | 4.04 | 101. | 17. | 0.00 | 0.21 | 5.72 | 5.72 | 34. | -27. | 0.02 | 0.01 |
| 224 | 15 | 4.04 | 4.04 | 88. | 4. | 0.03 | 0.12 | 5.72 | 5.72 | 24. | -51. | 0.03 | -0.01 |
| 225 | 15 | 4.04 | 4.04 | 0. | 20. | 0.00 | 0.12 | 5.72 | 5.72 | 0. | -80. | 0.03 | -0.03 |
| 226 | 15 | 4.04 | 4.04 | 0. | 5. | 0.00 | 0.03 | 5.72 | 5.72 | 0. | -85. | 0.04 | -0.04 |
| 227 | 15 | 4.04 | 4.04 | 1. | -2. | 0.00 | 0.01 | 5.72 | 5.72 | 0. | -93. | 0.04 | -0.04 |
| 228 | 15 | 4.04 | 4.04 | 3. | 19. | 0.00 | 0.12 | 5.72 | 5.72 | 18. | -103. | 0.05 | -0.03 |
| 229 | 15 | 4.04 | 4.04 | 23. | 1. | 0.01 | 0.03 | 5.72 | 5.72 | 6. | -97. | 0.04 | -0.04 |
| 394 | 15 | 4.04 | 4.04 | 7. | 4. | 0.00 | 0.03 | 5.72 | 5.72 | 8. | -65. | 0.03 | -0.02 |
| 395 | 15 | 4.04 | 4.04 | 11. | -6. | 0.01 | 0.01 | 5.72 | 5.72 | 11. | -59. | 0.03 | -0.02 |
| 396 | 15 | 4.04 | 4.04 | 26. | -7. | 0.01 | 0.02 | 5.72 | 5.72 | 16. | -49. | 0.03 | -0.01 |
| 397 | 15 | 4.04 | 4.04 | 21. | 4. | 0.01 | 0.04 | 5.72 | 5.72 | 33. | -29. | 0.02 | 0.01 |
| 398 | 15 | 4.04 | 4.04 | 7. | 5. | 0.00 | 0.04 | 5.72 | 5.72 | 14. | -84. | 0.04 | -0.03 |
| 399 | 15 | 4.04 | 4.04 | 11. | -6. | 0.01 | 0.01 | 5.72 | 5.72 | 11. | -65. | 0.03 | -0.02 |
| 400 | 15 | 4.04 | 4.04 | 23. | -3. | 0.01 | 0.02 | 5.72 | 5.72 | 11. | -51. | 0.03 | -0.01 |
| 401 | 15 | 4.04 | 4.04 | 28. | -2. | 0.01 | 0.03 | 5.72 | 5.72 | 11. | -35. | 0.02 | -0.01 |
| 402 | 15 | 4.04 | 4.04 | 6. | -4. | 0.00 | 0.01 | 5.72 | 5.72 | 7. | -84. | 0.04 | -0.03 |
| 403 | 15 | 4.04 | 4.04 | 10. | -7. | 0.01 | 0.01 | 5.72 | 5.72 | 9. | -65. | 0.03 | -0.02 |
| 404 | 15 | 4.04 | 4.04 | 33. | -5. | 0.02 | 0.03 | 5.72 | 5.72 | 10. | -50. | 0.02 | -0.01 |
| 405 | 15 | 4.04 | 4.04 | 49. | -2. | 0.02 | 0.05 | 5.72 | 5.72 | 10. | -37. | 0.02 | -0.01 |
| 406 | 15 | 4.04 | 4.04 | 0. | -4. | 0.00 | 0.00 | 5.72 | 5.72 | 0. | -82. | 0.03 | -0.03 |
| 407 | 15 | 4.04 | 4.04 | 6. | -3. | 0.00 | 0.01 | 5.72 | 5.72 | 0. | -62. | 0.03 | -0.03 |
| 408 | 15 | 4.04 | 4.04 | 40. | -6. | 0.02 | 0.04 | 5.72 | 5.72 | 5. | -46. | 0.02 | -0.02 |
| 409 | 15 | 4.04 | 4.04 | 67. | -1. | 0.03 | 0.07 | 5.72 | 5.72 | 8. | -34. | 0.02 | -0.01 |
| 410 | 15 | 4.04 | 4.04 | 0. | 8. | 0.00 | 0.05 | 5.72 | 5.72 | 0. | -73. | 0.03 | -0.03 |
| 411 | 15 | 4.04 | 4.04 | 0. | 7. | 0.00 | 0.04 | 5.72 | 5.72 | 0. | -55. | 0.02 | -0.02 |
| 412 | 15 | 4.04 | 4.04 | 27. | -2. | 0.01 | 0.04 | 5.72 | 5.72 | 0. | -38. | 0.02 | -0.02 |
| 413 | 15 | 4.04 | 4.04 | 91. | -1. | 0.04 | 0.10 | 5.72 | 5.72 | 0. | -25. | 0.01 | -0.01 |
| 414 | 15 | 4.04 | 4.04 | 0. | 14. | 0.00 | 0.08 | 5.72 | 5.72 | 0. | -56. | 0.02 | -0.02 |
| 415 | 15 | 4.04 | 4.04 | 0. | 10. | 0.00 | 0.06 | 5.72 | 5.72 | 0. | -44. | 0.02 | -0.02 |
| 416 | 15 | 4.04 | 4.04 | 35. | 2. | 0.00 | 0.06 | 5.72 | 5.72 | 0. | -28. | 0.01 | -0.01 |
| 417 | 15 | 4.04 | 4.04 | 130. | 2. | 0.04 | 0.16 | 5.72 | 5.72 | 5. | -16. | 0.01 | -0.01 |
| 418 | 15 | 4.04 | 4.04 | 0. | 13. | 0.00 | 0.08 | 5.72 | 5.72 | 0. | -38. | 0.02 | -0.02 |
| 419 | 15 | 4.04 | 4.04 | 81. | 4. | 0.01 | 0.11 | 5.72 | 5.72 | 0. | -33. | 0.01 | -0.01 |
| 420 | 15 | 4.04 | 4.04 | 112. | 3. | 0.03 | 0.14 | 5.72 | 5.72 | 0. | -19. | 0.01 | -0.01 |
| 421 | 15 | 4.04 | 4.04 | 119. | 5. | 0.02 | 0.16 | 5.72 | 5.72 | 16. | -10. | 0.01 | 0.01 |
| 978 | 15 | 4.71 | 4.71 | 132. | 7. | 0.02 | 0.16 | 5.99 | 5.99 | 27. | -11. | 0.01 | 0.01 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|----|------|------|------|----|------|------|------|------|------|------|------|------|
| 979 | 15 | 4.71 | 4.71 | 233. | 3. | 0.07 | 0.23 | 5.99 | 5.99 | 144. | -11. | 0.05 | 0.10 |
| 980 | 15 | 4.71 | 4.71 | 148. | 4. | 0.04 | 0.17 | 5.99 | 5.99 | 191. | -8. | 0.07 | 0.14 |
| 981 | 15 | 4.71 | 4.71 | 62. | 3. | 0.02 | 0.07 | 5.99 | 5.99 | 156. | -7. | 0.05 | 0.11 |
| 982 | 15 | 4.71 | 4.71 | 180. | 5. | 0.05 | 0.19 | 5.99 | 5.99 | 31. | -3. | 0.01 | 0.02 |
| 985 | 15 | 4.71 | 4.71 | 0. | 2. | 0.00 | 0.01 | 5.99 | 5.99 | 36. | -3. | 0.01 | 0.03 |

| GUSCI | spess | SUPERIORE ORIZZONTALE | | | | | | SUPERIORE VERTICALE | | | | | |
|-------|-------|-----------------------|------|------|------|------|-------|---------------------|------|------|-------|------|-------|
| | | Af | Afc | Mom | Nor | epsC | epsF | Af | Afc | Mom | Nor | epsC | epsF |
| 1 | 15 | 4.19 | 4.19 | 200. | 12. | 0.02 | 0.28 | 6.00 | 6.00 | 97. | 2. | 0.02 | 0.08 |
| 2 | 15 | 4.19 | 4.19 | 153. | 8. | 0.03 | 0.20 | 6.00 | 6.00 | 73. | 14. | 0.00 | 0.11 |
| 3 | 15 | 4.19 | 4.19 | 73. | -2. | 0.03 | 0.08 | 6.00 | 6.00 | 49. | 8. | 0.00 | 0.07 |
| 4 | 15 | 4.19 | 4.19 | 38. | 18. | 0.00 | 0.14 | 6.00 | 6.00 | 20. | 7. | 0.00 | 0.04 |
| 5 | 15 | 4.19 | 4.19 | 15. | 8. | 0.00 | 0.06 | 6.00 | 6.00 | 22. | -7. | 0.01 | 0.01 |
| 6 | 15 | 4.19 | 4.19 | 283. | 7. | 0.08 | 0.34 | 6.00 | 6.00 | 107. | 2. | 0.03 | 0.09 |
| 7 | 15 | 4.19 | 4.19 | 136. | -8. | 0.06 | 0.14 | 6.00 | 6.00 | 121. | 2. | 0.04 | 0.10 |
| 8 | 15 | 4.19 | 4.19 | 45. | -23. | 0.03 | 0.03 | 6.00 | 6.00 | 109. | 2. | 0.03 | 0.09 |
| 9 | 15 | 4.19 | 4.19 | 0. | -18. | 0.01 | -0.01 | 6.00 | 6.00 | 75. | 0. | 0.02 | 0.06 |
| 10 | 15 | 4.19 | 4.19 | 0. | 3. | 0.00 | 0.01 | 6.00 | 6.00 | 1. | -3. | 0.00 | 0.00 |
| 210 | 15 | 4.04 | 4.04 | 74. | 10. | 0.00 | 0.15 | 5.72 | 5.72 | 128. | -11. | 0.05 | 0.09 |
| 211 | 15 | 4.04 | 4.04 | 77. | 22. | 0.00 | 0.22 | 5.72 | 5.72 | 289. | -34. | 0.11 | 0.20 |
| 212 | 15 | 4.04 | 4.04 | 0. | 7. | 0.00 | 0.04 | 5.72 | 5.72 | 0. | -54. | 0.02 | -0.02 |
| 213 | 15 | 4.04 | 4.04 | 23. | 20. | 0.00 | 0.14 | 5.72 | 5.72 | 10. | -60. | 0.03 | -0.02 |
| 214 | 15 | 4.04 | 4.04 | 161. | 43. | 0.00 | 0.45 | 5.72 | 5.72 | 213. | 2. | 0.07 | 0.17 |
| 215 | 15 | 4.04 | 4.04 | 128. | 57. | 0.00 | 0.48 | 5.72 | 5.72 | 220. | -9. | 0.08 | 0.16 |
| 216 | 15 | 4.04 | 4.04 | 181. | 54. | 0.00 | 0.52 | 5.72 | 5.72 | 248. | 5. | 0.07 | 0.21 |
| 217 | 15 | 4.04 | 4.04 | 24. | 63. | 0.00 | 0.40 | 5.72 | 5.72 | 5. | -20. | 0.01 | 0.02 |
| 218 | 15 | 4.04 | 4.04 | 37. | 64. | 0.00 | 0.42 | 5.72 | 5.72 | 4. | -28. | 0.01 | -0.01 |
| 219 | 15 | 4.04 | 4.04 | 28. | 70. | 0.00 | 0.44 | 5.72 | 5.72 | 19. | -14. | 0.01 | 0.05 |
| 220 | 15 | 4.04 | 4.04 | 0. | 11. | 0.00 | 0.07 | 5.72 | 5.72 | 9. | -102. | 0.05 | -0.04 |
| 221 | 15 | 4.04 | 4.04 | 5. | 9. | 0.00 | 0.06 | 5.72 | 5.72 | 3. | -86. | 0.04 | -0.03 |
| 222 | 15 | 4.04 | 4.04 | 0. | 6. | 0.00 | 0.03 | 5.72 | 5.72 | 0. | -70. | 0.03 | -0.03 |
| 223 | 15 | 4.04 | 4.04 | 0. | 17. | 0.00 | 0.10 | 5.72 | 5.72 | 40. | -27. | 0.02 | 0.02 |
| 224 | 15 | 4.04 | 4.04 | 3. | 5. | 0.00 | 0.03 | 5.72 | 5.72 | 0. | -51. | 0.02 | -0.02 |
| 225 | 15 | 4.04 | 4.04 | 85. | 20. | 0.00 | 0.21 | 5.72 | 5.72 | 106. | -80. | 0.07 | 0.06 |
| 226 | 15 | 4.04 | 4.04 | 55. | 5. | 0.01 | 0.09 | 5.72 | 5.72 | 49. | -85. | 0.05 | -0.01 |
| 227 | 15 | 4.04 | 4.04 | 36. | -2. | 0.02 | 0.04 | 5.72 | 5.72 | 32. | -93. | 0.05 | -0.02 |
| 228 | 15 | 4.04 | 4.04 | 31. | 19. | 0.00 | 0.15 | 5.72 | 5.72 | 17. | -103. | 0.05 | -0.03 |
| 229 | 15 | 4.04 | 4.04 | 42. | -3. | 0.02 | 0.05 | 5.72 | 5.72 | 24. | -97. | 0.05 | -0.03 |
| 394 | 15 | 4.04 | 4.04 | 21. | 4. | 0.01 | 0.05 | 5.72 | 5.72 | 17. | -64. | 0.03 | -0.02 |
| 395 | 15 | 4.04 | 4.04 | 32. | -6. | 0.01 | 0.03 | 5.72 | 5.72 | 18. | -60. | 0.03 | -0.01 |
| 396 | 15 | 4.04 | 4.04 | 17. | -7. | 0.01 | 0.03 | 5.72 | 5.72 | 14. | -49. | 0.03 | -0.01 |
| 397 | 15 | 4.04 | 4.04 | 29. | 3. | 0.01 | 0.05 | 5.72 | 5.72 | 14. | -30. | 0.02 | -0.01 |
| 398 | 15 | 4.04 | 4.04 | 40. | -1. | 0.02 | 0.06 | 5.72 | 5.72 | 16. | -84. | 0.04 | -0.02 |
| 399 | 15 | 4.04 | 4.04 | 40. | -4. | 0.02 | 0.04 | 5.72 | 5.72 | 17. | -65. | 0.03 | -0.02 |
| 400 | 15 | 4.04 | 4.04 | 24. | -3. | 0.01 | 0.02 | 5.72 | 5.72 | 19. | -51. | 0.03 | -0.01 |
| 401 | 15 | 4.04 | 4.04 | 18. | -2. | 0.01 | 0.02 | 5.72 | 5.72 | 19. | -35. | 0.02 | 0.00 |
| 402 | 15 | 4.04 | 4.04 | 46. | -3. | 0.02 | 0.05 | 5.72 | 5.72 | 23. | -84. | 0.04 | -0.02 |
| 403 | 15 | 4.04 | 4.04 | 41. | -6. | 0.02 | 0.04 | 5.72 | 5.72 | 21. | -65. | 0.03 | -0.01 |
| 404 | 15 | 4.04 | 4.04 | 21. | -2. | 0.01 | 0.02 | 5.72 | 5.72 | 19. | -50. | 0.03 | -0.01 |
| 405 | 15 | 4.04 | 4.04 | 2. | -3. | 0.00 | 0.01 | 5.72 | 5.72 | 15. | -36. | 0.02 | -0.01 |
| 406 | 15 | 4.04 | 4.04 | 47. | -4. | 0.02 | 0.05 | 5.72 | 5.72 | 29. | -82. | 0.04 | -0.02 |
| 407 | 15 | 4.04 | 4.04 | 41. | -3. | 0.02 | 0.04 | 5.72 | 5.72 | 25. | -62. | 0.03 | -0.01 |
| 408 | 15 | 4.04 | 4.04 | 2. | -6. | 0.00 | 0.01 | 5.72 | 5.72 | 19. | -46. | 0.03 | -0.01 |
| 409 | 15 | 4.04 | 4.04 | 0. | -2. | 0.00 | 0.00 | 5.72 | 5.72 | 8. | -34. | 0.02 | -0.01 |
| 410 | 15 | 4.04 | 4.04 | 30. | 8. | 0.01 | 0.08 | 5.72 | 5.72 | 41. | -73. | 0.04 | -0.01 |
| 411 | 15 | 4.04 | 4.04 | 22. | 7. | 0.00 | 0.07 | 5.72 | 5.72 | 31. | -55. | 0.03 | 0.00 |
| 412 | 15 | 4.04 | 4.04 | 0. | 6. | 0.00 | 0.04 | 5.72 | 5.72 | 20. | -38. | 0.02 | -0.01 |
| 413 | 15 | 4.04 | 4.04 | 0. | -1. | 0.00 | 0.01 | 5.72 | 5.72 | 3. | -25. | 0.01 | -0.01 |
| 414 | 15 | 4.04 | 4.04 | 62. | 14. | 0.00 | 0.15 | 5.72 | 5.72 | 93. | -56. | 0.05 | 0.04 |
| 415 | 15 | 4.04 | 4.04 | 91. | 9. | 0.00 | 0.15 | 5.72 | 5.72 | 69. | -44. | 0.04 | 0.03 |
| 416 | 15 | 4.04 | 4.04 | 42. | 6. | 0.00 | 0.08 | 5.72 | 5.72 | 43. | -28. | 0.03 | 0.02 |
| 417 | 15 | 4.04 | 4.04 | 0. | 5. | 0.00 | 0.03 | 5.72 | 5.72 | 12. | -16. | 0.01 | 0.00 |
| 418 | 15 | 4.04 | 4.04 | 88. | 12. | 0.00 | 0.17 | 5.72 | 5.72 | 360. | -36. | 0.14 | 0.25 |
| 419 | 15 | 4.04 | 4.04 | 147. | 4. | 0.03 | 0.19 | 5.72 | 5.72 | 350. | -30. | 0.13 | 0.24 |
| 420 | 15 | 4.04 | 4.04 | 145. | 3. | 0.04 | 0.18 | 5.72 | 5.72 | 262. | -16. | 0.09 | 0.19 |
| 421 | 15 | 4.04 | 4.04 | 63. | 5. | 0.00 | 0.10 | 5.72 | 5.72 | 161. | -8. | 0.06 | 0.12 |
| 978 | 15 | 4.71 | 4.71 | 47. | 8. | 0.00 | 0.08 | 5.99 | 5.99 | 144. | -11. | 0.05 | 0.10 |
| 979 | 15 | 4.71 | 4.71 | 144. | 1. | 0.05 | 0.14 | 5.99 | 5.99 | 190. | -13. | 0.07 | 0.14 |
| 980 | 15 | 4.71 | 4.71 | 228. | 12. | 0.05 | 0.27 | 5.99 | 5.99 | 160. | -9. | 0.06 | 0.11 |
| 981 | 15 | 4.71 | 4.71 | 151. | 2. | 0.05 | 0.15 | 5.99 | 5.99 | 86. | -5. | 0.03 | 0.06 |
| 982 | 15 | 4.71 | 4.71 | 0. | 5. | 0.00 | 0.02 | 5.99 | 5.99 | 25. | 0. | 0.01 | 0.02 |
| 985 | 15 | 4.71 | 4.71 | 153. | 2. | 0.05 | 0.15 | 5.99 | 5.99 | 13. | -3. | 0.01 | 0.01 |

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

MACROGUSCIO SETTO02

VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

| Nome | Descrizione |
|------|--------------------|
| 12 | Rara (RARA) |
| 13 | Rara VentoX (RARA) |
| 14 | Rara VentoY (RARA) |

15 Frequente (FREQUENTE)
 16 Frequente VentoX (FREQUENTE)
 17 Frequente VentoY (FREQUENTE)
 18 Quasi Perm (QUASI PERMANENTE)

DATI:

copriferro inferiore (asse armatura): 3 cm
 copriferro superiore (asse armatura): 3 cm

Af = area effettiva tesa (cm2 al metro)

Afc = area effettiva compressa (cm2 al metro)

Mom = momento flettente [daNcm/cm]

Nor = sforzo normale [daN]

σc = tensione calcestruzzo [daN/cm2]

valore max per combinazione rara = 149.4 daN/cm2
 quasi permanente = 112 daN/cm2

σf = tensione acciaio [daN/cm2]

valore max per combinazione rara = 3600 daN/cm2

wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm

wkP = apertura caratteristica per combinazione quasi permanente (mm) - valore max = 0.3 mm

<-

ARMATURA INFERIORE ORIZZONTALE

| GUSCI | COMBINAZIONE RARA | | | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|-------------------|------|-----|-----|------|------|-----------------|-----|-------|------------------------|-----|------|-------|
| | Af | Afc | Mom | Nor | σc | σf | Mom | Nor | wkF | Mom | Nor | σc | wkP |
| 1 | 4.19 | 4.19 | 0. | 1 | 0.00 | 14. | 0. | 1 | 0.001 | 14 | 6 | 0.00 | 0.009 |
| 2 | 4.19 | 4.19 | 105 | 2 | 5.74 | 258. | 80 | 2 | 0.011 | 67 | 2 | 3.69 | 0.009 |
| 3 | 4.19 | 4.19 | 98 | -4 | 5.30 | 171. | 75 | -4 | 0.005 | 72 | -6 | 3.73 | 0.004 |
| 4 | 4.19 | 4.19 | 78 | 3 | 4.27 | 214. | 60 | 3 | 0.010 | 53 | 4 | 2.82 | 0.011 |
| 5 | 4.19 | 4.19 | 70 | 0. | 3.85 | 152. | 55 | -4 | 0.003 | 20 | 3 | 1.03 | 0.005 |
| 6 | 4.19 | 4.19 | 0. | -2 | 0.13 | -2. | 0. | -2 | 0.000 | 0. | 0. | 0.02 | 0.000 |
| 7 | 4.19 | 4.19 | 64 | -15 | 2.74 | 6. | 50 | -13 | 0.000 | 53 | -10 | 2.31 | 0.001 |
| 8 | 4.19 | 4.19 | 120 | -18 | 5.60 | 67. | 89 | -14 | 0.002 | 82 | -19 | 3.50 | 0.000 |
| 9 | 4.19 | 4.19 | 120 | -16 | 5.78 | 86. | 91 | -14 | 0.002 | 83 | -11 | 3.98 | 0.003 |
| 10 | 4.19 | 4.19 | 141 | -12 | 7.22 | 163. | 110 | -10 | 0.005 | 85 | -6 | 4.46 | 0.005 |
| 210 | 4.04 | 4.04 | 92 | 9 | 4.92 | 335. | 69 | 8 | 0.019 | 66 | 8 | 3.43 | 0.019 |
| 211 | 4.04 | 4.04 | 0. | 7 | 0.00 | 81. | 0. | 6 | 0.006 | 0. | 8 | 0.00 | 0.009 |
| 212 | 4.04 | 4.04 | 22 | -1 | 1.21 | 36. | 22 | -1 | 0.002 | 23 | 3 | 1.21 | 0.006 |
| 213 | 4.04 | 4.04 | 0. | 17 | 0.00 | 213. | 0. | 18 | 0.020 | 0. | 7 | 0.00 | 0.008 |
| 214 | 4.04 | 4.04 | 97 | 5 | 5.36 | 291. | 74 | 4 | 0.013 | 72 | 23 | 1.69 | 0.038 |
| 215 | 4.04 | 4.04 | 0. | 17 | 0.00 | 211. | 0. | 15 | 0.017 | 0. | 23 | 0.00 | 0.026 |
| 216 | 4.04 | 4.04 | 29 | 0. | 1.64 | 73. | 27 | 1 | 0.004 | 18 | 22 | 0.00 | 0.027 |
| 217 | 4.04 | 4.04 | 27 | 60 | 0.00 | 821. | 25 | 58 | 0.069 | 22 | 34 | 0.00 | 0.042 |
| 218 | 4.04 | 4.04 | 1 | 65 | 0.00 | 811. | 0. | 63 | 0.070 | 2 | 30 | 0.00 | 0.034 |
| 219 | 4.04 | 4.04 | 15 | 71 | 0.00 | 920. | 11 | 68 | 0.078 | 13 | 35 | 0.00 | 0.042 |
| 220 | 4.04 | 4.04 | 13 | 4 | 0.20 | 90. | 12 | 5 | 0.008 | 9 | 3 | 0.20 | 0.005 |
| 221 | 4.04 | 4.04 | 7 | 4 | 0.00 | 73. | 8 | 0. | 0.001 | 5 | 0. | 0.28 | 0.001 |
| 222 | 4.04 | 4.04 | 30 | 1 | 1.66 | 81. | 22 | 0. | 0.002 | 10 | 0. | 0.54 | 0.001 |
| 223 | 4.04 | 4.04 | 104 | 11 | 5.55 | 385. | 78 | 10 | 0.022 | 60 | 6 | 3.23 | 0.015 |
| 224 | 4.04 | 4.04 | 79 | 2 | 4.38 | 208. | 58 | 2 | 0.009 | 37 | -1 | 2.06 | 0.004 |
| 225 | 4.04 | 4.04 | 0. | 7 | 0.00 | 89. | 0. | 5 | 0.006 | 0. | 4 | 0.00 | 0.004 |
| 226 | 4.04 | 4.04 | 0. | 1 | 0.00 | 13. | 0. | 0. | 0.000 | 0. | -2 | 0.10 | 0.000 |
| 227 | 4.04 | 4.04 | 0. | -2 | 0.11 | -2. | 0. | -2 | 0.000 | 0. | -1 | 0.05 | 0.000 |
| 228 | 4.04 | 4.04 | 7 | 8 | 0.00 | 117. | 5 | 8 | 0.010 | 5 | 5 | 0.00 | 0.006 |
| 229 | 4.04 | 4.04 | 15 | -1 | 0.82 | 27. | 10 | 0. | 0.001 | 11 | -2 | 0.50 | 0.000 |
| 394 | 4.04 | 4.04 | 8 | 0. | 0.44 | 19. | 8 | -4 | 0.000 | 6 | -3 | 0.34 | 0.000 |
| 395 | 4.04 | 4.04 | 16 | -6 | 0.79 | -2. | 14 | -2 | 0.000 | 13 | -2 | 0.57 | 0.000 |
| 396 | 4.04 | 4.04 | 23 | -4 | 1.04 | 8. | 17 | -2 | 0.001 | 18 | -4 | 0.80 | 0.000 |
| 397 | 4.04 | 4.04 | 16 | 1 | 0.87 | 48. | 15 | 1 | 0.003 | 15 | 0. | 0.85 | 0.002 |
| 398 | 4.04 | 4.04 | 11 | -2 | 0.51 | 6. | 9 | -4 | 0.000 | 7 | -3 | 0.33 | 0.000 |
| 399 | 4.04 | 4.04 | 17 | -5 | 0.75 | -1. | 12 | -5 | 0.000 | 11 | -4 | 0.54 | 0.000 |
| 400 | 4.04 | 4.04 | 24 | -3 | 1.21 | 23. | 17 | -3 | 0.000 | 15 | -3 | 0.70 | 0.000 |
| 401 | 4.04 | 4.04 | 22 | -2 | 1.14 | 27. | 18 | -1 | 0.001 | 15 | -1 | 0.78 | 0.001 |
| 402 | 4.04 | 4.04 | 9 | -3 | 0.43 | -1. | 5 | -5 | 0.000 | 6 | -2 | 0.26 | 0.000 |
| 403 | 4.04 | 4.04 | 15 | -4 | 0.65 | 1. | 10 | -4 | 0.000 | 10 | -5 | 0.56 | 0.000 |
| 404 | 4.04 | 4.04 | 28 | -1 | 1.52 | 48. | 20 | 0. | 0.002 | 17 | -2 | 0.80 | 0.000 |
| 405 | 4.04 | 4.04 | 37 | -1 | 2.06 | 72. | 28 | -1 | 0.003 | 21 | -1 | 1.11 | 0.001 |
| 406 | 4.04 | 4.04 | 0. | -2 | 0.12 | -2. | 0. | -2 | 0.000 | 0. | -3 | 0.16 | 0.000 |
| 407 | 4.04 | 4.04 | 0. | -3 | 0.20 | -3. | 0. | -3 | 0.000 | 3 | -4 | 0.32 | 0.000 |
| 408 | 4.04 | 4.04 | 25 | -1 | 1.38 | 45. | 20 | -2 | 0.001 | 17 | -3 | 0.73 | 0.000 |
| 409 | 4.04 | 4.04 | 50 | -1 | 2.77 | 103. | 37 | -1 | 0.003 | 29 | -1 | 1.59 | 0.002 |
| 410 | 4.04 | 4.04 | 0. | -2 | 0.14 | -2. | 0. | -3 | 0.000 | 0. | -3 | 0.19 | 0.000 |
| 411 | 4.04 | 4.04 | 0. | -1 | 0.06 | -1. | 0. | -1 | 0.000 | 0. | -2 | 0.12 | 0.000 |
| 412 | 4.04 | 4.04 | 13 | -1 | 0.68 | 15. | 3 | -1 | 0.000 | 7 | -1 | 0.37 | 0.000 |
| 413 | 4.04 | 4.04 | 67 | 0. | 3.75 | 152. | 52 | -1 | 0.005 | 37 | 0. | 2.08 | 0.004 |
| 414 | 4.04 | 4.04 | 0. | 3 | 0.00 | 41. | 0. | 2 | 0.002 | 0. | 0. | 0.01 | 0.000 |
| 415 | 4.04 | 4.04 | 0. | 1 | 0.00 | 12. | 0. | 0. | 0.000 | 0. | -1 | 0.05 | 0.000 |
| 416 | 4.04 | 4.04 | 15 | 1 | 0.84 | 44. | 8 | 0. | 0.001 | 9 | 0. | 0.51 | 0.001 |
| 417 | 4.04 | 4.04 | 87 | 1 | 4.84 | 210. | 67 | 0. | 0.008 | 57 | 1 | 3.17 | 0.008 |
| 418 | 4.04 | 4.04 | 0. | 4 | 0.00 | 51. | 0. | 4 | 0.004 | 0. | 4 | 0.00 | 0.004 |
| 419 | 4.04 | 4.04 | 34 | -1 | 1.89 | 69. | 28 | 0. | 0.003 | 6 | 1 | 0.29 | 0.002 |
| 420 | 4.04 | 4.04 | 53 | 1 | 2.96 | 131. | 43 | 1 | 0.006 | 49 | 1 | 2.72 | 0.006 |
| 421 | 4.04 | 4.04 | 46 | 2 | 2.57 | 126. | 36 | 1 | 0.006 | 57 | 2 | 3.16 | 0.009 |
| 978 | 4.71 | 4.71 | 48 | 5 | 2.34 | 153. | 36 | 5 | 0.008 | 43 | 4 | 2.16 | 0.007 |
| 979 | 4.71 | 4.71 | 178 | -1 | 9.25 | 343. | 139 | 1 | 0.012 | 98 | 2 | 5.08 | 0.010 |
| 980 | 4.71 | 4.71 | 90 | 0. | 4.67 | 181. | 70 | 2 | 0.008 | 77 | 2 | 4.00 | 0.008 |
| 981 | 4.71 | 4.71 | 0. | -1 | 0.05 | -1. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 982 | 4.71 | 4.71 | 104 | 5 | 5.38 | 259. | 81 | 4 | 0.011 | 67 | 1 | 3.48 | 0.007 |

985 | 4.71 4.71 | 0. -1 0.06 -1. | 0. 0. 0.000 | 0. -1 0.05 0.000 |

ARMATURA INFERIORE VERTICALE

| | | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|------|------|------|-----------------|-----|-------|-----|------------------------|------|-------|--|
| GUSCI | Af | Afc | Mom | Nor | σc | σf | Mom | Nor | wkF | Mom | Nor | σc | wkP | |
| 1 | 6.00 | 6.00 | 57 | 0. | 2.67 | 92. | 41 | 0. | 0.002 | 54 | 1 | 2.52 | 0.004 | |
| 2 | 6.00 | 6.00 | 145 | 10 | 6.58 | 315. | 102 | 10 | 0.014 | 94 | 7 | 4.19 | 0.011 | |
| 3 | 6.00 | 6.00 | 167 | 1 | 7.76 | 274. | 118 | 1 | 0.008 | 103 | 2 | 4.77 | 0.008 | |
| 4 | 6.00 | 6.00 | 124 | 8 | 5.65 | 263. | 90 | 6 | 0.010 | 74 | 3 | 3.40 | 0.007 | |
| 5 | 6.00 | 6.00 | 41 | -2 | 1.91 | 46. | 29 | -3 | 0.001 | 13 | -6 | 0.64 | 0.000 | |
| 6 | 6.00 | 6.00 | 22 | -1 | 1.03 | 30. | 17 | -1 | 0.001 | 17 | 1 | 0.78 | 0.002 | |
| 7 | 6.00 | 6.00 | 75 | 0. | 3.51 | 120. | 60 | 0. | 0.003 | 55 | 0. | 2.55 | 0.004 | |
| 8 | 6.00 | 6.00 | 88 | 0. | 4.12 | 135. | 71 | 0. | 0.004 | 65 | 0. | 3.05 | 0.004 | |
| 9 | 6.00 | 6.00 | 76 | -2 | 3.54 | 106. | 59 | -2 | 0.003 | 60 | -1 | 2.82 | 0.003 | |
| 10 | 6.00 | 6.00 | 50 | -2 | 2.34 | 61. | 37 | -2 | 0.002 | 38 | -2 | 1.76 | 0.002 | |
| 210 | 5.72 | 5.72 | 26 | -7 | 1.06 | -1. | 21 | -7 | 0.000 | 21 | -10 | 1.12 | 0.000 | |
| 211 | 5.72 | 5.72 | 0. | -38 | 2.28 | -34. | 0. | -34 | 0.000 | 0. | -30 | 1.79 | 0.000 | |
| 212 | 5.72 | 5.72 | 31 | -41 | 3.21 | -31. | 25 | -28 | 0.000 | 12 | -33 | 2.24 | 0.000 | |
| 213 | 5.72 | 5.72 | 8 | -52 | 3.31 | -45. | 0. | -46 | 0.000 | 0. | -52 | 3.10 | 0.000 | |
| 214 | 5.72 | 5.72 | 9 | 3 | 0.15 | 44. | 10 | 3 | 0.003 | 17 | 0. | 0.82 | 0.001 | |
| 215 | 5.72 | 5.72 | 0. | -18 | 1.08 | -16. | 0. | -16 | 0.000 | 0. | -4 | 0.26 | 0.000 | |
| 216 | 5.72 | 5.72 | 0. | -6 | 0.33 | -5. | 0. | -4 | 0.000 | 0. | 1 | 0.00 | 0.001 | |
| 217 | 5.72 | 5.72 | 22 | -15 | 1.42 | -9. | 19 | -2 | 0.001 | 12 | -6 | 0.66 | 0.000 | |
| 218 | 5.72 | 5.72 | 12 | -32 | 2.23 | -26. | 7 | -12 | 0.000 | 2 | -18 | 1.14 | 0.000 | |
| 219 | 5.72 | 5.72 | 18 | -23 | 1.83 | -17. | 15 | -14 | 0.000 | 11 | -7 | 0.70 | 0.000 | |
| 220 | 5.72 | 5.72 | 0. | -94 | 5.64 | -85. | 0. | -87 | 0.000 | 0. | -77 | 4.61 | 0.000 | |
| 221 | 5.72 | 5.72 | 4 | -91 | 5.56 | -81. | 3 | -50 | 0.000 | 4 | -67 | 4.08 | 0.000 | |
| 222 | 5.72 | 5.72 | 18 | -77 | 5.03 | -65. | 12 | -71 | 0.000 | 5 | -57 | 3.52 | 0.000 | |
| 223 | 5.72 | 5.72 | 28 | -58 | 4.17 | -46. | 22 | -46 | 0.000 | 14 | -41 | 2.81 | 0.000 | |
| 224 | 5.72 | 5.72 | 48 | -62 | 4.84 | -46. | 36 | -55 | 0.000 | 21 | -47 | 3.31 | 0.000 | |
| 225 | 5.72 | 5.72 | 0. | -80 | 4.78 | -72. | 0. | -73 | 0.000 | 0. | -68 | 4.07 | 0.000 | |
| 226 | 5.72 | 5.72 | 0. | -87 | 5.23 | -78. | 0. | -80 | 0.000 | 0. | -76 | 4.56 | 0.000 | |
| 227 | 5.72 | 5.72 | 0. | -96 | 5.73 | -86. | 0. | -88 | 0.000 | 0. | -84 | 5.01 | 0.000 | |
| 228 | 5.72 | 5.72 | 36 | -105 | 7.16 | -87. | 20 | -92 | 0.000 | 16 | -92 | 5.89 | 0.000 | |
| 229 | 5.72 | 5.72 | 10 | -103 | 6.42 | -90. | 4 | -95 | 0.000 | 4 | -88 | 5.37 | 0.000 | |
| 394 | 5.72 | 5.72 | 19 | -66 | 4.43 | -56. | 7 | -55 | 0.000 | 2 | -61 | 3.72 | 0.000 | |
| 395 | 5.72 | 5.72 | 20 | -60 | 4.05 | -49. | 8 | -55 | 0.000 | 6 | -52 | 3.25 | 0.000 | |
| 396 | 5.72 | 5.72 | 25 | -40 | 2.96 | -30. | 12 | -40 | 0.000 | 12 | -34 | 2.32 | 0.000 | |
| 397 | 5.72 | 5.72 | 28 | -29 | 2.38 | -20. | 17 | -26 | 0.000 | 16 | -21 | 1.65 | 0.000 | |
| 398 | 5.72 | 5.72 | 26 | -80 | 5.41 | -66. | 14 | -71 | 0.000 | 11 | -69 | 4.38 | 0.000 | |
| 399 | 5.72 | 5.72 | 22 | -63 | 4.28 | -52. | 13 | -61 | 0.000 | 10 | -56 | 3.58 | 0.000 | |
| 400 | 5.72 | 5.72 | 18 | -39 | 2.79 | -31. | 13 | -42 | 0.000 | 10 | -38 | 2.52 | 0.000 | |
| 401 | 5.72 | 5.72 | 16 | -30 | 2.19 | -24. | 12 | -30 | 0.000 | 11 | -25 | 1.78 | 0.000 | |
| 402 | 5.72 | 5.72 | 12 | -86 | 5.43 | -75. | 5 | -80 | 0.000 | 7 | -71 | 4.39 | 0.000 | |
| 403 | 5.72 | 5.72 | 15 | -63 | 4.11 | -53. | 9 | -58 | 0.000 | 9 | -55 | 3.50 | 0.000 | |
| 404 | 5.72 | 5.72 | 17 | -43 | 2.96 | -35. | 12 | -39 | 0.000 | 10 | -39 | 2.60 | 0.000 | |
| 405 | 5.72 | 5.72 | 17 | -34 | 2.44 | -27. | 12 | -31 | 0.000 | 10 | -28 | 1.90 | 0.000 | |
| 406 | 5.72 | 5.72 | 0. | -81 | 4.87 | -73. | 0. | -75 | 0.000 | 0. | -69 | 4.11 | 0.000 | |
| 407 | 5.72 | 5.72 | 0. | -59 | 3.55 | -53. | 0. | -55 | 0.000 | 0. | -52 | 3.09 | 0.000 | |
| 408 | 5.72 | 5.72 | 7 | -40 | 2.54 | -34. | 4 | -36 | 0.000 | 6 | -38 | 2.42 | 0.000 | |
| 409 | 5.72 | 5.72 | 11 | -30 | 2.07 | -25. | 7 | -27 | 0.000 | 8 | -28 | 1.85 | 0.000 | |
| 410 | 5.72 | 5.72 | 0. | -72 | 4.31 | -65. | 0. | -66 | 0.000 | 0. | -61 | 3.67 | 0.000 | |
| 411 | 5.72 | 5.72 | 0. | -53 | 3.16 | -47. | 0. | -51 | 0.000 | 0. | -45 | 2.70 | 0.000 | |
| 412 | 5.72 | 5.72 | 0. | -32 | 1.89 | -28. | 0. | -33 | 0.000 | 0. | -32 | 1.93 | 0.000 | |
| 413 | 5.72 | 5.72 | 8 | -21 | 1.45 | -17. | 7 | -20 | 0.000 | 0. | -23 | 1.40 | 0.000 | |
| 414 | 5.72 | 5.72 | 0. | -61 | 3.64 | -55. | 0. | -55 | 0.000 | 0. | -50 | 2.98 | 0.000 | |
| 415 | 5.72 | 5.72 | 0. | -46 | 2.78 | -42. | 0. | -42 | 0.000 | 0. | -37 | 2.21 | 0.000 | |
| 416 | 5.72 | 5.72 | 0. | -30 | 1.80 | -27. | 0. | -27 | 0.000 | 0. | -25 | 1.50 | 0.000 | |
| 417 | 5.72 | 5.72 | 15 | -16 | 1.30 | -11. | 12 | -15 | 0.000 | 7 | -16 | 1.14 | 0.000 | |
| 418 | 5.72 | 5.72 | 0. | -42 | 2.54 | -38. | 0. | -38 | 0.000 | 0. | -36 | 2.14 | 0.000 | |
| 419 | 5.72 | 5.72 | 0. | -37 | 2.23 | -33. | 0. | -33 | 0.000 | 0. | -29 | 1.75 | 0.000 | |
| 420 | 5.72 | 5.72 | 0. | -24 | 1.46 | -22. | 0. | -21 | 0.000 | 0. | -17 | 1.04 | 0.000 | |
| 421 | 5.72 | 5.72 | 6 | -15 | 1.02 | -12. | 7 | -13 | 0.000 | 14 | -9 | 0.88 | 0.000 | |
| 978 | 5.99 | 5.99 | 21 | -10 | 1.11 | -5. | 18 | -9 | 0.000 | 5 | -10 | 0.72 | 0.000 | |
| 979 | 5.99 | 5.99 | 88 | -10 | 3.90 | 58. | 69 | -9 | 0.001 | 62 | -8 | 2.73 | 0.001 | |
| 980 | 5.99 | 5.99 | 145 | -7 | 6.74 | 170. | 113 | -6 | 0.005 | 98 | -5 | 4.53 | 0.004 | |
| 981 | 5.99 | 5.99 | 108 | -4 | 5.03 | 137. | 84 | -4 | 0.004 | 69 | -5 | 3.18 | 0.003 | |
| 982 | 5.99 | 5.99 | 22 | 2 | 0.98 | 49. | 15 | 1 | 0.002 | 18 | -1 | 0.85 | 0.001 | |
| 985 | 5.99 | 5.99 | 1 | -3 | 0.19 | -2. | 1 | -3 | 0.000 | 16 | -3 | 0.66 | 0.000 | |

ARMATURA SUPERIORE ORIZZONTALE

| | | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------------|------------|-----------------|-----|-------|-----|------------------------|------------|-------|--|
| GUSCI | Af | Afc | Mom | Nor | σ_c | σ_f | Mom | Nor | wkF | Mom | Nor | σ_c | wkP | |
| 1 | 4.19 | 4.19 | 132 | 1 | 7.25 | 306. | 99 | 1 | 0.012 | 75 | 6 | 4.01 | 0.015 | |
| 2 | 4.19 | 4.19 | 94 | 2 | 5.13 | 234. | 72 | 2 | 0.010 | 70 | 2 | 3.84 | 0.010 | |
| 3 | 4.19 | 4.19 | 72 | -4 | 3.86 | 114. | 50 | -4 | 0.003 | 46 | -6 | 2.25 | 0.002 | |
| 4 | 4.19 | 4.19 | 29 | 3 | 1.53 | 108. | 26 | 3 | 0.007 | 24 | 4 | 1.09 | 0.008 | |
| 5 | 4.19 | 4.19 | 0. | 0. | 0.01 | 0. | 0. | -4 | 0.000 | 0. | 3 | 0.00 | 0.003 | |
| 6 | 4.19 | 4.19 | 208 | -2 | 11.34 | 430. | 156 | -2 | 0.014 | 124 | 0. | 6.79 | 0.012 | |
| 7 | 4.19 | 4.19 | 100 | -15 | 4.62 | 52. | 77 | -13 | 0.001 | 68 | -10 | 3.19 | 0.002 | |
| 8 | 4.19 | 4.19 | 45 | -18 | 0.02 | -26. | 36 | -14 | 0.000 | 37 | -19 | 0.27 | 0.000 | |
| 9 | 4.19 | 4.19 | 16 | -16 | 0.57 | -18. | 13 | -14 | 0.000 | 16 | -11 | 0.28 | 0.000 | |
| 10 | 4.19 | 4.19 | 0. | -12 | 0.75 | -11. | 0. | -10 | 0.000 | 0. | -6 | 0.35 | 0.000 | |
| 210 | 4.04 | 4.04 | 0. | 9 | 0.00 | 116. | 0. | 8 | 0.009 | 0. | 8 | 0.00 | 0.009 | |
| 211 | 4.04 | 4.04 | 59 | 7 | 3.13 | 223. | 44 | 6 | 0.012 | 56 | 8 | 2.86 | 0.017 | |
| 212 | 4.04 | 4.04 | 0. | -1 | 0.07 | -1. | 0. | -1 | 0.000 | 0. | 3 | 0.00 | 0.003 | |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|------|------|-----|----|------|------|-----|----|-------|-----|----|------|-------|
| 213 | 4.04 | 4.04 | 27 | 17 | 0.00 | 288. | 27 | 18 | 0.024 | 18 | 7 | 0.00 | 0.011 |
| 214 | 4.04 | 4.04 | 121 | 5 | 6.70 | 345. | 91 | 4 | 0.015 | 66 | 23 | 0.79 | 0.037 |
| 215 | 4.04 | 4.04 | 48 | 17 | 0.47 | 342. | 40 | 15 | 0.024 | 43 | 23 | 0.00 | 0.034 |
| 216 | 4.04 | 4.04 | 92 | 0. | 5.12 | 215. | 71 | 1 | 0.009 | 78 | 22 | 2.61 | 0.037 |
| 217 | 4.04 | 4.04 | 11 | 60 | 0.00 | 777. | 13 | 58 | 0.066 | 19 | 34 | 0.00 | 0.042 |
| 218 | 4.04 | 4.04 | 37 | 65 | 0.00 | 908. | 30 | 63 | 0.075 | 19 | 30 | 0.00 | 0.037 |
| 219 | 4.04 | 4.04 | 24 | 71 | 0.00 | 945. | 24 | 68 | 0.080 | 21 | 35 | 0.00 | 0.043 |
| 220 | 4.04 | 4.04 | 0. | 4 | 0.00 | 54. | 0. | 5 | 0.006 | 0. | 3 | 0.00 | 0.003 |
| 221 | 4.04 | 4.04 | 0. | 4 | 0.00 | 53. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 222 | 4.04 | 4.04 | 0. | 1 | 0.00 | 12. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 223 | 4.04 | 4.04 | 0. | 11 | 0.00 | 136. | 0. | 10 | 0.011 | 0. | 6 | 0.00 | 0.007 |
| 224 | 4.04 | 4.04 | 0. | 2 | 0.00 | 27. | 0. | 2 | 0.002 | 0. | -1 | 0.04 | 0.000 |
| 225 | 4.04 | 4.04 | 86 | 7 | 4.65 | 291. | 69 | 5 | 0.015 | 64 | 4 | 3.57 | 0.012 |
| 226 | 4.04 | 4.04 | 48 | 1 | 2.66 | 122. | 40 | 0. | 0.005 | 19 | -2 | 1.01 | 0.001 |
| 227 | 4.04 | 4.04 | 20 | -2 | 1.03 | 24. | 15 | -2 | 0.001 | 16 | -1 | 0.86 | 0.001 |
| 228 | 4.04 | 4.04 | 36 | 8 | 1.53 | 188. | 31 | 8 | 0.014 | 26 | 5 | 1.27 | 0.009 |
| 229 | 4.04 | 4.04 | 29 | -1 | 1.61 | 60. | 23 | 0. | 0.002 | 22 | -2 | 1.10 | 0.001 |
| 394 | 4.04 | 4.04 | 26 | 0. | 1.42 | 60. | 23 | -4 | 0.000 | 20 | -3 | 0.95 | 0.001 |
| 395 | 4.04 | 4.04 | 25 | -6 | 1.07 | 1. | 21 | -2 | 0.001 | 22 | -2 | 1.11 | 0.001 |
| 396 | 4.04 | 4.04 | 18 | -4 | 0.79 | 2. | 20 | -2 | 0.001 | 20 | -4 | 0.89 | 0.000 |
| 397 | 4.04 | 4.04 | 24 | 1 | 1.36 | 68. | 23 | 1 | 0.004 | 20 | 0. | 1.14 | 0.002 |
| 398 | 4.04 | 4.04 | 29 | -2 | 1.57 | 46. | 25 | -4 | 0.001 | 25 | -3 | 1.23 | 0.001 |
| 399 | 4.04 | 4.04 | 28 | -5 | 1.23 | 8. | 23 | -5 | 0.000 | 23 | -4 | 1.00 | 0.000 |
| 400 | 4.04 | 4.04 | 18 | -3 | 0.84 | 11. | 18 | -3 | 0.001 | 17 | -3 | 0.77 | 0.000 |
| 401 | 4.04 | 4.04 | 16 | -2 | 0.83 | 16. | 14 | -1 | 0.001 | 14 | -1 | 0.72 | 0.001 |
| 402 | 4.04 | 4.04 | 32 | -3 | 1.64 | 32. | 26 | -5 | 0.000 | 25 | -2 | 1.32 | 0.002 |
| 403 | 4.04 | 4.04 | 30 | -4 | 1.44 | 21. | 24 | -4 | 0.001 | 22 | -5 | 0.95 | 0.000 |
| 404 | 4.04 | 4.04 | 15 | -1 | 0.77 | 19. | 12 | 0. | 0.001 | 13 | -2 | 0.60 | 0.000 |
| 405 | 4.04 | 4.04 | 0. | -1 | 0.06 | -1. | 0. | -1 | 0.000 | 1 | -1 | 0.04 | 0.000 |
| 406 | 4.04 | 4.04 | 30 | -2 | 1.61 | 44. | 23 | -2 | 0.001 | 23 | -3 | 1.14 | 0.001 |
| 407 | 4.04 | 4.04 | 27 | -3 | 1.34 | 23. | 21 | -3 | 0.001 | 20 | -4 | 0.87 | 0.000 |
| 408 | 4.04 | 4.04 | 5 | -1 | 0.24 | 2. | 3 | -2 | 0.000 | 7 | -3 | 0.04 | 0.000 |
| 409 | 4.04 | 4.04 | 0. | -1 | 0.05 | -1. | 0. | -1 | 0.000 | 0. | -1 | 0.08 | 0.000 |
| 410 | 4.04 | 4.04 | 36 | -2 | 1.92 | 52. | 30 | -3 | 0.001 | 19 | -3 | 0.89 | 0.000 |
| 411 | 4.04 | 4.04 | 23 | -1 | 1.27 | 41. | 19 | -1 | 0.001 | 14 | -2 | 0.67 | 0.000 |
| 412 | 4.04 | 4.04 | 0. | -1 | 0.08 | -1. | 0. | -1 | 0.000 | 0. | -1 | 0.04 | 0.000 |
| 413 | 4.04 | 4.04 | 0. | 0. | 0.01 | 0. | 0. | -1 | 0.000 | 0. | 0. | 0.03 | 0.000 |
| 414 | 4.04 | 4.04 | 77 | 3 | 4.27 | 219. | 60 | 2 | 0.009 | 49 | 0. | 2.71 | 0.005 |
| 415 | 4.04 | 4.04 | 67 | 1 | 3.74 | 165. | 52 | 0. | 0.006 | 38 | -1 | 2.11 | 0.004 |
| 416 | 4.04 | 4.04 | 34 | 1 | 1.91 | 87. | 30 | 0. | 0.004 | 13 | 0. | 0.70 | 0.001 |
| 417 | 4.04 | 4.04 | 0. | 1 | 0.00 | 12. | 0. | 0. | 0.000 | 0. | 1 | 0.00 | 0.002 |
| 418 | 4.04 | 4.04 | 85 | 4 | 4.69 | 248. | 65 | 4 | 0.012 | 63 | 4 | 3.45 | 0.012 |
| 419 | 4.04 | 4.04 | 104 | -1 | 5.77 | 227. | 80 | 0. | 0.008 | 70 | 1 | 3.89 | 0.008 |
| 420 | 4.04 | 4.04 | 109 | 1 | 6.10 | 260. | 84 | 1 | 0.010 | 57 | 1 | 3.18 | 0.007 |
| 421 | 4.04 | 4.04 | 54 | 2 | 2.99 | 144. | 42 | 1 | 0.007 | 13 | 2 | 0.59 | 0.005 |
| 978 | 4.71 | 4.71 | 40 | 5 | 1.92 | 138. | 30 | 5 | 0.007 | 0. | 4 | 0.00 | 0.003 |
| 979 | 4.71 | 4.71 | 97 | -1 | 5.06 | 184. | 75 | 1 | 0.007 | 74 | 2 | 3.86 | 0.008 |
| 980 | 4.71 | 4.71 | 179 | 0. | 9.29 | 357. | 138 | 2 | 0.013 | 105 | 2 | 5.46 | 0.010 |
| 981 | 4.71 | 4.71 | 124 | -1 | 6.42 | 234. | 95 | 0. | 0.007 | 70 | 0. | 3.63 | 0.006 |
| 982 | 4.71 | 4.71 | 0. | 5 | 0.00 | 50. | 0. | 4 | 0.004 | 0. | 1 | 0.00 | 0.001 |
| 985 | 4.71 | 4.71 | 112 | -1 | 5.83 | 210. | 86 | 0. | 0.007 | 70 | -1 | 3.61 | 0.005 |

ARMATURA SUPERIORE VERTICALE

| GUSCI | | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|------|------|-------|-----------------|-----|-------|--|------------------------|-----|------|-------|
| | Af | Afc | Mom | Nor | σc | σf | Mom | Nor | wkF | | Mom | Nor | σc | wkP |
| 1 | 6.00 | 6.00 | 50 | 0. | 2.34 | 81. | 41 | 0. | 0.002 | | 36 | 1 | 1.67 | 0.003 |
| 2 | 6.00 | 6.00 | 28 | 10 | 0.25 | 133. | 29 | 10 | 0.009 | | 35 | 7 | 1.19 | 0.008 |
| 3 | 6.00 | 6.00 | 0. | 1 | 0.00 | 12. | 8 | 1 | 0.001 | | 17 | 2 | 0.72 | 0.002 |
| 4 | 6.00 | 6.00 | 12 | 8 | 0.00 | 86. | 14 | 6 | 0.005 | | 14 | 3 | 0.48 | 0.003 |
| 5 | 6.00 | 6.00 | 6 | -2 | 0.01 | -3. | 3 | -3 | 0.000 | | 15 | -6 | 0.00 | 0.000 |
| 6 | 6.00 | 6.00 | 59 | -1 | 2.76 | 88. | 46 | -1 | 0.003 | | 46 | 1 | 2.15 | 0.003 |
| 7 | 6.00 | 6.00 | 74 | 0. | 3.43 | 117. | 59 | 0. | 0.003 | | 55 | 0. | 2.55 | 0.004 |
| 8 | 6.00 | 6.00 | 63 | 0. | 2.93 | 95. | 50 | 0. | 0.003 | | 48 | 0. | 2.25 | 0.003 |
| 9 | 6.00 | 6.00 | 47 | -2 | 2.21 | 61. | 36 | -2 | 0.002 | | 37 | -1 | 1.73 | 0.002 |
| 10 | 6.00 | 6.00 | 13 | -2 | 0.56 | 5. | 9 | -2 | 0.000 | | 8 | -2 | 0.31 | 0.000 |
| 210 | 5.72 | 5.72 | 36 | -7 | 1.49 | 7. | 26 | -7 | 0.000 | | 48 | -10 | 1.98 | 0.000 |
| 211 | 5.72 | 5.72 | 221 | -38 | 9.34 | 71. | 169 | -34 | 0.001 | | 141 | -30 | 5.84 | 0.001 |
| 212 | 5.72 | 5.72 | 0. | -41 | 2.48 | -37. | 1 | -28 | 0.000 | | 5 | -33 | 1.84 | 0.000 |
| 213 | 5.72 | 5.72 | 0. | -52 | 3.11 | -47. | 10 | -46 | 0.000 | | 10 | -52 | 2.85 | 0.000 |
| 214 | 5.72 | 5.72 | 145 | 3 | 6.89 | 266. | 109 | 3 | 0.009 | | 88 | 0. | 4.19 | 0.006 |
| 215 | 5.72 | 5.72 | 162 | -18 | 7.28 | 113. | 122 | -16 | 0.003 | | 92 | -4 | 4.35 | 0.004 |
| 216 | 5.72 | 5.72 | 169 | -6 | 8.03 | 228. | 129 | -4 | 0.007 | | 95 | 1 | 4.51 | 0.007 |
| 217 | 5.72 | 5.72 | 12 | -15 | 0.60 | -16. | 19 | -2 | 0.001 | | 20 | -6 | 0.10 | 0.000 |
| 218 | 5.72 | 5.72 | 3 | -32 | 1.86 | -30. | 14 | -12 | 0.000 | | 9 | -18 | 0.87 | 0.000 |
| 219 | 5.72 | 5.72 | 15 | -23 | 1.04 | -24. | 20 | -14 | 0.000 | | 21 | -7 | 0.07 | 0.000 |
| 220 | 5.72 | 5.72 | 13 | -94 | 5.33 | -87. | 13 | -87 | 0.000 | | 10 | -77 | 4.38 | 0.000 |
| 221 | 5.72 | 5.72 | 1 | -91 | 5.45 | -82. | 5 | -50 | 0.000 | | 4 | -67 | 3.90 | 0.000 |
| 222 | 5.72 | 5.72 | 0. | -77 | 4.61 | -69. | 0. | -71 | 0.000 | | 0. | -57 | 3.40 | 0.000 |
| 223 | 5.72 | 5.72 | 92 | -58 | 1.31 | -72. | 67 | -46 | 0.000 | | 14 | -41 | 2.15 | 0.000 |
| 224 | 5.72 | 5.72 | 10 | -62 | 3.49 | -58. | 6 | -55 | 0.000 | | 0. | -47 | 2.81 | 0.000 |
| 225 | 5.72 | 5.72 | 198 | -80 | 0.07 | -114. | 151 | -73 | 0.000 | | 126 | -68 | 1.07 | 0.000 |
| 226 | 5.72 | 5.72 | 92 | -87 | 3.05 | -98. | 72 | -80 | 0.000 | | 56 | -76 | 3.23 | 0.000 |
| 227 | 5.72 | 5.72 | 54 | -96 | 4.44 | -98. | 43 | -88 | 0.000 | | 38 | -84 | 4.11 | 0.000 |
| 228 | 5.72 | 5.72 | 11 | -105 | 6.04 | -97. | 20 | -92 | 0.000 | | 24 | -92 | 4.95 | 0.000 |
| 229 | 5.72 | 5.72 | 36 | -103 | 5.31 | -100. | 32 | -95 | 0.000 | | 30 | -88 | 4.56 | 0.000 |
| 394 | 5.72 | 5.72 | 9 | -66 | 3.76 | -62. | 21 | -55 | 0.000 | | 24 | -61 | 3.12 | 0.000 |
| 395 | 5.72 | 5.72 | 16 | -60 | 3.19 | -57. | 27 | -55 | 0.000 | | 28 | -52 | 2.47 | 0.000 |
| 396 | 5.72 | 5.72 | 16 | -40 | 1.99 | -39. | 24 | -40 | 0.000 | | 24 | -34 | 1.45 | 0.000 |

| | | | | | | | | | | | | | |
|-----|------|------|-----|-----|-------|------|-----|-----|-------|-----|-----|------|-------|
| 397 | 5.72 | 5.72 | 13 | -29 | 1.40 | -29. | 20 | -26 | 0.000 | 21 | -21 | 0.76 | 0.000 |
| 398 | 5.72 | 5.72 | 13 | -80 | 4.49 | -75. | 21 | -71 | 0.000 | 23 | -69 | 3.58 | 0.000 |
| 399 | 5.72 | 5.72 | 21 | -63 | 3.28 | -61. | 23 | -61 | 0.000 | 24 | -56 | 2.78 | 0.000 |
| 400 | 5.72 | 5.72 | 24 | -39 | 1.79 | -40. | 23 | -42 | 0.000 | 22 | -38 | 1.74 | 0.000 |
| 401 | 5.72 | 5.72 | 24 | -30 | 1.24 | -32. | 22 | -30 | 0.000 | 19 | -25 | 1.07 | 0.000 |
| 402 | 5.72 | 5.72 | 34 | -86 | 4.35 | -85. | 29 | -80 | 0.000 | 27 | -71 | 3.60 | 0.000 |
| 403 | 5.72 | 5.72 | 30 | -63 | 3.05 | -63. | 25 | -58 | 0.000 | 24 | -55 | 2.72 | 0.000 |
| 404 | 5.72 | 5.72 | 25 | -43 | 1.95 | -44. | 21 | -39 | 0.000 | 20 | -39 | 1.88 | 0.000 |
| 405 | 5.72 | 5.72 | 19 | -34 | 1.58 | -34. | 15 | -31 | 0.000 | 13 | -28 | 1.37 | 0.000 |
| 406 | 5.72 | 5.72 | 49 | -81 | 3.71 | -83. | 38 | -75 | 0.000 | 33 | -69 | 3.34 | 0.000 |
| 407 | 5.72 | 5.72 | 37 | -59 | 2.66 | -61. | 29 | -55 | 0.000 | 27 | -52 | 2.46 | 0.000 |
| 408 | 5.72 | 5.72 | 22 | -40 | 1.85 | -40. | 16 | -36 | 0.000 | 18 | -38 | 1.86 | 0.000 |
| 409 | 5.72 | 5.72 | 2 | -30 | 1.76 | -27. | 1 | -27 | 0.000 | 3 | -28 | 1.59 | 0.000 |
| 410 | 5.72 | 5.72 | 75 | -72 | 2.52 | -81. | 59 | -66 | 0.000 | 44 | -61 | 2.63 | 0.000 |
| 411 | 5.72 | 5.72 | 46 | -53 | 2.07 | -57. | 38 | -51 | 0.000 | 32 | -45 | 1.95 | 0.000 |
| 412 | 5.72 | 5.72 | 13 | -32 | 1.58 | -31. | 14 | -33 | 0.000 | 15 | -32 | 1.57 | 0.000 |
| 413 | 5.72 | 5.72 | 0. | -21 | 1.27 | -19. | 0. | -20 | 0.000 | 0. | -23 | 1.38 | 0.000 |
| 414 | 5.72 | 5.72 | 160 | -61 | 0.16 | -89. | 122 | -55 | 0.000 | 99 | -50 | 0.64 | 0.000 |
| 415 | 5.72 | 5.72 | 122 | -46 | 0.12 | -68. | 94 | -42 | 0.000 | 72 | -37 | 0.51 | 0.000 |
| 416 | 5.72 | 5.72 | 74 | -30 | 0.05 | -43. | 57 | -27 | 0.000 | 40 | -25 | 0.54 | 0.000 |
| 417 | 5.72 | 5.72 | 10 | -16 | 0.72 | -16. | 8 | -15 | 0.000 | 8 | -16 | 0.79 | 0.000 |
| 418 | 5.72 | 5.72 | 247 | -42 | 10.43 | 80. | 190 | -38 | 0.002 | 169 | -36 | 6.96 | 0.001 |
| 419 | 5.72 | 5.72 | 247 | -37 | 10.69 | 109. | 191 | -33 | 0.002 | 155 | -29 | 6.48 | 0.002 |
| 420 | 5.72 | 5.72 | 197 | -24 | 8.76 | 121. | 151 | -21 | 0.003 | 109 | -17 | 4.65 | 0.002 |
| 421 | 5.72 | 5.72 | 135 | -15 | 6.10 | 97. | 103 | -13 | 0.002 | 58 | -9 | 2.48 | 0.001 |
| 978 | 5.99 | 5.99 | 96 | -10 | 4.27 | 68. | 74 | -9 | 0.002 | 64 | -10 | 2.71 | 0.001 |
| 979 | 5.99 | 5.99 | 137 | -10 | 6.28 | 132. | 106 | -9 | 0.003 | 98 | -8 | 4.46 | 0.003 |
| 980 | 5.99 | 5.99 | 103 | -7 | 4.74 | 104. | 80 | -6 | 0.003 | 66 | -5 | 3.02 | 0.002 |
| 981 | 5.99 | 5.99 | 66 | -4 | 3.04 | 71. | 51 | -4 | 0.002 | 35 | -5 | 1.53 | 0.001 |
| 982 | 5.99 | 5.99 | 10 | 2 | 0.37 | 30. | 7 | 1 | 0.001 | 11 | -1 | 0.50 | 0.000 |
| 985 | 5.99 | 5.99 | 17 | -3 | 0.70 | 6. | 13 | -3 | 0.000 | 7 | -3 | 0.00 | 0.000 |

MACROGUSCIO SETTO03

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

| Nome | Descrizione |
|------|----------------------|
| 1 | SLU |
| 2 | SLU VENTOX |
| 3 | SLU VENTOY |
| 6 | SLU con SISMAX PRINC |
| 7 | SLU con SISMAX PRINC |

DATI:

tensione di snervamento acciaio (fyk): 4500 daN/cm2
 coefficiente sicurezza acciaio : 1.15
 deformazione ultima acciaio : 1.97 per mille
 deformazione ultima cls : 3.5 per mille
 rapporto rottura/snervamento (k): 1
 resistenza cilindrica cls (fck): 249 daN/cm2
 coefficiente sicurezza cls : 1.5
 coefficiente riduttivo (alfa): 0.85
 copriferro inferiore (asse armatura): 3 cm
 copriferro superiore (asse armatura): 3 cm
 moltiplicatore sollecitazioni : 1

LEGENDA:

spess = spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
 Af = area disposta al lembo teso, in cm2 al metro
 Afc = area disposta al lembo compresso, in cm2 al metro
 Mom = momento flettente [daNcm/cm]
 Nor = sforzo normale [daN]
 epsC = deformazione cls [per mille]
 epsF = deformazione acciaio [per mille]

<- L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

| GUSCI | spess | INFERIORE ORIZZONTALE | | | | | | INFERIORE VERTICALE | | | | | |
|-------|-------|-----------------------|------|-----|------|------|------|---------------------|------|-----|------|------|-------|
| | | Af | Afc | Mom | Nor | epsC | epsF | Af | Afc | Mom | Nor | epsC | epsF |
| 320 | 15 | 4.19 | 4.19 | 14. | 29. | 0.00 | 0.18 | 5.74 | 5.74 | 86. | 26. | 0.00 | 0.18 |
| 321 | 15 | 4.19 | 4.19 | 0. | 73. | 0.00 | 0.41 | 5.74 | 5.74 | 92. | 35. | 0.03 | 0.22 |
| 322 | 15 | 4.19 | 4.19 | 18. | 14. | 0.00 | 0.10 | 5.74 | 5.74 | 9. | 5. | 0.00 | 0.03 |
| 323 | 15 | 4.19 | 4.19 | 0. | 127. | 0.00 | 0.72 | 5.74 | 5.74 | 19. | 32. | 0.00 | 0.15 |
| 668 | 15 | 4.04 | 4.04 | 1. | -5. | 0.00 | 0.00 | 6.46 | 6.46 | 0. | -23. | 0.01 | -0.01 |
| 669 | 15 | 4.04 | 4.04 | 0. | 4. | 0.00 | 0.02 | 6.46 | 6.46 | 0. | -13. | 0.01 | -0.01 |
| 670 | 15 | 4.04 | 4.04 | 1. | 11. | 0.00 | 0.07 | 6.46 | 6.46 | 0. | -29. | 0.01 | -0.01 |
| 671 | 15 | 4.04 | 4.04 | 5. | -7. | 0.01 | 0.01 | 6.46 | 6.46 | 6. | -25. | 0.01 | -0.01 |
| 672 | 15 | 4.04 | 4.04 | 4. | -12. | 0.01 | 0.00 | 6.46 | 6.46 | 7. | -29. | 0.01 | -0.01 |
| 673 | 15 | 4.04 | 4.04 | 27. | 1. | 0.01 | 0.04 | 6.46 | 6.46 | 7. | -29. | 0.01 | -0.01 |
| 674 | 15 | 4.04 | 4.04 | 3. | -3. | 0.00 | 0.00 | 6.46 | 6.46 | 2. | -28. | 0.01 | -0.01 |
| 675 | 15 | 4.04 | 4.04 | 4. | -4. | 0.00 | 0.00 | 6.46 | 6.46 | 4. | -28. | 0.01 | -0.01 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|------|----|-------|------|-----|------|------|------|------|------|------|------|------|-------|
| 676 | 15 | 4.04 | 4.04 | 23. | 1. | 0.00 | 0.03 | 6.46 | 6.46 | 6. | -26. | 0.01 | -0.01 |
| 677 | 15 | 4.04 | 4.04 | 0. | 3. | 0.00 | 0.02 | 6.46 | 6.46 | 0. | -27. | 0.01 | -0.01 |
| 678 | 15 | 4.04 | 4.04 | 2. | 5. | 0.00 | 0.03 | 6.46 | 6.46 | 1. | -25. | 0.01 | -0.01 |
| 679 | 15 | 4.04 | 4.04 | 12. | 4. | 0.00 | 0.04 | 6.46 | 6.46 | 4. | -19. | 0.01 | -0.01 |
| 680 | 15 | 4.04 | 4.04 | 0. | 3. | 0.00 | 0.02 | 6.46 | 6.46 | 0. | -25. | 0.01 | -0.01 |
| 681 | 15 | 4.04 | 4.04 | 1. | 6. | 0.00 | 0.03 | 6.46 | 6.46 | 0. | -22. | 0.01 | -0.01 |
| 682 | 15 | 4.04 | 4.04 | 6. | 6. | 0.00 | 0.04 | 6.46 | 6.46 | 1. | -13. | 0.01 | 0.00 |
| 683 | 15 | 4.04 | 4.04 | 0. | -4. | 0.00 | 0.00 | 6.46 | 6.46 | 0. | -25. | 0.01 | -0.01 |
| 684 | 15 | 4.04 | 4.04 | 5. | -5. | 0.00 | 0.00 | 6.46 | 6.46 | 0. | -18. | 0.01 | -0.01 |
| 685 | 15 | 4.04 | 4.04 | 2. | 2. | 0.00 | 0.01 | 6.46 | 6.46 | 0. | -7. | 0.00 | 0.00 |
| 686 | 15 | 4.04 | 4.04 | 0. | -8. | 0.00 | 0.00 | 6.46 | 6.46 | 15. | -25. | 0.02 | -0.01 |
| 687 | 15 | 4.04 | 4.04 | 7. | -7. | 0.01 | 0.04 | 6.46 | 6.46 | 21. | -12. | 0.01 | 0.01 |
| 688 | 15 | 4.04 | 4.04 | 2. | 18. | 0.00 | 0.11 | 6.46 | 6.46 | 13. | 8. | 0.00 | 0.04 |
| 892 | 15 | 4.19 | 4.19 | 10. | -1. | 0.00 | 0.01 | 5.74 | 5.74 | 17. | 0. | 0.01 | 0.01 |
| 897 | 15 | 4.19 | 4.19 | 40. | 13. | 0.00 | 0.12 | 5.74 | 5.74 | 117. | 9. | 0.01 | 0.13 |
| 898 | 15 | 4.19 | 4.19 | 25. | 64. | 0.00 | 0.39 | 5.74 | 5.74 | 44. | 50. | 0.00 | 0.24 |
| 903 | 15 | 4.19 | 4.19 | 40. | 79. | 0.00 | 0.49 | 5.74 | 5.74 | 172. | 122. | 0.00 | 0.68 |
| 999 | 15 | 4.71 | 4.71 | 0. | 61. | 0.00 | 0.31 | 6.46 | 6.46 | 31. | -32. | 0.02 | 0.09 |
| 1000 | 15 | 4.71 | 4.71 | 7. | 53. | 0.00 | 0.28 | 6.46 | 6.46 | 23. | 44. | 0.00 | 0.18 |
| 1001 | 15 | 4.71 | 4.71 | 4. | 35. | 0.00 | 0.18 | 6.46 | 6.46 | 14. | 50. | 0.00 | 0.19 |
| 1002 | 15 | 11.85 | 4.71 | 0. | 124. | 0.00 | 0.59 | 6.46 | 6.46 | 1. | 20. | 0.01 | 0.07 |
| 1003 | 15 | 4.71 | 4.71 | 6. | 86. | 0.00 | 0.44 | 6.46 | 6.46 | 11. | 31. | 0.00 | 0.12 |
| 1004 | 15 | 4.71 | 4.71 | 8. | 38. | 0.00 | 0.20 | 6.46 | 6.46 | 11. | 28. | 0.00 | 0.11 |

| | | SUPERIORE ORIZZONTALE | | | | | | SUPERIORE VERTICALE | | | | | |
|-------|-------|-----------------------|------|-----|------|------|------|---------------------|------|-----|------|------|-------|
| GUSCI | spess | Af | Afc | Mom | Nor | epsC | epsF | Af | Afc | Mom | Nor | epsC | epsF |
| 320 | 15 | 4.19 | 4.19 | 55. | 29. | 0.00 | 0.22 | 5.74 | 5.74 | 0. | 26. | 0.00 | 0.11 |
| 321 | 15 | 4.19 | 4.19 | 48. | 73. | 0.00 | 0.47 | 5.74 | 5.74 | 0. | 35. | 0.01 | 0.15 |
| 322 | 15 | 4.19 | 4.19 | 43. | 16. | 0.00 | 0.14 | 5.74 | 5.74 | 22. | 5. | 0.00 | 0.04 |
| 323 | 15 | 4.19 | 4.19 | 78. | 123. | 0.00 | 0.80 | 5.74 | 5.74 | 9. | 32. | 0.00 | 0.14 |
| 668 | 15 | 4.04 | 4.04 | 6. | -5. | 0.00 | 0.01 | 6.46 | 6.46 | 34. | -21. | 0.02 | 0.01 |
| 669 | 15 | 4.04 | 4.04 | 11. | -3. | 0.01 | 0.03 | 6.46 | 6.46 | 50. | -7. | 0.02 | 0.03 |
| 670 | 15 | 4.04 | 4.04 | 8. | 11. | 0.00 | 0.08 | 6.46 | 6.46 | 90. | -19. | 0.04 | 0.05 |
| 671 | 15 | 4.04 | 4.04 | 3. | -7. | 0.00 | 0.00 | 6.46 | 6.46 | 5. | -25. | 0.01 | -0.01 |
| 672 | 15 | 4.04 | 4.04 | 7. | -12. | 0.01 | 0.00 | 6.46 | 6.46 | 2. | -29. | 0.01 | -0.01 |
| 673 | 15 | 4.04 | 4.04 | 0. | 1. | 0.00 | 0.01 | 6.46 | 6.46 | 0. | -29. | 0.01 | -0.01 |
| 674 | 15 | 4.04 | 4.04 | 4. | -3. | 0.00 | 0.00 | 6.46 | 6.46 | 3. | -28. | 0.01 | -0.01 |
| 675 | 15 | 4.04 | 4.04 | 3. | -4. | 0.00 | 0.00 | 6.46 | 6.46 | 1. | -28. | 0.01 | -0.01 |
| 676 | 15 | 4.04 | 4.04 | 0. | 3. | 0.00 | 0.02 | 6.46 | 6.46 | 0. | -27. | 0.01 | -0.01 |
| 677 | 15 | 4.04 | 4.04 | 6. | 3. | 0.00 | 0.02 | 6.46 | 6.46 | 3. | -27. | 0.01 | -0.01 |
| 678 | 15 | 4.04 | 4.04 | 0. | 5. | 0.00 | 0.03 | 6.46 | 6.46 | 2. | -25. | 0.01 | -0.01 |
| 679 | 15 | 4.04 | 4.04 | 0. | 5. | 0.00 | 0.03 | 6.46 | 6.46 | 0. | -19. | 0.01 | -0.01 |
| 680 | 15 | 4.04 | 4.04 | 11. | 2. | 0.00 | 0.03 | 6.46 | 6.46 | 3. | -25. | 0.01 | -0.01 |
| 681 | 15 | 4.04 | 4.04 | 1. | 6. | 0.00 | 0.03 | 6.46 | 6.46 | 3. | -22. | 0.01 | -0.01 |
| 682 | 15 | 4.04 | 4.04 | 0. | 6. | 0.00 | 0.03 | 6.46 | 6.46 | 1. | -13. | 0.01 | -0.01 |
| 683 | 15 | 4.04 | 4.04 | 21. | -2. | 0.01 | 0.02 | 6.46 | 6.46 | 7. | -25. | 0.01 | -0.01 |
| 684 | 15 | 4.04 | 4.04 | 0. | -5. | 0.00 | 0.00 | 6.46 | 6.46 | 4. | -18. | 0.01 | -0.01 |
| 685 | 15 | 4.04 | 4.04 | 2. | 1. | 0.00 | 0.01 | 6.46 | 6.46 | 2. | -7. | 0.00 | 0.00 |
| 686 | 15 | 4.04 | 4.04 | 13. | -8. | 0.01 | 0.01 | 6.46 | 6.46 | 0. | -28. | 0.01 | -0.01 |
| 687 | 15 | 4.04 | 4.04 | 0. | -7. | 0.00 | 0.04 | 6.46 | 6.46 | 0. | -14. | 0.01 | -0.01 |
| 688 | 15 | 4.04 | 4.04 | 7. | 18. | 0.00 | 0.11 | 6.46 | 6.46 | 0. | 9. | 0.00 | 0.03 |
| 892 | 15 | 4.19 | 4.19 | 0. | 1. | 0.00 | 0.00 | 5.74 | 5.74 | 10. | 1. | 0.00 | 0.01 |
| 897 | 15 | 4.19 | 4.19 | 8. | 13. | 0.00 | 0.08 | 5.74 | 5.74 | 0. | 19. | 0.00 | 0.08 |
| 898 | 15 | 4.19 | 4.19 | 20. | 64. | 0.00 | 0.38 | 5.74 | 5.74 | 0. | 50. | 0.00 | 0.21 |
| 903 | 15 | 4.19 | 4.19 | 21. | 79. | 0.00 | 0.47 | 5.74 | 5.74 | 0. | 137. | 0.00 | 0.57 |
| 999 | 15 | 4.71 | 4.71 | 20. | 61. | 0.00 | 0.33 | 6.46 | 6.46 | 0. | -32. | 0.01 | 0.07 |
| 1000 | 15 | 4.71 | 4.71 | 8. | 53. | 0.00 | 0.28 | 6.46 | 6.46 | 0. | 45. | 0.00 | 0.17 |
| 1001 | 15 | 4.71 | 4.71 | 19. | 35. | 0.00 | 0.20 | 6.46 | 6.46 | 6. | 50. | 0.00 | 0.19 |
| 1002 | 15 | 4.71 | 4.71 | 44. | 124. | 0.00 | 0.67 | 6.46 | 6.46 | 7. | 20. | 0.01 | 0.08 |
| 1003 | 15 | 4.71 | 4.71 | 22. | 86. | 0.00 | 0.46 | 6.46 | 6.46 | 12. | 31. | 0.00 | 0.12 |
| 1004 | 15 | 4.71 | 4.71 | 16. | 38. | 0.00 | 0.21 | 6.46 | 6.46 | 12. | 28. | 0.00 | 0.11 |

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

MACROGUSCIO SETTO03

VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

| Nome | Descrizione |
|------|-------------------------------|
| 12 | Rara (RARA) |
| 13 | Rara VentoX (RARA) |
| 14 | Rara VentoY (RARA) |
| 15 | Frequente (FREQUENTE) |
| 16 | Frequente VentoX (FREQUENTE) |
| 17 | Frequente VentoY (FREQUENTE) |
| 18 | Quasi Perm (QUASI PERMANENTE) |

DATI:

copriferro inferiore (asse armatura): 3 cm
copriferro superiore (asse armatura): 3 cm

Af = area effettiva tesa (cm2 al metro)
Afc = area effettiva compressa (cm2 al metro)

Mom = momento flettente [daNcm/cm]
 Nor = sforzo normale [daN]
 σ_c = tensione calcestruzzo [daN/cm²]
 valore max per combinazione rara = 149.4 daN/cm²
 quasi permanente = 112 daN/cm²
 σ_f = tensione acciaio [daN/cm²]
 valore max per combinazione rara = 3600 daN/cm²
 wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm
 wkP = apertura caratteristica per combinazione quasi permanente (mm) - valore max = 0.3 mm

<-

ARMATURA INFERIORE ORIZZONTALE

| GUSCI | | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------------|------------|-----------------|-----|-------|------------------------|-----|------------|-------|
| | Af | Afc | Mom | Nor | σ_c | σ_f | Mom | Nor | wkF | Mom | Nor | σ_c | wkP |
| 320 | 4.19 | 4.19 | 12 | 16 | 0.00 | 219. | 10 | 13 | 0.015 | 0. | 13 | 0.00 | 0.013 |
| 321 | 4.19 | 4.19 | 16 | 27 | 0.00 | 370. | 13 | 23 | 0.026 | 5 | 28 | 0.00 | 0.030 |
| 322 | 4.19 | 4.19 | 0. | 7 | 0.00 | 82. | 0. | 6 | 0.006 | 0. | 5 | 0.00 | 0.006 |
| 323 | 4.19 | 4.19 | 0. | 84 | 0.00 | 1008. | 0. | 66 | 0.068 | 0. | 58 | 0.00 | 0.060 |
| 668 | 4.04 | 4.04 | 0. | -4 | 0.24 | -4. | 0. | -2 | 0.000 | 0. | -8 | 0.52 | 0.000 |
| 669 | 4.04 | 4.04 | 0. | 5 | 0.00 | 58. | 0. | 1 | 0.001 | 0. | 0. | 0.00 | 0.000 |
| 670 | 4.04 | 4.04 | 0. | 11 | 0.00 | 134. | 0. | 8 | 0.009 | 0. | 2 | 0.00 | 0.002 |
| 671 | 4.04 | 4.04 | 7 | -12 | 0.87 | -9. | 6 | -9 | 0.000 | 7 | -12 | 0.88 | 0.000 |
| 672 | 4.04 | 4.04 | 4 | -6 | 0.47 | -5. | 4 | -1 | 0.000 | 4 | -6 | 0.45 | 0.000 |
| 673 | 4.04 | 4.04 | 16 | 3 | 0.80 | 76. | 14 | 1 | 0.003 | 14 | -2 | 0.64 | 0.000 |
| 674 | 4.04 | 4.04 | 0. | -3 | 0.20 | -3. | 0. | -3 | 0.000 | 2 | -5 | 0.34 | 0.000 |
| 675 | 4.04 | 4.04 | 5 | -5 | 0.42 | -3. | 5 | 0. | 0.000 | 4 | -5 | 0.39 | 0.000 |
| 676 | 4.04 | 4.04 | 19 | 1 | 1.07 | 57. | 17 | 0. | 0.002 | 13 | -1 | 0.68 | 0.001 |
| 677 | 4.04 | 4.04 | 0. | 0. | 0.00 | 3. | 0. | -1 | 0.000 | 0. | -1 | 0.05 | 0.000 |
| 678 | 4.04 | 4.04 | 4 | 0. | 0.23 | 12. | 4 | -1 | 0.000 | 3 | 0. | 0.14 | 0.000 |
| 679 | 4.04 | 4.04 | 13 | 2 | 0.66 | 52. | 12 | 0. | 0.002 | 9 | 0. | 0.49 | 0.002 |
| 680 | 4.04 | 4.04 | 0. | -2 | 0.14 | -2. | 0. | -2 | 0.000 | 0. | -1 | 0.04 | 0.000 |
| 681 | 4.04 | 4.04 | 3 | 1 | 0.02 | 20. | 2 | -1 | 0.000 | 1 | 0. | 0.06 | 0.000 |
| 682 | 4.04 | 4.04 | 5 | 2 | 0.00 | 44. | 5 | 0. | 0.001 | 4 | 1 | 0.20 | 0.001 |
| 683 | 4.04 | 4.04 | 0. | -6 | 0.36 | -5. | 0. | -6 | 0.000 | 0. | -4 | 0.24 | 0.000 |
| 684 | 4.04 | 4.04 | 6 | -1 | 0.27 | 1. | 5 | -2 | 0.000 | 3 | -1 | 0.14 | 0.000 |
| 685 | 4.04 | 4.04 | 0. | 3 | 0.00 | 31. | 1 | -1 | 0.000 | 1 | -1 | 0.09 | 0.000 |
| 686 | 4.04 | 4.04 | 0. | -30 | 1.84 | -28. | 0. | -23 | 0.000 | 0. | -17 | 1.03 | 0.000 |
| 687 | 4.04 | 4.04 | 11 | -14 | 1.16 | -11. | 8 | -10 | 0.000 | 7 | -6 | 0.54 | 0.000 |
| 688 | 4.04 | 4.04 | 2 | 0. | 0.11 | 9. | 2 | 2 | 0.002 | 0. | 2 | 0.00 | 0.002 |
| 892 | 4.19 | 4.19 | 9 | 0. | 0.48 | 24. | 8 | 0. | 0.001 | 7 | -1 | 0.37 | 0.000 |
| 897 | 4.19 | 4.19 | 18 | 9 | 0.00 | 150. | 15 | 7 | 0.010 | 16 | 5 | 0.46 | 0.008 |
| 898 | 4.19 | 4.19 | 11 | 33 | 0.00 | 429. | 9 | 26 | 0.028 | 10 | 28 | 0.00 | 0.031 |
| 903 | 4.19 | 4.19 | 22 | 41 | 0.00 | 544. | 19 | 32 | 0.036 | 20 | 32 | 0.00 | 0.037 |
| 999 | 4.71 | 4.71 | 0. | 16 | 0.00 | 174. | 0. | 14 | 0.011 | 0. | 7 | 0.00 | 0.006 |
| 1000 | 4.71 | 4.71 | 7 | 27 | 0.00 | 300. | 5 | 22 | 0.018 | 4 | 17 | 0.00 | 0.015 |
| 1001 | 4.71 | 4.71 | 5 | 21 | 0.00 | 239. | 2 | 16 | 0.013 | 2 | 14 | 0.00 | 0.012 |
| 1002 | 6.50 | 4.71 | 0. | 90 | 0.00 | 695. | 0. | 70 | 0.031 | 0. | 55 | 0.00 | 0.024 |
| 1003 | 4.71 | 4.71 | 1 | 64 | 0.00 | 678. | 2 | 50 | 0.041 | 4 | 40 | 0.00 | 0.033 |
| 1004 | 4.71 | 4.71 | 10 | 28 | 0.00 | 324. | 5 | 19 | 0.017 | 5 | 19 | 0.00 | 0.016 |

ARMATURA INFERIORE VERTICALE

| GUSCI | | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------------|------------|-----------------|-----|-------|------------------------|-----|------------|-------|
| | Af | Afc | Mom | Nor | σ_c | σ_f | Mom | Nor | wkF | Mom | Nor | σ_c | wkP |
| 320 | 5.74 | 5.74 | 62 | 19 | 1.26 | 285. | 48 | 14 | 0.014 | 24 | 11 | 0.00 | 0.010 |
| 321 | 5.74 | 5.74 | 80 | 0. | 3.81 | 129. | 62 | -2 | 0.003 | 44 | -8 | 1.84 | 0.000 |
| 322 | 5.74 | 5.74 | 0. | 1 | 0.00 | 11. | 0. | 0. | 0.000 | 0. | 2 | 0.00 | 0.001 |
| 323 | 5.74 | 5.74 | 6 | 10 | 0.00 | 101. | 1 | 10 | 0.006 | 2 | 8 | 0.00 | 0.005 |
| 668 | 6.46 | 6.46 | 0. | -36 | 2.11 | -32. | 0. | -33 | 0.000 | 0. | -23 | 1.37 | 0.000 |
| 669 | 6.46 | 6.46 | 0. | -28 | 1.64 | -25. | 0. | -28 | 0.000 | 0. | -5 | 0.29 | 0.000 |
| 670 | 6.46 | 6.46 | 0. | -38 | 2.24 | -34. | 0. | -37 | 0.000 | 0. | -27 | 1.61 | 0.000 |
| 671 | 6.46 | 6.46 | 9 | -38 | 2.45 | -32. | 8 | -34 | 0.000 | 7 | -30 | 1.91 | 0.000 |
| 672 | 6.46 | 6.46 | 10 | -28 | 1.87 | -22. | 9 | -28 | 0.000 | 7 | -22 | 1.45 | 0.000 |
| 673 | 6.46 | 6.46 | 12 | -34 | 2.26 | -27. | 11 | -34 | 0.000 | 9 | -27 | 1.78 | 0.000 |
| 674 | 6.46 | 6.46 | 1 | -33 | 1.99 | -29. | 1 | -33 | 0.000 | 2 | -33 | 1.97 | 0.000 |
| 675 | 6.46 | 6.46 | 6 | -26 | 1.67 | -22. | 5 | -27 | 0.000 | 5 | -28 | 1.74 | 0.000 |
| 676 | 6.46 | 6.46 | 9 | -24 | 1.60 | -19. | 8 | -25 | 0.000 | 7 | -26 | 1.68 | 0.000 |
| 677 | 6.46 | 6.46 | 0. | -29 | 1.74 | -26. | 0. | -29 | 0.000 | 0. | -30 | 1.77 | 0.000 |
| 678 | 6.46 | 6.46 | 3 | -21 | 1.30 | -18. | 3 | -23 | 0.000 | 2 | -25 | 1.54 | 0.000 |
| 679 | 6.46 | 6.46 | 7 | -15 | 1.02 | -12. | 6 | -18 | 0.000 | 4 | -21 | 1.32 | 0.000 |
| 680 | 6.46 | 6.46 | 0. | -30 | 1.78 | -27. | 0. | -29 | 0.000 | 0. | -28 | 1.67 | 0.000 |
| 681 | 6.46 | 6.46 | 0. | -18 | 1.05 | -16. | 0. | -19 | 0.000 | 0. | -21 | 1.25 | 0.000 |
| 682 | 6.46 | 6.46 | 3 | -8 | 0.54 | -7. | 2 | -12 | 0.000 | 1 | -14 | 0.84 | 0.000 |
| 683 | 6.46 | 6.46 | 0. | -31 | 1.83 | -27. | 0. | -29 | 0.000 | 0. | -27 | 1.62 | 0.000 |
| 684 | 6.46 | 6.46 | 0. | -14 | 0.85 | -13. | 0. | -18 | 0.000 | 0. | -17 | 0.99 | 0.000 |
| 685 | 6.46 | 6.46 | 0. | 1 | 0.00 | 8. | 0. | -8 | 0.000 | 0. | -7 | 0.42 | 0.000 |
| 686 | 6.46 | 6.46 | 11 | -34 | 2.24 | -27. | 7 | -30 | 0.000 | 6 | -29 | 1.85 | 0.000 |
| 687 | 6.46 | 6.46 | 29 | -12 | 1.41 | -5. | 21 | -13 | 0.000 | 15 | -11 | 0.99 | 0.000 |
| 688 | 6.46 | 6.46 | 28 | -1 | 1.26 | 33. | 20 | -3 | 0.000 | 12 | 0. | 0.55 | 0.001 |
| 892 | 5.74 | 5.74 | 18 | -2 | 0.77 | 10. | 10 | -2 | 0.000 | 5 | -1 | 0.22 | 0.000 |
| 897 | 5.74 | 5.74 | 81 | -10 | 3.62 | 51. | 62 | -10 | 0.001 | 43 | 0. | 2.02 | 0.003 |
| 898 | 5.74 | 5.74 | 28 | 37 | 0.00 | 379. | 19 | 28 | 0.021 | 12 | 21 | 0.00 | 0.016 |
| 903 | 5.74 | 5.74 | 110 | 94 | 0.00 | 1034. | 83 | 72 | 0.057 | 63 | 53 | 0.00 | 0.042 |
| 999 | 6.46 | 6.46 | 51 | -13 | 2.08 | 3. | 41 | -12 | 0.000 | 21 | -17 | 1.49 | 0.000 |
| 1000 | 6.46 | 6.46 | 22 | 29 | 0.00 | 265. | 19 | 21 | 0.013 | 14 | 18 | 0.00 | 0.011 |
| 1001 | 6.46 | 6.46 | 12 | 35 | 0.00 | 291. | 10 | 26 | 0.014 | 8 | 21 | 0.00 | 0.012 |
| 1002 | 6.46 | 6.46 | 1 | 0. | 0.04 | 0. | 0. | -3 | 0.000 | 0. | -1 | 0.06 | 0.000 |
| 1003 | 6.46 | 6.46 | 4 | 14 | 0.00 | 112. | 4 | 10 | 0.006 | 5 | 12 | 0.00 | 0.007 |

1004 | 6.46 6.46 | 8 17 0.00 143. | 7 12 0.007 | 6 12 0.00 0.007 |

ARMATURA SUPERIORE ORIZZONTALE

| | | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------------|------------|-----------------|-----|-------|------------------------|-----|------------|-------|
| GUSCI | Af | Afc | Mom | Nor | σ_c | σ_f | Mom | Nor | wkF | Mom | Nor | σ_c | wkP |
| 320 | 4.19 | 4.19 | 14 | 16 | 0.00 | 222. | 10 | 13 | 0.015 | 22 | 13 | 0.00 | 0.017 |
| 321 | 4.19 | 4.19 | 7 | 27 | 0.00 | 347. | 8 | 23 | 0.025 | 14 | 28 | 0.00 | 0.032 |
| 322 | 4.19 | 4.19 | 37 | 7 | 1.68 | 171. | 26 | 6 | 0.010 | 18 | 5 | 0.52 | 0.008 |
| 323 | 4.19 | 4.19 | 33 | 84 | 0.00 | 1096. | 29 | 66 | 0.073 | 26 | 58 | 0.00 | 0.065 |
| 668 | 4.04 | 4.04 | 12 | -4 | 0.05 | -6. | 11 | -2 | 0.000 | 6 | -8 | 0.37 | 0.000 |
| 669 | 4.04 | 4.04 | 8 | 5 | 0.00 | 79. | 7 | 1 | 0.002 | 6 | 0. | 0.33 | 0.001 |
| 670 | 4.04 | 4.04 | 8 | 11 | 0.00 | 155. | 7 | 8 | 0.010 | 4 | 2 | 0.00 | 0.003 |
| 671 | 4.04 | 4.04 | 4 | -12 | 0.62 | -12. | 3 | -9 | 0.000 | 2 | -12 | 0.66 | 0.000 |
| 672 | 4.04 | 4.04 | 6 | -6 | 0.22 | -7. | 5 | -1 | 0.000 | 6 | -6 | 0.21 | 0.000 |
| 673 | 4.04 | 4.04 | 0. | 3 | 0.00 | 35. | 0. | 1 | 0.001 | 0. | -2 | 0.15 | 0.000 |
| 674 | 4.04 | 4.04 | 5 | -3 | 0.07 | -4. | 4 | -3 | 0.000 | 4 | -5 | 0.20 | 0.000 |
| 675 | 4.04 | 4.04 | 2 | -5 | 0.24 | -5. | 2 | 0. | 0.000 | 2 | -5 | 0.24 | 0.000 |
| 676 | 4.04 | 4.04 | 0. | 1 | 0.00 | 12. | 0. | 0. | 0.000 | 0. | -1 | 0.05 | 0.000 |
| 677 | 4.04 | 4.04 | 8 | 0. | 0.44 | 21. | 6 | -1 | 0.000 | 5 | -1 | 0.23 | 0.000 |
| 678 | 4.04 | 4.04 | 1 | 0. | 0.01 | 4. | 0. | -1 | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 679 | 4.04 | 4.04 | 0. | 2 | 0.00 | 21. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.001 |
| 680 | 4.04 | 4.04 | 12 | -2 | 0.52 | 3. | 9 | -2 | 0.000 | 7 | -1 | 0.36 | 0.000 |
| 681 | 4.04 | 4.04 | 0. | 1 | 0.00 | 12. | 0. | -1 | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 682 | 4.04 | 4.04 | 0. | 2 | 0.00 | 31. | 0. | 0. | 0.000 | 0. | 1 | 0.00 | 0.001 |
| 683 | 4.04 | 4.04 | 16 | -6 | 0.02 | -9. | 12 | -6 | 0.000 | 10 | -4 | 0.01 | 0.000 |
| 684 | 4.04 | 4.04 | 0. | -1 | 0.08 | -1. | 0. | -2 | 0.000 | 0. | -1 | 0.07 | 0.000 |
| 685 | 4.04 | 4.04 | 2 | 3 | 0.00 | 37. | 0. | -1 | 0.000 | 0. | -1 | 0.06 | 0.000 |
| 686 | 4.04 | 4.04 | 20 | -30 | 1.34 | -32. | 15 | -23 | 0.000 | 8 | -17 | 0.82 | 0.000 |
| 687 | 4.04 | 4.04 | 0. | -14 | 0.89 | -13. | 0. | -10 | 0.000 | 0. | -6 | 0.36 | 0.000 |
| 688 | 4.04 | 4.04 | 4 | 0. | 0.21 | 13. | 2 | 2 | 0.002 | 2 | 2 | 0.00 | 0.003 |
| 892 | 4.19 | 4.19 | 0. | 0. | 0.00 | 4. | 0. | 0. | 0.000 | 2 | -1 | 0.00 | 0.000 |
| 897 | 4.19 | 4.19 | 2 | 9 | 0.00 | 108. | 2 | 7 | 0.008 | 3 | 5 | 0.00 | 0.005 |
| 898 | 4.19 | 4.19 | 1 | 33 | 0.00 | 401. | 1 | 26 | 0.027 | 3 | 28 | 0.00 | 0.030 |
| 903 | 4.19 | 4.19 | 5 | 41 | 0.00 | 497. | 5 | 32 | 0.034 | 5 | 32 | 0.00 | 0.034 |
| 999 | 4.71 | 4.71 | 22 | 16 | 0.00 | 225. | 14 | 14 | 0.013 | 9 | 7 | 0.00 | 0.007 |
| 1000 | 4.71 | 4.71 | 0. | 27 | 0.00 | 284. | 0. | 22 | 0.018 | 0. | 17 | 0.00 | 0.014 |
| 1001 | 4.71 | 4.71 | 12 | 21 | 0.00 | 256. | 11 | 16 | 0.015 | 9 | 14 | 0.00 | 0.013 |
| 1002 | 4.71 | 6.50 | 37 | 90 | 0.00 | 1046. | 25 | 70 | 0.061 | 20 | 55 | 0.00 | 0.048 |
| 1003 | 4.71 | 4.71 | 14 | 64 | 0.00 | 708. | 10 | 50 | 0.042 | 10 | 40 | 0.00 | 0.034 |
| 1004 | 4.71 | 4.71 | 8 | 28 | 0.00 | 317. | 9 | 19 | 0.017 | 8 | 19 | 0.00 | 0.016 |

ARMATURA SUPERIORE VERTICALE

| | | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------------|------------|-----------------|-----|-------|------------------------|-----|------------|-------|
| GUSCI | Af | Afc | Mom | Nor | σ_c | σ_f | Mom | Nor | wkF | Mom | Nor | σ_c | wkP |
| 320 | 5.74 | 5.74 | 0. | 19 | 0.00 | 167. | 0. | 14 | 0.009 | 0. | 11 | 0.00 | 0.007 |
| 321 | 5.74 | 5.74 | 0. | 0. | 0.01 | 0. | 0. | -2 | 0.000 | 0. | -8 | 0.50 | 0.000 |
| 322 | 5.74 | 5.74 | 16 | 1 | 0.75 | 38. | 11 | 0. | 0.001 | 8 | 2 | 0.23 | 0.002 |
| 323 | 5.74 | 5.74 | 7 | 10 | 0.00 | 103. | 2 | 10 | 0.006 | 2 | 8 | 0.00 | 0.005 |
| 668 | 6.46 | 6.46 | 37 | -36 | 1.25 | -39. | 34 | -33 | 0.000 | 21 | -23 | 0.87 | 0.000 |
| 669 | 6.46 | 6.46 | 46 | -28 | 0.55 | -34. | 43 | -28 | 0.000 | 31 | -5 | 1.27 | 0.000 |
| 670 | 6.46 | 6.46 | 69 | -38 | 0.62 | -48. | 64 | -37 | 0.000 | 46 | -27 | 0.53 | 0.000 |
| 671 | 6.46 | 6.46 | 3 | -38 | 2.18 | -34. | 3 | -34 | 0.000 | 4 | -30 | 1.64 | 0.000 |
| 672 | 6.46 | 6.46 | 0. | -28 | 1.63 | -24. | 0. | -28 | 0.000 | 2 | -22 | 1.23 | 0.000 |
| 673 | 6.46 | 6.46 | 0. | -34 | 1.99 | -30. | 0. | -34 | 0.000 | 0. | -27 | 1.57 | 0.000 |
| 674 | 6.46 | 6.46 | 3 | -33 | 1.90 | -30. | 2 | -33 | 0.000 | 2 | -33 | 1.87 | 0.000 |
| 675 | 6.46 | 6.46 | 0. | -26 | 1.52 | -23. | 0. | -27 | 0.000 | 0. | -28 | 1.62 | 0.000 |
| 676 | 6.46 | 6.46 | 0. | -24 | 1.39 | -21. | 0. | -25 | 0.000 | 0. | -26 | 1.52 | 0.000 |
| 677 | 6.46 | 6.46 | 3 | -29 | 1.68 | -27. | 2 | -29 | 0.000 | 2 | -30 | 1.72 | 0.000 |
| 678 | 6.46 | 6.46 | 2 | -21 | 1.18 | -19. | 1 | -23 | 0.000 | 1 | -25 | 1.46 | 0.000 |
| 679 | 6.46 | 6.46 | 1 | -15 | 0.84 | -13. | 0. | -18 | 0.000 | 0. | -21 | 1.21 | 0.000 |
| 680 | 6.46 | 6.46 | 4 | -30 | 1.69 | -27. | 3 | -29 | 0.000 | 2 | -28 | 1.61 | 0.000 |
| 681 | 6.46 | 6.46 | 3 | -18 | 0.97 | -16. | 3 | -19 | 0.000 | 2 | -21 | 1.19 | 0.000 |
| 682 | 6.46 | 6.46 | 2 | -8 | 0.43 | -8. | 1 | -12 | 0.000 | 1 | -14 | 0.78 | 0.000 |
| 683 | 6.46 | 6.46 | 9 | -31 | 1.62 | -29. | 7 | -29 | 0.000 | 5 | -27 | 1.49 | 0.000 |
| 684 | 6.46 | 6.46 | 4 | -14 | 0.76 | -14. | 3 | -18 | 0.000 | 2 | -17 | 0.95 | 0.000 |
| 685 | 6.46 | 6.46 | 2 | 1 | 0.00 | 12. | 2 | -8 | 0.000 | 1 | -7 | 0.39 | 0.000 |
| 686 | 6.46 | 6.46 | 0. | -34 | 1.98 | -30. | 0. | -30 | 0.000 | 0. | -29 | 1.72 | 0.000 |
| 687 | 6.46 | 6.46 | 0. | -12 | 0.73 | -11. | 0. | -13 | 0.000 | 0. | -11 | 0.64 | 0.000 |
| 688 | 6.46 | 6.46 | 0. | -1 | 0.06 | -1. | 0. | -3 | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 892 | 5.74 | 5.74 | 3 | -2 | 0.07 | -3. | 1 | -2 | 0.000 | 0. | -1 | 0.08 | 0.000 |
| 897 | 5.74 | 5.74 | 0. | -10 | 0.59 | -9. | 0. | -10 | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 898 | 5.74 | 5.74 | 0. | 37 | 0.00 | 325. | 0. | 28 | 0.019 | 0. | 21 | 0.00 | 0.014 |
| 903 | 5.74 | 5.74 | 0. | 94 | 0.00 | 821. | 0. | 72 | 0.047 | 0. | 53 | 0.00 | 0.035 |
| 999 | 6.46 | 6.46 | 0. | -13 | 0.75 | -11. | 0. | -12 | 0.000 | 0. | -17 | 0.99 | 0.000 |
| 1000 | 6.46 | 6.46 | 0. | 29 | 0.00 | 228. | 0. | 21 | 0.011 | 0. | 18 | 0.00 | 0.010 |
| 1001 | 6.46 | 6.46 | 0. | 35 | 0.00 | 271. | 0. | 26 | 0.013 | 4 | 21 | 0.00 | 0.012 |
| 1002 | 6.46 | 6.46 | 0. | 0. | 0.03 | 0. | 2 | -3 | 0.000 | 3 | -1 | 0.01 | 0.000 |
| 1003 | 6.46 | 6.46 | 8 | 14 | 0.00 | 119. | 7 | 10 | 0.006 | 7 | 12 | 0.00 | 0.007 |
| 1004 | 6.46 | 6.46 | 9 | 17 | 0.00 | 144. | 7 | 12 | 0.007 | 5 | 12 | 0.00 | 0.007 |

MACROGUSCIO SETTO04

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

| Nome | Descrizione |
|------|----------------------|
| 1 | SLU |
| 2 | SLU VENTOX |
| 3 | SLU VENTOI |
| 6 | SLU con SISMAX PRINC |
| 7 | SLU con SISMAX PRINC |

DATI:

tensione di snervamento acciaio (fyk): 4500 daN/cm2
 coefficiente sicurezza acciaio : 1.15
 deformazione ultima acciaio : 1.97 per mille
 deformazione ultima cls : 3.5 per mille
 rapporto rottura/snervamento (k): 1
 resistenza cilindrica cls (fck): 249 daN/cm2
 coefficiente sicurezza cls : 1.5
 coefficiente riduttivo (alfa): 0.85
 copriferro inferiore (asse armatura): 3 cm
 copriferro superiore (asse armatura): 3 cm
 moltiplicatore sollecitazioni : 1

LEGENDA:

spess = spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
 Af = area disposta al lembo teso, in cm2 al metro
 Afc = area disposta al lembo compresso, in cm2 al metro
 Mom = momento flettente [daNcm/cm]
 Nor = sforzo normale [daN]
 epsC = deformazione cls [per mille]
 epsF = deformazione acciaio [per mille]

<- L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

| GUSCI | spess | INFERIORE ORIZZONTALE | | | | | | INFERIORE VERTICALE | | | | | |
|-------|-------|-----------------------|------|------|------|------|------|---------------------|------|------|------|------|-------|
| | | Af | Afc | Mom | Nor | epsC | epsF | Af | Afc | Mom | Nor | epsC | epsF |
| 100 | 15 | 4.04 | 4.04 | 0. | -5. | 0.00 | 0.00 | 5.72 | 5.72 | 0. | -53. | 0.02 | -0.02 |
| 101 | 15 | 4.04 | 4.04 | 8. | -6. | 0.01 | 0.01 | 5.72 | 5.72 | 25. | -54. | 0.03 | -0.02 |
| 102 | 15 | 4.04 | 4.04 | 14. | -7. | 0.01 | 0.01 | 5.72 | 5.72 | 56. | -56. | 0.04 | 0.02 |
| 103 | 15 | 4.04 | 4.04 | 21. | -6. | 0.01 | 0.02 | 5.72 | 5.72 | 76. | -49. | 0.05 | 0.03 |
| 104 | 15 | 4.04 | 4.04 | 22. | -3. | 0.01 | 0.02 | 5.72 | 5.72 | 483. | -46. | 0.18 | 0.33 |
| 105 | 15 | 4.04 | 4.04 | 0. | -1. | 0.00 | 0.01 | 5.72 | 5.72 | 7. | -45. | 0.02 | -0.02 |
| 106 | 15 | 4.04 | 4.04 | 0. | -3. | 0.00 | 0.01 | 5.72 | 5.72 | 10. | -46. | 0.02 | -0.02 |
| 107 | 15 | 4.04 | 4.04 | 13. | -1. | 0.01 | 0.02 | 5.72 | 5.72 | 14. | -46. | 0.02 | -0.01 |
| 108 | 15 | 4.04 | 4.04 | 16. | 3. | 0.01 | 0.04 | 5.72 | 5.72 | 12. | -44. | 0.02 | -0.02 |
| 109 | 15 | 4.04 | 4.04 | 0. | 4. | 0.00 | 0.03 | 5.72 | 5.72 | 39. | -34. | 0.03 | 0.01 |
| 110 | 15 | 4.04 | 4.04 | 0. | 3. | 0.00 | 0.02 | 5.72 | 5.72 | 0. | -37. | 0.02 | -0.02 |
| 111 | 15 | 4.04 | 4.04 | 0. | 5. | 0.00 | 0.03 | 5.72 | 5.72 | 0. | -38. | 0.02 | -0.02 |
| 112 | 15 | 4.04 | 4.04 | 11. | 6. | 0.00 | 0.05 | 5.72 | 5.72 | 0. | -38. | 0.02 | -0.02 |
| 113 | 15 | 4.04 | 4.04 | 10. | 6. | 0.00 | 0.05 | 5.72 | 5.72 | 0. | -37. | 0.02 | -0.02 |
| 114 | 15 | 4.04 | 4.04 | 0. | 6. | 0.00 | 0.03 | 5.72 | 5.72 | 0. | -32. | 0.01 | -0.01 |
| 115 | 15 | 4.04 | 4.04 | 0. | 4. | 0.00 | 0.02 | 5.72 | 5.72 | 0. | -28. | 0.01 | -0.01 |
| 116 | 15 | 4.04 | 4.04 | 10. | 5. | 0.00 | 0.04 | 5.72 | 5.72 | 0. | -30. | 0.01 | -0.01 |
| 117 | 15 | 4.04 | 4.04 | 19. | 7. | 0.00 | 0.06 | 5.72 | 5.72 | 0. | -31. | 0.01 | -0.01 |
| 118 | 15 | 4.04 | 4.04 | 16. | 7. | 0.00 | 0.06 | 5.72 | 5.72 | 0. | -31. | 0.01 | -0.01 |
| 119 | 15 | 4.04 | 4.04 | 0. | 6. | 0.00 | 0.04 | 5.72 | 5.72 | 3. | -30. | 0.01 | -0.01 |
| 120 | 15 | 4.04 | 4.04 | 0. | 5. | 0.00 | 0.03 | 5.72 | 5.72 | 0. | -19. | 0.01 | -0.01 |
| 121 | 15 | 4.04 | 4.04 | 15. | 6. | 0.00 | 0.05 | 5.72 | 5.72 | 5. | -22. | 0.01 | -0.01 |
| 122 | 15 | 4.04 | 4.04 | 26. | 6. | 0.00 | 0.07 | 5.72 | 5.72 | 1. | -24. | 0.01 | -0.01 |
| 123 | 15 | 4.04 | 4.04 | 21. | 7. | 0.00 | 0.06 | 5.72 | 5.72 | 4. | -27. | 0.01 | -0.01 |
| 124 | 15 | 4.04 | 4.04 | 0. | 6. | 0.00 | 0.04 | 5.72 | 5.72 | 9. | -30. | 0.02 | -0.01 |
| 125 | 15 | 4.04 | 4.04 | 0. | 6. | 0.00 | 0.04 | 5.72 | 5.72 | 9. | -12. | 0.01 | 0.00 |
| 126 | 15 | 4.04 | 4.04 | 28. | 3. | 0.00 | 0.05 | 5.72 | 5.72 | 28. | -15. | 0.02 | 0.01 |
| 127 | 15 | 4.04 | 4.04 | 54. | 0. | 0.02 | 0.06 | 5.72 | 5.72 | 38. | -17. | 0.02 | 0.02 |
| 128 | 15 | 4.04 | 4.04 | 59. | -1. | 0.02 | 0.06 | 5.72 | 5.72 | 28. | -20. | 0.02 | 0.01 |
| 129 | 15 | 4.04 | 4.04 | 0. | 6. | 0.00 | 0.04 | 5.72 | 5.72 | 16. | -31. | 0.02 | 0.00 |
| 130 | 15 | 4.04 | 4.04 | 26. | 3. | 0.01 | 0.04 | 5.72 | 5.72 | 56. | -17. | 0.03 | 0.03 |
| 131 | 15 | 4.04 | 4.04 | 56. | -1. | 0.02 | 0.06 | 5.72 | 5.72 | 184. | -24. | 0.07 | 0.13 |
| 132 | 15 | 4.04 | 4.04 | 53. | -4. | 0.02 | 0.05 | 5.72 | 5.72 | 244. | -29. | 0.09 | 0.17 |
| 133 | 15 | 4.04 | 4.04 | 78. | -7. | 0.03 | 0.08 | 5.72 | 5.72 | 270. | -35. | 0.10 | 0.18 |
| 134 | 15 | 4.04 | 4.04 | 23. | -9. | 0.01 | 0.02 | 5.72 | 5.72 | 236. | -46. | 0.10 | 0.15 |
| 135 | 15 | 4.04 | 4.04 | 79. | -2. | 0.03 | 0.08 | 6.00 | 6.00 | 0. | -9. | 0.00 | 0.00 |
| 136 | 15 | 4.04 | 4.04 | 44. | -2. | 0.02 | 0.05 | 6.00 | 6.00 | 0. | -8. | 0.00 | 0.00 |
| 137 | 15 | 4.04 | 4.04 | 12. | -2. | 0.01 | 0.01 | 6.00 | 6.00 | 0. | -7. | 0.00 | 0.00 |
| 138 | 15 | 4.04 | 4.04 | 43. | -8. | 0.02 | 0.04 | 6.00 | 6.00 | 27. | -15. | 0.02 | 0.01 |
| 139 | 15 | 4.04 | 4.04 | 11. | -11. | 0.01 | 0.01 | 6.00 | 6.00 | 47. | -35. | 0.03 | 0.03 |
| 140 | 15 | 4.04 | 4.04 | 137. | -5. | 0.06 | 0.14 | 6.00 | 6.00 | 12. | -4. | 0.01 | 0.01 |
| 141 | 15 | 4.04 | 4.04 | 8. | 3. | 0.00 | 0.03 | 6.00 | 6.00 | 0. | -3. | 0.00 | 0.00 |
| 142 | 15 | 4.04 | 4.04 | 0. | 6. | 0.00 | 0.04 | 6.00 | 6.00 | 8. | 3. | 0.00 | 0.02 |
| 143 | 15 | 4.04 | 4.04 | 3. | 5. | 0.00 | 0.03 | 6.00 | 6.00 | 6. | -5. | 0.00 | 0.02 |
| 144 | 15 | 4.04 | 4.04 | 20. | 5. | 0.00 | 0.06 | 6.00 | 6.00 | 10. | -8. | 0.01 | 0.00 |
| 792 | 15 | 4.04 | 4.04 | 14. | -3. | 0.01 | 0.01 | 5.72 | 5.72 | 94. | -10. | 0.04 | 0.07 |
| 793 | 15 | 4.04 | 4.04 | 26. | 0. | 0.01 | 0.03 | 5.72 | 5.72 | 118. | -11. | 0.04 | 0.09 |
| 946 | 35 | 4.04 | 4.04 | 0. | -7. | 0.00 | 0.03 | 5.72 | 5.72 | 239. | -79. | 0.03 | 0.04 |
| 947 | 35 | 4.04 | 4.04 | 33. | -5. | 0.00 | 0.02 | 5.72 | 5.72 | 188. | -59. | 0.02 | 0.04 |
| 948 | 35 | 4.04 | 4.04 | 53. | -5. | 0.01 | 0.02 | 5.72 | 5.72 | 160. | -28. | 0.02 | 0.04 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|----|------|------|------|-----|------|------|------|------|------|------|------|-------|
| 949 | 35 | 4.04 | 4.04 | 78. | -5. | 0.01 | 0.03 | 5.72 | 5.72 | 92. | -15. | 0.01 | 0.02 |
| 950 | 35 | 4.04 | 4.04 | 155. | -2. | 0.01 | 0.06 | 5.72 | 5.72 | 566. | -96. | 0.06 | 0.11 |
| 951 | 35 | 4.04 | 4.04 | 201. | -5. | 0.02 | 0.08 | 5.72 | 5.72 | 564. | -86. | 0.05 | 0.12 |
| 952 | 35 | 4.04 | 4.04 | 82. | -2. | 0.01 | 0.03 | 5.72 | 5.72 | 477. | -79. | 0.05 | 0.10 |
| 953 | 35 | 4.04 | 4.04 | 0. | -5. | 0.00 | 0.00 | 5.72 | 5.72 | 242. | -57. | 0.03 | 0.05 |
| 954 | 35 | 4.04 | 4.04 | 125. | -2. | 0.01 | 0.05 | 5.72 | 5.72 | 112. | -74. | 0.02 | 0.01 |
| 955 | 35 | 4.04 | 4.04 | 171. | -4. | 0.01 | 0.07 | 5.72 | 5.72 | 136. | -67. | 0.02 | 0.02 |
| 956 | 35 | 4.04 | 4.04 | 98. | -1. | 0.01 | 0.04 | 5.72 | 5.72 | 147. | -57. | 0.02 | 0.03 |
| 957 | 35 | 4.04 | 4.04 | 33. | -3. | 0.00 | 0.01 | 5.72 | 5.72 | 133. | -49. | 0.02 | 0.02 |
| 958 | 35 | 4.04 | 4.04 | 106. | -2. | 0.01 | 0.04 | 5.72 | 5.72 | 21. | -73. | 0.02 | -0.01 |
| 959 | 35 | 4.04 | 4.04 | 138. | -6. | 0.01 | 0.05 | 5.72 | 5.72 | 39. | -67. | 0.02 | 0.00 |
| 960 | 35 | 4.04 | 4.04 | 120. | -5. | 0.01 | 0.05 | 5.72 | 5.72 | 65. | -54. | 0.01 | 0.01 |
| 961 | 35 | 4.04 | 4.04 | 109. | -2. | 0.01 | 0.04 | 5.72 | 5.72 | 78. | -45. | 0.01 | 0.01 |
| 962 | 35 | 4.04 | 4.04 | 37. | -1. | 0.00 | 0.01 | 5.72 | 5.72 | 25. | -68. | 0.01 | -0.01 |
| 963 | 35 | 4.04 | 4.04 | 107. | -3. | 0.01 | 0.04 | 5.72 | 5.72 | 39. | -63. | 0.01 | 0.00 |
| 964 | 35 | 4.04 | 4.04 | 123. | -4. | 0.01 | 0.05 | 5.72 | 5.72 | 57. | -49. | 0.01 | 0.01 |
| 965 | 35 | 4.04 | 4.04 | 159. | -4. | 0.01 | 0.06 | 5.72 | 5.72 | 69. | -40. | 0.01 | 0.01 |
| 966 | 35 | 4.04 | 4.04 | 8. | -3. | 0.00 | 0.02 | 5.72 | 5.72 | 27. | -65. | 0.01 | -0.01 |
| 967 | 35 | 4.04 | 4.04 | 63. | -3. | 0.01 | 0.03 | 5.72 | 5.72 | 45. | -60. | 0.01 | 0.00 |
| 968 | 35 | 4.04 | 4.04 | 90. | -5. | 0.01 | 0.04 | 5.72 | 5.72 | 58. | -44. | 0.01 | 0.01 |
| 969 | 35 | 4.04 | 4.04 | 153. | -4. | 0.01 | 0.06 | 5.72 | 5.72 | 66. | -36. | 0.01 | 0.01 |
| 970 | 35 | 4.04 | 4.04 | 0. | -6. | 0.00 | 0.02 | 5.72 | 5.72 | 30. | -62. | 0.01 | -0.01 |
| 971 | 35 | 4.04 | 4.04 | 44. | -3. | 0.00 | 0.02 | 5.72 | 5.72 | 39. | -53. | 0.01 | 0.01 |
| 972 | 35 | 4.04 | 4.04 | 74. | -4. | 0.01 | 0.03 | 5.72 | 5.72 | 47. | -35. | 0.01 | 0.01 |
| 973 | 35 | 4.04 | 4.04 | 120. | -4. | 0.01 | 0.05 | 5.72 | 5.72 | 48. | -29. | 0.01 | 0.01 |

| GUSCI | spess | Af | Afc | SUPERIORE ORIZZONTALE | | | | SUPERIORE VERTICALE | | | | epsC | epsF |
|-------|-------|------|------|-----------------------|------|------|------|---------------------|------|------|-------|------|-------|
| | | | | Mom | Nor | epsC | epsF | Af | Afc | Mom | Nor | | |
| 100 | 15 | 4.04 | 4.04 | 28. | -5. | 0.01 | 0.03 | 5.72 | 5.72 | 46. | -49. | 0.04 | -0.02 |
| 101 | 15 | 4.04 | 4.04 | 18. | -5. | 0.01 | 0.02 | 5.72 | 5.72 | 8. | -52. | 0.02 | -0.02 |
| 102 | 15 | 4.04 | 4.04 | 0. | -7. | 0.00 | 0.00 | 5.72 | 5.72 | 0. | -57. | 0.02 | -0.02 |
| 103 | 15 | 4.04 | 4.04 | 0. | -6. | 0.00 | 0.00 | 5.72 | 5.72 | 0. | -54. | 0.02 | -0.02 |
| 104 | 15 | 4.04 | 4.04 | 4. | -1. | 0.00 | 0.00 | 5.72 | 5.72 | 0. | -46. | 0.02 | -0.02 |
| 105 | 15 | 4.04 | 4.04 | 23. | -1. | 0.01 | 0.03 | 5.72 | 5.72 | 0. | -45. | 0.02 | -0.02 |
| 106 | 15 | 4.04 | 4.04 | 10. | -1. | 0.00 | 0.01 | 5.72 | 5.72 | 0. | -46. | 0.02 | -0.02 |
| 107 | 15 | 4.04 | 4.04 | 0. | -3. | 0.00 | 0.01 | 5.72 | 5.72 | 0. | -47. | 0.02 | -0.02 |
| 108 | 15 | 4.04 | 4.04 | 0. | 4. | 0.00 | 0.02 | 5.72 | 5.72 | 0. | -44. | 0.02 | -0.02 |
| 109 | 15 | 4.04 | 4.04 | 29. | 3. | 0.00 | 0.05 | 5.72 | 5.72 | 6. | -36. | 0.02 | -0.02 |
| 110 | 15 | 4.04 | 4.04 | 33. | 3. | 0.00 | 0.05 | 5.72 | 5.72 | 1. | -37. | 0.02 | -0.02 |
| 111 | 15 | 4.04 | 4.04 | 9. | 5. | 0.00 | 0.04 | 5.72 | 5.72 | 3. | -38. | 0.02 | -0.02 |
| 112 | 15 | 4.04 | 4.04 | 0. | 6. | 0.00 | 0.04 | 5.72 | 5.72 | 5. | -38. | 0.02 | -0.01 |
| 113 | 15 | 4.04 | 4.04 | 0. | 7. | 0.00 | 0.04 | 5.72 | 5.72 | 4. | -37. | 0.02 | -0.01 |
| 114 | 15 | 4.04 | 4.04 | 28. | 5. | 0.00 | 0.06 | 5.72 | 5.72 | 13. | -32. | 0.02 | -0.01 |
| 115 | 15 | 4.04 | 4.04 | 50. | 4. | 0.00 | 0.08 | 5.72 | 5.72 | 7. | -28. | 0.01 | -0.01 |
| 116 | 15 | 4.04 | 4.04 | 14. | 5. | 0.00 | 0.04 | 5.72 | 5.72 | 8. | -30. | 0.02 | -0.01 |
| 117 | 15 | 4.04 | 4.04 | 0. | 7. | 0.00 | 0.04 | 5.72 | 5.72 | 7. | -31. | 0.02 | -0.01 |
| 118 | 15 | 4.04 | 4.04 | 5. | 7. | 0.00 | 0.05 | 5.72 | 5.72 | 8. | -30. | 0.02 | -0.01 |
| 119 | 15 | 4.04 | 4.04 | 22. | 6. | 0.00 | 0.06 | 5.72 | 5.72 | 6. | -29. | 0.01 | -0.01 |
| 120 | 15 | 4.04 | 4.04 | 66. | 5. | 0.00 | 0.10 | 5.72 | 5.72 | 8. | -19. | 0.01 | 0.00 |
| 121 | 15 | 4.04 | 4.04 | 9. | 5. | 0.00 | 0.04 | 5.72 | 5.72 | 9. | -22. | 0.01 | -0.01 |
| 122 | 15 | 4.04 | 4.04 | 0. | 7. | 0.00 | 0.04 | 5.72 | 5.72 | 3. | -24. | 0.01 | -0.01 |
| 123 | 15 | 4.04 | 4.04 | 5. | 7. | 0.00 | 0.05 | 5.72 | 5.72 | 8. | -27. | 0.01 | -0.01 |
| 124 | 15 | 4.04 | 4.04 | 61. | 6. | 0.00 | 0.10 | 5.72 | 5.72 | 9. | -27. | 0.01 | -0.01 |
| 125 | 15 | 4.04 | 4.04 | 82. | 6. | 0.00 | 0.12 | 5.72 | 5.72 | 2. | -11. | 0.01 | 0.00 |
| 126 | 15 | 4.04 | 4.04 | 0. | 5. | 0.00 | 0.03 | 5.72 | 5.72 | 0. | -15. | 0.01 | -0.01 |
| 127 | 15 | 4.04 | 4.04 | 0. | 4. | 0.00 | 0.03 | 5.72 | 5.72 | 0. | -18. | 0.01 | -0.01 |
| 128 | 15 | 4.04 | 4.04 | 0. | 5. | 0.00 | 0.03 | 5.72 | 5.72 | 0. | -23. | 0.01 | -0.01 |
| 129 | 15 | 4.04 | 4.04 | 94. | 6. | 0.00 | 0.14 | 5.72 | 5.72 | 0. | -31. | 0.01 | -0.01 |
| 130 | 15 | 4.04 | 4.04 | 56. | 2. | 0.02 | 0.08 | 5.72 | 5.72 | 0. | -17. | 0.01 | -0.01 |
| 131 | 15 | 4.04 | 4.04 | 35. | -2. | 0.01 | 0.04 | 5.72 | 5.72 | 0. | -27. | 0.01 | -0.01 |
| 132 | 15 | 4.04 | 4.04 | 0. | -4. | 0.00 | 0.00 | 5.72 | 5.72 | 0. | -32. | 0.01 | -0.01 |
| 133 | 15 | 4.04 | 4.04 | 0. | -8. | 0.00 | 0.00 | 5.72 | 5.72 | 0. | -39. | 0.02 | -0.02 |
| 134 | 15 | 4.04 | 4.04 | 82. | -1. | 0.03 | 0.09 | 5.72 | 5.72 | 0. | -46. | 0.02 | -0.02 |
| 135 | 15 | 4.04 | 4.04 | 41. | -1. | 0.02 | 0.04 | 6.00 | 6.00 | 111. | -9. | 0.04 | 0.08 |
| 136 | 15 | 4.04 | 4.04 | 50. | 0. | 0.02 | 0.05 | 6.00 | 6.00 | 172. | -8. | 0.06 | 0.12 |
| 137 | 15 | 4.04 | 4.04 | 67. | -1. | 0.03 | 0.07 | 6.00 | 6.00 | 163. | -7. | 0.06 | 0.12 |
| 138 | 15 | 4.04 | 4.04 | 26. | -8. | 0.01 | 0.02 | 6.00 | 6.00 | 87. | -9. | 0.03 | 0.06 |
| 139 | 15 | 4.04 | 4.04 | 25. | -11. | 0.01 | 0.02 | 6.00 | 6.00 | 2. | -35. | 0.02 | -0.01 |
| 140 | 15 | 4.04 | 4.04 | 10. | -4. | 0.01 | 0.01 | 6.00 | 6.00 | 5. | -4. | 0.00 | 0.00 |
| 141 | 15 | 4.04 | 4.04 | 3. | 3. | 0.00 | 0.02 | 6.00 | 6.00 | 44. | 0. | 0.01 | 0.03 |
| 142 | 15 | 4.04 | 4.04 | 93. | 6. | 0.03 | 0.14 | 6.00 | 6.00 | 50. | 3. | 0.01 | 0.05 |
| 143 | 15 | 4.04 | 4.04 | 53. | 5. | 0.02 | 0.09 | 6.00 | 6.00 | 22. | 3. | 0.01 | 0.03 |
| 144 | 15 | 4.04 | 4.04 | 13. | 9. | 0.00 | 0.07 | 6.00 | 6.00 | 9. | -8. | 0.01 | 0.00 |
| 792 | 15 | 4.04 | 4.04 | 16. | -1. | 0.01 | 0.02 | 5.72 | 5.72 | 14. | -7. | 0.01 | 0.01 |
| 793 | 15 | 4.04 | 4.04 | 0. | 0. | 0.00 | 0.00 | 5.72 | 5.72 | 0. | -11. | 0.00 | 0.00 |
| 946 | 35 | 4.04 | 4.04 | 26. | -7. | 0.00 | 0.04 | 5.72 | 5.72 | 0. | -79. | 0.02 | -0.02 |
| 947 | 35 | 4.04 | 4.04 | 0. | -5. | 0.00 | 0.00 | 5.72 | 5.72 | 0. | -59. | 0.01 | -0.01 |
| 948 | 35 | 4.04 | 4.04 | 0. | -6. | 0.00 | 0.00 | 5.72 | 5.72 | 0. | -28. | 0.01 | -0.01 |
| 949 | 35 | 4.04 | 4.04 | 0. | -5. | 0.00 | 0.00 | 5.72 | 5.72 | 0. | -15. | 0.00 | 0.00 |
| 950 | 35 | 4.04 | 4.04 | 0. | -6. | 0.00 | 0.00 | 5.72 | 5.72 | 0. | -100. | 0.02 | -0.02 |
| 951 | 35 | 4.04 | 4.04 | 0. | -7. | 0.00 | 0.00 | 5.72 | 5.72 | 0. | -87. | 0.02 | -0.02 |
| 952 | 35 | 4.04 | 4.04 | 0. | -6. | 0.00 | 0.00 | 5.72 | 5.72 | 0. | -82. | 0.02 | -0.02 |
| 953 | 35 | 4.04 | 4.04 | 104. | -2. | 0.01 | 0.04 | 5.72 | 5.72 | 25. | -57. | 0.01 | -0.01 |
| 954 | 35 | 4.04 | 4.04 | 0. | -4. | 0.00 | 0.00 | 5.72 | 5.72 | 0. | -79. | 0.02 | -0.02 |
| 955 | 35 | 4.04 | 4.04 | 0. | -7. | 0.00 | 0.00 | 5.72 | 5.72 | 0. | -72. | 0.01 | -0.01 |
| 956 | 35 | 4.04 | 4.04 | 0. | -3. | 0.00 | 0.00 | 5.72 | 5.72 | 0. | -59. | 0.01 | -0.01 |
| 957 | 35 | 4.04 | 4.04 | 50. | -1. | 0.00 | 0.02 | 5.72 | 5.72 | 0. | -49. | 0.01 | -0.01 |
| 958 | 35 | 4.04 | 4.04 | 8. | -1. | 0.00 | 0.00 | 5.72 | 5.72 | 8. | -73. | 0.01 | -0.01 |
| 959 | 35 | 4.04 | 4.04 | 0. | -6. | 0.00 | 0.00 | 5.72 | 5.72 | 5. | -67. | 0.01 | -0.01 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|------|------|-----|-----|------|------|-----|-----|-------|-----|-----|------|-------|
| 132 | 4.04 | 4.04 | 35 | -2 | 1.87 | 52. | 26 | -1 | 0.002 | 25 | -3 | 1.22 | 0.001 |
| 133 | 4.04 | 4.04 | 55 | -5 | 2.85 | 65. | 40 | -3 | 0.002 | 36 | -1 | 2.00 | 0.003 |
| 134 | 4.04 | 4.04 | 33 | -10 | 1.46 | -2. | 25 | -7 | 0.000 | 0. | -3 | 0.19 | 0.000 |
| 135 | 4.04 | 4.04 | 46 | -1 | 2.54 | 88. | 33 | -1 | 0.003 | 37 | -1 | 2.03 | 0.003 |
| 136 | 4.04 | 4.04 | 16 | -3 | 0.75 | 7. | 17 | -2 | 0.001 | 20 | -2 | 1.00 | 0.001 |
| 137 | 4.04 | 4.04 | 0. | -6 | 0.35 | -5. | 0. | -5 | 0.000 | 0. | -5 | 0.28 | 0.000 |
| 138 | 4.04 | 4.04 | 0. | -11 | 0.68 | -10. | 0. | -9 | 0.000 | 0. | -7 | 0.46 | 0.000 |
| 139 | 4.04 | 4.04 | 24 | -10 | 1.21 | -4. | 24 | -10 | 0.000 | 17 | -7 | 0.86 | 0.000 |
| 140 | 4.04 | 4.04 | 93 | -4 | 5.09 | 165. | 65 | -2 | 0.005 | 56 | -2 | 3.07 | 0.005 |
| 141 | 4.04 | 4.04 | 4 | -2 | 0.21 | -1. | 4 | -1 | 0.000 | 11 | -1 | 0.55 | 0.001 |
| 142 | 4.04 | 4.04 | 0. | 0. | 0.00 | 5. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 143 | 4.04 | 4.04 | 0. | -2 | 0.12 | -2. | 0. | -2 | 0.000 | 0. | 1 | 0.00 | 0.001 |
| 144 | 4.04 | 4.04 | 12 | 4 | 0.25 | 84. | 11 | -2 | 0.000 | 4 | 2 | 0.00 | 0.003 |
| 792 | 4.04 | 4.04 | 41 | -5 | 2.01 | 31. | 32 | -3 | 0.001 | 25 | -5 | 1.08 | 0.000 |
| 793 | 4.04 | 4.04 | 68 | -4 | 3.68 | 110. | 50 | -2 | 0.004 | 31 | -2 | 1.63 | 0.002 |
| 946 | 4.04 | 4.04 | 0. | -6 | 0.16 | -2. | 0. | -4 | 0.000 | 0. | -4 | 0.12 | 0.000 |
| 947 | 4.04 | 4.04 | 56 | -4 | 0.48 | 6. | 43 | -2 | 0.001 | 33 | -3 | 0.27 | 0.000 |
| 948 | 4.04 | 4.04 | 71 | -11 | 0.63 | -1. | 57 | -9 | 0.000 | 41 | -9 | 0.43 | 0.000 |
| 949 | 4.04 | 4.04 | 103 | -14 | 0.86 | 1. | 83 | -10 | 0.000 | 63 | -11 | 0.60 | 0.000 |
| 950 | 4.04 | 4.04 | 115 | -8 | 1.04 | 18. | 110 | -7 | 0.001 | 94 | -8 | 0.79 | 0.001 |
| 951 | 4.04 | 4.04 | 135 | -5 | 1.44 | 54. | 130 | -5 | 0.004 | 124 | -6 | 1.25 | 0.003 |
| 952 | 4.04 | 4.04 | 59 | -5 | 0.49 | 4. | 55 | -7 | 0.000 | 41 | -6 | 0.35 | 0.000 |
| 953 | 4.04 | 4.04 | 0. | -2 | 0.05 | -1. | 0. | -4 | 0.000 | 0. | -5 | 0.13 | 0.000 |
| 954 | 4.04 | 4.04 | 93 | -6 | 0.84 | 14. | 89 | -6 | 0.001 | 71 | -6 | 0.59 | 0.001 |
| 955 | 4.04 | 4.04 | 127 | -4 | 1.37 | 55. | 121 | -4 | 0.005 | 112 | -5 | 1.16 | 0.004 |
| 956 | 4.04 | 4.04 | 68 | -5 | 0.60 | 9. | 56 | -6 | 0.000 | 54 | -4 | 0.44 | 0.000 |
| 957 | 4.04 | 4.04 | 17 | -2 | 0.14 | 0. | 0. | -4 | 0.000 | 0. | -4 | 0.10 | 0.000 |
| 958 | 4.04 | 4.04 | 77 | -5 | 0.73 | 16. | 73 | -4 | 0.001 | 51 | -3 | 0.48 | 0.001 |
| 959 | 4.04 | 4.04 | 126 | -4 | 1.36 | 56. | 118 | -4 | 0.005 | 105 | -4 | 1.12 | 0.004 |
| 960 | 4.04 | 4.04 | 107 | -4 | 1.14 | 43. | 91 | -5 | 0.002 | 88 | -3 | 0.94 | 0.003 |
| 961 | 4.04 | 4.04 | 87 | -3 | 0.93 | 35. | 57 | -4 | 0.001 | 53 | -3 | 0.49 | 0.001 |
| 962 | 4.04 | 4.04 | 21 | -1 | 0.20 | 4. | 21 | -2 | 0.000 | 10 | -2 | 0.09 | 0.000 |
| 963 | 4.04 | 4.04 | 87 | -7 | 0.72 | 7. | 79 | -6 | 0.001 | 66 | -4 | 0.63 | 0.001 |
| 964 | 4.04 | 4.04 | 101 | -6 | 0.96 | 20. | 88 | -5 | 0.002 | 82 | -3 | 0.86 | 0.003 |
| 965 | 4.04 | 4.04 | 135 | -1 | 1.52 | 97. | 109 | -1 | 0.007 | 92 | -1 | 1.03 | 0.006 |
| 966 | 4.04 | 4.04 | 0. | -4 | 0.11 | -2. | 0. | -3 | 0.000 | 0. | -2 | 0.05 | 0.000 |
| 967 | 4.04 | 4.04 | 62 | -6 | 0.50 | 2. | 52 | -5 | 0.000 | 41 | -3 | 0.33 | 0.000 |
| 968 | 4.04 | 4.04 | 87 | -8 | 0.71 | 5. | 74 | -7 | 0.000 | 63 | -6 | 0.51 | 0.000 |
| 969 | 4.04 | 4.04 | 143 | -8 | 1.35 | 29. | 116 | -6 | 0.002 | 98 | -6 | 0.89 | 0.002 |
| 970 | 4.04 | 4.04 | 0. | -6 | 0.18 | -3. | 0. | -5 | 0.000 | 0. | -4 | 0.11 | 0.000 |
| 971 | 4.04 | 4.04 | 56 | -5 | 0.47 | 5. | 45 | -3 | 0.001 | 35 | -3 | 0.28 | 0.000 |
| 972 | 4.04 | 4.04 | 78 | -10 | 0.64 | 1. | 64 | -8 | 0.000 | 49 | -8 | 0.43 | 0.000 |
| 973 | 4.04 | 4.04 | 115 | -13 | 0.92 | 3. | 92 | -9 | 0.000 | 79 | -10 | 0.64 | 0.000 |

ARMATURA INFERIORE VERTICALE

| GUSCI | COMBINAZIONE RARA | | | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|-------------------|------|-----|-----|------|------|-----------------|-----|-------|------------------------|-----|------|-------|
| | Af | Afc | Mom | Nor | σc | σf | Mom | Nor | wkF | Mom | Nor | σc | wkP |
| 100 | 5.72 | 5.72 | 0. | -70 | 4.20 | -63. | 0. | -66 | 0.000 | 0. | -62 | 3.70 | 0.000 |
| 101 | 5.72 | 5.72 | 0. | -62 | 3.71 | -56. | 0. | -60 | 0.000 | 0. | -59 | 3.50 | 0.000 |
| 102 | 5.72 | 5.72 | 45 | -63 | 4.85 | -47. | 46 | -62 | 0.000 | 34 | -63 | 4.56 | 0.000 |
| 103 | 5.72 | 5.72 | 67 | -54 | 4.86 | -34. | 66 | -53 | 0.000 | 54 | -55 | 4.57 | 0.000 |
| 104 | 5.72 | 5.72 | 217 | -45 | 8.94 | 37. | 212 | -44 | 0.001 | 197 | -42 | 8.10 | 0.001 |
| 105 | 5.72 | 5.72 | 4 | -58 | 3.54 | -51. | 4 | -55 | 0.000 | 3 | -55 | 3.36 | 0.000 |
| 106 | 5.72 | 5.72 | 5 | -55 | 3.43 | -49. | 5 | -54 | 0.000 | 4 | -54 | 3.30 | 0.000 |
| 107 | 5.72 | 5.72 | 10 | -54 | 3.44 | -46. | 10 | -52 | 0.000 | 9 | -52 | 3.33 | 0.000 |
| 108 | 5.72 | 5.72 | 10 | -46 | 3.01 | -39. | 10 | -45 | 0.000 | 7 | -46 | 2.94 | 0.000 |
| 109 | 5.72 | 5.72 | 26 | -33 | 2.61 | -24. | 25 | -32 | 0.000 | 6 | -36 | 2.33 | 0.000 |
| 110 | 5.72 | 5.72 | 0. | -46 | 2.75 | -41. | 0. | -45 | 0.000 | 0. | -46 | 2.75 | 0.000 |
| 111 | 5.72 | 5.72 | 0. | -46 | 2.78 | -42. | 0. | -45 | 0.000 | 0. | -46 | 2.74 | 0.000 |
| 112 | 5.72 | 5.72 | 0. | -46 | 2.72 | -41. | 0. | -44 | 0.000 | 0. | -44 | 2.62 | 0.000 |
| 113 | 5.72 | 5.72 | 0. | -42 | 2.49 | -37. | 0. | -40 | 0.000 | 0. | -40 | 2.38 | 0.000 |
| 114 | 5.72 | 5.72 | 0. | -33 | 1.96 | -29. | 0. | -31 | 0.000 | 0. | -34 | 2.01 | 0.000 |
| 115 | 5.72 | 5.72 | 0. | -36 | 2.15 | -32. | 0. | -35 | 0.000 | 0. | -36 | 2.17 | 0.000 |
| 116 | 5.72 | 5.72 | 0. | -39 | 2.32 | -35. | 0. | -37 | 0.000 | 0. | -37 | 2.21 | 0.000 |
| 117 | 5.72 | 5.72 | 0. | -39 | 2.33 | -35. | 0. | -37 | 0.000 | 0. | -37 | 2.19 | 0.000 |
| 118 | 5.72 | 5.72 | 0. | -37 | 2.24 | -34. | 0. | -35 | 0.000 | 0. | -35 | 2.10 | 0.000 |
| 119 | 5.72 | 5.72 | 0. | -34 | 2.06 | -31. | 0. | -32 | 0.000 | 0. | -32 | 1.92 | 0.000 |
| 120 | 5.72 | 5.72 | 0. | -26 | 1.55 | -23. | 0. | -26 | 0.000 | 0. | -27 | 1.61 | 0.000 |
| 121 | 5.72 | 5.72 | 3 | -31 | 1.90 | -27. | 2 | -29 | 0.000 | 4 | -28 | 1.79 | 0.000 |
| 122 | 5.72 | 5.72 | 0. | -32 | 1.92 | -29. | 0. | -30 | 0.000 | 0. | -30 | 1.78 | 0.000 |
| 123 | 5.72 | 5.72 | 5 | -33 | 2.12 | -29. | 3 | -31 | 0.000 | 2 | -31 | 1.91 | 0.000 |
| 124 | 5.72 | 5.72 | 1 | -36 | 2.16 | -32. | 0. | -32 | 0.000 | 1 | -31 | 1.89 | 0.000 |
| 125 | 5.72 | 5.72 | 6 | -17 | 1.16 | -14. | 4 | -18 | 0.000 | 3 | -18 | 1.18 | 0.000 |
| 126 | 5.72 | 5.72 | 35 | -24 | 2.24 | -14. | 26 | -23 | 0.000 | 20 | -21 | 1.76 | 0.000 |
| 127 | 5.72 | 5.72 | 45 | -26 | 2.61 | -13. | 33 | -24 | 0.000 | 26 | -23 | 2.01 | 0.000 |
| 128 | 5.72 | 5.72 | 37 | -29 | 2.60 | -18. | 26 | -26 | 0.000 | 20 | -27 | 2.06 | 0.000 |
| 129 | 5.72 | 5.72 | 4 | -38 | 2.38 | -33. | 3 | -33 | 0.000 | 4 | -32 | 2.02 | 0.000 |
| 130 | 5.72 | 5.72 | 99 | -17 | 4.21 | 34. | 72 | -16 | 0.000 | 30 | -13 | 1.47 | 0.000 |
| 131 | 5.72 | 5.72 | 146 | -18 | 6.49 | 88. | 107 | -17 | 0.002 | 78 | -16 | 3.22 | 0.001 |
| 132 | 5.72 | 5.72 | 168 | -20 | 7.53 | 109. | 124 | -18 | 0.002 | 97 | -18 | 4.08 | 0.001 |
| 133 | 5.72 | 5.72 | 186 | -23 | 8.27 | 115. | 137 | -20 | 0.003 | 109 | -20 | 4.54 | 0.001 |
| 134 | 5.72 | 5.72 | 205 | -38 | 8.59 | 55. | 154 | -32 | 0.001 | 92 | -34 | 4.24 | 0.000 |
| 135 | 6.00 | 6.00 | 7 | -7 | 0.56 | -4. | 0. | -7 | 0.000 | 0. | -8 | 0.45 | 0.000 |
| 136 | 6.00 | 6.00 | 0. | -5 | 0.32 | -5. | 0. | -6 | 0.000 | 0. | -6 | 0.38 | 0.000 |
| 137 | 6.00 | 6.00 | 0. | -6 | 0.33 | -5. | 0. | -6 | 0.000 | 0. | -7 | 0.39 | 0.000 |
| 138 | 6.00 | 6.00 | 0. | -20 | 1.18 | -18. | 0. | -17 | 0.000 | 0. | -11 | 0.66 | 0.000 |
| 139 | 6.00 | 6.00 | 45 | -46 | 3.81 | -31. | 34 | -38 | 0.000 | 9 | -29 | 1.91 | 0.000 |
| 140 | 6.00 | 6.00 | 15 | -2 | 0.63 | 5. | 8 | -2 | 0.000 | 9 | -2 | 0.35 | 0.000 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|------|------|-----|-----|------|------|-----|-----|-------|-----|-----|------|-------|
| 141 | 6.00 | 6.00 | 15 | -1 | 0.71 | 18. | 8 | -1 | 0.000 | 9 | -1 | 0.41 | 0.000 |
| 142 | 6.00 | 6.00 | 0. | 1 | 0.00 | 7. | 0. | 0. | 0.000 | 0. | 0. | 0.02 | 0.000 |
| 143 | 6.00 | 6.00 | 0. | -4 | 0.24 | -4. | 0. | -4 | 0.000 | 0. | -3 | 0.18 | 0.000 |
| 144 | 6.00 | 6.00 | 0. | -12 | 0.74 | -11. | 0. | -10 | 0.000 | 0. | -8 | 0.47 | 0.000 |
| 792 | 5.72 | 5.72 | 59 | -7 | 2.64 | 41. | 44 | -6 | 0.001 | 33 | -6 | 1.38 | 0.000 |
| 793 | 5.72 | 5.72 | 100 | -8 | 4.63 | 98. | 75 | -6 | 0.003 | 64 | -6 | 2.90 | 0.002 |
| 946 | 5.72 | 5.72 | 253 | -73 | 3.11 | -16. | 191 | -61 | 0.000 | 119 | -58 | 2.11 | 0.000 |
| 947 | 5.72 | 5.72 | 234 | -53 | 2.49 | -9. | 177 | -44 | 0.000 | 111 | -41 | 1.60 | 0.000 |
| 948 | 5.72 | 5.72 | 218 | -27 | 1.75 | 2. | 165 | -23 | 0.000 | 75 | -18 | 0.83 | 0.000 |
| 949 | 5.72 | 5.72 | 169 | -23 | 1.40 | 0. | 127 | -20 | 0.000 | 59 | -16 | 0.70 | 0.000 |
| 950 | 5.72 | 5.72 | 401 | -89 | 4.20 | -14. | 398 | -87 | 0.000 | 319 | -83 | 3.67 | 0.000 |
| 951 | 5.72 | 5.72 | 390 | -79 | 3.88 | -11. | 392 | -76 | 0.000 | 297 | -69 | 3.21 | 0.000 |
| 952 | 5.72 | 5.72 | 339 | -73 | 3.50 | -11. | 348 | -69 | 0.000 | 207 | -61 | 2.58 | 0.000 |
| 953 | 5.72 | 5.72 | 173 | -61 | 2.44 | -15. | 189 | -58 | 0.000 | 102 | -51 | 1.86 | 0.000 |
| 954 | 5.72 | 5.72 | 98 | -74 | 2.44 | -25. | 95 | -70 | 0.000 | 77 | -76 | 2.41 | 0.000 |
| 955 | 5.72 | 5.72 | 121 | -69 | 2.41 | -21. | 121 | -65 | 0.000 | 100 | -67 | 2.26 | 0.000 |
| 956 | 5.72 | 5.72 | 132 | -64 | 2.34 | -19. | 130 | -61 | 0.000 | 116 | -59 | 2.13 | 0.000 |
| 957 | 5.72 | 5.72 | 124 | -58 | 2.12 | -17. | 124 | -54 | 0.000 | 110 | -50 | 1.85 | 0.000 |
| 958 | 5.72 | 5.72 | 25 | -72 | 2.07 | -28. | 20 | -67 | 0.000 | 11 | -71 | 2.00 | 0.000 |
| 959 | 5.72 | 5.72 | 46 | -66 | 2.01 | -24. | 40 | -61 | 0.000 | 28 | -63 | 1.83 | 0.000 |
| 960 | 5.72 | 5.72 | 61 | -63 | 1.98 | -22. | 53 | -58 | 0.000 | 43 | -56 | 1.72 | 0.000 |
| 961 | 5.72 | 5.72 | 75 | -55 | 1.82 | -18. | 67 | -51 | 0.000 | 58 | -48 | 1.57 | 0.000 |
| 962 | 5.72 | 5.72 | 25 | -72 | 2.06 | -28. | 18 | -64 | 0.000 | 10 | -68 | 1.89 | 0.000 |
| 963 | 5.72 | 5.72 | 44 | -62 | 1.89 | -23. | 35 | -56 | 0.000 | 27 | -59 | 1.72 | 0.000 |
| 964 | 5.72 | 5.72 | 60 | -53 | 1.70 | -18. | 49 | -47 | 0.000 | 39 | -51 | 1.55 | 0.000 |
| 965 | 5.72 | 5.72 | 69 | -44 | 1.50 | -14. | 58 | -40 | 0.000 | 51 | -43 | 1.40 | 0.000 |
| 966 | 5.72 | 5.72 | 25 | -72 | 2.08 | -28. | 19 | -64 | 0.000 | 13 | -65 | 1.82 | 0.000 |
| 967 | 5.72 | 5.72 | 48 | -61 | 1.87 | -22. | 38 | -54 | 0.000 | 33 | -55 | 1.64 | 0.000 |
| 968 | 5.72 | 5.72 | 67 | -45 | 1.52 | -15. | 55 | -40 | 0.000 | 48 | -43 | 1.37 | 0.000 |
| 969 | 5.72 | 5.72 | 79 | -36 | 1.33 | -10. | 66 | -32 | 0.000 | 58 | -35 | 1.22 | 0.000 |
| 970 | 5.72 | 5.72 | 25 | -77 | 2.20 | -30. | 19 | -63 | 0.000 | 22 | -63 | 1.80 | 0.000 |
| 971 | 5.72 | 5.72 | 34 | -56 | 1.68 | -21. | 26 | -46 | 0.000 | 24 | -46 | 1.35 | 0.000 |
| 972 | 5.72 | 5.72 | 52 | -39 | 1.31 | -13. | 41 | -32 | 0.000 | 35 | -32 | 1.03 | 0.000 |
| 973 | 5.72 | 5.72 | 62 | -34 | 1.20 | -11. | 50 | -27 | 0.000 | 40 | -26 | 0.90 | 0.000 |

ARMATURA SUPERIORE ORIZZONTALE

| GUSCI | | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------|------|-----------------|-----|-------|------------------------|-----|------|-------|
| | Af | Afc | Mom | Nor | σc | σf | Mom | Nor | wkF | Mom | Nor | σc | wkP |
| 100 | 4.04 | 4.04 | 17 | -5 | 0.07 | -9. | 16 | -5 | 0.000 | 17 | -6 | 0.04 | 0.000 |
| 101 | 4.04 | 4.04 | 19 | -5 | 0.81 | 0. | 18 | -6 | 0.000 | 13 | -4 | 0.04 | 0.000 |
| 102 | 4.04 | 4.04 | 0. | -2 | 0.11 | -2. | 0. | -2 | 0.000 | 0. | -1 | 0.08 | 0.000 |
| 103 | 4.04 | 4.04 | 0. | -6 | 0.35 | -5. | 0. | -6 | 0.000 | 0. | -4 | 0.25 | 0.000 |
| 104 | 4.04 | 4.04 | 0. | -2 | 0.12 | -2. | 0. | -2 | 0.000 | 0. | -3 | 0.17 | 0.000 |
| 105 | 4.04 | 4.04 | 22 | -2 | 1.10 | 23. | 20 | -2 | 0.001 | 16 | -2 | 0.80 | 0.001 |
| 106 | 4.04 | 4.04 | 10 | -4 | 0.03 | -6. | 9 | -4 | 0.000 | 7 | -3 | 0.01 | 0.000 |
| 107 | 4.04 | 4.04 | 0. | -1 | 0.09 | -1. | 0. | -2 | 0.000 | 0. | -1 | 0.06 | 0.000 |
| 108 | 4.04 | 4.04 | 0. | 0. | 0.00 | 1. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 109 | 4.04 | 4.04 | 17 | -1 | 0.91 | 28. | 16 | -1 | 0.001 | 13 | -1 | 0.71 | 0.001 |
| 110 | 4.04 | 4.04 | 24 | 0. | 1.35 | 59. | 20 | 0. | 0.002 | 16 | 1 | 0.90 | 0.003 |
| 111 | 4.04 | 4.04 | 8 | 2 | 0.35 | 38. | 7 | 1 | 0.002 | 4 | 1 | 0.07 | 0.002 |
| 112 | 4.04 | 4.04 | 0. | 3 | 0.00 | 33. | 0. | 2 | 0.002 | 0. | 2 | 0.00 | 0.003 |
| 113 | 4.04 | 4.04 | 0. | 3 | 0.00 | 42. | 0. | 3 | 0.003 | 0. | 3 | 0.00 | 0.003 |
| 114 | 4.04 | 4.04 | 23 | 0. | 1.29 | 57. | 22 | 0. | 0.003 | 17 | 1 | 0.93 | 0.003 |
| 115 | 4.04 | 4.04 | 37 | 1 | 2.06 | 100. | 29 | 1 | 0.004 | 23 | 1 | 1.26 | 0.004 |
| 116 | 4.04 | 4.04 | 9 | 3 | 0.23 | 62. | 7 | 2 | 0.004 | 5 | 3 | 0.00 | 0.004 |
| 117 | 4.04 | 4.04 | 0. | 4 | 0.00 | 48. | 0. | 3 | 0.004 | 0. | 4 | 0.00 | 0.004 |
| 118 | 4.04 | 4.04 | 0. | 4 | 0.00 | 50. | 0. | 4 | 0.004 | 1 | 4 | 0.00 | 0.004 |
| 119 | 4.04 | 4.04 | 33 | 2 | 1.83 | 101. | 26 | 2 | 0.005 | 18 | 2 | 0.97 | 0.005 |
| 120 | 4.04 | 4.04 | 49 | 2 | 2.75 | 139. | 38 | 1 | 0.006 | 31 | 2 | 1.75 | 0.006 |
| 121 | 4.04 | 4.04 | 0. | 3 | 0.00 | 37. | 0. | 2 | 0.003 | 3 | 3 | 0.00 | 0.004 |
| 122 | 4.04 | 4.04 | 0. | 2 | 0.00 | 30. | 0. | 2 | 0.002 | 0. | 3 | 0.00 | 0.004 |
| 123 | 4.04 | 4.04 | 0. | 2 | 0.00 | 29. | 0. | 2 | 0.003 | 0. | 3 | 0.00 | 0.004 |
| 124 | 4.04 | 4.04 | 52 | 2 | 2.91 | 140. | 40 | 2 | 0.006 | 30 | 2 | 1.67 | 0.006 |
| 125 | 4.04 | 4.04 | 43 | 2 | 2.40 | 125. | 32 | 1 | 0.005 | 32 | 2 | 1.77 | 0.006 |
| 126 | 4.04 | 4.04 | 0. | 1 | 0.00 | 16. | 0. | 1 | 0.001 | 0. | 2 | 0.00 | 0.002 |
| 127 | 4.04 | 4.04 | 0. | -2 | 0.12 | -2. | 0. | -1 | 0.000 | 0. | 1 | 0.00 | 0.001 |
| 128 | 4.04 | 4.04 | 0. | -4 | 0.22 | -3. | 0. | -2 | 0.000 | 0. | 1 | 0.00 | 0.001 |
| 129 | 4.04 | 4.04 | 53 | -3 | 2.86 | 79. | 40 | -2 | 0.003 | 39 | 1 | 2.18 | 0.005 |
| 130 | 4.04 | 4.04 | 29 | 1 | 1.60 | 77. | 21 | 0. | 0.003 | 28 | 1 | 1.54 | 0.004 |
| 131 | 4.04 | 4.04 | 0. | -2 | 0.12 | -2. | 0. | -1 | 0.000 | 0. | -1 | 0.08 | 0.000 |
| 132 | 4.04 | 4.04 | 0. | -2 | 0.14 | -2. | 0. | -1 | 0.000 | 0. | -3 | 0.21 | 0.000 |
| 133 | 4.04 | 4.04 | 0. | -5 | 0.29 | -4. | 0. | -3 | 0.000 | 0. | -1 | 0.04 | 0.000 |
| 134 | 4.04 | 4.04 | 10 | -10 | 0.39 | -12. | 7 | -7 | 0.000 | 24 | -3 | 1.16 | 0.001 |
| 135 | 4.04 | 4.04 | 18 | -1 | 0.95 | 25. | 15 | -1 | 0.001 | 2 | -1 | 0.04 | 0.000 |
| 136 | 4.04 | 4.04 | 44 | -3 | 2.37 | 66. | 34 | -2 | 0.002 | 33 | -2 | 1.75 | 0.002 |
| 137 | 4.04 | 4.04 | 36 | -6 | 1.64 | 17. | 27 | -5 | 0.000 | 27 | -5 | 1.23 | 0.001 |
| 138 | 4.04 | 4.04 | 12 | -11 | 0.37 | -13. | 10 | -9 | 0.000 | 8 | -7 | 0.26 | 0.000 |
| 139 | 4.04 | 4.04 | 0. | -10 | 0.61 | -9. | 0. | -10 | 0.000 | 10 | -7 | 0.19 | 0.000 |
| 140 | 4.04 | 4.04 | 0. | -4 | 0.22 | -3. | 0. | -2 | 0.000 | 0. | -2 | 0.13 | 0.000 |
| 141 | 4.04 | 4.04 | 48 | -2 | 2.63 | 87. | 36 | -1 | 0.003 | 26 | -1 | 1.44 | 0.002 |
| 142 | 4.04 | 4.04 | 55 | 0. | 3.07 | 131. | 41 | 0. | 0.004 | 40 | 0. | 2.21 | 0.005 |
| 143 | 4.04 | 4.04 | 41 | -2 | 2.20 | 67. | 30 | -2 | 0.002 | 24 | 1 | 1.33 | 0.004 |
| 144 | 4.04 | 4.04 | 11 | 4 | 0.00 | 80. | 0. | -2 | 0.000 | 0. | 2 | 0.00 | 0.002 |
| 792 | 4.04 | 4.04 | 12 | -5 | 0.02 | -8. | 8 | -3 | 0.000 | 13 | -5 | 0.01 | 0.000 |
| 793 | 4.04 | 4.04 | 0. | -4 | 0.22 | -3. | 0. | -2 | 0.000 | 2 | -2 | 0.11 | 0.000 |
| 946 | 4.04 | 4.04 | 49 | -6 | 0.40 | 1. | 34 | -4 | 0.000 | 16 | -4 | 0.05 | 0.000 |
| 947 | 4.04 | 4.04 | 0. | -4 | 0.12 | -2. | 0. | -2 | 0.000 | 0. | -3 | 0.09 | 0.000 |
| 948 | 4.04 | 4.04 | 0. | -11 | 0.30 | -5. | 0. | -9 | 0.000 | 0. | -9 | 0.24 | 0.000 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|------|------|----|-----|------|-----|----|-----|-------|----|-----|------|-------|
| 949 | 4.04 | 4.04 | 0. | -14 | 0.38 | -6. | 0. | -10 | 0.000 | 0. | -11 | 0.32 | 0.000 |
| 950 | 4.04 | 4.04 | 0. | -8 | 0.21 | -3. | 0. | -7 | 0.000 | 0. | -8 | 0.21 | 0.000 |
| 951 | 4.04 | 4.04 | 0. | -5 | 0.14 | -2. | 0. | -5 | 0.000 | 0. | -6 | 0.16 | 0.000 |
| 952 | 4.04 | 4.04 | 0. | -5 | 0.14 | -2. | 0. | -7 | 0.000 | 0. | -6 | 0.16 | 0.000 |
| 953 | 4.04 | 4.04 | 44 | -2 | 0.46 | 15. | 67 | -4 | 0.001 | 42 | -5 | 0.34 | 0.000 |
| 954 | 4.04 | 4.04 | 0. | -6 | 0.17 | -3. | 0. | -6 | 0.000 | 0. | -6 | 0.16 | 0.000 |
| 955 | 4.04 | 4.04 | 0. | -4 | 0.12 | -2. | 0. | -4 | 0.000 | 0. | -5 | 0.13 | 0.000 |
| 956 | 4.04 | 4.04 | 0. | -5 | 0.13 | -2. | 0. | -6 | 0.000 | 0. | -4 | 0.12 | 0.000 |
| 957 | 4.04 | 4.04 | 0. | -2 | 0.06 | -1. | 16 | -4 | 0.000 | 6 | -4 | 0.07 | 0.000 |
| 958 | 4.04 | 4.04 | 0. | -5 | 0.13 | -2. | 0. | -4 | 0.000 | 0. | -3 | 0.09 | 0.000 |
| 959 | 4.04 | 4.04 | 0. | -4 | 0.11 | -2. | 0. | -4 | 0.000 | 0. | -4 | 0.11 | 0.000 |
| 960 | 4.04 | 4.04 | 0. | -4 | 0.11 | -2. | 0. | -5 | 0.000 | 0. | -3 | 0.09 | 0.000 |
| 961 | 4.04 | 4.04 | 0. | -3 | 0.09 | -1. | 0. | -4 | 0.000 | 0. | -3 | 0.09 | 0.000 |
| 962 | 4.04 | 4.04 | 3 | -1 | 0.02 | -1. | 0. | -2 | 0.000 | 1 | -2 | 0.04 | 0.000 |
| 963 | 4.04 | 4.04 | 0. | -7 | 0.20 | -3. | 0. | -6 | 0.000 | 0. | -4 | 0.10 | 0.000 |
| 964 | 4.04 | 4.04 | 0. | -6 | 0.17 | -2. | 0. | -5 | 0.000 | 0. | -3 | 0.09 | 0.000 |
| 965 | 4.04 | 4.04 | 0. | -1 | 0.03 | 0. | 0. | -1 | 0.000 | 0. | -1 | 0.02 | 0.000 |
| 966 | 4.04 | 4.04 | 25 | -4 | 0.01 | -3. | 16 | -3 | 0.000 | 8 | -2 | 0.02 | 0.000 |
| 967 | 4.04 | 4.04 | 0. | -6 | 0.18 | -3. | 0. | -5 | 0.000 | 0. | -3 | 0.09 | 0.000 |
| 968 | 4.04 | 4.04 | 0. | -8 | 0.22 | -3. | 0. | -7 | 0.000 | 0. | -6 | 0.17 | 0.000 |
| 969 | 4.04 | 4.04 | 0. | -8 | 0.23 | -3. | 0. | -6 | 0.000 | 0. | -6 | 0.17 | 0.000 |
| 970 | 4.04 | 4.04 | 40 | -6 | 0.00 | -5. | 28 | -5 | 0.000 | 13 | -4 | 0.05 | 0.000 |
| 971 | 4.04 | 4.04 | 0. | -5 | 0.12 | -2. | 0. | -3 | 0.000 | 0. | -3 | 0.08 | 0.000 |
| 972 | 4.04 | 4.04 | 0. | -10 | 0.27 | -4. | 0. | -8 | 0.000 | 0. | -8 | 0.21 | 0.000 |
| 973 | 4.04 | 4.04 | 0. | -13 | 0.35 | -5. | 0. | -9 | 0.000 | 0. | -10 | 0.26 | 0.000 |

ARMATURA SUPERIORE VERTICALE

| GUSCI | Af | Afc | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------|------|-----------------|-----|-------|------------------------|-----|------|-------|
| | | | Mom | Nor | σC | σf | Mom | Nor | wkF | Mom | Nor | σC | wkP |
| 100 | 5.72 | 5.72 | 74 | -70 | 2.45 | -79. | 67 | -66 | 0.000 | 46 | -62 | 2.61 | 0.000 |
| 101 | 5.72 | 5.72 | 36 | -62 | 2.86 | -63. | 31 | -60 | 0.000 | 12 | -59 | 3.23 | 0.000 |
| 102 | 5.72 | 5.72 | 0. | -63 | 3.78 | -57. | 0. | -62 | 0.000 | 0. | -63 | 3.74 | 0.000 |
| 103 | 5.72 | 5.72 | 0. | -54 | 3.26 | -49. | 0. | -53 | 0.000 | 0. | -55 | 3.29 | 0.000 |
| 104 | 5.72 | 5.72 | 0. | -45 | 2.70 | -41. | 0. | -44 | 0.000 | 0. | -42 | 2.53 | 0.000 |
| 105 | 5.72 | 5.72 | 0. | -58 | 3.45 | -52. | 0. | -55 | 0.000 | 0. | -55 | 3.28 | 0.000 |
| 106 | 5.72 | 5.72 | 0. | -55 | 3.32 | -50. | 0. | -54 | 0.000 | 1 | -54 | 3.18 | 0.000 |
| 107 | 5.72 | 5.72 | 0. | -54 | 3.21 | -48. | 0. | -52 | 0.000 | 0. | -52 | 3.12 | 0.000 |
| 108 | 5.72 | 5.72 | 0. | -46 | 2.77 | -42. | 0. | -45 | 0.000 | 0. | -46 | 2.76 | 0.000 |
| 109 | 5.72 | 5.72 | 0. | -33 | 2.00 | -30. | 0. | -32 | 0.000 | 5 | -36 | 2.06 | 0.000 |
| 110 | 5.72 | 5.72 | 3 | -46 | 2.68 | -42. | 2 | -45 | 0.000 | 2 | -46 | 2.69 | 0.000 |
| 111 | 5.72 | 5.72 | 6 | -46 | 2.64 | -43. | 3 | -45 | 0.000 | 4 | -46 | 2.65 | 0.000 |
| 112 | 5.72 | 5.72 | 8 | -46 | 2.53 | -43. | 7 | -44 | 0.000 | 6 | -44 | 2.49 | 0.000 |
| 113 | 5.72 | 5.72 | 11 | -42 | 2.24 | -40. | 9 | -40 | 0.000 | 7 | -40 | 2.22 | 0.000 |
| 114 | 5.72 | 5.72 | 9 | -33 | 1.75 | -31. | 9 | -31 | 0.000 | 14 | -34 | 1.68 | 0.000 |
| 115 | 5.72 | 5.72 | 10 | -36 | 1.91 | -34. | 7 | -35 | 0.000 | 7 | -36 | 2.00 | 0.000 |
| 116 | 5.72 | 5.72 | 13 | -39 | 2.02 | -38. | 9 | -37 | 0.000 | 9 | -37 | 2.01 | 0.000 |
| 117 | 5.72 | 5.72 | 11 | -39 | 2.08 | -37. | 9 | -37 | 0.000 | 8 | -37 | 2.01 | 0.000 |
| 118 | 5.72 | 5.72 | 13 | -37 | 1.93 | -36. | 10 | -35 | 0.000 | 10 | -35 | 1.86 | 0.000 |
| 119 | 5.72 | 5.72 | 4 | -34 | 1.95 | -32. | 5 | -32 | 0.000 | 7 | -32 | 1.75 | 0.000 |
| 120 | 5.72 | 5.72 | 11 | -26 | 1.28 | -26. | 9 | -26 | 0.000 | 9 | -27 | 1.40 | 0.000 |
| 121 | 5.72 | 5.72 | 9 | -31 | 1.61 | -29. | 7 | -29 | 0.000 | 8 | -28 | 1.51 | 0.000 |
| 122 | 5.72 | 5.72 | 0. | -32 | 1.92 | -29. | 1 | -30 | 0.000 | 2 | -30 | 1.73 | 0.000 |
| 123 | 5.72 | 5.72 | 3 | -33 | 1.92 | -31. | 3 | -31 | 0.000 | 9 | -31 | 1.64 | 0.000 |
| 124 | 5.72 | 5.72 | 8 | -36 | 1.95 | -34. | 8 | -32 | 0.000 | 8 | -31 | 1.69 | 0.000 |
| 125 | 5.72 | 5.72 | 4 | -17 | 0.93 | -16. | 4 | -18 | 0.000 | 5 | -18 | 0.99 | 0.000 |
| 126 | 5.72 | 5.72 | 0. | -24 | 1.42 | -21. | 0. | -23 | 0.000 | 0. | -21 | 1.28 | 0.000 |
| 127 | 5.72 | 5.72 | 0. | -26 | 1.54 | -23. | 0. | -24 | 0.000 | 0. | -23 | 1.39 | 0.000 |
| 128 | 5.72 | 5.72 | 0. | -29 | 1.73 | -26. | 0. | -26 | 0.000 | 0. | -27 | 1.59 | 0.000 |
| 129 | 5.72 | 5.72 | 0. | -38 | 2.28 | -34. | 0. | -33 | 0.000 | 4 | -32 | 1.81 | 0.000 |
| 130 | 5.72 | 5.72 | 0. | -17 | 1.00 | -15. | 0. | -16 | 0.000 | 0. | -13 | 0.75 | 0.000 |
| 131 | 5.72 | 5.72 | 0. | -18 | 1.09 | -16. | 0. | -17 | 0.000 | 0. | -16 | 0.97 | 0.000 |
| 132 | 5.72 | 5.72 | 0. | -20 | 1.20 | -18. | 0. | -18 | 0.000 | 0. | -18 | 1.07 | 0.000 |
| 133 | 5.72 | 5.72 | 0. | -23 | 1.36 | -20. | 0. | -20 | 0.000 | 0. | -20 | 1.23 | 0.000 |
| 134 | 5.72 | 5.72 | 0. | -38 | 2.25 | -34. | 0. | -32 | 0.000 | 0. | -34 | 2.04 | 0.000 |
| 135 | 6.00 | 6.00 | 60 | -7 | 2.68 | 42. | 64 | -7 | 0.002 | 26 | -8 | 0.15 | 0.000 |
| 136 | 6.00 | 6.00 | 95 | -5 | 4.39 | 104. | 84 | -6 | 0.003 | 64 | -6 | 2.85 | 0.002 |
| 137 | 6.00 | 6.00 | 109 | -6 | 5.06 | 124. | 84 | -6 | 0.003 | 66 | -7 | 2.96 | 0.002 |
| 138 | 6.00 | 6.00 | 55 | -20 | 0.12 | -29. | 41 | -17 | 0.000 | 37 | -11 | 0.20 | 0.000 |
| 139 | 6.00 | 6.00 | 0. | -46 | 2.74 | -41. | 0. | -38 | 0.000 | 0. | -29 | 1.70 | 0.000 |
| 140 | 6.00 | 6.00 | 7 | -2 | 0.02 | -4. | 3 | -2 | 0.000 | 0. | -2 | 0.15 | 0.000 |
| 141 | 6.00 | 6.00 | 40 | -1 | 1.88 | 57. | 25 | -1 | 0.001 | 19 | -1 | 0.86 | 0.001 |
| 142 | 6.00 | 6.00 | 40 | 1 | 1.87 | 71. | 28 | 0. | 0.002 | 23 | 0. | 1.09 | 0.001 |
| 143 | 6.00 | 6.00 | 25 | -4 | 1.06 | 9. | 21 | -4 | 0.000 | 17 | -3 | 0.73 | 0.000 |
| 144 | 6.00 | 6.00 | 11 | -12 | 0.48 | -13. | 8 | -10 | 0.000 | 9 | -8 | 0.25 | 0.000 |
| 792 | 5.72 | 5.72 | 0. | -7 | 0.39 | -6. | 0. | -6 | 0.000 | 0. | -6 | 0.39 | 0.000 |
| 793 | 5.72 | 5.72 | 0. | -8 | 0.45 | -7. | 0. | -6 | 0.000 | 0. | -6 | 0.38 | 0.000 |
| 946 | 5.72 | 5.72 | 0. | -73 | 1.98 | -30. | 0. | -61 | 0.000 | 0. | -58 | 1.58 | 0.000 |
| 947 | 5.72 | 5.72 | 0. | -53 | 1.45 | -22. | 0. | -44 | 0.000 | 0. | -41 | 1.11 | 0.000 |
| 948 | 5.72 | 5.72 | 0. | -27 | 0.75 | -11. | 0. | -23 | 0.000 | 0. | -18 | 0.50 | 0.000 |
| 949 | 5.72 | 5.72 | 0. | -23 | 0.63 | -9. | 0. | -20 | 0.000 | 0. | -16 | 0.44 | 0.000 |
| 950 | 5.72 | 5.72 | 0. | -89 | 2.42 | -36. | 0. | -87 | 0.000 | 0. | -83 | 2.25 | 0.000 |
| 951 | 5.72 | 5.72 | 0. | -79 | 2.15 | -32. | 0. | -76 | 0.000 | 0. | -69 | 1.89 | 0.000 |
| 952 | 5.72 | 5.72 | 0. | -73 | 1.99 | -30. | 0. | -69 | 0.000 | 0. | -61 | 1.66 | 0.000 |
| 953 | 5.72 | 5.72 | 0. | -61 | 1.67 | -25. | 0. | -58 | 0.000 | 0. | -51 | 1.40 | 0.000 |
| 954 | 5.72 | 5.72 | 0. | -74 | 2.00 | -30. | 0. | -70 | 0.000 | 0. | -76 | 2.07 | 0.000 |
| 955 | 5.72 | 5.72 | 0. | -69 | 1.87 | -28. | 0. | -65 | 0.000 | 0. | -67 | 1.81 | 0.000 |
| 956 | 5.72 | 5.72 | 0. | -64 | 1.76 | -26. | 0. | -61 | 0.000 | 0. | -59 | 1.61 | 0.000 |
| 957 | 5.72 | 5.72 | 0. | -58 | 1.57 | -24. | 0. | -54 | 0.000 | 0. | -50 | 1.36 | 0.000 |

| | | | | | | | | | | | | | |
|-----|------|------|----|-----|------|------|----|-----|-------|----|-----|------|-------|
| 958 | 5.72 | 5.72 | 11 | -72 | 1.91 | -30. | 11 | -67 | 0.000 | 13 | -71 | 1.89 | 0.000 |
| 959 | 5.72 | 5.72 | 5 | -66 | 1.78 | -27. | 7 | -61 | 0.000 | 7 | -63 | 1.68 | 0.000 |
| 960 | 5.72 | 5.72 | 0. | -63 | 1.71 | -26. | 1 | -58 | 0.000 | 0. | -56 | 1.53 | 0.000 |
| 961 | 5.72 | 5.72 | 0. | -55 | 1.49 | -22. | 0. | -51 | 0.000 | 0. | -48 | 1.31 | 0.000 |
| 962 | 5.72 | 5.72 | 0. | -72 | 1.95 | -29. | 0. | -64 | 0.000 | 0. | -68 | 1.84 | 0.000 |
| 963 | 5.72 | 5.72 | 0. | -62 | 1.70 | -25. | 0. | -56 | 0.000 | 0. | -59 | 1.60 | 0.000 |
| 964 | 5.72 | 5.72 | 0. | -53 | 1.43 | -22. | 0. | -47 | 0.000 | 0. | -51 | 1.38 | 0.000 |
| 965 | 5.72 | 5.72 | 0. | -44 | 1.19 | -18. | 0. | -40 | 0.000 | 0. | -43 | 1.17 | 0.000 |
| 966 | 5.72 | 5.72 | 0. | -72 | 1.97 | -29. | 0. | -64 | 0.000 | 0. | -65 | 1.76 | 0.000 |
| 967 | 5.72 | 5.72 | 0. | -61 | 1.65 | -25. | 0. | -54 | 0.000 | 0. | -55 | 1.49 | 0.000 |
| 968 | 5.72 | 5.72 | 0. | -45 | 1.22 | -18. | 0. | -40 | 0.000 | 0. | -43 | 1.16 | 0.000 |
| 969 | 5.72 | 5.72 | 0. | -36 | 0.98 | -15. | 0. | -32 | 0.000 | 0. | -35 | 0.96 | 0.000 |
| 970 | 5.72 | 5.72 | 0. | -77 | 2.09 | -31. | 0. | -63 | 0.000 | 0. | -63 | 1.70 | 0.000 |
| 971 | 5.72 | 5.72 | 0. | -56 | 1.52 | -23. | 0. | -46 | 0.000 | 0. | -46 | 1.24 | 0.000 |
| 972 | 5.72 | 5.72 | 0. | -39 | 1.07 | -16. | 0. | -32 | 0.000 | 0. | -32 | 0.88 | 0.000 |
| 973 | 5.72 | 5.72 | 0. | -34 | 0.93 | -14. | 0. | -27 | 0.000 | 0. | -26 | 0.72 | 0.000 |

MACROGUSCIO SETTO05

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

| Nome | Descrizione |
|------|----------------------|
| 1 | SLU |
| 2 | SLU VENTOX |
| 3 | SLU VENTOI |
| 6 | SLU con SISMAX PRINC |
| 7 | SLU con SISMAX PRINC |

DATI:

tensione di snervamento acciaio (fyk): 4500 daN/cm2
 coefficiente sicurezza acciaio : 1.15
 deformazione ultima acciaio : 1.97 per mille
 deformazione ultima cls : 3.5 per mille
 rapporto rottura/snervamento (k): 1
 resistenza cilindrica cls (fck): 249 daN/cm2
 coefficiente sicurezza cls : 1.5
 coefficiente riduttivo (alfa): 0.85
 copriferro inferiore (asse armatura): 3 cm
 copriferro superiore (asse armatura): 3 cm
 moltiplicatore sollecitazioni : 1

LEGENDA:

spess = spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
 Af = area disposta al lembo teso, in cm2 al metro
 Afc = area disposta al lembo compresso, in cm2 al metro
 Mom = momento flettente [daNcm/cm]
 Nor = sforzo normale [daN]
 epsC = deformazione cls [per mille]
 epsF = deformazione acciaio [per mille]

<-
L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

| GUSCI | spess | INFERIORE ORIZZONTALE | | | | | | INFERIORE VERTICALE | | | | | |
|-------|-------|-----------------------|------|------|-----|------|------|---------------------|------|-----|------|------|-------|
| | | Af | Afc | Mom | Nor | epsC | epsF | Af | Afc | Mom | Nor | epsC | epsF |
| 422 | 15 | 3.93 | 3.93 | 52. | 9. | 0.00 | 0.11 | 3.93 | 3.93 | 22. | -35. | 0.02 | 0.01 |
| 423 | 15 | 3.93 | 3.93 | 28. | 7. | 0.00 | 0.08 | 3.93 | 3.93 | 4. | -33. | 0.02 | -0.01 |
| 424 | 15 | 3.93 | 3.93 | 44. | 11. | 0.00 | 0.12 | 3.93 | 3.93 | 23. | -41. | 0.03 | -0.01 |
| 425 | 15 | 3.93 | 3.93 | 63. | 4. | 0.00 | 0.10 | 3.93 | 3.93 | 5. | -30. | 0.02 | -0.01 |
| 426 | 15 | 3.93 | 3.93 | 29. | 9. | 0.00 | 0.09 | 3.93 | 3.93 | 10. | -35. | 0.02 | -0.01 |
| 427 | 15 | 3.93 | 3.93 | 23. | 13. | 0.00 | 0.10 | 3.93 | 3.93 | 28. | -35. | 0.03 | 0.01 |
| 428 | 15 | 3.93 | 3.93 | 94. | 5. | 0.02 | 0.14 | 3.93 | 3.93 | 11. | -21. | 0.01 | 0.00 |
| 429 | 15 | 3.93 | 3.93 | 24. | 9. | 0.00 | 0.08 | 3.93 | 3.93 | 12. | -25. | 0.02 | 0.00 |
| 430 | 15 | 3.93 | 3.93 | 0. | 11. | 0.00 | 0.07 | 3.93 | 3.93 | 10. | -28. | 0.02 | -0.01 |
| 431 | 15 | 3.93 | 3.93 | 41. | 12. | 0.00 | 0.12 | 3.93 | 3.93 | 33. | -26. | 0.02 | 0.02 |
| 432 | 15 | 3.93 | 3.93 | 115. | 5. | 0.02 | 0.16 | 3.93 | 3.93 | 7. | -12. | 0.01 | 0.01 |
| 433 | 15 | 3.93 | 3.93 | 0. | 8. | 0.00 | 0.05 | 3.93 | 3.93 | 0. | -19. | 0.01 | -0.01 |
| 434 | 15 | 3.93 | 3.93 | 0. | 9. | 0.00 | 0.05 | 3.93 | 3.93 | 0. | -21. | 0.01 | -0.01 |
| 435 | 15 | 3.93 | 3.93 | 0. | 8. | 0.00 | 0.05 | 3.93 | 3.93 | 0. | -21. | 0.01 | -0.01 |
| 436 | 15 | 3.93 | 3.93 | 66. | 6. | 0.00 | 0.12 | 3.93 | 3.93 | 21. | -16. | 0.02 | 0.02 |
| 437 | 15 | 3.93 | 3.93 | 59. | 4. | 0.00 | 0.09 | 3.93 | 3.93 | 0. | -8. | 0.00 | 0.00 |
| 438 | 15 | 3.93 | 3.93 | 33. | 2. | 0.00 | 0.05 | 3.93 | 3.93 | 0. | -14. | 0.01 | -0.01 |
| 439 | 15 | 3.93 | 3.93 | 0. | 5. | 0.00 | 0.03 | 3.93 | 3.93 | 0. | -15. | 0.01 | -0.01 |
| 440 | 15 | 3.93 | 3.93 | 0. | 5. | 0.00 | 0.03 | 3.93 | 3.93 | 0. | -15. | 0.01 | -0.01 |
| 441 | 15 | 3.93 | 3.93 | 6. | 3. | 0.00 | 0.03 | 3.93 | 3.93 | 0. | -13. | 0.01 | -0.01 |
| 442 | 15 | 3.93 | 3.93 | 19. | 2. | 0.00 | 0.03 | 3.93 | 3.93 | 0. | -10. | 0.00 | 0.00 |
| 786 | 15 | 3.93 | 3.93 | 45. | 8. | 0.00 | 0.10 | 3.93 | 3.93 | 0. | -27. | 0.01 | -0.01 |
| 787 | 15 | 3.93 | 3.93 | 51. | 10. | 0.00 | 0.12 | 3.93 | 3.93 | 22. | -34. | 0.02 | 0.01 |
| 788 | 15 | 3.93 | 3.93 | 22. | 12. | 0.00 | 0.10 | 3.93 | 3.93 | 39. | -39. | 0.03 | 0.02 |
| 789 | 15 | 3.93 | 3.93 | 45. | 11. | 0.00 | 0.12 | 3.93 | 3.93 | 42. | -30. | 0.03 | 0.03 |
| 790 | 15 | 3.93 | 3.93 | 112. | 6. | 0.01 | 0.16 | 3.93 | 3.93 | 45. | -21. | 0.03 | 0.04 |
| 791 | 15 | 3.93 | 3.93 | 20. | 2. | 0.00 | 0.03 | 3.93 | 3.93 | 24. | -14. | 0.02 | 0.02 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|----|------|------|-----|------|------|------|------|------|------|------|------|-------|
| 925 | 35 | 3.93 | 3.93 | 0. | 1. | 0.00 | 0.01 | 3.93 | 3.93 | 22. | -34. | 0.01 | 0.00 |
| 926 | 35 | 3.93 | 3.93 | 36. | 2. | 0.00 | 0.03 | 3.93 | 3.93 | 38. | -37. | 0.01 | 0.01 |
| 927 | 35 | 3.93 | 3.93 | 84. | 7. | 0.00 | 0.08 | 3.93 | 3.93 | 29. | -37. | 0.01 | 0.00 |
| 928 | 35 | 3.93 | 3.93 | 22. | 2. | 0.00 | 0.02 | 3.93 | 3.93 | 12. | -29. | 0.01 | -0.01 |
| 929 | 35 | 3.93 | 3.93 | 76. | 8. | 0.00 | 0.08 | 3.93 | 3.93 | 21. | -46. | 0.01 | 0.00 |
| 930 | 35 | 3.93 | 3.93 | 10. | 15. | 0.00 | 0.09 | 3.93 | 3.93 | 26. | -53. | 0.01 | 0.00 |
| 931 | 35 | 3.93 | 3.93 | 0. | 14. | 0.00 | 0.08 | 3.93 | 3.93 | 15. | -65. | 0.01 | -0.01 |
| 932 | 35 | 3.93 | 3.93 | 42. | 2. | 0.00 | 0.03 | 3.93 | 3.93 | 4. | -41. | 0.01 | -0.01 |
| 933 | 35 | 3.93 | 3.93 | 28. | 2. | 0.00 | 0.03 | 3.93 | 3.93 | 0. | -36. | 0.01 | -0.01 |
| 934 | 35 | 3.93 | 3.93 | 0. | 16. | 0.00 | 0.10 | 3.93 | 3.93 | 22. | -71. | 0.02 | -0.01 |
| 935 | 35 | 3.93 | 3.93 | 6. | 16. | 0.00 | 0.10 | 3.93 | 3.93 | 0. | -70. | 0.01 | -0.01 |
| 936 | 35 | 3.93 | 3.93 | 0. | 13. | 0.00 | 0.08 | 3.93 | 3.93 | 0. | -77. | 0.02 | -0.02 |
| 937 | 35 | 3.93 | 3.93 | 0. | 3. | 0.00 | 0.02 | 3.93 | 3.93 | 0. | -59. | 0.01 | -0.01 |
| 938 | 35 | 3.93 | 3.93 | 23. | -3. | 0.00 | 0.01 | 3.93 | 3.93 | 0. | -52. | 0.01 | -0.01 |
| 939 | 35 | 3.93 | 3.93 | 56. | -1. | 0.00 | 0.02 | 3.93 | 3.93 | 0. | -45. | 0.01 | -0.01 |
| 940 | 35 | 3.93 | 3.93 | 81. | -2. | 0.01 | 0.03 | 3.93 | 3.93 | 178. | -67. | 0.03 | 0.05 |
| 941 | 35 | 3.93 | 3.93 | 23. | -6. | 0.00 | 0.01 | 3.93 | 3.93 | 14. | -69. | 0.01 | -0.01 |
| 942 | 35 | 3.93 | 3.93 | 0. | 2. | 0.00 | 0.01 | 3.93 | 3.93 | 0. | -73. | 0.01 | -0.01 |
| 943 | 35 | 3.93 | 3.93 | 0. | 3. | 0.00 | 0.02 | 3.93 | 3.93 | 0. | -75. | 0.01 | -0.01 |
| 944 | 35 | 3.93 | 3.93 | 40. | 11. | 0.00 | 0.09 | 3.93 | 3.93 | 0. | -71. | 0.01 | -0.01 |
| 945 | 35 | 3.93 | 3.93 | 31. | 19. | 0.00 | 0.13 | 3.93 | 3.93 | 0. | -55. | 0.01 | -0.01 |
| 986 | 15 | 3.93 | 3.93 | 34. | -1. | 0.01 | 0.04 | 3.93 | 3.93 | 120. | -6. | 0.05 | 0.13 |
| 987 | 15 | 3.93 | 3.93 | 76. | -4. | 0.03 | 0.08 | 3.93 | 3.93 | 172. | -6. | 0.07 | 0.18 |
| 988 | 15 | 3.93 | 3.93 | 71. | -5. | 0.03 | 0.08 | 3.93 | 3.93 | 149. | -8. | 0.06 | 0.16 |
| 989 | 15 | 3.93 | 3.93 | 39. | -2. | 0.02 | 0.04 | 3.93 | 3.93 | 100. | -7. | 0.04 | 0.11 |
| 990 | 15 | 3.93 | 3.93 | 34. | -1. | 0.01 | 0.04 | 3.93 | 3.93 | 50. | -6. | 0.02 | 0.05 |
| 991 | 15 | 3.93 | 3.93 | 0. | -1. | 0.00 | 0.00 | 3.93 | 3.93 | 10. | -1. | 0.00 | 0.01 |
| 992 | 15 | 3.93 | 3.93 | 73. | -8. | 0.03 | 0.08 | 3.93 | 3.93 | 47. | -2. | 0.02 | 0.05 |
| 993 | 15 | 3.93 | 3.93 | 84. | -12. | 0.04 | 0.08 | 3.93 | 3.93 | 54. | -3. | 0.02 | 0.06 |
| 994 | 15 | 3.93 | 3.93 | 50. | -8. | 0.02 | 0.06 | 3.93 | 3.93 | 36. | -2. | 0.02 | 0.04 |
| 995 | 15 | 3.93 | 3.93 | 19. | -2. | 0.01 | 0.02 | 3.93 | 3.93 | 12. | -1. | 0.01 | 0.01 |
| 996 | 15 | 3.93 | 3.93 | 7. | -1. | 0.00 | 0.01 | 3.93 | 3.93 | 1. | -2. | 0.00 | 0.00 |
| 997 | 15 | 3.93 | 3.93 | 8. | -1. | 0.00 | 0.01 | 3.93 | 3.93 | 0. | -7. | 0.00 | 0.00 |
| 998 | 15 | 3.93 | 3.93 | 6. | 0. | 0.00 | 0.01 | 3.93 | 3.93 | 0. | -9. | 0.00 | 0.00 |

| GUSCI | spess | SUPERIORE ORIZZONTALE | | | | SUPERIORE VERTICALE | | | | Mom | Nor | epsc | epsF |
|-------|-------|-----------------------|------|------|-----|---------------------|------|------|------|------|------|------|-------|
| | | Af | Afc | Mom | Nor | epsc | epsF | Af | Afc | | | | |
| 422 | 15 | 3.93 | 3.93 | 0. | 9. | 0.00 | 0.05 | 3.93 | 3.93 | 2. | -35. | 0.02 | -0.01 |
| 423 | 15 | 3.93 | 3.93 | 0. | 8. | 0.00 | 0.05 | 3.93 | 3.93 | 0. | -33. | 0.02 | -0.01 |
| 424 | 15 | 3.93 | 3.93 | 0. | 12. | 0.00 | 0.07 | 3.93 | 3.93 | 0. | -41. | 0.02 | -0.02 |
| 425 | 15 | 3.93 | 3.93 | 0. | 5. | 0.00 | 0.03 | 3.93 | 3.93 | 3. | -29. | 0.01 | -0.01 |
| 426 | 15 | 3.93 | 3.93 | 0. | 11. | 0.00 | 0.07 | 3.93 | 3.93 | 0. | -35. | 0.02 | -0.02 |
| 427 | 15 | 3.93 | 3.93 | 0. | 13. | 0.00 | 0.08 | 3.93 | 3.93 | 0. | -36. | 0.02 | -0.02 |
| 428 | 15 | 3.93 | 3.93 | 0. | 5. | 0.00 | 0.03 | 3.93 | 3.93 | 5. | -21. | 0.01 | -0.01 |
| 429 | 15 | 3.93 | 3.93 | 20. | 10. | 0.00 | 0.08 | 3.93 | 3.93 | 11. | -24. | 0.01 | -0.01 |
| 430 | 15 | 3.93 | 3.93 | 32. | 11. | 0.00 | 0.10 | 3.93 | 3.93 | 0. | -28. | 0.01 | -0.01 |
| 431 | 15 | 3.93 | 3.93 | 12. | 12. | 0.00 | 0.09 | 3.93 | 3.93 | 0. | -27. | 0.01 | -0.01 |
| 432 | 15 | 3.93 | 3.93 | 0. | 7. | 0.00 | 0.04 | 3.93 | 3.93 | 13. | -13. | 0.01 | 0.01 |
| 433 | 15 | 3.93 | 3.93 | 25. | 8. | 0.00 | 0.08 | 3.93 | 3.93 | 31. | -19. | 0.02 | 0.02 |
| 434 | 15 | 3.93 | 3.93 | 57. | 7. | 0.00 | 0.10 | 3.93 | 3.93 | 40. | -20. | 0.02 | 0.03 |
| 435 | 15 | 3.93 | 3.93 | 38. | 7. | 0.00 | 0.08 | 3.93 | 3.93 | 33. | -20. | 0.02 | 0.03 |
| 436 | 15 | 3.93 | 3.93 | 6. | 7. | 0.00 | 0.05 | 3.93 | 3.93 | 21. | -16. | 0.02 | 0.01 |
| 437 | 15 | 3.93 | 3.93 | 25. | 3. | 0.00 | 0.05 | 3.93 | 3.93 | 130. | -6. | 0.05 | 0.14 |
| 438 | 15 | 3.93 | 3.93 | 53. | 3. | 0.01 | 0.08 | 3.93 | 3.93 | 226. | -12. | 0.09 | 0.24 |
| 439 | 15 | 3.93 | 3.93 | 54. | 5. | 0.01 | 0.09 | 3.93 | 3.93 | 254. | -15. | 0.11 | 0.26 |
| 440 | 15 | 3.93 | 3.93 | 53. | 5. | 0.01 | 0.09 | 3.93 | 3.93 | 265. | -14. | 0.11 | 0.28 |
| 441 | 15 | 3.93 | 3.93 | 47. | 3. | 0.01 | 0.07 | 3.93 | 3.93 | 217. | -13. | 0.09 | 0.23 |
| 442 | 15 | 3.93 | 3.93 | 27. | 1. | 0.01 | 0.04 | 3.93 | 3.93 | 129. | -10. | 0.06 | 0.13 |
| 786 | 15 | 3.93 | 3.93 | 0. | 8. | 0.00 | 0.05 | 3.93 | 3.93 | 6. | -27. | 0.01 | -0.01 |
| 787 | 15 | 3.93 | 3.93 | 0. | 10. | 0.00 | 0.06 | 3.93 | 3.93 | 14. | -34. | 0.02 | 0.00 |
| 788 | 15 | 3.93 | 3.93 | 0. | 12. | 0.00 | 0.07 | 3.93 | 3.93 | 0. | -39. | 0.02 | -0.02 |
| 789 | 15 | 3.93 | 3.93 | 0. | 11. | 0.00 | 0.07 | 3.93 | 3.93 | 0. | -30. | 0.01 | -0.01 |
| 790 | 15 | 3.93 | 3.93 | 0. | 6. | 0.00 | 0.04 | 3.93 | 3.93 | 2. | -21. | 0.01 | -0.01 |
| 791 | 15 | 3.93 | 3.93 | 37. | 2. | 0.01 | 0.05 | 3.93 | 3.93 | 11. | -14. | 0.01 | 0.01 |
| 925 | 35 | 3.93 | 3.93 | 62. | 1. | 0.00 | 0.03 | 3.93 | 3.93 | 11. | -34. | 0.01 | 0.00 |
| 926 | 35 | 3.93 | 3.93 | 99. | 2. | 0.00 | 0.05 | 3.93 | 3.93 | 7. | -37. | 0.01 | 0.01 |
| 927 | 35 | 3.93 | 3.93 | 0. | 7. | 0.00 | 0.04 | 3.93 | 3.93 | 12. | -37. | 0.01 | 0.00 |
| 928 | 35 | 3.93 | 3.93 | 77. | 1. | 0.00 | 0.04 | 3.93 | 3.93 | 16. | -28. | 0.01 | 0.00 |
| 929 | 35 | 3.93 | 3.93 | 0. | 8. | 0.00 | 0.05 | 3.93 | 3.93 | 9. | -46. | 0.01 | -0.01 |
| 930 | 35 | 3.93 | 3.93 | 5. | 15. | 0.00 | 0.09 | 3.93 | 3.93 | 0. | -53. | 0.01 | -0.01 |
| 931 | 35 | 3.93 | 3.93 | 20. | 13. | 0.00 | 0.09 | 3.93 | 3.93 | 0. | -65. | 0.01 | -0.01 |
| 932 | 35 | 3.93 | 3.93 | 13. | 1. | 0.00 | 0.02 | 3.93 | 3.93 | 38. | -39. | 0.01 | 0.01 |
| 933 | 35 | 3.93 | 3.93 | 34. | 2. | 0.00 | 0.03 | 3.93 | 3.93 | 44. | -36. | 0.01 | 0.01 |
| 934 | 35 | 3.93 | 3.93 | 22. | 16. | 0.00 | 0.11 | 3.93 | 3.93 | 0. | -71. | 0.01 | -0.01 |
| 935 | 35 | 3.93 | 3.93 | 0. | 16. | 0.00 | 0.09 | 3.93 | 3.93 | 48. | -70. | 0.02 | 0.00 |
| 936 | 35 | 3.93 | 3.93 | 31. | 13. | 0.00 | 0.09 | 3.93 | 3.93 | 81. | -68. | 0.02 | 0.01 |
| 937 | 35 | 3.93 | 3.93 | 56. | 2. | 0.00 | 0.04 | 3.93 | 3.93 | 117. | -56. | 0.02 | 0.03 |
| 938 | 35 | 3.93 | 3.93 | 30. | 2. | 0.00 | 0.02 | 3.93 | 3.93 | 101. | -52. | 0.02 | 0.03 |
| 939 | 35 | 3.93 | 3.93 | 0. | -2. | 0.00 | 0.00 | 3.93 | 3.93 | 99. | -45. | 0.02 | 0.03 |
| 940 | 35 | 3.93 | 3.93 | 0. | -2. | 0.00 | 0.00 | 3.93 | 3.93 | 39. | -67. | 0.02 | -0.01 |
| 941 | 35 | 3.93 | 3.93 | 39. | 1. | 0.00 | 0.02 | 3.93 | 3.93 | 137. | -69. | 0.03 | 0.04 |
| 942 | 35 | 3.93 | 3.93 | 79. | 0. | 0.01 | 0.04 | 3.93 | 3.93 | 344. | -68. | 0.04 | 0.10 |
| 943 | 35 | 3.93 | 3.93 | 79. | 0. | 0.00 | 0.04 | 3.93 | 3.93 | 448. | -72. | 0.05 | 0.13 |
| 944 | 35 | 3.93 | 3.93 | 0. | 14. | 0.00 | 0.08 | 3.93 | 3.93 | 424. | -60. | 0.05 | 0.13 |
| 945 | 35 | 3.93 | 3.93 | 0. | 19. | 0.00 | 0.11 | 3.93 | 3.93 | 278. | -55. | 0.03 | 0.09 |
| 986 | 15 | 3.93 | 3.93 | 103. | -1. | 0.04 | 0.11 | 3.93 | 3.93 | 25. | -5. | 0.01 | 0.03 |
| 987 | 15 | 3.93 | 3.93 | 44. | -2. | 0.02 | 0.05 | 3.93 | 3.93 | 0. | -7. | 0.00 | 0.00 |
| 988 | 15 | 3.93 | 3.93 | 17. | -1. | 0.01 | 0.02 | 3.93 | 3.93 | 0. | -8. | 0.00 | 0.00 |
| 989 | 15 | 3.93 | 3.93 | 28. | -1. | 0.01 | 0.03 | 3.93 | 3.93 | 0. | -7. | 0.00 | 0.00 |

MACROGUSCIO SETT005

CASI DI CARICO: ->

| Nome | Descrizione |
|------|-------------------------------|
| 12 | Rara (RARA) |
| 13 | Rara VentoX (RARA) |
| 14 | Rara VentoY (RARA) |
| 15 | Frequente (FREQUENTE) |
| 16 | Frequente VentoX (FREQUENTE) |
| 17 | Frequente VentoY (FREQUENTE) |
| 18 | Quasi Perm (QUASI PERMANENTE) |

| | | |
|---------------------------------------|---|----|
| copriferro inferiore (asse armatura): | 3 | cm |
| copriferro superiore (asse armatura): | 3 | cm |

Af = area effettiva tesa (cm² al metro)
Afc = area effettiva compressa (cm² al metro)

Mom = momento flettente [daNcm/cm]

Nor = sforzo normale [daN]

σ_c = tensione calcestruzzo [daN/cm²]

σ_c = tensione calcestruzzo [daN/cm²]
valore max per combinazione rara = 149.4 daN/cm²
quasi permanente = 112 daN/cm²

σ_f = tensione acciaio [daN/cm²]
valore max per combinazione rara = 3600 daN/cm²

wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm
wkP = " " " " quasi permanente (mm) - " " = 0.3 mm

 $\angle -$

| | | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------|------|-----------------|-----|-------|-----|------------------------|------|-------|--|
| GUSCI | Af | Afc | Mom | Nor | σC | σf | Mom | Nor | WkF | Mom | Nor | σC | WkP | |
| 422 | 3.93 | 3.93 | 51 | 6 | 2.74 | 197. | 46 | 6 | 0.014 | 35 | 6 | 1.76 | 0.012 | |
| 423 | 3.93 | 3.93 | 32 | 5 | 1.66 | 144. | 28 | 5 | 0.010 | 20 | 4 | 0.83 | 0.008 | |
| 424 | 3.93 | 3.93 | 29 | 8 | 0.87 | 186. | 27 | 8 | 0.015 | 24 | 8 | 0.53 | 0.013 | |
| 425 | 3.93 | 3.93 | 49 | 3 | 2.76 | 157. | 39 | 3 | 0.009 | 30 | 3 | 1.66 | 0.008 | |
| 426 | 3.93 | 3.93 | 20 | 7 | 0.00 | 149. | 17 | 7 | 0.011 | 15 | 7 | 0.00 | 0.011 | |
| 427 | 3.93 | 3.93 | 11 | 10 | 0.00 | 156. | 10 | 9 | 0.013 | 10 | 9 | 0.00 | 0.012 | |
| 428 | 3.93 | 3.93 | 68 | 3 | 3.86 | 200. | 53 | 3 | 0.010 | 45 | 3 | 2.49 | 0.009 | |
| 429 | 3.93 | 3.93 | 17 | 6 | 0.26 | 121. | 14 | 5 | 0.009 | 12 | 5 | 0.00 | 0.009 | |
| 430 | 3.93 | 3.93 | 0. | 7 | 0.00 | 86. | 0. | 6 | 0.007 | 0. | 7 | 0.00 | 0.008 | |
| 431 | 3.93 | 3.93 | 26 | 9 | 0.37 | 184. | 20 | 8 | 0.013 | 14 | 8 | 0.00 | 0.012 | |
| 432 | 3.93 | 3.93 | 61 | 3 | 3.45 | 186. | 47 | 2 | 0.009 | 46 | 3 | 2.57 | 0.010 | |
| 433 | 3.93 | 3.93 | 0. | 4 | 0.00 | 51. | 0. | 3 | 0.004 | 0. | 4 | 0.00 | 0.005 | |
| 434 | 3.93 | 3.93 | 0. | 3 | 0.00 | 41. | 0. | 3 | 0.003 | 0. | 5 | 0.00 | 0.005 | |
| 435 | 3.93 | 3.93 | 0. | 3 | 0.00 | 43. | 0. | 3 | 0.004 | 0. | 5 | 0.00 | 0.005 | |
| 436 | 3.93 | 3.93 | 40 | 5 | 2.14 | 162. | 30 | 4 | 0.010 | 20 | 4 | 0.88 | 0.009 | |
| 437 | 3.93 | 3.93 | 19 | 3 | 0.99 | 82. | 13 | 2 | 0.004 | 22 | 2 | 1.22 | 0.005 | |
| 438 | 3.93 | 3.93 | 0. | 0. | 0.01 | 0. | 0. | 0. | 0.000 | 0. | 1 | 0.00 | 0.001 | |
| 439 | 3.93 | 3.93 | 0. | 0. | 0.01 | 0. | 0. | 0. | 0.000 | 0. | 1 | 0.00 | 0.001 | |
| 440 | 3.93 | 3.93 | 0. | -1 | 0.03 | -1. | 0. | 0. | 0.000 | 0. | 1 | 0.00 | 0.001 | |
| 441 | 3.93 | 3.93 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 1 | 0.00 | 0.001 | |
| 442 | 3.93 | 3.93 | 4 | 0. | 0.20 | 12. | 3 | 0. | 0.001 | 5 | 1 | 0.21 | 0.002 | |
| 786 | 3.93 | 3.93 | 33 | 4 | 1.75 | 135. | 29 | 5 | 0.010 | 26 | 5 | 1.24 | 0.010 | |
| 787 | 3.93 | 3.93 | 40 | 6 | 2.07 | 175. | 35 | 6 | 0.013 | 42 | 6 | 2.15 | 0.013 | |
| 788 | 3.93 | 3.93 | 21 | 8 | 0.21 | 155. | 16 | 7 | 0.012 | 18 | 7 | 0.00 | 0.012 | |
| 789 | 3.93 | 3.93 | 50 | 7 | 2.61 | 218. | 37 | 7 | 0.014 | 32 | 7 | 1.42 | 0.013 | |
| 790 | 3.93 | 3.93 | 89 | 4 | 4.98 | 268. | 66 | 4 | 0.014 | 57 | 4 | 3.20 | 0.012 | |
| 791 | 3.93 | 3.93 | 6 | 0. | 0.32 | 19. | 1 | 0. | 0.000 | 12 | 1 | 0.68 | 0.003 | |
| 925 | 3.93 | 3.93 | 0. | -2 | 0.07 | -1. | 0. | -2 | 0.000 | 0. | -1 | 0.02 | 0.000 | |
| 926 | 3.93 | 3.93 | 0. | -2 | 0.06 | -1. | 0. | -2 | 0.000 | 0. | 0. | 0.00 | 0.000 | |
| 927 | 3.93 | 3.93 | 83 | 4 | 0.67 | 124. | 60 | 4 | 0.014 | 39 | 4 | 0.00 | 0.012 | |
| 928 | 3.93 | 3.93 | 0. | -3 | 0.07 | -1. | 0. | -2 | 0.000 | 0. | 0. | 0.01 | 0.000 | |
| 929 | 3.93 | 3.93 | 58 | 2 | 0.55 | 77. | 38 | 3 | 0.009 | 26 | 3 | 0.00 | 0.009 | |
| 930 | 3.93 | 3.93 | 38 | 8 | 0.00 | 136. | 23 | 8 | 0.020 | 8 | 8 | 0.00 | 0.019 | |
| 931 | 3.93 | 3.93 | 5 | 3 | 0.00 | 48. | 0. | 4 | 0.009 | 0. | 5 | 0.00 | 0.012 | |
| 932 | 3.93 | 3.93 | 26 | -2 | 0.22 | 2. | 15 | -1 | 0.000 | 18 | 0. | 0.2 | | |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|------|------|----|----|------|------|----|----|-------|----|----|------|-------|
| 935 | 3.93 | 3.93 | 4 | 7 | 0.00 | 96. | 2 | 8 | 0.019 | 4 | 8 | 0.00 | 0.020 |
| 936 | 3.93 | 3.93 | 0. | 2 | 0.00 | 32. | 0. | 3 | 0.007 | 0. | 3 | 0.00 | 0.008 |
| 937 | 3.93 | 3.93 | 0. | -4 | 0.11 | -2. | 0. | -3 | 0.000 | 0. | -2 | 0.04 | 0.000 |
| 938 | 3.93 | 3.93 | 0. | -3 | 0.09 | -1. | 0. | -2 | 0.000 | 0. | -1 | 0.04 | 0.000 |
| 939 | 3.93 | 3.93 | 33 | -2 | 0.33 | 10. | 33 | 0. | 0.002 | 24 | -2 | 0.20 | 0.000 |
| 940 | 3.93 | 3.93 | 62 | -4 | 0.59 | 12. | 57 | -2 | 0.002 | 41 | -1 | 0.47 | 0.002 |
| 941 | 3.93 | 3.93 | 0. | -4 | 0.11 | -2. | 0. | -3 | 0.000 | 0. | -3 | 0.08 | 0.000 |
| 942 | 3.93 | 3.93 | 0. | -5 | 0.13 | -2. | 0. | -4 | 0.000 | 0. | -2 | 0.06 | 0.000 |
| 943 | 3.93 | 3.93 | 0. | -1 | 0.03 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.01 | 0.000 |
| 944 | 3.93 | 3.93 | 0. | 5 | 0.00 | 61. | 0. | 6 | 0.013 | 8 | 5 | 0.00 | 0.013 |
| 945 | 3.93 | 3.93 | 35 | 9 | 0.00 | 146. | 33 | 10 | 0.026 | 29 | 10 | 0.00 | 0.026 |
| 986 | 3.93 | 3.93 | 0. | -1 | 0.08 | -1. | 0. | -1 | 0.000 | 0. | -2 | 0.10 | 0.000 |
| 987 | 3.93 | 3.93 | 54 | 0. | 3.02 | 119. | 40 | 0. | 0.004 | 34 | -1 | 1.91 | 0.003 |
| 988 | 3.93 | 3.93 | 32 | -1 | 1.76 | 57. | 24 | -1 | 0.002 | 23 | -2 | 1.24 | 0.001 |
| 989 | 3.93 | 3.93 | 23 | -1 | 1.27 | 40. | 18 | -1 | 0.001 | 15 | 0. | 0.86 | 0.001 |
| 990 | 3.93 | 3.93 | 28 | -1 | 1.55 | 55. | 21 | -1 | 0.002 | 13 | -1 | 0.73 | 0.001 |
| 991 | 3.93 | 3.93 | 0. | -2 | 0.12 | -2. | 0. | -1 | 0.000 | 0. | -2 | 0.10 | 0.000 |
| 992 | 3.93 | 3.93 | 52 | -4 | 2.76 | 68. | 39 | -3 | 0.002 | 30 | -5 | 1.39 | 0.001 |
| 993 | 3.93 | 3.93 | 55 | -5 | 2.86 | 65. | 41 | -4 | 0.002 | 40 | -6 | 1.91 | 0.001 |
| 994 | 3.93 | 3.93 | 35 | -3 | 1.86 | 47. | 26 | -2 | 0.002 | 23 | -4 | 1.04 | 0.000 |
| 995 | 3.93 | 3.93 | 18 | -2 | 0.89 | 17. | 13 | -2 | 0.001 | 8 | -2 | 0.37 | 0.000 |
| 996 | 3.93 | 3.93 | 3 | -1 | 0.11 | 0. | 2 | -1 | 0.000 | 3 | -1 | 0.13 | 0.000 |
| 997 | 3.93 | 3.93 | 7 | 0. | 0.37 | 11. | 5 | 0. | 0.000 | 5 | 0. | 0.24 | 0.000 |
| 998 | 3.93 | 3.93 | 6 | 0. | 0.35 | 15. | 5 | 0. | 0.000 | 5 | 0. | 0.30 | 0.001 |

ARMATURA INFERIORE VERTICALE

| GUSCI | Af | Afc | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------|------|-----------------|-----|-------|--|------------------------|-----|------|-------|
| | | | Mom | Nor | σc | σf | Mom | Nor | wkF | | Mom | Nor | σc | wkP |
| 422 | 3.93 | 3.93 | 28 | -35 | 2.88 | -27. | 25 | -33 | 0.000 | | 15 | -26 | 2.00 | 0.000 |
| 423 | 3.93 | 3.93 | 9 | -34 | 2.33 | -30. | 8 | -31 | 0.000 | | 2 | -25 | 1.57 | 0.000 |
| 424 | 3.93 | 3.93 | 21 | -39 | 2.91 | -31. | 19 | -36 | 0.000 | | 14 | -34 | 2.44 | 0.000 |
| 425 | 3.93 | 3.93 | 15 | -29 | 2.18 | -24. | 6 | -23 | 0.000 | | 6 | -24 | 1.61 | 0.000 |
| 426 | 3.93 | 3.93 | 15 | -33 | 2.39 | -27. | 11 | -30 | 0.000 | | 11 | -30 | 2.16 | 0.000 |
| 427 | 3.93 | 3.93 | 31 | -41 | 3.29 | -31. | 26 | -37 | 0.000 | | 21 | -36 | 2.77 | 0.000 |
| 428 | 3.93 | 3.93 | 19 | -20 | 1.72 | -15. | 14 | -20 | 0.000 | | 13 | -22 | 1.69 | 0.000 |
| 429 | 3.93 | 3.93 | 20 | -28 | 2.24 | -22. | 15 | -27 | 0.000 | | 12 | -27 | 1.99 | 0.000 |
| 430 | 3.93 | 3.93 | 10 | -33 | 2.29 | -29. | 8 | -32 | 0.000 | | 6 | -31 | 2.10 | 0.000 |
| 431 | 3.93 | 3.93 | 46 | -33 | 3.17 | -20. | 36 | -32 | 0.000 | | 28 | -32 | 2.64 | 0.000 |
| 432 | 3.93 | 3.93 | 12 | -14 | 1.18 | -11. | 9 | -15 | 0.000 | | 9 | -15 | 1.16 | 0.000 |
| 433 | 3.93 | 3.93 | 0. | -24 | 1.51 | -23. | 0. | -23 | 0.000 | | 0. | -22 | 1.35 | 0.000 |
| 434 | 3.93 | 3.93 | 0. | -28 | 1.71 | -26. | 0. | -26 | 0.000 | | 0. | -26 | 1.59 | 0.000 |
| 435 | 3.93 | 3.93 | 0. | -28 | 1.71 | -26. | 0. | -26 | 0.000 | | 0. | -26 | 1.63 | 0.000 |
| 436 | 3.93 | 3.93 | 31 | -23 | 2.20 | -15. | 24 | -22 | 0.000 | | 10 | -23 | 1.65 | 0.000 |
| 437 | 3.93 | 3.93 | 0. | -15 | 0.93 | -14. | 0. | -14 | 0.000 | | 0. | -11 | 0.69 | 0.000 |
| 438 | 3.93 | 3.93 | 0. | -19 | 1.16 | -17. | 0. | -17 | 0.000 | | 0. | -17 | 1.07 | 0.000 |
| 439 | 3.93 | 3.93 | 0. | -22 | 1.36 | -20. | 0. | -20 | 0.000 | | 0. | -20 | 1.26 | 0.000 |
| 440 | 3.93 | 3.93 | 0. | -23 | 1.45 | -22. | 0. | -21 | 0.000 | | 0. | -20 | 1.26 | 0.000 |
| 441 | 3.93 | 3.93 | 0. | -21 | 1.32 | -20. | 0. | -19 | 0.000 | | 0. | -18 | 1.14 | 0.000 |
| 442 | 3.93 | 3.93 | 0. | -17 | 1.06 | -16. | 0. | -16 | 0.000 | | 0. | -14 | 0.87 | 0.000 |
| 786 | 3.93 | 3.93 | 0. | -23 | 1.44 | -22. | 0. | -20 | 0.000 | | 0. | -18 | 1.14 | 0.000 |
| 787 | 3.93 | 3.93 | 25 | -33 | 2.64 | -25. | 18 | -31 | 0.000 | | 17 | -30 | 2.24 | 0.000 |
| 788 | 3.93 | 3.93 | 45 | -37 | 3.41 | -25. | 36 | -35 | 0.000 | | 34 | -35 | 3.02 | 0.000 |
| 789 | 3.93 | 3.93 | 55 | -36 | 3.60 | -22. | 43 | -35 | 0.000 | | 39 | -34 | 3.09 | 0.000 |
| 790 | 3.93 | 3.93 | 64 | -28 | 3.28 | -12. | 49 | -26 | 0.000 | | 44 | -26 | 2.67 | 0.000 |
| 791 | 3.93 | 3.93 | 58 | -19 | 2.61 | -5. | 40 | -18 | 0.000 | | 30 | -17 | 1.78 | 0.000 |
| 925 | 3.93 | 3.93 | 58 | -41 | 1.41 | -14. | 39 | -39 | 0.000 | | 26 | -39 | 1.21 | 0.000 |
| 926 | 3.93 | 3.93 | 23 | -40 | 1.21 | -15. | 13 | -37 | 0.000 | | 25 | -40 | 1.22 | 0.000 |
| 927 | 3.93 | 3.93 | 41 | -49 | 1.54 | -18. | 30 | -46 | 0.000 | | 24 | -47 | 1.41 | 0.000 |
| 928 | 3.93 | 3.93 | 20 | -36 | 1.10 | -14. | 11 | -34 | 0.000 | | 0. | -35 | 0.97 | 0.000 |
| 929 | 3.93 | 3.93 | 33 | -50 | 1.55 | -19. | 22 | -48 | 0.000 | | 11 | -48 | 1.38 | 0.000 |
| 930 | 3.93 | 3.93 | 54 | -65 | 2.05 | -24. | 40 | -62 | 0.000 | | 22 | -61 | 1.80 | 0.000 |
| 931 | 3.93 | 3.93 | 22 | -65 | 1.89 | -26. | 14 | -62 | 0.000 | | 13 | -63 | 1.80 | 0.000 |
| 932 | 3.93 | 3.93 | 1 | -47 | 1.31 | -19. | 0. | -45 | 0.000 | | 0. | -46 | 1.26 | 0.000 |
| 933 | 3.93 | 3.93 | 0. | -43 | 1.19 | -18. | 0. | -41 | 0.000 | | 0. | -42 | 1.17 | 0.000 |
| 934 | 3.93 | 3.93 | 49 | -74 | 2.27 | -28. | 36 | -69 | 0.000 | | 18 | -68 | 1.96 | 0.000 |
| 935 | 3.93 | 3.93 | 0. | -68 | 1.89 | -28. | 0. | -64 | 0.000 | | 0. | -59 | 1.64 | 0.000 |
| 936 | 3.93 | 3.93 | 0. | -71 | 1.97 | -30. | 0. | -68 | 0.000 | | 0. | -66 | 1.83 | 0.000 |
| 937 | 3.93 | 3.93 | 0. | -66 | 1.81 | -27. | 0. | -63 | 0.000 | | 0. | -61 | 1.68 | 0.000 |
| 938 | 3.93 | 3.93 | 0. | -59 | 1.64 | -25. | 0. | -56 | 0.000 | | 0. | -55 | 1.53 | 0.000 |
| 939 | 3.93 | 3.93 | 0. | -56 | 1.55 | -23. | 0. | -53 | 0.000 | | 0. | -51 | 1.40 | 0.000 |
| 940 | 3.93 | 3.93 | 104 | -68 | 2.36 | -22. | 86 | -64 | 0.000 | | 14 | -59 | 1.70 | 0.000 |
| 941 | 3.93 | 3.93 | 0. | -72 | 2.00 | -30. | 0. | -69 | 0.000 | | 0. | -65 | 1.80 | 0.000 |
| 942 | 3.93 | 3.93 | 0. | -78 | 2.15 | -32. | 0. | -75 | 0.000 | | 0. | -72 | 1.99 | 0.000 |
| 943 | 3.93 | 3.93 | 0. | -76 | 2.10 | -31. | 0. | -73 | 0.000 | | 0. | -70 | 1.93 | 0.000 |
| 944 | 3.93 | 3.93 | 0. | -64 | 1.77 | -26. | 0. | -60 | 0.000 | | 0. | -57 | 1.58 | 0.000 |
| 945 | 3.93 | 3.93 | 0. | -53 | 1.46 | -22. | 0. | -49 | 0.000 | | 0. | -45 | 1.26 | 0.000 |
| 986 | 3.93 | 3.93 | 95 | -3 | 5.27 | 180. | 72 | -4 | 0.006 | | 29 | -5 | 1.29 | 0.000 |
| 987 | 3.93 | 3.93 | 121 | -5 | 6.69 | 222. | 92 | -5 | 0.007 | | 70 | -5 | 3.75 | 0.005 |
| 988 | 3.93 | 3.93 | 109 | -5 | 6.02 | 191. | 83 | -6 | 0.006 | | 65 | -6 | 3.40 | 0.004 |
| 989 | 3.93 | 3.93 | 74 | -4 | 4.02 | 117. | 56 | -5 | 0.003 | | 39 | -6 | 1.90 | 0.001 |
| 990 | 3.93 | 3.93 | 29 | -5 | 1.32 | 12. | 22 | -5 | 0.000 | | 16 | -6 | 0.74 | 0.000 |
| 991 | 3.93 | 3.93 | 3 | 0. | 0.19 | 5. | 3 | -1 | 0.000 | | 0. | -1 | 0.03 | 0.000 |
| 992 | 3.93 | 3.93 | 34 | 0. | 1.90 | 75. | 25 | -1 | 0.002 | | 19 | -1 | 1.03 | 0.001 |
| 993 | 3.93 | 3.93 | 37 | -2 | 2.04 | 64. | 28 | -2 | 0.002 | | 23 | -2 | 1.19 | 0.001 |
| 994 | 3.93 | 3.93 | 25 | -1 | 1.36 | 44. | 18 | -1 | 0.001 | | 14 | -2 | 0.69 | 0.001 |
| 995 | 3.93 | 3.93 | 6 | -1 | 0.27 | 4. | 4 | -1 | 0.000 | | 3 | -1 | 0.16 | 0.000 |
| 996 | 3.93 | 3.93 | 0. | -2 | 0.13 | -2. | 0. | -2 | 0.000 | | 0. | -2 | 0.14 | 0.000 |
| 997 | 3.93 | 3.93 | 0. | -7 | 0.43 | -6. | 0. | -7 | 0.000 | | 0. | -7 | 0.44 | 0.000 |

Relazione tecnica strutturale microcentrale elettrica

998 | 3.93 3.93 | 0. -9 0.55 -8. | 0. -9 0.000 | 0. -9 0.54 0.000 |

ARMATURA SUPERIORE ORIZZONTALE

| GUSCI | Af | Afc | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------|------|-----------------|-----|-------|------------------------|-----|------|-------|
| | | | Mom | Nor | σc | σf | Mom | Nor | wkF | Mom | Nor | σc | wkP |
| 422 | 3.93 | 3.93 | 0. | 6 | 0.00 | 72. | 0. | 6 | 0.007 | 0. | 6 | 0.00 | 0.006 |
| 423 | 3.93 | 3.93 | 0. | 5 | 0.00 | 62. | 0. | 5 | 0.006 | 0. | 4 | 0.00 | 0.005 |
| 424 | 3.93 | 3.93 | 0. | 8 | 0.00 | 107. | 0. | 8 | 0.010 | 0. | 8 | 0.00 | 0.009 |
| 425 | 3.93 | 3.93 | 0. | 3 | 0.00 | 39. | 0. | 3 | 0.003 | 0. | 3 | 0.00 | 0.003 |
| 426 | 3.93 | 3.93 | 0. | 7 | 0.00 | 93. | 0. | 7 | 0.008 | 0. | 7 | 0.00 | 0.008 |
| 427 | 3.93 | 3.93 | 0. | 10 | 0.00 | 126. | 0. | 9 | 0.011 | 0. | 9 | 0.00 | 0.010 |
| 428 | 3.93 | 3.93 | 0. | 3 | 0.00 | 37. | 0. | 3 | 0.003 | 0. | 3 | 0.00 | 0.003 |
| 429 | 3.93 | 3.93 | 5 | 6 | 0.00 | 88. | 3 | 5 | 0.007 | 6 | 5 | 0.00 | 0.007 |
| 430 | 3.93 | 3.93 | 22 | 7 | 0.56 | 146. | 15 | 6 | 0.010 | 8 | 7 | 0.00 | 0.010 |
| 431 | 3.93 | 3.93 | 0. | 9 | 0.00 | 113. | 0. | 8 | 0.009 | 1 | 8 | 0.00 | 0.009 |
| 432 | 3.93 | 3.93 | 0. | 3 | 0.00 | 39. | 0. | 2 | 0.003 | 0. | 3 | 0.00 | 0.004 |
| 433 | 3.93 | 3.93 | 16 | 4 | 0.64 | 94. | 11 | 3 | 0.006 | 12 | 4 | 0.26 | 0.007 |
| 434 | 3.93 | 3.93 | 35 | 3 | 1.95 | 127. | 26 | 3 | 0.007 | 24 | 5 | 1.13 | 0.009 |
| 435 | 3.93 | 3.93 | 25 | 3 | 1.31 | 106. | 18 | 3 | 0.006 | 13 | 5 | 0.15 | 0.008 |
| 436 | 3.93 | 3.93 | 0. | 5 | 0.00 | 62. | 0. | 4 | 0.005 | 0. | 4 | 0.00 | 0.005 |
| 437 | 3.93 | 3.93 | 18 | 3 | 0.95 | 81. | 13 | 2 | 0.004 | 0. | 2 | 0.00 | 0.002 |
| 438 | 3.93 | 3.93 | 50 | 0. | 2.80 | 113. | 37 | 0. | 0.004 | 27 | 1 | 1.51 | 0.005 |
| 439 | 3.93 | 3.93 | 30 | 0. | 1.66 | 67. | 22 | 0. | 0.002 | 22 | 1 | 1.21 | 0.004 |
| 440 | 3.93 | 3.93 | 44 | -1 | 2.50 | 96. | 34 | 0. | 0.004 | 29 | 1 | 1.61 | 0.005 |
| 441 | 3.93 | 3.93 | 37 | 0. | 2.09 | 87. | 28 | 0. | 0.003 | 21 | 1 | 1.15 | 0.004 |
| 442 | 3.93 | 3.93 | 20 | 0. | 1.11 | 50. | 14 | 0. | 0.002 | 0. | 1 | 0.00 | 0.001 |
| 786 | 3.93 | 3.93 | 0. | 4 | 0.00 | 53. | 0. | 5 | 0.005 | 0. | 5 | 0.00 | 0.005 |
| 787 | 3.93 | 3.93 | 0. | 6 | 0.00 | 74. | 0. | 6 | 0.007 | 0. | 6 | 0.00 | 0.007 |
| 788 | 3.93 | 3.93 | 0. | 8 | 0.00 | 95. | 0. | 7 | 0.009 | 0. | 7 | 0.00 | 0.008 |
| 789 | 3.93 | 3.93 | 0. | 7 | 0.00 | 91. | 0. | 7 | 0.008 | 0. | 7 | 0.00 | 0.008 |
| 790 | 3.93 | 3.93 | 0. | 4 | 0.00 | 56. | 0. | 4 | 0.005 | 0. | 4 | 0.00 | 0.005 |
| 791 | 3.93 | 3.93 | 29 | 0. | 1.63 | 73. | 22 | 0. | 0.003 | 18 | 1 | 0.99 | 0.003 |
| 925 | 3.93 | 3.93 | 60 | -2 | 0.63 | 22. | 48 | -2 | 0.001 | 34 | -1 | 0.37 | 0.002 |
| 926 | 3.93 | 3.93 | 67 | -2 | 0.74 | 31. | 53 | -2 | 0.002 | 31 | 0. | 0.35 | 0.002 |
| 927 | 3.93 | 3.93 | 0. | 4 | 0.00 | 53. | 0. | 4 | 0.010 | 0. | 4 | 0.00 | 0.009 |
| 928 | 3.93 | 3.93 | 61 | -3 | 0.64 | 21. | 51 | -2 | 0.002 | 33 | 0. | 0.38 | 0.002 |
| 929 | 3.93 | 3.93 | 0. | 2 | 0.00 | 28. | 0. | 3 | 0.006 | 0. | 3 | 0.00 | 0.008 |
| 930 | 3.93 | 3.93 | 0. | 8 | 0.00 | 102. | 0. | 8 | 0.019 | 0. | 8 | 0.00 | 0.019 |
| 931 | 3.93 | 3.93 | 1 | 3 | 0.00 | 44. | 6 | 4 | 0.009 | 15 | 5 | 0.00 | 0.013 |
| 932 | 3.93 | 3.93 | 0. | -2 | 0.06 | -1. | 0. | -1 | 0.000 | 3 | 0. | 0.02 | 0.000 |
| 933 | 3.93 | 3.93 | 31 | -2 | 0.27 | 3. | 23 | -2 | 0.000 | 20 | 0. | 0.22 | 0.001 |
| 934 | 3.93 | 3.93 | 19 | 8 | 0.00 | 125. | 19 | 9 | 0.022 | 17 | 9 | 0.00 | 0.022 |
| 935 | 3.93 | 3.93 | 8 | 7 | 0.00 | 100. | 12 | 8 | 0.020 | 0. | 8 | 0.00 | 0.020 |
| 936 | 3.93 | 3.93 | 38 | 2 | 0.22 | 65. | 42 | 3 | 0.010 | 38 | 3 | 0.00 | 0.011 |
| 937 | 3.93 | 3.93 | 28 | -4 | 0.01 | -3. | 32 | -3 | 0.000 | 36 | -2 | 0.37 | 0.001 |
| 938 | 3.93 | 3.93 | 10 | -3 | 0.04 | -2. | 14 | -2 | 0.000 | 11 | -1 | 0.09 | 0.000 |
| 939 | 3.93 | 3.93 | 0. | -2 | 0.04 | -1. | 0. | 0. | 0.000 | 0. | -2 | 0.06 | 0.000 |
| 940 | 3.93 | 3.93 | 0. | -4 | 0.10 | -2. | 0. | -2 | 0.000 | 0. | -1 | 0.02 | 0.000 |
| 941 | 3.93 | 3.93 | 28 | -4 | 0.02 | -3. | 34 | -3 | 0.000 | 15 | -3 | 0.01 | 0.000 |
| 942 | 3.93 | 3.93 | 53 | -5 | 0.43 | 3. | 56 | -4 | 0.001 | 60 | -2 | 0.64 | 0.002 |
| 943 | 3.93 | 3.93 | 67 | -1 | 0.76 | 44. | 70 | 0. | 0.005 | 63 | 0. | 0.72 | 0.005 |
| 944 | 3.93 | 3.93 | 24 | 5 | 0.00 | 81. | 28 | 6 | 0.015 | 0. | 5 | 0.00 | 0.013 |
| 945 | 3.93 | 3.93 | 0. | 9 | 0.00 | 115. | 0. | 10 | 0.025 | 0. | 10 | 0.00 | 0.024 |
| 986 | 3.93 | 3.93 | 64 | -1 | 3.58 | 132. | 48 | -1 | 0.005 | 43 | -2 | 2.36 | 0.004 |
| 987 | 3.93 | 3.93 | 23 | 0. | 1.30 | 48. | 17 | 0. | 0.002 | 18 | -1 | 0.96 | 0.001 |
| 988 | 3.93 | 3.93 | 0. | -1 | 0.08 | -1. | 0. | -1 | 0.000 | 0. | -2 | 0.11 | 0.000 |
| 989 | 3.93 | 3.93 | 0. | -1 | 0.07 | -1. | 0. | -1 | 0.000 | 0. | 0. | 0.02 | 0.000 |
| 990 | 3.93 | 3.93 | 21 | -1 | 1.16 | 40. | 16 | -1 | 0.001 | 18 | -1 | 0.98 | 0.001 |
| 991 | 3.93 | 3.93 | 104 | -2 | 5.84 | 218. | 79 | -1 | 0.008 | 61 | -2 | 3.42 | 0.006 |
| 992 | 3.93 | 3.93 | 0. | -4 | 0.26 | -4. | 0. | -3 | 0.000 | 7 | -5 | 0.11 | 0.000 |
| 993 | 3.93 | 3.93 | 0. | -5 | 0.30 | -5. | 0. | -4 | 0.000 | 0. | -6 | 0.35 | 0.000 |
| 994 | 3.93 | 3.93 | 0. | -3 | 0.17 | -2. | 0. | -2 | 0.000 | 0. | -4 | 0.24 | 0.000 |
| 995 | 3.93 | 3.93 | 0. | -2 | 0.12 | -2. | 0. | -2 | 0.000 | 0. | -2 | 0.09 | 0.000 |
| 996 | 3.93 | 3.93 | 11 | -1 | 0.60 | 18. | 8 | -1 | 0.001 | 8 | -1 | 0.39 | 0.000 |
| 997 | 3.93 | 3.93 | 21 | 0. | 1.20 | 45. | 16 | 0. | 0.002 | 14 | 0. | 0.80 | 0.001 |
| 998 | 3.93 | 3.93 | 28 | 0. | 1.59 | 66. | 21 | 0. | 0.002 | 17 | 0. | 0.95 | 0.002 |

ARMATURA SUPERIORE VERTICALE

| GUSCI | Af | Afc | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------|------|-----------------|-----|-------|------------------------|-----|------|-------|
| | | | Mom | Nor | σc | σf | Mom | Nor | wkF | Mom | Nor | σc | wkP |
| 422 | 3.93 | 3.93 | 0. | -35 | 2.19 | -33. | 0. | -33 | 0.000 | 2 | -26 | 1.57 | 0.000 |
| 423 | 3.93 | 3.93 | 0. | -34 | 2.11 | -32. | 0. | -31 | 0.000 | 1 | -25 | 1.50 | 0.000 |
| 424 | 3.93 | 3.93 | 0. | -39 | 2.39 | -36. | 0. | -36 | 0.000 | 0. | -34 | 2.09 | 0.000 |
| 425 | 3.93 | 3.93 | 0. | -29 | 1.80 | -27. | 0. | -23 | 0.000 | 0. | -24 | 1.47 | 0.000 |
| 426 | 3.93 | 3.93 | 0. | -33 | 2.03 | -30. | 0. | -30 | 0.000 | 0. | -30 | 1.88 | 0.000 |
| 427 | 3.93 | 3.93 | 0. | -41 | 2.52 | -38. | 0. | -37 | 0.000 | 0. | -36 | 2.26 | 0.000 |
| 428 | 3.93 | 3.93 | 0. | -20 | 1.25 | -19. | 1 | -20 | 0.000 | 2 | -22 | 1.32 | 0.000 |
| 429 | 3.93 | 3.93 | 4 | -28 | 1.66 | -27. | 3 | -27 | 0.000 | 7 | -27 | 1.53 | 0.000 |
| 430 | 3.93 | 3.93 | 0. | -33 | 2.06 | -31. | 0. | -32 | 0.000 | 0. | -31 | 1.94 | 0.000 |
| 431 | 3.93 | 3.93 | 0. | -33 | 2.04 | -31. | 0. | -32 | 0.000 | 0. | -32 | 1.96 | 0.000 |
| 432 | 3.93 | 3.93 | 9 | -14 | 0.65 | -15. | 9 | -15 | 0.000 | 9 | -15 | 0.71 | 0.000 |
| 433 | 3.93 | 3.93 | 46 | -24 | 0.38 | -33. | 35 | -23 | 0.000 | 29 | -22 | 0.64 | 0.000 |
| 434 | 3.93 | 3.93 | 57 | -28 | 0.31 | -38. | 44 | -26 | 0.000 | 35 | -26 | 0.73 | 0.000 |
| 435 | 3.93 | 3.93 | 45 | -28 | 0.60 | -36. | 34 | -26 | 0.000 | 24 | -26 | 1.03 | 0.000 |
| 436 | 3.93 | 3.93 | 0. | -23 | 1.43 | -21. | 0. | -22 | 0.000 | 8 | -23 | 1.21 | 0.000 |
| 437 | 3.93 | 3.93 | 109 | -15 | 5.25 | 73. | 82 | -14 | 0.002 | 35 | -11 | 0.17 | 0.000 |

| | | | | | | | | | | | | | |
|-----|------|------|-----|-----|------|------|-----|-----|-------|-----|-----|------|-------|
| 438 | 3.93 | 3.93 | 160 | -19 | 8.01 | 141. | 122 | -17 | 0.004 | 92 | -17 | 4.07 | 0.001 |
| 439 | 3.93 | 3.93 | 175 | -22 | 8.63 | 138. | 133 | -20 | 0.004 | 110 | -20 | 4.92 | 0.002 |
| 440 | 3.93 | 3.93 | 185 | -23 | 9.10 | 145. | 140 | -21 | 0.004 | 114 | -20 | 5.11 | 0.002 |
| 441 | 3.93 | 3.93 | 162 | -21 | 7.89 | 118. | 122 | -19 | 0.003 | 85 | -18 | 3.68 | 0.001 |
| 442 | 3.93 | 3.93 | 111 | -17 | 5.19 | 59. | 83 | -16 | 0.001 | 39 | -14 | 0.09 | 0.000 |
| 786 | 3.93 | 3.93 | 10 | -23 | 1.19 | -24. | 14 | -20 | 0.000 | 6 | -18 | 0.98 | 0.000 |
| 787 | 3.93 | 3.93 | 10 | -33 | 1.79 | -32. | 13 | -31 | 0.000 | 14 | -30 | 1.49 | 0.000 |
| 788 | 3.93 | 3.93 | 0. | -37 | 2.31 | -35. | 0. | -35 | 0.000 | 0. | -35 | 2.19 | 0.000 |
| 789 | 3.93 | 3.93 | 0. | -36 | 2.25 | -34. | 0. | -35 | 0.000 | 0. | -34 | 2.12 | 0.000 |
| 790 | 3.93 | 3.93 | 0. | -28 | 1.71 | -26. | 0. | -26 | 0.000 | 0. | -26 | 1.58 | 0.000 |
| 791 | 3.93 | 3.93 | 3 | -19 | 1.11 | -18. | 2 | -18 | 0.000 | 6 | -17 | 0.91 | 0.000 |
| 925 | 3.93 | 3.93 | 3 | -41 | 1.13 | -17. | 1 | -39 | 0.000 | 6 | -39 | 1.06 | 0.000 |
| 926 | 3.93 | 3.93 | 31 | -40 | 0.96 | -18. | 27 | -37 | 0.000 | 15 | -40 | 1.04 | 0.000 |
| 927 | 3.93 | 3.93 | 15 | -49 | 1.29 | -21. | 14 | -46 | 0.000 | 11 | -47 | 1.26 | 0.000 |
| 928 | 3.93 | 3.93 | 18 | -36 | 0.92 | -16. | 16 | -34 | 0.000 | 15 | -35 | 0.90 | 0.000 |
| 929 | 3.93 | 3.93 | 8 | -50 | 1.36 | -21. | 8 | -48 | 0.000 | 7 | -48 | 1.30 | 0.000 |
| 930 | 3.93 | 3.93 | 0. | -65 | 1.80 | -27. | 0. | -62 | 0.000 | 0. | -61 | 1.69 | 0.000 |
| 931 | 3.93 | 3.93 | 0. | -65 | 1.79 | -27. | 0. | -62 | 0.000 | 0. | -63 | 1.74 | 0.000 |
| 932 | 3.93 | 3.93 | 11 | -47 | 1.25 | -20. | 18 | -45 | 0.000 | 26 | -46 | 1.14 | 0.000 |
| 933 | 3.93 | 3.93 | 58 | -43 | 0.92 | -21. | 56 | -41 | 0.000 | 52 | -42 | 0.93 | 0.000 |
| 934 | 3.93 | 3.93 | 0. | -74 | 2.04 | -31. | 0. | -69 | 0.000 | 0. | -68 | 1.88 | 0.000 |
| 935 | 3.93 | 3.93 | 44 | -68 | 1.69 | -31. | 48 | -64 | 0.000 | 45 | -59 | 1.44 | 0.000 |
| 936 | 3.93 | 3.93 | 68 | -71 | 1.66 | -33. | 74 | -68 | 0.000 | 53 | -66 | 1.59 | 0.000 |
| 937 | 3.93 | 3.93 | 110 | -66 | 1.31 | -33. | 113 | -63 | 0.000 | 89 | -61 | 1.27 | 0.000 |
| 938 | 3.93 | 3.93 | 111 | -59 | 1.13 | -31. | 110 | -56 | 0.000 | 97 | -55 | 1.08 | 0.000 |
| 939 | 3.93 | 3.93 | 103 | -56 | 1.08 | -29. | 100 | -53 | 0.000 | 94 | -51 | 0.97 | 0.000 |
| 940 | 3.93 | 3.93 | 0. | -68 | 1.88 | -28. | 8 | -64 | 0.000 | 0. | -59 | 1.63 | 0.000 |
| 941 | 3.93 | 3.93 | 114 | -72 | 1.48 | -37. | 125 | -69 | 0.000 | 92 | -65 | 1.38 | 0.000 |
| 942 | 3.93 | 3.93 | 293 | -78 | 0.81 | -49. | 290 | -75 | 0.000 | 231 | -72 | 0.94 | 0.000 |
| 943 | 3.93 | 3.93 | 370 | -76 | 0.40 | -53. | 362 | -73 | 0.000 | 284 | -70 | 0.63 | 0.000 |
| 944 | 3.93 | 3.93 | 295 | -64 | 0.42 | -43. | 290 | -60 | 0.000 | 224 | -57 | 0.55 | 0.000 |
| 945 | 3.93 | 3.93 | 263 | -53 | 0.25 | -37. | 259 | -49 | 0.000 | 217 | -45 | 0.26 | 0.000 |
| 986 | 3.93 | 3.93 | 0. | -3 | 0.19 | -3. | 0. | -4 | 0.000 | 0. | -5 | 0.34 | 0.000 |
| 987 | 3.93 | 3.93 | 0. | -5 | 0.28 | -4. | 0. | -5 | 0.000 | 0. | -5 | 0.30 | 0.000 |
| 988 | 3.93 | 3.93 | 0. | -5 | 0.30 | -5. | 0. | -6 | 0.000 | 0. | -6 | 0.37 | 0.000 |
| 989 | 3.93 | 3.93 | 0. | -4 | 0.26 | -4. | 0. | -5 | 0.000 | 0. | -6 | 0.34 | 0.000 |
| 990 | 3.93 | 3.93 | 10 | -5 | 0.05 | -7. | 8 | -5 | 0.000 | 10 | -6 | 0.11 | 0.000 |
| 991 | 3.93 | 3.93 | 13 | 0. | 0.75 | 28. | 10 | -1 | 0.001 | 12 | -1 | 0.69 | 0.001 |
| 992 | 3.93 | 3.93 | 8 | 0. | 0.46 | 16. | 6 | -1 | 0.000 | 9 | -1 | 0.45 | 0.000 |
| 993 | 3.93 | 3.93 | 0. | -2 | 0.11 | -2. | 0. | -2 | 0.000 | 0. | -2 | 0.13 | 0.000 |
| 994 | 3.93 | 3.93 | 0. | -1 | 0.06 | -1. | 0. | -1 | 0.000 | 0. | -2 | 0.10 | 0.000 |
| 995 | 3.93 | 3.93 | 0. | -1 | 0.05 | -1. | 0. | -1 | 0.000 | 0. | -1 | 0.09 | 0.000 |
| 996 | 3.93 | 3.93 | 12 | -2 | 0.54 | 4. | 9 | -2 | 0.000 | 6 | -2 | 0.02 | 0.000 |
| 997 | 3.93 | 3.93 | 47 | -7 | 2.25 | 28. | 36 | -7 | 0.000 | 33 | -7 | 1.41 | 0.000 |
| 998 | 3.93 | 3.93 | 63 | -9 | 3.01 | 40. | 47 | -9 | 0.001 | 43 | -9 | 1.86 | 0.000 |

MACROGUSCIO SETTO06

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

| Nome | Descrizione |
|------|----------------------|
| 1 | SLU |
| 2 | SLU VENTOX |
| 3 | SLU VENTOY |
| 6 | SLU con SISMAX PRINC |
| 7 | SLU con SISMAX PRINC |

DATI:

tensione di snervamento acciaio (fyk): 4500 daN/cm2
 coefficiente sicurezza acciaio : 1.15
 deformazione ultima acciaio : 1.97 per mille
 deformazione ultima cls : 3.5 per mille
 rapporto rottura/snervamento (k): 1
 resistenza cilindrica cls (fck): 249 daN/cm2
 coefficiente sicurezza cls : 1.5
 coefficiente riduttivo (alfa): 0.85
 copriferro inferiore (asse armatura): 3 cm
 copriferro superiore (asse armatura): 3 cm
 moltiplicatore sollecitazioni : 1

LEGENDA:

spess = spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
 Af = area disposta al lembo teso, in cm2 al metro
 Afc = area disposta al lembo compresso, in cm2 al metro
 Mom = momento flettente [daNcm/cm]
 Nor = sforzo normale [daN]
 epsC = deformazione cls [per mille]
 epsF = deformazione acciaio [per mille]

<-

L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

| | | INFERIORE ORIZZONTALE | | | | | | INFERIORE VERTICALE | | | | | |
|-------|-------|-----------------------|------|-----|-----|------|------|---------------------|------|-----|------|------|-------|
| GUSCI | spess | Af | Afc | Mom | Nor | epsC | epsF | Af | Afc | Mom | Nor | epsC | epsF |
| 611 | 15 | 3.93 | 3.93 | 3. | -3. | 0.00 | 0.01 | 3.93 | 3.93 | 57. | -27. | 0.03 | 0.05 |
| 612 | 15 | 3.93 | 3.93 | 10. | -2. | 0.00 | 0.01 | 3.93 | 3.93 | 49. | -31. | 0.03 | 0.04 |
| 613 | 15 | 3.93 | 3.93 | 7. | -4. | 0.00 | 0.01 | 3.93 | 3.93 | 40. | -33. | 0.03 | 0.03 |
| 614 | 15 | 3.93 | 3.93 | 6. | -4. | 0.00 | 0.01 | 3.93 | 3.93 | 33. | -34. | 0.03 | 0.02 |
| 615 | 15 | 3.93 | 3.93 | 6. | -5. | 0.00 | 0.00 | 3.93 | 3.93 | 29. | -35. | 0.03 | 0.01 |
| 616 | 15 | 3.93 | 3.93 | 7. | -4. | 0.00 | 0.01 | 3.93 | 3.93 | 32. | -32. | 0.03 | 0.02 |
| 617 | 15 | 3.93 | 3.93 | 11. | -5. | 0.01 | 0.01 | 3.93 | 3.93 | 37. | -42. | 0.03 | 0.03 |
| 618 | 15 | 3.93 | 3.93 | 1. | -2. | 0.00 | 0.00 | 3.93 | 3.93 | 7. | -27. | 0.01 | -0.01 |
| 619 | 15 | 3.93 | 3.93 | 5. | -3. | 0.00 | 0.00 | 3.93 | 3.93 | 15. | -29. | 0.02 | -0.01 |
| 620 | 15 | 3.93 | 3.93 | 6. | -3. | 0.00 | 0.01 | 3.93 | 3.93 | 16. | -31. | 0.02 | 0.00 |
| 621 | 15 | 3.93 | 3.93 | 6. | -5. | 0.00 | 0.00 | 3.93 | 3.93 | 13. | -32. | 0.02 | 0.00 |
| 622 | 15 | 3.93 | 3.93 | 6. | -3. | 0.00 | 0.01 | 3.93 | 3.93 | 10. | -30. | 0.02 | -0.01 |
| 623 | 15 | 3.93 | 3.93 | 4. | -4. | 0.00 | 0.00 | 3.93 | 3.93 | 5. | -36. | 0.02 | -0.02 |
| 624 | 15 | 3.93 | 3.93 | 0. | 1. | 0.00 | 0.01 | 3.93 | 3.93 | 0. | -26. | 0.01 | -0.01 |
| 625 | 15 | 3.93 | 3.93 | 2. | -3. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -27. | 0.01 | -0.01 |
| 626 | 15 | 3.93 | 3.93 | 5. | -3. | 0.00 | 0.00 | 3.93 | 3.93 | 4. | -27. | 0.01 | -0.01 |
| 627 | 15 | 3.93 | 3.93 | 12. | -3. | 0.01 | 0.01 | 3.93 | 3.93 | 4. | -29. | 0.01 | -0.01 |
| 628 | 15 | 3.93 | 3.93 | 12. | -1. | 0.00 | 0.01 | 3.93 | 3.93 | 4. | -31. | 0.02 | -0.01 |
| 629 | 15 | 3.93 | 3.93 | 0. | 4. | 0.00 | 0.02 | 3.93 | 3.93 | 0. | -22. | 0.01 | -0.01 |
| 630 | 15 | 3.93 | 3.93 | 0. | 2. | 0.00 | 0.01 | 3.93 | 3.93 | 0. | -22. | 0.01 | -0.01 |
| 631 | 15 | 3.93 | 3.93 | 8. | 1. | 0.00 | 0.01 | 3.93 | 3.93 | 1. | -24. | 0.01 | -0.01 |
| 632 | 15 | 3.93 | 3.93 | 20. | 1. | 0.01 | 0.03 | 3.93 | 3.93 | 3. | -25. | 0.01 | -0.01 |
| 633 | 15 | 3.93 | 3.93 | 0. | 7. | 0.00 | 0.04 | 3.93 | 3.93 | 0. | -17. | 0.01 | -0.01 |
| 634 | 15 | 3.93 | 3.93 | 0. | 5. | 0.00 | 0.03 | 3.93 | 3.93 | 0. | -18. | 0.01 | -0.01 |
| 635 | 15 | 3.93 | 3.93 | 28. | 2. | 0.00 | 0.04 | 3.93 | 3.93 | 1. | -19. | 0.01 | -0.01 |
| 713 | 15 | 3.93 | 3.93 | 27. | -2. | 0.01 | 0.03 | 3.93 | 3.93 | 53. | -32. | 0.03 | 0.04 |
| 714 | 15 | 3.93 | 3.93 | 1. | -2. | 0.00 | 0.00 | 3.93 | 3.93 | 50. | -24. | 0.03 | 0.04 |
| 715 | 15 | 3.93 | 3.93 | 3. | -2. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -16. | 0.01 | -0.01 |
| 716 | 15 | 3.93 | 3.93 | 0. | 2. | 0.00 | 0.01 | 3.93 | 3.93 | 0. | -26. | 0.01 | -0.01 |
| 717 | 15 | 3.93 | 3.93 | 12. | -2. | 0.01 | 0.01 | 3.93 | 3.93 | 1. | -8. | 0.00 | 0.00 |
| 718 | 15 | 3.93 | 3.93 | 7. | 0. | 0.00 | 0.01 | 3.93 | 3.93 | 0. | -20. | 0.01 | -0.01 |
| 719 | 15 | 3.93 | 3.93 | 0. | 3. | 0.00 | 0.02 | 3.93 | 3.93 | 0. | -25. | 0.01 | -0.01 |
| 720 | 15 | 3.93 | 3.93 | 18. | -1. | 0.01 | 0.02 | 3.93 | 3.93 | 5. | -6. | 0.00 | 0.00 |
| 721 | 15 | 3.93 | 3.93 | 4. | -2. | 0.00 | 0.01 | 3.93 | 3.93 | 0. | -20. | 0.01 | -0.01 |
| 722 | 15 | 3.93 | 3.93 | 0. | 6. | 0.00 | 0.03 | 3.93 | 3.93 | 0. | -23. | 0.01 | -0.01 |
| 723 | 15 | 3.93 | 3.93 | 2. | -1. | 0.00 | 0.01 | 3.93 | 3.93 | 0. | -19. | 0.01 | -0.01 |
| 724 | 15 | 3.93 | 3.93 | 0. | 9. | 0.00 | 0.06 | 3.93 | 3.93 | 0. | -17. | 0.01 | -0.01 |
| 725 | 15 | 3.93 | 3.93 | 0. | 6. | 0.00 | 0.03 | 3.93 | 3.93 | 0. | -13. | 0.01 | -0.01 |
| 726 | 15 | 3.93 | 3.93 | 0. | 10. | 0.00 | 0.06 | 3.93 | 3.93 | 0. | -6. | 0.00 | 0.00 |
| 727 | 15 | 3.93 | 3.93 | 0. | 10. | 0.00 | 0.06 | 3.93 | 3.93 | 0. | -11. | 0.00 | 0.00 |
| 728 | 15 | 3.93 | 3.93 | 0. | 9. | 0.00 | 0.05 | 3.93 | 3.93 | 20. | -4. | 0.01 | 0.02 |
| 729 | 15 | 3.93 | 3.93 | 31. | 2. | 0.00 | 0.04 | 3.93 | 3.93 | 0. | -13. | 0.01 | -0.01 |
| 730 | 15 | 3.93 | 3.93 | 20. | 1. | 0.00 | 0.03 | 3.93 | 3.93 | 38. | -5. | 0.02 | 0.04 |
| 731 | 15 | 3.93 | 3.93 | 5. | 5. | 0.00 | 0.04 | 3.93 | 3.93 | 0. | -13. | 0.01 | -0.01 |
| 732 | 15 | 3.93 | 3.93 | 14. | 5. | 0.00 | 0.04 | 3.93 | 3.93 | 38. | -4. | 0.02 | 0.04 |
| 806 | 15 | 3.93 | 3.93 | 0. | 7. | 0.00 | 0.04 | 3.93 | 3.93 | 0. | -2. | 0.00 | 0.00 |
| 807 | 15 | 3.93 | 3.93 | 4. | 3. | 0.00 | 0.02 | 3.93 | 3.93 | 5. | -4. | 0.00 | 0.00 |
| 808 | 15 | 3.93 | 3.93 | 1. | 3. | 0.00 | 0.02 | 3.93 | 3.93 | 0. | -2. | 0.00 | 0.00 |
| 809 | 15 | 3.93 | 3.93 | 12. | -3. | 0.01 | 0.01 | 3.93 | 3.93 | 6. | -6. | 0.01 | 0.01 |
| 810 | 15 | 3.93 | 3.93 | 2. | -1. | 0.00 | 0.00 | 3.93 | 3.93 | 1. | -3. | 0.00 | 0.00 |
| 811 | 15 | 3.93 | 3.93 | 9. | -1. | 0.00 | 0.01 | 3.93 | 3.93 | 1. | -4. | 0.00 | 0.00 |
| 812 | 15 | 3.93 | 3.93 | 4. | -1. | 0.00 | 0.00 | 3.93 | 3.93 | 1. | -5. | 0.00 | 0.00 |
| 813 | 15 | 3.93 | 3.93 | 0. | -1. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -8. | 0.00 | 0.00 |
| 814 | 15 | 3.93 | 3.93 | 0. | -1. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -4. | 0.00 | 0.00 |
| 815 | 15 | 3.93 | 3.93 | 1. | -1. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -3. | 0.00 | 0.00 |

| | | SUPERIORE ORIZZONTALE | | | | | | SUPERIORE VERTICALE | | | | | |
|-------|-------|-----------------------|------|-----|-----|------|------|---------------------|------|-----|------|------|-------|
| GUSCI | spess | Af | Afc | Mom | Nor | epsC | epsF | Af | Afc | Mom | Nor | epsC | epsF |
| 611 | 15 | 3.93 | 3.93 | 0. | -3. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -28. | 0.01 | -0.01 |
| 612 | 15 | 3.93 | 3.93 | 0. | -2. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -32. | 0.01 | -0.01 |
| 613 | 15 | 3.93 | 3.93 | 0. | -4. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -34. | 0.01 | -0.01 |
| 614 | 15 | 3.93 | 3.93 | 0. | -4. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -35. | 0.02 | -0.02 |
| 615 | 15 | 3.93 | 3.93 | 0. | -5. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -35. | 0.02 | -0.02 |
| 616 | 15 | 3.93 | 3.93 | 0. | -4. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -34. | 0.01 | -0.01 |
| 617 | 15 | 3.93 | 3.93 | 0. | -6. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -42. | 0.02 | -0.02 |
| 618 | 15 | 3.93 | 3.93 | 26. | 0. | 0.01 | 0.03 | 3.93 | 3.93 | 10. | -27. | 0.02 | -0.01 |
| 619 | 15 | 3.93 | 3.93 | 0. | -3. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -30. | 0.01 | -0.01 |
| 620 | 15 | 3.93 | 3.93 | 0. | -3. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -31. | 0.01 | -0.01 |
| 621 | 15 | 3.93 | 3.93 | 0. | -5. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -32. | 0.01 | -0.01 |
| 622 | 15 | 3.93 | 3.93 | 0. | -3. | 0.00 | 0.00 | 3.93 | 3.93 | 1. | -31. | 0.01 | -0.01 |
| 623 | 15 | 3.93 | 3.93 | 22. | -2. | 0.01 | 0.02 | 3.93 | 3.93 | 7. | -36. | 0.02 | -0.01 |
| 624 | 15 | 3.93 | 3.93 | 34. | 1. | 0.01 | 0.05 | 3.93 | 3.93 | 20. | -26. | 0.02 | 0.01 |
| 625 | 15 | 3.93 | 3.93 | 10. | -1. | 0.00 | 0.01 | 3.93 | 3.93 | 7. | -27. | 0.01 | -0.01 |
| 626 | 15 | 3.93 | 3.93 | 3. | -3. | 0.00 | 0.00 | 3.93 | 3.93 | 7. | -27. | 0.01 | -0.01 |
| 627 | 15 | 3.93 | 3.93 | 2. | -3. | 0.00 | 0.00 | 3.93 | 3.93 | 6. | -29. | 0.02 | -0.01 |
| 628 | 15 | 3.93 | 3.93 | 14. | -1. | 0.01 | 0.01 | 3.93 | 3.93 | 5. | -31. | 0.02 | -0.01 |
| 629 | 15 | 3.93 | 3.93 | 39. | 4. | 0.01 | 0.07 | 3.93 | 3.93 | 21. | -22. | 0.02 | 0.01 |
| 630 | 15 | 3.93 | 3.93 | 7. | 2. | 0.00 | 0.02 | 3.93 | 3.93 | 10. | -22. | 0.01 | 0.00 |
| 631 | 15 | 3.93 | 3.93 | 8. | 2. | 0.00 | 0.02 | 3.93 | 3.93 | 6. | -24. | 0.01 | 0.00 |
| 632 | 15 | 3.93 | 3.93 | 0. | 1. | 0.00 | 0.01 | 3.93 | 3.93 | 5. | -25. | 0.01 | -0.01 |
| 633 | 15 | 3.93 | 3.93 | 20. | 7. | 0.00 | 0.06 | 3.93 | 3.93 | 17. | -16. | 0.01 | 0.01 |
| 634 | 15 | 3.93 | 3.93 | 14. | 5. | 0.00 | 0.05 | 3.93 | 3.93 | 9. | -18. | 0.01 | 0.00 |
| 635 | 15 | 3.93 | 3.93 | 0. | 3. | 0.00 | 0.02 | 3.93 | 3.93 | 2. | -19. | 0.01 | -0.01 |
| 713 | 15 | 3.93 | 3.93 | 4. | -2. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -32. | 0.01 | -0.01 |
| 714 | 15 | 3.93 | 3.93 | 36. | 0. | 0.01 | 0.04 | 3.93 | 3.93 | 0. | -25. | 0.01 | -0.01 |
| 715 | 15 | 3.93 | 3.93 | 0. | -2. | 0.00 | 0.00 | 3.93 | 3.93 | 9. | -16. | 0.01 | 0.00 |
| 716 | 15 | 3.93 | 3.93 | 51. | 2. | 0.02 | 0.07 | 3.93 | 3.93 | 33. | -25. | 0.02 | 0.02 |

| | | | | | | | | | | | | | |
|-----|----|------|------|-----|-----|------|------|------|------|-----|------|------|------|
| 717 | 15 | 3.93 | 3.93 | 3. | -2. | 0.00 | 0.00 | 3.93 | 3.93 | 5. | -8. | 0.01 | 0.00 |
| 718 | 15 | 3.93 | 3.93 | 36. | 0. | 0.01 | 0.04 | 3.93 | 3.93 | 29. | -20. | 0.02 | 0.02 |
| 719 | 15 | 3.93 | 3.93 | 63. | 3. | 0.01 | 0.09 | 3.93 | 3.93 | 36. | -24. | 0.02 | 0.03 |
| 720 | 15 | 3.93 | 3.93 | 0. | -2. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -8. | 0.00 | 0.00 |
| 721 | 15 | 3.93 | 3.93 | 49. | 1. | 0.01 | 0.06 | 3.93 | 3.93 | 30. | -20. | 0.02 | 0.02 |
| 722 | 15 | 3.93 | 3.93 | 54. | 6. | 0.00 | 0.09 | 3.93 | 3.93 | 30. | -22. | 0.02 | 0.02 |
| 723 | 15 | 3.93 | 3.93 | 54. | 2. | 0.01 | 0.07 | 3.93 | 3.93 | 25. | -19. | 0.02 | 0.02 |
| 724 | 15 | 3.93 | 3.93 | 55. | 9. | 0.00 | 0.12 | 3.93 | 3.93 | 22. | -17. | 0.02 | 0.02 |
| 725 | 15 | 3.93 | 3.93 | 44. | 6. | 0.00 | 0.08 | 3.93 | 3.93 | 17. | -13. | 0.01 | 0.01 |
| 726 | 15 | 3.93 | 3.93 | 48. | 10. | 0.00 | 0.12 | 3.93 | 3.93 | 9. | -6. | 0.01 | 0.01 |
| 727 | 15 | 3.93 | 3.93 | 29. | 9. | 0.00 | 0.09 | 3.93 | 3.93 | 19. | -11. | 0.01 | 0.02 |
| 728 | 15 | 3.93 | 3.93 | 16. | 9. | 0.00 | 0.07 | 3.93 | 3.93 | 0. | -4. | 0.00 | 0.00 |
| 729 | 15 | 3.93 | 3.93 | 3. | 3. | 0.00 | 0.02 | 3.93 | 3.93 | 17. | -13. | 0.01 | 0.01 |
| 730 | 15 | 3.93 | 3.93 | 30. | 3. | 0.00 | 0.05 | 3.93 | 3.93 | 3. | -4. | 0.00 | 0.00 |
| 731 | 15 | 3.93 | 3.93 | 20. | 5. | 0.00 | 0.05 | 3.93 | 3.93 | 21. | -12. | 0.01 | 0.02 |
| 732 | 15 | 3.93 | 3.93 | 16. | 5. | 0.00 | 0.05 | 3.93 | 3.93 | 2. | -4. | 0.00 | 0.00 |
| 806 | 15 | 3.93 | 3.93 | 13. | 7. | 0.00 | 0.06 | 3.93 | 3.93 | 2. | -2. | 0.00 | 0.00 |
| 807 | 15 | 3.93 | 3.93 | 3. | 3. | 0.00 | 0.02 | 3.93 | 3.93 | 0. | -4. | 0.00 | 0.00 |
| 808 | 15 | 3.93 | 3.93 | 3. | 2. | 0.00 | 0.02 | 3.93 | 3.93 | 2. | -2. | 0.00 | 0.00 |
| 809 | 15 | 3.93 | 3.93 | 0. | -3. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -6. | 0.00 | 0.00 |
| 810 | 15 | 3.93 | 3.93 | 0. | -1. | 0.00 | 0.00 | 3.93 | 3.93 | 1. | -3. | 0.00 | 0.00 |
| 811 | 15 | 3.93 | 3.93 | 0. | -1. | 0.00 | 0.00 | 3.93 | 3.93 | 1. | -4. | 0.00 | 0.00 |
| 812 | 15 | 3.93 | 3.93 | 0. | -1. | 0.00 | 0.00 | 3.93 | 3.93 | 2. | -5. | 0.00 | 0.00 |
| 813 | 15 | 3.93 | 3.93 | 1. | -1. | 0.00 | 0.00 | 3.93 | 3.93 | 5. | -8. | 0.01 | 0.00 |
| 814 | 15 | 3.93 | 3.93 | 2. | -1. | 0.00 | 0.00 | 3.93 | 3.93 | 3. | -4. | 0.00 | 0.00 |
| 815 | 15 | 3.93 | 3.93 | 0. | -1. | 0.00 | 0.00 | 3.93 | 3.93 | 1. | -3. | 0.00 | 0.00 |

L'ARMATURA È OVUNQUE > DELLA QUANTITÀ RICHIESTA: IL PUNTO 2.3 DELLE NTC È VERIFICATO ($R_d > E_d$)

MACROGUSCIO SETTO06

VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

| Nome | Descrizione |
|------|-------------------------------|
| 12 | Rara (RARA) |
| 13 | Rara VentoX (RARA) |
| 14 | Rara VentoY (RARA) |
| 15 | Frequente (FREQUENTE) |
| 16 | Frequente VentoX (FREQUENTE) |
| 17 | Frequente VentoY (FREQUENTE) |
| 18 | Quasi Perm (QUASI PERMANENTE) |

DATI:

copriferro inferiore (asse armatura): 3 cm
copriferro superiore (asse armatura): 3 cm

Af = area effettiva tesa (cm² al metro)

Afc = area effettiva compressa (cm² al metro)

Mom = momento flettente [daNcm/cm]

Nor = sforzo normale [daN]

σc = tensione calcestruzzo [daN/cm²]

valore max per combinazione rara = 149.4 daN/cm²
quasi permanente = 112 daN/cm²

σf = tensione acciaio [daN/cm²]

valore max per combinazione rara = 3600 daN/cm²

wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm

wkP = apertura caratteristica per combinazione quasi permanente (mm) - valore max = 0.3 mm

<-

ARMATURA INFERIORE ORIZZONTALE

| GUSCI | | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------|-----|-----------------|-----|-------|-----|------------------------|------|-------|--|
| | Af | Afc | Mom | Nor | σc | σf | Mom | Nor | wkF | Mom | Nor | σc | wkP | |
| 611 | 3.93 | 3.93 | 6 | -3 | 0.33 | -1. | 5 | -3 | 0.000 | 6 | -3 | 0.32 | 0.000 | |
| 612 | 3.93 | 3.93 | 7 | -1 | 0.34 | 3. | 6 | -1 | 0.000 | 9 | -1 | 0.42 | 0.000 | |
| 613 | 3.93 | 3.93 | 11 | -3 | 0.49 | 0. | 9 | -3 | 0.000 | 9 | -3 | 0.39 | 0.000 | |
| 614 | 3.93 | 3.93 | 10 | -5 | 0.52 | -2. | 8 | -4 | 0.000 | 8 | -4 | 0.46 | 0.000 | |
| 615 | 3.93 | 3.93 | 8 | -6 | 0.59 | -4. | 7 | -6 | 0.000 | 7 | -6 | 0.56 | 0.000 | |
| 616 | 3.93 | 3.93 | 13 | -4 | 0.54 | -1. | 11 | -4 | 0.000 | 9 | -4 | 0.49 | 0.000 | |
| 617 | 3.93 | 3.93 | 4 | -2 | 0.23 | -1. | 4 | -2 | 0.000 | 4 | -5 | 0.42 | 0.000 | |
| 618 | 3.93 | 3.93 | 0. | -1 | 0.04 | -1. | 0. | -1 | 0.000 | 0. | -2 | 0.10 | 0.000 | |
| 619 | 3.93 | 3.93 | 2 | -2 | 0.16 | -2. | 2 | -2 | 0.000 | 3 | -2 | 0.21 | 0.000 | |
| 620 | 3.93 | 3.93 | 6 | -4 | 0.41 | -2. | 5 | -4 | 0.000 | 6 | -4 | 0.40 | 0.000 | |
| 621 | 3.93 | 3.93 | 8 | -4 | 0.46 | -2. | 7 | -4 | 0.000 | 7 | -4 | 0.44 | 0.000 | |
| 622 | 3.93 | 3.93 | 11 | -3 | 0.45 | -1. | 8 | -3 | 0.000 | 8 | -2 | 0.33 | 0.000 | |
| 623 | 3.93 | 3.93 | 0. | -2 | 0.14 | -2. | 0. | -2 | 0.000 | 0. | -4 | 0.23 | 0.000 | |
| 624 | 3.93 | 3.93 | 0. | 0. | 0.00 | 6. | 0. | 0. | 0.000 | 0. | -1 | 0.04 | 0.000 | |
| 625 | 3.93 | 3.93 | 0. | -1 | 0.09 | -1. | 0. | 0. | 0.000 | 0. | -1 | 0.05 | 0.000 | |
| 626 | 3.93 | 3.93 | 0. | -2 | 0.14 | -2. | 3 | 0. | 0.000 | 4 | 0. | 0.23 | 0.000 | |
| 627 | 3.93 | 3.93 | 11 | -3 | 0.48 | -1. | 8 | -3 | 0.000 | 8 | -3 | 0.36 | 0.000 | |
| 628 | 3.93 | 3.93 | 4 | -1 | 0.17 | 0. | 2 | -1 | 0.000 | 3 | -1 | 0.14 | 0.000 | |
| 629 | 3.93 | 3.93 | 0. | 2 | 0.00 | 22. | 0. | 1 | 0.001 | 0. | 0. | 0.00 | 0.000 | |
| 630 | 3.93 | 3.93 | 0. | 1 | 0.00 | 15. | 0. | 0. | 0.000 | 0. | 0. | 0.03 | 0.000 | |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|------|------|----|----|------|------|----|----|-------|----|----|------|-------|
| 631 | 3.93 | 3.93 | 0. | 0. | 0.00 | 6. | 0. | 0. | 0.000 | 3 | 0. | 0.17 | 0.000 |
| 632 | 3.93 | 3.93 | 16 | 0. | 0.89 | 38. | 11 | 0. | 0.001 | 8 | 0. | 0.46 | 0.001 |
| 633 | 3.93 | 3.93 | 0. | 4 | 0.00 | 50. | 0. | 2 | 0.003 | 0. | 2 | 0.00 | 0.002 |
| 634 | 3.93 | 3.93 | 0. | 2 | 0.00 | 32. | 0. | 1 | 0.002 | 0. | 2 | 0.00 | 0.002 |
| 635 | 3.93 | 3.93 | 19 | 1 | 1.08 | 62. | 14 | 1 | 0.003 | 9 | 1 | 0.49 | 0.002 |
| 713 | 3.93 | 3.93 | 21 | 0. | 1.17 | 46. | 16 | -1 | 0.001 | 9 | -1 | 0.44 | 0.000 |
| 714 | 3.93 | 3.93 | 0. | -2 | 0.10 | -1. | 0. | -2 | 0.000 | 0. | -1 | 0.08 | 0.000 |
| 715 | 3.93 | 3.93 | 6 | -1 | 0.30 | 4. | 4 | -1 | 0.000 | 2 | -1 | 0.10 | 0.000 |
| 716 | 3.93 | 3.93 | 0. | 1 | 0.00 | 11. | 0. | 1 | 0.001 | 0. | 0. | 0.02 | 0.000 |
| 717 | 3.93 | 3.93 | 12 | -2 | 0.53 | 5. | 6 | -2 | 0.000 | 5 | -2 | 0.25 | 0.000 |
| 718 | 3.93 | 3.93 | 4 | 0. | 0.21 | 5. | 2 | 0. | 0.000 | 0. | -1 | 0.09 | 0.000 |
| 719 | 3.93 | 3.93 | 0. | 2 | 0.00 | 27. | 0. | 1 | 0.002 | 0. | 1 | 0.00 | 0.001 |
| 720 | 3.93 | 3.93 | 13 | -1 | 0.69 | 21. | 9 | 0. | 0.001 | 8 | -1 | 0.39 | 0.000 |
| 721 | 3.93 | 3.93 | 0. | 1 | 0.00 | 10. | 0. | 1 | 0.001 | 0. | -1 | 0.07 | 0.000 |
| 722 | 3.93 | 3.93 | 0. | 3 | 0.00 | 43. | 0. | 2 | 0.002 | 0. | 1 | 0.00 | 0.002 |
| 723 | 3.93 | 3.93 | 0. | 1 | 0.00 | 19. | 0. | 1 | 0.001 | 0. | -1 | 0.05 | 0.000 |
| 724 | 3.93 | 3.93 | 0. | 5 | 0.00 | 69. | 0. | 3 | 0.004 | 0. | 3 | 0.00 | 0.003 |
| 725 | 3.93 | 3.93 | 0. | 4 | 0.00 | 46. | 0. | 2 | 0.003 | 0. | 1 | 0.00 | 0.001 |
| 726 | 3.93 | 3.93 | 0. | 8 | 0.00 | 100. | 0. | 5 | 0.006 | 0. | 4 | 0.00 | 0.005 |
| 727 | 3.93 | 3.93 | 0. | 7 | 0.00 | 87. | 0. | 5 | 0.006 | 0. | 4 | 0.00 | 0.005 |
| 728 | 3.93 | 3.93 | 0. | 6 | 0.00 | 81. | 0. | 5 | 0.005 | 0. | 3 | 0.00 | 0.004 |
| 729 | 3.93 | 3.93 | 14 | 1 | 0.74 | 53. | 14 | 0. | 0.002 | 12 | 1 | 0.68 | 0.003 |
| 730 | 3.93 | 3.93 | 8 | 1 | 0.46 | 29. | 8 | 0. | 0.001 | 7 | 0. | 0.39 | 0.001 |
| 731 | 3.93 | 3.93 | 0. | 3 | 0.00 | 38. | 0. | 2 | 0.002 | 0. | 2 | 0.00 | 0.003 |
| 732 | 3.93 | 3.93 | 12 | 3 | 0.52 | 69. | 9 | 2 | 0.004 | 8 | 2 | 0.35 | 0.003 |
| 806 | 3.93 | 3.93 | 0. | 4 | 0.00 | 46. | 0. | 3 | 0.003 | 0. | 1 | 0.00 | 0.002 |
| 807 | 3.93 | 3.93 | 0. | 0. | 0.02 | 0. | 0. | 0. | 0.000 | 1 | -1 | 0.07 | 0.000 |
| 808 | 3.93 | 3.93 | 1 | 0. | 0.06 | 0. | 1 | 0. | 0.000 | 0. | 0. | 0.01 | 0.000 |
| 809 | 3.93 | 3.93 | 8 | -2 | 0.34 | 1. | 6 | -1 | 0.000 | 5 | -2 | 0.24 | 0.000 |
| 810 | 3.93 | 3.93 | 9 | -2 | 0.39 | 3. | 7 | -1 | 0.000 | 3 | -1 | 0.14 | 0.000 |
| 811 | 3.93 | 3.93 | 10 | -1 | 0.50 | 7. | 8 | -1 | 0.000 | 4 | -1 | 0.20 | 0.000 |
| 812 | 3.93 | 3.93 | 7 | -2 | 0.29 | 1. | 5 | -1 | 0.000 | 2 | -1 | 0.12 | 0.000 |
| 813 | 3.93 | 3.93 | 1 | -1 | 0.05 | 0. | 0. | 0. | 0.000 | 0. | -1 | 0.05 | 0.000 |
| 814 | 3.93 | 3.93 | 0. | -1 | 0.06 | -1. | 0. | -1 | 0.000 | 0. | -1 | 0.05 | 0.000 |
| 815 | 3.93 | 3.93 | 4 | -1 | 0.16 | 0. | 3 | -1 | 0.000 | 2 | -1 | 0.08 | 0.000 |

ARMATURA INFERIORE VERTICALE

| GUSCI | | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------|------|-----------------|-----|-------|------------------------|-----|------|-------|
| | Af | Afc | Mom | Nor | σc | σf | Mom | Nor | wkF | Mom | Nor | σc | wkP |
| 611 | 3.93 | 3.93 | 81 | -30 | 3.83 | -10. | 66 | -28 | 0.000 | 48 | -28 | 2.90 | 0.000 |
| 612 | 3.93 | 3.93 | 74 | -34 | 3.91 | -15. | 59 | -32 | 0.000 | 48 | -32 | 3.13 | 0.000 |
| 613 | 3.93 | 3.93 | 66 | -36 | 3.85 | -19. | 52 | -34 | 0.000 | 44 | -34 | 3.17 | 0.000 |
| 614 | 3.93 | 3.93 | 57 | -38 | 3.73 | -22. | 46 | -36 | 0.000 | 39 | -35 | 3.15 | 0.000 |
| 615 | 3.93 | 3.93 | 51 | -39 | 3.63 | -25. | 42 | -37 | 0.000 | 35 | -36 | 3.09 | 0.000 |
| 616 | 3.93 | 3.93 | 56 | -44 | 4.09 | -28. | 49 | -42 | 0.000 | 41 | -32 | 3.00 | 0.000 |
| 617 | 3.93 | 3.93 | 74 | -58 | 5.42 | -37. | 67 | -54 | 0.000 | 50 | -46 | 4.08 | 0.000 |
| 618 | 3.93 | 3.93 | 0. | -31 | 1.89 | -28. | 0. | -28 | 0.000 | 2 | -28 | 1.77 | 0.000 |
| 619 | 3.93 | 3.93 | 15 | -33 | 2.40 | -27. | 13 | -31 | 0.000 | 12 | -30 | 2.16 | 0.000 |
| 620 | 3.93 | 3.93 | 26 | -34 | 2.74 | -26. | 21 | -32 | 0.000 | 16 | -32 | 2.35 | 0.000 |
| 621 | 3.93 | 3.93 | 25 | -32 | 2.60 | -24. | 20 | -31 | 0.000 | 15 | -30 | 2.27 | 0.000 |
| 622 | 3.93 | 3.93 | 16 | -35 | 2.55 | -29. | 12 | -33 | 0.000 | 10 | -32 | 2.23 | 0.000 |
| 623 | 3.93 | 3.93 | 0. | -51 | 3.15 | -47. | 0. | -47 | 0.000 | 2 | -41 | 2.59 | 0.000 |
| 624 | 3.93 | 3.93 | 0. | -30 | 1.82 | -27. | 0. | -27 | 0.000 | 0. | -26 | 1.62 | 0.000 |
| 625 | 3.93 | 3.93 | 0. | -29 | 1.76 | -26. | 0. | -27 | 0.000 | 0. | -26 | 1.60 | 0.000 |
| 626 | 3.93 | 3.93 | 0. | -30 | 1.84 | -28. | 3 | -28 | 0.000 | 2 | -26 | 1.66 | 0.000 |
| 627 | 3.93 | 3.93 | 6 | -32 | 2.16 | -29. | 6 | -30 | 0.000 | 5 | -29 | 1.93 | 0.000 |
| 628 | 3.93 | 3.93 | 6 | -36 | 2.40 | -32. | 5 | -34 | 0.000 | 3 | -35 | 2.26 | 0.000 |
| 629 | 3.93 | 3.93 | 0. | -23 | 1.41 | -21. | 0. | -21 | 0.000 | 0. | -20 | 1.25 | 0.000 |
| 630 | 3.93 | 3.93 | 0. | -23 | 1.45 | -22. | 0. | -22 | 0.000 | 0. | -21 | 1.32 | 0.000 |
| 631 | 3.93 | 3.93 | 0. | -27 | 1.65 | -25. | 0. | -25 | 0.000 | 0. | -24 | 1.50 | 0.000 |
| 632 | 3.93 | 3.93 | 2 | -31 | 1.98 | -29. | 1 | -29 | 0.000 | 1 | -28 | 1.76 | 0.000 |
| 633 | 3.93 | 3.93 | 0. | -17 | 1.08 | -16. | 0. | -16 | 0.000 | 0. | -15 | 0.96 | 0.000 |
| 634 | 3.93 | 3.93 | 0. | -20 | 1.22 | -18. | 0. | -18 | 0.000 | 0. | -18 | 1.11 | 0.000 |
| 635 | 3.93 | 3.93 | 3 | -22 | 1.43 | -20. | 2 | -21 | 0.000 | 0. | -20 | 1.24 | 0.000 |
| 713 | 3.93 | 3.93 | 73 | -24 | 3.30 | -7. | 61 | -23 | 0.000 | 44 | -26 | 2.68 | 0.000 |
| 714 | 3.93 | 3.93 | 77 | -28 | 3.61 | -9. | 63 | -26 | 0.000 | 38 | -25 | 2.45 | 0.000 |
| 715 | 3.93 | 3.93 | 0. | -17 | 1.07 | -16. | 0. | -16 | 0.000 | 0. | -13 | 0.78 | 0.000 |
| 716 | 3.93 | 3.93 | 0. | -29 | 1.77 | -27. | 0. | -26 | 0.000 | 0. | -26 | 1.59 | 0.000 |
| 717 | 3.93 | 3.93 | 0. | -9 | 0.53 | -8. | 0. | -9 | 0.000 | 0. | -8 | 0.50 | 0.000 |
| 718 | 3.93 | 3.93 | 0. | -23 | 1.40 | -21. | 0. | -21 | 0.000 | 0. | -18 | 1.08 | 0.000 |
| 719 | 3.93 | 3.93 | 0. | -29 | 1.79 | -27. | 0. | -26 | 0.000 | 0. | -25 | 1.58 | 0.000 |
| 720 | 3.93 | 3.93 | 1 | -8 | 0.49 | -7. | 0. | -8 | 0.000 | 3 | -7 | 0.49 | 0.000 |
| 721 | 3.93 | 3.93 | 0. | -22 | 1.35 | -20. | 0. | -20 | 0.000 | 0. | -16 | 1.00 | 0.000 |
| 722 | 3.93 | 3.93 | 0. | -23 | 1.40 | -21. | 0. | -20 | 0.000 | 0. | -22 | 1.33 | 0.000 |
| 723 | 3.93 | 3.93 | 0. | -21 | 1.31 | -20. | 0. | -19 | 0.000 | 0. | -16 | 0.97 | 0.000 |
| 724 | 3.93 | 3.93 | 0. | -15 | 0.95 | -14. | 0. | -14 | 0.000 | 0. | -15 | 0.94 | 0.000 |
| 725 | 3.93 | 3.93 | 0. | -14 | 0.86 | -13. | 0. | -13 | 0.000 | 0. | -10 | 0.65 | 0.000 |
| 726 | 3.93 | 3.93 | 0. | -6 | 0.40 | -6. | 0. | -6 | 0.000 | 0. | -5 | 0.31 | 0.000 |
| 727 | 3.93 | 3.93 | 0. | -10 | 0.61 | -9. | 0. | -9 | 0.000 | 0. | -10 | 0.59 | 0.000 |
| 728 | 3.93 | 3.93 | 13 | -3 | 0.57 | 2. | 9 | -3 | 0.000 | 5 | -3 | 0.30 | 0.000 |
| 729 | 3.93 | 3.93 | 0. | -12 | 0.77 | -12. | 0. | -12 | 0.000 | 0. | -12 | 0.71 | 0.000 |
| 730 | 3.93 | 3.93 | 29 | -3 | 1.53 | 35. | 14 | -4 | 0.000 | 9 | -3 | 0.40 | 0.000 |
| 731 | 3.93 | 3.93 | 0. | -12 | 0.76 | -11. | 0. | -11 | 0.000 | 0. | -11 | 0.68 | 0.000 |
| 732 | 3.93 | 3.93 | 25 | -3 | 1.24 | 22. | 14 | -3 | 0.000 | 14 | -3 | 0.61 | 0.000 |
| 806 | 3.93 | 3.93 | 1 | -1 | 0.09 | -1. | 1 | -1 | 0.000 | 1 | -2 | 0.13 | 0.000 |
| 807 | 3.93 | 3.93 | 8 | -4 | 0.43 | -2. | 6 | -4 | 0.000 | 3 | -4 | 0.32 | 0.000 |
| 808 | 3.93 | 3.93 | 0. | -3 | 0.19 | -3. | 0. | -3 | 0.000 | 0. | -2 | 0.15 | 0.000 |
| 809 | 3.93 | 3.93 | 13 | -5 | 0.64 | -2. | 10 | -6 | 0.000 | 4 | -6 | 0.46 | 0.000 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|------|------|----|----|------|-----|----|----|-------|----|----|------|-------|
| 810 | 3.93 | 3.93 | 2 | -4 | 0.30 | -4. | 1 | -4 | 0.000 | 1 | -4 | 0.26 | 0.000 |
| 811 | 3.93 | 3.93 | 2 | -4 | 0.31 | -3. | 2 | -4 | 0.000 | 0. | -4 | 0.23 | 0.000 |
| 812 | 3.93 | 3.93 | 1 | -5 | 0.30 | -4. | 0. | -5 | 0.000 | 0. | -4 | 0.27 | 0.000 |
| 813 | 3.93 | 3.93 | 0. | -8 | 0.51 | -8. | 0. | -8 | 0.000 | 0. | -7 | 0.41 | 0.000 |
| 814 | 3.93 | 3.93 | 0. | -4 | 0.25 | -4. | 0. | -4 | 0.000 | 0. | -3 | 0.20 | 0.000 |
| 815 | 3.93 | 3.93 | 0. | -3 | 0.18 | -3. | 0. | -3 | 0.000 | 0. | -3 | 0.17 | 0.000 |

ARMATURA SUPERIORE ORIZZONTALE

| GUSCI | Af | Afc | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------|------|-----------------|-----|-------|------------------------|-----|------|-------|
| | | | Mom | Nor | σc | σf | Mom | Nor | wkF | Mom | Nor | σc | wkP |
| 611 | 3.93 | 3.93 | 0. | -3 | 0.18 | -3. | 0. | -3 | 0.000 | 0. | -3 | 0.18 | 0.000 |
| 612 | 3.93 | 3.93 | 0. | -1 | 0.07 | -1. | 0. | -1 | 0.000 | 0. | -1 | 0.08 | 0.000 |
| 613 | 3.93 | 3.93 | 0. | -3 | 0.19 | -3. | 0. | -3 | 0.000 | 0. | -3 | 0.17 | 0.000 |
| 614 | 3.93 | 3.93 | 0. | -5 | 0.29 | -4. | 0. | -4 | 0.000 | 0. | -4 | 0.27 | 0.000 |
| 615 | 3.93 | 3.93 | 0. | -6 | 0.39 | -6. | 0. | -6 | 0.000 | 0. | -6 | 0.38 | 0.000 |
| 616 | 3.93 | 3.93 | 0. | -4 | 0.23 | -3. | 0. | -4 | 0.000 | 0. | -4 | 0.27 | 0.000 |
| 617 | 3.93 | 3.93 | 0. | -2 | 0.13 | -2. | 0. | -2 | 0.000 | 0. | -5 | 0.32 | 0.000 |
| 618 | 3.93 | 3.93 | 21 | -1 | 1.18 | 41. | 15 | -1 | 0.001 | 4 | -2 | 0.02 | 0.000 |
| 619 | 3.93 | 3.93 | 0. | -2 | 0.12 | -2. | 0. | -2 | 0.000 | 0. | -2 | 0.13 | 0.000 |
| 620 | 3.93 | 3.93 | 0. | -4 | 0.26 | -4. | 0. | -4 | 0.000 | 0. | -4 | 0.25 | 0.000 |
| 621 | 3.93 | 3.93 | 0. | -4 | 0.26 | -4. | 0. | -4 | 0.000 | 0. | -4 | 0.26 | 0.000 |
| 622 | 3.93 | 3.93 | 0. | -3 | 0.19 | -3. | 0. | -3 | 0.000 | 0. | -2 | 0.13 | 0.000 |
| 623 | 3.93 | 3.93 | 15 | -2 | 0.70 | 9. | 13 | -2 | 0.000 | 9 | -4 | 0.00 | 0.000 |
| 624 | 3.93 | 3.93 | 29 | 0. | 1.63 | 74. | 21 | 0. | 0.002 | 11 | -1 | 0.60 | 0.001 |
| 625 | 3.93 | 3.93 | 10 | -1 | 0.45 | 6. | 7 | 0. | 0.001 | 2 | -1 | 0.01 | 0.000 |
| 626 | 3.93 | 3.93 | 5 | -2 | 0.02 | -3. | 2 | 0. | 0.000 | 1 | 0. | 0.01 | 0.000 |
| 627 | 3.93 | 3.93 | 3 | -3 | 0.14 | -4. | 2 | -3 | 0.000 | 3 | -3 | 0.10 | 0.000 |
| 628 | 3.93 | 3.93 | 9 | -1 | 0.44 | 8. | 10 | -1 | 0.000 | 8 | -1 | 0.38 | 0.000 |
| 629 | 3.93 | 3.93 | 29 | 2 | 1.65 | 92. | 22 | 1 | 0.004 | 14 | 0. | 0.78 | 0.002 |
| 630 | 3.93 | 3.93 | 12 | 1 | 0.64 | 43. | 8 | 0. | 0.001 | 4 | 0. | 0.22 | 0.000 |
| 631 | 3.93 | 3.93 | 6 | 0. | 0.36 | 22. | 5 | 0. | 0.001 | 4 | 0. | 0.25 | 0.000 |
| 632 | 3.93 | 3.93 | 0. | 0. | 0.00 | 2. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 633 | 3.93 | 3.93 | 22 | 4 | 1.04 | 106. | 16 | 2 | 0.005 | 13 | 2 | 0.67 | 0.004 |
| 634 | 3.93 | 3.93 | 13 | 2 | 0.63 | 66. | 9 | 1 | 0.003 | 5 | 2 | 0.10 | 0.003 |
| 635 | 3.93 | 3.93 | 0. | 1 | 0.00 | 16. | 0. | 1 | 0.001 | 0. | 1 | 0.00 | 0.001 |
| 713 | 3.93 | 3.93 | 0. | 0. | 0.00 | 0. | 0. | -1 | 0.000 | 0. | -1 | 0.07 | 0.000 |
| 714 | 3.93 | 3.93 | 15 | -2 | 0.78 | 16. | 11 | -2 | 0.000 | 9 | -1 | 0.45 | 0.000 |
| 715 | 3.93 | 3.93 | 2 | -1 | 0.00 | -1. | 2 | -1 | 0.000 | 0. | -1 | 0.06 | 0.000 |
| 716 | 3.93 | 3.93 | 44 | 1 | 2.48 | 115. | 33 | 1 | 0.004 | 20 | 0. | 1.14 | 0.002 |
| 717 | 3.93 | 3.93 | 0. | -2 | 0.12 | -2. | 0. | -2 | 0.000 | 0. | -2 | 0.12 | 0.000 |
| 718 | 3.93 | 3.93 | 30 | 0. | 1.71 | 67. | 24 | 0. | 0.002 | 11 | -1 | 0.57 | 0.000 |
| 719 | 3.93 | 3.93 | 53 | 2 | 2.97 | 153. | 40 | 1 | 0.007 | 28 | 1 | 1.58 | 0.004 |
| 720 | 3.93 | 3.93 | 0. | -1 | 0.04 | -1. | 0. | 0. | 0.000 | 0. | -1 | 0.06 | 0.000 |
| 721 | 3.93 | 3.93 | 36 | 1 | 2.04 | 95. | 27 | 1 | 0.004 | 15 | -1 | 0.78 | 0.001 |
| 722 | 3.93 | 3.93 | 54 | 3 | 3.02 | 173. | 41 | 2 | 0.008 | 30 | 1 | 1.70 | 0.005 |
| 723 | 3.93 | 3.93 | 38 | 1 | 2.14 | 109. | 29 | 1 | 0.005 | 17 | -1 | 0.92 | 0.001 |
| 724 | 3.93 | 3.93 | 45 | 5 | 2.42 | 181. | 34 | 3 | 0.009 | 27 | 3 | 1.44 | 0.007 |
| 725 | 3.93 | 3.93 | 40 | 4 | 2.17 | 142. | 30 | 2 | 0.007 | 19 | 1 | 1.06 | 0.003 |
| 726 | 3.93 | 3.93 | 33 | 8 | 1.35 | 188. | 25 | 5 | 0.010 | 18 | 4 | 0.76 | 0.008 |
| 727 | 3.93 | 3.93 | 21 | 7 | 0.45 | 146. | 15 | 5 | 0.008 | 14 | 4 | 0.38 | 0.007 |
| 728 | 3.93 | 3.93 | 12 | 6 | 0.00 | 117. | 9 | 5 | 0.007 | 7 | 3 | 0.00 | 0.005 |
| 729 | 3.93 | 3.93 | 7 | 1 | 0.34 | 38. | 4 | 0. | 0.001 | 0. | 1 | 0.00 | 0.001 |
| 730 | 3.93 | 3.93 | 22 | 1 | 1.23 | 61. | 15 | 0. | 0.002 | 13 | 0. | 0.72 | 0.002 |
| 731 | 3.93 | 3.93 | 21 | 3 | 1.07 | 90. | 15 | 2 | 0.004 | 12 | 2 | 0.56 | 0.005 |
| 732 | 3.93 | 3.93 | 16 | 3 | 0.80 | 78. | 12 | 2 | 0.004 | 9 | 2 | 0.38 | 0.004 |
| 806 | 3.93 | 3.93 | 10 | 4 | 0.11 | 75. | 8 | 3 | 0.004 | 6 | 1 | 0.25 | 0.003 |
| 807 | 3.93 | 3.93 | 4 | 0. | 0.21 | 6. | 3 | 0. | 0.000 | 3 | -1 | 0.12 | 0.000 |
| 808 | 3.93 | 3.93 | 4 | 0. | 0.21 | 4. | 3 | 0. | 0.000 | 3 | 0. | 0.16 | 0.000 |
| 809 | 3.93 | 3.93 | 0. | -2 | 0.10 | -2. | 0. | -1 | 0.000 | 0. | -2 | 0.10 | 0.000 |
| 810 | 3.93 | 3.93 | 0. | -2 | 0.10 | -2. | 0. | -1 | 0.000 | 0. | -1 | 0.05 | 0.000 |
| 811 | 3.93 | 3.93 | 0. | -1 | 0.09 | -1. | 0. | -1 | 0.000 | 0. | -1 | 0.05 | 0.000 |
| 812 | 3.93 | 3.93 | 0. | -2 | 0.09 | -1. | 0. | -1 | 0.000 | 0. | -1 | 0.07 | 0.000 |
| 813 | 3.93 | 3.93 | 0. | -1 | 0.04 | -1. | 0. | 0. | 0.000 | 2 | -1 | 0.00 | 0.000 |
| 814 | 3.93 | 3.93 | 1 | -1 | 0.03 | -1. | 1 | -1 | 0.000 | 2 | -1 | 0.01 | 0.000 |
| 815 | 3.93 | 3.93 | 0. | -1 | 0.06 | -1. | 0. | -1 | 0.000 | 0. | -1 | 0.04 | 0.000 |

ARMATURA SUPERIORE VERTICALE

| GUSCI | Af | Afc | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------|------|-----------------|-----|-------|------------------------|-----|------|-------|
| | | | Mom | Nor | σc | σf | Mom | Nor | wkF | Mom | Nor | σc | wkP |
| 611 | 3.93 | 3.93 | 0. | -30 | 1.84 | -28. | 0. | -28 | 0.000 | 0. | -28 | 1.73 | 0.000 |
| 612 | 3.93 | 3.93 | 0. | -34 | 2.09 | -31. | 0. | -32 | 0.000 | 0. | -32 | 1.96 | 0.000 |
| 613 | 3.93 | 3.93 | 0. | -36 | 2.24 | -34. | 0. | -34 | 0.000 | 0. | -34 | 2.10 | 0.000 |
| 614 | 3.93 | 3.93 | 0. | -38 | 2.33 | -35. | 0. | -36 | 0.000 | 0. | -35 | 2.19 | 0.000 |
| 615 | 3.93 | 3.93 | 0. | -39 | 2.38 | -36. | 0. | -37 | 0.000 | 0. | -36 | 2.22 | 0.000 |
| 616 | 3.93 | 3.93 | 0. | -44 | 2.71 | -41. | 0. | -42 | 0.000 | 0. | -32 | 1.98 | 0.000 |
| 617 | 3.93 | 3.93 | 0. | -58 | 3.59 | -54. | 0. | -54 | 0.000 | 0. | -46 | 2.84 | 0.000 |
| 618 | 3.93 | 3.93 | 24 | -31 | 1.30 | -34. | 17 | -28 | 0.000 | 1 | -28 | 1.69 | 0.000 |
| 619 | 3.93 | 3.93 | 0. | -33 | 2.04 | -31. | 0. | -31 | 0.000 | 0. | -30 | 1.87 | 0.000 |
| 620 | 3.93 | 3.93 | 0. | -34 | 2.10 | -31. | 0. | -32 | 0.000 | 0. | -32 | 1.95 | 0.000 |
| 621 | 3.93 | 3.93 | 0. | -32 | 2.00 | -30. | 0. | -31 | 0.000 | 0. | -30 | 1.88 | 0.000 |
| 622 | 3.93 | 3.93 | 0. | -35 | 2.17 | -32. | 0. | -33 | 0.000 | 0. | -32 | 1.98 | 0.000 |
| 623 | 3.93 | 3.93 | 8 | -51 | 2.94 | -49. | 8 | -47 | 0.000 | 6 | -41 | 2.40 | 0.000 |
| 624 | 3.93 | 3.93 | 40 | -30 | 0.84 | -36. | 30 | -27 | 0.000 | 18 | -26 | 1.18 | 0.000 |
| 625 | 3.93 | 3.93 | 14 | -29 | 1.41 | -30. | 11 | -27 | 0.000 | 5 | -26 | 1.48 | 0.000 |
| 626 | 3.93 | 3.93 | 10 | -30 | 1.60 | -30. | 5 | -28 | 0.000 | 5 | -26 | 1.49 | 0.000 |
| 627 | 3.93 | 3.93 | 9 | -32 | 1.79 | -32. | 6 | -30 | 0.000 | 7 | -29 | 1.65 | 0.000 |

| | | | | | | | | | | | | | |
|-----|------|------|----|-----|------|------|----|-----|-------|----|-----|------|-------|
| 628 | 3.93 | 3.93 | 10 | -36 | 2.01 | -36. | 8 | -34 | 0.000 | 6 | -35 | 2.02 | 0.000 |
| 629 | 3.93 | 3.93 | 39 | -23 | 0.44 | -30. | 30 | -21 | 0.000 | 21 | -20 | 0.73 | 0.000 |
| 630 | 3.93 | 3.93 | 19 | -23 | 0.99 | -26. | 14 | -22 | 0.000 | 10 | -21 | 1.07 | 0.000 |
| 631 | 3.93 | 3.93 | 10 | -27 | 1.40 | -27. | 8 | -25 | 0.000 | 8 | -24 | 1.29 | 0.000 |
| 632 | 3.93 | 3.93 | 0. | -31 | 1.93 | -29. | 1 | -29 | 0.000 | 2 | -28 | 1.68 | 0.000 |
| 633 | 3.93 | 3.93 | 35 | -17 | 0.22 | -24. | 26 | -16 | 0.000 | 20 | -15 | 0.47 | 0.000 |
| 634 | 3.93 | 3.93 | 18 | -20 | 0.78 | -22. | 13 | -18 | 0.000 | 9 | -18 | 0.89 | 0.000 |
| 635 | 3.93 | 3.93 | 0. | -22 | 1.36 | -20. | 0. | -21 | 0.000 | 1 | -20 | 1.22 | 0.000 |
| 713 | 3.93 | 3.93 | 0. | -24 | 1.51 | -23. | 0. | -23 | 0.000 | 0. | -26 | 1.60 | 0.000 |
| 714 | 3.93 | 3.93 | 0. | -28 | 1.71 | -26. | 0. | -26 | 0.000 | 0. | -25 | 1.52 | 0.000 |
| 715 | 3.93 | 3.93 | 19 | -17 | 0.60 | -20. | 14 | -16 | 0.000 | 6 | -13 | 0.62 | 0.000 |
| 716 | 3.93 | 3.93 | 56 | -29 | 0.40 | -39. | 42 | -26 | 0.000 | 27 | -26 | 0.93 | 0.000 |
| 717 | 3.93 | 3.93 | 7 | -9 | 0.34 | -10. | 6 | -9 | 0.000 | 3 | -8 | 0.42 | 0.000 |
| 718 | 3.93 | 3.93 | 49 | -23 | 0.20 | -32. | 37 | -21 | 0.000 | 24 | -18 | 0.50 | 0.000 |
| 719 | 3.93 | 3.93 | 63 | -29 | 0.25 | -41. | 48 | -26 | 0.000 | 38 | -25 | 0.65 | 0.000 |
| 720 | 3.93 | 3.93 | 1 | -8 | 0.46 | -7. | 1 | -8 | 0.000 | 0. | -7 | 0.43 | 0.000 |
| 721 | 3.93 | 3.93 | 51 | -22 | 0.09 | -32. | 39 | -20 | 0.000 | 23 | -16 | 0.43 | 0.000 |
| 722 | 3.93 | 3.93 | 57 | -23 | 0.00 | -34. | 43 | -20 | 0.000 | 36 | -22 | 0.44 | 0.000 |
| 723 | 3.93 | 3.93 | 45 | -21 | 0.21 | -30. | 34 | -19 | 0.000 | 20 | -16 | 0.49 | 0.000 |
| 724 | 3.93 | 3.93 | 45 | -15 | 0.15 | -24. | 34 | -14 | 0.000 | 29 | -15 | 0.22 | 0.000 |
| 725 | 3.93 | 3.93 | 34 | -14 | 0.03 | -20. | 26 | -13 | 0.000 | 14 | -10 | 0.31 | 0.000 |
| 726 | 3.93 | 3.93 | 25 | -6 | 1.09 | 1. | 19 | -6 | 0.000 | 8 | -5 | 0.12 | 0.000 |
| 727 | 3.93 | 3.93 | 44 | -10 | 1.89 | 6. | 32 | -9 | 0.000 | 25 | -10 | 0.03 | 0.000 |
| 728 | 3.93 | 3.93 | 0. | -3 | 0.17 | -3. | 0. | -3 | 0.000 | 0. | -3 | 0.17 | 0.000 |
| 729 | 3.93 | 3.93 | 40 | -12 | 0.21 | -20. | 29 | -12 | 0.000 | 15 | -12 | 0.33 | 0.000 |
| 730 | 3.93 | 3.93 | 2 | -3 | 0.12 | -3. | 0. | -4 | 0.000 | 0. | -3 | 0.18 | 0.000 |
| 731 | 3.93 | 3.93 | 46 | -12 | 2.00 | 1. | 33 | -11 | 0.000 | 26 | -11 | 0.03 | 0.000 |
| 732 | 3.93 | 3.93 | 0. | -3 | 0.18 | -3. | 0. | -3 | 0.000 | 0. | -3 | 0.17 | 0.000 |
| 806 | 3.93 | 3.93 | 2 | -1 | 0.01 | -1. | 1 | -1 | 0.000 | 1 | -2 | 0.09 | 0.000 |
| 807 | 3.93 | 3.93 | 0. | -4 | 0.24 | -4. | 0. | -4 | 0.000 | 2 | -4 | 0.20 | 0.000 |
| 808 | 3.93 | 3.93 | 3 | -3 | 0.12 | -3. | 2 | -3 | 0.000 | 2 | -2 | 0.09 | 0.000 |
| 809 | 3.93 | 3.93 | 0. | -5 | 0.33 | -5. | 0. | -6 | 0.000 | 0. | -6 | 0.35 | 0.000 |
| 810 | 3.93 | 3.93 | 1 | -4 | 0.24 | -4. | 1 | -4 | 0.000 | 1 | -4 | 0.21 | 0.000 |
| 811 | 3.93 | 3.93 | 0. | -4 | 0.25 | -4. | 0. | -4 | 0.000 | 1 | -4 | 0.20 | 0.000 |
| 812 | 3.93 | 3.93 | 1 | -5 | 0.26 | -4. | 1 | -5 | 0.000 | 3 | -4 | 0.20 | 0.000 |
| 813 | 3.93 | 3.93 | 5 | -8 | 0.38 | -9. | 5 | -8 | 0.000 | 5 | -7 | 0.28 | 0.000 |
| 814 | 3.93 | 3.93 | 4 | -4 | 0.16 | -5. | 3 | -4 | 0.000 | 3 | -3 | 0.12 | 0.000 |
| 815 | 3.93 | 3.93 | 2 | -3 | 0.13 | -3. | 2 | -3 | 0.000 | 2 | -3 | 0.13 | 0.000 |

MACROGUSCIO SETTO07

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

| Nome | Descrizione |
|------|----------------------|
| 1 | SLU |
| 2 | SLU VENTOX |
| 3 | SLU VENTOY |
| 6 | SLU con SISMAX PRINC |
| 7 | SLU con SISMAY PRINC |

DATI:

tensione di snervamento acciaio (fyk): 4500 daN/cm2
 coefficiente sicurezza acciaio : 1.15
 deformazione ultima acciaio : 1.97 per mille
 deformazione ultima cls : 3.5 per mille
 rapporto rottura/snervamento (k): 1
 resistenza cilindrica cls (fck): 249 daN/cm2
 coefficiente sicurezza cls : 1.5
 coefficiente riduttivo (alfa): 0.85
 copriferro inferiore (asse armatura): 3 cm
 copriferro superiore (asse armatura): 3 cm
 moltiplicatore sollecitazioni : 1

LEGENDA:

spess = spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
 Af = area disposta al lembo teso, in cm2 al metro
 Afc = area disposta al lembo compresso, in cm2 al metro
 Mom = momento flettente [daNcm/cm]
 Nor = sforzo normale [daN]
 epsC = deformazione cls [per mille]
 epsF = deformazione acciaio [per mille]

<-

L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

| GUSCI | spess | INFERIORE ORIZZONTALE | | | | | | INFERIORE VERTICALE | | | | | |
|-------|-------|-----------------------|------|-----|-----|------|------|---------------------|------|-----|------|------|-------|
| | | Af | Afc | Mom | Nor | epsC | epsF | Af | Afc | Mom | Nor | epsC | epsF |
| 636 | 15 | 3.93 | 3.93 | 0. | -7. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -46. | 0.02 | -0.02 |
| 637 | 15 | 3.93 | 3.93 | 0. | -1. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -28. | 0.01 | -0.01 |
| 638 | 15 | 3.93 | 3.93 | 0. | -3. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -33. | 0.01 | -0.01 |
| 639 | 15 | 3.93 | 3.93 | 0. | -3. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -35. | 0.02 | -0.02 |
| 640 | 15 | 3.93 | 3.93 | 0. | -6. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -37. | 0.02 | -0.02 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|------|----|------|------|-----|-----|------|------|------|------|-----|------|------|-------|
| 641 | 15 | 3.93 | 3.93 | 0. | -7. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -48. | 0.02 | -0.02 |
| 642 | 15 | 3.93 | 3.93 | 26. | -1. | 0.01 | 0.03 | 3.93 | 3.93 | 8. | -32. | 0.02 | -0.01 |
| 643 | 15 | 3.93 | 3.93 | 0. | -5. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -26. | 0.01 | -0.01 |
| 644 | 15 | 3.93 | 3.93 | 0. | -2. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -28. | 0.01 | -0.01 |
| 645 | 15 | 3.93 | 3.93 | 0. | -3. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -32. | 0.01 | -0.01 |
| 646 | 15 | 3.93 | 3.93 | 0. | -6. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -36. | 0.02 | -0.02 |
| 647 | 15 | 3.93 | 3.93 | 18. | -3. | 0.01 | 0.02 | 3.93 | 3.93 | 6. | -41. | 0.02 | -0.02 |
| 648 | 15 | 3.93 | 3.93 | 28. | -2. | 0.01 | 0.03 | 3.93 | 3.93 | 11. | -22. | 0.01 | 0.00 |
| 649 | 15 | 3.93 | 3.93 | 0. | -3. | 0.00 | 0.00 | 3.93 | 3.93 | 8. | -22. | 0.01 | -0.01 |
| 650 | 15 | 3.93 | 3.93 | 0. | -3. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -24. | 0.01 | -0.01 |
| 651 | 15 | 3.93 | 3.93 | 0. | -1. | 0.00 | 0.00 | 3.93 | 3.93 | 0. | -29. | 0.01 | -0.01 |
| 652 | 15 | 3.93 | 3.93 | 0. | -3. | 0.00 | 0.00 | 3.93 | 3.93 | 1. | -33. | 0.01 | -0.01 |
| 653 | 15 | 3.93 | 3.93 | 10. | -2. | 0.00 | 0.01 | 3.93 | 3.93 | 2. | -34. | 0.02 | -0.01 |
| 654 | 15 | 3.93 | 3.93 | 22. | 0. | 0.01 | 0.03 | 3.93 | 3.93 | 11. | -14. | 0.01 | 0.01 |
| 655 | 15 | 3.93 | 3.93 | 8. | 2. | 0.00 | 0.02 | 3.93 | 3.93 | 10. | -17. | 0.01 | 0.00 |
| 656 | 15 | 3.93 | 3.93 | 6. | 1. | 0.00 | 0.01 | 3.93 | 3.93 | 6. | -21. | 0.01 | 0.00 |
| 657 | 15 | 3.93 | 3.93 | 7. | 1. | 0.00 | 0.02 | 3.93 | 3.93 | 3. | -25. | 0.01 | -0.01 |
| 658 | 15 | 3.93 | 3.93 | 7. | 1. | 0.00 | 0.02 | 3.93 | 3.93 | 3. | -27. | 0.01 | -0.01 |
| 659 | 15 | 3.93 | 3.93 | 0. | 1. | 0.00 | 0.01 | 3.93 | 3.93 | 2. | -27. | 0.01 | -0.01 |
| 660 | 15 | 3.93 | 3.93 | 11. | 2. | 0.00 | 0.02 | 3.93 | 3.93 | 10. | -15. | 0.01 | 0.01 |
| 661 | 15 | 3.93 | 3.93 | 14. | 5. | 0.00 | 0.05 | 3.93 | 3.93 | 13. | -12. | 0.01 | 0.01 |
| 662 | 15 | 3.93 | 3.93 | 17. | 5. | 0.00 | 0.05 | 3.93 | 3.93 | 13. | -17. | 0.01 | 0.01 |
| 663 | 15 | 3.93 | 3.93 | 19. | 5. | 0.00 | 0.05 | 3.93 | 3.93 | 10. | -21. | 0.01 | 0.00 |
| 664 | 15 | 3.93 | 3.93 | 12. | 4. | 0.00 | 0.04 | 3.93 | 3.93 | 8. | -22. | 0.01 | -0.01 |
| 665 | 15 | 3.93 | 3.93 | 0. | 3. | 0.00 | 0.02 | 3.93 | 3.93 | 2. | -22. | 0.01 | -0.01 |
| 666 | 15 | 3.93 | 3.93 | 4. | 11. | 0.00 | 0.07 | 3.93 | 3.93 | 13. | -10. | 0.01 | 0.01 |
| 667 | 15 | 3.93 | 3.93 | 17. | 10. | 0.00 | 0.08 | 3.93 | 3.93 | 13. | -15. | 0.01 | 0.01 |
| 733 | 15 | 3.93 | 3.93 | 3. | 3. | 0.00 | 0.02 | 3.93 | 3.93 | 21. | -16. | 0.02 | 0.01 |
| 734 | 15 | 3.93 | 3.93 | 21. | 0. | 0.01 | 0.02 | 3.93 | 3.93 | 12. | -6. | 0.01 | 0.01 |
| 735 | 15 | 3.93 | 3.93 | 18. | 5. | 0.00 | 0.05 | 3.93 | 3.93 | 28. | -17. | 0.02 | 0.02 |
| 736 | 15 | 3.93 | 3.93 | 14. | 3. | 0.00 | 0.03 | 3.93 | 3.93 | 5. | -7. | 0.01 | 0.00 |
| 737 | 15 | 3.93 | 3.93 | 22. | 8. | 0.00 | 0.07 | 3.93 | 3.93 | 20. | -14. | 0.01 | 0.01 |
| 738 | 15 | 3.93 | 3.93 | 19. | 5. | 0.00 | 0.05 | 3.93 | 3.93 | 26. | -17. | 0.02 | 0.02 |
| 739 | 15 | 3.93 | 3.93 | 11. | 17. | 0.00 | 0.11 | 3.93 | 3.93 | 19. | 20. | 0.00 | 0.14 |
| 740 | 15 | 3.93 | 3.93 | 24. | 14. | 0.00 | 0.11 | 3.93 | 3.93 | 19. | -8. | 0.01 | 0.02 |
| 741 | 15 | 3.93 | 3.93 | 17. | 8. | 0.00 | 0.07 | 3.93 | 3.93 | 11. | -11. | 0.01 | 0.01 |
| 742 | 15 | 3.93 | 3.93 | 20. | 9. | 0.00 | 0.08 | 3.93 | 3.93 | 12. | -8. | 0.01 | 0.01 |
| 1005 | 15 | 3.93 | 3.93 | 24. | -1. | 0.01 | 0.03 | 3.93 | 3.93 | 19. | -3. | 0.01 | 0.02 |
| 1006 | 15 | 3.93 | 3.93 | 5. | -1. | 0.00 | 0.00 | 3.93 | 3.93 | 5. | -3. | 0.00 | 0.00 |
| 1007 | 15 | 3.93 | 3.93 | 12. | 6. | 0.00 | 0.05 | 3.93 | 3.93 | 0. | 9. | 0.00 | 0.05 |
| 1008 | 15 | 3.93 | 3.93 | 9. | -7. | 0.01 | 0.01 | 3.93 | 3.93 | 3. | 1. | 0.00 | 0.01 |
| 1009 | 15 | 3.93 | 3.93 | 3. | -2. | 0.00 | 0.00 | 3.93 | 3.93 | 4. | -1. | 0.00 | 0.00 |
| 1010 | 15 | 3.93 | 3.93 | 6. | -1. | 0.00 | 0.01 | 3.93 | 3.93 | 5. | -1. | 0.00 | 0.00 |
| 1011 | 15 | 3.93 | 3.93 | 17. | 14. | 0.00 | 0.11 | 3.93 | 3.93 | 21. | 20. | 0.00 | 0.14 |
| 1012 | 15 | 3.93 | 3.93 | 22. | 12. | 0.00 | 0.10 | 3.93 | 3.93 | 11. | 4. | 0.00 | 0.04 |
| 1013 | 15 | 3.93 | 3.93 | 8. | 3. | 0.00 | 0.03 | 3.93 | 3.93 | 1. | -12. | 0.01 | 0.00 |
| 1014 | 15 | 3.93 | 3.93 | 6. | 5. | 0.00 | 0.04 | 3.93 | 3.93 | 3. | -11. | 0.01 | 0.00 |
| 1015 | 15 | 3.93 | 3.93 | 7. | 6. | 0.00 | 0.04 | 3.93 | 3.93 | 3. | -6. | 0.00 | 0.00 |
| 1016 | 15 | 3.93 | 3.93 | 4. | -2. | 0.00 | 0.00 | 3.93 | 3.93 | 6. | -6. | 0.00 | 0.00 |
| 1017 | 15 | 3.93 | 3.93 | 7. | 3. | 0.00 | 0.02 | 3.93 | 3.93 | 6. | -7. | 0.01 | 0.01 |
| 1018 | 15 | 3.93 | 3.93 | 2. | -2. | 0.00 | 0.00 | 3.93 | 3.93 | 6. | -2. | 0.00 | 0.01 |
| 1019 | 15 | 3.93 | 3.93 | 3. | -1. | 0.00 | 0.00 | 3.93 | 3.93 | 4. | 1. | 0.00 | 0.01 |

| GUSCI | spess | SUPERIORE ORIZZONTALE | | | | SUPERIORE VERTICALE | | | |
|-------|-------|-----------------------|------|-----|-----|---------------------|------|------|------|
| | | Af | Afc | Mom | Nor | epsC | epsF | Af | Afc |
| 636 | 15 | 3.93 | 3.93 | 14. | -7. | 0.01 | 0.01 | 3.93 | 3.93 |
| 637 | 15 | 3.93 | 3.93 | 25. | -1. | 0.01 | 0.03 | 3.93 | 3.93 |
| 638 | 15 | 3.93 | 3.93 | 6. | -3. | 0.00 | 0.01 | 3.93 | 3.93 |
| 639 | 15 | 3.93 | 3.93 | 6. | -3. | 0.00 | 0.01 | 3.93 | 3.93 |
| 640 | 15 | 3.93 | 3.93 | 11. | -6. | 0.01 | 0.01 | 3.93 | 3.93 |
| 641 | 15 | 3.93 | 3.93 | 4. | -7. | 0.00 | 0.01 | 3.93 | 3.93 |
| 642 | 15 | 3.93 | 3.93 | 5. | -4. | 0.00 | 0.00 | 3.93 | 3.93 |
| 643 | 15 | 3.93 | 3.93 | 13. | -5. | 0.01 | 0.01 | 3.93 | 3.93 |
| 644 | 15 | 3.93 | 3.93 | 6. | -2. | 0.00 | 0.01 | 3.93 | 3.93 |
| 645 | 15 | 3.93 | 3.93 | 5. | -3. | 0.00 | 0.00 | 3.93 | 3.93 |
| 646 | 15 | 3.93 | 3.93 | 8. | -6. | 0.01 | 0.01 | 3.93 | 3.93 |
| 647 | 15 | 3.93 | 3.93 | 0. | -6. | 0.00 | 0.00 | 3.93 | 3.93 |
| 648 | 15 | 3.93 | 3.93 | 5. | -1. | 0.00 | 0.00 | 3.93 | 3.93 |
| 649 | 15 | 3.93 | 3.93 | 7. | -3. | 0.00 | 0.01 | 3.93 | 3.93 |
| 650 | 15 | 3.93 | 3.93 | 5. | -3. | 0.00 | 0.00 | 3.93 | 3.93 |
| 651 | 15 | 3.93 | 3.93 | 4. | -1. | 0.00 | 0.00 | 3.93 | 3.93 |
| 652 | 15 | 3.93 | 3.93 | 6. | -3. | 0.00 | 0.01 | 3.93 | 3.93 |
| 653 | 15 | 3.93 | 3.93 | 10. | -1. | 0.00 | 0.01 | 3.93 | 3.93 |
| 654 | 15 | 3.93 | 3.93 | 3. | 1. | 0.00 | 0.01 | 3.93 | 3.93 |
| 655 | 15 | 3.93 | 3.93 | 2. | 2. | 0.00 | 0.02 | 3.93 | 3.93 |
| 656 | 15 | 3.93 | 3.93 | 3. | 0. | 0.00 | 0.00 | 3.93 | 3.93 |
| 657 | 15 | 3.93 | 3.93 | 0. | 1. | 0.00 | 0.01 | 3.93 | 3.93 |
| 658 | 15 | 3.93 | 3.93 | 9. | -1. | 0.00 | 0.01 | 3.93 | 3.93 |
| 659 | 15 | 3.93 | 3.93 | 23. | 1. | 0.01 | 0.03 | 3.93 | 3.93 |
| 660 | 15 | 3.93 | 3.93 | 2. | 2. | 0.00 | 0.01 | 3.93 | 3.93 |
| 661 | 15 | 3.93 | 3.93 | 0. | 5. | 0.00 | 0.03 | 3.93 | 3.93 |
| 662 | 15 | 3.93 | 3.93 | 0. | 5. | 0.00 | 0.03 | 3.93 | 3.93 |
| 663 | 15 | 3.93 | 3.93 | 0. | 5. | 0.00 | 0.03 | 3.93 | 3.93 |
| 664 | 15 | 3.93 | 3.93 | 0. | 4. | 0.00 | 0.03 | 3.93 | 3.93 |
| 665 | 15 | 3.93 | 3.93 | 30. | 2. | 0.00 | 0.05 | 3.93 | 3.93 |
| 666 | 15 | 3.93 | 3.93 | 0. | 11. | 0.00 | 0.07 | 3.93 | 3.93 |
| 667 | 15 | 3.93 | 3.93 | 0. | 10. | 0.00 | 0.06 | 3.93 | 3.93 |
| 733 | 15 | 3.93 | 3.93 | 25. | 2. | 0.00 | 0.04 | 3.93 | 3.93 |
| 734 | 15 | 3.93 | 3.93 | 18. | 1. | 0.00 | 0.02 | 3.93 | 3.93 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|------|------|------|----|----|------|------|----|----|-------|----|----|------|-------|
| 659 | 3.93 | 3.93 | 0. | 0. | 0.00 | 4. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 660 | 3.93 | 3.93 | 11 | 2 | 0.54 | 55. | 10 | 1 | 0.003 | 9 | 1 | 0.47 | 0.002 |
| 661 | 3.93 | 3.93 | 12 | 4 | 0.31 | 81. | 9 | 3 | 0.005 | 9 | 2 | 0.37 | 0.004 |
| 662 | 3.93 | 3.93 | 13 | 4 | 0.32 | 88. | 9 | 3 | 0.005 | 8 | 2 | 0.32 | 0.004 |
| 663 | 3.93 | 3.93 | 13 | 3 | 0.53 | 75. | 9 | 2 | 0.004 | 7 | 2 | 0.23 | 0.004 |
| 664 | 3.93 | 3.93 | 8 | 3 | 0.23 | 56. | 6 | 2 | 0.003 | 5 | 2 | 0.12 | 0.003 |
| 665 | 3.93 | 3.93 | 0. | 1 | 0.00 | 15. | 0. | 1 | 0.001 | 0. | 1 | 0.00 | 0.001 |
| 666 | 3.93 | 3.93 | 8 | 4 | 0.00 | 70. | 7 | 3 | 0.005 | 4 | 2 | 0.00 | 0.003 |
| 667 | 3.93 | 3.93 | 12 | 7 | 0.00 | 120. | 9 | 5 | 0.008 | 8 | 4 | 0.00 | 0.006 |
| 733 | 3.93 | 3.93 | 10 | 2 | 0.41 | 52. | 7 | 1 | 0.003 | 1 | 1 | 0.00 | 0.002 |
| 734 | 3.93 | 3.93 | 18 | 1 | 0.99 | 50. | 13 | 0. | 0.002 | 11 | 0. | 0.62 | 0.001 |
| 735 | 3.93 | 3.93 | 17 | 3 | 0.87 | 80. | 13 | 2 | 0.004 | 10 | 2 | 0.44 | 0.004 |
| 736 | 3.93 | 3.93 | 8 | 2 | 0.34 | 48. | 7 | 2 | 0.003 | 6 | 1 | 0.35 | 0.002 |
| 737 | 3.93 | 3.93 | 18 | 7 | 0.03 | 134. | 12 | 5 | 0.008 | 9 | 4 | 0.00 | 0.007 |
| 738 | 3.93 | 3.93 | 10 | 2 | 0.52 | 47. | 8 | 1 | 0.003 | 8 | 2 | 0.25 | 0.004 |
| 739 | 3.93 | 3.93 | 7 | 12 | 0.00 | 168. | 6 | 9 | 0.012 | 3 | 7 | 0.00 | 0.009 |
| 740 | 3.93 | 3.93 | 20 | 10 | 0.00 | 180. | 13 | 7 | 0.011 | 11 | 6 | 0.00 | 0.009 |
| 741 | 3.93 | 3.93 | 10 | 6 | 0.00 | 102. | 7 | 4 | 0.007 | 6 | 4 | 0.00 | 0.006 |
| 742 | 3.93 | 3.93 | 16 | 6 | 0.00 | 127. | 11 | 4 | 0.007 | 8 | 4 | 0.00 | 0.007 |
| 1005 | 3.93 | 3.93 | 17 | -1 | 0.95 | 32. | 12 | 0. | 0.001 | 8 | -1 | 0.45 | 0.001 |
| 1006 | 3.93 | 3.93 | 1 | -1 | 0.06 | 0. | 2 | 0. | 0.000 | 2 | -1 | 0.10 | 0.000 |
| 1007 | 3.93 | 3.93 | 10 | 5 | 0.00 | 96. | 8 | 4 | 0.006 | 4 | 2 | 0.00 | 0.003 |
| 1008 | 3.93 | 3.93 | 13 | -2 | 0.59 | 6. | 10 | -2 | 0.000 | 9 | -5 | 0.51 | 0.000 |
| 1009 | 3.93 | 3.93 | 6 | 0. | 0.32 | 11. | 5 | -1 | 0.000 | 4 | -1 | 0.17 | 0.000 |
| 1010 | 3.93 | 3.93 | 6 | -3 | 0.31 | -1. | 6 | -1 | 0.000 | 5 | -1 | 0.23 | 0.000 |
| 1011 | 3.93 | 3.93 | 10 | 10 | 0.00 | 150. | 8 | 8 | 0.010 | 5 | 7 | 0.00 | 0.009 |
| 1012 | 3.93 | 3.93 | 17 | 6 | 0.00 | 128. | 13 | 5 | 0.008 | 11 | 3 | 0.44 | 0.005 |
| 1013 | 3.93 | 3.93 | 4 | -1 | 0.18 | 2. | 3 | 0. | 0.000 | 3 | 1 | 0.00 | 0.002 |
| 1014 | 3.93 | 3.93 | 4 | 4 | 0.00 | 59. | 4 | 2 | 0.003 | 3 | 3 | 0.00 | 0.004 |
| 1015 | 3.93 | 3.93 | 4 | 4 | 0.00 | 66. | 4 | 2 | 0.003 | 4 | 3 | 0.00 | 0.004 |
| 1016 | 3.93 | 3.93 | 1 | -3 | 0.24 | -3. | 2 | -3 | 0.000 | 3 | -1 | 0.16 | 0.000 |
| 1017 | 3.93 | 3.93 | 6 | 2 | 0.20 | 39. | 5 | -1 | 0.000 | 4 | 0. | 0.23 | 0.000 |
| 1018 | 3.93 | 3.93 | 4 | -1 | 0.19 | 2. | 3 | 0. | 0.000 | 3 | -1 | 0.15 | 0.000 |
| 1019 | 3.93 | 3.93 | 5 | -1 | 0.21 | 0. | 4 | -1 | 0.000 | 4 | -1 | 0.17 | 0.000 |

ARMATURA INFERIORE VERTICALE

| GUSCI | COMBINAZIONE RARA | | | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|-------------------|------|-----|-----|------|------|-----------------|-----|-------|------------------------|-----|------|-------|
| | Af | Afc | Mom | Nor | σc | σf | Mom | Nor | wkF | Mom | Nor | σc | wkP |
| 636 | 3.93 | 3.93 | 0. | -69 | 4.26 | -64. | 0. | -64 | 0.000 | 0. | -55 | 3.38 | 0.000 |
| 637 | 3.93 | 3.93 | 0. | -42 | 2.59 | -39. | 0. | -40 | 0.000 | 0. | -36 | 2.22 | 0.000 |
| 638 | 3.93 | 3.93 | 0. | -39 | 2.39 | -36. | 0. | -38 | 0.000 | 0. | -38 | 2.37 | 0.000 |
| 639 | 3.93 | 3.93 | 0. | -40 | 2.48 | -37. | 0. | -39 | 0.000 | 0. | -39 | 2.43 | 0.000 |
| 640 | 3.93 | 3.93 | 0. | -47 | 2.94 | -44. | 0. | -45 | 0.000 | 0. | -38 | 2.32 | 0.000 |
| 641 | 3.93 | 3.93 | 0. | -63 | 3.89 | -58. | 0. | -59 | 0.000 | 0. | -51 | 3.16 | 0.000 |
| 642 | 3.93 | 3.93 | 1 | -46 | 2.89 | -43. | 1 | -44 | 0.000 | 3 | -44 | 2.78 | 0.000 |
| 643 | 3.93 | 3.93 | 0. | -35 | 2.19 | -33. | 0. | -34 | 0.000 | 0. | -35 | 2.18 | 0.000 |
| 644 | 3.93 | 3.93 | 0. | -37 | 2.27 | -34. | 0. | -36 | 0.000 | 0. | -35 | 2.17 | 0.000 |
| 645 | 3.93 | 3.93 | 0. | -35 | 2.17 | -33. | 0. | -34 | 0.000 | 0. | -35 | 2.14 | 0.000 |
| 646 | 3.93 | 3.93 | 0. | -38 | 2.37 | -36. | 0. | -37 | 0.000 | 0. | -37 | 2.26 | 0.000 |
| 647 | 3.93 | 3.93 | 6 | -53 | 3.46 | -48. | 6 | -50 | 0.000 | 1 | -45 | 2.80 | 0.000 |
| 648 | 3.93 | 3.93 | 11 | -32 | 2.25 | -27. | 9 | -32 | 0.000 | 10 | -33 | 2.29 | 0.000 |
| 649 | 3.93 | 3.93 | 1 | -33 | 2.06 | -31. | 0. | -32 | 0.000 | 4 | -32 | 2.09 | 0.000 |
| 650 | 3.93 | 3.93 | 0. | -34 | 2.12 | -32. | 0. | -33 | 0.000 | 0. | -32 | 1.99 | 0.000 |
| 651 | 3.93 | 3.93 | 0. | -33 | 2.07 | -31. | 0. | -32 | 0.000 | 0. | -32 | 1.97 | 0.000 |
| 652 | 3.93 | 3.93 | 0. | -35 | 2.13 | -32. | 0. | -33 | 0.000 | 1 | -34 | 2.11 | 0.000 |
| 653 | 3.93 | 3.93 | 3 | -40 | 2.55 | -37. | 4 | -37 | 0.000 | 1 | -38 | 2.38 | 0.000 |
| 654 | 3.93 | 3.93 | 16 | -22 | 1.75 | -17. | 12 | -22 | 0.000 | 11 | -23 | 1.70 | 0.000 |
| 655 | 3.93 | 3.93 | 15 | -26 | 1.98 | -21. | 12 | -26 | 0.000 | 11 | -27 | 1.92 | 0.000 |
| 656 | 3.93 | 3.93 | 12 | -29 | 2.07 | -24. | 8 | -29 | 0.000 | 6 | -29 | 1.93 | 0.000 |
| 657 | 3.93 | 3.93 | 6 | -30 | 2.01 | -27. | 5 | -29 | 0.000 | 3 | -29 | 1.84 | 0.000 |
| 658 | 3.93 | 3.93 | 7 | -31 | 2.10 | -28. | 5 | -30 | 0.000 | 5 | -29 | 1.92 | 0.000 |
| 659 | 3.93 | 3.93 | 0. | -33 | 2.07 | -31. | 1 | -31 | 0.000 | 3 | -31 | 1.96 | 0.000 |
| 660 | 3.93 | 3.93 | 18 | -17 | 1.52 | -12. | 14 | -18 | 0.000 | 11 | -16 | 1.24 | 0.000 |
| 661 | 3.93 | 3.93 | 20 | -23 | 1.94 | -17. | 16 | -22 | 0.000 | 14 | -21 | 1.61 | 0.000 |
| 662 | 3.93 | 3.93 | 22 | -26 | 2.15 | -20. | 16 | -25 | 0.000 | 15 | -24 | 1.84 | 0.000 |
| 663 | 3.93 | 3.93 | 20 | -26 | 2.13 | -20. | 15 | -25 | 0.000 | 12 | -24 | 1.79 | 0.000 |
| 664 | 3.93 | 3.93 | 13 | -25 | 1.89 | -21. | 10 | -24 | 0.000 | 8 | -23 | 1.66 | 0.000 |
| 665 | 3.93 | 3.93 | 0. | -23 | 1.45 | -22. | 0. | -22 | 0.000 | 1 | -22 | 1.42 | 0.000 |
| 666 | 3.93 | 3.93 | 19 | -11 | 1.15 | -6. | 15 | -12 | 0.000 | 11 | -7 | 0.70 | 0.000 |
| 667 | 3.93 | 3.93 | 27 | -18 | 1.76 | -11. | 20 | -17 | 0.000 | 15 | -15 | 1.27 | 0.000 |
| 733 | 3.93 | 3.93 | 44 | -16 | 2.09 | -5. | 32 | -15 | 0.000 | 15 | -14 | 1.24 | 0.000 |
| 734 | 3.93 | 3.93 | 10 | -7 | 0.68 | -4. | 8 | -7 | 0.000 | 8 | -7 | 0.62 | 0.000 |
| 735 | 3.93 | 3.93 | 53 | -19 | 2.50 | -6. | 38 | -18 | 0.000 | 29 | -17 | 1.79 | 0.000 |
| 736 | 3.93 | 3.93 | 0. | -9 | 0.54 | -8. | 0. | -9 | 0.000 | 2 | -9 | 0.57 | 0.000 |
| 737 | 3.93 | 3.93 | 42 | -22 | 2.41 | -12. | 31 | -21 | 0.000 | 23 | -19 | 1.77 | 0.000 |
| 738 | 3.93 | 3.93 | 49 | -21 | 2.51 | -8. | 36 | -19 | 0.000 | 30 | -19 | 1.93 | 0.000 |
| 739 | 3.93 | 3.93 | 29 | -4 | 1.39 | 20. | 20 | -5 | 0.000 | 15 | 3 | 0.71 | 0.005 |
| 740 | 3.93 | 3.93 | 33 | -9 | 1.39 | -1. | 23 | -9 | 0.000 | 20 | -9 | 1.02 | 0.000 |
| 741 | 3.93 | 3.93 | 27 | -17 | 1.76 | -10. | 19 | -16 | 0.000 | 17 | -16 | 1.40 | 0.000 |
| 742 | 3.93 | 3.93 | 27 | -12 | 1.41 | -5. | 19 | -11 | 0.000 | 17 | -13 | 1.21 | 0.000 |
| 1005 | 3.93 | 3.93 | 16 | -3 | 0.70 | 4. | 12 | -3 | 0.000 | 8 | -2 | 0.35 | 0.000 |
| 1006 | 3.93 | 3.93 | 9 | -2 | 0.38 | 0. | 7 | -2 | 0.000 | 5 | -2 | 0.26 | 0.000 |
| 1007 | 3.93 | 3.93 | 0. | 4 | 0.00 | 54. | 0. | 3 | 0.003 | 0. | 2 | 0.00 | 0.003 |
| 1008 | 3.93 | 3.93 | 0. | 0. | 0.00 | 1. | 0. | 0. | 0.000 | 1 | -1 | 0.08 | 0.000 |
| 1009 | 3.93 | 3.93 | 5 | 0. | 0.26 | 7. | 4 | -1 | 0.000 | 4 | -1 | 0.18 | 0.000 |
| 1010 | 3.93 | 3.93 | 3 | 0. | 0.17 | 3. | 3 | 0. | 0.000 | 4 | -1 | 0.15 | 0.000 |
| 1011 | 3.93 | 3.93 | 12 | 7 | 0.00 | 119. | 10 | 4 | 0.006 | 11 | 5 | 0.00 | 0.008 |
| 1012 | 3.93 | 3.93 | 10 | 0. | 0.54 | 19. | 9 | -2 | 0.000 | 8 | -2 | 0.37 | 0.000 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|------|------|------|----|-----|------|------|----|-----|-------|----|-----|------|-------|
| 1013 | 3.93 | 3.93 | 0. | -11 | 0.67 | -10. | 0. | -11 | 0.000 | 0. | -11 | 0.69 | 0.000 |
| 1014 | 3.93 | 3.93 | 1 | -13 | 0.85 | -12. | 1 | -13 | 0.000 | 2 | -13 | 0.87 | 0.000 |
| 1015 | 3.93 | 3.93 | 2 | -6 | 0.42 | -5. | 3 | -7 | 0.000 | 3 | -7 | 0.51 | 0.000 |
| 1016 | 3.93 | 3.93 | 7 | -3 | 0.36 | -1. | 6 | -3 | 0.000 | 5 | -4 | 0.38 | 0.000 |
| 1017 | 3.93 | 3.93 | 7 | -8 | 0.68 | -6. | 6 | -6 | 0.000 | 6 | -6 | 0.53 | 0.000 |
| 1018 | 3.93 | 3.93 | 5 | -3 | 0.31 | -1. | 5 | -3 | 0.000 | 5 | -3 | 0.28 | 0.000 |
| 1019 | 3.93 | 3.93 | 3 | 1 | 0.13 | 18. | 3 | 0. | 0.001 | 3 | 0. | 0.16 | 0.001 |

ARMATURA SUPERIORE ORIZZONTALE

| GUSCI | Af | Afc | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------------|------------|-----------------|-----|-------|--|------------------------|-----|------------|-------|
| | | | Mom | Nor | σ_c | σ_f | Mom | Nor | wkF | | Mom | Nor | σ_c | wkP |
| 636 | 3.93 | 3.93 | 6 | -5 | 0.14 | -6. | 6 | -4 | 0.000 | | 8 | -7 | 0.26 | 0.000 |
| 637 | 3.93 | 3.93 | 20 | -6 | 0.10 | -10. | 17 | -5 | 0.000 | | 16 | -6 | 0.03 | 0.000 |
| 638 | 3.93 | 3.93 | 9 | -6 | 0.13 | -7. | 8 | -6 | 0.000 | | 8 | -6 | 0.20 | 0.000 |
| 639 | 3.93 | 3.93 | 9 | -5 | 0.09 | -6. | 7 | -5 | 0.000 | | 8 | -6 | 0.13 | 0.000 |
| 640 | 3.93 | 3.93 | 17 | -4 | 0.73 | 3. | 15 | -4 | 0.000 | | 13 | -4 | 0.06 | 0.000 |
| 641 | 3.93 | 3.93 | 6 | -3 | 0.06 | -4. | 6 | -3 | 0.000 | | 4 | -6 | 0.28 | 0.000 |
| 642 | 3.93 | 3.93 | 0. | -1 | 0.07 | -1. | 0. | 0. | 0.000 | | 0. | -2 | 0.15 | 0.000 |
| 643 | 3.93 | 3.93 | 15 | -7 | 0.05 | -9. | 14 | -5 | 0.000 | | 11 | -4 | 0.01 | 0.000 |
| 644 | 3.93 | 3.93 | 9 | -8 | 0.24 | -9. | 8 | -7 | 0.000 | | 9 | -7 | 0.23 | 0.000 |
| 645 | 3.93 | 3.93 | 7 | -5 | 0.15 | -6. | 6 | -5 | 0.000 | | 7 | -5 | 0.13 | 0.000 |
| 646 | 3.93 | 3.93 | 11 | -3 | 0.48 | 0. | 10 | -3 | 0.000 | | 8 | -2 | 0.06 | 0.000 |
| 647 | 3.93 | 3.93 | 0. | -2 | 0.11 | -2. | 0. | -2 | 0.000 | | 0. | -4 | 0.22 | 0.000 |
| 648 | 3.93 | 3.93 | 0. | -1 | 0.06 | -1. | 0. | -1 | 0.000 | | 0. | -1 | 0.06 | 0.000 |
| 649 | 3.93 | 3.93 | 9 | -3 | 0.02 | -5. | 8 | -2 | 0.000 | | 7 | -1 | 0.33 | 0.000 |
| 650 | 3.93 | 3.93 | 4 | -5 | 0.19 | -5. | 5 | -4 | 0.000 | | 6 | -4 | 0.10 | 0.000 |
| 651 | 3.93 | 3.93 | 5 | -2 | 0.02 | -3. | 5 | -2 | 0.000 | | 5 | -2 | 0.01 | 0.000 |
| 652 | 3.93 | 3.93 | 9 | -4 | 0.03 | -6. | 7 | 0. | 0.001 | | 7 | -3 | 0.01 | 0.000 |
| 653 | 3.93 | 3.93 | 6 | -1 | 0.27 | 3. | 0. | -1 | 0.000 | | 2 | -1 | 0.00 | 0.000 |
| 654 | 3.93 | 3.93 | 2 | 1 | 0.00 | 16. | 0. | 0. | 0.000 | | 1 | 0. | 0.03 | 0.000 |
| 655 | 3.93 | 3.93 | 4 | 1 | 0.18 | 16. | 4 | 0. | 0.001 | | 5 | 0. | 0.26 | 0.000 |
| 656 | 3.93 | 3.93 | 0. | 1 | 0.00 | 9. | 0. | 0. | 0.000 | | 2 | -1 | 0.01 | 0.000 |
| 657 | 3.93 | 3.93 | 0. | 1 | 0.00 | 11. | 0. | 0. | 0.000 | | 0. | -1 | 0.04 | 0.000 |
| 658 | 3.93 | 3.93 | 2 | 1 | 0.00 | 14. | 2 | 0. | 0.001 | | 4 | 0. | 0.24 | 0.000 |
| 659 | 3.93 | 3.93 | 17 | 0. | 0.98 | 44. | 12 | 0. | 0.002 | | 9 | 0. | 0.50 | 0.001 |
| 660 | 3.93 | 3.93 | 2 | 2 | 0.00 | 32. | 0. | 1 | 0.002 | | 1 | 1 | 0.00 | 0.001 |
| 661 | 3.93 | 3.93 | 0. | 4 | 0.00 | 48. | 0. | 3 | 0.003 | | 0. | 2 | 0.00 | 0.002 |
| 662 | 3.93 | 3.93 | 0. | 4 | 0.00 | 52. | 0. | 3 | 0.004 | | 0. | 2 | 0.00 | 0.002 |
| 663 | 3.93 | 3.93 | 0. | 3 | 0.00 | 40. | 0. | 2 | 0.003 | | 0. | 2 | 0.00 | 0.002 |
| 664 | 3.93 | 3.93 | 0. | 3 | 0.00 | 33. | 0. | 2 | 0.002 | | 0. | 2 | 0.00 | 0.002 |
| 665 | 3.93 | 3.93 | 16 | 1 | 0.90 | 54. | 12 | 1 | 0.003 | | 10 | 1 | 0.56 | 0.003 |
| 666 | 3.93 | 3.93 | 0. | 4 | 0.00 | 48. | 0. | 3 | 0.003 | | 0. | 2 | 0.00 | 0.003 |
| 667 | 3.93 | 3.93 | 0. | 7 | 0.00 | 87. | 0. | 5 | 0.006 | | 0. | 4 | 0.00 | 0.005 |
| 733 | 3.93 | 3.93 | 7 | 2 | 0.20 | 46. | 5 | 1 | 0.003 | | 10 | 1 | 0.50 | 0.003 |
| 734 | 3.93 | 3.93 | 8 | 1 | 0.43 | 27. | 6 | 0. | 0.001 | | 7 | 0. | 0.38 | 0.001 |
| 735 | 3.93 | 3.93 | 0. | 3 | 0.00 | 36. | 0. | 2 | 0.002 | | 0. | 2 | 0.00 | 0.003 |
| 736 | 3.93 | 3.93 | 14 | 2 | 0.69 | 60. | 9 | 2 | 0.003 | | 8 | 1 | 0.46 | 0.002 |
| 737 | 3.93 | 3.93 | 0. | 7 | 0.00 | 84. | 0. | 5 | 0.006 | | 0. | 4 | 0.00 | 0.005 |
| 738 | 3.93 | 3.93 | 0. | 2 | 0.00 | 21. | 0. | 1 | 0.001 | | 0. | 2 | 0.00 | 0.003 |
| 739 | 3.93 | 3.93 | 0. | 12 | 0.00 | 147. | 0. | 9 | 0.011 | | 0. | 7 | 0.00 | 0.009 |
| 740 | 3.93 | 3.93 | 0. | 10 | 0.00 | 125. | 0. | 7 | 0.008 | | 0. | 6 | 0.00 | 0.007 |
| 741 | 3.93 | 3.93 | 0. | 6 | 0.00 | 73. | 0. | 4 | 0.005 | | 0. | 4 | 0.00 | 0.005 |
| 742 | 3.93 | 3.93 | 0. | 6 | 0.00 | 83. | 0. | 4 | 0.005 | | 0. | 4 | 0.00 | 0.005 |
| 1005 | 3.93 | 3.93 | 0. | -1 | 0.04 | -1. | 0. | 0. | 0.000 | | 0. | -1 | 0.03 | 0.000 |
| 1006 | 3.93 | 3.93 | 15 | -1 | 0.80 | 27. | 10 | 0. | 0.001 | | 8 | -1 | 0.43 | 0.000 |
| 1007 | 3.93 | 3.93 | 0. | 5 | 0.00 | 67. | 0. | 4 | 0.005 | | 0. | 2 | 0.00 | 0.003 |
| 1008 | 3.93 | 3.93 | 0. | -2 | 0.13 | -2. | 0. | -2 | 0.000 | | 0. | -5 | 0.30 | 0.000 |
| 1009 | 3.93 | 3.93 | 3 | 0. | 0.15 | 5. | 2 | -1 | 0.000 | | 2 | -1 | 0.01 | 0.000 |
| 1010 | 3.93 | 3.93 | 2 | -3 | 0.12 | -3. | 1 | -1 | 0.000 | | 1 | -1 | 0.07 | 0.000 |
| 1011 | 3.93 | 3.93 | 0. | 10 | 0.00 | 123. | 0. | 8 | 0.009 | | 0. | 7 | 0.00 | 0.008 |
| 1012 | 3.93 | 3.93 | 0. | 6 | 0.00 | 81. | 0. | 5 | 0.005 | | 0. | 3 | 0.00 | 0.003 |
| 1013 | 3.93 | 3.93 | 11 | -1 | 0.58 | 18. | 7 | 0. | 0.001 | | 1 | 1 | 0.00 | 0.002 |
| 1014 | 3.93 | 3.93 | 0. | 4 | 0.00 | 47. | 0. | 2 | 0.003 | | 0. | 3 | 0.00 | 0.003 |
| 1015 | 3.93 | 3.93 | 0. | 4 | 0.00 | 54. | 0. | 2 | 0.002 | | 0. | 3 | 0.00 | 0.004 |
| 1016 | 3.93 | 3.93 | 14 | -3 | 0.61 | 2. | 10 | -3 | 0.000 | | 8 | -1 | 0.33 | 0.000 |
| 1017 | 3.93 | 3.93 | 5 | 2 | 0.03 | 36. | 4 | -1 | 0.000 | | 4 | 0. | 0.21 | 0.000 |
| 1018 | 3.93 | 3.93 | 2 | -1 | 0.10 | 0. | 2 | 0. | 0.000 | | 2 | -1 | 0.03 | 0.000 |
| 1019 | 3.93 | 3.93 | 2 | -1 | 0.05 | -2. | 1 | -1 | 0.000 | | 1 | -1 | 0.04 | 0.000 |

ARMATURA SUPERIORE VERTICALE

| GUSCI | Af | Afc | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------------|------------|-----------------|-----|-------|--|------------------------|-----|------------|-------|
| | | | Mom | Nor | σ_c | σ_f | Mom | Nor | wkF | | Mom | Nor | σ_c | wkP |
| 636 | 3.93 | 3.93 | 110 | -69 | 1.56 | -88. | 100 | -64 | 0.000 | | 81 | -55 | 1.40 | 0.000 |
| 637 | 3.93 | 3.93 | 82 | -42 | 0.58 | -57. | 73 | -40 | 0.000 | | 59 | -36 | 0.76 | 0.000 |
| 638 | 3.93 | 3.93 | 57 | -39 | 0.98 | -48. | 50 | -38 | 0.000 | | 43 | -38 | 1.32 | 0.000 |
| 639 | 3.93 | 3.93 | 52 | -40 | 1.20 | -49. | 45 | -39 | 0.000 | | 40 | -39 | 1.46 | 0.000 |
| 640 | 3.93 | 3.93 | 60 | -47 | 1.46 | -57. | 54 | -45 | 0.000 | | 47 | -38 | 1.16 | 0.000 |
| 641 | 3.93 | 3.93 | 78 | -63 | 1.98 | -76. | 72 | -59 | 0.000 | | 56 | -51 | 1.79 | 0.000 |
| 642 | 3.93 | 3.93 | 5 | -46 | 2.74 | -44. | 3 | -44 | 0.000 | | 1 | -44 | 2.69 | 0.000 |
| 643 | 3.93 | 3.93 | 22 | -35 | 1.64 | -38. | 20 | -34 | 0.000 | | 14 | -35 | 1.84 | 0.000 |
| 644 | 3.93 | 3.93 | 27 | -37 | 1.60 | -40. | 24 | -36 | 0.000 | | 20 | -35 | 1.67 | 0.000 |
| 645 | 3.93 | 3.93 | 25 | -35 | 1.55 | -38. | 22 | -34 | 0.000 | | 18 | -35 | 1.69 | 0.000 |
| 646 | 3.93 | 3.93 | 18 | -38 | 1.92 | -40. | 16 | -37 | 0.000 | | 12 | -37 | 1.95 | 0.000 |
| 647 | 3.93 | 3.93 | 0. | -53 | 3.30 | -50. | 0. | -50 | 0.000 | | 1 | -45 | 2.74 | 0.000 |
| 648 | 3.93 | 3.93 | 2 | -32 | 1.92 | -30. | 1 | -32 | 0.000 | | 3 | -33 | 1.98 | 0.000 |
| 649 | 3.93 | 3.93 | 8 | -33 | 1.86 | -32. | 6 | -32 | 0.000 | | 5 | -32 | 1.87 | 0.000 |

| | | | | | | | | | | | | | |
|------|------|------|----|-----|------|------|----|-----|-------|----|-----|------|-------|
| 650 | 3.93 | 3.93 | 8 | -34 | 1.92 | -33. | 7 | -33 | 0.000 | 6 | -32 | 1.85 | 0.000 |
| 651 | 3.93 | 3.93 | 11 | -33 | 1.80 | -33. | 9 | -32 | 0.000 | 7 | -32 | 1.79 | 0.000 |
| 652 | 3.93 | 3.93 | 12 | -35 | 1.85 | -35. | 9 | -33 | 0.000 | 8 | -34 | 1.90 | 0.000 |
| 653 | 3.93 | 3.93 | 10 | -40 | 2.23 | -39. | 6 | -37 | 0.000 | 3 | -38 | 2.27 | 0.000 |
| 654 | 3.93 | 3.93 | 3 | -22 | 1.31 | -21. | 2 | -22 | 0.000 | 1 | -23 | 1.39 | 0.000 |
| 655 | 3.93 | 3.93 | 1 | -26 | 1.59 | -24. | 1 | -26 | 0.000 | 1 | -27 | 1.63 | 0.000 |
| 656 | 3.93 | 3.93 | 0. | -29 | 1.79 | -27. | 0. | -29 | 0.000 | 0. | -29 | 1.77 | 0.000 |
| 657 | 3.93 | 3.93 | 0. | -30 | 1.87 | -28. | 0. | -29 | 0.000 | 0. | -29 | 1.77 | 0.000 |
| 658 | 3.93 | 3.93 | 2 | -31 | 1.89 | -30. | 3 | -30 | 0.000 | 4 | -29 | 1.71 | 0.000 |
| 659 | 3.93 | 3.93 | 7 | -33 | 1.89 | -32. | 5 | -31 | 0.000 | 5 | -31 | 1.76 | 0.000 |
| 660 | 3.93 | 3.93 | 0. | -17 | 1.07 | -16. | 0. | -18 | 0.000 | 0. | -16 | 0.96 | 0.000 |
| 661 | 3.93 | 3.93 | 0. | -23 | 1.44 | -22. | 0. | -22 | 0.000 | 0. | -21 | 1.27 | 0.000 |
| 662 | 3.93 | 3.93 | 0. | -26 | 1.62 | -24. | 0. | -25 | 0.000 | 0. | -24 | 1.48 | 0.000 |
| 663 | 3.93 | 3.93 | 0. | -26 | 1.63 | -24. | 0. | -25 | 0.000 | 0. | -24 | 1.50 | 0.000 |
| 664 | 3.93 | 3.93 | 0. | -25 | 1.57 | -24. | 0. | -24 | 0.000 | 0. | -23 | 1.45 | 0.000 |
| 665 | 3.93 | 3.93 | 5 | -23 | 1.32 | -23. | 4 | -22 | 0.000 | 3 | -22 | 1.31 | 0.000 |
| 666 | 3.93 | 3.93 | 0. | -11 | 0.68 | -10. | 0. | -12 | 0.000 | 0. | -7 | 0.43 | 0.000 |
| 667 | 3.93 | 3.93 | 0. | -18 | 1.11 | -17. | 0. | -17 | 0.000 | 0. | -15 | 0.90 | 0.000 |
| 733 | 3.93 | 3.93 | 0. | -16 | 1.00 | -15. | 0. | -15 | 0.000 | 0. | -14 | 0.87 | 0.000 |
| 734 | 3.93 | 3.93 | 18 | -7 | 0.02 | -10. | 13 | -7 | 0.000 | 8 | -7 | 0.22 | 0.000 |
| 735 | 3.93 | 3.93 | 0. | -19 | 1.20 | -18. | 0. | -18 | 0.000 | 0. | -17 | 1.07 | 0.000 |
| 736 | 3.93 | 3.93 | 23 | -9 | 0.02 | -13. | 16 | -9 | 0.000 | 14 | -9 | 0.20 | 0.000 |
| 737 | 3.93 | 3.93 | 0. | -22 | 1.38 | -21. | 0. | -21 | 0.000 | 0. | -19 | 1.20 | 0.000 |
| 738 | 3.93 | 3.93 | 0. | -21 | 1.29 | -19. | 0. | -19 | 0.000 | 0. | -19 | 1.18 | 0.000 |
| 739 | 3.93 | 3.93 | 0. | -4 | 0.24 | -4. | 0. | -5 | 0.000 | 0. | 3 | 0.00 | 0.003 |
| 740 | 3.93 | 3.93 | 0. | -9 | 0.58 | -9. | 0. | -9 | 0.000 | 0. | -9 | 0.53 | 0.000 |
| 741 | 3.93 | 3.93 | 0. | -17 | 1.08 | -16. | 0. | -16 | 0.000 | 0. | -16 | 0.98 | 0.000 |
| 742 | 3.93 | 3.93 | 0. | -12 | 0.73 | -11. | 0. | -11 | 0.000 | 0. | -13 | 0.79 | 0.000 |
| 1005 | 3.93 | 3.93 | 0. | -3 | 0.19 | -3. | 0. | -3 | 0.000 | 0. | -2 | 0.14 | 0.000 |
| 1006 | 3.93 | 3.93 | 6 | -2 | 0.02 | -4. | 5 | -2 | 0.000 | 4 | -2 | 0.04 | 0.000 |
| 1007 | 3.93 | 3.93 | 5 | 4 | 0.00 | 69. | 4 | 3 | 0.004 | 3 | 2 | 0.00 | 0.003 |
| 1008 | 3.93 | 3.93 | 4 | 0. | 0.24 | 11. | 3 | 0. | 0.000 | 1 | -1 | 0.01 | 0.000 |
| 1009 | 3.93 | 3.93 | 3 | 0. | 0.13 | 2. | 2 | -1 | 0.000 | 2 | -1 | 0.04 | 0.000 |
| 1010 | 3.93 | 3.93 | 2 | 0. | 0.10 | 1. | 2 | 0. | 0.000 | 1 | -1 | 0.03 | 0.000 |
| 1011 | 3.93 | 3.93 | 0. | 7 | 0.00 | 85. | 0. | 4 | 0.004 | 0. | 5 | 0.00 | 0.006 |
| 1012 | 3.93 | 3.93 | 0. | 0. | 0.02 | 0. | 0. | -2 | 0.000 | 0. | -2 | 0.14 | 0.000 |
| 1013 | 3.93 | 3.93 | 22 | -11 | 0.14 | -15. | 15 | -11 | 0.000 | 10 | -11 | 0.43 | 0.000 |
| 1014 | 3.93 | 3.93 | 9 | -13 | 0.62 | -14. | 6 | -13 | 0.000 | 2 | -13 | 0.75 | 0.000 |
| 1015 | 3.93 | 3.93 | 5 | -6 | 0.25 | -7. | 3 | -7 | 0.000 | 3 | -7 | 0.37 | 0.000 |
| 1016 | 3.93 | 3.93 | 7 | -3 | 0.01 | -5. | 5 | -3 | 0.000 | 5 | -4 | 0.14 | 0.000 |
| 1017 | 3.93 | 3.93 | 6 | -8 | 0.35 | -9. | 5 | -6 | 0.000 | 4 | -6 | 0.29 | 0.000 |
| 1018 | 3.93 | 3.93 | 0. | -3 | 0.17 | -3. | 0. | -3 | 0.000 | 0. | -3 | 0.17 | 0.000 |
| 1019 | 3.93 | 3.93 | 2 | 1 | 0.00 | 14. | 1 | 0. | 0.001 | 1 | 0. | 0.07 | 0.000 |

VERIFICA DELLA SOLETTA

MACROGUSCIO SOLETTA01

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

| Nome | Descrizione |
|------|----------------------|
| 1 | SLU |
| 2 | SLU VENTOX |
| 3 | SLU VENTOY |
| 6 | SLU con SISMAX PRINC |
| 7 | SLU con SISMAX PRINC |

DATI:

tensione di snervamento acciaio (fyk): 4500 daN/cm2
 coefficiente sicurezza acciaio : 1.15
 deformazione ultima acciaio : 1.97 per mille
 deformazione ultima cls : 3.5 per mille
 rapporto rottura/snervamento (k): 1
 resistenza cilindrica cls (fck): 249 daN/cm2
 coefficiente sicurezza cls : 1.5
 coefficiente riduttivo (alfa): 0.85
 copriferro inferiore (asse armatura): 3 cm
 copriferro superiore (asse armatura): 3 cm
 moltiplicatore sollecitazioni : 1

LEGENDA:

spess = spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
 Af = area disposta al lembo teso, in cm2 al metro
 Afc = area disposta al lembo compresso, in cm2 al metro
 Mom = momento flettente [daNcm/cm]
 Nor = sforzo normale [daN]
 epsC = deformazione cls [per mille]
 epsF = deformazione acciaio [per mille]

<- L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

| INFERIORE ORIZZONTALE | | | | | | | INFERIORE VERTICALE | | | | | |
|-----------------------|----|-----|-----|-----|------|------|---------------------|-----|-----|-----|------|------|
| GUSCI spess | Af | Afc | Mom | Nor | epsC | epsF | Af | Afc | Mom | Nor | epsC | epsF |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|----|------|------|------|-----|------|------|------|------|------|------|------|-------|
| 565 | 15 | 3.93 | 3.93 | 292. | 2. | 0.11 | 0.34 | 3.93 | 3.93 | 337. | 0. | 0.14 | 0.37 |
| 566 | 15 | 3.93 | 3.93 | 335. | 4. | 0.12 | 0.39 | 3.93 | 3.93 | 389. | -1. | 0.16 | 0.43 |
| 567 | 15 | 3.93 | 3.93 | 284. | 4. | 0.10 | 0.34 | 3.93 | 3.93 | 424. | 0. | 0.17 | 0.47 |
| 568 | 15 | 3.93 | 3.93 | 257. | 4. | 0.08 | 0.31 | 3.93 | 3.93 | 460. | 1. | 0.18 | 0.52 |
| 569 | 15 | 3.93 | 3.93 | 224. | 3. | 0.07 | 0.27 | 3.93 | 3.93 | 350. | -1. | 0.14 | 0.39 |
| 570 | 15 | 3.93 | 3.93 | 222. | 2. | 0.08 | 0.26 | 3.93 | 3.93 | 281. | 1. | 0.11 | 0.32 |
| 571 | 15 | 3.93 | 3.93 | 363. | 3. | 0.13 | 0.42 | 3.93 | 3.93 | 427. | 0. | 0.17 | 0.47 |
| 572 | 15 | 3.93 | 3.93 | 404. | 2. | 0.15 | 0.46 | 3.93 | 3.93 | 557. | -1. | 0.22 | 0.62 |
| 573 | 15 | 3.93 | 3.93 | 283. | 1. | 0.11 | 0.32 | 3.93 | 3.93 | 492. | -1. | 0.20 | 0.55 |
| 574 | 15 | 3.93 | 3.93 | 168. | 4. | 0.05 | 0.21 | 3.93 | 3.93 | 291. | 1. | 0.11 | 0.33 |
| 575 | 15 | 3.93 | 3.93 | 287. | 1. | 0.11 | 0.33 | 3.93 | 3.93 | 314. | 2. | 0.11 | 0.36 |
| 576 | 15 | 3.93 | 3.93 | 408. | 0. | 0.16 | 0.46 | 3.93 | 3.93 | 387. | 0. | 0.16 | 0.43 |
| 577 | 15 | 3.93 | 3.93 | 417. | 1. | 0.16 | 0.47 | 3.93 | 3.93 | 400. | -3. | 0.16 | 0.44 |
| 578 | 15 | 3.93 | 3.93 | 319. | 0. | 0.13 | 0.36 | 3.93 | 3.93 | 329. | -2. | 0.13 | 0.36 |
| 579 | 15 | 3.93 | 3.93 | 279. | 4. | 0.09 | 0.33 | 3.93 | 3.93 | 255. | 0. | 0.10 | 0.28 |
| 580 | 15 | 3.93 | 3.93 | 306. | -1. | 0.12 | 0.34 | 3.93 | 3.93 | 262. | 1. | 0.10 | 0.30 |
| 581 | 15 | 3.93 | 3.93 | 373. | -1. | 0.15 | 0.41 | 3.93 | 3.93 | 253. | -1. | 0.10 | 0.28 |
| 582 | 15 | 3.93 | 3.93 | 293. | -1. | 0.12 | 0.32 | 3.93 | 3.93 | 124. | -2. | 0.05 | 0.14 |
| 583 | 15 | 3.93 | 3.93 | 202. | 0. | 0.08 | 0.23 | 3.93 | 3.93 | 53. | 3. | 0.01 | 0.08 |
| 584 | 15 | 3.93 | 3.93 | 250. | 3. | 0.09 | 0.30 | 3.93 | 3.93 | 140. | 3. | 0.04 | 0.18 |
| 585 | 15 | 3.93 | 3.93 | 213. | 0. | 0.09 | 0.24 | 3.93 | 3.93 | 97. | 4. | 0.02 | 0.13 |
| 586 | 15 | 3.93 | 3.93 | 176. | -1. | 0.07 | 0.19 | 3.93 | 3.93 | 18. | 3. | 0.00 | 0.04 |
| 587 | 15 | 3.93 | 3.93 | 118. | -6. | 0.05 | 0.13 | 3.93 | 3.93 | 0. | 2. | 0.00 | 0.01 |
| 588 | 15 | 3.93 | 3.93 | 2. | 6. | 0.00 | 0.04 | 3.93 | 3.93 | 0. | 4. | 0.00 | 0.02 |
| 589 | 15 | 3.93 | 3.93 | 130. | 1. | 0.05 | 0.15 | 3.93 | 3.93 | 42. | 3. | 0.00 | 0.06 |
| 590 | 15 | 3.93 | 3.93 | 261. | 2. | 0.10 | 0.30 | 3.93 | 3.93 | 182. | 1. | 0.07 | 0.21 |
| 591 | 15 | 3.93 | 3.93 | 245. | 4. | 0.08 | 0.29 | 3.93 | 3.93 | 136. | 3. | 0.04 | 0.17 |
| 592 | 15 | 3.93 | 3.93 | 174. | 7. | 0.03 | 0.23 | 3.93 | 3.93 | 68. | 5. | 0.00 | 0.10 |
| 593 | 15 | 3.93 | 3.93 | 214. | 5. | 0.06 | 0.27 | 3.93 | 3.93 | 150. | -1. | 0.06 | 0.17 |
| 594 | 15 | 3.93 | 3.93 | 209. | 4. | 0.06 | 0.26 | 3.93 | 3.93 | 200. | 2. | 0.07 | 0.23 |
| 595 | 15 | 3.93 | 3.93 | 100. | 3. | 0.03 | 0.13 | 3.93 | 3.93 | 149. | 3. | 0.04 | 0.18 |
| 596 | 15 | 3.93 | 3.93 | 31. | 3. | 0.00 | 0.05 | 3.93 | 3.93 | 200. | 1. | 0.07 | 0.23 |
| 597 | 15 | 3.93 | 3.93 | 0. | 6. | 0.00 | 0.04 | 3.93 | 3.93 | 83. | 4. | 0.01 | 0.12 |
| 598 | 15 | 3.93 | 3.93 | 24. | 5. | 0.00 | 0.06 | 3.93 | 3.93 | 133. | 5. | 0.02 | 0.18 |
| 599 | 15 | 3.93 | 3.93 | 93. | 5. | 0.01 | 0.13 | 3.93 | 3.93 | 62. | 6. | 0.00 | 0.10 |
| 600 | 15 | 3.93 | 3.93 | 95. | 3. | 0.02 | 0.13 | 3.93 | 3.93 | 144. | 6. | 0.03 | 0.20 |
| 601 | 15 | 3.93 | 3.93 | 113. | 1. | 0.04 | 0.13 | 3.93 | 3.93 | 100. | 4. | 0.02 | 0.14 |
| 602 | 15 | 3.93 | 3.93 | 64. | 0. | 0.03 | 0.07 | 3.93 | 3.93 | 208. | 4. | 0.06 | 0.25 |
| 603 | 15 | 3.93 | 3.93 | 0. | 5. | 0.00 | 0.03 | 3.93 | 3.93 | 146. | 3. | 0.04 | 0.18 |
| 604 | 15 | 3.93 | 3.93 | 0. | 5. | 0.00 | 0.03 | 3.93 | 3.93 | 93. | 2. | 0.03 | 0.12 |
| 605 | 15 | 3.93 | 3.93 | 124. | 6. | 0.02 | 0.17 | 3.93 | 3.93 | 157. | 2. | 0.05 | 0.19 |
| 606 | 15 | 3.93 | 3.93 | 22. | 3. | 0.00 | 0.04 | 3.93 | 3.93 | 211. | 2. | 0.07 | 0.25 |
| 607 | 15 | 3.93 | 3.93 | 48. | -7. | 0.02 | 0.05 | 3.93 | 3.93 | 0. | -15. | 0.01 | -0.01 |
| 608 | 15 | 3.93 | 3.93 | 30. | -1. | 0.01 | 0.03 | 3.93 | 3.93 | 0. | -12. | 0.01 | -0.01 |
| 609 | 15 | 3.93 | 3.93 | 65. | 8. | 0.00 | 0.12 | 3.93 | 3.93 | 27. | 4. | 0.00 | 0.05 |
| 610 | 15 | 3.93 | 3.93 | 138. | 10. | 0.00 | 0.22 | 3.93 | 3.93 | 54. | 3. | 0.00 | 0.08 |
| 846 | 15 | 3.93 | 3.93 | 56. | -1. | 0.02 | 0.06 | 3.93 | 3.93 | 15. | -8. | 0.01 | 0.01 |
| 847 | 15 | 3.93 | 3.93 | 0. | 5. | 0.00 | 0.03 | 3.93 | 3.93 | 10. | -6. | 0.01 | 0.01 |
| 848 | 15 | 3.93 | 3.93 | 40. | -3. | 0.02 | 0.06 | 3.93 | 3.93 | 57. | -12. | 0.03 | 0.06 |
| 849 | 15 | 3.93 | 3.93 | 20. | -5. | 0.01 | 0.02 | 3.93 | 3.93 | 81. | -18. | 0.04 | 0.08 |
| 850 | 15 | 3.93 | 3.93 | 20. | 14. | 0.00 | 0.10 | 3.93 | 3.93 | 33. | 8. | 0.00 | 0.09 |
| 851 | 15 | 3.93 | 3.93 | 17. | 11. | 0.00 | 0.09 | 3.93 | 3.93 | 45. | 3. | 0.01 | 0.07 |
| 893 | 15 | 3.93 | 3.93 | 199. | 3. | 0.06 | 0.24 | 3.93 | 3.93 | 501. | 3. | 0.19 | 0.57 |
| 894 | 15 | 3.93 | 3.93 | 300. | 3. | 0.11 | 0.35 | 3.93 | 3.93 | 540. | 2. | 0.21 | 0.62 |
| 895 | 15 | 3.93 | 3.93 | 242. | 3. | 0.08 | 0.29 | 3.93 | 3.93 | 614. | 0. | 0.25 | 0.68 |
| 896 | 15 | 3.93 | 3.93 | 264. | 2. | 0.09 | 0.31 | 3.93 | 3.93 | 553. | 0. | 0.22 | 0.61 |
| 899 | 15 | 3.93 | 3.93 | 163. | 1. | 0.06 | 0.19 | 3.93 | 3.93 | 121. | -3. | 0.05 | 0.13 |
| 900 | 15 | 3.93 | 3.93 | 0. | 9. | 0.00 | 0.05 | 3.93 | 3.93 | 17. | -6. | 0.01 | 0.02 |
| 901 | 15 | 3.93 | 3.93 | 219. | 5. | 0.06 | 0.27 | 3.93 | 3.93 | 357. | 4. | 0.12 | 0.42 |
| 902 | 15 | 3.93 | 3.93 | 158. | 6. | 0.03 | 0.21 | 3.93 | 3.93 | 306. | 2. | 0.11 | 0.35 |

| | | SUPERIORE ORIZZONTALE | | | | SUPERIORE VERTICALE | | | |
|-------|-------|-----------------------|------|------|------|---------------------|------|------|------|
| GUSCI | spess | Af | Afc | Mom | epsF | Af | Afc | Mom | epsC |
| 565 | 15 | 3.93 | 3.93 | 133. | 1. | 0.05 | 0.16 | 3.93 | 0.03 |
| 566 | 15 | 3.93 | 3.93 | 0. | 4. | 0.00 | 0.02 | 3.93 | 0.00 |
| 567 | 15 | 3.93 | 3.93 | 0. | 4. | 0.00 | 0.03 | 3.93 | 0.00 |
| 568 | 15 | 3.93 | 3.93 | 0. | 5. | 0.00 | 0.03 | 3.93 | 0.01 |
| 569 | 15 | 3.93 | 3.93 | 118. | 3. | 0.03 | 0.15 | 3.93 | 0.01 |
| 570 | 15 | 3.93 | 3.93 | 0. | 2. | 0.00 | 0.01 | 3.93 | 0.00 |
| 571 | 15 | 3.93 | 3.93 | 0. | 3. | 0.00 | 0.02 | 3.93 | 0.00 |
| 572 | 15 | 3.93 | 3.93 | 0. | 3. | 0.00 | 0.02 | 3.93 | 0.00 |
| 573 | 15 | 3.93 | 3.93 | 0. | 3. | 0.00 | 0.02 | 3.93 | 0.00 |
| 574 | 15 | 3.93 | 3.93 | 0. | 5. | 0.00 | 0.03 | 3.93 | 0.02 |
| 575 | 15 | 3.93 | 3.93 | 28. | 0. | 0.01 | 0.03 | 3.93 | 0.02 |
| 576 | 15 | 3.93 | 3.93 | 0. | 2. | 0.00 | 0.01 | 3.93 | 0.01 |
| 577 | 15 | 3.93 | 3.93 | 0. | 1. | 0.00 | 0.01 | 3.93 | 0.00 |
| 578 | 15 | 3.93 | 3.93 | 0. | 1. | 0.00 | 0.01 | 3.93 | 0.09 |
| 579 | 15 | 3.93 | 3.93 | 29. | 3. | 0.00 | 0.05 | 3.93 | 0.04 |
| 580 | 15 | 3.93 | 3.93 | 113. | -2. | 0.05 | 0.12 | 3.93 | 0.13 |
| 581 | 15 | 3.93 | 3.93 | 0. | -3. | 0.00 | 0.00 | 3.93 | 0.00 |
| 582 | 15 | 3.93 | 3.93 | 0. | -6. | 0.00 | 0.00 | 3.93 | 0.00 |
| 583 | 15 | 3.93 | 3.93 | 0. | 3. | 0.00 | 0.02 | 3.93 | 0.12 |
| 584 | 15 | 3.93 | 3.93 | 40. | 2. | 0.01 | 0.05 | 3.93 | 0.11 |
| 585 | 15 | 3.93 | 3.93 | 123. | 3. | 0.05 | 0.16 | 3.93 | 0.42 |
| 586 | 15 | 3.93 | 3.93 | 32. | 2. | 0.00 | 0.05 | 3.93 | 0.44 |
| 587 | 15 | 3.93 | 3.93 | 19. | -4. | 0.01 | 0.02 | 3.93 | 0.43 |
| 588 | 15 | 3.93 | 3.93 | 43. | 5. | 0.00 | 0.08 | 3.93 | 0.34 |
| 589 | 15 | 3.93 | 3.93 | 61. | 5. | 0.00 | 0.10 | 3.93 | 0.29 |
| 590 | 15 | 3.93 | 3.93 | 170. | 2. | 0.06 | 0.20 | 3.93 | 0.40 |

MACROGUSCIO SOLETTA01

CASI DI CARICO: ->

| Nome | Descrizione |
|------|-------------------------------|
| 12 | Rara (RARA) |
| 13 | Rara VentoX (RARA) |
| 14 | Rara VentoY (RARA) |
| 15 | Frequente (FREQUENTE) |
| 16 | Frequente VentoX (FREQUENTE) |
| 17 | Frequente VentoY (FREQUENTE) |
| 18 | Quasi Perm (QUASI PERMANENTE) |

| | | |
|---------------------------------------|---|----|
| copriferro inferiore (asse armatura): | 3 | cm |
| copriferro superiore (asse armatura): | 3 | cm |

Af = area effettiva tesa (cm² al metro)
Afc = area effettiva compressa (cm² al metro)
Mom = momento flettente [daNcm/cm]
Nor = sforzo normale [daN]

σ_c = tensione calcestruzzo [daN/cm²]
 valore max per combinazione rara = 149.4 daN/cm²
 quasi permanente = 112 daN/cm²

σ_f = tensione acciaio [daN/cm²]
valore max per combinazione rara = 3600 daN/cm²

| | | | |
|-----|---|----------------------------|-----------------------------|
| wkF | = valore max per combinazione rara | - 5000 daN/cm ² | - valore max = 0.4 mm |
| wkP | = apertura caratteristica per combinazione frequente (mm) | | " " = 0.3 mm |
| | | | quasi permanente (mm) - " " |

ARMATURA INFERIORE ORIZZONTALE

| | | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------------|------------|-----------------|-----|-------|------------------------|-----|------------|-------|
| GUSCI | Af | Afc | Mom | Nor | σ_c | σ_f | Mom | Nor | wkF | Mom | Nor | σ_c | wkP |
| 565 | 3.93 | 3.93 | 192 | 1 | 10.84 | 461. | 141 | 1 | 0.017 | 117 | 1 | 6.63 | 0.015 |
| 566 | 3.93 | 3.93 | 239 | 2 | 13.47 | 580. | 177 | 1 | 0.022 | 154 | 2 | 8.71 | 0.020 |
| 567 | 3.93 | 3.93 | 198 | 2 | 11.19 | 490. | 147 | 2 | 0.019 | 128 | 2 | 7.22 | 0.018 |
| 568 | 3.93 | 3.93 | 169 | 2 | 9.55 | 424. | 129 | 2 | 0.018 | 126 | 3 | 7.11 | 0.018 |
| 569 | 3.93 | 3.93 | 138 | 1 | 7.80 | 343. | 102 | 1 | 0.013 | 88 | 1 | 4.98 | 0.012 |
| 570 | 3.93 | 3.93 | 154 | 1 | 8.71 | 374. | 111 | 1 | 0.014 | 77 | 1 | 4.32 | 0.009 |
| 571 | 3.93 | 3.93 | 244 | 2 | 13.75 | 593. | 179 | 1 | 0.022 | 149 | 1 | 8.38 | 0.018 |
| 572 | 3.93 | 3.93 | 269 | 1 | 15.17 | 648. | 201 | 1 | 0.024 | 176 | 1 | 9.95 | 0.021 |
| 573 | 3.93 | 3.93 | 178 | 1 | 10.03 | 433. | 137 | 1 | 0.018 | 117 | 1 | 6.61 | 0.015 |
| 574 | 3.93 | 3.93 | 123 | 2 | 6.97 | 318. | 90 | 2 | 0.013 | 51 | 2 | 2.90 | 0.008 |
| 575 | 3.93 | 3.93 | 207 | 0. | 11.66 | 486. | 151 | 0. | 0.017 | 110 | 0. | 6.20 | 0.012 |
| 576 | 3.93 | 3.93 | 280 | 1 | 15.80 | 669. | 208 | 1 | 0.024 | 192 | 0. | 10.80 | 0.022 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|------|------|-----|----|-------|------|-----|----|-------|-----|----|-------|-------|
| 577 | 3.93 | 3.93 | 277 | 0. | 15.64 | 653. | 208 | 0. | 0.023 | 189 | 0. | 10.63 | 0.021 |
| 578 | 3.93 | 3.93 | 219 | 1 | 12.34 | 519. | 166 | 0. | 0.019 | 146 | 0. | 8.25 | 0.017 |
| 579 | 3.93 | 3.93 | 186 | 2 | 10.52 | 463. | 138 | 2 | 0.019 | 115 | 2 | 6.48 | 0.015 |
| 580 | 3.93 | 3.93 | 202 | -1 | 11.36 | 459. | 149 | -1 | 0.016 | 128 | -1 | 7.23 | 0.014 |
| 581 | 3.93 | 3.93 | 217 | -2 | 12.21 | 481. | 162 | -2 | 0.017 | 153 | -2 | 8.60 | 0.016 |
| 582 | 3.93 | 3.93 | 175 | -2 | 9.79 | 375. | 131 | -2 | 0.013 | 107 | -2 | 5.99 | 0.011 |
| 583 | 3.93 | 3.93 | 140 | 0. | 7.91 | 328. | 105 | -1 | 0.011 | 67 | -1 | 3.76 | 0.007 |
| 584 | 3.93 | 3.93 | 147 | 1 | 8.30 | 358. | 108 | 1 | 0.014 | 105 | 1 | 5.94 | 0.013 |
| 585 | 3.93 | 3.93 | 51 | -1 | 2.87 | 107. | 39 | 0. | 0.004 | 87 | 0. | 4.87 | 0.009 |
| 586 | 3.93 | 3.93 | 0. | -4 | 0.24 | -4. | 0. | -3 | 0.000 | 38 | -2 | 2.08 | 0.003 |
| 587 | 3.93 | 3.93 | 0. | -9 | 0.55 | -8. | 0. | -7 | 0.000 | 31 | -6 | 1.39 | 0.001 |
| 588 | 3.93 | 3.93 | 0. | -2 | 0.10 | -2. | 0. | -1 | 0.000 | 0. | -1 | 0.04 | 0.000 |
| 589 | 3.93 | 3.93 | 0. | 0. | 0.00 | 4. | 0. | 1 | 0.001 | 12 | 0. | 0.69 | 0.001 |
| 590 | 3.93 | 3.93 | 159 | 0. | 8.99 | 377. | 122 | 0. | 0.014 | 117 | 1 | 6.59 | 0.015 |
| 591 | 3.93 | 3.93 | 157 | 1 | 8.88 | 388. | 121 | 1 | 0.016 | 108 | 2 | 6.13 | 0.015 |
| 592 | 3.93 | 3.93 | 95 | 5 | 5.36 | 288. | 76 | 4 | 0.015 | 68 | 4 | 3.79 | 0.014 |
| 593 | 3.93 | 3.93 | 135 | 4 | 7.65 | 369. | 104 | 3 | 0.017 | 98 | 4 | 5.53 | 0.016 |
| 594 | 3.93 | 3.93 | 135 | 3 | 7.63 | 360. | 102 | 3 | 0.016 | 97 | 3 | 5.46 | 0.015 |
| 595 | 3.93 | 3.93 | 0. | 1 | 0.00 | 11. | 0. | 1 | 0.001 | 19 | 2 | 1.05 | 0.005 |
| 596 | 3.93 | 3.93 | 0. | 1 | 0.00 | 10. | 0. | 1 | 0.001 | 0. | 0. | 0.00 | 0.000 |
| 597 | 3.93 | 3.93 | 0. | 1 | 0.00 | 17. | 0. | 1 | 0.001 | 0. | 1 | 0.00 | 0.001 |
| 598 | 3.93 | 3.93 | 0. | 2 | 0.00 | 21. | 0. | 1 | 0.001 | 0. | 1 | 0.00 | 0.001 |
| 599 | 3.93 | 3.93 | 38 | 1 | 2.15 | 97. | 28 | 1 | 0.005 | 40 | 2 | 2.27 | 0.007 |
| 600 | 3.93 | 3.93 | 0. | 1 | 0.00 | 7. | 0. | 1 | 0.001 | 9 | 1 | 0.51 | 0.002 |
| 601 | 3.93 | 3.93 | 34 | 0. | 1.92 | 82. | 25 | 0. | 0.003 | 32 | 0. | 1.81 | 0.004 |
| 602 | 3.93 | 3.93 | 0. | -1 | 0.04 | -1. | 0. | -1 | 0.000 | 0. | 0. | 0.02 | 0.000 |
| 603 | 3.93 | 3.93 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.01 | 0.000 |
| 604 | 3.93 | 3.93 | 0. | 0. | 0.00 | 2. | 0. | 0. | 0.000 | 0. | 0. | 0.01 | 0.000 |
| 605 | 3.93 | 3.93 | 0. | 1 | 0.00 | 12. | 0. | 1 | 0.001 | 20 | 3 | 1.03 | 0.006 |
| 606 | 3.93 | 3.93 | 0. | 0. | 0.00 | 4. | 0. | 1 | 0.001 | 0. | 1 | 0.00 | 0.001 |
| 607 | 3.93 | 3.93 | 0. | -8 | 0.50 | -7. | 0. | -8 | 0.000 | 27 | -6 | 1.16 | 0.000 |
| 608 | 3.93 | 3.93 | 0. | -9 | 0.55 | -8. | 0. | -7 | 0.000 | 0. | -3 | 0.18 | 0.000 |
| 609 | 3.93 | 3.93 | 32 | 8 | 1.13 | 193. | 23 | 7 | 0.013 | 17 | 6 | 0.00 | 0.011 |
| 610 | 3.93 | 3.93 | 90 | 9 | 4.89 | 331. | 71 | 8 | 0.019 | 59 | 6 | 3.22 | 0.016 |
| 846 | 3.93 | 3.93 | 19 | -8 | 1.00 | -4. | 15 | -6 | 0.000 | 18 | -3 | 0.82 | 0.000 |
| 847 | 3.93 | 3.93 | 0. | -4 | 0.25 | -4. | 0. | -2 | 0.000 | 0. | -2 | 0.12 | 0.000 |
| 848 | 3.93 | 3.93 | 29 | -2 | 1.59 | 47. | 24 | -1 | 0.002 | 15 | 0. | 0.86 | 0.002 |
| 849 | 3.93 | 3.93 | 12 | -6 | 0.69 | -3. | 11 | -4 | 0.000 | 10 | -4 | 0.47 | 0.000 |
| 850 | 3.93 | 3.93 | 2 | 8 | 0.00 | 104. | 1 | 6 | 0.007 | 0. | 6 | 0.00 | 0.008 |
| 851 | 3.93 | 3.93 | 21 | -1 | 1.18 | 39. | 15 | 0. | 0.001 | 10 | 1 | 0.54 | 0.002 |
| 893 | 3.93 | 3.93 | 137 | 2 | 7.76 | 353. | 113 | 2 | 0.016 | 84 | 3 | 4.72 | 0.013 |
| 894 | 3.93 | 3.93 | 215 | 2 | 12.12 | 534. | 173 | 2 | 0.023 | 145 | 3 | 8.17 | 0.020 |
| 895 | 3.93 | 3.93 | 172 | 1 | 9.70 | 420. | 125 | 1 | 0.016 | 127 | 1 | 7.15 | 0.016 |
| 896 | 3.93 | 3.93 | 144 | 2 | 8.12 | 366. | 121 | 1 | 0.016 | 130 | 0. | 7.32 | 0.015 |
| 899 | 3.93 | 3.93 | 0. | -4 | 0.23 | -3. | 0. | -2 | 0.000 | 32 | -1 | 1.76 | 0.003 |
| 900 | 3.93 | 3.93 | 0. | -1 | 0.07 | -1. | 0. | -1 | 0.000 | 0. | 1 | 0.00 | 0.002 |
| 901 | 3.93 | 3.93 | 155 | 1 | 8.74 | 374. | 116 | 2 | 0.016 | 35 | 2 | 1.97 | 0.006 |
| 902 | 3.93 | 3.93 | 0. | 5 | 0.00 | 60. | 0. | 3 | 0.004 | 26 | 2 | 1.43 | 0.005 |

ARMATURA INFERIORE VERTICALE

| GUSCI | Af | Afc | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|-------|------|-----------------|-----|-------|-----|------------------------|-------|-------|-----|
| | | | Mom | Nor | σc | σf | Mom | Nor | wkF | | Mom | Nor | σc | wkP |
| 565 | 3.93 | 3.93 | 229 | 0. | 12.89 | 536. | 173 | 0. | 0.019 | 144 | 1 | 8.14 | 0.017 | |
| 566 | 3.93 | 3.93 | 279 | 0. | 15.71 | 649. | 213 | 0. | 0.023 | 184 | 0. | 10.37 | 0.020 | |
| 567 | 3.93 | 3.93 | 287 | 0. | 16.17 | 670. | 222 | 0. | 0.025 | 198 | 0. | 11.17 | 0.022 | |
| 568 | 3.93 | 3.93 | 337 | 1 | 19.02 | 796. | 265 | 1 | 0.031 | 218 | 1 | 12.28 | 0.025 | |
| 569 | 3.93 | 3.93 | 215 | 0. | 12.12 | 504. | 166 | 0. | 0.019 | 151 | 0. | 8.48 | 0.017 | |
| 570 | 3.93 | 3.93 | 203 | 1 | 11.48 | 489. | 152 | 0. | 0.017 | 107 | 1 | 6.04 | 0.013 | |
| 571 | 3.93 | 3.93 | 307 | 0. | 17.31 | 718. | 233 | 0. | 0.026 | 177 | 0. | 9.97 | 0.019 | |
| 572 | 3.93 | 3.93 | 392 | 0. | 22.08 | 910. | 302 | 0. | 0.033 | 254 | 0. | 14.30 | 0.028 | |
| 573 | 3.93 | 3.93 | 334 | 0. | 18.83 | 782. | 260 | 1 | 0.030 | 220 | 0. | 12.43 | 0.025 | |
| 574 | 3.93 | 3.93 | 172 | 1 | 9.72 | 416. | 133 | 1 | 0.017 | 111 | 1 | 6.27 | 0.014 | |
| 575 | 3.93 | 3.93 | 219 | 2 | 12.34 | 532. | 164 | 1 | 0.020 | 126 | 1 | 7.10 | 0.016 | |
| 576 | 3.93 | 3.93 | 274 | 0. | 15.42 | 638. | 205 | 0. | 0.023 | 178 | 0. | 10.03 | 0.020 | |
| 577 | 3.93 | 3.93 | 277 | -3 | 15.54 | 611. | 208 | -2 | 0.022 | 177 | -2 | 9.93 | 0.019 | |
| 578 | 3.93 | 3.93 | 163 | -2 | 9.13 | 347. | 124 | -1 | 0.013 | 132 | -1 | 7.44 | 0.014 | |
| 579 | 3.93 | 3.93 | 161 | 1 | 9.08 | 384. | 123 | 1 | 0.015 | 111 | 1 | 6.29 | 0.014 | |
| 580 | 3.93 | 3.93 | 175 | 1 | 9.87 | 419. | 130 | 1 | 0.015 | 120 | 1 | 6.80 | 0.014 | |
| 581 | 3.93 | 3.93 | 180 | 0. | 10.16 | 418. | 133 | 0. | 0.015 | 105 | 0. | 5.93 | 0.012 | |
| 582 | 3.93 | 3.93 | 67 | -5 | 3.62 | 96. | 49 | -3 | 0.003 | 40 | -2 | 2.20 | 0.003 | |
| 583 | 3.93 | 3.93 | 0. | -6 | 0.40 | -6. | 0. | -5 | 0.000 | 0. | -4 | 0.27 | 0.000 | |
| 584 | 3.93 | 3.93 | 79 | 0. | 4.44 | 179. | 60 | 0. | 0.007 | 64 | 1 | 3.60 | 0.008 | |
| 585 | 3.93 | 3.93 | 0. | 1 | 0.00 | 19. | 0. | 1 | 0.002 | 0. | 1 | 0.00 | 0.002 | |
| 586 | 3.93 | 3.93 | 0. | -1 | 0.03 | -1. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 | |
| 587 | 3.93 | 3.93 | 0. | -2 | 0.15 | -2. | 0. | -2 | 0.000 | 0. | -1 | 0.05 | 0.000 | |
| 588 | 3.93 | 3.93 | 0. | -13 | 0.78 | -12. | 0. | -9 | 0.000 | 0. | -7 | 0.41 | 0.000 | |
| 589 | 3.93 | 3.93 | 0. | -2 | 0.09 | -1. | 0. | -1 | 0.000 | 0. | 0. | 0.00 | 0.000 | |
| 590 | 3.93 | 3.93 | 28 | 1 | 1.58 | 78. | 29 | 1 | 0.004 | 57 | 0. | 3.22 | 0.007 | |
| 591 | 3.93 | 3.93 | 0. | 1 | 0.00 | 17. | 0. | 1 | 0.001 | 24 | 1 | 1.36 | 0.004 | |
| 592 | 3.93 | 3.93 | 0. | 2 | 0.00 | 21. | 0. | 1 | 0.002 | 0. | 1 | 0.00 | 0.002 | |
| 593 | 3.93 | 3.93 | 0. | -1 | 0.09 | -1. | 0. | -1 | 0.000 | 33 | -1 | 1.82 | 0.003 | |
| 594 | 3.93 | 3.93 | 32 | 0. | 1.78 | 81. | 27 | 1 | 0.004 | 66 | 1 | 3.73 | 0.009 | |
| 595 | 3.93 | 3.93 | 66 | 1 | 3.73 | 174. | 52 | 2 | 0.008 | 63 | 2 | 3.53 | 0.010 | |
| 596 | 3.93 | 3.93 | 52 | 1 | 2.93 | 135. | 39 | 1 | 0.006 | 70 | 1 | 3.97 | 0.009 | |
| 597 | 3.93 | 3.93 | 10 | 3 | 0.33 | 61. | 7 | 2 | 0.004 | 22 | 2 | 1.21 | 0.005 | |
| 598 | 3.93 | 3.93 | 20 | 4 | 0.96 | 102. | 16 | 3 | 0.006 | 47 | 3 | 2.63 | 0.009 | |
| 599 | 3.93 | 3.93 | 0. | 3 | 0.00 | 35. | 0. | 2 | 0.003 | 21 | 3 | 1.10 | 0.007 | |
| 600 | 3.93 | 3.93 | 74 | 4 | 4.18 | 228. | 57 | 3 | 0.011 | 64 | 3 | 3.61 | 0.012 | |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|------|------|-----|-----|-------|------|-----|-----|-------|-----|-----|-------|-------|
| 601 | 3.93 | 3.93 | 41 | 2 | 2.33 | 125. | 30 | 2 | 0.006 | 39 | 2 | 2.21 | 0.007 |
| 602 | 3.93 | 3.93 | 96 | 2 | 5.45 | 259. | 77 | 2 | 0.011 | 87 | 2 | 4.93 | 0.012 |
| 603 | 3.93 | 3.93 | 65 | 3 | 3.68 | 196. | 51 | 2 | 0.009 | 34 | 2 | 1.89 | 0.007 |
| 604 | 3.93 | 3.93 | 53 | 2 | 3.01 | 155. | 41 | 1 | 0.007 | 22 | 1 | 1.22 | 0.004 |
| 605 | 3.93 | 3.93 | 82 | 1 | 4.61 | 204. | 65 | 1 | 0.009 | 63 | 2 | 3.55 | 0.010 |
| 606 | 3.93 | 3.93 | 83 | 1 | 4.68 | 212. | 64 | 1 | 0.009 | 80 | 2 | 4.49 | 0.011 |
| 607 | 3.93 | 3.93 | 0. | -9 | 0.57 | -9. | 0. | -9 | 0.000 | 0. | -14 | 0.89 | 0.000 |
| 608 | 3.93 | 3.93 | 0. | -22 | 1.33 | -20. | 0. | -20 | 0.000 | 0. | -19 | 1.18 | 0.000 |
| 609 | 3.93 | 3.93 | 0. | 0. | 0.00 | 3. | 0. | 0. | 0.001 | 0. | 1 | 0.00 | 0.001 |
| 610 | 3.93 | 3.93 | 0. | 0. | 0.00 | 2. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 846 | 3.93 | 3.93 | 0. | -17 | 1.02 | -15. | 2 | -14 | 0.000 | 7 | -15 | 1.09 | 0.000 |
| 847 | 3.93 | 3.93 | 0. | -14 | 0.86 | -13. | 0. | -12 | 0.000 | 0. | -7 | 0.43 | 0.000 |
| 848 | 3.93 | 3.93 | 53 | -6 | 2.66 | 48. | 40 | -4 | 0.002 | 27 | -5 | 1.21 | 0.000 |
| 849 | 3.93 | 3.93 | 52 | -10 | 2.30 | 13. | 40 | -7 | 0.001 | 38 | -7 | 1.70 | 0.001 |
| 850 | 3.93 | 3.93 | 23 | 3 | 1.17 | 99. | 16 | 3 | 0.005 | 15 | 2 | 0.73 | 0.005 |
| 851 | 3.93 | 3.93 | 32 | 1 | 1.81 | 84. | 23 | 1 | 0.004 | 15 | 0. | 0.84 | 0.002 |
| 893 | 3.93 | 3.93 | 321 | 1 | 18.09 | 763. | 250 | 1 | 0.030 | 192 | 2 | 10.83 | 0.025 |
| 894 | 3.93 | 3.93 | 380 | 2 | 21.46 | 909. | 301 | 2 | 0.036 | 233 | 3 | 13.16 | 0.030 |
| 895 | 3.93 | 3.93 | 418 | 0. | 23.55 | 979. | 330 | 1 | 0.038 | 295 | 1 | 16.62 | 0.034 |
| 896 | 3.93 | 3.93 | 388 | 0. | 21.88 | 909. | 301 | 1 | 0.034 | 267 | 1 | 15.06 | 0.031 |
| 899 | 3.93 | 3.93 | 0. | -9 | 0.55 | -8. | 0. | -6 | 0.000 | 5 | -4 | 0.36 | 0.000 |
| 900 | 3.93 | 3.93 | 0. | -9 | 0.56 | -8. | 0. | -6 | 0.000 | 0. | -7 | 0.42 | 0.000 |
| 901 | 3.93 | 3.93 | 263 | -1 | 14.83 | 608. | 198 | 0. | 0.022 | 79 | 2 | 4.45 | 0.013 |
| 902 | 3.93 | 3.93 | 133 | -1 | 7.47 | 303. | 99 | 0. | 0.011 | 84 | 1 | 4.75 | 0.011 |

ARMATURA SUPERIORE ORIZZONTALE

| GUSCI | Af | Afc | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|-------|------|-----------------|-----|-------|--|------------------------|-----|-------|-------|
| | | | Mom | Nor | σc | σf | Mom | Nor | wkF | | Mom | Nor | σc | wkP |
| 565 | 3.93 | 3.93 | 2 | 1 | 0.00 | 17. | 5 | 1 | 0.002 | | 32 | 1 | 1.78 | 0.006 |
| 566 | 3.93 | 3.93 | 0. | 2 | 0.00 | 21. | 0. | 1 | 0.002 | | 0. | 2 | 0.00 | 0.002 |
| 567 | 3.93 | 3.93 | 0. | 2 | 0.00 | 25. | 0. | 2 | 0.002 | | 0. | 2 | 0.00 | 0.003 |
| 568 | 3.93 | 3.93 | 0. | 2 | 0.00 | 28. | 0. | 2 | 0.002 | | 0. | 3 | 0.00 | 0.003 |
| 569 | 3.93 | 3.93 | 0. | 1 | 0.00 | 19. | 0. | 1 | 0.002 | | 24 | 1 | 1.33 | 0.005 |
| 570 | 3.93 | 3.93 | 0. | 1 | 0.00 | 12. | 0. | 1 | 0.001 | | 0. | 1 | 0.00 | 0.001 |
| 571 | 3.93 | 3.93 | 0. | 2 | 0.00 | 22. | 0. | 1 | 0.001 | | 0. | 1 | 0.00 | 0.001 |
| 572 | 3.93 | 3.93 | 0. | 1 | 0.00 | 19. | 0. | 1 | 0.001 | | 0. | 1 | 0.00 | 0.001 |
| 573 | 3.93 | 3.93 | 0. | 1 | 0.00 | 16. | 0. | 1 | 0.002 | | 0. | 1 | 0.00 | 0.002 |
| 574 | 3.93 | 3.93 | 0. | 2 | 0.00 | 28. | 0. | 2 | 0.002 | | 0. | 2 | 0.00 | 0.002 |
| 575 | 3.93 | 3.93 | 0. | 0. | 0.00 | 2. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 576 | 3.93 | 3.93 | 0. | 1 | 0.00 | 13. | 0. | 1 | 0.001 | | 0. | 0. | 0.00 | 0.000 |
| 577 | 3.93 | 3.93 | 0. | 0. | 0.00 | 5. | 0. | 0. | 0.000 | | 0. | 0. | 0.00 | 0.000 |
| 578 | 3.93 | 3.93 | 0. | 1 | 0.00 | 7. | 0. | 0. | 0.001 | | 0. | 0. | 0.00 | 0.000 |
| 579 | 3.93 | 3.93 | 0. | 2 | 0.00 | 26. | 0. | 2 | 0.002 | | 0. | 2 | 0.00 | 0.002 |
| 580 | 3.93 | 3.93 | 0. | -1 | 0.06 | -1. | 0. | -1 | 0.000 | | 28 | -1 | 1.53 | 0.002 |
| 581 | 3.93 | 3.93 | 0. | -2 | 0.12 | -2. | 0. | -2 | 0.000 | | 0. | -2 | 0.11 | 0.000 |
| 582 | 3.93 | 3.93 | 0. | -2 | 0.15 | -2. | 0. | -2 | 0.000 | | 0. | -2 | 0.13 | 0.000 |
| 583 | 3.93 | 3.93 | 0. | 0. | 0.00 | 0. | 0. | -1 | 0.000 | | 0. | -1 | 0.03 | 0.000 |
| 584 | 3.93 | 3.93 | 0. | 1 | 0.00 | 13. | 0. | 1 | 0.002 | | 15 | 1 | 0.84 | 0.003 |
| 585 | 3.93 | 3.93 | 71 | -1 | 3.96 | 152. | 53 | 0. | 0.006 | | 57 | 0. | 3.22 | 0.006 |
| 586 | 3.93 | 3.93 | 39 | -4 | 1.99 | 41. | 29 | -3 | 0.002 | | 2 | -2 | 0.08 | 0.000 |
| 587 | 3.93 | 3.93 | 42 | -9 | 1.82 | 8. | 31 | -7 | 0.000 | | 1 | -6 | 0.31 | 0.000 |
| 588 | 3.93 | 3.93 | 54 | -2 | 3.00 | 104. | 45 | -1 | 0.005 | | 29 | -1 | 1.61 | 0.003 |
| 589 | 3.93 | 3.93 | 25 | 0. | 1.41 | 63. | 22 | 1 | 0.004 | | 19 | 0. | 1.06 | 0.002 |
| 590 | 3.93 | 3.93 | 95 | 0. | 5.37 | 227. | 72 | 0. | 0.009 | | 76 | 1 | 4.28 | 0.010 |
| 591 | 3.93 | 3.93 | 14 | 1 | 0.76 | 53. | 12 | 1 | 0.004 | | 23 | 2 | 1.31 | 0.005 |
| 592 | 3.93 | 3.93 | 0. | 5 | 0.00 | 60. | 0. | 4 | 0.005 | | 0. | 4 | 0.00 | 0.005 |
| 593 | 3.93 | 3.93 | 42 | 4 | 2.28 | 151. | 36 | 3 | 0.009 | | 42 | 4 | 2.30 | 0.010 |
| 594 | 3.93 | 3.93 | 109 | 3 | 6.13 | 298. | 86 | 3 | 0.014 | | 88 | 3 | 4.95 | 0.014 |
| 595 | 3.93 | 3.93 | 238 | 1 | 13.40 | 567. | 182 | 1 | 0.022 | | 127 | 2 | 7.17 | 0.017 |
| 596 | 3.93 | 3.93 | 263 | 1 | 14.81 | 624. | 200 | 1 | 0.023 | | 165 | 0. | 9.30 | 0.019 |
| 597 | 3.93 | 3.93 | 255 | 1 | 14.41 | 615. | 195 | 1 | 0.023 | | 131 | 1 | 7.38 | 0.016 |
| 598 | 3.93 | 3.93 | 251 | 2 | 14.17 | 609. | 191 | 1 | 0.023 | | 136 | 1 | 7.65 | 0.017 |
| 599 | 3.93 | 3.93 | 116 | 1 | 6.54 | 279. | 87 | 1 | 0.011 | | 55 | 2 | 3.12 | 0.009 |
| 600 | 3.93 | 3.93 | 195 | 1 | 11.00 | 463. | 147 | 1 | 0.017 | | 100 | 1 | 5.65 | 0.012 |
| 601 | 3.93 | 3.93 | 208 | 0. | 11.70 | 487. | 154 | 0. | 0.018 | | 107 | 0. | 6.01 | 0.012 |
| 602 | 3.93 | 3.93 | 291 | -1 | 16.36 | 671. | 216 | -1 | 0.024 | | 156 | 0. | 8.81 | 0.017 |
| 603 | 3.93 | 3.93 | 302 | 0. | 17.03 | 706. | 224 | 0. | 0.025 | | 166 | 0. | 9.34 | 0.018 |
| 604 | 3.93 | 3.93 | 293 | 0. | 16.54 | 688. | 217 | 0. | 0.024 | | 160 | 0. | 9.00 | 0.018 |
| 605 | 3.93 | 3.93 | 275 | 1 | 15.49 | 655. | 205 | 1 | 0.025 | | 139 | 3 | 7.85 | 0.020 |
| 606 | 3.93 | 3.93 | 312 | 0. | 17.61 | 734. | 232 | 1 | 0.027 | | 181 | 1 | 10.23 | 0.021 |
| 607 | 3.93 | 3.93 | 135 | -8 | 7.31 | 209. | 97 | -8 | 0.006 | | 78 | -6 | 4.17 | 0.005 |
| 608 | 3.93 | 3.93 | 35 | -9 | 1.53 | 2. | 24 | -7 | 0.000 | | 4 | -3 | 0.09 | 0.000 |
| 609 | 3.93 | 3.93 | 37 | 8 | 1.54 | 205. | 22 | 7 | 0.012 | | 2 | 6 | 0.00 | 0.008 |
| 610 | 3.93 | 3.93 | 0. | 9 | 0.00 | 112. | 0. | 8 | 0.009 | | 8 | 6 | 0.00 | 0.009 |
| 846 | 3.93 | 3.93 | 24 | -8 | 0.06 | -13. | 18 | -6 | 0.000 | | 10 | -3 | 0.05 | 0.000 |
| 847 | 3.93 | 3.93 | 35 | -4 | 1.77 | 32. | 32 | -2 | 0.003 | | 28 | -2 | 1.50 | 0.002 |
| 848 | 3.93 | 3.93 | 9 | -2 | 0.41 | 3. | 8 | -1 | 0.000 | | 9 | 0. | 0.52 | 0.002 |
| 849 | 3.93 | 3.93 | 0. | -6 | 0.38 | -6. | 0. | -4 | 0.000 | | 0. | -4 | 0.23 | 0.000 |
| 850 | 3.93 | 3.93 | 4 | 8 | 0.00 | 110. | 2 | 6 | 0.007 | | 2 | 6 | 0.00 | 0.008 |
| 851 | 3.93 | 3.93 | 0. | -1 | 0.05 | -1. | 0. | 0. | 0.000 | | 0. | 1 | 0.00 | 0.001 |
| 893 | 3.93 | 3.93 | 0. | 2 | 0.00 | 30. | 0. | 2 | 0.003 | | 0. | 3 | 0.00 | 0.003 |
| 894 | 3.93 | 3.93 | 0. | 2 | 0.00 | 31. | 0. | 2 | 0.003 | | 0. | 3 | 0.00 | 0.003 |
| 895 | 3.93 | 3.93 | 0. | 1 | 0.00 | 18. | 0. | 1 | 0.002 | | 0. | 1 | 0.00 | 0.002 |
| 896 | 3.93 | 3.93 | 0. | 2 | 0.00 | 28. | 0. | 1 | 0.002 | | 0. | 0. | 0.00 | 0.001 |
| 899 | 3.93 | 3.93 | 107 | -4 | 5.92 | 200. | 75 | -2 | 0.007 | | 74 | -1 | 4.17 | 0.008 |
| 900 | 3.93 | 3.93 | 150 | -1 | 8.42 | 334. | 106 | -1 | 0.011 | | 56 | 1 | 3.17 | 0.009 |
| 901 | 3.93 | 3.93 | 0. | 1 | 0.00 | 12. | 0. | 2 | 0.002 | | 0. | 2 | 0.00 | 0.002 |
| 902 | 3.93 | 3.93 | 160 | 5 | 9.05 | 438. | 114 | 3 | 0.018 | | 65 | 2 | 3.68 | 0.010 |

ARMATURA SUPERIORE VERTICALE

| GUSCI | | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------------|------------|-----------------|-----|-------|------------------------|-----|------------|-------|
| | Af | Afc | Mom | Nor | σ_c | σ_f | Mom | Nor | wkF | Mom | Nor | σ_c | wkP |
| 565 | 3.93 | 3.93 | 0. | 0. | 0.00 | 1. | 0. | 0. | 0.000 | 7 | 1 | 0.37 | 0.002 |
| 566 | 3.93 | 3.93 | 0. | 0. | 0.01 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.02 | 0.000 |
| 567 | 3.93 | 3.93 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.01 | 0.000 |
| 568 | 3.93 | 3.93 | 0. | 1 | 0.00 | 7. | 0. | 1 | 0.001 | 0. | 1 | 0.00 | 0.001 |
| 569 | 3.93 | 3.93 | 0. | 0. | 0.00 | 1. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 570 | 3.93 | 3.93 | 0. | 1 | 0.00 | 12. | 0. | 0. | 0.000 | 0. | 1 | 0.00 | 0.001 |
| 571 | 3.93 | 3.93 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.02 | 0.000 |
| 572 | 3.93 | 3.93 | 0. | 0. | 0.03 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.02 | 0.000 |
| 573 | 3.93 | 3.93 | 0. | 0. | 0.00 | 1. | 0. | 1 | 0.001 | 0. | 0. | 0.00 | 0.001 |
| 574 | 3.93 | 3.93 | 0. | 1 | 0.00 | 13. | 0. | 1 | 0.001 | 0. | 1 | 0.00 | 0.001 |
| 575 | 3.93 | 3.93 | 0. | 2 | 0.00 | 20. | 0. | 1 | 0.001 | 0. | 1 | 0.00 | 0.001 |
| 576 | 3.93 | 3.93 | 0. | 0. | 0.01 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.00 | 0.000 |
| 577 | 3.93 | 3.93 | 0. | -3 | 0.16 | -2. | 0. | -2 | 0.000 | 0. | -2 | 0.10 | 0.000 |
| 578 | 3.93 | 3.93 | 33 | -2 | 1.79 | 46. | 28 | -1 | 0.002 | 25 | -1 | 1.35 | 0.002 |
| 579 | 3.93 | 3.93 | 0. | 1 | 0.00 | 7. | 2 | 1 | 0.001 | 18 | 1 | 0.99 | 0.003 |
| 580 | 3.93 | 3.93 | 31 | 1 | 1.77 | 83. | 26 | 1 | 0.004 | 35 | 1 | 1.99 | 0.005 |
| 581 | 3.93 | 3.93 | 0. | 0. | 0.01 | 0. | 0. | 0. | 0.000 | 0. | 0. | 0.01 | 0.000 |
| 582 | 3.93 | 3.93 | 0. | -5 | 0.29 | -4. | 0. | -3 | 0.000 | 0. | -2 | 0.15 | 0.000 |
| 583 | 3.93 | 3.93 | 80 | -6 | 4.26 | 104. | 63 | -5 | 0.004 | 23 | -4 | 1.03 | 0.000 |
| 584 | 3.93 | 3.93 | 64 | 0. | 3.59 | 143. | 50 | 0. | 0.006 | 44 | 1 | 2.48 | 0.006 |
| 585 | 3.93 | 3.93 | 231 | 1 | 13.03 | 560. | 171 | 1 | 0.021 | 143 | 1 | 8.05 | 0.018 |
| 586 | 3.93 | 3.93 | 226 | -1 | 12.75 | 522. | 166 | 0. | 0.018 | 132 | 0. | 7.44 | 0.015 |
| 587 | 3.93 | 3.93 | 263 | -2 | 14.77 | 581. | 196 | -2 | 0.021 | 129 | -1 | 7.27 | 0.014 |
| 588 | 3.93 | 3.93 | 226 | -13 | 12.30 | 361. | 176 | -9 | 0.014 | 117 | -7 | 6.37 | 0.009 |
| 589 | 3.93 | 3.93 | 184 | -2 | 10.36 | 410. | 140 | -1 | 0.015 | 105 | 0. | 5.92 | 0.012 |
| 590 | 3.93 | 3.93 | 232 | 1 | 13.11 | 555. | 170 | 1 | 0.020 | 138 | 0. | 7.78 | 0.016 |
| 591 | 3.93 | 3.93 | 238 | 1 | 13.41 | 573. | 174 | 1 | 0.021 | 118 | 1 | 6.65 | 0.015 |
| 592 | 3.93 | 3.93 | 184 | 2 | 10.37 | 452. | 136 | 1 | 0.017 | 67 | 1 | 3.79 | 0.010 |
| 593 | 3.93 | 3.93 | 193 | -1 | 10.85 | 432. | 150 | -1 | 0.016 | 99 | -1 | 5.57 | 0.010 |
| 594 | 3.93 | 3.93 | 217 | 0. | 12.22 | 513. | 166 | 1 | 0.020 | 119 | 1 | 6.70 | 0.015 |
| 595 | 3.93 | 3.93 | 189 | 1 | 10.66 | 461. | 144 | 2 | 0.019 | 105 | 2 | 5.93 | 0.015 |
| 596 | 3.93 | 3.93 | 46 | 1 | 2.60 | 121. | 34 | 1 | 0.005 | 41 | 1 | 2.33 | 0.006 |
| 597 | 3.93 | 3.93 | 0. | 3 | 0.00 | 35. | 0. | 2 | 0.003 | 0. | 2 | 0.00 | 0.002 |
| 598 | 3.93 | 3.93 | 49 | 4 | 2.71 | 168. | 38 | 3 | 0.009 | 37 | 3 | 2.08 | 0.008 |
| 599 | 3.93 | 3.93 | 127 | 3 | 7.20 | 335. | 96 | 2 | 0.014 | 71 | 3 | 4.02 | 0.012 |
| 600 | 3.93 | 3.93 | 69 | 4 | 3.89 | 216. | 53 | 3 | 0.011 | 53 | 3 | 2.96 | 0.010 |
| 601 | 3.93 | 3.93 | 196 | 2 | 11.09 | 487. | 147 | 2 | 0.019 | 113 | 2 | 6.37 | 0.015 |
| 602 | 3.93 | 3.93 | 86 | 2 | 4.85 | 234. | 65 | 2 | 0.010 | 67 | 2 | 3.81 | 0.010 |
| 603 | 3.93 | 3.93 | 16 | 3 | 0.76 | 82. | 13 | 2 | 0.005 | 22 | 2 | 1.19 | 0.005 |
| 604 | 3.93 | 3.93 | 0. | 2 | 0.00 | 28. | 0. | 1 | 0.001 | 0. | 1 | 0.00 | 0.001 |
| 605 | 3.93 | 3.93 | 202 | 1 | 11.38 | 485. | 149 | 1 | 0.019 | 118 | 2 | 6.64 | 0.016 |
| 606 | 3.93 | 3.93 | 66 | 1 | 3.70 | 172. | 49 | 1 | 0.007 | 61 | 2 | 3.43 | 0.009 |
| 607 | 3.93 | 3.93 | 258 | -9 | 14.31 | 481. | 194 | -9 | 0.016 | 133 | -14 | 6.76 | 0.006 |
| 608 | 3.93 | 3.93 | 222 | -22 | 11.52 | 246. | 171 | -20 | 0.007 | 109 | -19 | 4.96 | 0.002 |
| 609 | 3.93 | 3.93 | 158 | 0. | 8.92 | 373. | 118 | 0. | 0.014 | 58 | 1 | 3.31 | 0.008 |
| 610 | 3.93 | 3.93 | 158 | 0. | 8.91 | 371. | 123 | 0. | 0.014 | 79 | 0. | 4.48 | 0.009 |
| 846 | 3.93 | 3.93 | 62 | -17 | 2.69 | 2. | 48 | -14 | 0.000 | 38 | -15 | 0.02 | 0.000 |
| 847 | 3.93 | 3.93 | 75 | -14 | 3.37 | 24. | 58 | -12 | 0.000 | 42 | -7 | 1.96 | 0.001 |
| 848 | 3.93 | 3.93 | 0. | -6 | 0.38 | -6. | 0. | -4 | 0.000 | 0. | -5 | 0.32 | 0.000 |
| 849 | 3.93 | 3.93 | 0. | -10 | 0.64 | -10. | 0. | -7 | 0.000 | 0. | -7 | 0.41 | 0.000 |
| 850 | 3.93 | 3.93 | 3 | 3 | 0.00 | 52. | 0. | 3 | 0.003 | 0. | 2 | 0.00 | 0.003 |
| 851 | 3.93 | 3.93 | 0. | 1 | 0.00 | 9. | 0. | 1 | 0.001 | 0. | 0. | 0.00 | 0.000 |
| 893 | 3.93 | 3.93 | 0. | 1 | 0.00 | 12. | 0. | 1 | 0.002 | 0. | 2 | 0.00 | 0.002 |
| 894 | 3.93 | 3.93 | 0. | 2 | 0.00 | 19. | 0. | 2 | 0.002 | 0. | 3 | 0.00 | 0.003 |
| 895 | 3.93 | 3.93 | 0. | 0. | 0.00 | 2. | 0. | 1 | 0.001 | 0. | 1 | 0.00 | 0.001 |
| 896 | 3.93 | 3.93 | 0. | 0. | 0.00 | 2. | 0. | 1 | 0.001 | 0. | 1 | 0.00 | 0.001 |
| 899 | 3.93 | 3.93 | 172 | -9 | 9.40 | 284. | 129 | -6 | 0.011 | 90 | -4 | 4.96 | 0.007 |
| 900 | 3.93 | 3.93 | 154 | -9 | 8.35 | 240. | 116 | -6 | 0.009 | 74 | -7 | 3.86 | 0.004 |
| 901 | 3.93 | 3.93 | 0. | -1 | 0.03 | 0. | 0. | 0. | 0.000 | 0. | 2 | 0.00 | 0.003 |
| 902 | 3.93 | 3.93 | 0. | -1 | 0.03 | 0. | 0. | 0. | 0.000 | 27 | 1 | 1.51 | 0.005 |

VERIFICA SCALA

MACROGUSCIO PIANEROTTOLO

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

| Nome | Descrizione |
|------|----------------------|
| 1 | SLU |
| 2 | SLU VENTOX |
| 3 | SLU VENTOY |
| 6 | SLU con SISMAX PRINC |
| 7 | SLU con SISMAV PRINC |

DATI:

| | | |
|--|--------|-----------|
| tensione di snervamento acciaio (fyk): | 4500 | daN/cm2 |
| coefficiente sicurezza acciaio | : 1.15 | |
| deformazione ultima acciaio | : 1.97 | per mille |
| deformazione ultima cls | : 3.5 | per mille |
| rapporto rottura/snervamento (k): | 1 | |

<- L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

L'ARMATURA È OVUNQUE > DELLA QUANTITÀ RICHIESTA: IL PUNTO 2.3 DELLE NTC È VERIFICATO ($R_d > E_d$)

| Nome | Descrizione |
|------|-------------------------------|
| 12 | Rara (RARA) |
| 13 | Rara VentoX (RARA) |
| 14 | Rara VentoY (RARA) |
| 15 | Frequente (FREQUENTE) |
| 16 | Frequente VentoX (FREQUENTE) |
| 17 | Frequente VentoY (FREQUENTE) |
| 18 | Quasi Perm (QUASI PERMANENTE) |

ARMATURA INFERIORE ORIZZONTALE

Ing. Massimo Sigot, Via Mazzini n°21, Bussoleno (TO)

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|------|------|----|----|------|------|----|----|-------|----|----|------|-------|
| 705 | 2.51 | 2.51 | 30 | 9 | 3.26 | 352. | 22 | 7 | 0.025 | 19 | 7 | 1.95 | 0.023 |
| 706 | 2.51 | 2.51 | 20 | 8 | 1.85 | 285. | 14 | 7 | 0.021 | 8 | 6 | 0.00 | 0.018 |
| 743 | 2.51 | 4.31 | 9 | -3 | 0.61 | -1. | 6 | -2 | 0.000 | 6 | -2 | 0.38 | 0.000 |
| 744 | 2.51 | 4.31 | 0. | 6 | 0.00 | 118. | 0. | 2 | 0.003 | 1 | 4 | 0.00 | 0.009 |
| 745 | 2.51 | 2.51 | 40 | 4 | 4.57 | 271. | 28 | 3 | 0.015 | 24 | 2 | 2.82 | 0.013 |

ARMATURA INFERIORE VERTICALE

| GUSCI | Af | Afc | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------------|------------|-----------------|-----|-------|------------------------|-----|------------|-------|
| | | | Mom | Nor | σ_c | σ_f | Mom | Nor | wkF | Mom | Nor | σ_c | wkP |
| 701 | 2.51 | 2.51 | 64 | -5 | 6.52 | 191. | 46 | -4 | 0.007 | 38 | 2 | 4.37 | 0.016 |
| 702 | 2.51 | 2.51 | 56 | 0. | 6.22 | 265. | 40 | 0. | 0.012 | 35 | 0. | 3.91 | 0.010 |
| 703 | 2.51 | 2.51 | 29 | 8 | 3.17 | 311. | 20 | 6 | 0.022 | 17 | 6 | 1.77 | 0.020 |
| 704 | 2.51 | 2.51 | 0. | 3 | 0.00 | 57. | 0. | 2 | 0.005 | 0. | 1 | 0.00 | 0.002 |
| 705 | 2.51 | 2.51 | 19 | 1 | 2.18 | 120. | 14 | 1 | 0.008 | 0. | 1 | 0.00 | 0.002 |
| 706 | 2.51 | 2.51 | 13 | 5 | 1.29 | 186. | 10 | 4 | 0.014 | 9 | 4 | 0.81 | 0.012 |
| 743 | 2.51 | 2.51 | 0. | 0. | 0.02 | 0. | 0. | 3 | 0.006 | 0. | -1 | 0.11 | 0.000 |
| 744 | 2.51 | 2.51 | 0. | 13 | 0.00 | 257. | 0. | 10 | 0.021 | 5 | 7 | 0.00 | 0.017 |
| 745 | 2.51 | 2.51 | 2 | -1 | 0.17 | -1. | 1 | -1 | 0.000 | 12 | -4 | 0.86 | 0.000 |

ARMATURA SUPERIORE ORIZZONTALE

| GUSCI | Af | Afc | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------------|------------|-----------------|-----|-------|------------------------|-----|------------|-------|
| | | | Mom | Nor | σ_c | σ_f | Mom | Nor | wkF | Mom | Nor | σ_c | wkP |
| 701 | 2.51 | 2.51 | 0. | 8 | 0.00 | 152. | 0. | 5 | 0.012 | 0. | 6 | 0.00 | 0.013 |
| 702 | 2.51 | 2.51 | 0. | 10 | 0.00 | 190. | 0. | 7 | 0.015 | 0. | 7 | 0.00 | 0.014 |
| 703 | 2.51 | 2.51 | 3 | 10 | 0.00 | 222. | 2 | 8 | 0.018 | 13 | 7 | 0.81 | 0.023 |
| 704 | 2.51 | 2.51 | 9 | 5 | 0.39 | 168. | 6 | 5 | 0.013 | 4 | 5 | 0.00 | 0.014 |
| 705 | 2.51 | 2.51 | 0. | 9 | 0.00 | 183. | 0. | 7 | 0.015 | 0. | 7 | 0.00 | 0.014 |
| 706 | 2.51 | 2.51 | 24 | 8 | 2.46 | 304. | 17 | 7 | 0.022 | 25 | 6 | 2.79 | 0.023 |
| 743 | 4.31 | 2.51 | 0. | -3 | 0.25 | -4. | 0. | -2 | 0.000 | 0. | -2 | 0.17 | 0.000 |
| 744 | 4.31 | 2.51 | 30 | 6 | 2.48 | 167. | 16 | 2 | 0.003 | 12 | 4 | 0.82 | 0.005 |
| 745 | 2.51 | 2.51 | 0. | 4 | 0.00 | 75. | 0. | 3 | 0.005 | 0. | 2 | 0.00 | 0.005 |

ARMATURA SUPERIORE VERTICALE

| GUSCI | Af | Afc | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------------|------------|-----------------|-----|-------|------------------------|-----|------------|-------|
| | | | Mom | Nor | σ_c | σ_f | Mom | Nor | wkF | Mom | Nor | σ_c | wkP |
| 701 | 2.51 | 2.51 | 0. | -5 | 0.41 | -6. | 0. | -4 | 0.000 | 0. | 2 | 0.00 | 0.004 |
| 702 | 2.51 | 2.51 | 0. | 0. | 0.00 | 0. | 0. | 0. | 0.001 | 0. | 0. | 0.00 | 0.001 |
| 703 | 2.51 | 2.51 | 0. | 8 | 0.00 | 154. | 0. | 6 | 0.013 | 0. | 6 | 0.00 | 0.012 |
| 704 | 2.51 | 2.51 | 40 | 3 | 4.57 | 252. | 28 | 2 | 0.014 | 12 | 1 | 1.42 | 0.006 |
| 705 | 2.51 | 2.51 | 8 | 1 | 0.87 | 67. | 6 | 1 | 0.006 | 19 | 1 | 2.22 | 0.008 |
| 706 | 2.51 | 2.51 | 31 | 5 | 3.59 | 268. | 22 | 4 | 0.018 | 25 | 4 | 2.85 | 0.017 |
| 743 | 2.51 | 2.51 | 24 | 0. | 2.63 | 107. | 32 | 3 | 0.017 | 5 | -1 | 0.34 | 0.000 |
| 744 | 2.51 | 2.51 | 12 | 13 | 0.00 | 336. | 7 | 10 | 0.025 | 10 | 7 | 0.10 | 0.020 |
| 745 | 2.51 | 2.51 | 3 | -1 | 0.01 | -2. | 2 | -1 | 0.000 | 0. | -4 | 0.31 | 0.000 |

MACROGUSCIO RAMPA01

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

| Nome | Descrizione |
|------|----------------------|
| 1 | SLU |
| 2 | SLU VENTOX |
| 3 | SLU VENTOX |
| 6 | SLU con SISMAX PRINC |
| 7 | SLU con SISMAX PRINC |

DATI:

tensione di snervamento acciaio (fyk): 4500 daN/cm2
 coefficiente sicurezza acciaio : 1.15
 deformazione ultima acciaio : 1.97 per mille
 deformazione ultima cls : 3.5 per mille
 rapporto rottura/snervamento (k): 1
 resistenza cilindrica cls (fck): 249 daN/cm2
 coefficiente sicurezza cls : 1.5
 coefficiente riduttivo (alfa): 0.85
 copriferro inferiore (asse armatura): 3 cm
 copriferro superiore (asse armatura): 3 cm
 moltiplicatore sollecitazioni : 1

LEGENDA:

spess = spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
 Af = area disposta al lembo teso, in cm2 al metro
 Afc = area disposta al lembo compresso, in cm2 al metro
 Mom = momento flettente [daNcm/cm]
 Nor = sforzo normale [daN]
 epsC = deformazione cls [per mille]
 epsF = deformazione acciaio [per mille]

<-

L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

| GUSCI | spess | INFERIORE ORIZZONTALE | | | | | | | | INFERIORE VERTICALE | | | | | | | |
|-------|-------|-----------------------|------|-----|-----|------|------|------|------|---------------------|------|------|------|------|------|-----|------|
| | | Af | Afc | Mom | Nor | epsC | epsF | Af | Afc | Mom | Nor | epsC | epsF | Af | Afc | Mom | Nor |
| 689 | 12 | 2.51 | 2.51 | 29. | 17. | 0.00 | 0.22 | 2.51 | 2.51 | 10. | 17. | 0.00 | 0.19 | 2.51 | 2.51 | 10. | 17. |
| 690 | 12 | 2.51 | 2.51 | 23. | 16. | 0.00 | 0.21 | 2.51 | 2.51 | 5. | -16. | 0.01 | 0.07 | 2.51 | 2.51 | 5. | -16. |
| 691 | 12 | 2.51 | 2.51 | 84. | 6. | 0.02 | 0.24 | 2.51 | 2.51 | 9. | 9. | 0.00 | 0.10 | 2.51 | 2.51 | 9. | 9. |
| 692 | 12 | 2.51 | 2.51 | 80. | 13. | 0.00 | 0.30 | 2.51 | 2.51 | 8. | 6. | 0.00 | 0.07 | 2.51 | 2.51 | 8. | 6. |
| 693 | 12 | 2.51 | 2.51 | 90. | 5. | 0.03 | 0.25 | 2.51 | 2.51 | 5. | 4. | 0.00 | 0.05 | 2.51 | 2.51 | 5. | 4. |
| 694 | 12 | 2.51 | 2.51 | 92. | 14. | 0.00 | 0.34 | 2.51 | 2.51 | 5. | 5. | 0.00 | 0.05 | 2.51 | 2.51 | 5. | 5. |
| 695 | 12 | 2.51 | 2.51 | 91. | 5. | 0.03 | 0.25 | 2.51 | 2.51 | 6. | -1. | 0.01 | 0.02 | 2.51 | 2.51 | 6. | -1. |
| 696 | 12 | 2.51 | 2.51 | 95. | 15. | 0.00 | 0.36 | 2.51 | 2.51 | 0. | 8. | 0.00 | 0.08 | 2.51 | 2.51 | 0. | 8. |
| 697 | 12 | 2.51 | 2.51 | 84. | -3. | 0.07 | 0.18 | 2.51 | 2.51 | 10. | -6. | 0.01 | 0.02 | 2.51 | 2.51 | 10. | -6. |
| 698 | 12 | 2.51 | 2.51 | 87. | 14. | 0.00 | 0.33 | 2.51 | 2.51 | 19. | 8. | 0.00 | 0.12 | 2.51 | 2.51 | 19. | 8. |
| 699 | 12 | 5.86 | 5.16 | 14. | -8. | 0.02 | 0.03 | 2.51 | 2.51 | 9. | -10. | 0.01 | 0.01 | 2.51 | 2.51 | 9. | -10. |
| 700 | 12 | 5.86 | 5.16 | 46. | -2. | 0.04 | 0.11 | 2.51 | 2.51 | 22. | -2. | 0.02 | 0.07 | 2.51 | 2.51 | 22. | -2. |

| GUSCI | spess | SUPERIORE ORIZZONTALE | | | | | | | | SUPERIORE VERTICALE | | | | | | | |
|-------|-------|-----------------------|------|-----|------|------|------|------|------|---------------------|------|------|------|------|------|-----|------|
| | | Af | Afc | Mom | Nor | epsC | epsF | Af | Afc | Mom | Nor | epsC | epsF | Af | Afc | Mom | Nor |
| 689 | 12 | 2.51 | 2.51 | 12. | 17. | 0.00 | 0.18 | 2.51 | 2.51 | 22. | 17. | 0.00 | 0.22 | 2.51 | 2.51 | 22. | 17. |
| 690 | 12 | 2.51 | 2.51 | 7. | 16. | 0.00 | 0.17 | 2.51 | 2.51 | 0. | -16. | 0.01 | 0.07 | 2.51 | 2.51 | 0. | -16. |
| 691 | 12 | 2.51 | 2.51 | 64. | 6. | 0.00 | 0.20 | 2.51 | 2.51 | 1. | 10. | 0.00 | 0.09 | 2.51 | 2.51 | 1. | 10. |
| 692 | 12 | 2.51 | 2.51 | 73. | 14. | 0.00 | 0.30 | 2.51 | 2.51 | 3. | -5. | 0.00 | 0.05 | 2.51 | 2.51 | 3. | -5. |
| 693 | 12 | 2.51 | 2.51 | 76. | 9. | 0.00 | 0.26 | 2.51 | 2.51 | 3. | 5. | 0.00 | 0.05 | 2.51 | 2.51 | 3. | 5. |
| 694 | 12 | 2.51 | 2.51 | 68. | 14. | 0.00 | 0.29 | 2.51 | 2.51 | 6. | 4. | 0.00 | 0.06 | 2.51 | 2.51 | 6. | 4. |
| 695 | 12 | 2.51 | 2.51 | 24. | 11. | 0.00 | 0.16 | 2.51 | 2.51 | 0. | -1. | 0.00 | 0.01 | 2.51 | 2.51 | 0. | -1. |
| 696 | 12 | 2.51 | 2.51 | 61. | 14. | 0.00 | 0.27 | 2.51 | 2.51 | 4. | 8. | 0.00 | 0.09 | 2.51 | 2.51 | 4. | 8. |
| 697 | 12 | 2.51 | 2.51 | 71. | 5. | 0.01 | 0.21 | 2.51 | 2.51 | 0. | -7. | 0.00 | 0.00 | 2.51 | 2.51 | 0. | -7. |
| 698 | 12 | 2.51 | 2.51 | 55. | 11. | 0.00 | 0.23 | 2.51 | 2.51 | 3. | 11. | 0.00 | 0.11 | 2.51 | 2.51 | 3. | 11. |
| 699 | 12 | 5.16 | 2.51 | 5. | -10. | 0.01 | 0.01 | 2.51 | 2.51 | 33. | -8. | 0.03 | 0.07 | 2.51 | 2.51 | 33. | -8. |
| 700 | 12 | 5.16 | 2.51 | 34. | -1. | 0.02 | 0.04 | 2.51 | 2.51 | 17. | 7. | 0.01 | 0.11 | 2.51 | 2.51 | 17. | 7. |

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

MACROGUSCIO RAMPA01

VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

| Nome | Descrizione |
|------|-------------------------------|
| 12 | Rara (RARA) |
| 13 | Rara VentoX (RARA) |
| 14 | Rara VentoY (RARA) |
| 15 | Frequente (FREQUENTE) |
| 16 | Frequente VentoX (FREQUENTE) |
| 17 | Frequente VentoY (FREQUENTE) |
| 18 | Quasi Perm (QUASI PERMANENTE) |

DATI:

copriferro inferiore (asse armatura): 3 cm
copriferro superiore (asse armatura): 3 cm

Af = area effettiva tesa (cm2 al metro)
Afc = area effettiva compressa (cm2 al metro)
Mom = momento flettente [daNcm/cm]
Nor = sforzo normale [daN]

σc = tensione calcestruzzo [daN/cm2]
valore max per combinazione rara = 149.4 daN/cm2
quasi permanente = 112 daN/cm2

σf = tensione acciaio [daN/cm2]
valore max per combinazione rara = 3600 daN/cm2

wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm
wkP = apertura caratteristica per combinazione quasi permanente (mm) - valore max = 0.3 mm

<-

ARMATURA INFERIORE ORIZZONTALE

| GUSCI | Af Afc | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|--------|------|-------------------|-----|------|------|-----------------|-----|-------|------------------------|-----|------|-------|
| | | | Mom | Nor | σc | σf | Mom | Nor | wkF | Mom | Nor | σc | wkP |
| 689 | 2.51 | 2.51 | 23 | 11 | 1.96 | 354. | 19 | 10 | 0.031 | 16 | 7 | 1.44 | 0.023 |
| 690 | 2.51 | 2.51 | 22 | 12 | 1.49 | 381. | 18 | 10 | 0.032 | 3 | 5 | 0.00 | 0.013 |
| 691 | 2.51 | 2.51 | 43 | 3 | 4.90 | 267. | 32 | 2 | 0.014 | 9 | 2 | 1.01 | 0.007 |
| 692 | 2.51 | 2.51 | 38 | 9 | 4.25 | 391. | 28 | 8 | 0.029 | 7 | 7 | 0.00 | 0.019 |
| 693 | 2.51 | 2.51 | 42 | 4 | 4.86 | 297. | 31 | 2 | 0.016 | 4 | 1 | 0.47 | 0.005 |
| 694 | 2.51 | 2.51 | 45 | 10 | 5.15 | 445. | 33 | 8 | 0.031 | 7 | 7 | 0.00 | 0.019 |
| 695 | 2.51 | 2.51 | 43 | 4 | 4.94 | 281. | 32 | 2 | 0.015 | 5 | 2 | 0.54 | 0.006 |
| 696 | 2.51 | 2.51 | 46 | 11 | 5.17 | 463. | 34 | 8 | 0.032 | 8 | 7 | 0.00 | 0.020 |
| 697 | 2.51 | 2.51 | 42 | -1 | 4.55 | 183. | 31 | 0. | 0.008 | 8 | -1 | 0.68 | 0.001 |
| 698 | 2.51 | 2.51 | 45 | 10 | 5.12 | 430. | 33 | 7 | 0.029 | 12 | 6 | 0.90 | 0.019 |
| 699 | 3.35 | 4.50 | 20 | -20 | 2.28 | -17. | 14 | -15 | 0.000 | 3 | -11 | 0.99 | 0.000 |
| 700 | 3.35 | 4.50 | 22 | -1 | 2.12 | 63. | 23 | -1 | 0.003 | 8 | -1 | 0.66 | 0.000 |

ARMATURA INFERIORE VERTICALE

| | | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------------|------------|-----------------|-----|-------|------------------------|-----|------------|-------|
| GUSCI | Af | Afc | Mom | Nor | σ_c | σ_f | Mom | Nor | wkF | Mom | Nor | σ_c | wkP |
| 689 | 2.51 | 2.51 | 0. | 4 | 0.00 | 73. | 0. | 4 | 0.009 | 2 | 7 | 0.00 | 0.016 |
| 690 | 2.51 | 2.51 | 0. | 0. | 0.02 | 8. | 1 | 1 | 0.002 | 0. | -5 | 0.39 | 0.000 |
| 691 | 2.51 | 2.51 | 18 | -1 | 1.85 | 63. | 13 | -1 | 0.002 | 4 | 1 | 0.37 | 0.005 |
| 692 | 2.51 | 2.51 | 8 | 0. | 0.90 | 34. | 6 | -1 | 0.001 | 5 | -1 | 0.49 | 0.001 |
| 693 | 2.51 | 2.51 | 9 | -3 | 0.66 | 1. | 7 | -3 | 0.000 | 1 | -2 | 0.23 | 0.000 |
| 694 | 2.51 | 2.51 | 4 | 1 | 0.43 | 38. | 3 | 0. | 0.001 | 2 | 0. | 0.22 | 0.000 |
| 695 | 2.51 | 2.51 | 11 | -3 | 0.79 | 1. | 9 | -3 | 0.000 | 2 | -4 | 0.38 | 0.000 |
| 696 | 2.51 | 2.51 | 4 | 3 | 0.00 | 86. | 3 | 1 | 0.005 | 3 | 1 | 0.27 | 0.004 |
| 697 | 2.51 | 2.51 | 18 | -7 | 1.22 | -3. | 13 | -5 | 0.000 | 7 | -5 | 0.70 | 0.000 |
| 698 | 2.51 | 2.51 | 9 | 4 | 0.79 | 143. | 7 | 3 | 0.009 | 7 | 2 | 0.69 | 0.008 |
| 699 | 2.51 | 2.51 | 0. | -10 | 0.76 | -11. | 0. | -8 | 0.000 | 0. | -8 | 0.66 | 0.000 |
| 700 | 2.51 | 2.51 | 0. | 0. | 0.00 | 6. | 0. | 0. | 0.000 | 0. | 0. | 0.04 | 0.000 |

ARMATURA SUPERIORE ORIZZONTALE

| | | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------------|------------|-----------------|-----|-------|------------------------|-----|------------|-------|
| GUSCI | Af | Afc | Mom | Nor | σ_c | σ_f | Mom | Nor | wkF | Mom | Nor | σ_c | wkP |
| 689 | 2.51 | 2.51 | 0. | 11 | 0.00 | 213. | 0. | 10 | 0.021 | 6 | 7 | 0.00 | 0.018 |
| 690 | 2.51 | 2.51 | 0. | 12 | 0.00 | 239. | 0. | 10 | 0.022 | 0. | 5 | 0.00 | 0.012 |
| 691 | 2.51 | 2.51 | 0. | 3 | 0.00 | 58. | 0. | 2 | 0.004 | 0. | 2 | 0.00 | 0.003 |
| 692 | 2.51 | 2.51 | 0. | 9 | 0.00 | 186. | 0. | 8 | 0.016 | 1 | 7 | 0.00 | 0.016 |
| 693 | 2.51 | 2.51 | 0. | 4 | 0.00 | 88. | 0. | 2 | 0.005 | 0. | 1 | 0.00 | 0.003 |
| 694 | 2.51 | 2.51 | 0. | 10 | 0.00 | 203. | 0. | 8 | 0.017 | 0. | 7 | 0.00 | 0.015 |
| 695 | 2.51 | 2.51 | 0. | 4 | 0.00 | 71. | 0. | 2 | 0.005 | 0. | 2 | 0.00 | 0.004 |
| 696 | 2.51 | 2.51 | 0. | 11 | 0.00 | 216. | 0. | 8 | 0.018 | 0. | 7 | 0.00 | 0.016 |
| 697 | 2.51 | 2.51 | 0. | -1 | 0.05 | -1. | 0. | 0. | 0.000 | 0. | -1 | 0.11 | 0.000 |
| 698 | 2.51 | 2.51 | 0. | 10 | 0.00 | 192. | 0. | 7 | 0.016 | 0. | 6 | 0.00 | 0.013 |
| 699 | 4.50 | 3.35 | 0. | -20 | 1.51 | -23. | 0. | -15 | 0.000 | 0. | -11 | 0.86 | 0.000 |
| 700 | 4.50 | 3.35 | 0. | -1 | 0.08 | -1. | 0. | -1 | 0.000 | 0. | -1 | 0.08 | 0.000 |

ARMATURA SUPERIORE VERTICALE

| | | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------------|------------|-----------------|-----|-------|------------------------|-----|------------|-------|
| GUSCI | Af | Afc | Mom | Nor | σ_c | σ_f | Mom | Nor | wkF | Mom | Nor | σ_c | wkP |
| 689 | 2.51 | 2.51 | 16 | 4 | 1.83 | 159. | 14 | 4 | 0.015 | 10 | 7 | 0.00 | 0.021 |
| 690 | 2.51 | 2.51 | 12 | 0. | 1.34 | 62. | 9 | 1 | 0.004 | 2 | -5 | 0.31 | 0.000 |
| 691 | 2.51 | 2.51 | 0. | -1 | 0.07 | -1. | 0. | -1 | 0.000 | 0. | 1 | 0.00 | 0.003 |
| 692 | 2.51 | 2.51 | 0. | 0. | 0.02 | 0. | 0. | -1 | 0.000 | 0. | -1 | 0.05 | 0.000 |
| 693 | 2.51 | 2.51 | 0. | -3 | 0.21 | -3. | 0. | -3 | 0.000 | 0. | -2 | 0.19 | 0.000 |
| 694 | 2.51 | 2.51 | 0. | 1 | 0.00 | 18. | 0. | 0. | 0.000 | 0. | 0. | 0.02 | 0.000 |
| 695 | 2.51 | 2.51 | 0. | -3 | 0.27 | -4. | 0. | -3 | 0.000 | 0. | -4 | 0.29 | 0.000 |
| 696 | 2.51 | 2.51 | 0. | 3 | 0.00 | 58. | 0. | 1 | 0.003 | 0. | 1 | 0.00 | 0.002 |
| 697 | 2.51 | 2.51 | 0. | -7 | 0.52 | -8. | 0. | -5 | 0.000 | 0. | -5 | 0.40 | 0.000 |
| 698 | 2.51 | 2.51 | 0. | 4 | 0.00 | 86. | 0. | 3 | 0.006 | 0. | 2 | 0.00 | 0.005 |
| 699 | 2.51 | 2.51 | 13 | -10 | 0.23 | -15. | 9 | -8 | 0.000 | 6 | -8 | 0.44 | 0.000 |
| 700 | 2.51 | 2.51 | 9 | 0. | 1.07 | 51. | 8 | 0. | 0.002 | 8 | 0. | 0.80 | 0.001 |

MACROGUSCIO RAMPA02

VERIFICA ARMATURE EFFETTIVE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

| Nome | Descrizione |
|------|----------------------|
| 1 | SLU |
| 2 | SLU VENTOX |
| 3 | SLU VENTOX |
| 6 | SLU con SISMAX PRINC |
| 7 | SLU con SISMAX PRINC |

DATI:

tensione di snervamento acciaio (fyk): 4500 daN/cm2
 coefficiente sicurezza acciaio : 1.15
 deformazione ultima acciaio : 1.97 per mille
 deformazione ultima cls : 3.5 per mille
 rapporto rottura/snervamento (k): 1
 resistenza cilindrica cls (fck): 249 daN/cm2
 coefficiente sicurezza cls : 1.5
 coefficiente riduttivo (alfa): 0.85
 copriferro inferiore (asse armatura): 3 cm
 copriferro superiore (asse armatura): 3 cm
 moltiplicatore sollecitazioni : 1

LEGENDA:

spess = spessore guscio. Verifica effettuata su sezione BxH, con B=1 cm e H="spess" cm
 Af = area disposta al lembo teso, in cm2 al metro
 Afc = area disposta al lembo compresso, in cm2 al metro
 Mom = momento flettente [daNcm/cm]
 Nor = sforzo normale [daN]
 epsc = deformazione cls [per mille]

epsF = deformazione acciaio [per mille]

<- L'armatura è sufficiente se le deformazioni dei materiali sono ovunque minori delle corrispondenti deformazioni ultime.

| INFERIORE ORIZZONTALE | | | | | | | | INFERIORE VERTICALE | | | | | |
|-----------------------|-------|------|------|-----|-----|------|------|---------------------|------|-----|-----|------|------|
| GUSCI | spess | Af | Afc | Mom | Nor | epsC | epsF | Af | Afc | Mom | Nor | epsC | epsF |
| 707 | 12 | 2.51 | 2.51 | 0. | 14. | 0.00 | 0.13 | 2.51 | 2.51 | 0. | 13. | 0.00 | 0.12 |
| 708 | 12 | 2.51 | 2.51 | 64. | 6. | 0.05 | 0.20 | 2.51 | 2.51 | 9. | 14. | 0.00 | 0.15 |
| 709 | 12 | 2.51 | 2.51 | 27. | 18. | 0.00 | 0.23 | 2.51 | 2.51 | 10. | 18. | 0.00 | 0.19 |
| 710 | 12 | 2.51 | 2.51 | 7. | 10. | 0.00 | 0.11 | 2.51 | 2.51 | 10. | 12. | 0.00 | 0.13 |
| 711 | 12 | 2.51 | 2.51 | 63. | -6. | 0.05 | 0.14 | 2.51 | 2.51 | 14. | 8. | 0.01 | 0.11 |
| 712 | 12 | 2.51 | 2.51 | 18. | 9. | 0.00 | 0.13 | 2.51 | 2.51 | 16. | 13. | 0.00 | 0.16 |

| SUPERIORE ORIZZONTALE | | | | | | | | SUPERIORE VERTICALE | | | | | |
|-----------------------|-------|------|------|-----|------|------|-------|---------------------|------|-----|-----|------|------|
| GUSCI | spess | Af | Afc | Mom | Nor | epsC | epsF | Af | Afc | Mom | Nor | epsC | epsF |
| 707 | 12 | 2.51 | 2.51 | 82. | 12. | 0.00 | 0.30 | 2.51 | 2.51 | 19. | 11. | 0.00 | 0.14 |
| 708 | 12 | 2.51 | 2.51 | 0. | 8. | 0.00 | 0.07 | 2.51 | 2.51 | 0. | 14. | 0.00 | 0.13 |
| 709 | 12 | 2.51 | 2.51 | 25. | 18. | 0.00 | 0.23 | 2.51 | 2.51 | 14. | 19. | 0.00 | 0.21 |
| 710 | 12 | 2.51 | 2.51 | 70. | 11. | 0.00 | 0.26 | 2.51 | 2.51 | 20. | 12. | 0.00 | 0.16 |
| 711 | 12 | 2.51 | 2.51 | 0. | -10. | 0.01 | -0.01 | 2.51 | 2.51 | 0. | 8. | 0.00 | 0.08 |
| 712 | 12 | 2.51 | 2.51 | 31. | 8. | 0.00 | 0.14 | 2.51 | 2.51 | 3. | 13. | 0.00 | 0.13 |

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

MACROGUSCIO RAMPA02

VERIFICHE A FESSURAZIONE (EFFETTO MEMBRANA + PIASTRA)

CASI DI CARICO: ->

| Nome | Descrizione |
|------|-------------------------------|
| 12 | Rara (RARA) |
| 13 | Rara VentoX (RARA) |
| 14 | Rara VentoY (RARA) |
| 15 | Frequente (FREQUENTE) |
| 16 | Frequente VentoX (FREQUENTE) |
| 17 | Frequente VentoY (FREQUENTE) |
| 18 | Quasi Perm (QUASI PERMANENTE) |

DATI:

copriferro inferiore (asse armatura): 3 cm
copriferro superiore (asse armatura): 3 cm

Af = area effettiva tesa (cm2 al metro)
Afc = area effettiva compressa (cm2 al metro)
Mom = momento flettente [daNcm/cm]
Nor = sforzo normale [daN]

σc = tensione calcestruzzo [daN/cm2]
valore max per combinazione rara = 149.4 daN/cm2
quasi permanente = 112 daN/cm2

σf = tensione acciaio [daN/cm2]
valore max per combinazione rara = 3600 daN/cm2

wkF = apertura caratteristica per combinazione frequente (mm) - valore max = 0.4 mm
wkP = apertura caratteristica per combinazione quasi permanente (mm) - valore max = 0.3 mm

<-

ARMATURA INFERIORE ORIZZONTALE

| COMBINAZIONE RARA | | | | | | | | COMB. FREQUENTE | | | | COMB. QUASI PERMANENTE | | | |
|-------------------|------|------|-----|-----|------|------|--|-----------------|-----|-------|--|------------------------|-----|------|-------|
| GUSCI | Af | Afc | Mom | Nor | σc | σf | | Mom | Nor | wkF | | Mom | Nor | σc | wkP |
| 707 | 2.51 | 2.51 | 0. | 9 | 0.00 | 170. | | 0. | 6 | 0.012 | | 0. | 3 | 0.00 | 0.007 |
| 708 | 2.51 | 2.51 | 53 | 4 | 6.09 | 333. | | 37 | -2 | 0.007 | | 34 | 2 | 3.90 | 0.016 |
| 709 | 2.51 | 2.51 | 0. | 14 | 0.00 | 270. | | 0. | 9 | 0.020 | | 0. | 8 | 0.00 | 0.016 |
| 710 | 2.51 | 2.51 | 0. | 5 | 0.00 | 101. | | 0. | 5 | 0.010 | | 0. | 4 | 0.00 | 0.008 |
| 711 | 2.51 | 2.51 | 48 | -4 | 4.86 | 145. | | 34 | -2 | 0.006 | | 26 | -3 | 2.54 | 0.003 |
| 712 | 2.51 | 2.51 | 19 | 5 | 2.07 | 211. | | 14 | 3 | 0.013 | | 7 | 3 | 0.65 | 0.009 |

ARMATURA INFERIORE VERTICALE

| COMBINAZIONE RARA | | | | | | | | COMB. FREQUENTE | | | | COMB. QUASI PERMANENTE | | | |
|-------------------|------|------|-----|-----|------|------|--|-----------------|-----|-------|--|------------------------|-----|------|-------|
| GUSCI | Af | Afc | Mom | Nor | σc | σf | | Mom | Nor | wkF | | Mom | Nor | σc | wkP |
| 707 | 2.51 | 2.51 | 0. | 4 | 0.00 | 77. | | 0. | 3 | 0.006 | | 0. | 3 | 0.00 | 0.007 |
| 708 | 2.51 | 2.51 | 0. | 5 | 0.00 | 91. | | 7 | 4 | 0.012 | | 4 | 3 | 0.00 | 0.010 |
| 709 | 2.51 | 2.51 | 0. | 10 | 0.00 | 194. | | 0. | 7 | 0.015 | | 0. | 8 | 0.00 | 0.017 |
| 710 | 2.51 | 2.51 | 0. | 7 | 0.00 | 132. | | 0. | 5 | 0.011 | | 0. | 4 | 0.00 | 0.009 |
| 711 | 2.51 | 2.51 | 16 | -1 | 1.60 | 44. | | 12 | -1 | 0.002 | | 6 | -1 | 0.58 | 0.001 |
| 712 | 2.51 | 2.51 | 14 | 6 | 1.23 | 210. | | 10 | 4 | 0.014 | | 9 | 3 | 0.85 | 0.012 |

ARMATURA SUPERIORE ORIZZONTALE

| COMBINAZIONE RARA | | | | | | | | COMB. FREQUENTE | | | | COMB. QUASI PERMANENTE | | | |
|-------------------|------|------|-----|-----|------|------|--|-----------------|-----|-------|--|------------------------|-----|------|-------|
| GUSCI | Af | Afc | Mom | Nor | σc | σf | | Mom | Nor | wkF | | Mom | Nor | σc | wkP |
| 707 | 2.51 | 2.51 | 50 | 9 | 5.83 | 431. | | 38 | 6 | 0.027 | | 20 | 3 | 2.32 | 0.015 |
| 708 | 2.51 | 2.51 | 0. | 4 | 0.00 | 74. | | 0. | -2 | 0.000 | | 0. | 2 | 0.00 | 0.005 |

Relazione tecnica strutturale microcentrale elettrica

| | | | | | | | | | | | | | |
|-----|------|------|----|----|------|------|----|----|-------|----|----|------|-------|
| 709 | 2.51 | 2.51 | 26 | 14 | 1.91 | 436. | 19 | 9 | 0.030 | 7 | 8 | 0.00 | 0.020 |
| 710 | 2.51 | 2.51 | 51 | 5 | 5.88 | 353. | 38 | 5 | 0.024 | 24 | 4 | 2.76 | 0.017 |
| 711 | 2.51 | 2.51 | 0. | -4 | 0.29 | -4. | 0. | -2 | 0.000 | 0. | -3 | 0.24 | 0.000 |
| 712 | 2.51 | 2.51 | 0. | 5 | 0.00 | 106. | 0. | 3 | 0.007 | 4 | 3 | 0.00 | 0.008 |

ARMATURA SUPERIORE VERTICALE

| GUSCI | | | COMBINAZIONE RARA | | | | COMB. FREQUENTE | | | COMB. QUASI PERMANENTE | | | |
|-------|------|------|-------------------|-----|------------|------------|-----------------|-----|-------|------------------------|-----|------------|-------|
| | Af | Afc | Mom | Nor | σ_c | σ_f | Mom | Nor | WkF | Mom | Nor | σ_c | WkP |
| 707 | 2.51 | 2.51 | 11 | 4 | 1.20 | 142. | 8 | 3 | 0.009 | 4 | 3 | 0.00 | 0.009 |
| 708 | 2.51 | 2.51 | 4 | 5 | 0.00 | 117. | 0. | 4 | 0.008 | 0. | 3 | 0.00 | 0.007 |
| 709 | 2.51 | 2.51 | 8 | 10 | 0.00 | 245. | 3 | 7 | 0.017 | 0. | 8 | 0.00 | 0.018 |
| 710 | 2.51 | 2.51 | 12 | 7 | 0.66 | 206. | 8 | 5 | 0.015 | 6 | 4 | 0.00 | 0.013 |
| 711 | 2.51 | 2.51 | 0. | -1 | 0.12 | -2. | 0. | -1 | 0.000 | 0. | -1 | 0.07 | 0.000 |
| 712 | 2.51 | 2.51 | 0. | 6 | 0.00 | 125. | 0. | 4 | 0.009 | 0. | 3 | 0.00 | 0.007 |

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Bussoleno, Dicembre 2017
Aggiornamento Maggio 2018

Il tecnico
Arch. Marina Cancia

