



AMMINISTRAZIONE PROVINCIALE DI SIENA

Settore Servizi Tecnici - Servizio Viabilità

PROGETTO

SISTEMAZIONE MOVIMENTO FRANOSO S.P. 35C
"DI RADICONDOLI" IN LOC. LE CELLE

PROGETTO DEFINITIVO - ESECUTIVO

ELABORATO

FASCICOLO DEI CALCOLI ESECUTIVI
DELLE OPERE DI SISTEMAZIONE
DEL MOVIMENTO FRANOSO

ENTE ATTUATORE

AMMINISTRAZIONE PROVINCIALE DI SIENA
Settore Servizi Tecnici - Servizio Viabilità
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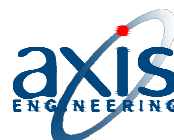
RESPONSABILE UNICO DEL PROCEDIMENTO

Dott. Arch. Maria Elena Di Trolio

UBICAZIONE

Comune di Radicondoli
S.P. 35C "di Radicondoli"

PROGETTO ED ELABORAZIONE GRAFICA



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GEOLOGIA

GE.MIN.A
Geologia e Ingegneria Geotecnica

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SPAZIO PER L'ENTE

COMMESSA	PARTE	FASE	SETTORE	VAR	ELABORATO	REV
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0	EMISSIONE	03/01/2022	GT	GT	GT	



P R O G E T T I G L O B A L I

Amministrazione Provinciale di Siena
Settore Servizi Tecnici - Servizio Viabilità

Comune di Radicondoli
Provincia di Siena

SISTEMAZIONE MOVIMENTO FRANOSO S.P. 35C
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PROGETTO DEFINITIVO - ESECUTIVO

FASCICOLO DEI CALCOLI ESECUTIVI DELLE OPERE DI SISTEMAZIONE DEL
MOVIMENTO FRANOSO

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CASO A BACK ANALYSYS

Report elaborazioni

SSAP 5.0.2 - Slope Stability Analysis Program (1991,2021)
WWW.SSAP.EU
Build No. 12007
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** Gia' Ricercatore CNR-IRPI fino a Luglio 2011

Ultima Revisione struttura tabelle del report: 21 Febbraio 2021

Modello pendio: CASO A.mod

----- PARAMETRI DEL MODELLO DEL PENDIO -----

___ PARAMETRI GEOMETRICI - Coordinate X Y (in m) ___

SUP T.		SUP 2		SUP 3		SUP 4	
X	Y	X	Y	X	Y	X	Y
0.00	30.73	0.00	27.50	0.00	24.00	0.00	15.50
12.70	33.89	45.62	42.31	45.59	38.80	45.60	30.30
27.25	38.72	76.05	47.93	75.84	43.13	76.05	38.61
39.27	44.22	94.85	51.93	95.41	50.10	94.85	44.93
62.06	48.35	170.31	76.50	170.31	74.49	170.31	69.50
68.08	51.04	-	-	-	-	-	-
73.38	51.85	-	-	-	-	-	-
75.82	53.21	-	-	-	-	-	-
84.19	53.61	-	-	-	-	-	-
85.52	52.71	-	-	-	-	-	-
91.39	56.07	-	-	-	-	-	-
94.10	56.40	-	-	-	-	-	-
101.48	60.74	-	-	-	-	-	-
111.60	63.30	-	-	-	-	-	-
119.84	66.26	-	-	-	-	-	-
131.00	69.53	-	-	-	-	-	-
133.02	71.23	-	-	-	-	-	-
157.83	77.62	-	-	-	-	-	-
170.31	80.51	-	-	-	-	-	-

---- SUP FALDA -----

X Y (in m)

0.00	30.73
12.70	33.89
27.25	38.72
39.27	44.22
62.06	48.35
68.08	51.04
73.38	51.85
75.82	53.21
84.19	53.61
85.52	52.71
91.39	56.07
94.10	56.40
101.48	60.74
111.60	63.30
119.84	66.26
131.00	69.53
133.02	71.23
157.83	77.62
170.31	80.51

----- GESTIONE ACQUIFERI -----

Strati esclusi da acquifero:

Esclusione sovraccarico pendio sommerso: NON ATTIVATA

EFFETTO TENSION CRACK IN TESTA RIEMPIUTO DI ACQUA: ----> DISATTIVATO

In caso di superfici con tension crack in testa, la frattura di tensione

puo' venir viene considerata completamente riempita di acqua per la sua intera profondita'.

Viene quindi considerato una forza in testa, prodotta dalla pressione idrostatica.

La forza applicata ha un effetto destabilizzante aggiuntivo alle altre forze destabilizzanti agenti.

Peso unitario fluido (kN/m³): 9.81

Parametri funzione dissipazione superficiale pressione dei fluidi:

Coefficiente A

0

Coefficiente K

0.000800

Pressione minima fluidi Uo_Min (kPa)

0.01

Coefficiente di sovrappressione oltre pressione idrostatica

1.00

Limitazione dissipazione a Pressione Idrostatica = ATTIVA

STABILITE CONDIZIONI PER LA VERIFICA CON SOVRAPPRESSIONE ACQUIFERI CON DISSIPAZIONE IN DIREZIONE DELLA SUPERFICIE

CALCOLO EFFETTO DI FILTRAZIONE NON ATTIVATO

----- PARAMETRI GEOMECCANICI -----

	fi'	C'	Cu	Gamm	Gamm_sat	STR_IDX	sgci	GSI	mi	D
STRATO 1	18.00	11.00	0.00	18.00	20.00	1.269	0.00	0.00	0.00	0.00
STRATO 2	18.00	11.00	0.00	18.00	20.00	1.269	0.00	0.00	0.00	0.00
STRATO 3	25.00	50.00	0.00	20.00	20.00	4.881	0.00	0.00	0.00	0.00
STRATO 4	35.00	0.00	0.00	20.00	20.00	2.404	0.00	0.00	0.00	0.00

LEGENDA: fi' _____ Angolo di attrito interno efficace(in gradi)

C' _____ Coesione efficace (in Kpa)

Cu _____ Resistenza al taglio Non drenata (in Kpa)

Gamm _____ Peso di volume terreno fuori falda (in KN/m³)

Gamm_sat _____ Peso di volume terreno immerso (in KN/m³)

STR_IDX _____ Indice di resistenza (usato in solo in 'SNIFF SEARCH) (adimensionale)

---- SOLO Per AMMASSI ROCCIOSI FRATTURATI - Parametri Criterio di Rottura di Hoek (2002)-

sigci _____ Resistenza Compressione Uniassiale Rocca Intatta (in MPa)

GSI _____ Geological Strenght Index ammasso(adimensionale)

mi _____ Indice litologico ammasso(adimensionale)

D _____ Fattore di disturbo ammasso(adimensionale)

Fattore di riduzione NTC2018: gammaPHI=1.25 e gammaC=1.25 - DISATTIVATO (solo per ROCCE)

Uso CRITERIO DI ROTTURA Hoek et al.(2002,2006) - non-lineare - Generalizzato, secondo Lei et al.(2016)

----- INFORMAZIONI GENERAZIONE SUPERFICI RANDOM -----

*** PARAMETRI PER LA GENERAZIONE DELLE SUPERFICI

MOTORE DI RICERCA: CONVEX RANDOM - Chen (1992)

FILTRAGGIO SUPERFICI : ATTIVATO

COORDINATE X1,X2,Y OSTACOLO : 0.00 0.00 0.00

LUNGHEZZA MEDIA SEGMENTI (m)*: 6.8 (+/-) 50%

INTERVALLO ASCISSE RANDOM STARTING POINT (Xmin .. Xmax): 11.00 30.00

LIVELLO MINIMO CONSIDERATO (Ymin): 29.00

INTERVALLO ASCISSE AMMESSO PER LA TERMINAZIONE (Xmin .. Xmax): 112.00 120.00

TOTALE SUPERFICI GENERATE : 1000

*NOTA IMPORTANTE: La lunghezza media dei segmenti non viene considerata nel caso di uso del motore di ricerca NEW RANOM SEARCH

----- INFORMAZIONI PARAMETRI DI CALCOLO -----

METODO DI CALCOLO : MORGENSTERN - PRICE (Morgenstern & Price, 1965)

METODO DI ESPLORAZIONE CAMPO VALORI (lambda0,Fs0) ADOTTATO : A (rapido)

COEFFICIENTE SISMICO UTILIZZATO Kh : 0.0000

COEFFICIENTE SISMICO UTILIZZATO Kv (assunto Positivo): 0.0000

COEFFICIENTE c=Kv/Kh UTILIZZATO : 0.5000

FORZA ORIZZONTALE ADDIZIONALE IN TESTA (kN/m): 0.00

FORZA ORIZZONTALE ADDIZIONALE ALLA BASE (kN/m): 0.00

N.B. Le forze orizzontali addizionali in testa e alla base sono poste uguali a 0 durante le tutte le verifiche globali.

I valori >0 impostati dall'utente sono utilizzati solo in caso di verifica singola

----- RISULTATO FINALE ELABORAZIONI -----

* DATI RELATIVI ALLE 10 SUPERFICI GENERATE CON MINOR F_s *

Fattore di sicurezza (FS) 0.9836 - Min. - X Y Lambda= 0.3285
 16.22 35.06
 25.83 35.15
 31.82 36.23
 38.60 37.46
 48.35 39.25
 58.41 41.10
 61.88 41.82
 70.76 43.74
 75.60 44.78
 85.08 48.03
 88.46 49.19
 96.11 51.82
 104.23 54.61
 111.26 60.44
 112.34 61.71
 112.34 63.57

Fattore di sicurezza (FS) 0.9900 - N.2 -- X Y Lambda= 0.3235
 25.53 38.15
 36.17 37.23
 51.90 40.92
 66.75 44.41
 80.80 47.71
 95.86 51.26
 104.89 54.70
 109.89 58.63
 114.43 62.19
 114.43 64.32

Fattore di sicurezza (FS) 1.0018 - N.3 -- X Y Lambda= 0.3060
 21.40 36.78
 33.97 38.25
 47.38 39.81
 61.58 42.23
 69.46 43.57
 82.83 47.32
 88.12 48.81
 101.47 52.56
 109.61 58.74
 112.31 61.57
 112.31 63.55

Fattore di sicurezza (FS) 1.0116 - N.4 -- X Y Lambda= 0.2866
 29.13 39.58
 39.22 39.67
 50.51 39.76
 59.03 41.70
 66.25 43.34
 71.85 44.62
 81.04 46.73
 92.55 49.37
 99.91 52.18
 108.96 58.71
 112.93 61.58
 112.93 63.78

Fattore di sicurezza (FS) 1.0210 - N.5 -- X Y Lambda= 0.2971
 27.86 39.00
 42.29 37.96
 57.02 41.69
 71.38 45.33
 86.38 49.13
 99.28 52.94
 107.56 57.20
 112.96 61.70
 112.96 63.79

Fattore di sicurezza (FS) 1.0526 - N.6 -- X Y Lambda= 0.3140
 22.33 37.09
 37.55 38.79
 52.77 40.49
 68.03 44.29
 80.73 47.45
 94.49 52.22
 100.35 54.86
 112.07 60.14
 114.23 62.11
 114.23 64.24

Fattore di sicurezza (FS) 1.0550 - N.7 -- X Y Lambda= 0.3282
 21.79 36.91
 24.88 37.46
 29.58 38.29
 37.88 39.77
 44.33 40.92
 51.60 42.22
 55.36 42.89
 58.33 43.42
 64.52 44.53
 69.06 45.35
 76.85 46.75
 84.52 48.18
 88.50 48.92
 95.99 50.33
 101.35 53.48
 108.45 57.65
 113.75 61.95
 113.75 64.07

Fattore di sicurezza (FS) 1.0659 - N.8 -- X Y Lambda= 0.3087
 26.52 38.48
 34.34 39.14
 41.57 39.75
 45.65 40.10
 56.45 41.02
 67.14 42.63
 71.46 43.73
 79.79 45.85
 85.30 47.26
 96.00 49.99
 105.99 55.90
 113.49 61.15
 114.87 62.51
 114.87 64.48

Fattore di sicurezza (FS) 1.0883 - N.9 -- X Y Lambda= 0.3232
 27.29 38.74
 31.98 39.04
 39.61 39.69
 45.90 40.26
 56.41 41.73
 60.43 42.64
 72.34 45.31
 82.40 47.58
 87.71 49.80
 92.61 51.86
 101.13 55.43
 110.41 59.51
 112.96 61.74
 112.96 63.79

Fattore di sicurezza (FS) 1.1332 - N.10 -- X Y Lambda= 0.3723
 26.77 38.56
 32.46 37.81

41.26 39.90
49.36 41.83
54.94 43.20
63.78 45.37
73.55 47.90
82.29 50.16
89.98 52.15
98.01 54.23
106.26 56.37
113.16 61.16
113.85 61.84
113.85 64.11

----- ANALISI DEFICIT DI RESISTENZA -----

DATI RELATIVI ALLE 10 SUPERFICI GENERATE CON MINOR Fs *

Analisi Deficit in riferimento a FS(progetto) = 1.200

Sup N.	FS	FTR(kN/m)	FTA(kN/m)	Bilancio(kN/m)	ESITO
1	0.984	2799.1	2845.6	-615.7	Deficit
2	0.990	2438.5	2463.1	-517.3	Deficit
3	1.002	2548.7	2544.2	-504.4	Deficit
4	1.012	2409.7	2382.0	-448.7	Deficit
5	1.021	2353.9	2305.4	-412.6	Deficit
6	1.053	2374.7	2256.0	-332.5	Deficit
7	1.055	2338.4	2216.5	-321.4	Deficit
8	1.066	2782.8	2610.6	-350.0	Deficit
9	1.088	2217.0	2037.1	-227.6	Deficit
10	1.133	2008.0	1772.0	-118.4	Deficit

Esito analisi: DEFICIT di RESISTENZA!

Valore massimo di DEFICIT di RESISTENZA(kN/m): -615.7

Note: FTR --> Forza totale Resistente lungo la superficie di scivolamento

FTA --> Forza totale Agente lungo la superficie di scivolamento

IMPORTANTE! : Il Deficit o il Surplus di resistenza viene espresso in kN per metro di LARGHEZZA rispetto al fronte della scarpata

TABELLA PARAMETRI CONCI DELLA SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	dx (m)	alpha (°)	W (kN/m)	ru (-)	U (kPa)	phi' (°)	(c',Cu) (kPa)
16.224	0.739	0.55	1.76	0.49	1.17	18.00	11.00
16.963	0.739	0.55	5.28	0.49	3.50	18.00	11.00
17.702	0.739	0.55	8.80	0.49	5.84	18.00	11.00
18.440	0.739	0.55	12.32	0.49	8.18	18.00	11.00
19.179	0.739	0.55	15.84	0.49	10.51	18.00	11.00
19.918	0.739	0.55	19.36	0.49	12.91	18.00	11.00
20.657	0.739	0.55	22.87	0.49	15.29	18.00	11.00
21.395	0.739	0.55	26.39	0.49	17.80	18.00	11.00
22.134	0.739	0.55	29.91	0.49	20.19	18.00	11.00
22.873	0.628	0.55	28.19	0.49	22.39	18.00	11.00
23.501	0.739	0.55	36.42	0.49	24.21	18.00	11.00
24.239	0.739	0.55	39.94	0.49	26.22	18.00	11.00
24.978	0.739	0.55	43.46	0.49	28.13	18.00	11.00
25.717	0.113	0.55	6.96	0.49	29.94	18.00	11.00
25.830	0.739	10.22	46.59	0.49	30.18	18.00	11.00
26.569	0.681	10.22	44.44	0.49	32.07	18.00	11.00
27.250	0.739	10.22	50.45	0.49	33.84	18.00	11.00
27.989	0.739	10.22	53.48	0.49	35.75	18.00	11.00
28.727	0.739	10.22	56.50	0.49	37.68	18.00	11.00
29.466	0.739	10.22	59.53	0.49	39.60	18.00	11.00
30.205	0.739	10.22	62.55	0.49	41.54	18.00	11.00
30.944	0.739	10.22	65.58	0.49	43.50	18.00	11.00
31.682	0.141	10.22	12.85	0.49	45.48	18.00	11.00
31.823	0.739	10.23	69.18	0.49	45.80	18.00	11.00
32.562	0.739	10.23	72.20	0.49	47.67	18.00	11.00

33.301	0.739	10.23	75.23	0.49	49.71	18.00	11.00
34.039	0.739	10.23	78.25	0.49	51.79	18.00	11.00
34.778	0.739	10.23	81.27	0.49	53.82	18.00	11.00
35.517	0.739	10.23	84.30	0.49	55.78	18.00	11.00
36.256	0.739	10.23	87.32	0.49	57.64	18.00	11.00
36.994	0.739	10.23	90.34	0.49	59.35	18.00	11.00
37.733	0.739	10.23	93.37	0.49	60.88	18.00	11.00
38.472	0.128	10.23	16.47	0.49	62.03	18.00	11.00
38.600	0.670	10.41	87.82	0.49	62.19	18.00	11.00
39.270	0.739	10.41	98.10	0.49	63.00	18.00	11.00
40.009	0.739	10.41	98.08	0.49	63.70	18.00	11.00
40.747	0.739	10.41	98.05	0.49	64.23	18.00	11.00
41.486	0.739	10.41	98.02	0.49	64.59	18.00	11.00
42.225	0.739	10.41	98.00	0.49	64.82	18.00	11.00
42.964	0.739	10.41	97.97	0.49	64.94	18.00	11.00
43.702	0.739	10.41	97.94	0.49	65.00	18.00	11.00
44.441	0.722	10.41	95.67	0.49	65.01	18.00	11.00
45.163	0.427	10.41	56.62	0.49	65.00	25.00	50.00
45.590	0.010	10.41	1.33	0.49	64.99	25.00	50.00
45.600	0.020	10.41	2.65	0.49	64.99	25.00	50.00
45.620	0.739	10.41	97.87	0.49	64.99	25.00	50.00
46.359	0.739	10.41	97.85	0.49	64.97	18.00	11.00
47.097	0.739	10.41	97.82	0.49	64.96	18.00	11.00
47.836	0.513	10.41	67.96	0.49	64.94	18.00	11.00
48.350	0.739	10.42	97.77	0.49	64.93	18.00	11.00
49.088	0.739	10.42	97.75	0.49	64.91	18.00	11.00
49.827	0.739	10.42	97.72	0.49	64.89	18.00	11.00
50.566	0.739	10.42	97.69	0.49	64.87	18.00	11.00
51.304	0.739	10.42	97.66	0.49	64.85	18.00	11.00
52.043	0.739	10.42	97.63	0.49	64.83	18.00	11.00
52.782	0.739	10.42	97.60	0.49	64.81	18.00	11.00
53.521	0.739	10.42	97.58	0.49	64.78	18.00	11.00
54.259	0.739	10.42	97.55	0.49	64.76	18.00	11.00
54.998	0.739	10.42	97.52	0.49	64.72	18.00	11.00
55.737	0.739	10.42	97.49	0.49	64.68	18.00	11.00
56.475	0.739	10.42	97.46	0.49	64.62	18.00	11.00
57.214	0.739	10.42	97.43	0.49	64.56	18.00	11.00
57.953	0.459	10.42	60.49	0.49	64.54	18.00	11.00
58.412	0.739	11.79	97.25	0.49	64.54	18.00	11.00
59.150	0.739	11.79	96.95	0.49	64.62	18.00	11.00
59.889	0.739	11.79	96.65	0.49	64.80	18.00	11.00
60.628	0.739	11.79	96.35	0.49	65.11	18.00	11.00
61.367	0.513	11.79	66.76	0.49	65.57	18.00	11.00
61.880	0.180	12.17	23.42	0.49	66.01	18.00	11.00
62.060	0.739	12.17	97.17	0.49	66.18	18.00	11.00
62.799	0.739	12.17	99.69	0.49	67.18	18.00	11.00
63.537	0.739	12.17	102.21	0.49	68.35	18.00	11.00
64.276	0.739	12.17	104.74	0.49	69.61	18.00	11.00
65.015	0.739	12.17	107.26	0.49	70.88	18.00	11.00
65.754	0.739	12.17	109.78	0.49	72.14	18.00	11.00
66.492	0.739	12.17	112.30	0.49	73.29	18.00	11.00
67.231	0.739	12.17	114.83	0.49	74.29	18.00	11.00
67.970	0.110	12.17	17.35	0.49	75.00	18.00	11.00
68.080	0.739	12.17	116.12	0.49	75.07	18.00	11.00
68.819	0.739	12.17	115.44	0.49	75.41	18.00	11.00
69.557	0.739	12.17	114.75	0.49	75.66	18.00	11.00
70.296	0.468	12.17	72.41	0.49	75.99	18.00	11.00
70.765	0.739	12.18	113.63	0.49	76.27	18.00	11.00
71.503	0.739	12.18	112.94	0.49	76.68	18.00	11.00
72.242	0.739	12.18	112.26	0.49	77.05	18.00	11.00
72.981	0.399	12.18	60.38	0.49	77.39	18.00	11.00
73.380	0.739	12.18	113.40	0.49	77.58	18.00	11.00
74.119	0.739	12.18	117.13	0.49	77.90	18.00	11.00
74.857	0.739	12.18	120.86	0.49	78.09	18.00	11.00
75.596	0.004	12.18	0.75	0.49	78.08	18.00	11.00
75.601	0.219	18.93	36.55	0.49	78.08	18.00	11.00
75.820	0.020	18.93	3.34	0.49	77.99	18.00	11.00
75.840	0.210	18.93	34.94	0.49	77.98	18.00	11.00
76.050	0.739	18.93	120.83	0.49	77.85	18.00	11.00
76.789	0.739	18.93	117.61	0.49	77.13	18.00	11.00
77.527	0.739	18.93	114.39	0.49	76.09	18.00	11.00
78.266	0.739	18.93	111.16	0.49	74.72	18.00	11.00
79.005	0.739	18.93	107.94	0.49	72.79	18.00	11.00

79.744	0.739	18.93	104.72	0.49	70.22	18.00	11.00
80.482	0.739	18.93	101.50	0.49	67.14	18.00	11.00
81.221	0.739	18.93	98.28	0.49	63.84	18.00	11.00
81.960	0.739	18.93	95.06	0.49	60.96	18.00	11.00
82.698	0.739	18.93	91.84	0.49	58.68	18.00	11.00
83.437	0.739	18.93	88.62	0.49	56.65	18.00	11.00
84.176	0.014	18.93	1.66	0.49	54.88	18.00	11.00
84.190	0.739	18.93	81.38	0.49	54.85	18.00	11.00
84.929	0.152	18.93	15.33	0.49	53.33	18.00	11.00
85.080	0.440	18.94	41.78	0.49	53.09	18.00	11.00
85.520	0.739	18.94	68.16	0.49	52.48	18.00	11.00
86.259	0.739	18.94	70.66	0.49	51.87	18.00	11.00
86.997	0.739	18.94	73.16	0.49	51.64	18.00	11.00
87.736	0.721	18.94	73.77	0.49	51.69	18.00	11.00
88.457	0.739	18.95	78.11	0.49	51.97	18.00	11.00
89.195	0.739	18.95	80.61	0.49	52.43	18.00	11.00
89.934	0.739	18.95	83.11	0.49	53.03	18.00	11.00
90.673	0.717	18.95	83.07	0.49	53.71	18.00	11.00
91.390	0.739	18.95	85.58	0.49	54.19	18.00	11.00
92.129	0.739	18.95	83.16	0.49	54.51	18.00	11.00
92.867	0.739	18.95	80.74	0.49	54.80	18.00	11.00
93.606	0.494	18.95	52.63	0.49	55.14	18.00	11.00
94.100	0.739	18.95	79.25	0.49	55.44	18.00	11.00
94.839	0.011	18.95	1.23	0.49	56.06	18.00	11.00
94.850	0.560	18.95	61.89	0.49	56.07	18.00	11.00
95.410	0.703	18.95	79.89	0.49	56.71	18.00	11.00
96.113	0.739	18.96	86.53	0.49	57.79	18.00	11.00
96.852	0.739	18.96	89.20	0.49	59.10	18.00	11.00
97.591	0.739	18.96	91.87	0.49	60.54	18.00	11.00
98.329	0.739	18.96	94.54	0.49	62.03	18.00	11.00
99.068	0.739	18.96	97.21	0.49	63.49	18.00	11.00
99.807	0.739	18.96	99.88	0.49	64.73	18.00	11.00
100.545	0.739	18.96	102.55	0.49	65.56	18.00	11.00
101.284	0.196	18.96	27.63	0.49	65.80	18.00	11.00
101.480	0.739	18.96	104.09	0.49	65.75	18.00	11.00
102.219	0.739	18.96	103.11	0.49	65.27	18.00	11.00
102.957	0.739	18.96	102.12	0.49	64.31	18.00	11.00
103.696	0.536	18.96	73.46	0.49	62.87	18.00	11.00
104.232	0.739	39.71	97.76	0.49	61.50	18.00	11.00
104.971	0.011	39.71	1.41	0.49	59.19	18.00	11.00
104.982	0.739	39.71	91.36	0.49	59.15	18.00	11.00
105.721	0.739	39.71	85.06	0.49	56.13	18.00	11.00
106.459	0.739	39.71	78.75	0.49	52.87	18.00	11.00
107.198	0.739	39.71	72.45	0.49	49.15	18.00	11.00
107.937	0.739	39.71	66.15	0.49	44.32	18.00	11.00
108.675	0.739	39.71	59.84	0.49	39.39	18.00	11.00
109.414	0.739	39.71	53.54	0.49	35.16	18.00	11.00
110.153	0.739	39.71	47.24	0.49	30.99	18.00	11.00
110.892	0.364	39.71	20.98	0.49	27.40	18.00	11.00
111.256	0.344	49.56	17.99	0.49	25.66	18.00	11.00
111.600	0.739	49.56	31.86	0.49	21.15	18.00	11.00

LEGENDA SIMBOLI

X(m) : Ascissa sinistra concio
dx(m) : Larghezza concio
alpha(°) : Angolo pendenza base concio
W(kN/m) : Forza peso concio
ru(-) : Coefficiente locale pressione interstiziale
U(kPa) : Pressione totale dei pori base concio
phi'(°) : Angolo di attrito efficace base concio
c'/Cu (kPa) : Coesione efficace o Resistenza al taglio in condizioni non drenate

TABELLA DIAGRAMMA DELLE FORZE DELLA SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	ht (m)	yt (m)	yt' (--)	E(x) (kN/m)	T(x) (kN/m)	E' (kN)	rho(x)F (--)	S_qFEM (--)	FS_srmFEM (--)
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110.892	0.846	60.983	0.567	2.6612727571E+001	3.4666029891E-001	-1.8141103901E+001	0.033	0.472	0.662
111.256	0.728	61.168	0.505	2.0817842178E+001	1.8918419747E-001	-1.4882935945E+001	0.033	0.429	0.659
111.600	0.498	61.341	0.505	1.6029248874E+001	1.3812131498E-001	-1.6392444663E+001	0.033	0.457	0.698

LEGENDA SIMBOLI

- X(m) : Ascissa sinistra concio
 ht(m) : Altezza linea di thrust da nodo sinistro base concio
 yt(m) : coordinata Y linea di trust
 yt'(-) : gradiente pendenza locale linea di trust
 E(x)(kN/m) : Forza Normale interconcio
 T(x)(kN/m) : Forza Tangenziale interconcio
 E' (kN) : derivata Forza normale interconcio
 Rho(x) (-) : fattore mobilizzazione resistenza al taglio verticale interconcio ZhU et al.(2003)
 FS_qFEM(x)(-) : fattore di sicurezza locale stimato (locale in X) by qFEM
 FS_srmFEM(x)(-) : fattore di sicurezza locale stimato (locale in X) by SRM Procedure

TABELLA SFORZI DI TAGLIO DISTRIBUITI LUNGO SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	dx (m)	dl (m)	alpha (°)	TauStress (kPa)	TauF (kN/m)	TauStrength (kPa)	TauS (kN/m)
16.224	0.739	0.739	0.545	0.023	0.017	11.403	8.424
16.963	0.739	0.739	0.545	0.068	0.050	12.248	9.049
17.702	0.739	0.739	0.545	0.113	0.084	13.160	9.722
18.440	0.739	0.739	0.545	0.159	0.117	14.141	10.447
19.179	0.739	0.739	0.545	0.204	0.151	15.148	11.191
19.918	0.739	0.739	0.545	0.249	0.184	16.062	11.866
20.657	0.739	0.739	0.545	0.295	0.218	17.026	12.578
21.395	0.739	0.739	0.545	0.340	0.251	17.817	13.162
22.134	0.739	0.739	0.545	0.385	0.285	18.484	13.655
22.873	0.628	0.628	0.545	0.427	0.268	19.251	12.086
23.501	0.739	0.739	0.545	0.469	0.347	20.119	14.863
24.239	0.739	0.739	0.545	0.515	0.380	21.041	15.544
24.978	0.739	0.739	0.545	0.560	0.414	21.985	16.242
25.717	0.113	0.113	0.545	0.586	0.066	22.228	2.513
25.830	0.739	0.751	10.225	11.017	8.270	21.563	16.186
26.569	0.681	0.692	10.225	11.393	7.889	21.644	14.987
27.250	0.739	0.751	10.225	11.931	8.956	22.053	16.554
27.989	0.739	0.751	10.225	12.646	9.493	22.739	17.069
28.727	0.739	0.751	10.225	13.362	10.030	23.409	17.572
29.466	0.739	0.751	10.225	14.077	10.567	24.092	18.085
30.205	0.739	0.751	10.225	14.793	11.104	24.770	18.593
30.944	0.739	0.751	10.225	15.508	11.641	25.439	19.095
31.682	0.141	0.143	10.225	15.934	2.281	25.465	3.645
31.823	0.739	0.751	10.235	16.375	12.292	26.197	19.666
32.562	0.739	0.751	10.235	17.091	12.829	26.961	20.239
33.301	0.739	0.751	10.235	17.806	13.367	27.612	20.727
34.039	0.739	0.751	10.235	18.522	13.904	28.230	21.191
34.778	0.739	0.751	10.235	19.238	14.441	28.857	21.662
35.517	0.739	0.751	10.235	19.953	14.978	29.505	22.148
36.256	0.739	0.751	10.235	20.669	15.515	30.182	22.656
36.994	0.739	0.751	10.235	21.384	16.053	30.890	23.188
37.733	0.739	0.751	10.235	22.100	16.590	31.599	23.720
38.472	0.128	0.130	10.235	22.520	2.926	31.904	4.146
38.600	0.670	0.682	10.407	23.271	15.863	32.541	22.182
39.270	0.739	0.751	10.407	23.594	17.721	32.913	24.720
40.009	0.739	0.751	10.407	23.587	17.716	32.732	24.585
40.747	0.739	0.751	10.407	23.581	17.711	32.508	24.416
41.486	0.739	0.751	10.407	23.574	17.706	32.344	24.293
42.225	0.739	0.751	10.407	23.568	17.701	32.242	24.216
42.964	0.739	0.751	10.407	23.562	17.697	32.156	24.152
43.702	0.739	0.751	10.407	23.555	17.692	32.095	24.106
44.441	0.722	0.734	10.407	23.549	17.280	31.991	23.475
45.163	0.427	0.434	10.407	23.544	10.227	80.288	34.874
45.590	0.010	0.010	10.407	23.542	0.239	80.342	0.817
45.600	0.020	0.020	10.407	23.542	0.479	80.342	1.634
45.620	0.739	0.751	10.407	23.539	17.679	80.307	60.316
46.359	0.739	0.751	10.407	23.532	17.675	31.964	24.008
47.097	0.739	0.751	10.407	23.526	17.670	31.973	24.014
47.836	0.513	0.522	10.407	23.521	12.276	31.977	16.690
48.350	0.739	0.751	10.417	23.536	17.678	31.988	24.026

49.088	0.739	0.751	10.417	23.530	17.673	32.005	24.039
49.827	0.739	0.751	10.417	23.523	17.668	32.022	24.052
50.566	0.739	0.751	10.417	23.516	17.663	32.039	24.065
51.304	0.739	0.751	10.417	23.509	17.658	31.918	23.973
52.043	0.739	0.751	10.417	23.502	17.652	31.882	23.947
52.782	0.739	0.751	10.417	23.495	17.647	31.857	23.928
53.521	0.739	0.751	10.417	23.488	17.642	31.827	23.905
54.259	0.739	0.751	10.417	23.481	17.637	31.790	23.877
54.998	0.739	0.751	10.417	23.475	17.632	31.771	23.863
55.737	0.739	0.751	10.417	23.468	17.627	31.781	23.871
56.475	0.739	0.751	10.417	23.461	17.621	31.787	23.875
57.214	0.739	0.751	10.417	23.454	17.616	31.784	23.873
57.953	0.459	0.466	10.417	23.448	10.937	31.769	14.818
58.412	0.739	0.755	11.785	26.321	19.863	31.279	23.604
59.150	0.739	0.755	11.785	26.240	19.802	31.142	23.501
59.889	0.739	0.755	11.785	26.159	19.741	30.978	23.377
60.628	0.739	0.755	11.785	26.078	19.679	30.776	23.225
61.367	0.513	0.524	11.785	26.010	13.636	30.551	16.017
61.880	0.180	0.184	12.170	26.765	4.936	30.205	5.571
62.060	0.739	0.756	12.170	27.105	20.483	30.744	23.233
62.799	0.739	0.756	12.170	27.808	21.015	31.519	23.819
63.537	0.739	0.756	12.170	28.512	21.547	32.225	24.352
64.276	0.739	0.756	12.170	29.216	22.079	32.882	24.849
65.015	0.739	0.756	12.170	29.920	22.611	33.537	25.344
65.754	0.739	0.756	12.170	30.624	23.143	34.176	25.827
66.492	0.739	0.756	12.170	31.328	23.675	34.839	26.328
67.231	0.739	0.756	12.170	32.032	24.206	35.536	26.855
67.970	0.110	0.113	12.170	32.436	3.658	35.824	4.040
68.080	0.739	0.756	12.170	32.393	24.480	35.740	27.009
68.819	0.739	0.756	12.170	32.202	24.335	35.304	26.680
69.557	0.739	0.756	12.170	32.011	24.190	34.924	26.392
70.296	0.468	0.479	12.170	31.854	15.265	34.565	16.564
70.765	0.739	0.756	12.180	31.722	23.973	34.182	25.833
71.503	0.739	0.756	12.180	31.530	23.828	33.706	25.472
72.242	0.739	0.756	12.180	31.338	23.683	33.238	25.119
72.981	0.399	0.408	12.180	31.190	12.738	32.851	13.417
73.380	0.739	0.756	12.180	31.659	23.926	33.443	25.274
74.119	0.739	0.756	12.180	32.699	24.712	34.823	26.317
74.857	0.739	0.756	12.180	33.740	25.498	36.247	27.393
75.596	0.004	0.005	12.180	34.264	0.158	36.973	0.170
75.601	0.219	0.232	18.928	51.128	11.855	34.101	7.907
75.820	0.020	0.021	18.928	51.254	1.084	34.250	0.724
75.840	0.210	0.222	18.928	51.046	11.332	34.058	7.561
76.050	0.739	0.781	18.928	50.187	39.193	33.299	26.004
76.789	0.739	0.781	18.928	48.849	38.148	32.282	25.210
77.527	0.739	0.781	18.928	47.511	37.103	31.367	24.496
78.266	0.739	0.781	18.928	46.173	36.059	30.572	23.875
79.005	0.739	0.781	18.928	44.835	35.014	29.955	23.394
79.744	0.739	0.781	18.928	43.497	33.969	29.537	23.067
80.482	0.739	0.781	18.928	42.159	32.924	29.275	22.862
81.221	0.739	0.781	18.928	40.821	31.879	29.062	22.696
81.960	0.739	0.781	18.928	39.484	30.835	28.702	22.414
82.698	0.739	0.781	18.928	38.146	29.790	28.159	21.991
83.437	0.739	0.781	18.928	36.808	28.745	27.540	21.507
84.176	0.014	0.015	18.928	36.126	0.537	27.459	0.409
84.190	0.739	0.781	18.928	33.802	26.398	25.265	19.730
84.929	0.152	0.160	18.928	31.017	4.974	23.109	3.706
85.080	0.440	0.465	18.938	29.180	13.561	21.431	9.960
85.520	0.739	0.781	18.938	28.323	22.120	20.813	16.254
86.259	0.739	0.781	18.938	29.363	22.933	21.987	17.172
86.997	0.739	0.781	18.938	30.403	23.745	23.044	17.997
87.736	0.721	0.762	18.938	31.430	23.943	23.994	18.278
88.457	0.739	0.781	18.948	32.472	25.362	24.869	19.424
89.195	0.739	0.781	18.948	33.511	26.174	25.702	20.074
89.934	0.739	0.781	18.948	34.551	26.985	26.486	20.687
90.673	0.717	0.758	18.948	35.575	26.974	27.232	20.648
91.390	0.739	0.781	18.948	35.577	27.787	27.073	21.145
92.129	0.739	0.781	18.948	34.572	27.002	26.016	20.319
92.867	0.739	0.781	18.948	33.567	26.217	24.970	19.503
93.606	0.494	0.522	18.948	32.728	17.088	24.064	12.564
94.100	0.739	0.781	18.948	32.947	25.733	24.173	18.880
94.839	0.011	0.012	18.948	33.511	0.400	24.505	0.292
94.850	0.560	0.592	18.948	33.940	20.096	24.907	14.747

95.410	0.703	0.743	18.948	34.890	25.939	25.599	19.032
96.113	0.739	0.781	18.958	35.990	28.111	26.271	20.520
96.852	0.739	0.781	18.958	37.100	28.978	26.897	21.009
97.591	0.739	0.781	18.958	38.210	29.845	27.485	21.468
98.329	0.739	0.781	18.958	39.320	30.713	28.058	21.915
99.068	0.739	0.781	18.958	40.431	31.580	28.649	22.377
99.807	0.739	0.781	18.958	41.541	32.447	29.306	22.890
100.545	0.739	0.781	18.958	42.651	33.314	30.094	23.506
101.284	0.196	0.207	18.958	43.353	8.975	30.689	6.353
101.480	0.739	0.781	18.958	43.295	33.817	30.656	23.945
102.219	0.739	0.781	18.958	42.884	33.496	30.436	23.773
102.957	0.739	0.781	18.958	42.473	33.175	30.370	23.722
103.696	0.536	0.567	18.958	42.118	23.866	30.512	17.289
104.232	0.739	0.960	39.709	65.040	62.455	19.114	18.354
104.971	0.011	0.014	39.709	62.912	0.903	18.897	0.271
104.982	0.739	0.960	39.709	60.784	58.368	18.533	17.796
105.721	0.739	0.960	39.709	56.590	54.341	18.154	17.432
106.459	0.739	0.960	39.709	52.397	50.314	17.725	17.021
107.198	0.739	0.960	39.709	48.203	46.287	17.528	16.831
107.937	0.739	0.960	39.709	44.010	42.260	17.884	17.173
108.675	0.739	0.960	39.709	39.816	38.233	16.358	15.708
109.414	0.739	0.960	39.709	35.622	34.206	15.120	14.519
110.153	0.739	0.960	39.709	31.429	30.179	13.774	13.227
110.892	0.364	0.474	39.709	28.298	13.405	13.296	6.298
111.256	0.344	0.530	49.556	25.823	13.692	11.052	5.860
111.600	0.739	1.139	49.556	21.292	24.246	11.065	12.601

LEGENDA SIMBOLI

X(m) : Ascissa sinistra concio

dx(m) : Larghezza concio

dl(m) : lunghezza base concio

alpha(°) : Angolo pendenza base concio

TauStress(kPa) : Sforzo di taglio su base concio

TauF (kN/m) : Forza di taglio su base concio

TauStrength(kPa) : Resistenza al taglio su base concio

TauS (kN/m) : Forza resistente al taglio su base concio

CASO B

Report elaborazioni

SSAP 5.0.2 - Slope Stability Analysis Program (1991,2021)

WWW.SSAP.EU

Build No. 12007

BY

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** Gia' Ricercatore CNR-IRPI fino a Luglio 2011

Ultima Revisione struttura tabelle del report: 21 Febbraio 2021

Modello pendio: CASO B.mod

----- PARAMETRI DEL MODELLO DEL PENDIO -----

___ PARAMETRI GEOMETRICI - Coordinate X Y (in m) ___

SUP T.		SUP 2		SUP 3		SUP 4	
X	Y	X	Y	X	Y	X	Y
0.00	30.73	0.00	27.50	0.00	24.00	0.00	15.50
12.70	33.89	45.62	42.31	45.59	38.80	45.60	30.30
27.25	38.72	76.05	47.93	75.84	43.13	76.05	38.61
39.27	44.22	94.85	51.93	95.41	50.10	94.85	44.93
62.06	48.35	170.31	76.50	170.31	74.49	170.31	69.50
68.08	51.04	-	-	-	-	-	-
73.38	51.85	-	-	-	-	-	-
75.82	53.21	-	-	-	-	-	-
84.19	53.61	-	-	-	-	-	-
85.52	52.71	-	-	-	-	-	-
91.39	56.07	-	-	-	-	-	-
94.10	56.40	-	-	-	-	-	-
101.48	60.74	-	-	-	-	-	-
111.60	63.30	-	-	-	-	-	-
119.84	66.26	-	-	-	-	-	-
131.00	69.53	-	-	-	-	-	-
133.02	71.23	-	-	-	-	-	-
157.83	77.62	-	-	-	-	-	-
170.31	80.51	-	-	-	-	-	-

---- SUP FALDA -----

X Y (in m)

0.00	30.73
12.70	33.89
27.25	38.72
39.27	44.22
62.06	48.35
68.08	51.04
73.38	51.85
75.82	53.21
84.19	53.61
85.52	52.71
91.39	56.07
94.10	56.40
101.48	60.74
111.60	63.30
119.84	66.26
131.00	69.53
133.02	71.23
157.83	77.62
170.31	80.51

----- GESTIONE ACQUIFERI -----

Strati esclusi da acquifero:

STRATO 4

Esclusione sovraccarico pendio sommerso: NON ATTIVATA

EFFETTO TENSION CRACK IN TESTA RIEMPITO DI ACQUA: ----> DISATTIVATO

In caso di superfici con tension crack in testa, la frattura di tensione

puo' venir viene considerata completamente riempita di acqua per la sua intera profondita'.
Viene quindi considerato una forza in testa, prodotta dalla pressione idrostatica.
La forza applicata ha un effetto destabilizzante aggiuntivo alle altre forze destabilizzanti agenti.

Peso unitario fluido (kN/m³): 9.81

Parametri funzione dissipazione superficiale pressione dei fluidi:

Coefficiente A 0
Coefficiente K 0.000800
Pressione minima fluidi Uo_Min (kPa) 0.01
Coefficiente di soprapressione oltre pressione idrostatica 1.00
Limitazione dissipazione a Pressione Idrostatica = ATTIVA
STABILITE CONDIZIONI PER LA VERIFICA CON SOVRAPPRESSIONE ACQUIFERI CON DISSIPAZIONE IN DIREZIONE DELLA SUPERFICIE

CALCOLO EFFETTO DI FILTRAZIONE NON ATTIVATO

----- PARAMETRI GEOMECCANICI -----

	fi`	C`	Cu	Gamm	Gamm_sat	STR_IDX	sgci	GSI	mi	D
STRATO 1	23.00	18.00	18.00	0.00	20.00	20.00	1.953	0.00	0.00	0.00
STRATO 2	23.00	18.00	18.00	0.00	20.00	20.00	1.953	0.00	0.00	0.00
STRATO 3	25.00	50.00	50.00	0.00	20.00	20.00	4.881	0.00	0.00	0.00
STRATO 4	35.00	0.00	0.00	0.00	20.00	20.00	2.404	0.00	0.00	0.00

LEGENDA: fi` _____ Angolo di attrito interno efficace(in gradi)
C` _____ Coesione efficace (in Kpa)
Cu _____ Resistenza al taglio Non drenata (in Kpa)
Gamm _____ Peso di volume terreno fuori falda (in KN/m³)
Gamm_sat _____ Peso di volume terreno immerso (in KN/m³)
STR_IDX _____ Indice di resistenza (usato in solo in 'SNIFF SEARCH) (adimensionale)
---- SOLO Per AMMASSI ROCCIOSI FRATTURATI - Parametri Criterio di Rottura di Hoek (2002)-
sigci _____ Resistenza Compressione Uniassiale Roccia Intatta (in MPa)
GSI _____ Geological Strength Index ammasso(adimensionale)
mi _____ Indice litologico ammasso(adimensionale)
D _____ Fattore di disturbo ammasso(adimensionale)
Fattore di riduzione NTC2018: gammaPHI=1.25 e gammaC=1.25 - DISATTIVATO (solo per ROCCE)
Uso CRITERIO DI ROTTURA Hoek et al.(2002,2006) - non-lineare - Generalizzato, secondo Lei et al.(2016)

----- INFORMAZIONI GENERAZIONE SUPERFICI RANDOM -----

*** PARAMETRI PER LA GENERAZIONE DELLE SUPERFICI
MOTORE DI RICERCA: CONVEX RANDOM - Chen (1992)
FILTRAGGIO SUPERFICI : ATTIVATO
COORDINATE X1,X2,Y OSTACOLO : 0.00 0.00 0.00
LUNGHEZZA MEDIA SEGMENTI (m)*: 6.8 (+/-) 50%
INTERVALLO ASCISSE RANDOM STARTING POINT (Xmin .. Xmax): 3.41 156.69
LIVELLO MINIMO CONSIDERATO (Ymin): 29.00
INTERVALLO ASCISSE AMMESSO PER LA TERMINAZIONE (Xmin .. Xmax): 40.00 166.90
TOTALE SUPERFICI GENERATE : 10000
*NOTA IMPORTANTE: La lunghezza media dei segmenti non viene considerata nel caso di uso del motore di ricerca NEW RANDOM SEARCH

----- INFORMAZIONI PARAMETRI DI CALCOLO -----

METODO DI CALCOLO : MORGENSTERN - PRICE (Morgenstern & Price, 1965)
METODO DI ESPLORAZIONE CAMPO VALORI (lambda0,Fs0) ADOTTATO : A (rapido)
COEFFICIENTE SISMICO UTILIZZATO Kh : 0.0000
COEFFICIENTE SISMICO UTILIZZATO Kv (assunto Positivo): 0.0000
COEFFICIENTE c=Kv/Kh UTILIZZATO : 0.5000
FORZA ORIZZONTALE ADDIZIONALE IN TESTA (kN/m): 0.00
FORZA ORIZZONTALE ADDIZIONALE ALLA BASE (kN/m): 0.00

N.B. Le forze orizzontali addizionali in testa e alla base sono poste uguali a 0 durante le tutte le verifiche globali.
I valori >0 impostati dall'utente sono utilizzati solo in caso di verifica singola

----- RISULTATO FINALE ELABORAZIONI -----

* DATI RELATIVI ALLE 10 SUPERFICI GENERATE CON MINOR Fs *

Fattore di sicurezza (FS) 1.0886 - Min. - X Y Lambda= 0.3689
85.97 52.96

89.28 51.09
 96.10 51.48
 101.11 52.42
 109.22 55.26
 114.08 56.95
 117.99 58.32
 124.85 60.72
 128.35 61.95
 133.63 65.02
 137.31 68.71
 137.31 72.33

Fattore di sicurezza (FS) 1.0992 - N.2 -- X Y Lambda= 0.3384

87.16 53.65
 93.74 50.53
 97.42 51.27
 100.55 52.25
 107.88 54.56
 112.50 56.14
 115.58 57.20
 120.61 58.92
 127.85 61.41
 135.11 63.90
 141.05 65.94
 148.18 68.40
 151.09 70.20
 154.12 72.07
 155.29 73.02
 155.29 76.97

Fattore di sicurezza (FS) 1.1100 - N.3 -- X Y Lambda= 0.3376

87.02 53.57
 93.46 51.22
 99.04 51.51
 105.62 53.59
 112.26 55.69
 117.41 57.38
 121.44 58.73
 126.21 60.34
 129.66 61.71
 133.34 64.51
 136.86 68.37
 136.86 72.22

Fattore di sicurezza (FS) 1.1152 - N.4 -- X Y Lambda= 0.3598

85.65 52.78
 87.88 51.67
 90.78 50.22
 93.00 50.18
 97.14 51.13
 101.58 52.54
 103.56 53.17
 106.24 54.06
 107.72 54.57
 111.90 56.21
 114.57 57.27
 118.19 58.82
 120.60 59.86
 124.33 61.46
 125.85 62.11
 129.43 64.81
 130.29 65.57
 130.29 69.32

Fattore di sicurezza (FS) 1.1193 - N.5 -- X Y Lambda= 0.3472

86.28 53.15
 91.32 50.53
 93.73 50.72
 97.13 50.99

102.96 52.68
109.04 54.79
113.66 56.39
116.89 57.51
119.95 59.38
123.06 61.28
128.59 64.69
129.50 65.28
129.50 69.09

Fattore di sicurezza (FS) 1.1304 - N.6 -- X Y Lambda= 0.3528
85.66 52.79
89.16 51.24
99.39 52.63
108.40 54.33
115.25 56.76
122.01 59.17
130.31 64.95
134.42 67.81
134.42 71.59

Fattore di sicurezza (FS) 1.1328 - N.7 -- X Y Lambda= 0.3497
87.82 54.03
91.35 52.64
94.42 51.43
99.05 52.32
105.40 53.77
113.00 56.39
119.83 58.75
126.32 62.13
131.05 65.11
135.84 68.12
135.84 71.96

Fattore di sicurezza (FS) 1.1338 - N.8 -- X Y Lambda= 0.3249
87.98 54.12
94.15 52.93
99.63 52.43
102.91 53.23
106.26 54.25
108.87 55.04
111.89 55.96
117.01 57.52
120.17 58.48
124.85 59.91
131.08 62.73
136.19 65.04
139.15 66.87
144.03 70.28
144.03 74.07

Fattore di sicurezza (FS) 1.1354 - N.9 -- X Y Lambda= 0.3462
87.28 53.72
97.55 51.46
106.36 54.31
119.38 58.51
125.00 61.07
139.37 68.97
139.37 72.87

Fattore di sicurezza (FS) 1.1440 - N.10 -- X Y Lambda= 0.3242
86.06 53.02
93.12 52.80
97.10 52.73
103.15 53.49
110.87 55.61
120.01 58.60
126.05 60.68

132.55 62.92
137.44 64.61
143.50 66.70
147.62 69.24
152.77 72.41
152.77 76.32

----- ANALISI DEFICIT DI RESISTENZA -----

DATI RELATIVI ALLE 10 SUPERFICI GENERATE CON MINOR FS *

Analisi Deficit in riferimento a FS(progetto) = 1.200

Sup N.	FS	FTR(kN/m)	FTA(kN/m)	Bilancio(kN/m)	ESITO
1	1.089	2212.3	2032.2	-226.4	Deficit
2	1.099	3039.1	2764.8	-278.6	Deficit
3	1.110	2263.7	2039.4	-183.6	Deficit
4	1.115	1920.0	1721.6	-146.0	Deficit
5	1.119	1880.1	1679.7	-135.5	Deficit
6	1.130	2077.1	1837.5	-127.8	Deficit
7	1.133	2032.9	1794.6	-120.6	Deficit
8	1.134	2446.4	2157.7	-142.8	Deficit
9	1.135	2198.3	1936.2	-125.1	Deficit
10	1.144	2891.3	2527.3	-141.5	Deficit

Esito analisi: DEFICIT di RESISTENZA!

Valore massimo di DEFICIT di RESISTENZA(kN/m): -278.6

Note: FTR --> Forza totale Resistente lungo la superficie di scivolamento

FTA --> Forza totale Agente lungo la superficie di scivolamento

IMPORTANTE! : Il Deficit o il Surplus di resistenza viene espresso in kN per metro di LARGHEZZA rispetto al fronte della scarpata

----- TABELLA PARAMETRI CONCI DELLA SUPERFICIE INDIVIDUATA CON MINOR FS -----

X (m)	dx (m)	alpha (°)	W (kN/m)	ru (-)	U (kPa)	phi' (°)	(c',Cu) (kPa)
85.965	0.460	-29.52	2.41	0.00	0.00	23.00	18.00
86.425	0.460	-29.52	7.22	0.49	7.70	23.00	18.00
86.885	0.460	-29.52	12.04	0.49	12.84	23.00	18.00
87.345	0.460	-29.52	16.85	0.49	17.98	23.00	18.00
87.804	0.460	-29.52	21.66	0.49	23.70	23.00	18.00
88.264	0.460	-29.52	26.48	0.49	28.38	23.00	18.00
88.724	0.460	-29.52	31.29	0.49	32.07	23.00	18.00
89.184	0.100	-29.52	7.45	0.49	35.48	23.00	18.00
89.284	0.460	3.33	35.84	0.49	36.14	23.00	18.00
89.744	0.460	3.33	38.01	0.49	39.01	23.00	18.00
90.203	0.460	3.33	40.18	0.49	41.44	23.00	18.00
90.663	0.460	3.33	42.36	0.49	43.44	23.00	18.00
91.123	0.267	3.33	25.59	0.49	45.08	23.00	18.00
91.390	0.094	3.33	9.15	0.49	45.85	23.00	18.00
91.484	0.460	3.33	44.90	0.49	46.13	23.00	18.00
91.944	0.460	3.33	45.17	0.49	47.25	23.00	18.00
92.404	0.460	3.33	45.43	0.49	48.37	23.00	18.00
92.863	0.460	3.33	45.70	0.49	49.37	23.00	18.00
93.323	0.460	3.33	45.97	0.49	50.48	23.00	18.00
93.783	0.317	3.33	31.84	0.49	51.68	23.00	18.00
94.100	0.460	3.33	47.41	0.49	52.62	23.00	18.00
94.560	0.290	3.33	31.08	0.49	54.11	23.00	18.00
94.850	0.460	3.33	51.07	0.49	55.05	23.00	18.00
95.310	0.100	3.33	11.43	0.49	56.61	23.00	18.00
95.410	0.460	3.33	53.80	0.49	56.96	23.00	18.00
95.870	0.227	3.33	27.39	0.49	58.64	23.00	18.00
96.097	0.460	10.65	56.87	0.49	59.50	23.00	18.00
96.557	0.460	10.65	58.56	0.49	61.34	23.00	18.00
97.016	0.460	10.65	60.25	0.49	63.30	23.00	18.00
97.476	0.460	10.65	61.94	0.49	65.28	23.00	18.00
97.936	0.460	10.65	63.63	0.49	67.36	23.00	18.00

98.396	0.460	10.65	65.32	0.49	69.45	23.00	18.00
98.856	0.460	10.65	67.02	0.49	71.40	23.00	18.00
99.315	0.460	10.65	68.71	0.49	73.19	23.00	18.00
99.775	0.460	10.65	70.40	0.49	74.70	23.00	18.00
100.235	0.460	10.65	72.09	0.49	76.01	23.00	18.00
100.695	0.413	10.65	66.14	0.49	77.09	23.00	18.00
101.108	0.372	19.25	60.64	0.49	77.81	23.00	18.00
101.480	0.460	19.25	75.07	0.49	78.25	23.00	18.00
101.940	0.460	19.25	74.66	0.49	78.56	23.00	18.00
102.400	0.460	19.25	74.25	0.49	78.64	23.00	18.00
102.859	0.460	19.25	73.85	0.49	78.53	23.00	18.00
103.319	0.460	19.25	73.44	0.49	78.27	23.00	18.00
103.779	0.460	19.25	73.03	0.49	77.91	23.00	18.00
104.239	0.460	19.25	72.63	0.49	77.49	23.00	18.00
104.699	0.460	19.25	72.22	0.49	77.04	23.00	18.00
105.158	0.460	19.25	71.81	0.49	76.61	23.00	18.00
105.618	0.460	19.25	71.41	0.49	76.17	23.00	18.00
106.078	0.460	19.25	71.00	0.49	75.73	23.00	18.00
106.538	0.460	19.25	70.59	0.49	75.29	23.00	18.00
106.998	0.460	19.25	70.19	0.49	74.85	23.00	18.00
107.457	0.460	19.25	69.78	0.49	74.42	23.00	18.00
107.917	0.460	19.25	69.37	0.49	73.99	23.00	18.00
108.377	0.460	19.25	68.97	0.49	73.56	23.00	18.00
108.837	0.386	19.25	57.55	0.49	73.10	23.00	18.00
109.223	0.460	19.26	68.22	0.49	72.74	23.00	18.00
109.682	0.460	19.26	67.81	0.49	72.34	23.00	18.00
110.142	0.460	19.26	67.40	0.49	71.97	23.00	18.00
110.602	0.460	19.26	67.00	0.49	71.66	23.00	18.00
111.062	0.460	19.26	66.59	0.49	71.40	23.00	18.00
111.522	0.078	19.26	11.32	0.49	71.20	23.00	18.00
111.600	0.460	19.26	66.33	0.49	71.17	23.00	18.00
112.060	0.460	19.26	66.38	0.49	71.05	23.00	18.00
112.520	0.460	19.26	66.42	0.49	70.98	23.00	18.00
112.979	0.460	19.26	66.46	0.49	70.96	23.00	18.00
113.439	0.460	19.26	66.50	0.49	70.96	23.00	18.00
113.899	0.176	19.26	25.47	0.49	70.98	23.00	18.00
114.075	0.460	19.27	66.56	0.49	71.00	23.00	18.00
114.535	0.460	19.27	66.60	0.49	71.04	23.00	18.00
114.995	0.460	19.27	66.64	0.49	71.08	23.00	18.00
115.454	0.460	19.27	66.68	0.49	71.13	23.00	18.00
115.914	0.460	19.27	66.72	0.49	71.17	23.00	18.00
116.374	0.460	19.27	66.76	0.49	71.22	23.00	18.00
116.834	0.460	19.27	66.80	0.49	71.27	23.00	18.00
117.294	0.460	19.27	66.84	0.49	71.31	23.00	18.00
117.753	0.238	19.27	34.56	0.49	71.33	23.00	18.00
117.991	0.460	19.28	66.91	0.49	71.34	23.00	18.00
118.451	0.460	19.28	66.95	0.49	71.34	23.00	18.00
118.911	0.460	19.28	66.99	0.49	71.31	23.00	18.00
119.370	0.460	19.28	67.03	0.49	71.26	23.00	18.00
119.830	0.010	19.28	1.42	0.49	71.17	23.00	18.00
119.840	0.460	19.28	66.93	0.49	71.17	23.00	18.00
120.300	0.460	19.28	66.69	0.49	71.04	23.00	18.00
120.760	0.460	19.28	66.45	0.49	70.86	23.00	18.00
121.219	0.460	19.28	66.21	0.49	70.65	23.00	18.00
121.679	0.460	19.28	65.97	0.49	70.42	23.00	18.00
122.139	0.460	19.28	65.73	0.49	70.16	23.00	18.00
122.599	0.460	19.28	65.49	0.49	69.89	23.00	18.00
123.059	0.460	19.28	65.25	0.49	69.60	23.00	18.00
123.518	0.460	19.28	65.01	0.49	69.34	23.00	18.00
123.978	0.460	19.28	64.77	0.49	69.08	23.00	18.00
124.438	0.414	19.28	58.10	0.49	68.82	23.00	18.00
124.852	0.460	19.40	64.31	0.49	68.60	23.00	18.00
125.312	0.460	19.40	64.06	0.49	68.32	23.00	18.00
125.772	0.460	19.40	63.81	0.49	68.03	23.00	18.00
126.231	0.460	19.40	63.56	0.49	67.70	23.00	18.00
126.691	0.460	19.40	63.31	0.49	67.31	23.00	18.00
127.151	0.460	19.40	63.06	0.49	66.85	23.00	18.00
127.611	0.460	19.40	62.81	0.49	66.30	23.00	18.00
128.071	0.281	19.40	38.29	0.49	65.62	23.00	18.00
128.352	0.460	30.17	61.92	0.49	65.18	23.00	18.00
128.812	0.460	30.17	60.70	0.49	64.38	23.00	18.00
129.271	0.460	30.17	59.48	0.49	63.60	23.00	18.00
129.731	0.460	30.17	58.26	0.49	62.92	23.00	18.00

130.191	0.460	30.17	57.04	0.49	62.38	23.00	18.00
130.651	0.349	30.17	42.51	0.49	61.99	23.00	18.00
131.000	0.460	30.17	56.06	0.49	61.81	23.00	18.00
131.460	0.348	30.17	43.15	0.49	61.63	23.00	18.00
131.808	0.460	30.17	57.99	0.49	61.53	23.00	18.00
132.268	0.460	30.17	59.09	0.49	61.24	23.00	18.00
132.727	0.293	30.17	38.18	0.49	60.70	23.00	18.00
133.020	0.460	30.17	59.66	0.49	60.13	23.00	18.00
133.480	0.151	30.17	19.27	0.49	58.90	23.00	18.00
133.631	0.460	45.04	56.95	0.49	58.43	23.00	18.00
134.090	0.460	45.04	53.80	0.49	57.00	23.00	18.00
134.550	0.460	45.04	50.66	0.49	54.63	23.00	18.00
135.010	0.460	45.04	47.51	0.49	51.17	23.00	18.00
135.470	0.460	45.04	44.37	0.49	47.33	23.00	18.00
135.930	0.460	45.04	41.22	0.49	43.97	23.00	18.00
136.389	0.460	45.04	38.08	0.49	40.62	23.00	18.00
136.849	0.460	45.04	34.93	0.49	37.26	23.00	18.00

LEGENDA SIMBOLI

- X(m) : Ascissa sinistra concio
 dx(m) : Larghezza concio
 alpha(°) : Angolo pendenza base concio
 W(kN/m) : Forza peso concio
 ru(-) : Coefficiente locale pressione interstiziale
 U(kPa) : Pressione totale dei pori base concio
 phi'(°) : Angolo di attrito efficace base concio
 c/Cu (kPa) : Coesione efficace o Resistenza al taglio in condizioni non drenate

TABELLA DIAGRAMMA DELLE FORZE DELLA SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	ht (m)	yt (m)	yt' (--)	E(x) (kN/m)	T(x) (kN/m)	E' (kN)	rho(x) (--)	FS_qFEM (--)	FS_srmFEM (--)			
85.965	0.000	52.965	-0.276	0.0000000000E+000	0.0000000000E+000	0.0000000000E+000	7.9674448217E-001	0.036	5.831	6.677		
86.425	0.131	52.836	-0.276	1.5503800694E+000	4.1274010447E-003	5.9469467809E+000	0.036	5.831	6.677			
86.885	0.267	52.711	-0.257	5.4688314770E+000	9.9953243811E-002	1.6071911399E+001	0.036	5.041	5.882			
87.345	0.416	52.600	-0.235	1.6330161727E+001	1.2457090564E+000	4.1600856225E+001	0.041	5.378	6.317			
87.804	0.571	52.494	-0.181	4.3725113293E+001	4.8331543967E+000	6.2499601685E+001	0.099	4.831	5.541			
88.264	0.771	52.434	-0.070	7.3804997402E+001	9.2862503212E+000	6.1243529031E+001	0.134	4.316	4.903			
88.724	1.027	52.430	0.045	1.0004486050E+002	1.4073571174E+001	5.6696399966E+001	0.161	3.909	4.476			
89.184	1.333	52.475	0.095	1.2594319002E+002	1.9924713975E+001	4.9167765968E+001	0.188	3.519	4.113			
89.284	1.397	52.483	0.080	1.3070587226E+002	2.1012092188E+001	4.7139372831E+001	0.191	3.461	4.057			
89.744	1.407	52.520	0.099	1.5138462152E+002	2.5866880694E+001	4.3650741167E+001	0.213	3.218	3.829			
90.203	1.435	52.574	0.131	1.7084723490E+002	3.0887799726E+001	4.0852050466E+001	0.233	2.999	3.625			
90.663	1.474	52.640	0.151	1.8895229915E+002	3.5957204978E+001	3.8372098281E+001	0.250	2.803	3.439			
91.123	1.520	52.713	0.159	2.0613434047E+002	4.1147716538E+001	3.5238104853E+001	0.267	2.627	3.270			
91.390	1.547	52.755	0.160	2.1521200183E+002	4.4031130901E+001	3.6001139874E+001	0.276	2.539	3.184			
91.484	1.557	52.771	0.165	2.1866446030E+002	4.5132742208E+001	3.6352180123E+001	0.280	2.507	3.152			
91.944	1.606	52.847	0.174	2.3458456113E+002	5.0486397743E+001	3.5670651895E+001	0.301	2.363	3.004			
92.404	1.663	52.931	0.175	2.5146730705E+002	5.6364124741E+001	3.5951394091E+001	0.323	2.229	2.858			
92.863	1.714	53.008	0.173	2.6764557931E+002	6.1987547304E+001	3.5761007570E+001	0.342	2.123	2.733			
93.323	1.769	53.090	0.179	2.8435324517E+002	6.7797602973E+001	3.5808931260E+001	0.360	2.030	2.617			
93.783	1.826	53.173	0.188	3.0057558821E+002	7.3510705445E+001	3.4870980681E+001	0.377	1.952	2.515			
94.100	1.869	53.236	0.206	3.1153778254E+002	7.7466231201E+001	3.4202810581E+001	0.388	1.905	2.450			
94.560	1.940	53.333	0.213	3.2700718314E+002	8.3199481380E+001	3.0823454419E+001	0.397	1.845	2.360			
94.850	1.986	53.395	0.221	3.3543556765E+002	8.6473188672E+001	2.8118435880E+001	0.402	1.815	2.310			
95.310	2.062	53.499	0.227	3.4769051575E+002	9.1488304294E+001	2.5372699876E+001	0.409	1.772	2.230			
95.410	2.080	53.522	0.252	3.5020487093E+002	9.2571836248E+001	2.5108487855E+001	0.410	1.763	2.211			
95.870	2.171	53.640	0.263	3.6178084936E+002	9.7804515135E+001	2.4882296011E+001	0.418	1.721	2.118			
96.097	2.221	53.703	0.299	3.6739689649E+002	1.0049800091E+002	2.4526087244E+001	0.422	1.699	2.070			
96.557	2.276	53.845	0.330	3.7847737346E+002	1.0634947063E+002	2.4130011183E+001	0.434	1.655	1.954			
97.016	2.351	54.006	0.363	3.8958693275E+002	1.1274394169E+002	2.3782706786E+001	0.448	1.611	1.825			
97.476	2.437	54.179	0.395	4.0034802748E+002	1.1945302033E+002	2.3609034553E+001	0.462	1.570	1.691			
97.936	2.541	54.369	0.425	4.1129787721E+002	1.2665835764E+002	2.3457121624E+001	0.477	1.529	1.552			
98.396	2.655	54.570	0.435	4.2191927232E+002	1.3396629944E+002	2.2127032224E+001	0.492	1.478	1.420			
98.856	2.768	54.769	0.428	4.3164596755E+002	1.4088501566E+002	1.9921371358E+001	0.505	1.425	1.305			
99.315	2.875	54.963	0.406	4.4023902980E+002	1.4716559720E+002	1.7041019274E+001	0.516	1.370	1.208			
99.775	2.968	55.143	0.386	4.4731694394E+002	1.5239992252E+002	1.4174117562E+001	0.524	1.316	1.132			
100.235	3.057	55.318	0.376	4.5327359411E+002	1.5690334248E+002	1.1507141604E+001	0.530	1.259	1.071			
100.695	3.141	55.488	0.364	4.5789894854E+002	1.6059111011E+002	8.3309278310E+000	0.534	1.202	1.022			
101.108	3.211	55.635	0.351	4.6069681407E+002	1.6312558037E+002	5.0683821922E+000	0.536	1.150	0.989			

101.480	3.209	55.764	0.343	4.6200939954E+002	1.6480650495E+002	2.2179043682E+000	0.538	1.112	0.966
101.940	3.206	55.921	0.339	4.6228775600E+002	1.6616590521E+002	-7.6499028563E-001	0.543	1.075	0.945
102.400	3.199	56.075	0.331	4.6130591200E+002	1.6675151946E+002	-3.2585292681E+000	0.547	1.046	0.930
102.859	3.189	56.226	0.325	4.5929120196E+002	1.6663860555E+002	-5.2520326672E+000	0.550	1.025	0.922
103.319	3.177	56.374	0.320	4.5647612579E+002	1.6592158744E+002	-6.7344265475E+000	0.551	1.012	0.919
103.779	3.163	56.520	0.317	4.5309820154E+002	1.6470916417E+002	-7.6948659090E+000	0.551	1.005	0.919
104.239	3.147	56.665	0.312	4.4939990224E+002	1.6311646960E+002	-8.0712066041E+000	0.549	1.006	0.923
104.699	3.129	56.808	0.304	4.4567589387E+002	1.6126207438E+002	-7.9527628366E+000	0.547	1.009	0.929
105.158	3.106	56.945	0.298	4.4208651583E+002	1.5927119211E+002	-7.7524690351E+000	0.544	1.013	0.937
105.618	3.082	57.082	0.301	4.3854669829E+002	1.5719938829E+002	-7.7161561609E+000	0.541	1.017	0.946
106.078	3.061	57.222	0.303	4.3499071369E+002	1.5505015904E+002	-7.6443960349E+000	0.537	1.022	0.956
106.538	3.040	57.361	0.301	4.3151688699E+002	1.5291658800E+002	-7.4643499173E+000	0.534	1.028	0.967
106.998	3.017	57.498	0.299	4.2812647339E+002	1.5081957843E+002	-7.2828406686E+000	0.530	1.034	0.978
107.457	2.994	57.636	0.297	4.2481956318E+002	1.4877075523E+002	-7.1020514690E+000	0.526	1.040	0.990
107.917	2.970	57.772	0.297	4.2159540391E+002	1.4677620718E+002	-6.9430315776E+000	0.523	1.046	1.002
108.377	2.946	57.909	0.309	4.1843472891E+002	1.4482984293E+002	-7.0654108447E+000	0.519	1.052	1.014
108.837	2.933	58.056	0.317	4.1509802926E+002	1.4280253457E+002	-7.0405067893E+000	0.515	1.059	1.026
109.223	2.918	58.176	0.309	4.1245215872E+002	1.4122079582E+002	-6.7557847361E+000	0.512	1.064	1.036
109.682	2.899	58.317	0.305	4.0940242195E+002	1.3943814678E+002	-6.4975444108E+000	0.509	1.070	1.046
110.142	2.877	58.457	0.301	4.0647699588E+002	1.3778470440E+002	-6.2365551789E+000	0.506	1.075	1.056
110.602	2.854	58.594	0.308	4.0366726566E+002	1.3626367987E+002	-6.1696823235E+000	0.504	1.080	1.064
111.062	2.839	58.740	0.315	4.0080333608E+002	1.3481044458E+002	-6.0968901356E+000	0.502	1.084	1.070
111.522	2.822	58.884	0.314	3.9806054579E+002	1.3350169354E+002	-5.9844740163E+000	0.500	1.087	1.074
111.600	2.820	58.909	0.317	3.9759100925E+002	1.3328430450E+002	-5.9591920165E+000	0.500	1.087	1.075
112.060	2.805	59.054	0.319	3.9492800655E+002	1.3212199402E+002	-5.7617261499E+000	0.497	1.089	1.076
112.520	2.792	59.202	0.324	3.9229250727E+002	1.3104860424E+002	-5.7200877319E+000	0.495	1.090	1.075
112.979	2.782	59.352	0.330	3.8966779539E+002	1.3004648424E+002	-5.7194139699E+000	0.493	1.091	1.072
113.439	2.774	59.506	0.336	3.8703291570E+002	1.2909442189E+002	-5.7467275877E+000	0.491	1.090	1.066
113.899	2.770	59.662	0.335	3.8438308613E+002	1.2817844390E+002	-5.5461566295E+000	0.489	1.088	1.058
114.075	2.765	59.719	0.346	3.8342159036E+002	1.2785516931E+002	-5.6078699221E+000	0.489	1.088	1.054
114.535	2.767	59.882	0.368	3.8066925109E+002	1.2694123125E+002	-6.1975362114E+000	0.488	1.085	1.042
114.995	2.782	60.057	0.371	3.7772231603E+002	1.2597970418E+002	-6.2512652149E+000	0.486	1.081	1.028
115.454	2.787	60.223	0.363	3.7492056740E+002	1.2507796721E+002	-6.1147954465E+000	0.485	1.077	1.013
115.914	2.794	60.390	0.365	3.7209913038E+002	1.2417285165E+002	-6.1582226623E+000	0.483	1.073	0.997
116.374	2.801	60.558	0.377	3.6925744594E+002	1.2326062315E+002	-6.3915474332E+000	0.482	1.069	0.982
116.834	2.819	60.737	0.394	3.6622144271E+002	1.2228220540E+002	-6.6989720862E+000	0.480	1.065	0.966
117.294	2.842	60.921	0.376	3.6309704956E+002	1.2127136389E+002	-6.4068562529E+000	0.478	1.061	0.952
117.753	2.844	61.083	0.341	3.6032967699E+002	1.2037156762E+002	-5.6741410326E+000	0.476	1.058	0.942
117.991	2.837	61.159	0.329	3.5902364773E+002	1.1994516404E+002	-5.5772698608E+000	0.475	1.057	0.938
118.451	2.829	61.312	0.329	3.5638700296E+002	1.1907140531E+002	-5.6831057158E+000	0.473	1.056	0.931
118.911	2.817	61.462	0.320	3.5379744535E+002	1.1819186387E+002	-5.5790500423E+000	0.471	1.055	0.925
119.370	2.802	61.607	0.312	3.5125649051E+002	1.1729993911E+002	-5.4714266040E+000	0.469	1.055	0.922
119.830	2.783	61.748	0.308	3.4876590376E+002	1.1638919727E+002	-5.6259101478E+000	0.467	1.055	0.919
119.840	2.782	61.751	0.307	3.4871101661E+002	1.1636828650E+002	-5.6268380847E+000	0.467	1.055	0.919
120.300	2.762	61.892	0.313	3.4619987875E+002	1.1539469354E+002	-5.5901464782E+000	0.466	1.056	0.918
120.760	2.748	62.039	0.326	3.4357029984E+002	1.1432414133E+002	-5.8539425574E+000	0.465	1.057	0.917
121.219	2.741	62.192	0.331	3.4081657425E+002	1.1315096894E+002	-5.9397234881E+000	0.463	1.058	0.917
121.679	2.731	62.343	0.332	3.3810811093E+002	1.1193698935E+002	-5.9610383521E+000	0.461	1.060	0.917
122.139	2.725	62.498	0.342	3.3533478412E+002	1.1065275162E+002	-6.1053843526E+000	0.459	1.062	0.918
122.599	2.723	62.657	0.353	3.3249357975E+002	1.0930409425E+002	-6.2570947259E+000	0.456	1.063	0.918
123.059	2.727	62.822	0.340	3.2958073959E+002	1.0789794574E+002	-5.9722422036E+000	0.454	1.065	0.918
123.518	2.714	62.970	0.320	3.2700148652E+002	1.0662929933E+002	-5.5577387996E+000	0.451	1.067	0.919
123.978	2.700	63.116	0.318	3.2446982503E+002	1.0536619017E+002	-5.4693327265E+000	0.448	1.069	0.919
124.438	2.685	63.262	0.315	3.2197187047E+002	1.0409096136E+002	-5.3633410641E+000	0.445	1.071	0.919
124.852	2.669	63.391	0.323	3.1977781416E+002	1.0293104915E+002	-5.4440954524E+000	0.443	1.072	0.919
125.312	2.660	63.544	0.331	3.1720147982E+002	1.0145674311E+002	-5.6501961584E+000	0.439	1.072	0.919
125.772	2.650	63.696	0.329	3.1458187551E+002	9.9888014814E+001	-5.9775440238E+000	0.435	1.065	0.918
126.231	2.640	63.847	0.330	3.1170451102E+002	9.8176112880E+001	-6.7589057991E+000	0.430	1.053	0.918
126.691	2.630	64.000	0.334	3.0836636390E+002	9.6273107793E+001	-7.9696999441E+000	0.425	1.035	0.917
127.151	2.623	64.154	0.340	3.0437554920E+002	9.4140355825E+001	-9.5865013503E+000	0.419	1.012	0.916
127.611	2.619	64.312	0.354	2.9955058628E+002	9.1750078395E+001	-1.1886313563E+001	0.413	0.983	0.914
128.071	2.625	64.480	0.364	2.9344485684E+002	8.8990250081E+001	-1.4380895224E+001	0.405	0.948	0.911
128.352	2.628	64.582	0.389	2.8921127005E+002	8.7221866678E+001	-1.6384902042E+001	0.400	0.924	0.907
128.812	2.547	64.768	0.417	2.8067746704E+002	8.3911711748E+001	-1.9729497707E+001	0.395	0.888	0.899
129.271	2.477	64.965	0.440	2.7106796021E+002	8.0339048521E+001	-2.1819252330E+001	0.389	0.857	0.887
129.731	2.417	65.173	0.474	2.6061241209E+002	7.6519634820E+001	-2.3919631793E+001	0.382	0.829	0.871
130.191	2.378	65.401	0.519	2.4907138952E+002	7.2275519012E+001	-2.6265862635E+001	0.373	0.803	0.850
130.651	2.360	65.650	0.544	2.3645823994E+002	6.7472451555E+001	-2.7549163736E+001	0.361	0.778	0.825
131.000	2.347	65.841	0.548	2.2680549476E+002	6.3709030146E+001	-2.7780972119E+001	0.351	0.759	0.804
131.460	2.333	66.094	0.534	2.1394543539E+002	5.8591952964E+001	-2.7109226438E+001	0.328	0.733	0.778
131.808	2.309	66.273	0.514	2.0473971578E+002	5.4827610511E+001	-2.6996392745E+001	0.310	0.715	0.760
132.268	2.278	66.509	0.510	1.9200010107E+002	4.9548573932E+001	-2.8281700430E+001	0.285	0.689	0.737
132.727	2.243	66.741	0.507	1.7873177267E+002	4.4057849199E+001	-3.0143774543E+001	0.258	0.661	0.717

133.020	2.222	66.890	0.502	1.6966983351E+002	4.0401437493E+001	-3.1392150679E+001	0.240	0.643	0.707
133.480	2.183	67.119	0.491	1.5492570213E+002	3.4689325530E+001	-3.1983435874E+001	0.216	0.614	0.693
133.631	2.167	67.190	0.515	1.5010542706E+002	3.2910793153E+001	-3.3165977729E+001	0.209	0.604	0.690
134.090	1.950	67.434	0.535	1.3316010668E+002	2.7066026413E+001	-3.8056680625E+001	0.186	0.571	0.676
134.550	1.738	67.682	0.557	1.1510838057E+002	2.0581641416E+001	-4.2708672425E+001	0.155	0.537	0.668
135.010	1.541	67.946	0.631	9.3885073508E+001	1.3680337934E+001	-5.0598670231E+001	0.115	0.510	0.667
135.470	1.397	68.263	0.662	6.8577679923E+001	6.5508708571E+000	-4.9161596895E+001	0.063	0.510	0.673
135.930	1.230	68.555	0.680	4.8675910140E+001	2.2441718286E+000	-4.1387952171E+001	0.036	0.519	0.679
136.389	1.102	68.888	0.755	3.0517185362E+001	4.8732041552E-001	-3.7713268262E+001	0.036	0.529	0.688
136.849	1.003	69.250	0.755	1.3994666777E+001	9.0377690242E-002	-3.3185165426E+001	0.036	0.569	0.736

 LEGENDA SIMBOLI

- X(m) : Ascissa sinistra concio
 - ht(m) : Altezza linea di thrust da nodo sinistro base concio
 - yt(m) : coordinata Y linea di trust
 - yt'(-) : gradiente pendenza locale linea di trust
 - E(x)(kN/m) : Forza Normale interconcio
 - T(x)(kN/m) : Forza Tangenziale interconcio
 - E' (kN) : derivata Forza normale interconcio
 - Rho(x) (-) : fattore mobilizzazione resistenza al taglio verticale interconcio ZhU et al.(2003)
 - FS_qFEM(x)(-) : fattore di sicurezza locale stimato (locale in X) by qFEM
 - FS_srmFEM(x)(-) : fattore di sicurezza locale stimato (locale in X) by SRM Procedure
-

TABELLA SFORZI DI TAGLIO DISTRIBUITI LUNGO SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	dx (m)	dl (m)	alpha (°)	TauStress (kPa)	TauF (kN/m)	TauStrength (kPa)	TauS (kN/m)
85.965	0.460	0.528	-29.519	-2.245	-1.186	19.690	10.404
86.425	0.460	0.528	-29.519	-6.734	-3.558	19.943	10.537
86.885	0.460	0.528	-29.519	-11.223	-5.930	22.928	12.115
87.345	0.460	0.528	-29.519	-15.713	-8.302	28.299	14.953
87.804	0.460	0.528	-29.519	-20.202	-10.675	30.720	16.232
88.264	0.460	0.528	-29.519	-24.691	-13.047	32.668	17.262
88.724	0.460	0.528	-29.519	-29.181	-15.419	36.295	19.178
89.184	0.100	0.115	-29.519	-31.914	-3.669	35.433	4.073
89.284	0.460	0.461	3.331	4.521	2.082	39.430	18.160
89.744	0.460	0.461	3.331	4.795	2.209	40.342	18.581
90.203	0.460	0.461	3.331	5.070	2.335	41.350	19.045
90.663	0.460	0.461	3.331	5.344	2.461	42.594	19.618
91.123	0.267	0.267	3.331	5.561	1.487	43.304	11.581
91.390	0.094	0.094	3.331	5.644	0.532	43.911	4.137
91.484	0.460	0.461	3.331	5.664	2.609	43.917	20.227
91.944	0.460	0.461	3.331	5.698	2.624	44.098	20.310
92.404	0.460	0.461	3.331	5.732	2.640	43.671	20.114
92.863	0.460	0.461	3.331	5.766	2.656	43.643	20.101
93.323	0.460	0.461	3.331	5.800	2.671	43.340	19.961
93.783	0.317	0.317	3.331	5.829	1.850	43.059	13.670
94.100	0.460	0.461	3.331	5.982	2.755	43.773	20.161
94.560	0.290	0.291	3.331	6.212	1.806	44.395	12.905
94.850	0.460	0.461	3.331	6.443	2.967	45.541	20.975
95.310	0.100	0.100	3.331	6.615	0.664	46.102	4.627
95.410	0.460	0.461	3.331	6.787	3.126	47.411	21.836
95.870	0.227	0.227	3.331	6.998	1.591	48.411	11.009
96.097	0.460	0.468	10.652	22.467	10.511	46.149	21.591
96.557	0.460	0.468	10.652	23.135	10.824	47.126	22.048
97.016	0.460	0.468	10.652	23.803	11.137	47.947	22.433
97.476	0.460	0.468	10.652	24.471	11.449	48.846	22.853
97.936	0.460	0.468	10.652	25.139	11.762	49.517	23.167
98.396	0.460	0.468	10.652	25.808	12.074	49.959	23.374
98.856	0.460	0.468	10.652	26.476	12.387	50.343	23.553
99.315	0.460	0.468	10.652	27.144	12.700	50.608	23.678
99.775	0.460	0.468	10.652	27.812	13.012	51.138	23.926
100.235	0.460	0.468	10.652	28.480	13.325	51.713	24.194
100.695	0.413	0.420	10.652	29.114	12.226	52.289	21.958
101.108	0.372	0.395	19.248	50.672	19.991	46.751	18.444
101.480	0.460	0.487	19.248	50.811	24.746	46.671	22.730
101.940	0.460	0.487	19.248	50.536	24.612	46.139	22.471
102.400	0.460	0.487	19.248	50.260	24.478	45.711	22.262
102.859	0.460	0.487	19.248	49.985	24.344	45.371	22.097
103.319	0.460	0.487	19.248	49.710	24.210	45.103	21.966

103.779	0.460	0.487	19.248	49.434	24.076	44.889	21.862
104.239	0.460	0.487	19.248	49.159	23.942	44.711	21.775
104.699	0.460	0.487	19.248	48.884	23.808	44.553	21.698
105.158	0.460	0.487	19.248	48.608	23.673	44.395	21.622
105.618	0.460	0.487	19.248	48.333	23.539	44.238	21.545
106.078	0.460	0.487	19.248	48.058	23.405	44.093	21.474
106.538	0.460	0.487	19.248	47.782	23.271	43.948	21.404
106.998	0.460	0.487	19.248	47.507	23.137	43.803	21.333
107.457	0.460	0.487	19.248	47.232	23.003	43.657	21.262
107.917	0.460	0.487	19.248	46.956	22.869	43.510	21.190
108.377	0.460	0.487	19.248	46.681	22.735	43.350	21.113
108.837	0.386	0.409	19.248	46.428	18.970	43.250	17.671
109.223	0.460	0.487	19.258	46.195	22.499	43.098	20.991
109.682	0.460	0.487	19.258	45.919	22.365	42.944	20.916
110.142	0.460	0.487	19.258	45.643	22.230	42.774	20.833
110.602	0.460	0.487	19.258	45.367	22.096	42.578	20.738
111.062	0.460	0.487	19.258	45.091	21.962	42.367	20.635
111.522	0.078	0.083	19.258	44.929	3.732	42.258	3.510
111.600	0.460	0.487	19.258	44.920	21.878	42.269	20.587
112.060	0.460	0.487	19.258	44.948	21.892	42.360	20.632
112.520	0.460	0.487	19.258	44.976	21.906	42.429	20.665
112.979	0.460	0.487	19.258	45.004	21.920	42.479	20.690
113.439	0.460	0.487	19.258	45.032	21.933	42.515	20.707
113.899	0.176	0.186	19.258	45.052	8.399	42.535	7.930
114.075	0.460	0.487	19.268	45.091	21.963	42.541	20.721
114.535	0.460	0.487	19.268	45.119	21.977	42.552	20.727
114.995	0.460	0.487	19.268	45.146	21.990	42.571	20.736
115.454	0.460	0.487	19.268	45.174	22.004	42.586	20.743
115.914	0.460	0.487	19.268	45.202	22.017	42.600	20.750
116.374	0.460	0.487	19.268	45.229	22.031	42.609	20.754
116.834	0.460	0.487	19.268	45.257	22.044	42.620	20.759
117.294	0.460	0.487	19.268	45.285	22.057	42.645	20.772
117.753	0.238	0.252	19.268	45.306	11.405	42.666	10.740
117.991	0.460	0.487	19.278	45.346	22.089	42.677	20.789
118.451	0.460	0.487	19.278	45.373	22.102	42.710	20.805
118.911	0.460	0.487	19.278	45.401	22.115	42.753	20.826
119.370	0.460	0.487	19.278	45.428	22.128	42.807	20.852
119.830	0.010	0.010	19.278	45.442	0.469	42.854	0.443
119.840	0.460	0.487	19.278	45.361	22.096	42.758	20.828
120.300	0.460	0.487	19.278	45.198	22.017	42.610	20.756
120.760	0.460	0.487	19.278	45.035	21.937	42.477	20.691
121.219	0.460	0.487	19.278	44.873	21.858	42.365	20.637
121.679	0.460	0.487	19.278	44.710	21.779	42.262	20.586
122.139	0.460	0.487	19.278	44.547	21.700	42.168	20.541
122.599	0.460	0.487	19.278	44.385	21.620	42.083	20.499
123.059	0.460	0.487	19.278	44.222	21.541	42.021	20.469
123.518	0.460	0.487	19.278	44.060	21.462	41.933	20.426
123.978	0.460	0.487	19.278	43.897	21.383	41.843	20.382
124.438	0.414	0.438	19.278	43.742	19.180	41.764	18.313
124.852	0.460	0.487	19.395	43.809	21.355	41.585	20.271
125.312	0.460	0.487	19.395	43.639	21.272	41.490	20.225
125.772	0.460	0.487	19.395	43.469	21.189	41.398	20.180
126.231	0.460	0.487	19.395	43.299	21.107	41.317	20.141
126.691	0.460	0.487	19.395	43.128	21.024	41.257	20.111
127.151	0.460	0.487	19.395	42.958	20.941	41.227	20.096
127.611	0.460	0.487	19.395	42.788	20.858	41.226	20.096
128.071	0.281	0.298	19.395	42.651	12.716	41.338	12.324
128.352	0.460	0.532	30.174	58.518	31.124	34.177	18.178
128.812	0.460	0.532	30.174	57.366	30.511	33.764	17.958
129.271	0.460	0.532	30.174	56.213	29.898	33.335	17.730
129.731	0.460	0.532	30.174	55.061	29.285	32.929	17.514
130.191	0.460	0.532	30.174	53.908	28.672	32.506	17.289
130.651	0.349	0.404	30.174	52.894	21.369	31.980	12.920
131.000	0.460	0.532	30.174	52.977	28.177	32.175	17.113
131.460	0.348	0.402	30.174	53.890	21.688	32.868	13.228
131.808	0.460	0.532	30.174	54.803	29.148	33.682	17.914
132.268	0.460	0.532	30.174	55.842	29.701	34.634	18.421
132.727	0.293	0.339	30.174	56.693	19.193	35.570	12.042
133.020	0.460	0.532	30.174	56.377	29.985	35.571	18.919
133.480	0.151	0.174	30.174	55.518	9.687	35.366	6.171
133.631	0.460	0.651	45.041	61.928	40.298	23.673	15.405
134.090	0.460	0.651	45.041	58.508	38.073	23.290	15.155
134.550	0.460	0.651	45.041	55.088	35.847	23.149	15.063

135.010	0.460	0.651	45.041	51.667	33.621	23.333	15.184
135.470	0.460	0.651	45.041	48.247	31.395	21.473	13.973
135.930	0.460	0.651	45.041	44.826	29.170	19.604	12.757
136.389	0.460	0.651	45.041	41.406	26.944	18.595	12.101
136.849	0.460	0.651	45.041	37.986	24.718	18.348	11.940

LEGENDA SIMBOLI

X(m) : Ascissa sinistra concio
dx(m) : Larghezza concio
dl(m) : lunghezza base concio
alpha(°) : Angolo pendenza base concio
TauStress(kPa) : Sforzo di taglio su base concio
TauF (kN/m) : Forza di taglio su base concio
TauStrength(kPa) : Resistenza al taglio su base concio
TauS (kN/m) : Forza resistente al taglio su base concio

CASO B sisma

Report elaborazioni

SSAP 5.0.2 - Slope Stability Analysis Program (1991,2021)
WWW.SSAP.EU
Build No. 12007

BY

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** Gia' Ricercatore CNR-IRPI fino a Luglio 2011

Ultima Revisione struttura tabelle del report: 21 Febbraio 2021

Modello pendio: CASO B sisma.mod

----- PARAMETRI DEL MODELLO DEL PENDIO -----

___ PARAMETRI GEOMETRICI - Coordinate X Y (in m) ___

SUP T.		SUP 2		SUP 3		SUP 4	
X	Y	X	Y	X	Y	X	Y
0.00	30.73	0.00	27.50	0.00	24.00	0.00	15.50
12.70	33.89	45.62	42.31	45.59	38.80	45.60	30.30
27.25	38.72	76.05	47.93	75.84	43.13	76.05	38.61
39.27	44.22	94.85	51.93	95.41	50.10	94.85	44.93
62.06	48.35	170.31	76.50	170.31	74.49	170.31	69.50
68.08	51.04	-	-	-	-	-	-
73.38	51.85	-	-	-	-	-	-
75.82	53.21	-	-	-	-	-	-
84.19	53.61	-	-	-	-	-	-
85.52	52.71	-	-	-	-	-	-
91.39	56.07	-	-	-	-	-	-
94.10	56.40	-	-	-	-	-	-
101.48	60.74	-	-	-	-	-	-
111.60	63.30	-	-	-	-	-	-
119.84	66.26	-	-	-	-	-	-
131.00	69.53	-	-	-	-	-	-
133.02	71.23	-	-	-	-	-	-
157.83	77.62	-	-	-	-	-	-
170.31	80.51	-	-	-	-	-	-

---- SUP FALDA -----

X Y (in m)

0.00	30.73
12.70	33.89
27.25	38.72
39.27	44.22
62.06	48.35
68.08	51.04
73.38	51.85
75.82	53.21
84.19	53.61
85.52	52.71
91.39	56.07
94.10	56.40
101.48	60.74
111.60	63.30
119.84	66.26
131.00	69.53
133.02	71.23
157.83	77.62
170.31	80.51

----- GESTIONE ACQUIFERI -----

Strati esclusi da acquifero:

STRATO 4

Esclusione sovraccarico pendio sommerso: NON ATTIVATA

EFFETTO TENSION CRACK IN TESTA RIEMPITO DI ACQUA: ----> DISATTIVATO

In caso di superfici con tension crack in testa, la frattura di tensione

puo' venir viene considerata completamente riempita di acqua per la sua intera profondita'.

Viene quindi considerato una forza in testa, prodotta dalla pressione idrostatica.

La forza applicata ha un effetto destabilizzante aggiuntivo alle altre forze

destabilizzanti agenti.

Peso unitario fluido (kN/m³): 9.81

Parametri funzione dissipazione superficiale pressione dei fluidi:

Coefficiente A 0
 Coefficiente K 0.000800
 Pressione minima fluidi U_{0_Min} (kPa) 0.01
 Coefficiente di sovrappressione oltre pressione idrostatica 1.00
 Limitazione dissipazione a Pressione Idrostatica = ATTIVA
 STABILITE CONDIZIONI PER LA VERIFICA CON SOVRAPPRESSIONE ACQUIFERI CON DISSIPAZIONE IN DIREZIONE DELLA SUPERFICIE

CALCOLO EFFETTO DI FILTRAZIONE NON ATTIVATO

----- PARAMETRI GEOMECCANICI -----

	fi'	C'	Cu	Gamm	Gamm_sat	STR_IDX	sgci	GSI	mi	D
STRATO 1	23.00	18.00	18.00	0.00	20.00	20.00	1.953	0.00	0.00	0.00
STRATO 2	23.00	18.00	18.00	0.00	20.00	20.00	1.953	0.00	0.00	0.00
STRATO 3	25.00	50.00	50.00	0.00	20.00	20.00	4.881	0.00	0.00	0.00
STRATO 4	35.00	0.00	0.00	0.00	20.00	20.00	2.404	0.00	0.00	0.00

LEGENDA: fi' _____ Angolo di attrito interno efficace(in gradi)

C' _____ Coesione efficace (in Kpa)

Cu _____ Resistenza al taglio Non drenata (in Kpa)

Gamm _____ Peso di volume terreno fuori falda (in KN/m³)

Gamm_sat _____ Peso di volume terreno immerso (in KN/m³)

STR_IDX _____ Indice di resistenza (usato in solo in 'SNIFF SEARCH') (adimensionale)

---- SOLO Per AMMASSI ROCCIOSI FRATTURATI - Parametri Criterio di Rottura di Hoek (2002)-

sgci _____ Resistenza Compressione Uniassiale Rocca Intatta (in MPa)

GSI _____ Geological Strenght Index ammasso(adimensionale)

mi _____ Indice litologico ammasso(adimensionale)

D _____ Fattore di disturbo ammasso(adimensionale)

Fattore di riduzione NTC2018: gammaPHI=1.25 e gammaC=1.25 - DISATTIVATO (solo per ROCCE)

Uso CRITERIO DI ROTTURA Hoek et al.(2002,2006) - non-lineare - Generalizzato, secondo Lei et al.(2016)

----- INFORMAZIONI GENERAZIONE SUPERFICI RANDOM -----

*** PARAMETRI PER LA GENERAZIONE DELLE SUPERFICI

MOTORE DI RICERCA: CONVEX RANDOM - Chen (1992)

FILTRAGGIO SUPERFICI : ATTIVATO

COORDINATE X1,X2,Y OSTACOLO : 0.00 0.00 0.00

LUNGHEZZA MEDIA SEGMENTI (m)*: 6.8 (+/-) 50%

INTERVALLO ASCISSE RANDOM STARTING POINT (Xmin .. Xmax): 3.41 156.69

LIVELLO MINIMO CONSIDERATO (Ymin): 29.00

INTERVALLO ASCISSE AMMESSO PER LA TERMINAZIONE (Xmin .. Xmax): 40.00 166.90

TOTALE SUPERFICI GENERATE : 10000

*NOTA IMPORTANTE: La lunghezza media dei segmenti non viene cosiderata nel caso di uso del motore di ricerca NEW RANOM SEARCH

----- INFORMAZIONI PARAMETRI DI CALCOLO -----

METODO DI CALCOLO : MORGENSTERN - PRICE (Morgenstern & Price, 1965)

METODO DI ESPLORAZIONE CAMPO VALORI (lambda0,Fs0) ADOTTATO : A (rapido)

COEFFICIENTE SISMICO UTILIZZATO Kh : 0.0480

COEFFICIENTE SISMICO UTILIZZATO Kv (assunto Positivo): 0.0240

COEFFICIENTE c=Kv/Kh UTILIZZATO : 0.5000

FORZA ORIZZONTALE ADDIZIONALE IN TESTA (kN/m): 0.00

FORZA ORIZZONTALE ADDIZIONALE ALLA BASE (kN/m): 0.00

N.B. Le forze orizzontali addizionali in testa e alla base sono poste uguali a 0 durante le tutte le verifiche globali.

I valori >0 impostati dall'utente sono utilizzati solo in caso di verifica singola

----- RISULTATO FINALE ELABORAZIONI -----

* DATI RELATIVI ALLE 10 SUPERFICI GENERATE CON MINOR Fs *

Fattore di sicurezza (FS) 0.9504 - Min. - X Y Lambda= 0.4283
 86.58 53.32
 94.64 50.76
 104.64 53.56
 109.06 55.11

116.47 57.72
127.88 61.75
136.86 64.92
146.05 69.28
148.76 71.49
148.76 75.28

Fattore di sicurezza (FS) 0.9506 - N.2 -- X Y Lambda= 0.4141
80.80 53.45
90.22 49.57
95.86 50.85
101.27 52.34
107.44 54.43
115.34 57.10
125.49 60.54
135.97 64.10
143.33 67.78
149.72 71.61
149.72 75.53

Fattore di sicurezza (FS) 0.9583 - N.3 -- X Y Lambda= 0.4081
86.71 53.39
93.43 51.68
98.69 52.32
106.25 54.50
119.70 58.39
126.29 60.29
137.44 66.12
143.76 70.23
143.76 74.00

Fattore di sicurezza (FS) 0.9637 - N.4 -- X Y Lambda= 0.4192
85.59 52.75
89.25 52.01
91.61 51.53
96.21 51.42
101.98 53.06
104.75 53.85
110.28 55.60
114.01 56.79
118.93 58.44
121.35 59.25
124.96 60.46
128.25 62.49
131.89 65.02
135.05 67.22
136.44 68.31
136.44 72.11

Fattore di sicurezza (FS) 0.9677 - N.5 -- X Y Lambda= 0.4282
85.60 52.76
99.02 51.58
111.91 55.96
119.20 58.44
131.58 63.46
137.87 66.03
146.83 70.96
146.83 74.79

Fattore di sicurezza (FS) 0.9740 - N.6 -- X Y Lambda= 0.4204
86.25 53.13
97.58 52.30
107.80 55.23
114.89 57.27
124.17 59.94
136.49 63.99
147.52 68.47
153.96 72.79

153.96 76.62

Fattore di sicurezza (FS) 0.9775 - N.7 -- X Y Lambda= 0.4277
86.73 53.41
95.82 51.48
100.69 52.18
111.70 55.83
122.52 60.08
127.18 62.31
134.15 66.98
135.03 67.85
135.03 71.75

Fattore di sicurezza (FS) 0.9800 - N.8 -- X Y Lambda= 0.3961
87.17 53.65
98.72 52.62
105.12 54.29
116.36 57.24
127.32 60.54
134.14 64.05
138.53 66.52
142.08 68.81
143.05 69.88
143.05 73.81

Fattore di sicurezza (FS) 0.9824 - N.9 -- X Y Lambda= 0.4197
85.53 52.71
95.72 52.52
102.16 53.96
116.11 57.08
124.09 60.34
131.08 63.20
138.45 67.48
140.91 69.60
140.91 73.26

Fattore di sicurezza (FS) 0.9847 - N.10 -- X Y Lambda= 0.4088
86.73 53.40
91.39 52.03
96.32 52.49
104.79 54.64
109.53 55.85
116.27 57.71
122.47 59.74
130.21 62.28
137.20 67.62
138.58 69.07
138.58 72.66

----- ANALISI DEFICIT DI RESISTENZA -----

DATI RELATIVI ALLE 10 SUPERFICI GENERATE CON MINOR Fs *

Analisi Deficit in riferimento a FS(progetto) = 1.200

Sup N.	FS	FTR(kN/m)	FTA(kN/m)	Bilancio(kN/m)	ESITO
1	0.950	2739.2	2882.3	-719.5	Deficit
2	0.951	3016.9	3173.7	-791.5	Deficit
3	0.958	2496.5	2605.2	-629.8	Deficit
4	0.964	2183.0	2265.1	-535.2	Deficit
5	0.968	2653.7	2742.2	-637.0	Deficit
6	0.974	2968.3	3047.4	-688.6	Deficit
7	0.977	2085.7	2133.8	-474.8	Deficit
8	0.980	2454.5	2504.7	-551.1	Deficit
9	0.982	2325.1	2366.8	-515.1	Deficit
10	0.985	2201.7	2235.9	-481.3	Deficit

Esito analisi: DEFICIT di RESISTENZA!

Valore massimo di DEFICIT di RESISTENZA(kN/m): -791.5

Note: FTR --> Forza totale Resistente lungo la superficie di scivolamento

FTA --> Forza totale Agente lungo la superficie di scivolamento

IMPORTANTE! : Il Deficit o il Surplus di resistenza viene espresso in kN per metro di LARGHEZZA rispetto al fronte della scarpata

TABELLA PARAMETRI CONCI DELLA SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	dx (m)	alpha (°)	W (kN/m)	ru (-)	U (kPa)	phi' (°)	(c',Cu) (kPa)	
86.583	0.542	-17.65	2.68	0.49	2.37	23.00	18.00	
87.125	0.542	-17.65	8.04	0.49	7.10	23.00	18.00	
87.667	0.542	-17.65	13.39	0.49	11.84	23.00	18.00	
88.209	0.542	-17.65	18.75	0.49	16.57	23.00	18.00	
88.751	0.542	-17.65	24.11	0.49	21.31	23.00	18.00	
89.293	0.542	-17.65	29.46	0.49	26.13	23.00	18.00	
89.835	0.542	-17.65	34.82	0.49	30.84	23.00	18.00	
90.377	0.542	-17.65	40.18	0.49	34.88	23.00	18.00	
90.919	0.471	-17.65	39.30	0.49	38.54	23.00	18.00	
91.390	0.542	-17.65	48.84	0.49	41.63	23.00	18.00	
91.932	0.542	-17.65	51.48	0.49	44.98	23.00	18.00	
92.474	0.037	-17.65	3.64	0.49	47.93	23.00	18.00	
92.511	0.542	-17.65	54.31	0.49	48.12	23.00	18.00	
93.053	0.542	-17.65	56.96	0.49	50.77	23.00	18.00	
93.595	0.505	-17.65	55.45	0.49	53.22	23.00	18.00	
94.100	0.539	-17.65	63.08	0.49	55.35	23.00	18.00	
94.639	0.211	15.64	25.93	0.49	57.47	23.00	18.00	
94.850	0.542	15.64	67.81	0.49	58.27	23.00	18.00	
95.392	0.018	15.64	2.29	0.49	60.18	23.00	18.00	
95.410	0.542	15.64	69.73	0.49	60.24	23.00	18.00	
95.952	0.542	15.64	71.58	0.49	62.14	23.00	18.00	
96.494	0.542	15.64	73.43	0.49	64.05	23.00	18.00	
97.036	0.542	15.64	75.29	0.49	65.79	23.00	18.00	
97.578	0.542	15.64	77.14	0.49	67.55	23.00	18.00	
98.120	0.542	15.64	78.99	0.49	69.47	23.00	18.00	
98.662	0.542	15.64	80.85	0.49	71.38	23.00	18.00	
99.204	0.542	15.64	82.70	0.49	73.09	23.00	18.00	
99.746	0.542	15.64	84.55	0.49	74.49	23.00	18.00	
100.287	0.542	15.64	86.40	0.49	75.68	23.00	18.00	
100.829	0.542	15.64	88.26	0.49	76.66	23.00	18.00	
101.371	0.109	15.64	17.92	0.49	77.41	23.00	18.00	
101.480	0.542	15.64	89.47	0.49	77.53	23.00	18.00	
102.022	0.542	15.64	89.31	0.49	77.96	23.00	18.00	
102.564	0.542	15.64	89.15	0.49	78.20	23.00	18.00	
103.106	0.542	15.64	88.99	0.49	78.27	23.00	18.00	
103.648	0.542	15.64	88.82	0.49	78.19	23.00	18.00	
104.190	0.447	15.64	73.18	0.49	77.98	23.00	18.00	
104.637	0.542	19.40	88.31	0.49	77.72	23.00	18.00	
105.179	0.542	19.40	87.71	0.49	77.33	23.00	18.00	
105.721	0.542	19.40	87.12	0.49	76.85	23.00	18.00	
106.263	0.542	19.40	86.52	0.49	76.36	23.00	18.00	
106.805	0.542	19.40	85.92	0.49	75.86	23.00	18.00	
107.347	0.542	19.40	85.33	0.49	75.35	23.00	18.00	
107.889	0.542	19.40	84.73	0.49	74.82	23.00	18.00	
108.431	0.542	19.40	84.13	0.49	74.32	23.00	18.00	
108.972	0.087	19.40	13.45	0.49	73.86	23.00	18.00	
109.059	0.542	19.41	83.44	0.49	73.79	23.00	18.00	
109.601	0.542	19.41	82.84	0.49	73.36	23.00	18.00	
110.143	0.542	19.41	82.24	0.49	72.97	23.00	18.00	
110.685	0.542	19.41	81.65	0.49	72.62	23.00	18.00	
111.227	0.373	19.41	55.81	0.49	72.32	23.00	18.00	
111.600	0.542	19.41	80.96	0.49	72.16	23.00	18.00	
112.142	0.542	19.41	81.00	0.49	71.97	23.00	18.00	
112.684	0.542	19.41	81.04	0.49	71.83	23.00	18.00	
113.226	0.542	19.41	81.08	0.49	71.76	23.00	18.00	
113.768	0.542	19.41	81.12	0.49	71.74	23.00	18.00	
114.310	0.542	19.41	81.16	0.49	71.75	23.00	18.00	
114.852	0.542	19.41	81.21	0.49	71.77	23.00	18.00	

115.394	0.542	19.41	81.25	0.49	71.81	23.00	18.00
115.936	0.533	19.41	80.01	0.49	71.85	23.00	18.00
116.469	0.542	19.42	81.33	0.49	71.88	23.00	18.00
117.011	0.542	19.42	81.37	0.49	71.91	23.00	18.00
117.553	0.542	19.42	81.41	0.49	71.91	23.00	18.00
118.095	0.542	19.42	81.45	0.49	71.90	23.00	18.00
118.637	0.542	19.42	81.49	0.49	71.86	23.00	18.00
119.179	0.542	19.42	81.53	0.49	71.78	23.00	18.00
119.721	0.119	19.42	17.97	0.49	71.67	23.00	18.00
119.840	0.542	19.42	81.38	0.49	71.64	23.00	18.00
120.382	0.542	19.42	81.02	0.49	71.46	23.00	18.00
120.924	0.542	19.42	80.66	0.49	71.24	23.00	18.00
121.466	0.542	19.42	80.30	0.49	70.99	23.00	18.00
122.008	0.542	19.42	79.95	0.49	70.70	23.00	18.00
122.550	0.542	19.42	79.59	0.49	70.39	23.00	18.00
123.092	0.542	19.42	79.23	0.49	70.06	23.00	18.00
123.634	0.542	19.42	78.87	0.49	69.71	23.00	18.00
124.176	0.542	19.42	78.51	0.49	69.39	23.00	18.00
124.717	0.542	19.42	78.16	0.49	69.07	23.00	18.00
125.259	0.542	19.42	77.80	0.49	68.75	23.00	18.00
125.801	0.542	19.42	77.44	0.49	68.43	23.00	18.00
126.343	0.542	19.42	77.08	0.49	68.12	23.00	18.00
126.885	0.542	19.42	76.72	0.49	67.81	23.00	18.00
127.427	0.455	19.42	64.19	0.49	67.50	23.00	18.00
127.883	0.542	19.43	76.06	0.49	67.30	23.00	18.00
128.424	0.542	19.43	75.70	0.49	67.15	23.00	18.00
128.966	0.542	19.43	75.35	0.49	67.16	23.00	18.00
129.508	0.542	19.43	74.99	0.49	67.39	23.00	18.00
130.050	0.542	19.43	74.63	0.49	67.83	23.00	18.00
130.592	0.408	19.43	55.92	0.49	68.45	23.00	18.00
131.000	0.542	19.43	75.65	0.49	69.04	23.00	18.00
131.542	0.542	19.43	78.59	0.49	69.96	23.00	18.00
132.084	0.542	19.43	81.53	0.49	70.89	23.00	18.00
132.626	0.394	19.43	61.15	0.49	71.73	23.00	18.00
133.020	0.542	19.43	84.85	0.49	72.22	23.00	18.00
133.562	0.542	19.43	84.28	0.49	72.67	23.00	18.00
134.104	0.542	19.43	83.71	0.49	72.88	23.00	18.00
134.646	0.542	19.43	83.13	0.49	72.84	23.00	18.00
135.188	0.542	19.43	82.56	0.49	72.54	23.00	18.00
135.730	0.542	19.43	81.99	0.49	72.04	23.00	18.00
136.272	0.542	19.43	81.42	0.49	71.41	23.00	18.00
136.814	0.050	19.43	7.52	0.49	70.67	23.00	18.00
136.864	0.542	25.39	80.42	0.49	70.59	23.00	18.00
137.406	0.542	25.39	79.12	0.49	69.75	23.00	18.00
137.948	0.542	25.39	77.81	0.49	68.77	23.00	18.00
138.490	0.542	25.39	76.51	0.49	67.71	23.00	18.00
139.032	0.542	25.39	75.20	0.49	66.60	23.00	18.00
139.574	0.542	25.39	73.90	0.49	65.43	23.00	18.00
140.115	0.542	25.39	72.59	0.49	64.22	23.00	18.00
140.657	0.542	25.39	71.29	0.49	62.97	23.00	18.00
141.199	0.328	25.39	42.49	0.49	61.86	23.00	18.00
141.527	0.542	25.39	69.19	0.49	61.21	23.00	18.00
142.069	0.542	25.39	67.89	0.49	60.10	23.00	18.00
142.611	0.542	25.39	66.58	0.49	58.88	23.00	18.00
143.153	0.542	25.39	65.28	0.49	57.63	23.00	18.00
143.695	0.542	25.39	63.97	0.49	56.31	23.00	18.00
144.237	0.542	25.39	62.67	0.49	54.89	23.00	18.00
144.779	0.542	25.39	61.36	0.49	53.50	23.00	18.00
145.321	0.542	25.39	60.05	0.49	52.17	23.00	18.00
145.863	0.189	25.39	20.62	0.49	50.75	23.00	18.00
146.052	0.542	39.22	57.27	0.49	50.19	23.00	18.00
146.593	0.542	39.22	53.91	0.49	48.16	23.00	18.00
147.135	0.542	39.22	50.55	0.49	44.68	23.00	18.00
147.677	0.542	39.22	47.19	0.49	41.71	23.00	18.00
148.219	0.542	39.22	43.82	0.49	38.74	23.00	18.00

LEGENDA SIMBOLI

X(m) : Ascissa sinistra concio

dx(m) : Larghezza concio

alpha(°) : Angolo pendenza base concio

W(kN/m) : Forza peso concio

ru(-) : Coefficiente locale pressione interstiziale

U(kPa) : Pressione totale dei pori base concio
 phi'(°) : Angolo di attrito efficace base concio
 c'/Cu (kPa) : Coesione efficace o Resistenza al taglio in condizioni non drenate

TABELLA DIAGRAMMA DELLE FORZE DELLA SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	ht (m)	yt (m)	yt' (--)	E(x) (kN/m)	T(x) (kN/m)	E' (kN)	rho(x) (kN)	FS_qFEM (--)	FS_srmFEM (--)			
86.583	0.000	53.319	-0.092	0.0000000000E+000	0.0000000000E+000	0.0000000000E+000	3.3943553599E-001	0.032	4.916	3.805		
87.125	0.121	53.267	-0.092	7.3275137970E-001	2.2124697462E-003	2.3647407356E+000	0.032	4.916	3.805			
87.667	0.246	53.219	-0.078	2.5630977608E+000	4.9171839464E-002	5.7898418464E+000	0.032	3.006	2.246			
88.209	0.381	53.182	-0.053	7.0082514583E+000	4.6213726174E-001	1.0462233115E+001	0.032	2.546	2.034			
88.751	0.533	53.162	-0.026	1.3902914370E+001	2.4153809844E+000	2.0006609060E+001	0.061	2.392	2.143			
89.293	0.698	53.154	-0.016	2.8693036649E+001	6.9754539924E+000	4.0129398928E+001	0.128	2.327	2.299			
89.835	0.860	53.144	-0.026	5.7398410933E+001	1.5142894548E+001	5.9722633729E+001	0.200	2.278	2.390			
90.377	1.014	53.126	-0.036	9.3425269861E+001	2.5173880515E+001	6.4542909634E+001	0.250	2.228	2.405			
90.919	1.166	53.105	-0.039	1.2735525004E+002	3.4435062135E+001	6.7679597550E+001	0.277	2.175	2.396			
91.390	1.297	53.086	-0.036	1.6133708888E+002	4.3703887491E+001	7.6215527304E+001	0.297	2.116	2.375			
91.932	1.451	53.068	-0.025	2.0521149369E+002	5.6043638204E+001	8.0282502229E+001	0.327	2.035	2.330			
92.474	1.614	53.058	-0.018	2.4835377472E+002	6.8529322615E+001	7.6441052976E+001	0.352	1.950	2.273			
92.511	1.625	53.058	0.004	2.5119456804E+002	6.9358572723E+001	7.6280177573E+001	0.353	1.944	2.269			
93.053	1.800	53.060	0.020	2.9298189204E+002	8.1958603249E+001	7.5212945110E+001	0.374	1.852	2.201			
93.595	1.992	53.079	0.053	3.3271645680E+002	9.4496749180E+001	7.0052941905E+001	0.392	1.758	2.129			
94.100	2.189	53.116	0.058	3.6655422047E+002	1.0585417326E+002	6.2851734897E+001	0.407	1.668	2.063			
94.639	2.385	53.140	0.134	3.9802456585E+002	1.1741153909E+002	5.3906325537E+001	0.414	1.572	1.996			
94.850	2.402	53.217	0.251	4.0903974259E+002	1.2187649620E+002	4.9161849939E+001	0.421	1.537	1.970			
95.392	2.362	53.329	0.208	4.3154540291E+002	1.3238124277E+002	3.4256851145E+001	0.438	1.456	1.903			
95.410	2.362	53.333	0.274	4.3215968723E+002	1.4270969110E+002	3.3961420076E+001	0.439	1.454	1.901			
95.952	2.359	53.482	0.306	4.4970066861E+002	1.4270929286E+002	2.9287077157E+001	0.456	1.380	1.829			
96.494	2.390	53.665	0.359	4.6390339627E+002	1.5251197106E+002	2.0760944469E+001	0.474	1.313	1.752			
97.036	2.445	53.871	0.404	4.7220306368E+002	1.6085528237E+002	1.3085022903E+001	0.490	1.257	1.673			
97.578	2.525	54.103	0.466	4.7808600513E+002	1.6884982877E+002	9.3470900466E+000	0.506	1.207	1.589			
98.120	2.646	54.376	0.512	4.8233419781E+002	1.7688436440E+002	6.9353040187E+000	0.523	1.163	1.493			
98.662	2.776	54.658	0.504	4.8560305000E+002	1.8441694875E+002	5.5550618636E+000	0.539	1.126	1.400			
99.204	2.888	54.922	0.459	4.8835522431E+002	1.9074569509E+002	4.5180415062E+000	0.551	1.096	1.316			
99.746	2.970	55.155	0.413	4.9050006974E+002	1.9566549091E+002	3.5994971148E+000	0.558	1.075	1.248			
100.287	3.032	55.370	0.386	4.9225665115E+002	1.9964177838E+002	3.0064128104E+000	0.563	1.058	1.190			
100.829	3.084	55.573	0.361	4.9375866373E+002	2.0291694897E+002	2.5240492097E+000	0.566	1.044	1.142			
101.371	3.120	55.761	0.347	4.9499242036E+002	2.0547045224E+002	2.0962682776E+000	0.567	1.033	1.103			
101.480	3.128	55.799	0.321	4.9521626097E+002	2.0593093153E+002	1.9709536075E+000	0.568	1.030	1.096			
102.022	3.147	55.970	0.310	4.9604337002E+002	2.0761091607E+002	1.1756076291E+000	0.572	1.019	1.068			
102.564	3.160	56.135	0.301	4.9649047985E+002	2.0868139305E+002	3.9248244945E-001	0.576	1.009	1.046			
103.106	3.170	56.296	0.296	4.9646877432E+002	2.0913946612E+002	-5.5854646737E-001	0.578	0.998	1.031			
103.648	3.177	56.456	0.294	4.9588508190E+002	2.0899397222E+002	-1.6868348917E+000	0.578	0.987	1.021			
104.190	3.185	56.615	0.292	4.9464044588E+002	2.0826055500E+002	-2.9949482448E+000	0.578	0.975	1.016			
104.637	3.190	56.745	0.301	4.9304323303E+002	2.0723158059E+002	-4.3123881087E+000	0.577	0.964	1.014			
105.179	3.166	56.912	0.315	4.9021947396E+002	2.0545465747E+002	-6.2198473185E+000	0.576	0.954	1.016			
105.721	3.150	57.087	0.316	4.8630165816E+002	2.0299382395E+002	-7.6154736541E+000	0.573	0.947	1.022			
106.263	3.126	57.254	0.307	4.8196520609E+002	2.0028080822E+002	-8.2758643068E+000	0.570	0.943	1.031			
106.805	3.101	57.419	0.302	4.7733160535E+002	1.9740022784E+002	-8.7038247997E+000	0.566	0.942	1.042			
107.347	3.072	57.581	0.302	4.7253129500E+002	1.9443754414E+002	-9.0618105993E+000	0.562	0.942	1.054			
107.889	3.046	57.747	0.300	4.6750968022E+002	1.9136334086E+002	-9.1542508792E+000	0.558	0.945	1.066			
108.431	3.016	57.907	0.288	4.6260917560E+002	1.8838252292E+002	-8.7286876267E+000	0.554	0.950	1.079			
108.972	2.977	58.059	0.281	4.5804882078E+002	1.8561521782E+002	-8.5485753510E+000	0.551	0.955	1.091			
109.059	2.971	58.084	0.282	4.5730330330E+002	1.8516558162E+002	-8.5114145694E+000	0.550	0.956	1.093			
109.601	2.932	58.236	0.285	4.5288854967E+002	1.8252830316E+002	-8.1531175491E+000	0.547	0.960	1.104			
110.143	2.898	58.392	0.294	4.4846629339E+002	1.7993977677E+002	-8.1720143175E+000	0.544	0.965	1.113			
110.685	2.869	58.554	0.304	4.4403105790E+002	1.7741385425E+002	-8.2023033882E+000	0.542	0.969	1.120			
111.227	2.845	58.722	0.310	4.3957597187E+002	1.7495950217E+002	-8.1288770120E+000	0.539	0.972	1.124			
111.600	2.830	58.838	0.326	4.3656923744E+002	1.7335750881E+002	-8.2233772189E+000	0.538	0.974	1.125			
112.142	2.821	59.020	0.346	4.3198848410E+002	1.7099361803E+002	-8.5994912318E+000	0.534	0.976	1.124			
112.684	2.823	59.213	0.356	4.2724841153E+002	1.6864165229E+002	-8.6215462272E+000	0.531	0.977	1.119			
113.226	2.825	59.405	0.352	4.2264375319E+002	1.6646051048E+002	-8.3175308726E+000	0.527	0.978	1.110			
113.768	2.823	59.594	0.352	4.1823319712E+002	1.6447214383E+002	-8.1655910948E+000	0.524	0.977	1.098			
114.310	2.825	59.787	0.359	4.1379322344E+002	1.6254421332E+002	-8.2268294689E+000	0.521	0.976	1.083			
114.852	2.830	59.983	0.365	4.0931629224E+002	1.6065994559E+002	-8.3008014296E+000	0.519	0.974	1.067			
115.394	2.838	60.183	0.362	4.0479614175E+002	1.5880278461E+002	-8.1912612989E+000	0.516	0.972	1.049			
115.936	2.840	60.375	0.370	4.0043793904E+002	1.5705126175E+002	-8.3753717993E+000	0.513	0.970	1.032			
116.469	2.857	60.581	0.379	3.9579502527E+002	1.5520355370E+002	-8.5887460696E+000	0.510	0.968	1.015			
117.011	2.869	60.783	0.368	3.9120370826E+002	1.5338170327E+002	-8.3528215655E+000	0.507	0.966	0.999			
117.553	2.874	60.980	0.357	3.8674155994E+002	1.5160565757E+002	-8.1171982378E+000	0.504	0.964	0.985			

TABELLA SFORZI DI TAGLIO DISTRIBUITI LUNGO SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	dx (m)	dl (m)	alpha (°)	TauStress (kPa)	TauF (kN/m)	TauStrength (kPa)	TauS (kN/m)
86.583	0.542	0.569	-17.650	-1.213	-0.690	18.932	10.767
87.125	0.542	0.569	-17.650	-3.638	-2.069	20.845	11.855
87.667	0.542	0.569	-17.650	-6.063	-3.448	23.149	13.165
88.209	0.542	0.569	-17.650	-8.488	-4.827	26.883	15.289
88.751	0.542	0.569	-17.650	-10.913	-6.206	31.917	18.151
89.293	0.542	0.569	-17.650	-13.338	-7.585	38.129	21.685
89.835	0.542	0.569	-17.650	-15.763	-8.964	42.270	24.040
90.377	0.542	0.569	-17.650	-18.188	-10.344	43.485	24.730
90.919	0.471	0.495	-17.650	-20.455	-10.118	47.247	23.371
91.390	0.542	0.569	-17.650	-22.108	-12.573	50.623	28.790
91.932	0.542	0.569	-17.650	-23.306	-13.255	51.288	29.168
92.474	0.037	0.039	-17.650	-23.947	-0.937	50.537	1.977
92.511	0.542	0.569	-17.650	-24.587	-13.983	52.137	29.651
93.053	0.542	0.569	-17.650	-25.785	-14.664	52.849	30.056
93.595	0.505	0.530	-17.650	-26.942	-14.277	53.230	28.207
94.100	0.539	0.565	-17.650	-28.726	-16.240	54.485	30.803
94.639	0.211	0.219	15.644	37.339	8.192	44.375	9.736
94.850	0.542	0.563	15.644	38.062	21.421	44.702	25.158
95.392	0.018	0.019	15.644	38.599	0.724	44.402	0.833
95.410	0.542	0.563	15.644	39.136	22.025	45.100	25.382
95.952	0.542	0.563	15.644	40.176	22.611	45.572	25.647
96.494	0.542	0.563	15.644	41.216	23.196	45.692	25.715
97.036	0.542	0.563	15.644	42.256	23.781	46.188	25.994
97.578	0.542	0.563	15.644	43.296	24.367	46.777	26.325
98.120	0.542	0.563	15.644	44.336	24.952	47.153	26.537
98.662	0.542	0.563	15.644	45.376	25.537	47.346	26.646
99.204	0.542	0.563	15.644	46.416	26.122	47.565	26.769
99.746	0.542	0.563	15.644	47.456	26.708	48.042	27.037
100.287	0.542	0.563	15.644	48.496	27.293	48.676	27.394
100.829	0.542	0.563	15.644	49.536	27.878	49.391	27.796
101.371	0.109	0.113	15.644	50.160	5.660	49.801	5.619
101.480	0.542	0.563	15.644	50.219	28.263	49.655	27.945
102.022	0.542	0.563	15.644	50.128	28.211	49.191	27.684
102.564	0.542	0.563	15.644	50.036	28.160	48.807	27.468
103.106	0.542	0.563	15.644	49.945	28.108	48.498	27.294
103.648	0.542	0.563	15.644	49.854	28.057	48.256	27.158
104.190	0.447	0.464	15.644	49.770	23.116	48.101	22.340
104.637	0.542	0.575	19.400	58.011	33.331	45.245	25.996
105.179	0.542	0.575	19.400	57.619	33.106	44.902	25.799
105.721	0.542	0.575	19.400	57.227	32.880	44.657	25.658
106.263	0.542	0.575	19.400	56.835	32.655	44.432	25.529
106.805	0.542	0.575	19.400	56.443	32.430	44.224	25.410
107.347	0.542	0.575	19.400	56.051	32.205	44.016	25.290
107.889	0.542	0.575	19.400	55.659	31.980	43.844	25.191
108.431	0.542	0.575	19.400	55.267	31.755	43.681	25.097
108.972	0.087	0.092	19.400	55.040	5.076	43.633	4.024
109.059	0.542	0.575	19.410	54.832	31.506	43.445	24.963
109.601	0.542	0.575	19.410	54.439	31.281	43.223	24.836
110.143	0.542	0.575	19.410	54.047	31.055	42.990	24.702
110.685	0.542	0.575	19.410	53.654	30.829	42.740	24.558
111.227	0.373	0.395	19.410	53.322	21.075	42.539	16.813
111.600	0.542	0.575	19.410	53.201	30.569	42.476	24.407
112.142	0.542	0.575	19.410	53.228	30.585	42.587	24.470
112.684	0.542	0.575	19.410	53.255	30.600	42.699	24.535
113.226	0.542	0.575	19.410	53.282	30.616	42.786	24.585
113.768	0.542	0.575	19.410	53.309	30.631	42.831	24.611
114.310	0.542	0.575	19.410	53.337	30.647	42.862	24.629
114.852	0.542	0.575	19.410	53.364	30.663	42.883	24.640
115.394	0.542	0.575	19.410	53.391	30.678	42.912	24.657
115.936	0.533	0.566	19.410	53.418	30.213	42.906	24.267
116.469	0.542	0.575	19.420	53.464	30.722	42.920	24.663
117.011	0.542	0.575	19.420	53.490	30.737	42.944	24.677
117.553	0.542	0.575	19.420	53.517	30.753	42.973	24.694
118.095	0.542	0.575	19.420	53.543	30.768	43.010	24.715
118.637	0.542	0.575	19.420	53.570	30.783	43.058	24.742
119.179	0.542	0.575	19.420	53.596	30.798	43.118	24.777

119.721	0.119	0.127	19.420	53.612	6.787	43.155	5.463
119.840	0.542	0.575	19.420	53.497	30.741	43.068	24.748
120.382	0.542	0.575	19.420	53.262	30.606	42.883	24.642
120.924	0.542	0.575	19.420	53.027	30.471	42.715	24.545
121.466	0.542	0.575	19.420	52.791	30.336	42.563	24.458
122.008	0.542	0.575	19.420	52.556	30.200	42.425	24.379
122.550	0.542	0.575	19.420	52.320	30.065	42.300	24.307
123.092	0.542	0.575	19.420	52.085	29.930	42.185	24.241
123.634	0.542	0.575	19.420	51.850	29.794	42.111	24.198
124.176	0.542	0.575	19.420	51.614	29.659	42.009	24.140
124.717	0.542	0.575	19.420	51.379	29.524	41.908	24.082
125.259	0.542	0.575	19.420	51.143	29.389	41.808	24.024
125.801	0.542	0.575	19.420	50.908	29.253	41.710	23.968
126.343	0.542	0.575	19.420	50.673	29.118	41.613	23.912
126.885	0.542	0.575	19.420	50.437	28.983	41.514	23.855
127.427	0.455	0.483	19.420	50.221	24.247	41.440	20.007
127.883	0.542	0.575	19.430	50.022	28.746	41.316	23.743
128.424	0.542	0.575	19.430	49.786	28.610	41.159	23.653
128.966	0.542	0.575	19.430	49.549	28.474	40.934	23.524
129.508	0.542	0.575	19.430	49.313	28.339	40.613	23.339
130.050	0.542	0.575	19.430	49.077	28.203	40.205	23.105
130.592	0.408	0.432	19.430	48.870	21.132	39.739	17.184
131.000	0.542	0.575	19.430	49.748	28.588	40.406	23.220
131.542	0.542	0.575	19.430	51.681	29.700	42.028	24.152
132.084	0.542	0.575	19.430	53.615	30.811	43.628	25.071
132.626	0.394	0.418	19.430	55.285	23.108	44.977	18.800
133.020	0.542	0.575	19.430	55.800	32.067	45.242	25.999
133.562	0.542	0.575	19.430	55.424	31.850	44.617	25.640
134.104	0.542	0.575	19.430	55.047	31.634	44.088	25.336
134.646	0.542	0.575	19.430	54.671	31.417	43.666	25.094
135.188	0.542	0.575	19.430	54.294	31.201	43.354	24.914
135.730	0.542	0.575	19.430	53.918	30.985	43.125	24.782
136.272	0.542	0.575	19.430	53.541	30.768	42.961	24.688
136.814	0.050	0.053	19.430	53.335	2.840	43.007	2.290
136.864	0.542	0.600	25.387	63.293	37.968	38.421	23.048
137.406	0.542	0.600	25.387	62.266	37.352	37.987	22.787
137.948	0.542	0.600	25.387	61.239	36.735	37.600	22.555
138.490	0.542	0.600	25.387	60.212	36.119	37.241	22.340
139.032	0.542	0.600	25.387	59.184	35.503	36.908	22.140
139.574	0.542	0.600	25.387	58.157	34.887	36.595	21.952
140.115	0.542	0.600	25.387	57.130	34.270	36.298	21.774
140.657	0.542	0.600	25.387	56.103	33.654	35.992	21.591
141.199	0.328	0.363	25.387	55.278	20.059	35.804	12.992
141.527	0.542	0.600	25.387	54.454	32.665	35.431	21.254
142.069	0.542	0.600	25.387	53.427	32.049	35.106	21.059
142.611	0.542	0.600	25.387	52.399	31.433	34.807	20.880
143.153	0.542	0.600	25.387	51.372	30.817	34.521	20.708
143.695	0.542	0.600	25.387	50.345	30.200	34.260	20.552
144.237	0.542	0.600	25.387	49.318	29.584	34.036	20.417
144.779	0.542	0.600	25.387	48.290	28.968	33.815	20.284
145.321	0.542	0.600	25.387	47.263	28.352	33.546	20.123
145.863	0.189	0.209	25.387	46.570	9.734	33.583	7.019
146.052	0.542	0.700	39.223	54.808	38.341	23.960	16.761
146.593	0.542	0.700	39.223	51.592	36.092	23.134	16.184
147.135	0.542	0.700	39.223	48.376	33.842	22.795	15.947
147.677	0.542	0.700	39.223	45.160	31.592	21.820	15.264
148.219	0.542	0.700	39.223	41.944	29.342	21.390	14.963

LEGENDA SIMBOLI

X(m) : Ascissa sinistra concio
dx(m) : Larghezza concio
dl(m) : lunghezza base concio
alpha(°) : Angolo pendenza base concio
TauStress(kPa) : Sforzo di taglio su base concio
TauF (kN/m) : Forza di taglio su base concio
TauStrength(kPa) : Resistenza al taglio su base concio
TauS (kN/m) : Forza resistente al taglio su base concio

CASO C

Report elaborazioni

SSAP 5.0.2 - Slope Stability Analysis Program (1991,2021)

WWW.SSAP.EU
Build No. 12007
BY

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** Gia' Ricercatore CNR-IRPI fino a Luglio 2011

Ultima Revisione struttura tabelle del report: 21 Febbraio 2021

Modello pendio: CASO C.mod

----- PARAMETRI DEL MODELLO DEL PENDIO -----

___ PARAMETRI GEOMETRICI - Coordinate X Y (in m) ___

SUP T.		SUP 2		SUP 3		SUP 4	
X	Y	X	Y	X	Y	X	Y
0.00	30.73	0.00	27.50	0.00	24.00	0.00	15.50
12.70	33.89	45.62	42.31	45.59	38.80	45.60	30.30
27.25	38.72	76.05	47.93	75.84	43.13	76.05	38.61
39.27	44.22	94.85	51.93	95.41	50.10	94.85	44.93
62.06	48.35	170.31	76.50	170.31	74.49	170.31	69.50
68.08	51.04	-	-	-	-	-	-
73.38	51.85	-	-	-	-	-	-
75.82	53.21	-	-	-	-	-	-
84.19	53.61	-	-	-	-	-	-
85.52	52.71	-	-	-	-	-	-
91.39	56.07	-	-	-	-	-	-
94.10	56.40	-	-	-	-	-	-
101.48	60.74	-	-	-	-	-	-
111.60	63.30	-	-	-	-	-	-
119.84	66.26	-	-	-	-	-	-
131.00	69.53	-	-	-	-	-	-
133.02	71.23	-	-	-	-	-	-
157.83	77.62	-	-	-	-	-	-
170.31	80.51	-	-	-	-	-	-

---- SUP FALDA -----

X Y (in m)

0.00	30.73
12.70	33.89
27.25	38.72
39.27	44.22
62.06	48.35
68.08	51.04
73.38	51.85
75.82	53.21
84.19	53.61
85.52	52.71
91.39	56.07
94.10	56.40
101.48	60.74
111.60	63.30
119.84	66.26
131.00	69.53
133.02	71.23
157.83	77.62
170.31	80.51

----- GESTIONE ACQUIFERI -----

Strati esclusi da acquifero:

STRATO 4

Esclusione sovraccarico pendio sommerso: NON ATTIVATA

EFFETTO TENSION CRACK IN TESTA RIEMPITO DI ACQUA: ----> DISATTIVATO

In caso di superfici con tension crack in testa, la frattura di tensione

puo' venir viene considerata completamente riempita di acqua per la sua intera profondita'.

Viene quindi considerato una forza in testa, prodotta dalla pressione idrostatica.

La forza applicata ha un effetto destabilizzante aggiuntivo alle altre forze destabilizzanti agenti.

Peso unitario fluido (kN/m³): 9.81

Parametri funzione dissipazione superficiale pressione dei fluidi:

Coefficiente A 0
 Coefficiente K 0.000800
 Pressione minima fluidi Uo_Min (kPa) 0.01
 Coefficiente di soprapressione oltre pressione idrostatica 1.00
 Limitazione dissipazione a Pressione Idrostatica = ATTIVA
 STABILITE CONDIZIONI PER LA VERIFICA CON SOVRAPPRESSIONE ACQUIFERI CON DISSIPAZIONE IN DIREZIONE DELLA SUPERFICIE

CALCOLO EFFETTO DI FILTRAZIONE NON ATTIVATO

----- PARAMETRI GEOMECCANICI -----

	fi'	C'	Cu	Gamm	Gamm_sat	STR_IDX	sgci	GSI	mi	D
STRATO 1	18.00	11.00	11.00	0.00	18.00	20.00	1.269	0.00	0.00	0.00
STRATO 2	18.00	11.00	11.00	0.00	18.00	20.00	1.269	0.00	0.00	0.00
STRATO 3	25.00	50.00	50.00	0.00	20.00	20.00	4.881	0.00	0.00	0.00
STRATO 4	35.00	0.00	0.00	0.00	20.00	20.00	2.404	0.00	0.00	0.00

LEGENDA: fi' _____ Angolo di attrito interno efficace(in gradi)
 C' _____ Coesione efficace (in Kpa)
 Cu _____ Resistenza al taglio Non drenata (in Kpa)
 Gamm _____ Peso di volume terreno fuori falda (in KN/m³)
 Gamm_sat _____ Peso di volume terreno immerso (in KN/m³)
 STR_IDX _____ Indice di resistenza (usato in solo in 'SNIFF SEARCH) (adimensionale)
 ---- SOLO Per AMMASSI ROCCIOSI FRATTURATI - Parametri Criterio di Rottura di Hoek (2002)-
 sigci _____ Resistenza Compressione Uniassiale Rocca Intatta (in MPa)
 GSI _____ Geological Strenght Index ammasso(adimensionale)
 mi _____ Indice litologico ammasso(adimensionale)
 D _____ Fattore di disturbo ammasso(adimensionale)
 Fattore di riduzione NTC2018: gammaPHI=1.25 e gammaC=1.25 - DISATTIVATO (solo per ROCCE)
 Uso CRITERIO DI ROTTURA Hoek et al.(2002,2006) - non-lineare - Generalizzato, secondo Lei et al.(2016)

----- INFORMAZIONI GENERAZIONE SUPERFICI RANDOM -----

*** PARAMETRI PER LA GENERAZIONE DELLE SUPERFICI
 MOTORE DI RICERCA: CONVEX RANDOM - Chen (1992)
 FILTRAGGIO SUPERFICI : ATTIVATO
 COORDINATE X1,X2,Y OSTACOLO : 0.00 0.00 0.00
 LUNGHEZZA MEDIA SEGMENTI (m)*: 6.8 (+/-) 50%
 INTERVALLO ASCISSE RANDOM STARTING POINT (Xmin .. Xmax): 3.41 156.69
 LIVELLO MINIMO CONSIDERATO (Ymin): 29.00
 INTERVALLO ASCISSE AMMESSO PER LA TERMINAZIONE (Xmin .. Xmax): 40.00 166.90
 TOTALE SUPERFICI GENERATE : 10000
 *NOTA IMPORTANTE: La lunghezza media dei segmenti non viene considerata nel caso di uso del motore di ricerca NEW RANOM SEARCH

----- INFORMAZIONI PARAMETRI DI CALCOLO -----

METODO DI CALCOLO : MORGENSTERN - PRICE (Morgenstern & Price, 1965)
 METODO DI ESPLORAZIONE CAMPO VALORI (lambda0,Fs0) ADOTTATO : A (rapido)
 COEFFICIENTE SISMICO UTILIZZATO Kh : 0.0000
 COEFFICIENTE SISMICO UTILIZZATO Kv (assunto Positivo): 0.0000
 COEFFICIENTE c=Kv/Kh UTILIZZATO : 0.5000
 FORZA ORIZZONTALE ADDIZIONALE IN TESTA (kN/m): 0.00
 FORZA ORIZZONTALE ADDIZIONALE ALLA BASE (kN/m): 0.00

N.B. Le forze orizzontali addizionali in testa e alla base sono poste uguali a 0 durante le tutte le verifiche globali.
 I valori >0 impostati dall'utente sono utilizzati solo in caso di verifica singola

----- RISULTATO FINALE ELABORAZIONI -----

* DATI RELATIVI ALLE 10 SUPERFICI GENERATE CON MINOR Fs *

Fattore di sicurezza (FS)	0.7439	- Min.	X	Y	Lambda=	0.3626
	81.91		53.50			
	89.93		49.81			
	97.73		50.91			

102.55 52.59
108.20 54.56
114.45 56.75
122.87 59.69
125.93 60.76
130.37 62.31
137.89 66.69
145.01 70.84
148.43 72.84
148.43 75.20

Fattore di sicurezza (FS) 0.7467 - N.2 -- X Y Lambda= 0.3548

82.80 53.54
87.91 51.05
90.11 50.04
97.00 50.99
100.71 52.15
104.48 53.32
110.40 55.17
114.31 56.39
120.94 58.46
125.70 60.21
129.65 61.66
132.53 63.94
135.48 66.27
139.24 70.84
139.24 72.83

Fattore di sicurezza (FS) 0.7604 - N.3 -- X Y Lambda= 0.3416

86.38 53.20
94.73 51.01
106.14 54.32
113.08 56.34
121.87 59.22
127.60 61.65
139.47 66.68
148.34 71.62
152.35 73.86
152.35 76.21

Fattore di sicurezza (FS) 0.7621 - N.4 -- X Y Lambda= 0.3866

83.11 53.56
88.96 50.32
94.89 50.47
109.95 56.06
124.56 61.48
134.08 67.79
136.92 69.94
136.92 72.23

Fattore di sicurezza (FS) 0.7628 - N.5 -- X Y Lambda= 0.3854

81.85 53.50
85.80 51.40
88.72 49.99
92.29 49.40
97.04 51.05
100.80 52.36
104.08 53.50
108.46 55.03
111.09 55.94
115.73 57.75
119.40 59.18
125.23 62.28
129.19 64.59
131.57 66.30
135.46 69.24
136.42 69.96
136.42 72.11

Fattore di sicurezza (FS) 0.7649 - N.6 -- X Y Lambda= 0.3815
 84.03 53.60
 88.49 50.88
 94.63 50.39
 102.70 53.30
 110.67 56.21
 118.31 59.01
 121.17 60.05
 126.73 63.59
 132.74 67.41
 135.82 69.37
 136.76 69.98
 136.76 72.19

Fattore di sicurezza (FS) 0.7660 - N.7 -- X Y Lambda= 0.3451
 86.36 53.19
 91.85 52.42
 98.28 51.51
 106.08 53.91
 113.04 56.18
 123.74 59.68
 132.02 62.38
 142.10 65.68
 147.56 69.62
 151.86 73.97
 151.86 76.08

Fattore di sicurezza (FS) 0.7667 - N.8 -- X Y Lambda= 0.4009
 82.84 53.55
 88.99 50.34
 93.22 49.62
 97.10 50.98
 104.69 54.07
 108.40 55.58
 112.59 57.29
 119.33 60.04
 126.06 62.78
 130.56 64.62
 136.60 69.32
 137.55 70.13
 137.55 72.40

Fattore di sicurezza (FS) 0.7683 - N.9 -- X Y Lambda= 0.3522
 81.38 53.48
 91.70 50.15
 99.47 52.31
 104.60 53.74
 111.33 55.61
 118.41 57.88
 126.55 60.49
 136.48 67.41
 139.87 70.66
 139.87 72.99

Fattore di sicurezza (FS) 0.7685 - N.10 -- X Y Lambda= 0.3937
 83.07 53.56
 88.31 50.60
 91.71 50.15
 100.47 51.79
 107.21 54.10
 114.68 57.80
 119.68 60.28
 124.81 62.83
 131.57 66.95
 134.56 68.96
 135.50 69.60
 135.50 71.87

----- ANALISI DEFICIT DI RESISTENZA -----

DATI RELATIVI ALLE 10 SUPERFICIE GENERATE CON MINOR FS *

Analisi Deficit in riferimento a FS(progetto) = 1.200

Sup N.	FS	FTR(kN/m)	FTA(kN/m)	Bilancio(kN/m)	ESITO
1	0.744	1935.6	2601.9	-1186.7	Deficit
2	0.747	1713.1	2294.3	-1040.1	Deficit
3	0.760	1909.7	2511.4	-1104.0	Deficit
4	0.762	1476.1	1936.8	-848.1	Deficit
5	0.763	1527.0	2002.0	-875.3	Deficit
6	0.765	1440.6	1883.3	-819.3	Deficit
7	0.766	2031.9	2652.5	-1151.2	Deficit
8	0.767	1503.9	1961.5	-849.9	Deficit
9	0.768	1691.4	2201.5	-950.4	Deficit
10	0.768	1440.7	1874.7	-809.0	Deficit

Esito analisi: DEFICIT di RESISTENZA!

Valore massimo di DEFICIT di RESISTENZA(kN/m): -1186.7

Note: FTR --> Forza totale Resistente lungo la superficie di scivolamento

FTA --> Forza totale Agente lungo la superficie di scivolamento

IMPORTANTE! : Il Deficit o il Surplus di resistenza viene espresso in kN per metro di LARGHEZZA rispetto al fronte della scarpata

TABELLA PARAMETRI CONCI DELLA SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	dx (m)	alpha (°)	W (kN/m)	ru (-)	U (kPa)	phi' (°)	(c',Cu) (kPa)
81.908	0.571	-24.72	1.66	0.49	1.42	18.00	11.00
82.479	0.571	-24.72	4.97	0.49	4.27	18.00	11.00
83.050	0.571	-24.72	8.28	0.49	7.12	18.00	11.00
83.621	0.569	-24.72	11.55	0.49	8.83	18.00	11.00
84.190	0.571	-24.72	12.54	0.49	9.71	18.00	11.00
84.761	0.571	-24.72	11.13	0.49	11.56	18.00	11.00
85.332	0.188	-24.72	3.36	0.49	14.60	18.00	11.00
85.520	0.571	-24.72	13.32	0.49	15.88	18.00	11.00
86.091	0.571	-24.72	20.06	0.49	20.27	18.00	11.00
86.662	0.571	-24.72	26.79	0.49	24.42	18.00	11.00
87.233	0.571	-24.72	33.52	0.49	28.93	18.00	11.00
87.804	0.528	-24.72	37.01	0.49	33.85	18.00	11.00
88.332	0.571	-24.72	46.49	0.49	38.43	18.00	11.00
88.903	0.571	-24.72	53.22	0.49	43.20	18.00	11.00
89.474	0.454	-24.72	47.11	0.49	47.57	18.00	11.00
89.928	0.571	8.04	63.34	0.49	50.26	18.00	11.00
90.499	0.571	8.04	66.15	0.49	53.07	18.00	11.00
91.069	0.321	8.04	38.38	0.49	55.38	18.00	11.00
91.390	0.571	8.04	69.07	0.49	56.47	18.00	11.00
91.961	0.571	8.04	68.95	0.49	57.99	18.00	11.00
92.532	0.571	8.04	68.82	0.49	59.22	18.00	11.00
93.103	0.571	8.04	68.69	0.49	60.33	18.00	11.00
93.674	0.426	8.04	51.21	0.49	61.49	18.00	11.00
94.100	0.571	8.04	69.99	0.49	62.55	18.00	11.00
94.671	0.179	8.04	22.55	0.49	64.09	18.00	11.00
94.850	0.560	8.04	72.37	0.49	64.61	18.00	11.00
95.410	0.571	8.04	76.67	0.49	66.36	18.00	11.00
95.981	0.571	8.04	79.58	0.49	68.22	18.00	11.00
96.552	0.571	8.04	82.50	0.49	70.14	18.00	11.00
97.123	0.571	8.04	85.41	0.49	72.06	18.00	11.00
97.694	0.038	8.04	5.77	0.49	73.98	18.00	11.00
97.732	0.571	19.23	87.84	0.49	74.10	18.00	11.00
98.302	0.571	19.23	89.40	0.49	75.85	18.00	11.00
98.873	0.571	19.23	90.96	0.49	77.45	18.00	11.00
99.444	0.571	19.23	92.52	0.49	78.72	18.00	11.00
100.015	0.571	19.23	94.08	0.49	79.78	18.00	11.00
100.586	0.571	19.23	95.64	0.49	80.64	18.00	11.00
101.157	0.323	19.23	54.78	0.49	81.28	18.00	11.00

101.480	0.571	19.23	96.99	0.49	81.52	18.00	11.00
102.051	0.503	19.23	84.93	0.49	81.74	18.00	11.00
102.554	0.571	19.24	95.81	0.49	81.70	18.00	11.00
103.125	0.571	19.24	95.18	0.49	81.50	18.00	11.00
103.696	0.571	19.24	94.56	0.49	81.16	18.00	11.00
104.267	0.571	19.24	93.93	0.49	80.71	18.00	11.00
104.838	0.571	19.24	93.31	0.49	80.19	18.00	11.00
105.408	0.571	19.24	92.68	0.49	79.63	18.00	11.00
105.979	0.571	19.24	92.05	0.49	79.08	18.00	11.00
106.550	0.571	19.24	91.43	0.49	78.54	18.00	11.00
107.121	0.571	19.24	90.80	0.49	78.00	18.00	11.00
107.692	0.508	19.24	80.27	0.49	77.47	18.00	11.00
108.200	0.571	19.25	89.62	0.49	77.01	18.00	11.00
108.771	0.571	19.25	88.99	0.49	76.51	18.00	11.00
109.342	0.571	19.25	88.36	0.49	76.03	18.00	11.00
109.913	0.571	19.25	87.74	0.49	75.60	18.00	11.00
110.484	0.571	19.25	87.11	0.49	75.22	18.00	11.00
111.055	0.545	19.25	82.60	0.49	74.90	18.00	11.00
111.600	0.571	19.25	86.23	0.49	74.67	18.00	11.00
112.171	0.571	19.25	86.29	0.49	74.50	18.00	11.00
112.742	0.571	19.25	86.36	0.49	74.40	18.00	11.00
113.313	0.571	19.25	86.43	0.49	74.35	18.00	11.00
113.884	0.567	19.25	85.87	0.49	74.35	18.00	11.00
114.451	0.571	19.26	86.56	0.49	74.37	18.00	11.00
115.021	0.571	19.26	86.62	0.49	74.42	18.00	11.00
115.592	0.571	19.26	86.68	0.49	74.47	18.00	11.00
116.163	0.571	19.26	86.75	0.49	74.53	18.00	11.00
116.734	0.571	19.26	86.81	0.49	74.57	18.00	11.00
117.305	0.571	19.26	86.88	0.49	74.60	18.00	11.00
117.876	0.571	19.26	86.94	0.49	74.61	18.00	11.00
118.447	0.571	19.26	87.00	0.49	74.59	18.00	11.00
119.018	0.571	19.26	87.07	0.49	74.52	18.00	11.00
119.589	0.251	19.26	38.33	0.49	74.40	18.00	11.00
119.840	0.571	19.26	86.95	0.49	74.34	18.00	11.00
120.411	0.571	19.26	86.58	0.49	74.17	18.00	11.00
120.982	0.571	19.26	86.21	0.49	73.95	18.00	11.00
121.553	0.571	19.26	85.84	0.49	73.71	18.00	11.00
122.124	0.571	19.26	85.48	0.49	73.42	18.00	11.00
122.695	0.179	19.26	26.73	0.49	73.12	18.00	11.00
122.874	0.571	19.27	84.99	0.49	73.03	18.00	11.00
123.445	0.571	19.27	84.62	0.49	72.72	18.00	11.00
124.016	0.571	19.27	84.25	0.49	72.40	18.00	11.00
124.586	0.571	19.27	83.89	0.49	72.09	18.00	11.00
125.157	0.571	19.27	83.52	0.49	71.79	18.00	11.00
125.728	0.199	19.27	29.03	0.49	71.49	18.00	11.00
125.927	0.571	19.28	83.02	0.49	71.38	18.00	11.00
126.498	0.571	19.28	82.65	0.49	71.05	18.00	11.00
127.069	0.571	19.28	82.28	0.49	70.68	18.00	11.00
127.640	0.571	19.28	81.91	0.49	70.30	18.00	11.00
128.211	0.571	19.28	81.54	0.49	69.96	18.00	11.00
128.782	0.571	19.28	81.17	0.49	69.69	18.00	11.00
129.353	0.571	19.28	80.80	0.49	69.51	18.00	11.00
129.924	0.447	19.28	63.04	0.49	69.38	18.00	11.00
130.371	0.571	30.23	79.38	0.49	69.32	18.00	11.00
130.942	0.058	30.23	7.96	0.49	69.26	18.00	11.00
131.000	0.571	30.23	79.09	0.49	69.25	18.00	11.00
131.571	0.571	30.23	80.77	0.49	69.23	18.00	11.00
132.142	0.571	30.23	82.46	0.49	69.11	18.00	11.00
132.713	0.307	30.23	45.07	0.49	68.83	18.00	11.00
133.020	0.571	30.23	83.15	0.49	68.57	18.00	11.00
133.591	0.571	30.23	81.03	0.49	67.86	18.00	11.00
134.162	0.571	30.23	78.91	0.49	66.78	18.00	11.00
134.733	0.244	30.23	33.05	0.49	65.48	18.00	11.00
134.977	0.571	30.23	75.88	0.49	64.87	18.00	11.00
135.547	0.571	30.23	73.76	0.49	63.30	18.00	11.00
136.118	0.571	30.23	71.64	0.49	61.60	18.00	11.00
136.689	0.571	30.23	69.52	0.49	59.83	18.00	11.00
137.260	0.571	30.23	67.40	0.49	58.06	18.00	11.00
137.831	0.056	30.23	6.52	0.49	56.37	18.00	11.00
137.887	0.571	30.24	65.07	0.49	56.21	18.00	11.00
138.458	0.571	30.24	62.95	0.49	54.46	18.00	11.00
139.029	0.571	30.24	60.83	0.49	52.63	18.00	11.00
139.600	0.571	30.24	58.71	0.49	50.86	18.00	11.00

140.171	0.571	30.24	56.59	0.49	49.04	18.00	11.00
140.742	0.571	30.24	54.46	0.49	47.15	18.00	11.00
141.313	0.571	30.24	52.34	0.49	45.10	18.00	11.00
141.884	0.571	30.24	50.22	0.49	43.02	18.00	11.00
142.455	0.571	30.24	48.10	0.49	41.13	18.00	11.00
143.026	0.571	30.24	45.98	0.49	39.31	18.00	11.00
143.597	0.571	30.24	43.85	0.49	37.53	18.00	11.00
144.167	0.571	30.24	41.73	0.49	35.80	18.00	11.00
144.738	0.270	30.24	19.01	0.49	34.11	18.00	11.00
145.009	0.571	30.25	38.60	0.49	33.33	18.00	11.00
145.579	0.571	30.25	36.48	0.49	31.65	18.00	11.00
146.150	0.571	30.25	34.36	0.49	29.79	18.00	11.00
146.721	0.571	30.25	32.23	0.49	27.69	18.00	11.00
147.292	0.571	30.25	30.11	0.49	25.87	18.00	11.00
147.863	0.571	30.25	27.99	0.49	24.05	18.00	11.00

LEGENDA SIMBOLI

- X(m) : Ascissa sinistra concio
 dx(m) : Larghezza concio
 alpha(°) : Angolo pendenza base concio
 W(kN/m) : Forza peso concio
 ru(-) : Coefficiente locale pressione interstiziale
 U(kPa) : Pressione totale dei pori base concio
 phi'(°) : Angolo di attrito efficace base concio
 c'/Cu (kPa) : Coesione efficace o Resistenza al taglio in condizioni non drenate

TABELLA DIAGRAMMA DELLE FORZE DELLA SUPERFICIE INDIVIDUATA CON MINOR FS

X	ht	yt	yt'	E(x)	T(x)	E'	rho(x)	FS_qFEM	FS_srmFEM			
(m)	(m)	(m)	(--)	(kN/m)	(kN/m)		(kN)	(--)	(--)	(--)		
81.908	0.000	53.501	-0.332	0.0000000000E+000	0.0000000000E+000	0.0000000000E+000	7.4312957308E-001	0.025	10.100	10.693		
82.479	0.073	53.311	-0.332	7.6915868770E-001	1.3173624618E-003	1.9513164884E+000	0.025	10.100	10.693			
83.050	0.146	53.121	-0.340	2.2280973458E+000	1.7481158695E-002	3.9557415306E+000	0.025	7.756	7.321			
83.621	0.211	52.923	-0.385	5.2859950172E+000	1.2558252728E-001	7.9790494140E+000	0.025	4.377	3.231			
84.190	0.232	52.682	-0.420	1.1314970863E+001	6.2575533949E-001	1.0749184733E+001	0.030	3.206	2.044			
84.761	0.257	52.444	-0.344	1.7540964159E+001	1.6730064561E+000	1.4270997393E+001	0.079	3.318	1.802			
85.332	0.365	52.290	-0.340	2.7610211334E+001	3.7892606614E+000	2.4871975975E+001	0.163	3.789	1.755			
85.520	0.349	52.187	-0.195	3.2738697584E+001	4.8395097989E+000	3.0136296707E+001	0.196	3.922	1.760			
86.091	0.567	52.142	-0.139	5.4933046342E+001	9.2542806785E+000	3.8944119255E+001	0.218	4.048	1.792			
86.662	0.716	52.029	-0.177	7.7206772991E+001	1.3685549066E+001	4.3619341135E+001	0.227	3.930	1.790			
87.233	0.890	51.939	-0.132	1.0473949178E+002	1.9330481461E+001	5.4244313881E+001	0.241	3.641	1.806			
87.804	1.092	51.878	-0.084	1.3914527067E+002	2.6610684577E+001	6.3342392591E+001	0.258	3.167	1.828			
88.332	1.304	51.847	-0.035	1.7410590305E+002	3.4284279406E+001	6.7930720390E+001	0.272	2.744	1.851			
88.903	1.560	51.840	0.011	2.1396281298E+002	4.3437753652E+001	7.0191272603E+001	0.287	2.341	1.861			
89.474	1.842	51.859	0.053	2.5425332614E+002	5.3233529334E+001	6.6770565332E+001	0.301	2.007	1.849			
89.928	2.086	51.895	0.100	2.8318714535E+002	6.0853773211E+001	6.1107318997E+001	0.310	1.790	1.822			
90.499	2.073	51.962	0.141	3.1617725928E+002	7.0510075396E+001	5.5625041331E+001	0.330	1.584	1.774			
91.069	2.085	52.055	0.169	3.4670221719E+002	8.0510968931E+001	5.0478448286E+001	0.349	1.428	1.717			
91.390	2.097	52.112	0.186	3.6234670904E+002	8.5966232627E+001	4.6197070982E+001	0.359	1.360	1.684			
91.961	2.125	52.221	0.197	3.8607419995E+002	9.5045476043E+001	3.8492769600E+001	0.381	1.269	1.626			
92.532	2.161	52.337	0.211	4.0629941394E+002	1.0354615233E+002	3.3016483367E+001	0.402	1.203	1.572			
93.103	2.205	52.462	0.228	4.2377384498E+002	1.1151790914E+002	2.9319819375E+001	0.421	1.156	1.522			
93.674	2.260	52.598	0.250	4.3977804855E+002	1.1925081524E+002	2.7923728254E+001	0.439	1.122	1.471			
94.100	2.313	52.711	0.271	4.5164777797E+002	1.2509833315E+002	2.7221381053E+001	0.452	1.100	1.430			
94.671	2.389	52.868	0.277	4.6671399493E+002	1.3250714987E+002	2.5056328101E+001	0.461	1.072	1.376			
94.850	2.415	52.919	0.297	4.7112616917E+002	1.3471462930E+002	2.4663377656E+001	0.464	1.064	1.359			
95.410	2.504	53.087	0.307	4.8498171168E+002	1.4175455603E+002	2.3350889146E+001	0.473	1.036	1.301			
95.981	2.602	53.266	0.324	4.9750350996E+002	1.4843876715E+002	2.0878432296E+001	0.481	1.007	1.242			
96.552	2.713	53.457	0.346	5.0882160636E+002	1.5490833979E+002	1.8495563134E+001	0.489	0.976	1.179			
97.123	2.835	53.661	0.376	5.1862254184E+002	1.6106457725E+002	1.5550725529E+001	0.496	0.942	1.115			
97.694	2.981	53.887	0.397	5.2657809563E+002	1.6694656830E+002	1.2027084945E+001	0.503	0.905	1.050			
97.732	2.991	53.902	0.421	5.2702893043E+002	1.6731897180E+002	1.1700065223E+001	0.503	0.902	1.045			
98.302	3.032	54.143	0.433	5.3198409916E+002	1.7252198669E+002	6.7833530133E+000	0.513	0.864	0.982			
98.873	3.087	54.396	0.435	5.3477445553E+002	1.7710028090E+002	2.7200890126E+000	0.523	0.829	0.923			
99.444	3.131	54.640	0.427	5.3509001414E+002	1.8051289734E+002	-7.7741401603E-001	0.530	0.801	0.872			
100.015	3.177	54.885	0.428	5.3388677067E+002	1.8315660563E+002	-3.1754009168E+000	0.536	0.777	0.828			
100.586	3.221	55.128	0.423	5.3146420438E+002	1.8503829221E+002	-5.0487560968E+000	0.540	0.757	0.790			
101.157	3.262	55.368	0.417	5.2812188315E+002	1.8617933017E+002	-6.4729949102E+000	0.543	0.741	0.758			
101.480	3.282	55.501	0.399	5.2591875142E+002	1.8648285844E+002	-6.9574904870E+000	0.543	0.734	0.743			
102.051	3.306	55.724	0.368	5.2181074810E+002	1.8644842174E+002	-7.0908090373E+000	0.548	0.726	0.722			



Table with 11 columns and 100 rows of numerical data, likely representing engineering calculations for slope stabilization.

141.313	1.539	70.228	0.491	6.3104057276E+001	1.4161057122E+001	-1.8166905376E+001	0.158	0.470	0.442
141.884	1.488	70.510	0.474	5.3009435049E+001	1.1294633888E+001	-1.6266682238E+001	0.137	0.478	0.448
142.455	1.415	70.769	0.444	4.4530057755E+001	8.9706348031E+000	-1.3868252705E+001	0.117	0.488	0.457
143.026	1.329	71.017	0.430	3.7174065837E+001	7.0415600519E+000	-1.2172988664E+001	0.099	0.500	0.467
143.597	1.240	71.261	0.423	3.0630414157E+001	5.4092514058E+000	-1.0772399872E+001	0.082	0.513	0.479
144.167	1.147	71.500	0.413	2.4873674944E+001	4.0577671692E+000	-9.9398316725E+000	0.067	0.527	0.491
144.738	1.046	71.732	0.404	1.9280685551E+001	2.7516807660E+000	-9.1578026138E+000	0.049	0.543	0.507
145.009	0.996	71.840	0.402	1.6888427792E+001	2.2320411513E+000	-8.5423372062E+000	0.042	0.551	0.514
145.579	0.893	72.070	0.413	1.2389443273E+001	1.3514357758E+000	-7.3622400508E+000	0.027	0.571	0.533
146.150	0.802	72.312	0.469	8.4819044961E+000	7.0601091328E-001	-6.7812375326E+000	0.025	0.595	0.558
146.721	0.763	72.606	0.491	4.6463337171E+000	2.1004527228E-001	-5.4838655173E+000	0.025	0.628	0.592
147.292	0.696	72.872	0.478	2.2201902756E+000	3.6262213906E-002	-3.4953881693E+000	0.025	0.662	0.626
147.863	0.642	73.151	0.478	6.5514871505E-001	4.0178435689E-003	-1.9443916579E+000	0.025	0.698	0.664

LEGENDA SIMBOLI

- X(m) : Ascissa sinistra concio
 ht(m) : Altezza linea di thrust da nodo sinistro base concio
 yt(m) : coordinata Y linea di trust
 yt'(-) : gradiente pendenza locale linea di trust
 E(x)(kN/m) : Forza Normale interconcio
 T(x)(kN/m) : Forza Tangenziale interconcio
 E' (kN) : derivata Forza normale interconcio
 Rho(x) (-) : fattore mobilizzazione resistenza al taglio verticale interconcio ZhU et al.(2003)
 FS_qFEM(x)(-) : fattore di sicurezza locale stimato (locale in X) by qFEM
 FS_srmFEM(x)(-) : fattore di sicurezza locale stimato (locale in X) by SRM Procedure

TABELLA SFORZI DI TAGLIO DISTRIBUITI LUNGO SUPERFICIE INDIVIDUATA CON MINOR FS

X	dx	dl	alpha	TauStress	TauF	TauStrength	TauS
(m)	(m)	(m)	(°)	(kPa)	(kN/m)	(kPa)	(kN/m)
81.908	0.571	0.629	-24.724	-1.102	-0.693	11.317	7.113
82.479	0.571	0.629	-24.724	-3.307	-2.079	11.962	7.518
83.050	0.571	0.629	-24.724	-5.512	-3.464	12.681	7.970
83.621	0.569	0.627	-24.724	-7.713	-4.832	14.057	8.807
84.190	0.571	0.629	-24.724	-8.343	-5.244	14.744	9.267
84.761	0.571	0.629	-24.724	-7.405	-4.654	14.511	9.120
85.332	0.188	0.207	-24.724	-6.781	-1.405	14.114	2.924
85.520	0.571	0.629	-24.724	-8.867	-5.573	16.355	10.280
86.091	0.571	0.629	-24.724	-13.347	-8.389	18.108	11.381
86.662	0.571	0.629	-24.724	-17.827	-11.205	21.090	13.256
87.233	0.571	0.629	-24.724	-22.308	-14.021	24.366	15.315
87.804	0.528	0.581	-24.724	-26.620	-15.479	26.789	15.577
88.332	0.571	0.629	-24.724	-30.933	-19.443	29.170	18.335
88.903	0.571	0.629	-24.724	-35.414	-22.259	31.404	19.738
89.474	0.454	0.500	-24.724	-39.435	-19.704	32.616	16.297
89.928	0.571	0.577	8.045	15.374	8.865	33.659	19.408
90.499	0.571	0.577	8.045	16.056	9.258	34.442	19.859
91.069	0.321	0.324	8.045	16.589	5.371	34.809	11.270
91.390	0.571	0.577	8.045	16.765	9.666	34.618	19.961
91.961	0.571	0.577	8.045	16.734	9.649	33.835	19.509
92.532	0.571	0.577	8.045	16.703	9.631	33.166	19.123
93.103	0.571	0.577	8.045	16.672	9.613	32.645	18.823
93.674	0.426	0.431	8.045	16.645	7.166	32.243	13.882
94.100	0.571	0.577	8.045	16.987	9.794	32.523	18.753
94.671	0.179	0.181	8.045	17.451	3.156	32.949	5.959
94.850	0.560	0.566	8.045	17.908	10.128	33.885	19.164
95.410	0.571	0.577	8.045	18.608	10.730	34.740	20.031
95.981	0.571	0.577	8.045	19.315	11.137	35.679	20.573
96.552	0.571	0.577	8.045	20.022	11.545	36.562	21.081
97.123	0.571	0.577	8.045	20.729	11.952	37.460	21.599
97.694	0.038	0.038	8.045	21.106	0.808	37.603	1.439
97.732	0.571	0.605	19.229	47.842	28.928	32.022	19.362
98.302	0.571	0.605	19.229	48.692	29.442	32.183	19.460
98.873	0.571	0.605	19.229	49.541	29.955	32.334	19.551
99.444	0.571	0.605	19.229	50.391	30.469	32.636	19.733
100.015	0.571	0.605	19.229	51.241	30.983	33.002	19.955
100.586	0.571	0.605	19.229	52.090	31.497	33.438	20.219
101.157	0.323	0.342	19.229	52.755	18.041	33.790	11.555
101.480	0.571	0.605	19.229	52.826	31.941	33.719	20.388
102.051	0.503	0.533	19.229	52.505	27.969	33.276	17.726

102.554	0.571	0.605	19.239	52.208	31.570	32.932	19.913
103.125	0.571	0.605	19.239	51.867	31.363	32.636	19.734
103.696	0.571	0.605	19.239	51.526	31.157	32.389	19.585
104.267	0.571	0.605	19.239	51.185	30.951	32.190	19.465
104.838	0.571	0.605	19.239	50.844	30.745	32.024	19.364
105.408	0.571	0.605	19.239	50.502	30.538	31.890	19.284
105.979	0.571	0.605	19.239	50.161	30.332	31.746	19.197
106.550	0.571	0.605	19.239	49.820	30.126	31.611	19.115
107.121	0.571	0.605	19.239	49.479	29.920	31.471	19.030
107.692	0.508	0.538	19.239	49.157	26.448	31.353	16.869
108.200	0.571	0.605	19.249	48.856	29.544	31.204	18.870
108.771	0.571	0.605	19.249	48.514	29.338	31.059	18.782
109.342	0.571	0.605	19.249	48.172	29.131	30.905	18.689
109.913	0.571	0.605	19.249	47.830	28.924	30.739	18.589
110.484	0.571	0.605	19.249	47.488	28.717	30.557	18.479
111.055	0.545	0.577	19.249	47.153	27.231	30.361	17.533
111.600	0.571	0.605	19.249	47.008	28.427	30.313	18.331
112.171	0.571	0.605	19.249	47.044	28.449	30.416	18.394
112.742	0.571	0.605	19.249	47.079	28.470	30.493	18.440
113.313	0.571	0.605	19.249	47.115	28.492	30.550	18.475
113.884	0.567	0.600	19.249	47.151	28.310	30.593	18.368
114.451	0.571	0.605	19.259	47.206	28.549	30.617	18.516
115.021	0.571	0.605	19.259	47.241	28.570	30.638	18.529
115.592	0.571	0.605	19.259	47.276	28.591	30.648	18.535
116.163	0.571	0.605	19.259	47.311	28.612	30.665	18.545
116.734	0.571	0.605	19.259	47.346	28.633	30.684	18.557
117.305	0.571	0.605	19.259	47.381	28.655	30.707	18.571
117.876	0.571	0.605	19.259	47.416	28.676	30.737	18.589
118.447	0.571	0.605	19.259	47.451	28.697	30.766	18.606
119.018	0.571	0.605	19.259	47.486	28.718	30.820	18.639
119.589	0.251	0.266	19.259	47.511	12.641	30.884	8.217
119.840	0.571	0.605	19.259	47.419	28.677	30.811	18.633
120.411	0.571	0.605	19.259	47.219	28.556	30.679	18.554
120.982	0.571	0.605	19.259	47.018	28.435	30.559	18.481
121.553	0.571	0.605	19.259	46.818	28.314	30.439	18.409
122.124	0.571	0.605	19.259	46.617	28.192	30.348	18.353
122.695	0.179	0.190	19.259	46.486	8.817	30.333	5.753
122.874	0.571	0.605	19.269	46.374	28.047	30.223	18.279
123.445	0.571	0.605	19.269	46.173	27.925	30.134	18.225
124.016	0.571	0.605	19.269	45.972	27.804	30.058	18.179
124.586	0.571	0.605	19.269	45.770	27.682	29.967	18.124
125.157	0.571	0.605	19.269	45.569	27.560	29.875	18.068
125.728	0.199	0.211	19.269	45.433	9.581	29.843	6.293
125.927	0.571	0.605	19.279	45.317	27.410	29.731	17.982
126.498	0.571	0.605	19.279	45.115	27.287	29.622	17.916
127.069	0.571	0.605	19.279	44.913	27.165	29.541	17.867
127.640	0.571	0.605	19.279	44.711	27.043	29.462	17.819
128.211	0.571	0.605	19.279	44.509	26.921	29.366	17.762
128.782	0.571	0.605	19.279	44.307	26.799	29.230	17.679
129.353	0.571	0.605	19.279	44.105	26.677	29.082	17.590
129.924	0.447	0.474	19.279	43.925	20.815	28.952	13.719
130.371	0.571	0.661	30.234	60.487	39.970	22.675	14.984
130.942	0.058	0.067	30.234	59.694	4.008	22.314	1.498
131.000	0.571	0.661	30.234	60.264	39.823	22.649	14.967
131.571	0.571	0.661	30.234	61.549	40.672	23.424	15.479
132.142	0.571	0.661	30.234	62.834	41.522	24.224	16.007
132.713	0.307	0.356	30.234	63.823	22.696	24.898	8.854
133.020	0.571	0.661	30.234	63.361	41.870	24.771	16.369
133.591	0.571	0.661	30.234	61.745	40.802	24.217	16.003
134.162	0.571	0.661	30.234	60.130	39.734	23.673	15.643
134.733	0.244	0.282	30.234	58.977	16.641	23.453	6.618
134.977	0.571	0.661	30.234	57.824	38.211	22.953	15.168
135.547	0.571	0.661	30.234	56.208	37.143	22.525	14.885
136.118	0.571	0.661	30.234	54.592	36.075	22.149	14.637
136.689	0.571	0.661	30.234	52.977	35.008	21.781	14.393
137.260	0.571	0.661	30.234	51.361	33.940	21.375	14.125
137.831	0.056	0.065	30.234	50.474	3.282	21.382	1.391
137.887	0.571	0.661	30.244	49.595	32.776	20.943	13.841
138.458	0.571	0.661	30.244	47.978	31.708	20.597	13.612
139.029	0.571	0.661	30.244	46.361	30.639	20.225	13.366
139.600	0.571	0.661	30.244	44.744	29.570	19.875	13.135
140.171	0.571	0.661	30.244	43.126	28.501	19.545	12.917
140.742	0.571	0.661	30.244	41.509	27.433	19.250	12.722

141.313	0.571	0.661	30.244	39.892	26.364	18.985	12.546
141.884	0.571	0.661	30.244	38.275	25.295	18.682	12.347
142.455	0.571	0.661	30.244	36.658	24.226	18.340	12.120
143.026	0.571	0.661	30.244	35.040	23.157	17.986	11.887
143.597	0.571	0.661	30.244	33.423	22.089	17.624	11.647
144.167	0.571	0.661	30.244	31.806	21.020	17.277	11.418
144.738	0.270	0.313	30.244	30.615	9.573	17.134	5.358
145.009	0.571	0.661	30.254	29.429	19.451	16.690	11.031
145.579	0.571	0.661	30.254	27.810	18.381	16.299	10.773
146.150	0.571	0.661	30.254	26.191	17.311	15.980	10.562
146.721	0.571	0.661	30.254	24.573	16.241	15.715	10.386
147.292	0.571	0.661	30.254	22.954	15.171	15.385	10.169
147.863	0.571	0.661	30.254	21.335	14.101	15.073	9.962

LEGENDA SIMBOLI

X(m) : Ascissa sinistra concio
dx(m) : Larghezza concio
dl(m) : lunghezza base concio
alpha(°) : Angolo pendenza base concio
TauStress(kPa) : Sforzo di taglio su base concio
TauF (kN/m) : Forza di taglio su base concio
TauStrength(kPa) : Resistenza al taglio su base concio
TauS (kN/m) : Forza resistente al taglio su base concio

CASO C sisma

Report elaborazioni

SSAP 5.0.2 - Slope Stability Analysis Program (1991,2021)

WWW.SSAP.EU

Build No. 12007

BY

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** Gia' Ricercatore CNR-IRPI fino a Luglio 2011

Ultima Revisione struttura tabelle del report: 21 Febbraio 2021

Modello pendio: CASO C sisma.mod

----- PARAMETRI DEL MODELLO DEL PENDIO -----

__ PARAMETRI GEOMETRICI - Coordinate X Y (in m) __

SUP T.		SUP 2		SUP 3		SUP 4	
X	Y	X	Y	X	Y	X	Y
0.00	30.73	0.00	27.50	0.00	24.00	0.00	15.50
12.70	33.89	45.62	42.31	45.59	38.80	45.60	30.30
27.25	38.72	76.05	47.93	75.84	43.13	76.05	38.61
39.27	44.22	94.85	51.93	95.41	50.10	94.85	44.93
62.06	48.35	170.31	76.50	170.31	74.49	170.31	69.50
68.08	51.04	-	-	-	-	-	-
73.38	51.85	-	-	-	-	-	-
75.82	53.21	-	-	-	-	-	-
84.19	53.61	-	-	-	-	-	-
85.52	52.71	-	-	-	-	-	-
91.39	56.07	-	-	-	-	-	-
94.10	56.40	-	-	-	-	-	-
101.48	60.74	-	-	-	-	-	-
111.60	63.30	-	-	-	-	-	-
119.84	66.26	-	-	-	-	-	-
131.00	69.53	-	-	-	-	-	-
133.02	71.23	-	-	-	-	-	-
157.83	77.62	-	-	-	-	-	-
170.31	80.51	-	-	-	-	-	-

---- SUP FALDA -----

X Y (in m)

0.00	30.73
12.70	33.89
27.25	38.72
39.27	44.22
62.06	48.35
68.08	51.04
73.38	51.85
75.82	53.21
84.19	53.61
85.52	52.71
91.39	56.07
94.10	56.40
101.48	60.74
111.60	63.30
119.84	66.26
131.00	69.53
133.02	71.23
157.83	77.62
170.31	80.51

----- GESTIONE ACQUIFERI -----

Strati esclusi da acquifero:

STRATO 4

Esclusione sovraccarico pendio sommerso: NON ATTIVATA

EFFETTO TENSION CRACK IN TESTA RIEMPITO DI ACQUA: ----> DISATTIVATO

In caso di superfici con tension crack in testa, la frattura di tensione

puo' venir viene considerata completamente riempita di acqua per la sua intera profondita'.
Viene quindi considerato una forza in testa, prodotta dalla pressione idrostatica.
La forza applicata ha un effetto destabilizzante aggiuntivo alle altre forze destabilizzanti agenti.

Peso unitario fluido (kN/m³): 9.81

Parametri funzione dissipazione superficiale pressione dei fluidi:

Coefficiente A 0
Coefficiente K 0.000800
Pressione minima fluidi Uo_Min (kPa) 0.01
Coefficiente di soprappressione oltre pressione idrostatica 1.00
Limitazione dissipazione a Pressione Idrostatica = ATTIVA
STABILITE CONDIZIONI PER LA VERIFICA CON SOVRAPPRESSIONE ACQUIFERI CON DISSIPAZIONE IN DIREZIONE DELLA SUPERFICIE

CALCOLO EFFETTO DI FILTRAZIONE NON ATTIVATO

----- PARAMETRI GEOMECCANICI -----

	fi`	C`	Cu	Gamm	Gamm_sat	STR_IDX	sgci	GSI	mi	D
STRATO 1	18.00	11.00	0.00	18.00	20.00	1.269	0.00	0.00	0.00	0.00
STRATO 2	18.00	11.00	0.00	18.00	20.00	1.269	0.00	0.00	0.00	0.00
STRATO 3	25.00	50.00	0.00	20.00	20.00	4.881	0.00	0.00	0.00	0.00
STRATO 4	35.00	0.00	0.00	20.00	20.00	2.404	0.00	0.00	0.00	0.00

LEGENDA: fi` _____ Angolo di attrito interno efficace(in gradi)
C` _____ Coesione efficace (in Kpa)
Cu _____ Resistenza al taglio Non drenata (in Kpa)
Gamm _____ Peso di volume terreno fuori falda (in KN/m³)
Gamm_sat _____ Peso di volume terreno immerso (in KN/m³)
STR_IDX _____ Indice di resistenza (usato in solo in 'SNIFF SEARCH) (adimensionale)
---- SOLO Per AMMASSI ROCCIOSI FRATTURATI - Parametri Criterio di Rottura di Hoek (2002)-
sigci _____ Resistenza Compressione Uniassiale Roccia Intatta (in MPa)
GSI _____ Geological Strenght Index ammasso(adimensionale)
mi _____ Indice litologico ammasso(adimensionale)
D _____ Fattore di disturbo ammasso(adimensionale)
Fattore di riduzione NTC2018: gammaPHI=1.25 e gammaC=1.25 - DISATTIVATO (solo per ROCCE)
Uso CRITERIO DI ROTTURA Hoek et al.(2002,2006) - non-lineare - Generalizzato, secondo Lei et al.(2016)

----- INFORMAZIONI GENERAZIONE SUPERFICI RANDOM -----

*** PARAMETRI PER LA GENERAZIONE DELLE SUPERFICI
MOTORE DI RICERCA: CONVEX RANDOM - Chen (1992)
FILTRAGGIO SUPERFICI : ATTIVATO
COORDINATE X1,X2,Y OSTACOLO : 0.00 0.00 0.00
LUNGHEZZA MEDIA SEGMENTI (m)*: 6.8 (+/-) 50%
INTERVALLO ASCISSE RANDOM STARTING POINT (Xmin .. Xmax): 3.41 156.69
LIVELLO MINIMO CONSIDERATO (Ymin): 29.00
INTERVALLO ASCISSE AMMESSO PER LA TERMINAZIONE (Xmin .. Xmax): 40.00 166.90
TOTALE SUPERFICI GENERATE : 10000
*NOTA IMPORTANTE: La lunghezza media dei segmenti non viene considerata nel caso di uso del motore di ricerca NEW RANOM SEARCH

----- INFORMAZIONI PARAMETRI DI CALCOLO -----

METODO DI CALCOLO : MORGENSTERN - PRICE (Morgenstern & Price, 1965)
METODO DI ESPLORAZIONE CAMPO VALORI (lambda0,Fs0) ADOTTATO : A (rapido)
COEFFICIENTE SISMICO UTILIZZATO Kh : 0.0480
COEFFICIENTE SISMICO UTILIZZATO Kv (assunto Positivo): 0.0240
COEFFICIENTE c=Kv/Kh UTILIZZATO : 0.5000
FORZA ORIZZONTALE ADDIZIONALE IN TESTA (kN/m): 0.00
FORZA ORIZZONTALE ADDIZIONALE ALLA BASE (kN/m): 0.00

N.B. Le forze orizzontali addizionali in testa e alla base sono poste uguali a 0 durante le tutte le verifiche globali.
I valori >0 impostati dall'utente sono utilizzati solo in caso di verifica singola

----- RISULTATO FINALE ELABORAZIONI -----

* DATI RELATIVI ALLE 10 SUPERFICI GENERATE CON MINOR Fs *

Fattore di sicurezza (FS) 0.6586 - Min. - X Y Lambda= 0.4302
82.11 53.51

90.84 50.12
95.78 51.05
105.73 54.27
111.19 56.07
120.38 59.32
126.58 61.52
132.15 63.49
140.32 67.57
147.21 71.63
148.86 73.11
148.86 75.31

Fattore di sicurezza (FS) 0.6621 - N.2 -- X Y Lambda= 0.4416

86.31 53.16
89.19 52.16
92.82 51.42
98.75 51.81
105.31 53.77
109.39 54.99
116.60 57.34
122.49 60.48
125.44 62.05
128.46 63.66
133.65 66.44
137.85 69.15
140.76 71.03
140.76 73.22

Fattore di sicurezza (FS) 0.6648 - N.3 -- X Y Lambda= 0.4621

87.67 53.94
94.63 50.99
100.38 51.79
105.57 53.47
109.29 55.03
112.74 56.48
117.47 58.46
121.89 60.32
125.09 62.25
131.28 66.01
135.14 69.65
135.14 71.78

Fattore di sicurezza (FS) 0.6666 - N.4 -- X Y Lambda= 0.4602

86.72 53.39
93.03 51.08
95.67 50.93
102.13 52.82
105.07 53.68
110.62 55.86
116.76 58.28
121.35 60.09
127.43 62.77
133.66 65.52
137.43 67.18
142.16 69.27
145.75 71.44
147.31 72.55
147.31 74.91

Fattore di sicurezza (FS) 0.6671 - N.5 -- X Y Lambda= 0.4233

85.94 52.95
94.72 52.10
99.39 52.88
109.59 55.07
120.90 59.37
125.69 61.19
131.69 63.83
137.20 66.74
143.09 71.58

143.09 73.82

Fattore di sicurezza (FS) 0.6724 - N.6 -- X Y Lambda= 0.4313
87.11 53.62
91.23 51.88
100.03 51.74
107.94 54.33
116.63 57.19
122.96 59.28
126.58 61.48
133.39 67.35
135.53 69.59
135.53 71.88

Fattore di sicurezza (FS) 0.6725 - N.7 -- X Y Lambda= 0.4406
81.17 53.47
91.91 50.59
105.16 54.43
115.41 57.41
125.49 60.34
137.50 63.86
146.57 69.07
153.71 74.36
153.71 76.56

Fattore di sicurezza (FS) 0.6729 - N.8 -- X Y Lambda= 0.4236
86.38 53.20
97.13 52.04
107.07 54.94
111.63 56.35
122.39 60.26
132.56 64.08
140.45 70.90
140.45 73.14

Fattore di sicurezza (FS) 0.6731 - N.9 -- X Y Lambda= 0.4475
85.88 52.91
89.66 51.94
95.63 50.41
98.28 51.15
103.90 53.09
109.63 55.07
112.41 56.15
115.12 57.23
120.01 59.82
124.83 62.35
127.31 63.87
130.57 67.32
130.57 69.41

Fattore di sicurezza (FS) 0.6750 - N.10 -- X Y Lambda= 0.4377
80.41 53.43
89.97 50.75
94.84 51.31
104.88 53.34
112.62 56.35
122.06 60.03
131.58 63.74
137.07 67.84
141.15 71.15
141.15 73.32

----- ANALISI DEFICIT DI RESISTENZA -----

DATI RELATIVI ALLE 10 SUPERFICI GENERATE CON MINOR Fs *

Analisi Deficit in riferimento a FS(progetto) = 1.200

Sup N. FS FTR(kN/m) FTA(kN/m) Bilancio(kN/m) ESITO

1	0.659	1912.8	2904.6	-1572.6	Deficit
2	0.662	1566.7	2366.5	-1273.0	Deficit
3	0.665	1393.0	2095.3	-1121.3	Deficit
4	0.667	1733.6	2600.6	-1387.1	Deficit
5	0.667	1651.3	2475.4	-1319.1	Deficit
6	0.672	1490.9	2217.5	-1170.0	Deficit
7	0.673	2139.1	3180.7	-1677.7	Deficit
8	0.673	1540.6	2289.5	-1206.7	Deficit
9	0.673	1335.2	1983.7	-1045.3	Deficit
10	0.675	1716.7	2543.1	-1335.1	Deficit

Esito analisi: DEFICIT di RESISTENZA!

Valore massimo di DEFICIT di RESISTENZA(kN/m): -1677.7

Note: FTR --> Forza totale Resistente lungo la superficie di scivolamento

FTA --> Forza totale Agente lungo la superficie di scivolamento

IMPORTANTE! : Il Deficit o il Surplus di resistenza viene espresso in kN per metro di LARGHEZZA rispetto al fronte della scarpata

TABELLA PARAMETRI CONCI DELLA SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	dx (m)	alpha (°)	W (kN/m)	ru (-)	U (kPa)	phi' (°)	(c',Cu) (kPa)
82.107	0.550	-21.22	1.35	0.49	1.18	18.00	11.00
82.657	0.550	-21.22	4.05	0.49	3.53	18.00	11.00
83.207	0.550	-21.22	6.75	0.49	5.94	18.00	11.00
83.757	0.433	-21.22	7.22	0.49	6.89	18.00	11.00
84.190	0.550	-21.22	9.34	0.49	7.05	18.00	11.00
84.740	0.550	-21.22	7.55	0.49	8.22	18.00	11.00
85.290	0.230	-21.22	2.63	0.49	10.62	18.00	11.00
85.520	0.550	-21.22	8.89	0.49	11.93	18.00	11.00
86.070	0.550	-21.22	14.84	0.49	15.92	18.00	11.00
86.620	0.550	-21.22	20.79	0.49	19.75	18.00	11.00
87.170	0.550	-21.22	26.74	0.49	23.88	18.00	11.00
87.720	0.550	-21.22	32.70	0.49	28.74	18.00	11.00
88.270	0.550	-21.22	38.65	0.49	33.72	18.00	11.00
88.820	0.427	-21.22	34.07	0.49	38.47	18.00	11.00
89.246	0.550	-21.22	49.21	0.49	41.91	18.00	11.00
89.796	0.550	-21.22	55.17	0.49	45.81	18.00	11.00
90.346	0.493	-21.22	54.49	0.49	48.96	18.00	11.00
90.839	0.550	10.72	64.66	0.49	51.29	18.00	11.00
91.389	0.001	10.72	0.11	0.49	53.36	18.00	11.00
91.390	0.550	10.72	65.64	0.49	53.37	18.00	11.00
91.940	0.550	10.72	65.23	0.49	54.96	18.00	11.00
92.490	0.550	10.72	64.81	0.49	56.21	18.00	11.00
93.040	0.550	10.72	64.39	0.49	57.24	18.00	11.00
93.590	0.510	10.72	59.35	0.49	58.11	18.00	11.00
94.100	0.550	10.72	65.03	0.49	58.92	18.00	11.00
94.650	0.200	10.72	24.26	0.49	59.84	18.00	11.00
94.850	0.550	10.72	68.40	0.49	60.20	18.00	11.00
95.400	0.010	10.72	1.27	0.49	61.28	18.00	11.00
95.410	0.369	10.72	47.35	0.49	61.30	18.00	11.00
95.779	0.550	17.92	72.16	0.49	62.10	18.00	11.00
96.329	0.550	17.92	73.80	0.49	63.36	18.00	11.00
96.879	0.550	17.92	75.43	0.49	64.76	18.00	11.00
97.429	0.550	17.92	77.07	0.49	66.28	18.00	11.00
97.979	0.550	17.92	78.71	0.49	67.93	18.00	11.00
98.529	0.550	17.92	80.35	0.49	69.57	18.00	11.00
99.079	0.550	17.92	81.99	0.49	71.14	18.00	11.00
99.629	0.550	17.92	83.63	0.49	72.50	18.00	11.00
100.179	0.550	17.92	85.27	0.49	73.49	18.00	11.00
100.729	0.550	17.92	86.91	0.49	74.29	18.00	11.00
101.279	0.201	17.92	32.18	0.49	74.88	18.00	11.00
101.480	0.550	17.92	88.11	0.49	75.04	18.00	11.00
102.030	0.550	17.92	87.67	0.49	75.29	18.00	11.00
102.580	0.550	17.92	87.24	0.49	75.37	18.00	11.00
103.130	0.550	17.92	86.80	0.49	75.30	18.00	11.00

103.680	0.550	17.92	86.37	0.49	75.11	18.00	11.00
104.230	0.550	17.92	85.93	0.49	74.81	18.00	11.00
104.780	0.550	17.92	85.49	0.49	74.45	18.00	11.00
105.330	0.400	17.92	61.86	0.49	74.05	18.00	11.00
105.729	0.550	18.27	84.72	0.49	73.76	18.00	11.00
106.279	0.550	18.27	84.24	0.49	73.37	18.00	11.00
106.829	0.550	18.27	83.76	0.49	72.97	18.00	11.00
107.379	0.550	18.27	83.28	0.49	72.56	18.00	11.00
107.929	0.550	18.27	82.81	0.49	72.13	18.00	11.00
108.479	0.550	18.27	82.33	0.49	71.71	18.00	11.00
109.029	0.550	18.27	81.85	0.49	71.31	18.00	11.00
109.579	0.550	18.27	81.37	0.49	70.94	18.00	11.00
110.129	0.550	18.27	80.90	0.49	70.61	18.00	11.00
110.679	0.506	18.27	74.07	0.49	70.32	18.00	11.00
111.186	0.414	19.47	60.26	0.49	70.10	18.00	11.00
111.600	0.550	19.47	79.76	0.49	69.96	18.00	11.00
112.150	0.550	19.47	79.80	0.49	69.81	18.00	11.00
112.700	0.550	19.47	79.84	0.49	69.72	18.00	11.00
113.250	0.550	19.47	79.87	0.49	69.66	18.00	11.00
113.800	0.550	19.47	79.91	0.49	69.64	18.00	11.00
114.350	0.550	19.47	79.94	0.49	69.64	18.00	11.00
114.900	0.550	19.47	79.98	0.49	69.66	18.00	11.00
115.450	0.550	19.47	80.01	0.49	69.69	18.00	11.00
116.000	0.550	19.47	80.05	0.49	69.72	18.00	11.00
116.550	0.550	19.47	80.08	0.49	69.74	18.00	11.00
117.100	0.550	19.47	80.12	0.49	69.75	18.00	11.00
117.650	0.550	19.47	80.15	0.49	69.74	18.00	11.00
118.200	0.550	19.47	80.19	0.49	69.71	18.00	11.00
118.750	0.550	19.47	80.22	0.49	69.64	18.00	11.00
119.300	0.540	19.47	78.87	0.49	69.54	18.00	11.00
119.840	0.540	19.47	78.58	0.49	69.39	18.00	11.00
120.380	0.550	19.48	79.72	0.49	69.20	18.00	11.00
120.930	0.550	19.48	79.34	0.49	68.97	18.00	11.00
121.480	0.550	19.48	78.97	0.49	68.71	18.00	11.00
122.030	0.550	19.48	78.59	0.49	68.42	18.00	11.00
122.579	0.550	19.48	78.22	0.49	68.11	18.00	11.00
123.129	0.550	19.48	77.84	0.49	67.77	18.00	11.00
123.679	0.550	19.48	77.46	0.49	67.43	18.00	11.00
124.229	0.550	19.48	77.09	0.49	67.09	18.00	11.00
124.779	0.550	19.48	76.71	0.49	66.77	18.00	11.00
125.329	0.550	19.48	76.34	0.49	66.45	18.00	11.00
125.879	0.550	19.48	75.96	0.49	66.14	18.00	11.00
126.429	0.154	19.48	21.18	0.49	65.84	18.00	11.00
126.583	0.550	19.49	75.48	0.49	65.75	18.00	11.00
127.133	0.550	19.49	75.10	0.49	65.44	18.00	11.00
127.683	0.550	19.49	74.72	0.49	65.16	18.00	11.00
128.233	0.550	19.49	74.35	0.49	64.99	18.00	11.00
128.783	0.550	19.49	73.97	0.49	64.99	18.00	11.00
129.333	0.550	19.49	73.59	0.49	65.16	18.00	11.00
129.883	0.550	19.49	73.21	0.49	65.45	18.00	11.00
130.433	0.550	19.49	72.84	0.49	65.84	18.00	11.00
130.983	0.017	19.49	2.27	0.49	66.29	18.00	11.00
131.000	0.550	19.49	74.15	0.49	66.31	18.00	11.00
131.550	0.550	19.49	77.17	0.49	66.86	18.00	11.00
132.100	0.051	19.49	7.37	0.49	67.34	18.00	11.00
132.151	0.550	26.56	80.02	0.49	67.38	18.00	11.00
132.701	0.319	26.56	47.33	0.49	67.66	18.00	11.00
133.020	0.550	26.56	81.55	0.49	67.72	18.00	11.00
133.570	0.550	26.56	80.05	0.49	67.60	18.00	11.00
134.120	0.550	26.56	78.55	0.49	67.25	18.00	11.00
134.670	0.550	26.56	77.05	0.49	66.64	18.00	11.00
135.220	0.298	26.56	41.15	0.49	65.78	18.00	11.00
135.518	0.550	26.56	74.73	0.49	65.18	18.00	11.00
136.068	0.550	26.56	73.23	0.49	63.97	18.00	11.00
136.618	0.550	26.56	71.73	0.49	62.62	18.00	11.00
137.168	0.550	26.56	70.23	0.49	61.24	18.00	11.00
137.718	0.550	26.56	68.73	0.49	59.88	18.00	11.00
138.268	0.550	26.56	67.23	0.49	58.49	18.00	11.00
138.818	0.550	26.56	65.73	0.49	57.05	18.00	11.00
139.368	0.550	26.56	64.22	0.49	55.57	18.00	11.00
139.918	0.397	26.56	45.47	0.49	54.11	18.00	11.00
140.315	0.550	30.54	61.36	0.49	53.00	18.00	11.00
140.865	0.550	30.54	59.30	0.49	51.43	18.00	11.00

141.415	0.550	30.54	57.24	0.49	49.79	18.00	11.00
141.965	0.550	30.54	55.18	0.49	48.10	18.00	11.00
142.515	0.550	30.54	53.13	0.49	46.35	18.00	11.00
143.065	0.550	30.54	51.07	0.49	44.57	18.00	11.00
143.615	0.550	30.54	49.01	0.49	42.65	18.00	11.00
144.165	0.550	30.54	46.95	0.49	40.69	18.00	11.00
144.715	0.550	30.54	44.89	0.49	38.88	18.00	11.00
145.265	0.550	30.54	42.83	0.49	37.05	18.00	11.00
145.815	0.550	30.54	40.78	0.49	35.22	18.00	11.00
146.365	0.550	30.54	38.72	0.49	33.37	18.00	11.00
146.915	0.291	30.54	19.63	0.49	31.53	18.00	11.00
147.205	0.550	41.81	34.63	0.49	30.46	18.00	11.00
147.755	0.550	41.81	30.68	0.49	26.72	18.00	11.00
148.305	0.550	41.81	26.74	0.49	23.29	18.00	11.00

LEGENDA SIMBOLI

- X(m) : Ascissa sinistra concio
 dx(m) : Larghezza concio
 alpha(°) : Angolo pendenza base concio
 W(kN/m) : Forza peso concio
 ru(-) : Coefficiente locale pressione interstiziale
 U(kPa) : Pressione totale dei pori base concio
 phi'(°) : Angolo di attrito efficace base concio
 c'/Cu (kPa) : Coesione efficace o Resistenza al taglio in condizioni non drenate

TABELLA DIAGRAMMA DELLE FORZE DELLA SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	ht (m)	yt (m)	yt' (--)	E(x) (kN/m)	T(x) (kN/m)	E' (kN)	rho(x) (kN)	FS_qFEM (--)	FS_srmFEM (--)			
82.107	0.000	53.510	-0.291	0.0000000000E+000	0.0000000000E+000	0.0000000000E+000	4.6344713993E-001	0.022	16.241	15.567		
82.657	0.060	53.357	-0.291	5.7614623454E-001	9.7617794896E-004	1.6317589383E+000	0.022	16.241	15.567			
83.207	0.107	53.190	-0.300	1.7948244380E+000	1.6450942469E-002	2.8772404238E+000	0.022	8.046	5.957			
83.757	0.158	53.028	-0.313	3.7409160454E+000	8.6376758485E-002	5.6538568474E+000	0.022	3.683	2.219			
84.190	0.182	52.883	-0.360	6.9108262057E+000	3.1332531434E-001	7.8521293753E+000	0.022	2.978	1.529			
84.740	0.186	52.674	-0.339	1.1601186197E+001	9.8221878373E-001	9.7999108211E+000	0.058	3.080	1.278			
85.290	0.237	52.511	-0.357	1.7690065111E+001	2.5555639422E+000	1.4698136829E+001	0.152	3.570	1.194			
85.520	0.210	52.395	-0.151	2.1420686714E+001	3.6269070270E+000	1.9822725397E+001	0.210	3.746	1.181			
86.070	0.421	52.393	-0.054	3.7065053272E+001	7.9775876499E+000	3.0813076522E+001	0.241	3.844	1.174			
86.620	0.577	52.335	-0.120	5.5312986278E+001	1.2904054935E+001	3.6929978072E+001	0.257	3.701	1.163			
87.170	0.716	52.260	-0.118	7.7685530711E+001	1.8860683067E+001	4.9503277298E+001	0.272	3.394	1.157			
87.720	0.875	52.206	-0.080	1.0976324224E+002	2.7508946936E+001	6.2910996706E+001	0.295	2.868	1.164			
88.270	1.055	52.172	-0.040	1.4688337094E+002	3.7553892179E+001	6.9697316619E+001	0.313	2.403	1.178			
88.820	1.258	52.162	-0.005	1.8642557525E+002	4.8481822797E+001	7.3344709841E+001	0.329	2.030	1.192			
89.246	1.430	52.167	0.027	2.1818967665E+002	5.7516578267E+001	7.4171577067E+001	0.339	1.792	1.198			
89.796	1.664	52.188	0.052	2.5877294059E+002	6.9401200985E+001	7.1365023235E+001	0.351	1.546	1.197			
90.346	1.914	52.224	0.082	2.9668637412E+002	8.1045887113E+001	6.6646884494E+001	0.360	1.350	1.188			
90.839	2.154	52.273	0.119	3.2852204492E+002	9.1508280646E+001	6.1069337479E+001	0.369	1.206	1.173			
91.389	2.126	52.349	0.138	3.5994512857E+002	1.0293989363E+002	5.1017866929E+001	0.385	1.086	1.150			
91.390	2.126	52.349	0.187	3.5999030924E+002	1.0295783191E+002	5.1005495526E+001	0.385	1.086	1.150			
91.940	2.125	52.452	0.197	3.8718207609E+002	1.1422802755E+002	4.5284694581E+001	0.408	0.997	1.121			
92.490	2.134	52.565	0.216	4.0980040961E+002	1.2450933707E+002	3.7395111564E+001	0.429	0.933	1.092			
93.040	2.154	52.689	0.233	4.2831416890E+002	1.3374877848E+002	2.9683783533E+001	0.448	0.884	1.066			
93.590	2.182	52.821	0.249	4.4245056329E+002	1.4167841707E+002	2.2999404372E+001	0.465	0.850	1.043			
94.100	2.217	52.953	0.269	4.5290353121E+002	1.4820873659E+002	1.8489085022E+001	0.479	0.826	1.024			
94.650	2.266	53.106	0.279	4.6188520264E+002	1.5448127307E+002	1.4391076726E+001	0.486	0.807	1.007			
94.850	2.284	53.162	0.299	4.6462274005E+002	1.5653612183E+002	1.3365139141E+001	0.489	0.802	1.001			
95.400	2.348	53.330	0.305	4.7148890314E+002	1.6198615937E+002	1.1606784027E+001	0.495	0.789	0.986			
95.410	2.349	53.333	0.321	4.7160520289E+002	1.6208202391E+002	1.1528159094E+001	0.496	0.788	0.986			
95.779	2.398	53.452	0.334	4.7501164517E+002	1.6527550078E+002	8.3217388682E+000	0.499	0.781	0.977			
96.329	2.408	53.640	0.362	4.7884955671E+002	1.6969842216E+002	6.1522103994E+000	0.507	0.769	0.961			
96.879	2.440	53.850	0.407	4.8177866039E+002	1.7414514440E+002	4.5542297044E+000	0.515	0.755	0.943			
97.429	2.500	54.088	0.461	4.8385890127E+002	1.7872058869E+002	3.0510956563E+000	0.524	0.739	0.919			
97.979	2.592	54.357	0.501	4.8513465920E+002	1.8346548568E+002	1.6367963703E+000	0.534	0.722	0.888			
98.529	2.695	54.639	0.518	4.8565926655E+002	1.8806840351E+002	3.6522928056E-001	0.544	0.705	0.853			
99.079	2.806	54.927	0.512	4.8553638670E+002	1.9240729230E+002	-8.2209645028E-001	0.553	0.689	0.817			
99.629	2.902	55.201	0.459	4.8475501607E+002	1.9605062829E+002	-1.7515845024E+000	0.561	0.675	0.781			
100.179	2.955	55.432	0.408	4.8360976224E+002	1.9854664678E+002	-2.2429043120E+000	0.565	0.664	0.751			
100.729	2.995	55.650	0.383	4.8228797307E+002	2.0044707392E+002	-2.5417267728E+000	0.568	0.656	0.724			
101.279	3.021	55.854	0.368	4.8081403475E+002	2.0175391173E+002	-2.8716704355E+000	0.569	0.650	0.702			
101.480	3.029	55.926	0.352	4.8022267029E+002	2.0208683961E+002	-3.0122862209E+000	0.569	0.648	0.695			



Table with 11 columns and 49 rows of numerical data, likely representing engineering calculations or measurements.

139.918	2.053	69.424	0.393	1.3316058589E+002	4.2470968936E+001	-1.8850795970E+001	0.282	0.446	0.397
140.315	2.013	69.582	0.399	1.2565062393E+002	3.9284542968E+001	-1.8791980790E+001	0.270	0.442	0.397
140.865	1.908	69.802	0.403	1.1539881637E+002	3.5081471163E+001	-1.8607020006E+001	0.255	0.439	0.398
141.415	1.808	70.026	0.411	1.0518416075E+002	3.1001154095E+001	-1.8444714568E+001	0.239	0.438	0.400
141.965	1.711	70.254	0.417	9.5110878198E+001	2.7046733274E+001	-1.8094594249E+001	0.222	0.438	0.403
142.515	1.618	70.485	0.423	8.5281331242E+001	2.3234852866E+001	-1.7581784203E+001	0.204	0.440	0.406
143.065	1.528	70.719	0.438	7.5772105043E+001	1.9584030332E+001	-1.7179562085E+001	0.184	0.443	0.410
143.615	1.451	70.967	0.451	6.6384975205E+001	1.6023748449E+001	-1.6561160471E+001	0.161	0.447	0.415
144.165	1.375	71.215	0.446	5.7555948945E+001	1.2766806217E+001	-1.5210514290E+001	0.138	0.452	0.421
144.715	1.292	71.457	0.432	4.9654438529E+001	9.9789123157E+000	-1.4207039014E+001	0.116	0.460	0.427
145.265	1.201	71.691	0.424	4.1929167184E+001	7.1249066131E+000	-1.3285264925E+001	0.090	0.467	0.435
145.815	1.110	71.924	0.424	3.5041545906E+001	4.6777412534E+000	-1.1791481605E+001	0.064	0.474	0.444
146.365	1.019	72.157	0.425	2.8959335154E+001	2.7274407956E+000	-1.0398599496E+001	0.040	0.479	0.455
146.915	0.928	72.391	0.426	2.3603789961E+001	1.3317597928E+000	-9.2750244445E+000	0.022	0.473	0.471
147.205	0.881	72.515	0.501	2.0978816010E+001	8.4904678413E-001	-1.0001038734E+001	0.022	0.455	0.481
147.755	0.686	72.812	0.679	1.4468553711E+001	3.1713712437E-001	-1.4407812113E+001	0.022	0.443	0.528
148.305	0.644	73.262	0.679	5.1311974236E+000	3.7980909493E-002	-1.3154039661E+001	0.022	0.496	0.591

LEGENDA SIMBOLI

- X(m) : Ascissa sinistra concio
 ht(m) : Altezza linea di thrust da nodo sinistro base concio
 yt(m) : coordinata Y linea di trust
 yt'(-) : gradiente pendenza locale linea di trust
 E(x)(kN/m) : Forza Normale interconcio
 T(x)(kN/m) : Forza Tangenziale interconcio
 E' (kN) : derivata Forza normale interconcio
 Rho(x) (-) : fattore mobilizzazione resistenza al taglio verticale interconcio ZhU et al.(2003)
 FS_qFEM(x)(-) : fattore di sicurezza locale stimato (locale in X) by qFEM
 FS_srmFEM(x)(-) : fattore di sicurezza locale stimato (locale in X) by SRM Procedure

TABELLA SFORZI DI TAGLIO DISTRIBUITI LUNGO SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	dx (m)	dl (m)	alpha (°)	TauStress (kPa)	TauF (kN/m)	TauStrength (kPa)	TauS (kN/m)
82.107	0.550	0.590	-21.225	-0.726	-0.429	11.325	6.682
82.657	0.550	0.590	-21.225	-2.179	-1.286	11.987	7.072
83.207	0.550	0.590	-21.225	-3.632	-2.143	12.667	7.473
83.757	0.433	0.465	-21.225	-4.931	-2.291	13.821	6.421
84.190	0.550	0.590	-21.225	-5.023	-2.963	14.206	8.381
84.740	0.550	0.590	-21.225	-4.062	-2.397	13.723	8.096
85.290	0.230	0.247	-21.225	-3.381	-0.835	13.350	3.295
85.520	0.550	0.590	-21.225	-4.781	-2.821	15.763	9.300
86.070	0.550	0.590	-21.225	-7.981	-4.709	18.108	10.683
86.620	0.550	0.590	-21.225	-11.182	-6.597	20.922	12.344
87.170	0.550	0.590	-21.225	-14.382	-8.485	25.160	14.844
87.720	0.550	0.590	-21.225	-17.583	-10.374	27.976	16.505
88.270	0.550	0.590	-21.225	-20.784	-12.262	30.279	17.864
88.820	0.427	0.458	-21.225	-23.625	-10.811	32.160	14.716
89.246	0.550	0.590	-21.225	-26.467	-15.615	34.022	20.073
89.796	0.550	0.590	-21.225	-29.667	-17.503	35.647	21.031
90.346	0.493	0.529	-21.225	-32.702	-17.290	37.603	19.882
90.839	0.550	0.560	10.716	26.929	15.073	34.900	19.534
91.389	0.001	0.001	10.716	27.424	0.025	34.795	0.031
91.390	0.550	0.560	10.716	27.338	15.302	34.724	19.436
91.940	0.550	0.560	10.716	27.164	15.204	33.623	18.820
92.490	0.550	0.560	10.716	26.990	15.107	32.613	18.254
93.040	0.550	0.560	10.716	26.816	15.009	31.580	17.676
93.590	0.510	0.519	10.716	26.648	13.835	30.758	15.969
94.100	0.550	0.560	10.716	27.082	15.158	30.816	17.248
94.650	0.200	0.204	10.716	27.783	5.656	31.248	6.362
94.850	0.550	0.560	10.716	28.485	15.944	32.015	17.919
95.400	0.010	0.010	10.716	29.009	0.296	32.304	0.330
95.410	0.369	0.376	10.716	29.363	11.037	32.603	12.255
95.779	0.550	0.578	17.923	44.117	25.500	29.632	17.128
96.329	0.550	0.578	17.923	45.119	26.080	30.088	17.391
96.879	0.550	0.578	17.923	46.121	26.659	30.523	17.643
97.429	0.550	0.578	17.923	47.124	27.238	30.923	17.874
97.979	0.550	0.578	17.923	48.126	27.818	31.222	18.047
98.529	0.550	0.578	17.923	49.128	28.397	31.503	18.209
99.079	0.550	0.578	17.923	50.131	28.976	31.729	18.340

99.629	0.550	0.578	17.923	51.133	29.556	31.941	18.462
100.179	0.550	0.578	17.923	52.135	30.135	32.372	18.712
100.729	0.550	0.578	17.923	53.138	30.714	32.865	18.997
101.279	0.201	0.211	17.923	53.822	11.372	33.190	7.012
101.480	0.550	0.578	17.923	53.872	31.139	33.098	19.131
102.030	0.550	0.578	17.923	53.605	30.984	32.692	18.897
102.580	0.550	0.578	17.923	53.338	30.830	32.353	18.700
103.130	0.550	0.578	17.923	53.071	30.676	32.073	18.539
103.680	0.550	0.578	17.923	52.804	30.522	31.845	18.407
104.230	0.550	0.578	17.923	52.537	30.367	31.659	18.300
104.780	0.550	0.578	17.923	52.271	30.213	31.506	18.211
105.330	0.400	0.420	17.923	52.040	21.863	31.415	13.198
105.729	0.550	0.579	18.268	52.521	30.418	31.117	18.022
106.279	0.550	0.579	18.268	52.225	30.246	30.979	17.941
106.829	0.550	0.579	18.268	51.928	30.075	30.844	17.864
107.379	0.550	0.579	18.268	51.632	29.903	30.713	17.788
107.929	0.550	0.579	18.268	51.336	29.732	30.602	17.724
108.479	0.550	0.579	18.268	51.040	29.560	30.492	17.660
109.029	0.550	0.579	18.268	50.743	29.388	30.379	17.594
109.579	0.550	0.579	18.268	50.447	29.217	30.274	17.533
110.129	0.550	0.579	18.268	50.151	29.045	30.143	17.458
110.679	0.506	0.533	18.268	49.866	26.594	30.007	16.003
111.186	0.414	0.440	19.470	51.907	22.814	29.250	12.856
111.600	0.550	0.583	19.470	51.766	30.196	29.196	17.030
112.150	0.550	0.583	19.470	51.789	30.209	29.265	17.071
112.700	0.550	0.583	19.470	51.812	30.223	29.318	17.102
113.250	0.550	0.583	19.470	51.834	30.236	29.358	17.125
113.800	0.550	0.583	19.470	51.857	30.250	29.386	17.142
114.350	0.550	0.583	19.470	51.880	30.263	29.405	17.153
114.900	0.550	0.583	19.470	51.903	30.276	29.420	17.161
115.450	0.550	0.583	19.470	51.926	30.290	29.435	17.170
116.000	0.550	0.583	19.470	51.949	30.303	29.443	17.175
116.550	0.550	0.583	19.470	51.972	30.316	29.451	17.180
117.100	0.550	0.583	19.470	51.995	30.330	29.463	17.186
117.650	0.550	0.583	19.470	52.018	30.343	29.479	17.196
118.200	0.550	0.583	19.470	52.041	30.356	29.502	17.209
118.750	0.550	0.583	19.470	52.063	30.370	29.534	17.228
119.300	0.540	0.573	19.470	52.086	29.859	29.577	16.955
119.840	0.540	0.572	19.470	51.978	29.749	29.530	16.901
120.380	0.550	0.583	19.480	51.756	30.192	29.386	17.143
120.930	0.550	0.583	19.480	51.511	30.050	29.260	17.069
121.480	0.550	0.583	19.480	51.267	29.907	29.145	17.002
122.030	0.550	0.583	19.480	51.023	29.765	29.031	16.935
122.579	0.550	0.583	19.480	50.779	29.622	28.927	16.875
123.129	0.550	0.583	19.480	50.535	29.480	28.853	16.832
123.679	0.550	0.583	19.480	50.291	29.337	28.780	16.789
124.229	0.550	0.583	19.480	50.047	29.195	28.706	16.746
124.779	0.550	0.583	19.480	49.802	29.053	28.631	16.702
125.329	0.550	0.583	19.480	49.558	28.910	28.553	16.657
125.879	0.550	0.583	19.480	49.314	28.768	28.474	16.611
126.429	0.154	0.163	19.480	49.158	8.020	28.454	4.642
126.583	0.550	0.583	19.490	49.019	28.597	28.348	16.538
127.133	0.550	0.583	19.490	48.774	28.455	28.255	16.484
127.683	0.550	0.583	19.490	48.529	28.312	28.154	16.425
128.233	0.550	0.583	19.490	48.284	28.169	28.019	16.346
128.783	0.550	0.583	19.490	48.039	28.026	27.829	16.236
129.333	0.550	0.583	19.490	47.794	27.883	27.586	16.094
129.883	0.550	0.583	19.490	47.549	27.740	27.296	15.924
130.433	0.550	0.583	19.490	47.304	27.597	26.975	15.737
130.983	0.017	0.018	19.490	47.178	0.862	26.743	0.488
131.000	0.550	0.583	19.490	48.155	28.093	27.454	16.017
131.550	0.550	0.583	19.490	50.117	29.238	28.789	16.795
132.100	0.051	0.055	19.490	51.189	2.794	29.450	1.607
132.151	0.550	0.615	26.561	63.780	39.215	26.038	16.010
132.701	0.319	0.356	26.561	65.112	23.196	26.720	9.519
133.020	0.550	0.615	26.561	65.002	39.967	26.640	16.380
133.570	0.550	0.615	26.561	63.806	39.232	25.990	15.980
134.120	0.550	0.615	26.561	62.609	38.496	25.418	15.628
134.670	0.550	0.615	26.561	61.413	37.760	24.925	15.325
135.220	0.298	0.333	26.561	60.490	20.169	24.671	8.226
135.518	0.550	0.615	26.561	59.567	36.625	24.333	14.961
136.068	0.550	0.615	26.561	58.371	35.890	24.036	14.779
136.618	0.550	0.615	26.561	57.174	35.154	23.781	14.622

137.168	0.550	0.615	26.561	55.978	34.418	23.536	14.471
137.718	0.550	0.615	26.561	54.781	33.683	23.283	14.316
138.268	0.550	0.615	26.561	53.584	32.947	23.042	14.167
138.818	0.550	0.615	26.561	52.388	32.211	22.815	14.028
139.368	0.550	0.615	26.561	51.191	31.475	22.603	13.897
139.918	0.397	0.444	26.561	50.161	22.282	22.479	9.986
140.315	0.550	0.639	30.535	52.797	33.712	20.271	12.944
140.865	0.550	0.639	30.535	51.026	32.581	19.895	12.703
141.415	0.550	0.639	30.535	49.255	31.450	19.540	12.476
141.965	0.550	0.639	30.535	47.484	30.319	19.201	12.260
142.515	0.550	0.639	30.535	45.712	29.188	18.878	12.054
143.065	0.550	0.639	30.535	43.941	28.057	18.573	11.859
143.615	0.550	0.639	30.535	42.170	26.926	18.294	11.681
144.165	0.550	0.639	30.535	40.399	25.795	18.013	11.501
144.715	0.550	0.639	30.535	38.627	24.664	17.732	11.322
145.265	0.550	0.639	30.535	36.856	23.533	17.413	11.119
145.815	0.550	0.639	30.535	35.085	22.402	17.090	10.912
146.365	0.550	0.639	30.535	33.314	21.271	16.765	10.704
146.915	0.291	0.337	30.535	31.960	10.786	16.653	5.620
147.205	0.550	0.738	41.808	32.965	24.323	12.124	8.946
147.755	0.550	0.738	41.808	29.210	21.552	12.031	8.877
148.305	0.550	0.738	41.808	25.455	18.781	11.843	8.738

LEGENDA SIMBOLI

X(m) : Ascissa sinistra concio
dx(m) : Larghezza concio
dl(m) : lunghezza base concio
alpha(°) : Angolo pendenza base concio
TauStress(kPa) : Sforzo di taglio su base concio
TauF (kN/m) : Forza di taglio su base concio
TauStrength(kPa) : Resistenza al taglio su base concio
TauS (kN/m) : Forza resistente al taglio su base concio

CASO A – PROGETTO-

Report elaborazioni

SSAP 5.0.2 - Slope Stability Analysis Program (1991,2021)
WWW.SSAP.EU
Build No. 12007
BY
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** Gia' Ricercatore CNR-IRPI fino a Luglio 2011

Ultima Revisione struttura tabelle del report: 21 Febbraio 2021

Modello pendio: CASO A PROGETTO.mod

----- PARAMETRI DEL MODELLO DEL PENDIO -----

___ PARAMETRI GEOMETRICI - Coordinate X Y (in m) ___

SUP T.		SUP 2		SUP 3		SUP 4	
X	Y	X	Y	X	Y	X	Y
0.00	30.73	0.00	27.50	0.00	24.00	0.00	15.50
12.70	33.89	45.62	42.31	45.59	38.80	45.60	30.30
27.25	38.72	76.05	47.93	75.84	43.13	76.05	38.61
39.27	44.22	94.85	51.93	95.41	50.10	94.85	44.93
62.06	48.35	170.31	76.50	170.31	74.49	170.31	69.50
68.08	51.04	-	-	-	-	-	-
73.38	51.85	-	-	-	-	-	-
75.82	53.21	-	-	-	-	-	-
84.19	53.61	-	-	-	-	-	-
85.52	52.71	-	-	-	-	-	-
91.39	56.07	-	-	-	-	-	-
94.10	56.40	-	-	-	-	-	-
101.48	60.74	-	-	-	-	-	-
111.60	63.30	-	-	-	-	-	-
119.84	66.26	-	-	-	-	-	-
131.00	69.53	-	-	-	-	-	-
133.02	71.23	-	-	-	-	-	-
157.83	77.62	-	-	-	-	-	-
170.31	80.51	-	-	-	-	-	-

---- SUP FALDA -----

X Y (in m)

0.00	30.73
12.70	33.89
20.07	36.34
78.38	39.13
79.25	41.11
81.84	45.27
89.54	55.01
139.52	57.54
145.20	66.31
150.21	70.78
161.42	78.45
170.31	80.51

----- GESTIONE ACQUIFERI -----

Strati esclusi da acquifero:

Esclusione sovraccarico pendio sommerso: NON ATTIVATA

EFFETTO TENSION CRACK IN TESTA RIEMPITO DI ACQUA: ----> DISATTIVATO

In caso di superfici con tension crack in testa, la frattura di tensione

puo' venir viene considerata completamente riempita di acqua per la sua intera profondita'.

Viene quindi considerato una forza in testa, prodotta dalla pressione idrostatica.

La forza applicata ha un effetto destabilizzante aggiuntivo alle altre forze

destabilizzanti agenti.

Peso unitario fluido (kN/m³): 9.81

Parametri funzione dissipazione superficiale pressione dei fluidi:

Coefficiente A 0
 Coefficiente K 0.000800
 Pressione minima fluidi U_{o_Min} (kPa) 0.01
 Coefficiente di soprapressione oltre pressione idrostatica 1.00
 Limitazione dissipazione a Pressione Idrostatica = ATTIVA
 STABILITE CONDIZIONI PER LA VERIFICA CON SOVRAPPRESSIONE ACQUIFERI CON DISSIPAZIONE IN DIREZIONE DELLA SUPERFICIE

CALCOLO EFFETTO DI FILTRAZIONE NON ATTIVATO

----- PARAMETRI GEOMECCANICI -----

	fi'	C'	Cu	Gamm	Gamm_sat	STR_IDX	sgci	GSI	mi	D
STRATO 1	18.00	11.00	11.00	0.00	18.00	20.00	1.269	0.00	0.00	0.00
STRATO 2	18.00	11.00	11.00	0.00	18.00	20.00	1.269	0.00	0.00	0.00
STRATO 3	25.00	50.00	50.00	0.00	20.00	20.00	4.881	0.00	0.00	0.00
STRATO 4	35.00	0.00	0.00	0.00	20.00	20.00	2.404	0.00	0.00	0.00

LEGENDA: fi' _____ Angolo di attrito interno efficace(in gradi)

C' _____ Coesione efficace (in Kpa)

Cu _____ Resistenza al taglio Non drenata (in Kpa)

Gamm _____ Peso di volume terreno fuori falda (in KN/m³)

Gamm_sat _____ Peso di volume terreno immerso (in KN/m³)

STR_IDX _____ Indice di resistenza (usato in solo in 'SNIFF SEARCH') (adimensionale)

----- SOLO Per AMMASSI ROCCIOSI FRATTURATI - Parametri Criterio di Rottura di Hoek (2002)-

sgci _____ Resistenza Compressione Uniassiale Rocca Intatta (in MPa)

GSI _____ Geological Strenght Index ammasso(adimensionale)

mi _____ Indice litologico ammasso(adimensionale)

D _____ Fattore di disturbo ammasso(adimensionale)

Fattore di riduzione NTC2018: gammaPHI=1.25 e gammaC=1.25 - DISATTIVATO (solo per ROCCE)

Uso CRITERIO DI ROTTURA Hoek et al.(2002,2006) - non-lineare - Generalizzato, secondo Lei et al.(2016)

----- SOVRACCARICHI PRESENTI -----

Nota Bene:

##Nota: la distribuzione del carico e delle forze unitarie puo' variare
in modo lineare tra gli estremi di coordinate X1 e X2

TABELLA SOVRACCARICHI IN SUPERFICIE

N. da X1 (-)	a X2 (m)	SX1 (kPa)	SX2 (kPa)	Alpha (°)	WsH1 (kN/m)	WsH2 (kN/m)	WsV1 (kN/m)	WsV2 (kN/m)
1	75.0000	84.0000	25.00	25.00	90.00	0.00	0.00	25.00

LEGENDA SIMBOLI

N.(-) : NUMERO SOVRACCARICO

X1(m) : Posizione carico da X1

X2(m) : a X2

SX1(kPa) : Carico in X1 (Kpa)

SX2(kPa) : Carico in X2 (Kpa)

Alpha(°) : Inclinazione carico (gradi):

Componenti distribuzione forza unitaria applicata:

WsH1, WsH2(kN/m) : forza unitaria Orizzontale (per metro di proiezione Verticale) : da X1 a X2 (vedasi cap.2 manuale)

WsV1, WsV2(kN/m) : forza unitaria Verticale (per metro di proiezione Orizzontale) : da X1 a X2 (vedasi Cap.2 manuale)

----- INFORMAZIONI GENERAZIONE SUPERFICI RANDOM -----

*** PARAMETRI PER LA GENERAZIONE DELLE SUPERFICI

MOTORE DI RICERCA: CONVEX RANDOM - Chen (1992)

FILTRAGGIO SUPERFICI : ATTIVATO

COORDINATE X1,X2,Y OSTACOLO : 0.00 0.00 0.00

LUNGHEZZA MEDIA SEGMENTI (m)*: 6.8 (+/-) 50%

INTERVALLO ASCISSE RANDOM STARTING POINT (Xmin .. Xmax): 11.00 30.00

LIVELLO MINIMO CONSIDERATO (Ymin): 29.00

INTERVALLO ASCISSE AMMESSO PER LA TERMINAZIONE (Xmin .. Xmax): 112.00 120.00

TOTALE SUPERFICI GENERATE : 1000

*NOTA IMPORTANTE: La lunghezza media dei segmenti non viene considerata nel caso di uso del motore di ricerca NEW RANOM SEARCH

----- INFORMAZIONI PARAMETRI DI CALCOLO -----

METODO DI CALCOLO : MORGENSTERN - PRICE (Morgenstern & Price, 1965)
 METODO DI ESPLORAZIONE CAMPO VALORI (λ_0, F_{s0}) ADOTTATO : A (rapido)
 COEFFICIENTE SISMICO UTILIZZATO K_h : 0.0000
 COEFFICIENTE SISMICO UTILIZZATO K_v (assunto Positivo): 0.0000
 COEFFICIENTE $c=K_v/K_h$ UTILIZZATO : 0.5000
 FORZA ORIZZONTALE ADDIZIONALE IN TESTA (kN/m): 0.00
 FORZA ORIZZONTALE ADDIZIONALE ALLA BASE (kN/m): 0.00

N.B. Le forze orizzontali addizionali in testa e alla base sono poste uguali a 0 durante le tutte le verifiche globali.
 I valori >0 impostati dall'utente sono utilizzati solo in caso di verifica singola

----- RISULTATO FINALE ELABORAZIONI -----

* DATI RELATIVI ALLE 10 SUPERFICI GENERATE CON MINOR F_s *

Fattore di sicurezza (FS) 1.5370 - Min. - X Y Lambda= 0.3535
 12.05 33.73
 18.54 32.79
 25.93 34.46
 30.29 35.45
 35.79 36.69
 43.90 38.53
 52.35 40.45
 60.51 42.30
 65.69 43.49
 73.34 45.75
 80.27 47.80
 84.56 49.24
 90.62 51.29
 97.98 53.93
 103.18 56.37
 109.93 61.35
 113.49 63.98

Fattore di sicurezza (FS) 1.5605 - N.2 -- X Y Lambda= 0.3386
 15.04 34.67
 23.64 34.91
 38.20 37.55
 52.52 40.15
 65.28 42.47
 80.17 47.28
 90.56 50.64
 103.96 54.99
 110.10 59.80
 117.09 65.27

Fattore di sicurezza (FS) 1.5807 - N.3 -- X Y Lambda= 0.3257
 20.77 36.57
 31.42 37.14
 42.47 38.32
 57.13 40.92
 67.94 42.85
 84.13 46.92
 94.70 49.98
 105.63 57.53
 115.56 64.72

Fattore di sicurezza (FS) 1.5990 - N.4 -- X Y Lambda= 0.3490
 15.22 34.73
 21.62 35.75
 30.71 37.34
 40.45 39.06
 51.64 41.03
 63.53 43.12
 73.80 44.93
 85.98 47.92

93.00 50.52
103.95 54.57
112.84 61.15
116.96 65.23

Fattore di sicurezza (FS) 1.6017 - N.5 -- X Y Lambda= 0.3428
20.77 36.57
29.49 35.35
41.13 37.83
49.84 39.69
59.40 41.97
66.23 43.61
73.22 45.28
88.47 50.48
103.47 56.47
108.52 60.01
114.92 64.49

Fattore di sicurezza (FS) 1.6028 - N.6 -- X Y Lambda= 0.3276
29.39 39.70
41.69 39.09
48.54 39.90
56.18 41.12
63.04 42.22
73.85 44.43
80.82 46.55
90.85 49.61
97.87 52.15
103.23 54.08
112.30 60.42
116.61 65.10

Fattore di sicurezza (FS) 1.6168 - N.7 -- X Y Lambda= 0.3206
21.50 36.81
35.59 38.57
47.29 40.49
63.14 43.67
71.55 45.36
88.23 48.72
99.36 51.91
106.57 56.27
113.98 64.16

Fattore di sicurezza (FS) 1.6187 - N.8 -- X Y Lambda= 0.3540
25.44 38.12
36.68 39.08
50.29 40.79
56.24 41.53
62.65 42.34
76.99 44.14
87.89 48.37
98.40 52.45
107.45 56.48
117.56 65.44

Fattore di sicurezza (FS) 1.6210 - N.9 -- X Y Lambda= 0.3246
28.93 39.49
34.42 37.64
41.21 38.27
46.90 39.36
57.35 41.37
70.11 43.83
80.97 46.32
92.41 48.95
104.41 56.65
113.49 63.98

Fattore di sicurezza (FS)	1.6294	- N.10 --	X	Y	Lambda= 0.3456
	22.20	37.04			
	28.13	36.89			
	43.74	40.13			
	59.08	43.32			
	69.86	45.56			
	76.34	47.05			
	91.57	50.56			
	103.05	55.09			
	110.31	59.20			
	118.97	65.95			

----- ANALISI DEFICIT DI RESISTENZA -----

DATI RELATIVI ALLE 10 SUPERFICI GENERATE CON MINOR FS *

Analisi Deficit in riferimento a FS(progetto) = 1.200

Sup N.	FS	FTR(kN/m)	FTA(kN/m)	Bilancio(kN/m)	ESITO
1	1.537	3814.8	2482.0	836.4	Surplus
2	1.561	4047.4	2593.7	935.1	Surplus
3	1.581	4010.6	2537.1	966.0	Surplus
4	1.599	3930.1	2457.8	980.8	Surplus
5	1.602	3710.5	2316.6	930.7	Surplus
6	1.603	3753.9	2342.0	943.5	Surplus
7	1.617	3596.0	2224.2	927.0	Surplus
8	1.619	3887.4	2401.6	1005.6	Surplus
9	1.621	3740.3	2307.4	971.5	Surplus
10	1.629	3492.0	2143.1	920.3	Surplus

Esito analisi: SURPLUS di RESISTENZA!

Valore minimo di SURPLUS di RESISTENZA (kN/m): 836.4

Note: FTR --> Forza totale Resistente lungo la superficie di scivolamento

FTA --> Forza totale Agente lungo la superficie di scivolamento

IMPORTANTE! : Il Deficit o il Surplus di resistenza viene espresso in kN per metro di LARGHEZZA rispetto al fronte della scarpata

----- TABELLA PARAMETRI CONCI DELLA SUPERFICIE INDIVIDUATA CON MINOR FS -----

X	dx	alpha	W	ru	U	phi'	(c',Cu)
(m)	(m)	(°)	(kN/m)	(-)	(kPa)	(°)	(kPa)
12.047	0.653	-8.18	1.67	0.49	1.26	18.00	11.00
12.700	0.760	-8.18	6.64	0.49	4.29	18.00	11.00
13.460	0.760	-8.18	12.13	0.49	7.84	18.00	11.00
14.219	0.760	-8.18	17.62	0.49	11.38	18.00	11.00
14.979	0.760	-8.18	23.11	0.49	15.15	18.00	11.00
15.738	0.760	-8.18	28.60	0.49	18.87	18.00	11.00
16.498	0.495	-8.18	21.61	0.49	21.83	18.00	11.00
16.993	0.760	-8.18	37.67	0.49	23.20	18.00	11.00
17.752	0.760	-8.18	43.17	0.48	24.59	18.00	11.00
18.512	0.031	-8.18	1.90	0.48	25.71	18.00	11.00
18.543	0.760	12.73	46.75	0.47	25.76	18.00	11.00
19.303	0.760	12.73	47.98	0.47	26.62	18.00	11.00
20.062	0.008	12.73	0.50	0.45	27.08	18.00	11.00
20.070	0.760	12.73	49.03	0.45	27.08	18.00	11.00
20.830	0.760	12.73	49.92	0.44	27.12	18.00	11.00
21.589	0.760	12.73	50.82	0.42	26.79	18.00	11.00
22.349	0.760	12.73	51.71	0.40	26.16	18.00	11.00
23.108	0.760	12.73	52.61	0.37	25.21	18.00	11.00
23.868	0.760	12.73	53.50	0.35	24.05	18.00	11.00
24.627	0.760	12.73	54.40	0.32	22.70	18.00	11.00
25.387	0.543	12.73	39.41	0.29	21.36	18.00	11.00
25.929	0.760	12.74	55.93	0.28	20.42	18.00	11.00
26.689	0.561	12.74	41.91	0.25	19.18	18.00	11.00
27.250	0.760	12.74	58.14	0.24	18.32	18.00	11.00
28.010	0.459	12.74	36.17	0.22	17.17	18.00	11.00
28.468	0.760	12.74	61.66	0.20	16.45	18.00	11.00

29.228	0.760	12.74	63.86	0.18	15.30	18.00	11.00
29.987	0.306	12.74	26.39	0.16	14.10	18.00	11.00
30.294	0.760	12.75	66.94	0.16	13.60	18.00	11.00
31.053	0.760	12.75	69.14	0.14	12.31	18.00	11.00
31.813	0.760	12.75	71.33	0.12	10.98	18.00	11.00
32.572	0.760	12.75	73.53	0.10	9.66	18.00	11.00
33.332	0.760	12.75	75.72	0.08	8.31	18.00	11.00
34.091	0.760	12.75	77.92	0.07	6.99	18.00	11.00
34.851	0.760	12.75	80.11	0.05	5.79	18.00	11.00
35.610	0.178	12.75	19.11	0.04	4.64	18.00	11.00
35.788	0.760	12.76	82.82	0.04	4.39	18.00	11.00
36.548	0.760	12.76	85.01	0.03	3.42	18.00	11.00
37.307	0.713	12.76	81.75	0.02	2.58	18.00	11.00
38.020	0.760	12.76	89.37	0.00	0.00	18.00	11.00
38.779	0.491	12.76	59.00	0.00	0.00	18.00	11.00
39.270	0.760	12.76	91.88	0.00	0.00	18.00	11.00
40.030	0.760	12.76	91.41	0.00	0.00	18.00	11.00
40.789	0.325	12.76	38.95	0.00	0.00	18.00	11.00
41.114	0.760	12.76	90.74	0.00	0.00	18.00	11.00
41.873	0.760	12.76	90.27	0.00	0.00	18.00	11.00
42.633	0.760	12.76	89.80	0.00	0.00	18.00	11.00
43.392	0.504	12.76	59.37	0.00	0.00	18.00	11.00
43.897	0.760	12.77	89.01	0.00	0.00	18.00	11.00
44.656	0.760	12.77	88.54	0.00	0.00	18.00	11.00
45.416	0.174	12.77	20.25	0.00	0.00	18.00	11.00
45.590	0.010	12.77	1.16	0.00	0.00	18.00	11.00
45.600	0.020	12.77	2.32	0.00	0.00	18.00	11.00
45.620	0.760	12.77	87.94	0.00	0.00	18.00	11.00
46.380	0.760	12.77	87.47	0.00	0.00	18.00	11.00
47.139	0.760	12.77	87.00	0.00	0.00	18.00	11.00
47.899	0.760	12.77	86.53	0.00	0.00	18.00	11.00
48.658	0.760	12.77	86.05	0.00	0.00	18.00	11.00
49.418	0.760	12.77	85.58	0.00	0.00	18.00	11.00
50.177	0.760	12.77	85.11	0.00	0.00	18.00	11.00
50.937	0.760	12.77	84.64	0.00	0.00	18.00	11.00
51.696	0.657	12.77	72.83	0.00	0.00	18.00	11.00
52.353	0.760	12.78	83.75	0.00	0.00	18.00	11.00
53.113	0.760	12.78	83.28	0.00	0.00	18.00	11.00
53.872	0.760	12.78	82.81	0.00	0.00	18.00	11.00
54.632	0.760	12.78	82.33	0.00	0.00	18.00	11.00
55.391	0.760	12.78	81.86	0.00	0.00	18.00	11.00
56.151	0.760	12.78	81.38	0.00	0.00	18.00	11.00
56.910	0.760	12.78	80.91	0.00	0.00	18.00	11.00
57.670	0.760	12.78	80.44	0.00	0.00	18.00	11.00
58.429	0.760	12.78	79.96	0.00	0.00	18.00	11.00
59.189	0.760	12.78	79.49	0.00	0.00	18.00	11.00
59.948	0.564	12.78	58.67	0.00	0.00	18.00	11.00
60.512	0.760	12.91	78.65	0.00	0.00	18.00	11.00
61.271	0.760	12.91	78.15	0.00	0.00	18.00	11.00
62.031	0.029	12.91	3.00	0.00	0.00	18.00	11.00
62.060	0.760	12.91	79.01	0.00	0.00	18.00	11.00
62.820	0.760	12.91	81.27	0.00	0.00	18.00	11.00
63.579	0.760	12.91	83.53	0.00	0.00	18.00	11.00
64.339	0.760	12.91	85.79	0.00	0.00	18.00	11.00
65.098	0.597	12.91	68.98	0.00	0.00	18.00	11.00
65.695	0.760	16.48	89.48	0.00	0.00	18.00	11.00
66.454	0.760	16.48	91.05	0.00	0.00	18.00	11.00
67.214	0.760	16.48	92.61	0.00	0.00	18.00	11.00
67.973	0.107	16.48	13.14	0.00	0.00	18.00	11.00
68.080	0.760	16.48	92.88	0.00	0.00	18.00	11.00
68.840	0.760	16.48	91.39	0.00	0.00	18.00	11.00
69.599	0.760	16.48	89.91	0.00	0.00	18.00	11.00
70.359	0.760	16.48	88.42	0.00	0.00	18.00	11.00
71.118	0.760	16.48	86.94	0.00	0.00	18.00	11.00
71.878	0.760	16.48	85.46	0.00	0.00	18.00	11.00
72.637	0.704	16.48	77.87	0.00	0.00	18.00	11.00
73.341	0.039	16.49	4.28	0.00	0.00	18.00	11.00
73.380	0.760	16.49	84.62	0.00	0.00	18.00	11.00
74.140	0.760	16.49	87.33	0.00	0.00	18.00	11.00
74.899	0.101	16.49	11.82	0.00	0.00	18.00	11.00
75.000	0.760	16.49	109.40	0.00	0.00	18.00	11.00
75.760	0.060	16.49	8.83	0.00	0.00	18.00	11.00
75.820	0.020	16.49	2.92	0.00	0.00	18.00	11.00

75.840	0.210	16.49	30.56	0.00	0.00	18.00	11.00
76.050	0.760	16.49	108.90	0.00	0.00	18.00	11.00
76.810	0.657	16.49	92.17	0.00	0.00	18.00	11.00
77.467	0.760	16.49	104.09	0.00	0.00	18.00	11.00
78.226	0.154	16.49	20.74	0.00	0.00	18.00	11.00
78.380	0.136	16.49	18.24	0.00	0.00	18.00	11.00
78.516	0.734	16.49	97.23	0.00	0.00	18.00	11.00
79.250	0.760	16.49	98.04	0.00	0.00	18.00	11.00
80.010	0.260	16.49	32.92	0.00	0.00	18.00	11.00
80.269	0.760	18.61	94.37	0.00	0.00	18.00	11.00
81.029	0.760	18.61	91.37	0.00	0.00	18.00	11.00
81.788	0.049	18.61	5.84	0.00	0.00	18.00	11.00
81.838	0.002	18.61	0.29	0.00	0.00	18.00	11.00
81.840	0.760	18.61	88.17	0.00	0.00	18.00	11.00
82.600	0.760	18.61	85.17	0.00	0.00	18.00	11.00
83.359	0.641	18.61	69.54	0.00	0.00	18.00	11.00
84.000	0.190	18.61	15.45	0.00	0.00	18.00	11.00
84.190	0.372	18.61	28.83	0.00	0.00	18.00	11.00
84.562	0.572	18.62	39.36	0.00	0.00	18.00	11.00
85.134	0.386	18.62	23.20	0.00	0.00	18.00	11.00
85.520	0.019	18.62	1.09	0.13	8.02	18.00	11.00
85.539	0.760	18.62	45.36	0.13	8.09	18.00	11.00
86.298	0.760	18.62	48.88	0.18	11.18	18.00	11.00
87.058	0.760	18.62	52.39	0.23	14.47	18.00	11.00
87.817	0.750	18.62	55.17	0.28	17.93	18.00	11.00
88.567	0.760	18.62	59.38	0.32	20.95	18.00	11.00
89.327	0.213	18.62	17.31	0.35	23.71	18.00	11.00
89.540	0.760	18.62	63.19	0.36	24.39	18.00	11.00
90.300	0.324	18.62	27.60	0.38	26.50	18.00	11.00
90.623	0.760	19.77	66.07	0.38	27.11	18.00	11.00
91.383	0.007	19.77	0.62	0.38	27.94	18.00	11.00
91.390	0.760	19.77	65.61	0.38	27.95	18.00	11.00
92.150	0.760	19.77	62.78	0.37	27.69	18.00	11.00
92.909	0.760	19.77	59.96	0.36	26.82	18.00	11.00
93.669	0.431	19.77	32.80	0.33	25.53	18.00	11.00
94.100	0.750	19.77	57.21	0.32	24.65	18.00	11.00
94.850	0.560	19.77	44.00	0.29	22.86	18.00	11.00
95.410	0.760	19.77	61.43	0.27	21.30	18.00	11.00
96.170	0.760	19.77	63.45	0.23	18.79	18.00	11.00
96.929	0.760	19.77	65.47	0.20	16.22	18.00	11.00
97.689	0.289	19.77	25.43	0.16	13.66	18.00	11.00
97.977	0.760	25.13	67.62	0.15	12.78	18.00	11.00
98.737	0.760	25.13	68.38	0.12	10.53	18.00	11.00
99.496	0.760	25.13	69.13	0.09	8.42	18.00	11.00
100.256	0.760	25.13	69.88	0.07	6.52	18.00	11.00
101.015	0.465	25.13	43.12	0.05	4.89	18.00	11.00
101.480	0.102	25.13	9.46	0.04	3.99	18.00	11.00
101.582	0.760	25.13	69.23	0.00	0.00	18.00	11.00
102.341	0.760	25.13	66.99	0.00	0.00	18.00	11.00
103.101	0.075	25.13	6.46	0.00	0.00	18.00	11.00
103.175	0.760	36.42	63.13	0.00	0.00	18.00	11.00
103.935	0.760	36.42	58.10	0.00	0.00	18.00	11.00
104.694	0.760	36.42	53.06	0.00	0.00	18.00	11.00
105.454	0.760	36.42	48.03	0.00	0.00	18.00	11.00
106.213	0.760	36.42	42.99	0.00	0.00	18.00	11.00
106.973	0.055	36.42	2.93	0.00	0.00	18.00	11.00
107.028	0.760	36.42	37.59	0.00	0.00	18.00	11.00
107.788	0.760	36.42	32.56	0.00	0.00	18.00	11.00
108.547	0.760	36.42	27.52	0.00	0.00	18.00	11.00
109.307	0.623	36.42	18.82	0.00	0.00	18.00	11.00
109.930	0.760	36.43	18.36	0.00	0.00	18.00	11.00
110.689	0.760	36.43	13.32	0.00	0.00	18.00	11.00
111.449	0.151	36.43	2.05	0.00	0.00	18.00	11.00
111.600	0.760	36.43	7.83	0.00	0.00	18.00	11.00
112.360	0.760	36.43	3.90	0.00	0.00	18.00	11.00
113.119	0.373	36.43	0.47	0.00	0.00	18.00	11.00

LEGENDA SIMBOLI

X(m) : Ascissa sinistra concio
 dx(m) : Larghezza concio
 alpha(°) : Angolo pendenza base concio
 W(kN/m) : Forza peso concio



ru(-) : Coefficiente locale pressione interstiziale
 U(kPa) : Pressione totale dei pori base concio
 phi'(^) : Angolo di attrito efficace base concio
 c'/Cu (kPa) : Coesione efficace o Resistenza al taglio in condizioni non drenate

TABELLA DIAGRAMMA DELLE FORZE DELLA SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	ht (m)	yt (m)	yt' (-)	E(x) (kN/m)	T(x) (kN/m)	E' (kN)	rho(x) (kN)	FS_qFEM (-)	FS_srmFEM (-)			
12.047	0.000	33.728	-0.032	0.0000000000E+000	0.0000000000E+000	0.0000000000E+000	5.2286975171E+000	0.051	3.737	1.537		
12.700	0.064	33.698	-0.032	5.4153644425E+000	1.2147520938E-002	1.1356711098E+001	0.051	3.737	1.537			
13.460	0.157	33.682	-0.016	1.6747533980E+001	1.7758384434E-001	1.4346637837E+001	0.051	2.826	1.171			
14.219	0.258	33.673	-0.004	2.7208235931E+001	9.4022655754E-001	1.5481947696E+001	0.081	3.890	1.234			
14.979	0.370	33.676	0.009	4.0264967149E+001	2.7826639570E+000	1.8803900743E+001	0.168	5.755	1.464			
15.738	0.490	33.687	0.039	5.5771791869E+001	5.1389746690E+000	1.9446734952E+001	0.231	6.634	1.807			
16.498	0.647	33.735	0.076	6.9805002975E+001	7.4952437086E+000	1.5775210332E+001	0.271	6.206	2.205			
16.993	0.766	33.783	0.109	7.6744829378E+001	8.8102623948E+000	1.2582854572E+001	0.287	5.759	2.446			
17.752	0.964	33.871	0.118	8.4634730389E+001	1.0490364339E+001	9.5588363987E+000	0.301	5.144	2.754			
18.512	1.164	33.962	0.119	9.1264920816E+001	1.1956842720E+001	8.6608877416E+000	0.309	4.737	3.050			
18.543	1.172	33.965	0.137	9.1536823303E+001	1.2015658341E+001	8.6086418464E+000	0.309	4.725	3.064			
19.303	1.105	34.070	0.154	9.7167649644E+001	1.3438095147E+001	6.7109791338E+000	0.331	4.377	3.380			
20.062	1.062	34.199	0.169	1.0173095432E+002	1.4818368781E+001	5.5466261905E+000	0.352	4.001	3.637			
20.070	1.062	34.200	0.196	1.0177407184E+002	1.4832546300E+001	5.5315694321E+000	0.352	3.997	3.639			
20.830	1.039	34.349	0.214	1.0520957916E+002	1.6111170482E+001	4.0569393348E+000	0.372	3.634	3.756			
21.589	1.043	34.525	0.243	1.0793665562E+002	1.7356016789E+001	3.1719814834E+000	0.391	3.299	3.723			
22.349	1.065	34.719	0.271	1.1002789168E+002	1.8537580885E+001	2.4336996688E+000	0.408	3.020	3.576			
23.108	1.112	34.937	0.293	1.1163350116E+002	1.9694789918E+001	1.7912095540E+000	0.424	2.783	3.345			
23.868	1.167	35.164	0.313	1.1274878003E+002	2.0768484148E+001	1.4567700973E+000	0.439	2.591	3.087			
24.627	1.244	35.413	0.316	1.1384636831E+002	2.1874494225E+001	1.4845260270E+000	0.454	2.422	2.815			
25.387	1.304	35.644	0.302	1.1500380906E+002	2.2850247802E+001	1.5930162696E+000	0.465	2.293	2.574			
25.929	1.343	35.806	0.289	1.1589490641E+002	2.3532089737E+001	1.6796226492E+000	0.472	2.215	2.420			
26.689	1.386	36.020	0.277	1.1721020554E+002	2.4444835880E+001	1.7738264646E+000	0.481	2.126	2.233			
27.250	1.410	36.172	0.273	1.1822337453E+002	2.5105621917E+001	1.8840792860E+000	0.487	2.070	2.113			
28.010	1.448	36.381	0.281	1.1973571247E+002	2.6065334511E+001	2.1325991899E+000	0.489	2.002	1.964			
28.468	1.477	36.514	0.286	1.2075279935E+002	2.6704177057E+001	2.2556816504E+000	0.491	1.963	1.879			
29.228	1.521	36.730	0.294	1.2251345258E+002	2.7802583900E+001	2.4896674725E+000	0.496	1.906	1.755			
29.987	1.581	36.961	0.307	1.2453466127E+002	2.9065963751E+001	2.8256027507E+000	0.502	1.852	1.640			
30.294	1.607	37.057	0.324	1.2542098759E+002	2.9622040592E+001	2.9643734679E+000	0.505	1.831	1.597			
31.053	1.685	37.307	0.334	1.2780878802E+002	3.1124118288E+001	3.2767823821E+000	0.515	1.782	1.498			
31.813	1.771	37.564	0.340	1.3039849508E+002	3.2752049231E+001	3.5070595328E+000	0.525	1.737	1.411			
32.572	1.857	37.822	0.345	1.3313609178E+002	3.4464200714E+001	3.7556235944E+000	0.536	1.698	1.338			
33.332	1.951	38.088	0.349	1.3610337335E+002	3.6294297312E+001	4.0139819409E+000	0.547	1.663	1.276			
34.091	2.044	38.353	0.339	1.3923342229E+002	3.8185026512E+001	4.1241992066E+000	0.558	1.633	1.225			
34.851	2.122	38.603	0.334	1.4236812641E+002	4.0029328547E+001	4.3250568675E+000	0.568	1.608	1.185			
35.610	2.207	38.860	0.334	1.4580328274E+002	4.1973496482E+001	4.4135514658E+000	0.579	1.586	1.152			
35.788	2.224	38.917	0.318	1.4658490707E+002	4.2408664441E+001	4.4243413374E+000	0.581	1.581	1.146			
36.548	2.293	39.158	0.307	1.5006320023E+002	4.4279606160E+001	4.5757666661E+000	0.590	1.563	1.124			
37.307	2.345	39.383	0.295	1.5353560144E+002	4.6059418256E+001	4.7115788343E+000	0.597	1.549	1.108			
38.020	2.393	39.592	0.287	1.5698628246E+002	4.7733119137E+001	4.8878729940E+000	0.602	1.537	1.099			
38.779	2.434	39.805	0.275	1.6073530066E+002	4.945613231E+001	4.9476222044E+000	0.608	1.526	1.094			
39.270	2.454	39.936	0.286	1.6316630850E+002	5.0521984208E+001	5.3947301418E+000	0.611	1.519	1.092			
40.030	2.508	40.162	0.293	1.6778061820E+002	5.2354026391E+001	6.1600288446E+000	0.627	1.510	1.097			
40.789	2.555	40.381	0.280	1.7252353341E+002	5.4107913632E+001	5.9597513610E+000	0.643	1.501	1.106			
41.114	2.566	40.466	0.256	1.7441992507E+002	5.4778841928E+001	5.8518621732E+000	0.648	1.498	1.111			
41.873	2.588	40.659	0.235	1.7888930675E+002	5.6276858565E+001	5.5745899132E+000	0.661	1.493	1.124			
42.633	2.579	40.823	0.207	1.8288785484E+002	5.7496570391E+001	5.1420692227E+000	0.670	1.489	1.141			
43.392	2.558	40.974	0.194	1.8670022768E+002	5.8577150903E+001	4.9072368841E+000	0.678	1.486	1.159			
43.897	2.538	41.068	0.182	1.8913747253E+002	5.9222826311E+001	4.7691700570E+000	0.683	1.485	1.172			
44.656	2.501	41.203	0.173	1.9268705822E+002	6.0117082218E+001	4.5663716732E+000	0.689	1.484	1.194			
45.416	2.456	41.331	0.164	1.9607389569E+002	6.0922310455E+001	4.0405399300E+000	0.695	1.484	1.216			
45.590	2.443	41.357	0.148	1.9676123167E+002	6.1078186263E+001	3.9196094496E+000	0.696	1.484	1.221			
45.600	2.442	41.358	0.147	1.9680041349E+002	6.1087047928E+001	3.9138524260E+000	0.696	1.484	1.221			
45.620	2.440	41.361	0.165	1.9687851735E+002	6.1104666043E+001	3.9189026778E+000	0.696	1.484	1.222			
46.380	2.394	41.487	0.173	2.0025039556E+002	6.1855990233E+001	4.6446983278E+000	0.701	1.485	1.248			
47.139	2.359	41.624	0.182	2.0393392050E+002	6.2661761457E+001	4.8953871316E+000	0.706	1.487	1.279			
47.899	2.326	41.764	0.191	2.0768660074E+002	6.3470475976E+001	5.1369907486E+000	0.711	1.490	1.312			
48.658	2.304	41.914	0.206	2.1173712711E+002	6.4346195104E+001	5.5530106359E+000	0.715	1.492	1.350			
49.418	2.294	42.076	0.219	2.1612175109E+002	6.5300091678E+001	5.9262210950E+000	0.721	1.496	1.394			
50.177	2.293	42.247	0.233	2.2073919270E+002	6.6311125217E+001	6.3092603697E+000	0.726	1.499	1.442			
50.937	2.304	42.430	0.249	2.2570566211E+002	6.7400707691E+001	6.7469332904E+000	0.731	1.503	1.496			
51.696	2.326	42.625	0.230	2.3098793890E+002	6.8556140222E+001	6.1200675090E+000	0.737	1.506	1.556			

52.353	2.308	42.755	0.200	2.3453433333E+002	6.9325539254E+001	5.4311837516E+000	0.741	1.508	1.596
53.113	2.288	42.908	0.202	2.3868852888E+002	7.0215084626E+001	5.4844907859E+000	0.746	1.510	1.642
53.872	2.270	43.061	0.205	2.4286540046E+002	7.1099763759E+001	5.5896229989E+000	0.750	1.512	1.687
54.632	2.256	43.220	0.209	2.4717929424E+002	7.2010285853E+001	5.6846280803E+000	0.754	1.513	1.730
55.391	2.242	43.379	0.211	2.5150048072E+002	7.2925338245E+001	5.7410311818E+000	0.759	1.513	1.772
56.151	2.232	43.541	0.221	2.5590005211E+002	7.3876547748E+001	5.9826917443E+000	0.763	1.513	1.809
56.910	2.234	43.715	0.227	2.6058832652E+002	7.4937933997E+001	6.0705384664E+000	0.768	1.511	1.843
57.670	2.232	43.886	0.223	2.6512133909E+002	7.6014186415E+001	5.8565672340E+000	0.773	1.508	1.870
58.429	2.228	44.054	0.219	2.6948458629E+002	7.7122067573E+001	5.6042160044E+000	0.779	1.504	1.890
59.189	2.220	44.218	0.220	2.7363427156E+002	7.8265653768E+001	5.4172666922E+000	0.786	1.499	1.903
59.948	2.217	44.388	0.221	2.7771353848E+002	7.9502449459E+001	5.1812464749E+000	0.793	1.493	1.907
60.512	2.213	44.511	0.224	2.8055392327E+002	8.0434414437E+001	4.9794640764E+000	0.799	1.487	1.905
61.271	2.212	44.685	0.232	2.8427337194E+002	8.1772092571E+001	4.7117268345E+000	0.809	1.478	1.896
62.031	2.217	44.863	0.237	2.8771114426E+002	8.3154450633E+001	4.7749584223E+000	0.818	1.466	1.882
62.060	2.219	44.872	0.281	2.8785122075E+002	8.3218253713E+001	4.7669512003E+000	0.819	1.466	1.881
62.820	2.258	45.085	0.287	2.9112514100E+002	8.4798583731E+001	4.0878320014E+000	0.819	1.450	1.858
63.579	2.306	45.308	0.298	2.9406073120E+002	8.6388038775E+001	3.5907399326E+000	0.820	1.433	1.830
64.339	2.362	45.538	0.307	2.9657955721E+002	8.7932510183E+001	2.9917071818E+000	0.822	1.415	1.800
65.098	2.424	45.774	0.312	2.9860520293E+002	8.9385596825E+001	2.2641780640E+000	0.823	1.395	1.769
65.695	2.475	45.962	0.318	2.9976736286E+002	9.0429861840E+001	1.6308891673E+000	0.824	1.379	1.744
66.454	2.493	46.204	0.316	3.0069977676E+002	9.1634566449E+001	8.1785350481E-001	0.827	1.359	1.711
67.214	2.506	46.442	0.323	3.0100970106E+002	9.2632356432E+001	2.8600003708E-002	0.829	1.339	1.680
67.973	2.534	46.695	0.333	3.0074322082E+002	9.3500504280E+001	-4.7572376271E-001	0.831	1.319	1.645
68.080	2.538	46.730	0.293	3.0069057337E+002	9.3613526256E+001	-5.7691774363E-001	0.832	1.316	1.641
68.840	2.531	46.948	0.298	2.9980030564E+002	9.4127752763E+001	-1.4228771291E+000	0.843	1.299	1.610
69.599	2.542	47.183	0.336	2.9852919042E+002	9.4605049665E+001	-1.9916989938E+000	0.856	1.282	1.578
70.359	2.593	47.459	0.311	2.9677486925E+002	9.5176039290E+001	-2.3635475234E+000	0.870	1.264	1.540
71.118	2.565	47.656	0.249	2.9493890759E+002	9.5742204696E+001	-2.3603899699E+000	0.884	1.248	1.506
71.878	2.522	47.837	0.239	2.9318938282E+002	9.6269058177E+001	-2.2992205206E+000	0.899	1.236	1.477
72.637	2.479	48.019	0.239	2.9144633896E+002	9.6754703859E+001	-2.3249530287E+000	0.913	1.226	1.453
73.341	2.438	48.187	0.239	2.8979030650E+002	9.7150967138E+001	-2.2830688153E+000	0.926	1.219	1.436
73.380	2.436	48.196	0.393	2.8970127727E+002	9.7169887230E+001	-2.2789811862E+000	0.927	1.219	1.435
74.140	2.516	48.500	0.401	2.8797361979E+002	9.7518556192E+001	-2.2241098955E+000	0.921	1.214	1.422
74.899	2.595	48.804	0.401	2.8632280339E+002	9.7644787413E+001	-2.0407457868E+000	0.913	1.213	1.418
75.000	2.605	48.845	0.251	2.8611851735E+002	9.7648680912E+001	-2.0447127180E+000	0.912	1.213	1.418
75.760	2.556	49.020	0.230	2.8444202591E+002	9.7527256510E+001	-2.5609382727E+000	0.902	1.215	1.422
75.820	2.552	49.034	0.224	2.8428541499E+002	9.7481120178E+001	-2.8221673951E+000	0.901	1.215	1.423
75.840	2.550	49.038	0.228	2.8422743041E+002	9.7459448057E+001	-2.9008065940E+000	0.901	1.216	1.423
76.050	2.536	49.086	0.221	2.8361478239E+002	9.7219343448E+001	-2.9268358957E+000	0.903	1.218	1.429
76.810	2.478	49.252	0.214	2.8136581898E+002	9.6201999599E+001	-3.0302692337E+000	0.909	1.230	1.454
77.467	2.421	49.390	0.207	2.7933447998E+002	9.5058311109E+001	-3.2057488824E+000	0.912	1.244	1.481
78.226	2.352	49.546	0.207	2.7679824702E+002	9.3303403885E+001	-3.6565189265E+000	0.911	1.266	1.521
78.380	2.339	49.579	0.211	2.7622667270E+002	9.2841630002E+001	-3.7269355234E+000	0.910	1.272	1.530
78.516	2.327	49.607	0.213	2.7572006146E+002	9.2417401962E+001	-3.7824656928E+000	0.909	1.277	1.539
79.250	2.266	49.763	0.207	2.7274408734E+002	8.9631293561E+001	-4.2011401575E+000	0.899	1.317	1.593
80.010	2.195	49.917	0.200	2.6943687236E+002	8.6003121550E+001	-4.3792389802E+000	0.881	1.375	1.653
80.269	2.168	49.967	0.192	2.6829779687E+002	8.4692080378E+001	-4.4199623557E+000	0.873	1.398	1.674
81.029	2.058	50.113	0.184	2.6486916218E+002	8.0551994277E+001	-4.3712258558E+000	0.851	1.482	1.732
81.788	1.936	50.247	0.177	2.6165780467E+002	7.6375906353E+001	-4.2449859854E+000	0.826	1.585	1.781
81.838	1.929	50.256	0.184	2.6144797883E+002	7.6095346174E+001	-4.1147699861E+000	0.825	1.593	1.783
81.840	1.929	50.256	0.147	2.6143793608E+002	7.6081736008E+001	-4.1059531895E+000	0.825	1.593	1.783
82.600	1.784	50.368	0.151	2.5886718317E+002	7.2365371660E+001	-3.3498991199E+000	0.803	1.712	1.795
83.359	1.646	50.485	0.166	2.5634936259E+002	6.8626685683E+001	-3.3649141303E+000	0.779	1.865	1.793
84.000	1.546	50.601	0.181	2.5416555763E+002	6.5439778485E+001	-3.3223409014E+000	0.759	2.030	1.777
84.190	1.516	50.635	0.187	2.5353908053E+002	6.4513089891E+001	-3.2557787136E+000	0.752	2.086	1.772
84.562	1.462	50.706	0.196	2.5235744999E+002	6.2818008102E+001	-3.0864705231E+000	0.759	2.200	1.756
85.134	1.383	50.820	0.123	2.5066995486E+002	6.0585826307E+001	-3.1024785269E+000	0.774	2.380	1.724
85.520	1.257	50.824	0.030	2.4943305519E+002	5.9134002298E+001	-3.5281568174E+000	0.793	2.518	1.702
85.539	1.259	50.832	0.395	2.4936591599E+002	5.9065099122E+001	-3.5484972949E+000	0.792	2.525	1.701
86.298	1.303	51.132	0.355	2.4653498022E+002	5.6364415872E+001	-3.8704137674E+000	0.752	2.850	1.663
87.058	1.287	51.372	0.335	2.4348666882E+002	5.4051876136E+001	-4.3479584882E+000	0.717	3.221	1.630
87.817	1.301	51.641	0.356	2.3993033169E+002	5.1901110648E+001	-4.8829858672E+000	0.686	3.671	1.607
88.567	1.316	51.910	0.364	2.3612104882E+002	5.0433875522E+001	-5.3659628468E+000	0.665	3.974	1.609
89.327	1.341	52.190	0.374	2.3182626467E+002	4.9168990109E+001	-6.2738609376E+000	0.647	4.193	1.629
89.540	1.353	52.274	0.391	2.3045098385E+002	4.8830860883E+001	-6.5164488009E+000	0.642	4.224	1.639
90.300	1.394	52.571	0.387	2.2531587473E+002	4.7727378531E+001	-6.9205160745E+000	0.627	4.247	1.688
90.623	1.407	52.693	0.369	2.2305175306E+002	4.7328753598E+001	-7.0723750821E+000	0.622	4.195	1.716
91.383	1.412	52.971	0.366	2.1753091240E+002	4.6455700555E+001	-7.2804986544E+000	0.611	3.968	1.798
91.390	1.412	52.974	0.337	2.1747994615E+002	4.6447838461E+001	-7.2827368896E+000	0.611	3.965	1.799
92.150	1.395	53.229	0.342	2.1177296379E+002	4.5583563517E+001	-7.7986019613E+000	0.620	3.618	1.891
92.909	1.386	53.494	0.354	2.0563369114E+002	4.4617633781E+001	-8.2781912277E+000	0.629	3.240	1.991
93.669	1.387	53.768	0.364	1.9919820170E+002	4.3547376150E+001	-8.5924999081E+000	0.637	2.889	2.087
94.100	1.392	53.927	0.387	1.9546159084E+002	4.2894537382E+001	-8.8667459826E+000	0.641	2.709	2.134

94.850	1.420	54.225	0.412	1.8854235521E+002	4.1624510074E+001	-9.6884167862E+000	0.624	2.422	2.195
95.410	1.461	54.467	0.461	1.8292334255E+002	4.0548393251E+001	-1.0560455155E+001	0.609	2.230	2.216
96.170	1.554	54.834	0.484	1.7436020263E+002	3.8794643211E+001	-1.1351368971E+001	0.586	1.996	2.175
96.929	1.651	55.203	0.494	1.6568035308E+002	3.6947834731E+001	-1.1761412521E+001	0.561	1.814	2.094
97.689	1.759	55.584	0.493	1.5649434761E+002	3.4896663975E+001	-1.1746226626E+001	0.534	1.668	1.980
97.977	1.791	55.720	0.475	1.5313986445E+002	3.4136346010E+001	-1.1778596653E+001	0.524	1.622	1.935
98.737	1.796	56.081	0.474	1.4386462515E+002	3.2035287978E+001	-1.2474159351E+001	0.500	1.517	1.817
99.496	1.799	56.441	0.466	1.3419133067E+002	2.9833590854E+001	-1.2908268274E+001	0.474	1.432	1.709
100.256	1.792	56.790	0.448	1.2425666998E+002	2.7560550516E+001	-1.3118482229E+001	0.447	1.362	1.617
101.015	1.767	57.121	0.448	1.1426405568E+002	2.5264368858E+001	-1.4226591151E+001	0.419	1.306	1.542
101.480	1.767	57.338	0.458	1.0735057613E+002	2.3684427295E+001	-1.3806483120E+001	0.399	1.274	1.501
101.582	1.761	57.381	0.443	1.0596885355E+002	2.3366932744E+001	-1.3718498872E+001	0.394	1.268	1.494
102.341	1.744	57.720	0.449	9.4713715276E+001	2.0789768644E+001	-1.5057211056E+001	0.373	1.221	1.441
103.101	1.731	58.063	0.450	8.3096605063E+001	1.8169983335E+001	-1.4727973271E+001	0.349	1.175	1.395
103.175	1.728	58.095	0.475	8.2002606758E+001	1.7928090730E+001	-1.4826142347E+001	0.347	1.171	1.392
103.935	1.532	58.459	0.480	6.9551443208E+001	1.5249217529E+001	-1.6179656455E+001	0.328	1.126	1.349
104.694	1.336	58.824	0.491	5.7425338003E+001	1.2701636776E+001	-1.5878810715E+001	0.308	1.084	1.308
105.454	1.157	59.205	0.535	4.5431166023E+001	1.0234723296E+001	-1.5834594154E+001	0.284	1.039	1.261
106.213	1.028	59.637	0.575	3.3372226787E+001	7.8216080889E+000	-1.5273043603E+001	0.253	0.981	1.194
106.973	0.909	60.078	0.582	2.2231062955E+001	5.6401939204E+000	-1.4220050331E+001	0.218	0.921	1.118
107.028	0.901	60.111	0.587	2.1447362047E+001	5.4876248094E+000	-1.4148748257E+001	0.215	0.917	1.112
107.788	0.786	60.556	0.586	1.1104953841E+001	3.5236253120E+000	-1.3268633853E+001	0.170	0.855	1.035
108.547	0.670	61.000	0.567	1.2920033017E+000	1.7560149988E+000	-1.0659724032E+001	0.110	0.794	0.943
109.307	0.528	61.418	0.583	-5.0874111278E+000	6.7019581388E-001	-7.3475056711E+000	0.056	0.721	0.831
109.930	0.456	61.806	0.626	-9.1280796682E+000	5.6989301433E-002	-5.2005607928E+000	0.051	0.642	0.711
110.689	0.372	62.283	0.587	-1.1889329540E+001	-2.7217499758E-001	-1.8209484407E+000	0.051	0.546	0.567
111.449	0.226	62.697	0.530	-1.1894142059E+001	-2.2005372746E-001	1.1941111429E+000	0.070	0.472	0.444
111.600	0.182	62.765	0.585	-1.1677588760E+001	-2.0053830412E-001	1.7994810210E+000	0.075	0.465	0.429
112.360	0.086	63.230	0.642	-8.9118227886E+000	-1.0198273395E-001	5.4859960325E+000	0.064	0.533	0.448
113.119	0.036	63.740	0.642	-3.3442351280E+000	-1.6786748937E-002	8.4253929803E+000	0.055	2.116	2.422

LEGENDA SIMBOLI

- X(m) : Ascissa sinistra concio
 - ht(m) : Altezza linea di thrust da nodo sinistro base concio
 - yt(m) : coordinata Y linea di trust
 - yt'(-) : gradiente pendenza locale linea di trust
 - E(x)(kN/m) : Forza Normale interconcio
 - T(x)(kN/m) : Forza Tangenziale interconcio
 - E' (kN) : derivata Forza normale interconcio
 - Rho(x) (-) : fattore mobilizzazione resistenza al taglio verticale interconcio ZhU et al.(2003)
 - FS_qFEM(x)(-) : fattore di sicurezza locale stimato (locale in X) by qFEM
 - FS_srmFEM(x)(-) : fattore di sicurezza locale stimato (locale in X) by SRM Procedure
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TABELLA SFORZI DI TAGLIO DISTRIBUITI LUNGO SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	dx (m)	dl (m)	alpha (°)	TauStress (kPa)	TauF (kN/m)	TauStrength (kPa)	TauS (kN/m)
12.047	0.653	0.660	-8.181	-0.361	-0.238	11.417	7.533
12.700	0.760	0.767	-8.181	-1.231	-0.945	12.505	9.596
13.460	0.760	0.767	-8.181	-2.251	-1.727	14.075	10.800
14.219	0.760	0.767	-8.181	-3.271	-2.510	15.984	12.265
14.979	0.760	0.767	-8.181	-4.290	-3.292	17.423	13.369
15.738	0.760	0.767	-8.181	-5.309	-4.074	18.517	14.209
16.498	0.495	0.500	-8.181	-6.151	-3.078	19.217	9.614
16.993	0.760	0.767	-8.181	-6.993	-5.366	20.436	15.681
17.752	0.760	0.767	-8.181	-8.013	-6.148	22.135	16.985
18.512	0.031	0.032	-8.181	-8.543	-0.271	22.940	0.728
18.543	0.760	0.779	12.733	13.225	10.298	21.621	16.835
19.303	0.760	0.779	12.733	13.571	10.567	21.841	17.007
20.062	0.008	0.008	12.733	13.746	0.110	21.944	0.175
20.070	0.760	0.779	12.733	13.879	10.807	22.122	17.226
20.830	0.760	0.779	12.733	14.132	11.004	22.474	17.500
21.589	0.760	0.779	12.733	14.385	11.201	22.946	17.867
22.349	0.760	0.779	12.733	14.639	11.399	23.516	18.311
23.108	0.760	0.779	12.733	14.892	11.596	24.191	18.836
23.868	0.760	0.779	12.733	15.146	11.793	24.931	19.413
24.627	0.760	0.779	12.733	15.399	11.991	25.738	20.041
25.387	0.543	0.556	12.733	15.616	8.686	26.486	14.733
25.929	0.760	0.779	12.743	15.845	12.338	27.104	21.106
26.689	0.561	0.576	12.743	16.064	9.245	27.822	16.012

27.250	0.760	0.779	12.743	16.469	12.824	28.680	22.333
28.010	0.459	0.470	12.743	16.968	7.978	29.770	13.996
28.468	0.760	0.779	12.743	17.467	13.602	30.718	23.920
29.228	0.760	0.779	12.743	18.090	14.086	31.981	24.903
29.987	0.306	0.314	12.743	18.526	5.821	32.997	10.368
30.294	0.760	0.779	12.753	18.977	14.778	33.781	26.306
31.053	0.760	0.779	12.753	19.599	15.262	35.090	27.326
31.813	0.760	0.779	12.753	20.221	15.747	36.411	28.354
32.572	0.760	0.779	12.753	20.844	16.231	37.731	29.382
33.332	0.760	0.779	12.753	21.466	16.716	39.061	30.417
34.091	0.760	0.779	12.753	22.088	17.201	40.384	31.448
34.851	0.760	0.779	12.753	22.710	17.685	41.664	32.445
35.610	0.178	0.183	12.753	23.095	4.218	42.592	7.779
35.788	0.760	0.779	12.763	23.495	18.297	43.220	33.657
36.548	0.760	0.779	12.763	24.118	18.782	44.432	34.602
37.307	0.713	0.731	12.763	24.720	18.061	45.567	33.292
38.020	0.760	0.779	12.763	25.353	19.743	47.315	36.847
38.779	0.491	0.503	12.763	25.913	13.035	48.121	24.207
39.270	0.760	0.779	12.763	26.066	20.299	48.335	37.641
40.030	0.760	0.779	12.763	25.932	20.195	48.146	37.494
40.789	0.325	0.333	12.763	25.837	8.606	48.014	15.992
41.114	0.760	0.779	12.763	25.742	20.047	47.880	37.287
41.873	0.760	0.779	12.763	25.608	19.943	47.697	37.144
42.633	0.760	0.779	12.763	25.475	19.839	47.509	36.998
43.392	0.504	0.517	12.763	25.364	13.116	47.353	24.486
43.897	0.760	0.779	12.773	25.271	19.681	47.193	36.753
44.656	0.760	0.779	12.773	25.137	19.576	47.003	36.605
45.416	0.174	0.179	12.773	25.055	4.477	46.889	8.378
45.590	0.010	0.010	12.773	25.038	0.257	46.865	0.481
45.600	0.020	0.021	12.773	25.036	0.513	46.862	0.961
45.620	0.760	0.779	12.773	24.967	19.444	46.761	36.417
46.380	0.760	0.779	12.773	24.833	19.339	46.567	36.266
47.139	0.760	0.779	12.773	24.699	19.235	46.375	36.116
47.899	0.760	0.779	12.773	24.565	19.131	46.181	35.965
48.658	0.760	0.779	12.773	24.430	19.026	45.986	35.813
49.418	0.760	0.779	12.773	24.296	18.922	45.792	35.662
50.177	0.760	0.779	12.773	24.162	18.817	45.598	35.511
50.937	0.760	0.779	12.773	24.028	18.713	45.404	35.360
51.696	0.657	0.674	12.773	23.903	16.103	45.232	30.471
52.353	0.760	0.779	12.783	23.795	18.532	45.050	35.085
53.113	0.760	0.779	12.783	23.660	18.427	44.857	34.935
53.872	0.760	0.779	12.783	23.526	18.322	44.663	34.784
54.632	0.760	0.779	12.783	23.391	18.217	44.470	34.634
55.391	0.760	0.779	12.783	23.256	18.112	44.276	34.483
56.151	0.760	0.779	12.783	23.122	18.007	44.080	34.330
56.910	0.760	0.779	12.783	22.987	17.903	43.886	34.179
57.670	0.760	0.779	12.783	22.852	17.798	43.693	34.028
58.429	0.760	0.779	12.783	22.717	17.693	43.499	33.877
59.189	0.760	0.779	12.783	22.583	17.588	43.303	33.725
59.948	0.564	0.578	12.783	22.465	12.981	43.134	24.924
60.512	0.760	0.779	12.912	22.554	17.575	42.920	33.444
61.271	0.760	0.779	12.912	22.411	17.463	42.716	33.285
62.031	0.029	0.030	12.912	22.337	0.671	42.601	1.280
62.060	0.760	0.779	12.912	22.658	17.656	43.059	33.552
62.820	0.760	0.779	12.912	23.306	18.160	43.977	34.267
63.579	0.760	0.779	12.912	23.954	18.665	44.897	34.984
64.339	0.760	0.779	12.912	24.602	19.170	45.818	35.702
65.098	0.597	0.612	12.912	25.180	15.415	46.642	28.553
65.695	0.760	0.792	16.477	32.043	25.379	46.010	36.442
66.454	0.760	0.792	16.477	32.604	25.824	46.659	36.956
67.214	0.760	0.792	16.477	33.166	26.269	47.297	37.461
67.973	0.107	0.111	16.477	33.486	3.727	47.659	5.305
68.080	0.760	0.792	16.477	33.260	26.343	47.456	37.587
68.840	0.760	0.792	16.477	32.729	25.922	46.877	37.129
69.599	0.760	0.792	16.477	32.197	25.501	46.279	36.655
70.359	0.760	0.792	16.477	31.665	25.080	45.696	36.193
71.118	0.760	0.792	16.477	31.134	24.659	45.118	35.735
71.878	0.760	0.792	16.477	30.602	24.238	44.540	35.278
72.637	0.704	0.734	16.477	30.090	22.087	43.987	32.287
73.341	0.039	0.041	16.487	29.846	1.216	43.707	1.780
73.380	0.760	0.792	16.487	30.319	24.015	44.229	35.033
74.140	0.760	0.792	16.487	31.291	24.785	45.332	35.906
74.899	0.101	0.105	16.487	31.842	3.353	45.952	4.839

75.000	0.760	0.792	16.487	39.197	31.047	54.049	42.811
75.760	0.060	0.063	16.487	39.722	2.506	54.697	3.450
75.820	0.020	0.021	16.487	39.748	0.829	54.765	1.142
75.840	0.210	0.219	16.487	39.608	8.674	54.619	11.962
76.050	0.760	0.792	16.487	39.019	30.906	53.995	42.768
76.810	0.657	0.686	16.487	38.158	26.159	53.097	36.401
77.467	0.760	0.792	16.487	37.297	29.542	52.220	41.363
78.226	0.154	0.160	16.487	36.741	5.886	51.694	8.282
78.380	0.136	0.142	16.487	36.566	5.176	51.515	7.292
78.516	0.734	0.766	16.487	36.037	27.595	51.015	39.065
79.250	0.760	0.792	16.487	35.129	27.825	50.135	39.711
80.010	0.260	0.271	16.487	34.509	9.343	49.488	13.398
80.269	0.760	0.801	18.607	37.574	30.112	48.205	38.632
81.029	0.760	0.801	18.607	36.380	29.155	47.061	37.715
81.788	0.049	0.052	18.607	35.744	1.864	46.478	2.423
81.838	0.002	0.003	18.607	35.703	0.092	46.420	0.120
81.840	0.760	0.801	18.607	35.104	28.132	45.725	36.644
82.600	0.760	0.801	18.607	33.910	27.175	44.578	35.724
83.359	0.641	0.676	18.607	32.809	22.189	43.523	29.436
84.000	0.190	0.200	18.607	24.595	4.931	35.581	7.133
84.190	0.372	0.393	18.607	23.419	9.198	34.390	13.507
84.562	0.572	0.603	18.617	20.825	12.565	31.763	19.165
85.134	0.386	0.407	18.617	18.182	7.405	29.189	11.888
85.520	0.019	0.020	18.617	17.351	0.347	25.760	0.515
85.539	0.760	0.801	18.617	18.069	14.481	26.414	21.169
86.298	0.760	0.801	18.617	19.470	15.604	26.675	21.379
87.058	0.760	0.801	18.617	20.870	16.726	26.919	21.574
87.817	0.750	0.791	18.617	22.262	17.612	26.985	21.348
88.567	0.760	0.801	18.617	23.654	18.957	27.298	21.878
89.327	0.213	0.225	18.617	24.551	5.526	27.251	6.133
89.540	0.760	0.801	18.617	25.169	20.171	27.602	22.122
90.300	0.324	0.342	18.617	25.770	8.810	27.458	9.387
90.623	0.760	0.807	19.768	27.689	22.347	27.456	22.159
91.383	0.007	0.007	19.768	28.081	0.209	27.535	0.205
91.390	0.760	0.807	19.768	27.493	22.189	27.005	21.795
92.150	0.760	0.807	19.768	26.310	21.234	26.047	21.022
92.909	0.760	0.807	19.768	25.127	20.279	25.286	20.408
93.669	0.431	0.458	19.768	24.199	11.095	24.887	11.410
94.100	0.750	0.797	19.768	24.281	19.351	25.282	20.149
94.850	0.560	0.595	19.768	25.010	14.883	26.572	15.812
95.410	0.760	0.807	19.768	25.745	20.778	27.818	22.451
96.170	0.760	0.807	19.768	26.591	21.461	29.425	23.748
96.929	0.760	0.807	19.768	27.436	22.143	31.079	25.083
97.689	0.289	0.307	19.768	28.020	8.600	32.426	9.952
97.977	0.760	0.839	25.130	34.232	28.718	31.459	26.391
98.737	0.760	0.839	25.130	34.613	29.037	32.497	27.263
99.496	0.760	0.839	25.130	34.994	29.357	33.476	28.083
100.256	0.760	0.839	25.130	35.375	29.677	34.367	28.831
101.015	0.465	0.513	25.130	35.683	18.311	35.231	18.079
101.480	0.102	0.112	25.130	35.707	4.016	35.450	3.987
101.582	0.760	0.839	25.130	35.046	29.401	36.378	30.518
102.341	0.760	0.839	25.130	33.910	28.448	35.609	29.873
103.101	0.075	0.082	25.130	33.287	2.741	35.111	2.892
103.175	0.760	0.944	36.420	39.709	37.480	30.335	28.632
103.935	0.760	0.944	36.420	36.543	34.491	28.850	27.231
104.694	0.760	0.944	36.420	33.376	31.502	27.400	25.862
105.454	0.760	0.944	36.420	30.209	28.513	25.968	24.511
106.213	0.760	0.944	36.420	27.043	25.525	24.414	23.043
106.973	0.055	0.069	36.420	25.344	1.740	23.608	1.621
107.028	0.760	0.944	36.420	23.646	22.318	22.768	21.490
107.788	0.760	0.944	36.420	20.479	19.330	21.238	20.046
108.547	0.760	0.944	36.420	17.313	16.341	19.373	18.286
109.307	0.623	0.774	36.420	14.430	11.174	17.871	13.838
109.930	0.760	0.944	36.430	11.548	10.902	16.311	15.397
110.689	0.760	0.944	36.430	8.380	7.910	14.653	13.832
111.449	0.151	0.188	36.430	6.480	1.217	13.785	2.589
111.600	0.760	0.944	36.430	4.928	4.652	13.101	12.367
112.360	0.760	0.944	36.430	2.453	2.316	12.021	11.348
113.119	0.373	0.464	36.430	0.608	0.282	11.244	5.214

LEGENDA SIMBOLI

X(m) : Ascissa sinistra concio

dx(m) : Larghezza concio

dI(m) : lunghezza base concio
alpha(°) : Angolo pendenza base concio
TauStress(kPa) : Sforzo di taglio su base concio
TauF (kN/m) : Forza di taglio su base concio
TauStrength(kPa) : Resistenza al taglio su base concio
TauS (kN/m) : Forza resistente al taglio su base concio

CASO A sisma - PROGETTO-

Report elaborazioni

SSAP 5.0.2 - Slope Stability Analysis Program (1991,2021)
WWW.SSAP.EU
Build No. 12007
BY
Dr. Geol. LORENZO BORSELLI *,**
*UASLP, San Luis Potosi, Mexico
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** Gia' Ricercatore CNR-IRPI fino a Luglio 2011

Ultima Revisione struttura tabelle del report: 21 Febbraio 2021

Modello pendio: CASO A PROGETTO SISMA.mod

----- PARAMETRI DEL MODELLO DEL PENDIO -----

___ PARAMETRI GEOMETRICI - Coordinate X Y (in m) ___

SUP T.		SUP 2		SUP 3		SUP 4	
X	Y	X	Y	X	Y	X	Y
0.00	30.73	0.00	27.50	0.00	24.00	0.00	15.50
12.70	33.89	45.62	42.31	45.59	38.80	45.60	30.30
27.25	38.72	76.05	47.93	75.84	43.13	76.05	38.61
39.27	44.22	94.85	51.93	95.41	50.10	94.85	44.93
62.06	48.35	170.31	76.50	170.31	74.49	170.31	69.50
68.08	51.04	-	-	-	-	-	-
73.38	51.85	-	-	-	-	-	-
75.82	53.21	-	-	-	-	-	-
84.19	53.61	-	-	-	-	-	-
85.52	52.71	-	-	-	-	-	-
91.39	56.07	-	-	-	-	-	-
94.10	56.40	-	-	-	-	-	-
101.48	60.74	-	-	-	-	-	-
111.60	63.30	-	-	-	-	-	-
119.84	66.26	-	-	-	-	-	-
131.00	69.53	-	-	-	-	-	-
133.02	71.23	-	-	-	-	-	-
157.83	77.62	-	-	-	-	-	-
170.31	80.51	-	-	-	-	-	-

---- SUP FALDA -----

X Y (in m)

0.00	30.73
12.70	33.89
20.07	36.34
78.38	39.13
79.25	41.11
81.84	45.27
89.54	55.01
139.52	57.54
145.20	66.31
150.21	70.78
161.42	78.45
170.31	80.51

----- GESTIONE ACQUIFERI -----

Strati esclusi da acquifero:

Esclusione sovraccarico pendio sommerso: NON ATTIVATA

EFFETTO TENSION CRACK IN TESTA RIEMPITO DI ACQUA: ----> DISATTIVATO

In caso di superfici con tension crack in testa, la frattura di tensione

puo' venir viene considerata completamente riempita di acqua per la sua intera profondita'.

Viene quindi considerato una forza in testa, prodotta dalla pressione idrostatica.

La forza applicata ha un effetto destabilizzante aggiuntivo alle altre forze destabilizzanti agenti.

Peso unitario fluido (kN/m³): 9.81

Parametri funzione dissipazione superficiale pressione dei fluidi:

Coefficiente A 0
 Coefficiente K 0.000800
 Pressione minima fluidi Uo_Min (kPa) 0.01
 Coefficiente di soprappressione oltre pressione idrostatica 1.00
 Limitazione dissipazione a Pressione Idrostatica = ATTIVA
 STABILITE CONDIZIONI PER LA VERIFICA CON SOVRAPPRESSIONE ACQUIFERI CON DISSIPAZIONE IN DIREZIONE DELLA SUPERFICIE

CALCOLO EFFETTO DI FILTRAZIONE NON ATTIVATO

----- PARAMETRI GEOMECCANICI -----

	fi'	C'	Cu	Gamm	Gamm_sat	STR_IDX	sgci	GSI	mi	D
STRATO 1	18.00	11.00	11.00	0.00	18.00	20.00	1.269	0.00	0.00	0.00
STRATO 2	18.00	11.00	11.00	0.00	18.00	20.00	1.269	0.00	0.00	0.00
STRATO 3	25.00	50.00	50.00	0.00	20.00	20.00	4.881	0.00	0.00	0.00
STRATO 4	35.00	0.00	0.00	0.00	20.00	20.00	2.404	0.00	0.00	0.00

LEGENDA: fi' _____ Angolo di attrito interno efficace(in gradi)

C' _____ Coesione efficace (in Kpa)

Cu _____ Resistenza al taglio Non drenata (in Kpa)

Gamm _____ Peso di volume terreno fuori falda (in KN/m³)

Gamm_sat _____ Peso di volume terreno immerso (in KN/m³)

STR_IDX _____ Indice di resistenza (usato in solo in 'SNIFF SEARCH) (adimensionale)

---- SOLO Per AMMASSI ROCCIOSI FRATTURATI - Parametri Criterio di Rottura di Hoek (2002)-

sigci _____ Resistenza Compressione Uniassiale Roccia Intatta (in MPa)

GSI _____ Geological Strenght Index ammasso(adimensionale)

mi _____ Indice litologico ammasso(adimensionale)

D _____ Fattore di disturbo ammasso(adimensionale)

Fattore di riduzione NTC2018: gammaPHI=1.25 e gammaC=1.25 - DISATTIVATO (solo per ROCCE)

Uso CRITERIO DI ROTTURA Hoek et al.(2002,2006) - non-lineare - Generalizzato, secondo Lei et al.(2016)

----- SOVRACCARICHI PRESENTI -----

Nota Bene:

##Nota: la distribuzione del carico e delle forze unitarie puo' variare
in modo lineare tra gli estremi di coordinate X1 e X2

TABELLA SOVRACCARICHI IN SUPERFICIE

N.	da X1	a X2	SX1	SX2	Alpha	WsH1	WsH2	WsV1	WsV2
(-)	(m)	(m)	(kPa)	(kPa)	(°)	(kN/m)	(kN/m)	(kN/m)	(kN/m)
1	75.0000	84.0000	25.00	25.00	90.00	0.00	0.00	25.00	25.00

LEGENDA SIMBOLI

N.(-) : NUMERO SOVRACCARICO

X1(m) : Posizione carico da X1

X2(m) : a X2

SX1(kPa) : Carico in X1 (Kpa)

SX2(kPa) : Carico in X2 (Kpa)

Alpha(°) : Inclinazione carico (gradi):

Componenti distribuzione forza unitaria applicata:

WsH1, WsH2(kN/m) : forza unitaria Orizzontale (per metro di proiezione Verticale) : da X1 a X2 (vedasi cap.2 manuale)

WsV1, WsV2(kN/m) : forza unitaria Verticale (per metro di proiezione Orizzontale) : da X1 a X2 (vedasi Cap.2 manuale)

----- INFORMAZIONI GENERAZIONE SUPERFICI RANDOM -----

*** PARAMETRI PER LA GENERAZIONE DELLE SUPERFICI

MOTORE DI RICERCA: CONVEX RANDOM - Chen (1992)

FILTRAGGIO SUPERFICI : ATTIVATO

COORDINATE X1,X2,Y OSTACOLO : 0.00 0.00 0.00

LUNGHEZZA MEDIA SEGMENTI (m)*: 6.8 (+/-) 50%

INTERVALLO ASCISSE RANDOM STARTING POINT (Xmin .. Xmax): 11.00 30.00

LIVELLO MINIMO CONSIDERATO (Ymin): 29.00

INTERVALLO ASCISSE AMMESSO PER LA TERMINAZIONE (Xmin .. Xmax): 112.00 120.00

TOTALE SUPERFICI GENERATE : 1000

*NOTA IMPORTANTE: La lunghezza media dei segmenti non viene considerata nel caso di uso del motore di ricerca NEW RANOM SEARCH

----- INFORMAZIONI PARAMETRI DI CALCOLO -----

METODO DI CALCOLO : MORGENSTERN - PRICE (Morgenstern & Price, 1965)
 METODO DI ESPLORAZIONE CAMPO VALORI (λ_0, F_s0) ADOTTATO : A (rapido)
 COEFFICIENTE SISMICO UTILIZZATO K_h : 0.0480
 COEFFICIENTE SISMICO UTILIZZATO K_v (assunto Positivo): 0.0240
 COEFFICIENTE $c=K_v/K_h$ UTILIZZATO : 0.5000
 FORZA ORIZZONTALE ADDIZIONALE IN TESTA (kN/m): 0.00
 FORZA ORIZZONTALE ADDIZIONALE ALLA BASE (kN/m): 0.00

N.B. Le forze orizzontali addizionali in testa e alla base sono poste uguali a 0 durante le tutte le verifiche globali.
 I valori >0 impostati dall'utente sono utilizzati solo in caso di verifica singola

----- RISULTATO FINALE ELABORAZIONI -----

* DATI RELATIVI ALLE 10 SUPERFICI GENERATE CON MINOR F_s *

Fattore di sicurezza (FS) 1.2780 - Min. - X Y Lambda= 0.3922
 18.38 35.78
 26.67 35.41
 40.77 38.01
 52.32 40.46
 60.79 42.26
 69.80 44.18
 83.32 47.05
 90.48 48.58
 101.51 53.76
 108.37 58.11
 112.32 62.60
 112.32 63.56

Fattore di sicurezza (FS) 1.3100 - N.2 -- X Y Lambda= 0.4237
 16.18 35.05
 27.97 35.52
 42.61 38.48
 54.30 40.88
 60.81 42.22
 76.09 45.72
 90.98 50.63
 99.07 53.30
 109.34 60.03
 113.12 62.51
 113.12 63.85

Fattore di sicurezza (FS) 1.3270 - N.3 -- X Y Lambda= 0.3708
 28.65 39.36
 41.83 39.95
 52.35 41.55
 63.12 43.19
 74.57 44.93
 86.88 47.47
 96.91 50.81
 104.65 54.95
 111.69 60.29
 113.67 62.62
 113.67 64.04

Fattore di sicurezza (FS) 1.3320 - N.4 -- X Y Lambda= 0.3686
 25.36 38.09
 37.41 39.24
 46.13 40.08
 60.91 41.75
 75.64 45.23
 89.12 48.42
 97.82 51.76
 103.21 53.91
 110.55 60.49
 112.28 62.04
 112.28 63.54

Fattore di sicurezza (FS) 1.3377 - N.5 -- X Y Lambda= 0.3865
 27.25 38.72
 30.52 38.88
 37.29 39.64
 40.67 40.03
 46.11 40.64
 48.82 40.95
 51.46 41.28
 58.01 42.08
 63.85 42.80
 70.67 43.85
 73.91 44.37
 77.89 45.45
 81.28 46.43
 87.44 48.22
 94.19 50.18
 100.37 53.33
 105.15 56.20
 109.31 58.70
 111.97 61.52
 112.64 62.22
 112.64 63.67

Fattore di sicurezza (FS) 1.3404 - N.6 -- X Y Lambda= 0.4018
 24.73 37.88
 34.76 38.31
 39.68 38.53
 44.00 39.13
 48.04 39.73
 58.42 41.28
 68.79 42.83
 75.13 44.53
 78.67 45.48
 83.18 47.18
 89.00 49.37
 93.81 51.19
 98.88 53.10
 108.25 56.65
 111.51 59.08
 115.03 63.60
 115.03 64.53

Fattore di sicurezza (FS) 1.3439 - N.7 -- X Y Lambda= 0.4133
 21.58 36.84
 28.99 35.64
 37.56 37.71
 50.36 40.80
 64.95 44.33
 78.33 47.74
 91.11 51.00
 103.80 55.78
 113.03 62.49
 113.03 63.81

Fattore di sicurezza (FS) 1.3463 - N.8 -- X Y Lambda= 0.3643
 26.07 38.33
 37.56 39.33
 51.61 41.82
 62.31 43.72
 76.65 46.26
 87.71 48.23
 101.12 52.22
 105.52 55.74
 112.51 61.35
 113.86 63.11
 113.86 64.11

Fattore di sicurezza (FS) 1.3532 - N.9 -- X Y Lambda= 0.3884
 27.36 38.77
 39.26 39.36
 50.77 40.30
 55.24 40.66
 59.84 41.04
 64.57 42.04
 74.55 44.69
 81.37 46.54
 87.72 48.88
 97.07 52.34
 102.10 54.80
 109.17 58.25
 114.28 63.04
 114.28 64.26

Fattore di sicurezza (FS) 1.3575 - N.10 -- X Y Lambda= 0.3929
 14.78 34.58
 22.94 36.14
 33.28 38.11
 45.58 40.47
 57.56 42.76
 65.64 44.31
 80.77 47.21
 96.78 51.45
 109.16 57.22
 115.89 63.61
 115.89 64.84

----- ANALISI DEFICIT DI RESISTENZA -----

DATI RELATIVI ALLE 10 SUPERFICI GENERATE CON MINOR Fs *

Analisi Deficit in riferimento a FS(progetto) = 1.200

Sup N.	FS	FTR(kN/m)	FTA(kN/m)	Bilancio(kN/m)	ESITO
1	1.278	3996.8	3127.3	244.0	Surplus
2	1.310	3871.0	2954.9	325.1	Surplus
3	1.327	3592.9	2707.5	343.9	Surplus
4	1.332	3704.7	2781.2	367.2	Surplus
5	1.338	3593.1	2686.0	369.8	Surplus
6	1.340	3955.4	2951.0	414.2	Surplus
7	1.344	3496.9	2602.0	374.5	Surplus
8	1.346	3500.9	2600.3	380.5	Surplus
9	1.353	3744.4	2767.0	423.9	Surplus
10	1.357	3780.1	2784.6	438.5	Surplus

Esito analisi: SURPLUS di RESISTENZA!

Valore minimo di SURPLUS di RESISTENZA (kN/m): 244.0

Note: FTR --> Forza totale Resistente lungo la superficie di scivolamento

FTA --> Forza totale Agente lungo la superficie di scivolamento

IMPORTANTE! : Il Deficit o il Surplus di resistenza viene espresso in kN per metro di LARGHEZZA rispetto al fronte della scarpata

TABELLA PARAMETRI CONCI DELLA SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	dx (m)	alpha (°)	W (kN/m)	ru (-)	U (kPa)	phi' (°)	(c',Cu) (kPa)
18.385	0.717	-2.55	2.00	0.50	1.35	18.00	11.00
19.102	0.717	-2.55	5.96	0.49	4.00	18.00	11.00
19.819	0.251	-2.55	3.03	0.46	5.81	18.00	11.00
20.070	0.717	-2.55	11.15	0.44	6.23	18.00	11.00
20.787	0.717	-2.55	14.81	0.38	7.29	18.00	11.00
21.504	0.717	-2.55	18.48	0.34	8.18	18.00	11.00
22.220	0.717	-2.55	22.14	0.31	8.98	18.00	11.00
22.937	0.717	-2.55	25.80	0.29	9.55	18.00	11.00

23.654	0.717	-2.55	29.47	0.27	9.90	18.00	11.00
24.371	0.267	-2.55	11.93	0.25	10.16	18.00	11.00
24.638	0.717	-2.55	34.50	0.24	10.26	18.00	11.00
25.355	0.717	-2.55	38.16	0.22	10.42	18.00	11.00
26.072	0.602	-2.55	34.88	0.20	10.39	18.00	11.00
26.674	0.576	10.44	35.03	0.19	10.26	18.00	11.00
27.250	0.717	10.44	45.30	0.17	10.03	18.00	11.00
27.967	0.501	10.44	33.13	0.16	9.62	18.00	11.00
28.468	0.717	10.44	49.45	0.15	9.26	18.00	11.00
29.185	0.717	10.44	51.90	0.13	8.63	18.00	11.00
29.902	0.717	10.44	54.34	0.11	7.89	18.00	11.00
30.618	0.717	10.44	56.79	0.09	7.02	18.00	11.00
31.335	0.717	10.44	59.23	0.08	6.09	18.00	11.00
32.052	0.717	10.44	61.68	0.06	5.14	18.00	11.00
32.769	0.717	10.44	64.12	0.05	4.24	18.00	11.00
33.486	0.717	10.44	66.57	0.04	3.40	18.00	11.00
34.202	0.717	10.44	69.01	0.03	2.64	18.00	11.00
34.919	0.717	10.44	71.46	0.02	2.00	18.00	11.00
35.636	0.190	10.44	19.32	0.01	1.43	18.00	11.00
35.826	0.717	10.44	74.62	0.00	0.00	18.00	11.00
36.543	0.717	10.44	77.21	0.00	0.00	18.00	11.00
37.259	0.717	10.44	79.80	0.00	0.00	18.00	11.00
37.976	0.717	10.44	82.39	0.00	0.00	18.00	11.00
38.693	0.577	10.44	68.20	0.00	0.00	18.00	11.00
39.270	0.717	10.44	85.75	0.00	0.00	18.00	11.00
39.987	0.717	10.44	85.72	0.00	0.00	18.00	11.00
40.704	0.069	10.44	8.23	0.00	0.00	18.00	11.00
40.772	0.341	11.99	40.79	0.00	0.00	18.00	11.00
41.114	0.717	11.99	85.42	0.00	0.00	18.00	11.00
41.831	0.717	11.99	85.12	0.00	0.00	18.00	11.00
42.547	0.717	11.99	84.83	0.00	0.00	18.00	11.00
43.264	0.717	11.99	84.53	0.00	0.00	18.00	11.00
43.981	0.717	11.99	84.24	0.00	0.00	18.00	11.00
44.698	0.717	11.99	83.94	0.00	0.00	18.00	11.00
45.415	0.175	11.99	20.49	0.00	0.00	18.00	11.00
45.590	0.010	11.99	1.17	0.00	0.00	18.00	11.00
45.600	0.020	11.99	2.34	0.00	0.00	18.00	11.00
45.620	0.717	11.99	83.56	0.00	0.00	18.00	11.00
46.337	0.717	11.99	83.27	0.00	0.00	18.00	11.00
47.054	0.717	11.99	82.97	0.00	0.00	18.00	11.00
47.770	0.717	11.99	82.68	0.00	0.00	18.00	11.00
48.487	0.717	11.99	82.38	0.00	0.00	18.00	11.00
49.204	0.717	11.99	82.09	0.00	0.00	18.00	11.00
49.921	0.717	11.99	81.79	0.00	0.00	18.00	11.00
50.638	0.717	11.99	81.50	0.00	0.00	18.00	11.00
51.354	0.717	11.99	81.20	0.00	0.00	18.00	11.00
52.071	0.250	11.99	28.21	0.00	0.00	18.00	11.00
52.321	0.717	12.00	80.80	0.00	0.00	18.00	11.00
53.038	0.717	12.00	80.50	0.00	0.00	18.00	11.00
53.754	0.717	12.00	80.21	0.00	0.00	18.00	11.00
54.471	0.717	12.00	79.91	0.00	0.00	18.00	11.00
55.188	0.717	12.00	79.61	0.00	0.00	18.00	11.00
55.905	0.717	12.00	79.32	0.00	0.00	18.00	11.00
56.622	0.717	12.00	79.02	0.00	0.00	18.00	11.00
57.338	0.717	12.00	78.72	0.00	0.00	18.00	11.00
58.055	0.717	12.00	78.43	0.00	0.00	18.00	11.00
58.772	0.717	12.00	78.13	0.00	0.00	18.00	11.00
59.489	0.717	12.00	77.83	0.00	0.00	18.00	11.00
60.206	0.588	12.00	63.67	0.00	0.00	18.00	11.00
60.794	0.717	12.01	77.29	0.00	0.00	18.00	11.00
61.511	0.549	12.01	59.00	0.00	0.00	18.00	11.00
62.060	0.717	12.01	78.02	0.00	0.00	18.00	11.00
62.777	0.717	12.01	80.24	0.00	0.00	18.00	11.00
63.494	0.717	12.01	82.45	0.00	0.00	18.00	11.00
64.210	0.717	12.01	84.67	0.00	0.00	18.00	11.00
64.927	0.717	12.01	86.89	0.00	0.00	18.00	11.00
65.644	0.717	12.01	89.10	0.00	0.00	18.00	11.00
66.361	0.717	12.01	91.32	0.00	0.00	18.00	11.00
67.078	0.717	12.01	93.54	0.00	0.00	18.00	11.00
67.794	0.286	12.01	37.88	0.00	0.00	18.00	11.00
68.080	0.717	12.01	95.25	0.00	0.00	18.00	11.00
68.797	0.717	12.01	94.68	0.00	0.00	18.00	11.00
69.514	0.288	12.01	37.87	0.00	0.00	18.00	11.00

69.802	0.717	12.02	93.88	0.00	0.00	18.00	11.00
70.518	0.717	12.02	93.31	0.00	0.00	18.00	11.00
71.235	0.717	12.02	92.74	0.00	0.00	18.00	11.00
71.952	0.717	12.02	92.17	0.00	0.00	18.00	11.00
72.669	0.711	12.02	90.90	0.00	0.00	18.00	11.00
73.380	0.717	12.02	92.95	0.00	0.00	18.00	11.00
74.097	0.717	12.02	96.22	0.00	0.00	18.00	11.00
74.814	0.186	12.02	25.55	0.00	0.00	18.00	11.00
75.000	0.717	12.02	118.68	0.00	0.00	18.00	11.00
75.717	0.103	12.02	17.35	0.00	0.00	18.00	11.00
75.820	0.020	12.02	3.37	0.00	0.00	18.00	11.00
75.840	0.210	12.02	35.30	0.00	0.00	18.00	11.00
76.050	0.717	12.02	119.49	0.00	0.00	18.00	11.00
76.767	0.700	12.02	115.19	0.00	0.00	18.00	11.00
77.467	0.717	12.02	116.40	0.00	0.00	18.00	11.00
78.184	0.196	12.02	31.61	0.00	0.00	18.00	11.00
78.380	0.136	12.02	21.78	0.00	0.00	18.00	11.00
78.516	0.717	12.02	114.11	0.00	0.00	18.00	11.00
79.233	0.017	12.02	2.76	0.00	0.00	18.00	11.00
79.250	0.717	12.02	112.51	0.00	0.00	18.00	11.00
79.967	0.717	12.02	110.95	0.00	0.00	18.00	11.00
80.684	0.717	12.02	109.38	0.00	0.00	18.00	11.00
81.400	0.437	12.02	65.94	0.00	0.00	18.00	11.00
81.838	0.002	12.02	0.37	0.00	0.00	18.00	11.00
81.840	0.717	12.02	106.86	0.00	0.00	18.00	11.00
82.557	0.680	12.02	99.93	0.00	0.00	18.00	11.00
83.237	0.085	12.02	12.41	0.00	0.00	18.00	11.00
83.322	0.678	12.03	98.68	0.09	10.13	18.00	11.00
84.000	0.190	12.03	22.71	0.13	13.39	18.00	11.00
84.190	0.717	12.03	81.97	0.14	14.40	18.00	11.00
84.907	0.613	12.03	64.32	0.18	18.40	18.00	11.00
85.520	0.019	12.03	1.91	0.21	22.25	18.00	11.00
85.539	0.717	12.03	74.42	0.22	22.37	18.00	11.00
86.256	0.717	12.03	78.93	0.26	27.56	18.00	11.00
86.973	0.717	12.03	83.44	0.31	33.08	18.00	11.00
87.689	0.717	12.03	87.95	0.35	38.39	18.00	11.00
88.406	0.717	12.03	92.46	0.38	43.08	18.00	11.00
89.123	0.417	12.03	55.87	0.41	47.08	18.00	11.00
89.540	0.717	12.03	98.96	0.42	48.87	18.00	11.00
90.257	0.221	12.03	31.17	0.43	50.93	18.00	11.00
90.478	0.717	25.15	101.83	0.43	51.42	18.00	11.00
91.195	0.195	25.15	27.85	0.43	52.19	18.00	11.00
91.390	0.717	25.15	100.38	0.42	52.10	18.00	11.00
92.107	0.717	25.15	96.65	0.42	51.42	18.00	11.00
92.824	0.717	25.15	92.91	0.41	50.12	18.00	11.00
93.540	0.560	25.15	69.94	0.39	48.34	18.00	11.00
94.100	0.717	25.15	88.47	0.38	46.72	18.00	11.00
94.817	0.033	25.15	4.11	0.36	44.35	18.00	11.00
94.850	0.560	25.15	69.62	0.36	44.23	18.00	11.00
95.410	0.717	25.15	89.72	0.34	42.22	18.00	11.00
96.127	0.717	25.15	90.40	0.32	39.16	18.00	11.00
96.844	0.717	25.15	91.09	0.29	35.83	18.00	11.00
97.560	0.717	25.15	91.77	0.27	32.55	18.00	11.00
98.277	0.717	25.15	92.45	0.24	29.30	18.00	11.00
98.994	0.717	25.15	93.13	0.21	26.00	18.00	11.00
99.711	0.717	25.15	93.82	0.18	22.66	18.00	11.00
100.428	0.717	25.15	94.50	0.16	19.45	18.00	11.00
101.144	0.336	25.15	44.48	0.14	16.75	18.00	11.00
101.480	0.025	25.15	3.33	0.13	15.55	18.00	11.00
101.505	0.717	32.40	92.96	0.12	15.46	18.00	11.00
102.222	0.383	32.40	47.98	0.10	12.87	18.00	11.00
102.605	0.717	32.40	86.47	0.09	11.53	18.00	11.00
103.322	0.717	32.40	82.24	0.07	9.13	18.00	11.00
104.039	0.649	32.40	70.59	0.00	0.00	18.00	11.00
104.688	0.717	32.40	74.49	0.00	0.00	18.00	11.00
105.405	0.717	32.40	70.88	0.00	0.00	18.00	11.00
106.122	0.717	32.40	67.26	0.00	0.00	18.00	11.00
106.838	0.190	32.40	17.20	0.00	0.00	18.00	11.00
107.028	0.717	32.40	62.69	0.00	0.00	18.00	11.00
107.745	0.622	32.40	51.46	0.00	0.00	18.00	11.00
108.367	0.717	48.63	53.57	0.00	0.00	18.00	11.00
109.084	0.717	48.63	45.21	0.00	0.00	18.00	11.00
109.800	0.717	48.63	36.85	0.00	0.00	18.00	11.00

110.517	0.717	48.63	28.49	0.00	0.00	18.00	11.00
111.234	0.366	48.63	11.32	0.00	0.00	18.00	11.00
111.600	0.717	48.63	16.37	0.00	0.00	18.00	11.00

LEGENDA SIMBOLI

- X(m) : Ascissa sinistra concio
- dx(m) : Larghezza concio
- alpha(°) : Angolo pendenza base concio
- W(kN/m) : Forza peso concio
- ru(-) : Coefficiente locale pressione interstiziale
- U(kPa) : Pressione totale dei pori base concio
- phi'(°) : Angolo di attrito efficace base concio
- c'/Cu (kPa) : Coesione efficace o Resistenza al taglio in condizioni non drenate

TABELLA DIAGRAMMA DELLE FORZE DELLA SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	ht (m)	yt (m)	yt' (--)	E(x) (kN/m)	T(x) (kN/m)	E' (kN)	rho(x) (kN)	FS_qFEM (--)	FS_srmFEM (--)			
18.385	0.000	35.777	0.053	0.0000000000E+000	0.0000000000E+000	0.0000000000E+000	5.4658983735E+001	0.043	11.333	0.975		
19.102	0.068	35.813	0.053	2.8758320515E+001	7.0630001850E-002	2.5581708636E+001	0.043	11.333	0.975			
19.819	0.140	35.853	0.053	3.6674009386E+001	3.3214107597E-001	9.1287922199E+000	0.043	7.285	0.667			
20.070	0.162	35.864	0.050	3.8800763743E+001	4.6654856927E-001	9.0858426913E+000	0.043	7.898	0.656			
20.787	0.232	35.902	0.059	4.6597912495E+001	1.2408864895E+000	1.2005651770E+001	0.066	9.566	0.660			
21.504	0.310	35.948	0.072	5.6012099857E+001	2.5925201104E+000	1.4939083865E+001	0.111	7.987	0.697			
22.220	0.399	36.005	0.080	6.8014625104E+001	4.6147577475E+000	1.6984350707E+001	0.161	5.796	0.763			
22.937	0.488	36.063	0.088	8.0360912757E+001	6.8221496688E+000	1.6949712780E+001	0.200	4.854	0.840			
23.654	0.589	36.131	0.101	9.2313780974E+001	9.1359814946E+000	1.5866109557E+001	0.231	4.520	0.926			
24.371	0.697	36.208	0.109	1.0310661200E+002	1.1350868117E+001	1.5281595269E+001	0.255	4.271	1.012			
24.638	0.739	36.238	0.120	1.0721349346E+002	1.2194783890E+001	1.5269138566E+001	0.263	4.182	1.047			
25.355	0.860	36.326	0.131	1.1797344959E+002	1.4527686206E+001	1.4473574546E+001	0.282	3.989	1.157			
26.072	0.991	36.425	0.147	1.2796285060E+002	1.6901148512E+001	1.3407504354E+001	0.300	3.829	1.282			
26.674	1.112	36.520	0.167	1.3576801097E+002	1.8936400266E+001	1.2538606380E+001	0.314	3.717	1.397			
27.250	1.108	36.622	0.192	1.4275868845E+002	2.0941068084E+001	1.1790218902E+001	0.333	3.566	1.514			
27.967	1.121	36.767	0.210	1.5090522291E+002	2.3529292927E+001	1.0976717648E+001	0.353	3.349	1.665			
28.468	1.140	36.878	0.236	1.5627143378E+002	2.5387667176E+001	1.0603746113E+001	0.367	3.188	1.770			
29.185	1.184	37.054	0.258	1.6376832876E+002	2.8203129082E+001	1.0351043651E+001	0.387	2.956	1.914			
29.902	1.246	37.248	0.286	1.7111071904E+002	3.1194124941E+001	1.0190607390E+001	0.408	2.733	2.043			
30.618	1.330	37.465	0.306	1.7837761215E+002	3.4445156279E+001	9.9370434960E+000	0.430	2.516	2.125			
31.335	1.421	37.688	0.313	1.8535649252E+002	3.7756664204E+001	9.7017297965E+000	0.452	2.328	2.162			
32.052	1.516	37.914	0.314	1.9228603925E+002	4.1142807772E+001	9.6423515242E+000	0.472	2.167	2.158			
32.769	1.607	38.138	0.308	1.9917979476E+002	4.4538483518E+001	9.5911474880E+000	0.491	2.038	2.119			
33.486	1.693	38.355	0.302	2.0603593524E+002	4.7902433241E+001	9.6592325204E+000	0.508	1.939	2.054			
34.202	1.777	38.571	0.294	2.1302729765E+002	5.1309418803E+001	9.6396880046E+000	0.525	1.859	1.976			
34.919	1.850	38.777	0.295	2.1985541905E+002	5.4601676711E+001	1.0037226345E+001	0.539	1.796	1.895			
35.636	1.935	38.994	0.302	2.2741669354E+002	5.8164147941E+001	1.0619007585E+001	0.554	1.741	1.813			
35.826	1.957	39.051	0.296	2.2943456686E+002	5.9099710779E+001	1.0656448511E+001	0.557	1.727	1.793			
36.543	2.037	39.263	0.289	2.3712409245E+002	6.2633787495E+001	1.0620797942E+001	0.571	1.681	1.721			
37.259	2.107	39.465	0.276	2.4466057263E+002	6.6031636031E+001	1.0374145230E+001	0.583	1.642	1.662			
37.976	2.168	39.658	0.261	2.5199649620E+002	6.9261066089E+001	1.0064107798E+001	0.593	1.608	1.613			
38.693	2.218	39.840	0.248	2.5908850585E+002	7.2294186183E+001	9.7242750682E+000	0.601	1.578	1.576			
39.270	2.251	39.979	0.235	2.6462069819E+002	7.4589893486E+001	9.4886055475E+000	0.606	1.557	1.554			
39.987	2.284	40.144	0.246	2.7133392562E+002	7.7269655359E+001	1.0069028408E+001	0.619	1.534	1.534			
40.704	2.340	40.332	0.262	2.7905568561E+002	8.0126939564E+001	1.0181125416E+001	0.632	1.509	1.526			
40.772	2.344	40.349	0.246	2.7975288875E+002	8.0375699246E+001	1.0097942716E+001	0.633	1.507	1.525			
41.114	2.355	40.433	0.230	2.8315568367E+002	8.1584019044E+001	9.6591440488E+000	0.639	1.497	1.525			
41.831	2.362	40.592	0.213	2.8961570048E+002	8.3776728857E+001	8.6370105097E+000	0.649	1.481	1.529			
42.547	2.357	40.739	0.200	2.9553772621E+002	8.5661576049E+001	8.0411309554E+000	0.656	1.467	1.539			
43.264	2.344	40.879	0.191	3.0114348842E+002	8.7340448909E+001	7.6281257407E+000	0.663	1.457	1.551			
43.981	2.326	41.013	0.184	3.0647342871E+002	8.8843364485E+001	7.2704992899E+000	0.669	1.448	1.565			
44.698	2.303	41.142	0.176	3.1156649663E+002	9.0201475790E+001	6.8777556390E+000	0.673	1.441	1.581			
45.415	2.274	41.265	0.171	3.1633339852E+002	9.1405311360E+001	6.5551076422E+000	0.677	1.437	1.595			
45.590	2.266	41.295	0.169	3.1747860146E+002	9.1689439271E+001	6.5100889435E+000	0.678	1.435	1.599			
45.600	2.266	41.297	0.168	3.1754368995E+002	9.1705533326E+001	6.5038933612E+000	0.678	1.435	1.599			
45.620	2.265	41.300	0.175	3.1767356961E+002	9.1737540690E+001	6.5005708839E+000	0.678	1.435	1.599			
46.337	2.238	41.425	0.176	3.2250242597E+002	9.2888117373E+001	6.7809338461E+000	0.681	1.432	1.612			
47.054	2.213	41.552	0.181	3.2739473543E+002	9.3998869286E+001	6.9996963472E+000	0.684	1.431	1.621			
47.770	2.194	41.686	0.191	3.3253721032E+002	9.5149032795E+001	7.3735085692E+000	0.687	1.430	1.629			
48.487	2.182	41.826	0.202	3.3796541803E+002	9.6359248339E+001	7.7891905161E+000	0.690	1.429	1.633			
49.204	2.178	41.974	0.213	3.4370381573E+002	9.7639261443E+001	8.2408719569E+000	0.693	1.428	1.634			
49.921	2.183	42.132	0.226	3.4977955523E+002	9.8995687848E+001	8.7326105104E+000	0.696	1.428	1.632			

50.638	2.198	42.298	0.235	3.5622291070E+002	1.0043218249E+002	9.0771438821E+000	0.699	1.427	1.625
51.354	2.215	42.468	0.211	3.6279257420E+002	1.0188866710E+002	8.1642153438E+000	0.702	1.427	1.614
52.071	2.196	42.601	0.182	3.6792715276E+002	1.0301220796E+002	6.8018597547E+000	0.704	1.426	1.600
52.321	2.186	42.644	0.182	3.6959384174E+002	1.0337298889E+002	6.8020624760E+000	0.705	1.426	1.595
53.038	2.166	42.777	0.187	3.7472898282E+002	1.0447525382E+002	7.2354371349E+000	0.707	1.425	1.576
53.754	2.149	42.912	0.191	3.7996658475E+002	1.0559148271E+002	7.3809727568E+000	0.709	1.423	1.555
54.471	2.135	43.050	0.196	3.8531036611E+002	1.0672913861E+002	7.5628770109E+000	0.711	1.421	1.531
55.188	2.125	43.193	0.202	3.9080874649E+002	1.0791097942E+002	7.7848596471E+000	0.713	1.418	1.506
55.905	2.119	43.339	0.209	3.9647076277E+002	1.0915461019E+002	8.0674757813E+000	0.715	1.414	1.480
56.622	2.120	43.493	0.215	4.0237430244E+002	1.1051078756E+002	8.2705485344E+000	0.718	1.407	1.453
57.338	2.123	43.648	0.217	4.0832744439E+002	1.1195582738E+002	8.2852825650E+000	0.721	1.400	1.428
58.055	2.127	43.804	0.213	4.1425210680E+002	1.1351084508E+002	7.9800014769E+000	0.725	1.390	1.405
58.772	2.123	43.953	0.209	4.1976759693E+002	1.1512777637E+002	7.6499122666E+000	0.730	1.380	1.387
59.489	2.122	44.104	0.214	4.2521904253E+002	1.1692146677E+002	7.5610229999E+000	0.736	1.368	1.372
60.206	2.125	44.259	0.219	4.3060710075E+002	1.1892994585E+002	7.4537918699E+000	0.743	1.354	1.362
60.794	2.130	44.390	0.228	4.3496284311E+002	1.2074662141E+002	7.4150936346E+000	0.750	1.342	1.355
61.511	2.145	44.557	0.237	4.4028937308E+002	1.2324578631E+002	7.3723331877E+000	0.760	1.326	1.351
62.060	2.161	44.689	0.261	4.4431261775E+002	1.2534452702E+002	7.5901158142E+000	0.769	1.314	1.350
62.777	2.206	44.887	0.283	4.4999905050E+002	1.2861216085E+002	7.9613399379E+000	0.775	1.295	1.350
63.494	2.261	45.095	0.294	4.5572601706E+002	1.3215638769E+002	8.0010698769E+000	0.783	1.276	1.352
64.210	2.323	45.309	0.306	4.6146940676E+002	1.3589740253E+002	8.1594251512E+000	0.791	1.257	1.354
64.927	2.395	45.534	0.310	4.6742339188E+002	1.3989082876E+002	8.2026371375E+000	0.801	1.237	1.355
65.644	2.463	45.754	0.302	4.7322873041E+002	1.4384594614E+002	7.9990683621E+000	0.810	1.218	1.354
66.361	2.523	45.967	0.287	4.7889087876E+002	1.4773358498E+002	7.7066115858E+000	0.818	1.199	1.351
67.078	2.570	46.166	0.267	4.8427695044E+002	1.5144995287E+002	7.3587127876E+000	0.826	1.180	1.345
67.794	2.601	46.350	0.251	4.8944035010E+002	1.5502641810E+002	7.0081696051E+000	0.833	1.162	1.336
68.080	2.608	46.418	0.232	4.9141959156E+002	1.5641332445E+002	6.9324191707E+000	0.836	1.155	1.332
68.797	2.621	46.583	0.230	4.9639241019E+002	1.5993359558E+002	7.0354552302E+000	0.850	1.138	1.319
69.514	2.633	46.748	0.235	5.0150563995E+002	1.6373729137E+002	7.5453958798E+000	0.866	1.119	1.304
69.802	2.643	46.819	0.268	5.0372584488E+002	1.6548709247E+002	7.9232227194E+000	0.874	1.111	1.296
70.518	2.689	47.017	0.292	5.0978412200E+002	1.7062449073E+002	8.8282682457E+000	0.895	1.091	1.275
71.235	2.757	47.238	0.290	5.1638207505E+002	1.7663029803E+002	8.9539065773E+000	0.921	1.069	1.251
71.952	2.799	47.433	0.230	5.2262046763E+002	1.8253963304E+002	8.4582905273E+000	0.945	1.050	1.229
72.669	2.782	47.568	0.189	5.2850790411E+002	1.8829301626E+002	8.4134937090E+000	0.969	1.034	1.209
73.380	2.765	47.703	0.270	5.3463324968E+002	1.9429680001E+002	8.2481052932E+000	0.994	1.020	1.191
74.097	2.864	47.954	0.351	5.4028266133E+002	1.9976895544E+002	7.4646777312E+000	1.004	1.009	1.177
74.814	2.962	48.206	0.351	5.4533463265E+002	2.0450929055E+002	6.5715303184E+000	1.010	1.000	1.166
75.000	2.988	48.271	0.242	5.4653645563E+002	2.0561464411E+002	6.3521249841E+000	1.012	0.998	1.163
75.717	2.988	48.424	0.209	5.5082636563E+002	2.0926183504E+002	5.6220960217E+000	1.014	0.993	1.157
75.820	2.985	48.442	0.180	5.5140116919E+002	2.0970165594E+002	5.7145938367E+000	1.013	0.992	1.156
75.840	2.984	48.446	0.178	5.5151602199E+002	2.0978539722E+002	5.7460222619E+000	1.014	0.992	1.156
76.050	2.977	48.483	0.177	5.5273014463E+002	2.1064926550E+002	5.8770820648E+000	1.018	0.991	1.154
76.767	2.950	48.610	0.170	5.5717661567E+002	2.1317233061E+002	6.1990095223E+000	1.030	0.987	1.150
77.467	2.917	48.725	0.161	5.6151345988E+002	2.1506080709E+002	6.3409990857E+000	1.038	0.985	1.147
78.184	2.877	48.838	0.156	5.6616592057E+002	2.1625732560E+002	6.4252739439E+000	1.043	0.983	1.144
78.380	2.865	48.868	0.147	5.6742388838E+002	2.1647411097E+002	6.4150653002E+000	1.044	0.983	1.143
78.516	2.855	48.887	0.146	5.6829533321E+002	2.1652433420E+002	6.4852844461E+000	1.044	0.982	1.142
79.233	2.808	48.992	0.146	5.7318970673E+002	2.1637626165E+002	6.4492308606E+000	1.042	0.981	1.135
79.250	2.806	48.994	0.138	5.7330219709E+002	2.1636458304E+002	6.4551586952E+000	1.042	0.981	1.135
79.967	2.753	49.093	0.137	5.7837518668E+002	2.1532047136E+002	7.3612481075E+000	1.036	0.981	1.125
80.684	2.697	49.190	0.128	5.8385530307E+002	2.1335367317E+002	7.4370800832E+000	1.025	0.980	1.110
81.400	2.631	49.276	0.111	5.8903700559E+002	2.1077050215E+002	6.3888511109E+000	1.011	0.979	1.093
81.838	2.580	49.319	0.096	5.9160593433E+002	2.0901906710E+002	5.1694515974E+000	1.002	0.978	1.081
81.840	2.579	49.319	0.090	5.9161856148E+002	2.0900927958E+002	5.1660121672E+000	1.002	0.978	1.081
82.557	2.491	49.383	0.093	5.9542969719E+002	2.0588148327E+002	5.1760106494E+000	0.987	0.977	1.060
83.237	2.411	49.448	0.095	5.9885852315E+002	2.0274655627E+002	4.6366084374E+000	0.973	0.975	1.039
83.322	2.401	49.456	0.107	5.9924901407E+002	2.0236257254E+002	4.5891581893E+000	0.976	0.974	1.036
84.000	2.330	49.530	0.110	6.0237883220E+002	1.9913395203E+002	3.9845786087E+000	0.962	0.972	1.014
84.190	2.312	49.552	0.120	6.0310228779E+002	1.9829980481E+002	3.6817445682E+000	0.959	0.971	1.009
84.907	2.245	49.638	0.035	6.0540086008E+002	1.9537614093E+002	2.6168673720E+000	0.970	0.969	0.990
85.520	2.075	49.598	-0.052	6.0669610715E+002	1.9331719351E+002	1.9854445198E+000	0.983	0.971	0.979
85.539	2.077	49.605	0.357	6.0673364572E+002	1.9325701954E+002	1.9419054465E+000	0.982	0.971	0.978
86.256	2.180	49.861	0.327	6.0705102124E+002	1.9116059243E+002	-3.6069740202E-001	0.963	0.980	0.972
86.973	2.241	50.074	0.296	6.0621654891E+002	1.8926025827E+002	-2.2871774871E+000	0.946	0.996	0.971
87.689	2.299	50.285	0.305	6.0377211717E+002	1.8760891058E+002	-4.7620370442E+000	0.933	1.019	0.977
88.406	2.372	50.511	0.330	5.9938967922E+002	1.8618147822E+002	-7.7352045553E+000	0.923	1.050	0.992
89.123	2.467	50.758	0.359	5.9268290618E+002	1.8452269340E+002	-1.2445360441E+001	0.914	1.091	1.015
89.540	2.538	50.918	0.384	5.8674308943E+002	1.8317943888E+002	-1.5167863136E+001	0.909	1.120	1.033
90.257	2.660	51.193	0.382	5.7473069766E+002	1.8048695208E+002	-1.7707061060E+001	0.900	1.177	1.067
90.478	2.696	51.276	0.388	5.7075223748E+002	1.7959512320E+002	-1.8775715940E+001	0.897	1.197	1.078
91.195	2.640	51.557	0.383	5.5548965138E+002	1.7602997274E+002	-2.2466551972E+001	0.894	1.254	1.116
91.390	2.617	51.626	0.357	5.5103792332E+002	1.7490886570E+002	-2.3044694710E+001	0.893	1.265	1.125
92.107	2.537	51.882	0.363	5.3384043939E+002	1.7044080733E+002	-2.5065759047E+001	0.900	1.301	1.159

92.824	2.465	52.146	0.375	5.1510358072E+002	1.6526680186E+002	-2.6950332341E+001	0.905	1.325	1.192
93.540	2.402	52.420	0.388	4.9520436721E+002	1.5947223267E+002	-2.8299485499E+001	0.908	1.335	1.222
94.100	2.360	52.641	0.408	4.7913290211E+002	1.5461246101E+002	-2.9175290822E+001	0.910	1.333	1.243
94.817	2.323	52.940	0.418	4.5780177165E+002	1.4792476494E+002	-3.0095229164E+001	0.894	1.317	1.264
94.850	2.322	52.955	0.431	4.5680213499E+002	1.4760245156E+002	-3.0078365004E+001	0.893	1.315	1.265
95.410	2.300	53.196	0.477	4.4026475171E+002	1.4221642726E+002	-3.1309266628E+001	0.880	1.290	1.274
96.127	2.332	53.564	0.529	4.1619069040E+002	1.3412938535E+002	-3.3657038697E+001	0.857	1.243	1.276
96.844	2.386	53.955	0.546	3.9201392646E+002	1.2570690090E+002	-3.3057633813E+001	0.831	1.191	1.265
97.560	2.442	54.347	0.546	3.6879917368E+002	1.1751848042E+002	-3.2028622268E+001	0.802	1.144	1.245
98.277	2.496	54.737	0.541	3.4609760358E+002	1.0950603118E+002	-3.1415872049E+001	0.772	1.103	1.219
98.994	2.545	55.123	0.535	3.2376129123E+002	1.0164267780E+002	-3.1079543614E+001	0.741	1.069	1.192
99.711	2.590	55.505	0.518	3.0154188252E+002	9.3839832123E+001	-3.0364683880E+001	0.707	1.042	1.167
100.428	2.615	55.866	0.466	2.8023039509E+002	8.6366641121E+001	-2.7755685992E+001	0.673	1.021	1.145
101.144	2.585	56.173	0.423	2.6175125308E+002	7.9892905207E+001	-2.5565324033E+001	0.641	1.009	1.131
101.480	2.566	56.311	0.415	2.5320554677E+002	7.6880586160E+001	-2.7516627080E+001	0.625	1.005	1.126
101.505	2.565	56.322	0.423	2.5251109004E+002	7.6635238467E+001	-2.7642341475E+001	0.624	1.005	1.126
102.222	2.413	56.625	0.424	2.3326481104E+002	6.9858473061E+001	-2.7094712732E+001	0.603	1.002	1.122
102.605	2.333	56.789	0.428	2.2282794055E+002	6.6137778122E+001	-2.7257481423E+001	0.590	1.002	1.123
103.322	2.186	57.096	0.434	2.0324682948E+002	5.9045199979E+001	-2.7408381085E+001	0.562	1.008	1.127
104.039	2.045	57.410	0.448	1.8353520841E+002	5.1818329354E+001	-2.7644206150E+001	0.526	1.016	1.137
104.688	1.930	57.707	0.468	1.6550277223E+002	4.5182970332E+001	-2.7734411630E+001	0.492	1.026	1.148
105.405	1.818	58.050	0.504	1.4565510202E+002	3.7934119355E+001	-2.8010203319E+001	0.450	1.039	1.163
106.122	1.743	58.430	0.553	1.2534726605E+002	3.0719175885E+001	-2.8920423268E+001	0.400	1.055	1.182
106.838	1.701	58.842	0.562	1.0419470196E+002	2.3308914147E+001	-2.7313124426E+001	0.337	1.078	1.207
107.028	1.677	58.939	0.493	9.9123261073E+001	2.1444730473E+001	-2.6053967863E+001	0.319	1.084	1.213
107.745	1.573	59.290	0.499	8.2283414217E+001	1.5362047423E+001	-2.2557843019E+001	0.254	1.096	1.228
108.367	1.496	59.607	0.564	6.8760172393E+001	1.0930180337E+001	-2.2574934107E+001	0.198	1.099	1.242
109.084	1.120	60.045	0.715	5.1893953271E+001	6.5260971988E+000	-2.5795762014E+001	0.144	1.104	1.270
109.800	0.893	60.632	0.835	3.1779295483E+001	2.6407261899E+000	-2.5728306225E+001	0.076	1.134	1.330
110.517	0.689	61.243	0.839	1.5009781168E+001	6.5156821619E-001	-1.9108406988E+001	0.043	1.220	1.428
111.234	0.468	61.835	0.779	4.3854295295E+000	7.2351717433E-002	-9.5494507895E+000	0.043	1.297	1.515
111.600	0.303	62.086	0.779	1.8758998134E+000	2.4058938272E-002	-5.4245206283E+000	0.043	1.400	1.631

LEGENDA SIMBOLI

- X(m) : Ascissa sinistra concio
- ht(m) : Altezza linea di thrust da nodo sinistro base concio
- yt(m) : coordinata Y linea di trust
- yt'(-) : gradiente pendenza locale linea di trust
- E(x)(kN/m) : Forza Normale interconcio
- T(x)(kN/m) : Forza Tangenziale interconcio
- E' (kN) : derivata Forza normale interconcio
- Rho(x) (-) : fattore mobilitazione resistenza al taglio verticale interconcio ZhU et al.(2003)
- FS_qFEM(x)(-) : fattore di sicurezza locale stimato (locale in X) by qFEM
- FS_srmFEM(x)(-) : fattore di sicurezza locale stimato (locale in X) by SRM Procedure

TABELLA SFORZI DI TAGLIO DISTRIBUITI LUNGO SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	dx (m)	dl (m)	alpha (°)	TauStress (kPa)	TauF (kN/m)	TauStrength (kPa)	TauS (kN/m)
18.385	0.717	0.718	-2.552	0.001	0.001	11.506	8.256
19.102	0.717	0.718	-2.552	0.019	0.013	12.543	9.000
19.819	0.251	0.252	-2.552	0.031	0.008	13.234	3.331
20.070	0.717	0.718	-2.552	0.053	0.038	14.443	10.363
20.787	0.717	0.718	-2.552	0.071	0.051	16.067	11.528
21.504	0.717	0.718	-2.552	0.088	0.063	17.795	12.768
22.220	0.717	0.718	-2.552	0.106	0.076	19.295	13.844
22.937	0.717	0.718	-2.552	0.123	0.088	20.826	14.943
23.654	0.717	0.718	-2.552	0.141	0.101	22.320	16.015
24.371	0.267	0.268	-2.552	0.153	0.041	23.401	6.261
24.638	0.717	0.718	-2.552	0.165	0.118	24.544	17.611
25.355	0.717	0.718	-2.552	0.182	0.131	26.176	18.781
26.072	0.602	0.603	-2.552	0.198	0.120	27.738	16.717
26.674	0.576	0.586	10.439	13.653	8.000	26.902	15.762
27.250	0.717	0.729	10.439	14.195	10.346	27.737	20.216
27.967	0.501	0.510	10.439	14.846	7.567	28.781	14.670
28.468	0.717	0.729	10.439	15.497	11.295	29.821	21.735
29.185	0.717	0.729	10.439	16.263	11.853	31.109	22.674
29.902	0.717	0.729	10.439	17.029	12.412	32.444	23.647
30.618	0.717	0.729	10.439	17.795	12.970	33.797	24.633
31.335	0.717	0.729	10.439	18.561	13.529	35.170	25.635

32.052	0.717	0.729	10.439	19.327	14.087	36.540	26.633
32.769	0.717	0.729	10.439	20.094	14.646	37.894	27.619
33.486	0.717	0.729	10.439	20.860	15.204	39.233	28.596
34.202	0.717	0.729	10.439	21.626	15.762	40.527	29.539
34.919	0.717	0.729	10.439	22.392	16.321	41.833	30.491
35.636	0.190	0.193	10.439	22.877	4.413	42.686	8.234
35.826	0.717	0.729	10.439	23.384	17.043	43.853	31.963
36.543	0.717	0.729	10.439	24.195	17.635	44.961	32.771
37.259	0.717	0.729	10.439	25.006	18.226	46.066	33.576
37.976	0.717	0.729	10.439	25.817	18.817	47.167	34.378
38.693	0.577	0.587	10.439	26.549	15.577	48.160	28.257
39.270	0.717	0.729	10.439	26.871	19.585	48.586	35.413
39.987	0.717	0.729	10.439	26.862	19.579	48.595	35.419
40.704	0.069	0.070	10.439	26.857	1.881	48.556	3.400
40.772	0.341	0.349	11.991	29.767	10.389	47.945	16.734
41.114	0.717	0.733	11.991	29.692	21.758	47.827	35.047
41.831	0.717	0.733	11.991	29.589	21.683	47.678	34.938
42.547	0.717	0.733	11.991	29.486	21.607	47.537	34.835
43.264	0.717	0.733	11.991	29.384	21.532	47.398	34.733
43.981	0.717	0.733	11.991	29.281	21.457	47.260	34.632
44.698	0.717	0.733	11.991	29.178	21.382	47.123	34.531
45.415	0.175	0.179	11.991	29.114	5.218	47.041	8.431
45.590	0.010	0.010	11.991	29.101	0.298	47.024	0.481
45.600	0.020	0.020	11.991	29.099	0.595	47.021	0.961
45.620	0.717	0.733	11.991	29.046	21.285	46.956	34.409
46.337	0.717	0.733	11.991	28.944	21.210	46.826	34.314
47.054	0.717	0.733	11.991	28.841	21.134	46.702	34.223
47.770	0.717	0.733	11.991	28.738	21.059	46.580	34.133
48.487	0.717	0.733	11.991	28.636	20.984	46.458	34.044
49.204	0.717	0.733	11.991	28.533	20.909	46.337	33.955
49.921	0.717	0.733	11.991	28.430	20.834	46.216	33.866
50.638	0.717	0.733	11.991	28.328	20.758	46.090	33.775
51.354	0.717	0.733	11.991	28.225	20.683	45.940	33.664
52.071	0.250	0.255	11.991	28.156	7.186	45.848	11.701
52.321	0.717	0.733	12.001	28.104	20.595	45.764	33.536
53.038	0.717	0.733	12.001	28.001	20.519	45.637	33.444
53.754	0.717	0.733	12.001	27.897	20.444	45.511	33.351
54.471	0.717	0.733	12.001	27.794	20.368	45.387	33.260
55.188	0.717	0.733	12.001	27.691	20.292	45.264	33.170
55.905	0.717	0.733	12.001	27.588	20.217	45.144	33.082
56.622	0.717	0.733	12.001	27.484	20.141	45.023	32.994
57.338	0.717	0.733	12.001	27.381	20.065	44.903	32.906
58.055	0.717	0.733	12.001	27.278	19.990	44.780	32.816
58.772	0.717	0.733	12.001	27.174	19.914	44.665	32.732
59.489	0.717	0.733	12.001	27.071	19.838	44.553	32.649
60.206	0.588	0.602	12.001	26.977	16.229	44.451	26.742
60.794	0.717	0.733	12.011	26.899	19.713	44.352	32.503
61.511	0.549	0.561	12.011	26.808	15.049	44.256	24.843
62.060	0.717	0.733	12.011	27.154	19.899	44.720	32.773
62.777	0.717	0.733	12.011	27.925	20.465	45.691	33.484
63.494	0.717	0.733	12.011	28.697	21.030	46.656	34.192
64.210	0.717	0.733	12.011	29.468	21.596	47.625	34.902
64.927	0.717	0.733	12.011	30.240	22.161	48.574	35.597
65.644	0.717	0.733	12.011	31.011	22.726	49.521	36.291
66.361	0.717	0.733	12.011	31.783	23.292	50.460	36.980
67.078	0.717	0.733	12.011	32.554	23.857	51.402	37.670
67.794	0.286	0.292	12.011	33.094	9.663	52.061	15.201
68.080	0.717	0.733	12.011	33.149	24.293	52.131	38.204
68.797	0.717	0.733	12.011	32.951	24.148	51.908	38.040
69.514	0.288	0.294	12.011	32.813	9.659	51.776	15.242
69.802	0.717	0.733	12.021	32.694	23.961	51.655	37.857
70.518	0.717	0.733	12.021	32.496	23.815	51.472	37.722
71.235	0.717	0.733	12.021	32.298	23.670	51.221	37.538
71.952	0.717	0.733	12.021	32.100	23.525	50.965	37.351
72.669	0.711	0.727	12.021	31.902	23.199	50.743	36.901
73.380	0.717	0.733	12.021	32.372	23.724	51.281	37.582
74.097	0.717	0.733	12.021	33.508	24.557	52.629	38.571
74.814	0.186	0.191	12.021	34.223	6.522	53.477	10.191
75.000	0.717	0.733	12.021	41.329	30.289	62.192	45.579
75.717	0.103	0.106	12.021	41.979	4.429	62.951	6.642
75.820	0.020	0.020	12.021	42.053	0.860	63.039	1.289
75.840	0.210	0.215	12.021	41.966	9.010	62.928	13.511
76.050	0.717	0.733	12.021	41.614	30.498	62.464	45.778

76.767	0.700	0.716	12.021	41.075	29.400	61.759	44.205
77.467	0.717	0.733	12.021	40.537	29.709	61.043	44.737
78.184	0.196	0.201	12.021	40.190	8.067	60.587	12.162
78.380	0.136	0.139	12.021	40.064	5.560	60.395	8.381
78.516	0.717	0.733	12.021	39.740	29.124	59.966	43.948
79.233	0.017	0.018	12.021	39.461	0.705	59.599	1.064
79.250	0.717	0.733	12.021	39.182	28.716	59.215	43.397
79.967	0.717	0.733	12.021	38.637	28.316	58.479	42.858
80.684	0.717	0.733	12.021	38.093	27.917	57.764	42.334
81.400	0.437	0.447	12.021	37.654	16.830	57.204	25.567
81.838	0.002	0.002	12.021	37.487	0.094	56.998	0.142
81.840	0.717	0.733	12.021	37.214	27.273	56.643	41.512
82.557	0.680	0.695	12.021	36.683	25.504	55.977	38.918
83.237	0.085	0.087	12.021	36.392	3.168	55.623	4.843
83.322	0.678	0.693	12.031	36.353	25.203	52.241	36.218
84.000	0.190	0.194	12.031	29.862	5.801	43.204	8.393
84.190	0.717	0.733	12.031	28.565	20.935	41.295	30.265
84.907	0.613	0.627	12.031	26.198	16.426	37.119	23.272
85.520	0.019	0.019	12.031	25.128	0.487	34.559	0.669
85.539	0.717	0.733	12.031	25.935	19.007	35.526	26.037
86.256	0.717	0.733	12.031	27.506	20.159	35.788	26.229
86.973	0.717	0.733	12.031	29.077	21.311	35.947	26.346
87.689	0.717	0.733	12.031	30.649	22.462	36.172	26.510
88.406	0.717	0.733	12.031	32.220	23.614	36.567	26.800
89.123	0.417	0.426	12.031	33.463	14.269	36.751	15.671
89.540	0.717	0.733	12.031	34.483	25.273	37.401	27.411
90.257	0.221	0.226	12.031	35.220	7.959	37.624	8.503
90.478	0.717	0.792	25.148	60.238	47.701	32.387	25.646
91.195	0.195	0.216	25.148	60.440	13.044	32.430	6.999
91.390	0.717	0.792	25.148	59.378	47.019	31.920	25.276
92.107	0.717	0.792	25.148	57.170	45.271	31.009	24.555
92.824	0.717	0.792	25.148	54.961	43.522	30.270	23.970
93.540	0.560	0.618	25.148	52.995	32.761	29.778	18.408
94.100	0.717	0.792	25.148	52.335	41.442	30.044	23.791
94.817	0.033	0.037	25.148	52.546	1.927	31.030	1.138
94.850	0.560	0.619	25.148	52.713	32.610	31.151	19.271
95.410	0.717	0.792	25.148	53.073	42.026	32.400	25.656
96.127	0.717	0.792	25.148	53.476	42.346	33.747	26.723
96.844	0.717	0.792	25.148	53.880	42.666	35.001	27.716
97.560	0.717	0.792	25.148	54.284	42.985	36.259	28.712
98.277	0.717	0.792	25.148	54.688	43.305	37.519	29.710
98.994	0.717	0.792	25.148	55.092	43.625	38.819	30.739
99.711	0.717	0.792	25.148	55.495	43.945	40.049	31.713
100.428	0.717	0.792	25.148	55.899	44.264	41.026	32.487
101.144	0.336	0.371	25.148	56.195	20.833	42.072	15.597
101.480	0.025	0.028	25.148	56.264	1.560	42.683	1.183
101.505	0.717	0.849	32.397	63.106	53.573	38.380	32.582
102.222	0.383	0.454	32.397	60.903	27.651	38.290	17.384
102.605	0.717	0.849	32.397	58.701	49.833	37.775	32.069
103.322	0.717	0.849	32.397	55.830	47.396	37.295	31.661
104.039	0.649	0.769	32.397	52.906	40.680	38.960	29.956
104.688	0.717	0.849	32.397	50.569	42.929	37.844	32.127
105.405	0.717	0.849	32.397	48.115	40.847	36.695	31.152
106.122	0.717	0.849	32.397	45.662	38.764	35.657	30.271
106.838	0.190	0.225	32.397	44.111	9.911	34.764	7.811
107.028	0.717	0.849	32.397	42.559	36.130	33.583	28.510
107.745	0.622	0.736	32.397	40.268	29.657	32.055	23.608
108.367	0.717	1.085	48.634	38.633	41.904	24.050	26.086
109.084	0.717	1.085	48.634	32.605	35.365	22.129	24.002
109.800	0.717	1.085	48.634	26.576	28.826	19.263	20.893
110.517	0.717	1.085	48.634	20.547	22.287	16.730	18.147
111.234	0.366	0.554	48.634	15.994	8.856	15.216	8.426
111.600	0.717	1.085	48.634	11.804	12.803	14.080	15.272

 LEGENDA SIMBOLI

X(m) : Ascissa sinistra concio
 dx(m) : Larghezza concio
 dl(m) : lunghezza base concio
 alpha(°) : Angolo pendenza base concio
 TauStress(kPa) : Sforzo di taglio su base concio
 TauF (kN/m) : Forza di taglio su base concio
 TauStrength(kPa) : Resistenza al taglio su base concio
 TauS (kN/m) : Forza resistente al taglio su base concio

CASO B -PROGETTO-

Report elaborazioni

SSAP 5.0.2 - Slope Stability Analysis Program (1991,2021)
WWW.SSAP.EU
Build No. 12007
BY
Dr. Geol. LORENZO BORSELLI *,**
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** Gia' Ricercatore CNR-IRPI fino a Luglio 2011

Ultima Revisione struttura tabelle del report: 21 Febbraio 2021

Descrizione:

Modello pendio: CASO B PROGETTO.mod

----- PARAMETRI DEL MODELLO DEL PENDIO -----

___ PARAMETRI GEOMETRICI - Coordinate X Y (in m) ___

SUP T.		SUP 2		SUP 3		SUP 4	
X	Y	X	Y	X	Y	X	Y
0.00	30.73	0.00	27.50	0.00	24.00	0.00	15.50
12.70	33.89	45.62	42.31	45.59	38.80	45.60	30.30
27.25	38.72	76.05	47.93	75.84	43.13	76.05	38.61
39.27	44.22	94.85	51.93	95.41	50.10	94.85	44.93
62.06	48.35	170.31	76.50	170.31	74.49	170.31	69.50
68.08	51.04	-	-	-	-	-	-
73.38	51.85	-	-	-	-	-	-
75.82	53.21	-	-	-	-	-	-
84.19	53.61	-	-	-	-	-	-
85.52	52.71	-	-	-	-	-	-
91.39	56.07	-	-	-	-	-	-
94.10	56.40	-	-	-	-	-	-
101.48	60.74	-	-	-	-	-	-
111.60	63.30	-	-	-	-	-	-
119.84	66.26	-	-	-	-	-	-
131.00	69.53	-	-	-	-	-	-
133.02	71.23	-	-	-	-	-	-
157.83	77.62	-	-	-	-	-	-
170.31	80.51	-	-	-	-	-	-

---- SUP FALDA -----

X Y (in m)

0.00	30.73
12.70	33.89
20.07	36.34
78.38	39.13
79.25	41.11
81.84	45.27
89.54	55.01
139.52	57.54
145.20	66.31
150.21	70.78
161.42	78.45
170.31	80.51

----- GESTIONE ACQUIFERI -----

Strati esclusi da acquifero:

Esclusione sovraccarico pendio sommerso: NON ATTIVATA

EFFETTO TENSION CRACK IN TESTA RIEMPITO DI ACQUA: ----> DISATTIVATO

In caso di superfici con tension crack in testa, la frattura di tensione

puo' venir viene considerata completamente riempita di acqua per la sua intera profondita'.

Viene quindi considerato una forza in testa, prodotta dalla pressione idrostatica.

La forza applicata ha un effetto destabilizzante aggiuntivo alle altre forze

destabilizzanti agenti.

Peso unitario fluido (kN/m³): 9.81

Parametri funzione dissipazione superficiale pressione dei fluidi:

Coefficiente A 0
 Coefficiente K 0.000800
 Pressione minima fluidi U_{o_Min} (kPa) 0.01
 Coefficiente di soprapressione oltre pressione idrostatica 1.00
 Limitazione dissipazione a Pressione Idrostatica = ATTIVA
 STABILITE CONDIZIONI PER LA VERIFICA CON SOVRAPPRESSIONE ACQUIFERI CON DISSIPAZIONE IN DIREZIONE DELLA SUPERFICIE

CALCOLO EFFETTO DI FILTRAZIONE NON ATTIVATO

----- PARAMETRI GEOMECCANICI -----

	fi'	C'	Cu	Gamm	Gamm_sat	STR_IDX	sgci	GSI	mi	D
STRATO 1	23.00	18.00	0.00	20.00	20.00	1.953	0.00	0.00	0.00	0.00
STRATO 2	23.00	18.00	0.00	20.00	20.00	1.953	0.00	0.00	0.00	0.00
STRATO 3	25.00	50.00	0.00	20.00	20.00	4.881	0.00	0.00	0.00	0.00
STRATO 4	35.00	0.00	0.00	20.00	20.00	2.404	0.00	0.00	0.00	0.00

LEGENDA: fi' _____ Angolo di attrito interno efficace(in gradi)

C' _____ Coesione efficace (in Kpa)

Cu _____ Resistenza al taglio Non drenata (in Kpa)

Gamm _____ Peso di volume terreno fuori falda (in KN/m³)

Gamm_sat _____ Peso di volume terreno immerso (in KN/m³)

STR_IDX _____ Indice di resistenza (usato in solo in 'SNIFF SEARCH') (adimensionale)

----- SOLO Per AMMASSI ROCCIOSI FRATTURATI - Parametri Criterio di Rottura di Hoek (2002)-

sgci _____ Resistenza Compressione Uniassiale Rocca Intatta (in MPa)

GSI _____ Geological Strenght Index ammasso(adimensionale)

mi _____ Indice litologico ammasso(adimensionale)

D _____ Fattore di disturbo ammasso(adimensionale)

Fattore di riduzione NTC2018: gammaPHI=1.25 e gammaC=1.25 - DISATTIVATO (solo per ROCCE)

Uso CRITERIO DI ROTTURA Hoek et al.(2002,2006) - non-lineare - Generalizzato, secondo Lei et al.(2016)

----- SOVRACCARICHI PRESENTI -----

Nota Bene:

##Nota: la distribuzione del carico e delle forze unitarie puo' variare
in modo lineare tra gli estremi di coordinate X1 e X2

TABELLA SOVRACCARICHI IN SUPERFICIE

N. da X1 (-)	a X2 (m)	SX1 (kPa)	SX2 (kPa)	Alpha (°)	WsH1 (kN/m)	WsH2 (kN/m)	WsV1 (kN/m)	WsV2 (kN/m)
1	75.0000	84.0000	25.00	25.00	90.00	0.00	0.00	25.00

LEGENDA SIMBOLI

N.(-) : NUMERO SOVRACCARICO

X1(m) : Posizione carico da X1

X2(m) : a X2

SX1(kPa) : Carico in X1 (Kpa)

SX2(kPa) : Carico in X2 (Kpa)

Alpha(°) : Inclinazione carico (gradi):

Componenti distribuzione forza unitaria applicata:

WsH1, WsH2(kN/m) : forza unitaria Orizzontale (per metro di proiezione Verticale) : da X1 a X2 (vedasi cap.2 manuale)

WsV1, WsV2(kN/m) : forza unitaria Verticale (per metro di proiezione Orizzontale) : da X1 a X2 (vedasi Cap.2 manuale)

----- INFORMAZIONI GENERAZIONE SUPERFICI RANDOM -----

*** PARAMETRI PER LA GENERAZIONE DELLE SUPERFICI

MOTORE DI RICERCA: CONVEX RANDOM - Chen (1992)

FILTRAGGIO SUPERFICI : ATTIVATO

COORDINATE X1,X2,Y OSTACOLO : 0.00 0.00 0.00

LUNGHEZZA MEDIA SEGMENTI (m)*: 6.8 (+/-) 50%

INTERVALLO ASCISSE RANDOM STARTING POINT (Xmin .. Xmax): 3.41 156.69

LIVELLO MINIMO CONSIDERATO (Ymin): 29.00

INTERVALLO ASCISSE AMMESSO PER LA TERMINAZIONE (Xmin .. Xmax): 40.00 166.90

TOTALE SUPERFICI GENERATE : 10000

*NOTA IMPORTANTE: La lunghezza media dei segmenti non viene considerata nel caso di uso del motore di ricerca NEW RANOM SEARCH

----- INFORMAZIONI PARAMETRI DI CALCOLO -----

METODO DI CALCOLO : MORGENSTERN - PRICE (Morgenstern & Price, 1965)
 METODO DI ESPLORAZIONE CAMPO VALORI (λ_0, F_{s0}) ADOTTATO : A (rapido)
 COEFFICIENTE SISMICO UTILIZZATO K_h : 0.0000
 COEFFICIENTE SISMICO UTILIZZATO K_v (assunto Positivo): 0.0000
 COEFFICIENTE $c=K_v/K_h$ UTILIZZATO : 0.5000
 FORZA ORIZZONTALE ADDIZIONALE IN TESTA (kN/m): 0.00
 FORZA ORIZZONTALE ADDIZIONALE ALLA BASE (kN/m): 0.00

N.B. Le forze orizzontali addizionali in testa e alla base sono poste uguali a 0 durante le tutte le verifiche globali.
 I valori >0 impostati dall'utente sono utilizzati solo in caso di verifica singola

----- RISULTATO FINALE ELABORAZIONI -----

* DATI RELATIVI ALLE 10 SUPERFICI GENERATE CON MINOR F_s *

Fattore di sicurezza (FS)	1.6876 - Min. -	X	Y	Lambda= 0.3064
	6.00	32.22		
	6.92	31.73		
	8.76	31.09		
	10.55	30.46		
	11.65	30.41		
	13.01	30.38		
	14.67	30.33		
	16.30	30.29		
	18.39	30.62		
	19.37	30.77		
	20.81	30.99		
	22.89	31.67		
	24.44	32.18		
	25.75	32.61		
	27.48	33.22		
	29.39	33.89		
	30.93	34.66		
	32.59	35.51		
	33.53	35.98		
	35.48	36.97		
	37.01	37.75		
	38.14	38.35		
	38.80	38.93		
	39.94	39.93		
	40.73	40.64		
	42.09	41.87		
	42.44	42.26		
	42.44	44.79		

Fattore di sicurezza (FS)	1.6902 - N.2 --	X	Y	Lambda= 0.3830
	85.71	52.82		
	91.60	50.25		
	94.90	51.05		
	97.47	51.67		
	101.30	52.60		
	104.02	53.26		
	107.16	55.22		
	113.42	59.13		
	118.89	62.59		
	120.56	63.78		
	120.56	66.47		

Fattore di sicurezza (FS)	1.7095 - N.3 --	X	Y	Lambda= 0.3340
	9.68	33.14		
	13.35	31.02		
	16.02	31.30		
	20.42	31.77		
	25.58	32.32		
	30.05	34.08		
	35.69	36.29		
	38.92	38.67		

42.83 42.19
42.83 44.87

Fattore di sicurezza (FS) 1.7449 - N.4 -- X Y Lambda= 0.3464
82.23 53.52
92.64 50.90
103.32 52.79
110.16 55.02
123.56 59.40
129.16 62.87
139.66 70.19
140.16 70.55
140.16 73.07

Fattore di sicurezza (FS) 1.7543 - N.5 -- X Y Lambda= 0.3480
9.98 33.21
13.56 31.13
22.03 32.20
28.57 34.00
34.13 35.54
37.39 37.02
42.05 39.53
45.98 42.82
45.98 45.44

Fattore di sicurezza (FS) 1.7547 - N.6 -- X Y Lambda= 0.3447
83.38 53.57
88.22 51.11
90.29 50.29
92.83 50.82
98.11 51.93
102.27 53.46
104.73 54.37
107.15 55.26
109.38 56.19
111.27 57.28
114.25 60.08
116.76 62.45
116.76 65.16

Fattore di sicurezza (FS) 1.7571 - N.7 -- X Y Lambda= 0.3550
5.64 32.13
9.98 29.90
19.47 31.72
29.73 33.69
36.47 38.33
41.85 42.04
41.85 44.69

Fattore di sicurezza (FS) 1.7609 - N.8 -- X Y Lambda= 0.3327
11.13 33.50
18.38 30.99
25.90 32.68
38.29 37.22
44.92 42.59
44.92 45.24

Fattore di sicurezza (FS) 1.7619 - N.9 -- X Y Lambda= 0.3692
85.75 52.84
93.40 50.38
97.38 50.88
102.07 52.25
108.10 56.26
113.21 59.92
116.17 62.03
116.86 62.56
116.86 65.19

Fattore di sicurezza (FS) 1.7665 - N.10 -- X Y Lambda= 0.3818
 83.81 53.59
 90.45 50.16
 99.64 51.20
 115.52 59.37
 131.32 67.50
 133.50 68.68
 133.50 71.35

----- ANALISI DEFICIT DI RESISTENZA -----

DATI RELATIVI ALLE 10 SUPERFICIE GENERATE CON MINOR FS *

Analisi Deficit in riferimento a FS(progetto) = 1.200

Sup N.	FS	FTR(kN/m)	FTA(kN/m)	Bilancio(kN/m)	ESITO
1	1.688	1691.7	1002.4	488.8	Surplus
2	1.690	2020.5	1195.4	586.0	Surplus
3	1.710	1605.3	939.0	478.5	Surplus
4	1.745	3742.5	2144.9	1168.6	Surplus
5	1.754	1762.9	1004.9	557.0	Surplus
6	1.755	1889.2	1076.6	597.2	Surplus
7	1.757	1606.2	914.2	509.2	Surplus
8	1.761	1698.9	964.8	541.2	Surplus
9	1.762	1861.8	1056.7	593.7	Surplus
10	1.766	2893.6	1638.1	927.9	Surplus

Esito analisi: SURPLUS di RESISTENZA!

Valore minimo di SURPLUS di RESISTENZA (kN/m): 478.5

Note: FTR --> Forza totale Resistente lungo la superficie di scivolamento

FTA --> Forza totale Agente lungo la superficie di scivolamento

IMPORTANTE! : Il Deficit o il Surplus di resistenza viene espresso in kN per metro di LARGHEZZA rispetto al fronte della scarpata

TABELLA PARAMETRI CONCI DELLA SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	dx (m)	alpha (°)	W (kN/m)	ru (-)	U (kPa)	phi' (°)	(c',Cu) (kPa)
6.000	0.354	-28.31	0.98	0.49	1.37	23.00	18.00
6.354	0.354	-28.31	2.95	0.49	4.10	23.00	18.00
6.708	0.215	-28.31	2.76	0.49	6.70	23.00	18.00
6.923	0.354	-19.20	5.88	0.49	7.91	23.00	18.00
7.276	0.354	-19.20	7.38	0.49	9.98	23.00	18.00
7.630	0.354	-19.20	8.87	0.49	12.36	23.00	18.00
7.983	0.354	-19.20	10.36	0.49	14.53	23.00	18.00
8.337	0.354	-19.20	11.86	0.49	16.68	23.00	18.00
8.691	0.065	-19.20	2.34	0.49	18.63	23.00	18.00
8.756	0.354	-19.19	13.62	0.49	18.97	23.00	18.00
9.109	0.354	-19.19	15.12	0.49	20.86	23.00	18.00
9.463	0.354	-19.19	16.61	0.49	22.63	23.00	18.00
9.816	0.047	-19.19	2.34	0.49	24.37	23.00	18.00
9.864	0.354	-19.19	18.30	0.49	24.60	23.00	18.00
10.217	0.337	-19.19	18.82	0.49	26.23	23.00	18.00
10.554	0.354	-2.63	20.84	0.49	27.70	23.00	18.00
10.908	0.354	-2.63	21.58	0.49	29.20	23.00	18.00
11.261	0.354	-2.63	22.31	0.49	30.47	23.00	18.00
11.615	0.038	-2.63	2.44	0.49	31.62	23.00	18.00
11.653	0.354	-1.46	23.10	0.49	31.74	23.00	18.00
12.007	0.354	-1.46	23.79	0.49	32.88	23.00	18.00
12.360	0.340	-1.46	23.50	0.49	33.95	23.00	18.00
12.700	0.312	-1.46	22.24	0.49	35.02	23.00	18.00
13.012	0.354	-1.45	26.03	0.49	36.05	23.00	18.00
13.366	0.354	-1.45	26.92	0.49	37.26	23.00	18.00
13.720	0.354	-1.45	27.82	0.49	38.54	23.00	18.00
14.073	0.354	-1.45	28.71	0.49	39.85	23.00	18.00

14.427	0.238	-1.45	19.87	0.49	41.07	23.00	18.00
14.665	0.354	-1.44	30.21	0.49	41.89	23.00	18.00
15.019	0.354	-1.44	31.10	0.49	43.06	23.00	18.00
15.373	0.354	-1.44	31.99	0.49	44.16	23.00	18.00
15.726	0.354	-1.44	32.89	0.49	45.20	23.00	18.00
16.080	0.218	-1.44	20.74	0.49	46.16	23.00	18.00
16.298	0.354	8.76	34.11	0.49	46.73	23.00	18.00
16.652	0.354	8.76	34.55	0.49	47.57	23.00	18.00
17.005	0.354	8.76	35.00	0.49	48.34	23.00	18.00
17.359	0.354	8.76	35.44	0.49	49.04	23.00	18.00
17.712	0.354	8.76	35.89	0.49	49.67	23.00	18.00
18.066	0.322	8.76	33.10	0.49	50.26	23.00	18.00
18.388	0.354	8.77	36.74	0.49	50.75	23.00	18.00
18.742	0.354	8.77	37.19	0.49	51.20	23.00	18.00
19.096	0.273	8.77	29.05	0.49	51.56	23.00	18.00
19.369	0.354	8.78	37.97	0.49	51.77	23.00	18.00
19.723	0.347	8.78	37.73	0.48	51.92	23.00	18.00
20.070	0.354	8.78	38.84	0.48	51.93	23.00	18.00
20.424	0.354	8.78	39.29	0.47	51.80	23.00	18.00
20.777	0.031	8.78	3.47	0.47	51.50	23.00	18.00
20.808	0.354	18.15	39.55	0.47	51.47	23.00	18.00
21.162	0.354	18.15	39.56	0.46	50.97	23.00	18.00
21.516	0.354	18.15	39.57	0.45	50.32	23.00	18.00
21.869	0.354	18.15	39.58	0.44	49.54	23.00	18.00
22.223	0.354	18.15	39.59	0.43	48.62	23.00	18.00
22.576	0.310	18.15	34.69	0.42	47.57	23.00	18.00
22.886	0.354	18.16	39.61	0.42	46.63	23.00	18.00
23.240	0.354	18.16	39.62	0.41	45.57	23.00	18.00
23.593	0.354	18.16	39.63	0.40	44.57	23.00	18.00
23.947	0.354	18.16	39.64	0.39	43.61	23.00	18.00
24.301	0.136	18.16	15.24	0.38	42.68	23.00	18.00
24.437	0.354	18.17	39.66	0.38	42.33	23.00	18.00
24.790	0.354	18.17	39.67	0.37	41.40	23.00	18.00
25.144	0.354	18.17	39.67	0.36	40.36	23.00	18.00
25.497	0.252	18.17	28.31	0.35	39.28	23.00	18.00
25.750	0.354	19.29	39.66	0.34	38.52	23.00	18.00
26.103	0.354	19.29	39.62	0.34	37.46	23.00	18.00
26.457	0.354	19.29	39.57	0.33	36.39	23.00	18.00
26.811	0.354	19.29	39.53	0.32	35.37	23.00	18.00
27.164	0.086	19.29	9.58	0.31	34.43	23.00	18.00
27.250	0.230	19.29	25.74	0.30	34.20	23.00	18.00
27.480	0.354	19.30	39.80	0.30	33.58	23.00	18.00
27.834	0.354	19.30	40.07	0.29	32.59	23.00	18.00
28.187	0.281	19.30	32.02	0.28	31.57	23.00	18.00
28.468	0.354	19.30	40.55	0.27	30.71	23.00	18.00
28.822	0.354	19.30	40.82	0.26	29.43	23.00	18.00
29.175	0.217	19.30	25.24	0.24	28.05	23.00	18.00
29.393	0.354	26.87	41.06	0.24	27.17	23.00	18.00
29.746	0.354	26.87	40.94	0.22	25.71	23.00	18.00
30.100	0.354	26.87	40.81	0.21	24.29	23.00	18.00
30.454	0.354	26.87	40.69	0.20	22.78	23.00	18.00
30.807	0.118	26.87	13.59	0.19	21.30	23.00	18.00
30.926	0.354	26.88	40.53	0.18	20.83	23.00	18.00
31.279	0.354	26.88	40.40	0.17	19.29	23.00	18.00
31.633	0.354	26.88	40.28	0.15	17.67	23.00	18.00
31.987	0.354	26.88	40.16	0.14	16.11	23.00	18.00
32.340	0.251	26.88	28.41	0.13	14.54	23.00	18.00
32.591	0.354	26.89	39.95	0.12	13.44	23.00	18.00
32.945	0.354	26.89	39.82	0.10	11.84	23.00	18.00
33.298	0.228	26.89	25.59	0.09	10.21	23.00	18.00
33.526	0.354	26.90	39.62	0.08	9.18	23.00	18.00
33.880	0.354	26.90	39.50	0.07	7.64	23.00	18.00
34.233	0.354	26.90	39.37	0.05	6.17	23.00	18.00
34.587	0.354	26.90	39.25	0.04	4.81	23.00	18.00
34.941	0.354	26.90	39.12	0.03	3.59	23.00	18.00
35.294	0.190	26.90	20.96	0.02	2.57	23.00	18.00
35.484	0.225	26.91	24.77	0.02	2.11	23.00	18.00
35.709	0.354	26.91	38.85	0.00	0.00	23.00	18.00
36.063	0.354	26.91	38.73	0.00	0.00	23.00	18.00
36.416	0.354	26.91	38.60	0.00	0.00	23.00	18.00
36.770	0.241	26.91	26.29	0.00	0.00	23.00	18.00
37.011	0.354	27.86	38.37	0.00	0.00	23.00	18.00
37.365	0.354	27.86	38.19	0.00	0.00	23.00	18.00

37.719	0.354	27.86	38.01	0.00	0.00	23.00	18.00
38.072	0.068	27.86	7.26	0.00	0.00	23.00	18.00
38.140	0.354	41.45	37.36	0.00	0.00	23.00	18.00
38.494	0.311	41.45	32.00	0.00	0.00	23.00	18.00
38.805	0.354	41.46	35.36	0.00	0.00	23.00	18.00
39.158	0.112	41.46	10.93	0.00	0.00	23.00	18.00
39.270	0.354	41.46	33.61	0.00	0.00	23.00	18.00
39.624	0.312	41.46	28.19	0.00	0.00	23.00	18.00
39.936	0.354	41.47	30.30	0.00	0.00	23.00	18.00
40.289	0.354	41.47	28.55	0.00	0.00	23.00	18.00
40.643	0.091	41.47	7.03	0.00	0.00	23.00	18.00
40.733	0.148	42.40	11.20	0.00	0.00	23.00	18.00
40.881	0.233	42.40	17.02	0.00	0.00	23.00	18.00
41.114	0.354	42.40	24.33	0.00	0.00	23.00	18.00
41.467	0.354	42.40	22.50	0.00	0.00	23.00	18.00
41.821	0.265	42.40	15.67	0.00	0.00	23.00	18.00
42.086	0.354	47.98	19.05	0.00	0.00	23.00	18.00

LEGENDA SIMBOLI

- X(m) : Ascissa sinistra concio
 dx(m) : Larghezza concio
 alpha(°) : Angolo pendenza base concio
 W(kN/m) : Forza peso concio
 ru(-) : Coefficiente locale pressione interstiziale
 U(kPa) : Pressione totale dei pori base concio
 phi'(°) : Angolo di attrito efficace base concio
 c'/Cu (kPa) : Coesione efficace o Resistenza al taglio in condizioni non drenate

TABELLA DIAGRAMMA DELLE FORZE DELLA SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	ht (m)	yt (m)	yt' (--)	E(x) (kN/m)	T(x) (kN/m)	E' (kN)	rho(x) (--)	FS_qFEM (--)	FS_srmFEM (--)			
6.000	0.000	32.223	-0.349	0.0000000000E+000	0.0000000000E+000	0.0000000000E+000	3.7362411020E-001	0.056	22.421	19.072		
6.354	0.070	32.102	-0.349	1.0743915286E+000	2.1155692862E-003	5.7028705825E+000	0.056	22.421	19.072			
6.708	0.134	31.976	-0.301	4.0333225997E+000	5.1454819992E-002	1.0624406805E+001	0.056	8.959	6.207			
6.923	0.205	31.931	-0.194	6.6103186201E+000	1.5784614726E-001	1.5008708659E+001	0.056	7.263	4.535			
7.276	0.263	31.866	-0.190	1.3671657454E+001	6.4728754054E-001	2.5385608445E+001	0.056	5.463	3.151			
7.630	0.317	31.797	-0.180	2.4564144990E+001	1.7611200467E+000	3.1005948676E+001	0.099	4.731	2.541			
7.983	0.382	31.738	-0.160	3.5600437304E+001	3.1253227340E+000	3.2912021221E+001	0.138	4.562	2.296			
8.337	0.450	31.683	-0.150	4.7840983746E+001	4.8395350189E+000	3.2633859680E+001	0.173	4.658	2.179			
8.691	0.522	31.632	-0.141	5.8680547901E+001	6.3475375315E+000	3.0485802864E+001	0.193	4.639	2.086			
8.756	0.537	31.624	-0.124	6.0656574097E+001	6.6397032569E+000	3.0764950057E+001	0.197	4.645	2.076			
9.109	0.616	31.581	-0.113	7.2132848021E+001	8.3985058864E+000	3.2971153418E+001	0.217	4.695	2.034			
9.463	0.703	31.544	-0.094	8.3975233761E+001	1.0392675054E+001	3.4146774037E+001	0.237	4.742	2.027			
9.816	0.795	31.514	-0.084	9.6282958643E+001	1.2634223612E+001	3.4773630737E+001	0.257	4.708	2.036			
9.864	0.808	31.511	-0.061	9.7930833026E+001	1.2945724855E+001	3.4673217166E+001	0.259	4.693	2.038			
10.217	0.911	31.490	-0.048	1.0993811088E+002	1.5311513412E+001	3.3847880553E+001	0.278	4.508	2.057			
10.554	1.015	31.477	-0.023	1.2130406365E+002	1.7705874214E+001	3.3465023228E+001	0.295	4.216	2.077			
10.908	1.029	31.474	0.006	1.3303381050E+002	2.0380571622E+001	3.1375714185E+001	0.319	3.897	2.097			
11.261	1.052	31.481	0.033	1.4349435805E+002	2.2968560259E+001	2.8092254742E+001	0.340	3.595	2.113			
11.615	1.084	31.497	0.045	1.5290189698E+002	2.5480461846E+001	2.5445173317E+001	0.359	3.327	2.126			
11.653	1.088	31.499	0.068	1.5386429963E+002	2.5745758201E+001	2.5363677275E+001	0.361	3.300	2.128			
12.007	1.121	31.524	0.079	1.6297489675E+002	2.8369568233E+001	2.5134180584E+001	0.380	3.073	2.142			
12.360	1.161	31.555	0.097	1.7164030508E+002	3.1043342363E+001	2.4313244448E+001	0.399	2.899	2.159			
12.700	1.206	31.591	0.111	1.7983602569E+002	3.3733289435E+001	2.4436582287E+001	0.418	2.774	2.183			
13.012	1.251	31.627	0.122	1.8755617752E+002	3.6348060772E+001	2.5076318053E+001	0.434	2.684	2.211			
13.366	1.304	31.672	0.130	1.9656674905E+002	3.9467013344E+001	2.6055037121E+001	0.452	2.601	2.253			
13.720	1.361	31.720	0.140	2.0598345349E+002	4.2795665354E+001	2.7171410680E+001	0.471	2.533	2.304			
14.073	1.421	31.771	0.141	2.1578357384E+002	4.6313305162E+001	2.6823217625E+001	0.489	2.484	2.364			
14.427	1.478	31.819	0.139	2.2495402073E+002	4.9643998796E+001	2.5680554930E+001	0.505	2.452	2.425			
14.665	1.518	31.853	0.143	2.3103762984E+002	5.1872145920E+001	2.5303167494E+001	0.515	2.436	2.466			
15.019	1.578	31.904	0.148	2.3987673504E+002	5.5162563881E+001	2.4290828989E+001	0.530	2.417	2.523			
15.373	1.640	31.958	0.155	2.4821717970E+002	5.8337342726E+001	2.2863453513E+001	0.542	2.403	2.571			
15.726	1.706	32.014	0.166	2.5604678177E+002	6.1408373237E+001	2.1208028584E+001	0.554	2.389	2.608			
16.080	1.776	32.075	0.179	2.6321643661E+002	6.4346720630E+001	1.9093646763E+001	0.565	2.375	2.632			
16.298	1.822	32.116	0.198	2.6722414490E+002	6.6098945896E+001	1.7613577377E+001	0.571	2.364	2.638			
16.652	1.840	32.188	0.211	2.7302231296E+002	6.8832729726E+001	1.5367240282E+001	0.585	2.341	2.637			
17.005	1.863	32.266	0.227	2.7809253770E+002	7.1440260736E+001	1.3179064694E+001	0.597	2.315	2.622			
17.359	1.891	32.348	0.238	2.8234313108E+002	7.3854154495E+001	1.1270216547E+001	0.609	2.285	2.591			
17.712	1.922	32.434	0.246	2.8606333388E+002	7.6120235953E+001	9.9781570001E+000	0.619	2.254	2.551			

18.066	1.956	32.522	0.252	2.8940012555E+002	7.8255425028E+001	9.1202321110E+000	0.629	2.224	2.503
18.388	1.988	32.605	0.260	2.9224700264E+002	8.0105640672E+001	8.8184760472E+000	0.637	2.198	2.454
18.742	2.027	32.698	0.262	2.9536001715E+002	8.2018236397E+001	8.5491903345E+000	0.645	2.170	2.394
19.096	2.065	32.790	0.258	2.9829336861E+002	8.3743151201E+001	7.8329937952E+000	0.651	2.140	2.334
19.369	2.092	32.860	0.252	3.0033685305E+002	8.4933709319E+001	6.9758877942E+000	0.655	2.115	2.289
19.723	2.126	32.948	0.250	3.0257501322E+002	8.6253663999E+001	5.5963330524E+000	0.659	2.082	2.236
20.070	2.159	33.035	0.251	3.0426885451E+002	8.7320389994E+001	4.0061256365E+000	0.661	2.047	2.188
20.424	2.194	33.124	0.254	3.0537220167E+002	8.8151768710E+001	2.0171619336E+000	0.663	2.008	2.144
20.777	2.230	33.214	0.255	3.0569548075E+002	8.8697161794E+001	-5.8305339206E-001	0.663	1.967	2.107
20.808	2.232	33.222	0.271	3.0567326819E+002	8.8727122710E+001	-8.4284753419E-001	0.663	1.963	2.104
21.162	2.213	33.319	0.285	3.0485946429E+002	8.8949554499E+001	-3.3618229872E+000	0.665	1.922	2.072
21.516	2.202	33.423	0.302	3.0329563811E+002	8.8929355191E+001	-5.3516913792E+000	0.667	1.886	2.042
21.869	2.195	33.532	0.323	3.0107451117E+002	8.8659159376E+001	-7.1807130895E+000	0.668	1.855	2.015
22.223	2.198	33.652	0.349	2.9821711985E+002	8.8152119947E+001	-8.7262759387E+000	0.668	1.829	1.988
22.576	2.210	33.779	0.363	2.9490290243E+002	8.7453420014E+001	-9.5922339875E+000	0.666	1.808	1.962
22.886	2.221	33.892	0.360	2.9187172375E+002	8.6753280903E+001	-9.6682640203E+000	0.665	1.794	1.940
23.240	2.231	34.018	0.345	2.8849992930E+002	8.5902207328E+001	-9.1026877682E+000	0.662	1.783	1.917
23.593	2.234	34.137	0.329	2.8543389989E+002	8.5044641628E+001	-8.4216389009E+000	0.659	1.777	1.895
23.947	2.232	34.251	0.318	2.8254377336E+002	8.4203476536E+001	-7.9591888173E+000	0.655	1.770	1.876
24.301	2.227	34.362	0.309	2.7980480913E+002	8.3389939404E+001	-7.4341122211E+000	0.652	1.763	1.857
24.437	2.223	34.402	0.308	2.7881069191E+002	8.3091961622E+001	-7.3689428722E+000	0.651	1.761	1.850
24.790	2.217	34.512	0.328	2.7615473366E+002	8.2293713480E+001	-7.8578567556E+000	0.648	1.753	1.833
25.144	2.222	34.634	0.349	2.7325326767E+002	8.1428492578E+001	-8.2994398808E+000	0.644	1.745	1.813
25.497	2.232	34.760	0.353	2.7028500228E+002	8.0557704783E+001	-8.3104774909E+000	0.641	1.735	1.793
25.750	2.238	34.848	0.351	2.6820332890E+002	7.9963117546E+001	-8.2304612438E+000	0.638	1.728	1.779
26.103	2.238	34.972	0.353	2.6530301871E+002	7.9154066952E+001	-8.2583616694E+000	0.635	1.719	1.759
26.457	2.239	35.098	0.349	2.6236264984E+002	7.8366769322E+001	-8.1478938510E+000	0.633	1.709	1.737
26.811	2.237	35.219	0.343	2.5954046739E+002	7.7636241453E+001	-7.6867108875E+000	0.631	1.700	1.715
27.164	2.234	35.340	0.343	2.5692626753E+002	7.6974001631E+001	-7.1450620475E+000	0.628	1.691	1.692
27.250	2.234	35.369	0.360	2.5631882827E+002	7.6819988748E+001	-7.1411200656E+000	0.628	1.688	1.686
27.480	2.238	35.454	0.365	2.5464197468E+002	7.6395416058E+001	-7.4173644310E+000	0.625	1.678	1.670
27.834	2.242	35.582	0.367	2.5195061916E+002	7.5710186448E+001	-7.7938872961E+000	0.621	1.658	1.644
28.187	2.250	35.714	0.378	2.4912979247E+002	7.4977936979E+001	-8.3967203779E+000	0.616	1.633	1.616
28.468	2.260	35.822	0.418	2.4667784101E+002	7.4323569232E+001	-9.7535884689E+000	0.612	1.610	1.593
28.822	2.293	35.979	0.430	2.4277307355E+002	7.3250358025E+001	-1.1768825555E+001	0.606	1.572	1.562
29.175	2.316	36.126	0.408	2.3835440645E+002	7.2014943604E+001	-1.3234390901E+001	0.599	1.530	1.532
29.393	2.326	36.212	0.451	2.3537732811E+002	7.1180612662E+001	-1.4204512327E+001	0.594	1.503	1.515
29.746	2.319	36.384	0.487	2.3005780051E+002	6.9698936226E+001	-1.5310768985E+001	0.589	1.465	1.490
30.100	2.312	36.556	0.487	2.2454887432E+002	6.8144457360E+001	-1.6358354858E+001	0.583	1.435	1.469
30.454	2.305	36.729	0.484	2.1848844761E+002	6.6398130970E+001	-1.7262042105E+001	0.576	1.411	1.449
30.807	2.296	36.899	0.467	2.1234039378E+002	6.4595226055E+001	-1.6425611250E+001	0.569	1.394	1.433
30.926	2.286	36.949	0.461	2.1043406318E+002	6.4029021420E+001	-1.6572921116E+001	0.566	1.390	1.428
31.279	2.275	37.117	0.485	2.0407830282E+002	6.2101537647E+001	-1.8272671503E+001	0.558	1.379	1.414
31.633	2.270	37.292	0.484	1.9751082078E+002	6.0064467090E+001	-1.7949581514E+001	0.548	1.374	1.400
31.987	2.259	37.459	0.473	1.9138356397E+002	5.8107366570E+001	-1.7100674674E+001	0.538	1.371	1.388
32.340	2.247	37.626	0.470	1.8541646643E+002	5.6164930446E+001	-1.6504214224E+001	0.528	1.369	1.377
32.591	2.237	37.743	0.476	1.8134205969E+002	5.4823971300E+001	-1.6319896949E+001	0.521	1.367	1.369
32.945	2.228	37.914	0.496	1.7553201911E+002	5.2897003158E+001	-1.6571137776E+001	0.510	1.366	1.358
33.298	2.229	38.094	0.504	1.6962221728E+002	5.0928042625E+001	-1.6145223929E+001	0.499	1.364	1.347
33.526	2.226	38.207	0.495	1.6602710336E+002	4.9731214152E+001	-1.5591714879E+001	0.492	1.364	1.340
33.880	2.221	38.382	0.491	1.6061684061E+002	4.7935251175E+001	-1.5032257375E+001	0.481	1.363	1.329
34.233	2.215	38.555	0.488	1.5539562532E+002	4.6206861839E+001	-1.4506671272E+001	0.470	1.363	1.320
34.587	2.208	38.727	0.489	1.5035708033E+002	4.4541749526E+001	-1.4126784765E+001	0.460	1.362	1.310
34.941	2.202	38.901	0.478	1.4540453760E+002	4.2900583444E+001	-1.3419995934E+001	0.449	1.361	1.300
35.294	2.187	39.065	0.457	1.4086586497E+002	4.1385262635E+001	-1.2282336169E+001	0.439	1.360	1.290
35.484	2.175	39.149	0.449	1.3858946378E+002	4.0614120135E+001	-1.2061237740E+001	0.434	1.359	1.284
35.709	2.163	39.251	0.470	1.3585675288E+002	3.9672821139E+001	-1.2329746922E+001	0.427	1.357	1.278
36.063	2.153	39.421	0.483	1.3139718041E+002	3.8049165162E+001	-1.2725541942E+001	0.416	1.349	1.266
36.416	2.145	39.593	0.488	1.2685668613E+002	3.6349907703E+001	-1.3194607779E+001	0.403	1.334	1.254
36.770	2.140	39.766	0.500	1.2206536953E+002	3.4538484068E+001	-1.4522582497E+001	0.389	1.313	1.242
37.011	2.141	39.890	0.529	1.1839766127E+002	3.3154185775E+001	-1.5990029155E+001	0.378	1.295	1.236
37.365	2.145	40.081	0.542	1.1232757480E+002	3.0882219730E+001	-1.8028396092E+001	0.359	1.264	1.227
37.719	2.151	40.274	0.522	1.0564718126E+002	2.8419837295E+001	-1.8996859737E+001	0.338	1.230	1.222
38.072	2.140	40.450	0.494	9.8892154413E+001	2.5993546935E+001	-1.9419163550E+001	0.317	1.198	1.221
38.140	2.136	40.482	0.496	9.7573537745E+001	2.5535394360E+001	-1.9900594436E+001	0.313	1.191	1.221
38.494	2.001	40.659	0.532	8.9758903762E+001	2.2892542291E+001	-2.4586350887E+001	0.293	1.165	1.226
38.805	1.903	40.836	0.561	8.1424667246E+001	2.0111870982E+001	-2.7025265924E+001	0.270	1.150	1.236
39.158	1.787	41.032	0.554	7.1767742765E+001	1.6929163724E+001	-2.7277035404E+001	0.240	1.142	1.251
39.270	1.749	41.093	0.517	6.8726194569E+001	1.5942824640E+001	-2.6914599237E+001	0.230	1.142	1.257
39.624	1.617	41.273	0.511	5.9603742584E+001	1.3021610528E+001	-2.5751138089E+001	0.202	1.147	1.278
39.936	1.501	41.433	0.523	5.1582090410E+001	1.0538386893E+001	-2.6222849292E+001	0.176	1.156	1.300
40.289	1.377	41.621	0.495	4.2103769821E+001	7.6141251484E+000	-2.4926133155E+001	0.139	1.182	1.331
40.643	1.226	41.783	0.453	3.3953225311E+001	5.0651814810E+000	-2.1365585796E+001	0.101	1.216	1.366

40.733	1.185	41.822	0.443	3.2057133854E+001	4.4956039481E+000	-2.1033353835E+001	0.092	1.223	1.374
40.881	1.117	41.889	0.415	2.8927879757E+001	3.5903377312E+000	-1.9434840857E+001	0.076	1.235	1.387
41.114	0.996	41.980	0.460	2.5049613072E+001	2.6046496286E+000	-1.7457298502E+001	0.059	1.255	1.408
41.467	0.851	42.158	0.618	1.8448262121E+001	1.3107559886E+000	-2.0749325377E+001	0.056	1.314	1.471
41.821	0.787	42.417	0.648	1.0374771383E+001	2.1708180609E-001	-1.7082084221E+001	0.056	1.394	1.554
42.086	0.687	42.559	0.648	6.9891902292E+000	6.3803832641E-002	-1.5768428255E+001	0.056	1.385	1.609

LEGENDA SIMBOLI

- X(m) : Ascissa sinistra concio
 ht(m) : Altezza linea di thrust da nodo sinistro base concio
 yt(m) : coordinata Y linea di trust
 yt'(-) : gradiente pendenza locale linea di trust
 E(x)(kN/m) : Forza Normale interconcio
 T(x)(kN/m) : Forza Tangenziale interconcio
 E' (kN) : derivata Forza normale interconcio
 Rho(x) (-) : fattore mobilitazione resistenza al taglio verticale interconcio ZhU et al.(2003)
 FS_qFEM(x)(-) : fattore di sicurezza locale stimato (locale in X) by qFEM
 FS_srmFEM(x)(-) : fattore di sicurezza locale stimato (locale in X) by SRM Procedure

TABELLA SFORZI DI TAGLIO DISTRIBUITI LUNGO SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	dx (m)	dl (m)	alpha (°)	TauStress (kPa)	TauF (kN/m)	TauStrength (kPa)	TauS (kN/m)
6.000	0.354	0.402	-28.311	-1.163	-0.467	18.343	7.368
6.354	0.354	0.402	-28.311	-3.488	-1.401	19.153	7.693
6.708	0.215	0.244	-28.311	-5.357	-1.307	19.889	4.853
6.923	0.354	0.374	-19.202	-5.167	-1.935	22.189	8.309
7.276	0.354	0.374	-19.202	-6.478	-2.426	24.505	9.176
7.630	0.354	0.374	-19.202	-7.790	-2.917	25.728	9.634
7.983	0.354	0.374	-19.202	-9.102	-3.408	27.303	10.224
8.337	0.354	0.374	-19.202	-10.413	-3.899	27.461	10.283
8.691	0.065	0.069	-19.202	-11.189	-0.769	27.793	1.910
8.756	0.354	0.374	-19.192	-11.960	-4.478	29.020	10.866
9.109	0.354	0.374	-19.192	-13.271	-4.969	30.420	11.390
9.463	0.354	0.374	-19.192	-14.581	-5.460	31.899	11.944
9.816	0.047	0.050	-19.192	-15.324	-0.769	32.275	1.620
9.864	0.354	0.374	-19.192	-16.068	-6.016	33.188	12.427
10.217	0.337	0.357	-19.192	-17.347	-6.186	34.437	12.281
10.554	0.354	0.354	-2.631	-2.702	-0.957	34.990	12.386
10.908	0.354	0.354	-2.631	-2.798	-0.990	35.117	12.431
11.261	0.354	0.354	-2.631	-2.894	-1.024	35.350	12.514
11.615	0.038	0.038	-2.631	-2.947	-0.112	35.291	1.343
11.653	0.354	0.354	-1.458	-1.661	-0.588	35.708	12.631
12.007	0.354	0.354	-1.458	-1.711	-0.605	36.114	12.775
12.360	0.340	0.340	-1.458	-1.759	-0.598	36.631	12.446
12.700	0.312	0.312	-1.458	-1.811	-0.566	37.257	11.640
13.012	0.354	0.354	-1.448	-1.859	-0.658	38.039	13.456
13.366	0.354	0.354	-1.448	-1.924	-0.681	38.872	13.750
13.720	0.354	0.354	-1.448	-1.988	-0.703	39.651	14.026
14.073	0.354	0.354	-1.448	-2.053	-0.726	39.923	14.122
14.427	0.238	0.239	-1.448	-2.106	-0.502	40.266	9.605
14.665	0.354	0.354	-1.438	-2.145	-0.759	40.794	14.430
15.019	0.354	0.354	-1.438	-2.209	-0.781	41.218	14.580
15.373	0.354	0.354	-1.438	-2.273	-0.804	41.686	14.746
15.726	0.354	0.354	-1.438	-2.337	-0.827	42.142	14.907
16.080	0.218	0.218	-1.438	-2.389	-0.521	42.470	9.271
16.298	0.354	0.358	8.759	14.511	5.192	39.401	14.097
16.652	0.354	0.358	8.759	14.700	5.260	39.507	14.136
17.005	0.354	0.358	8.759	14.889	5.327	39.615	14.174
17.359	0.354	0.358	8.759	15.078	5.395	39.774	14.231
17.712	0.354	0.358	8.759	15.267	5.463	39.967	14.300
18.066	0.322	0.326	8.759	15.448	5.038	40.170	13.101
18.388	0.354	0.358	8.769	15.646	5.598	40.404	14.457
18.742	0.354	0.358	8.769	15.835	5.666	40.648	14.544
19.096	0.273	0.277	8.769	16.002	4.426	40.873	11.305
19.369	0.354	0.358	8.779	16.188	5.792	41.145	14.722
19.723	0.347	0.351	8.779	16.375	5.755	41.493	14.584
20.070	0.354	0.358	8.779	16.568	5.928	41.874	14.983
20.424	0.354	0.358	8.779	16.758	5.996	42.322	15.143
20.777	0.031	0.031	8.779	16.861	0.530	42.639	1.341

20.808	0.354	0.372	18.154	33.116	12.324	38.951	14.496
21.162	0.354	0.372	18.154	33.124	12.327	39.252	14.607
21.516	0.354	0.372	18.154	33.133	12.330	39.621	14.745
21.869	0.354	0.372	18.154	33.141	12.333	40.041	14.901
22.223	0.354	0.372	18.154	33.150	12.336	40.509	15.075
22.576	0.310	0.326	18.154	33.158	10.810	40.996	13.365
22.886	0.354	0.372	18.164	33.181	12.349	41.419	15.415
23.240	0.354	0.372	18.164	33.189	12.352	41.879	15.586
23.593	0.354	0.372	18.164	33.197	12.355	42.309	15.746
23.947	0.354	0.372	18.164	33.206	12.358	42.719	15.899
24.301	0.136	0.143	18.164	33.211	4.750	43.109	6.166
24.437	0.354	0.372	18.174	33.232	12.369	43.268	16.104
24.790	0.354	0.372	18.174	33.240	12.372	43.695	16.263
25.144	0.354	0.372	18.174	33.248	12.374	44.147	16.431
25.497	0.252	0.266	18.174	33.254	8.830	44.604	11.844
25.750	0.354	0.375	19.292	34.975	13.104	44.401	16.635
26.103	0.354	0.375	19.292	34.936	13.089	44.794	16.782
26.457	0.354	0.375	19.292	34.896	13.074	45.175	16.925
26.811	0.354	0.375	19.292	34.856	13.059	45.530	17.058
27.164	0.086	0.091	19.292	34.831	3.164	45.892	4.169
27.250	0.230	0.244	19.292	34.903	8.504	46.084	11.228
27.480	0.354	0.375	19.302	35.114	13.157	46.590	17.457
27.834	0.354	0.375	19.302	35.351	13.245	47.317	17.729
28.187	0.281	0.298	19.302	35.564	10.583	48.045	14.298
28.468	0.354	0.375	19.302	35.776	13.405	48.776	18.276
28.822	0.354	0.375	19.302	36.013	13.493	49.673	18.612
29.175	0.217	0.230	19.302	36.204	8.343	50.541	11.646
29.393	0.354	0.396	26.867	46.809	18.556	47.123	18.680
29.746	0.354	0.396	26.867	46.669	18.500	47.695	18.907
30.100	0.354	0.396	26.867	46.529	18.445	48.366	19.173
30.454	0.354	0.396	26.867	46.390	18.389	48.944	19.402
30.807	0.118	0.133	26.867	46.296	6.143	49.390	6.554
30.926	0.354	0.396	26.877	46.214	18.322	49.732	19.716
31.279	0.354	0.396	26.877	46.074	18.266	50.373	19.970
31.633	0.354	0.396	26.877	45.934	18.210	50.868	20.166
31.987	0.354	0.396	26.877	45.793	18.154	51.399	20.377
32.340	0.251	0.281	26.877	45.673	12.845	51.913	14.600
32.591	0.354	0.396	26.887	45.564	18.065	52.310	20.740
32.945	0.354	0.396	26.887	45.423	18.009	52.912	20.979
33.298	0.228	0.255	26.887	45.307	11.573	53.399	13.640
33.526	0.354	0.397	26.897	45.202	17.924	53.672	21.282
33.880	0.354	0.397	26.897	45.061	17.867	54.143	21.468
34.233	0.354	0.397	26.897	44.919	17.811	54.586	21.644
34.587	0.354	0.397	26.897	44.777	17.755	55.022	21.817
34.941	0.354	0.397	26.897	44.635	17.699	55.300	21.927
35.294	0.190	0.213	26.897	44.526	9.483	55.563	11.833
35.484	0.225	0.252	26.907	44.454	11.211	55.726	14.054
35.709	0.354	0.397	26.907	44.338	17.582	56.663	22.470
36.063	0.354	0.397	26.907	44.195	17.526	56.617	22.452
36.416	0.354	0.397	26.907	44.053	17.469	56.607	22.448
36.770	0.241	0.271	26.907	43.933	11.898	56.716	15.360
37.011	0.354	0.400	27.861	44.826	17.930	56.344	22.537
37.365	0.354	0.400	27.861	44.618	17.847	56.374	22.549
37.719	0.354	0.400	27.861	44.411	17.764	56.170	22.467
38.072	0.068	0.077	27.861	44.287	3.391	56.036	4.291
38.140	0.354	0.472	41.445	52.413	24.726	47.671	22.489
38.494	0.311	0.415	41.445	51.010	21.181	47.870	19.878
38.805	0.354	0.472	41.455	49.608	23.406	47.229	22.284
39.158	0.112	0.149	41.455	48.625	7.237	46.662	6.945
39.270	0.354	0.472	41.455	47.157	22.250	45.608	21.519
39.624	0.312	0.416	41.455	44.839	18.666	44.313	18.447
39.936	0.354	0.472	41.465	42.521	20.066	43.379	20.471
40.289	0.354	0.472	41.465	40.056	18.902	41.559	19.612
40.643	0.091	0.121	41.465	38.508	4.654	40.265	4.867
40.733	0.148	0.200	42.401	37.788	7.555	39.299	7.857
40.881	0.233	0.315	42.401	36.402	11.475	37.499	11.821
41.114	0.354	0.479	42.401	34.264	16.408	36.155	17.314
41.467	0.354	0.479	42.401	31.687	15.174	34.612	16.575
41.821	0.265	0.359	42.401	29.432	10.564	32.033	11.498
42.086	0.354	0.528	47.979	26.796	14.155	28.366	14.985

 LEGENDA SIMBOLI

X(m) : Ascissa sinistra concio

dx(m) : Larghezza concio
dl(m) : lunghezza base concio
alpha(°) : Angolo pendenza base concio
TauStress(kPa) : Sforzo di taglio su base concio
TauF (kN/m) : Forza di taglio su base concio
TauStrength(kPa) : Resistenza al taglio su base concio
TauS (kN/m) : Forza resistente al taglio su base concio

CASO B sisma -PROGETTO-

Report elaborazioni

SSAP 5.0.2 - Slope Stability Analysis Program (1991,2021)
WWW.SSAP.EU
Build No. 12007
BY
Dr. Geol. LORENZO BORSELLI *,**
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** Gia' Ricercatore CNR-IRPI fino a Luglio 2011

Ultima Revisione struttura tabelle del report: 21 Febbraio 2021

Modello pendio: CASO B PROGETTO SISMA.mod

----- PARAMETRI DEL MODELLO DEL PENDIO -----

___ PARAMETRI GEOMETRICI - Coordinate X Y (in m) ___

SUP T.		SUP 2		SUP 3		SUP 4	
X	Y	X	Y	X	Y	X	Y
0.00	30.73	0.00	27.50	0.00	24.00	0.00	15.50
12.70	33.89	45.62	42.31	45.59	38.80	45.60	30.30
27.25	38.72	76.05	47.93	75.84	43.13	76.05	38.61
39.27	44.22	94.85	51.93	95.41	50.10	94.85	44.93
62.06	48.35	170.31	76.50	170.31	74.49	170.31	69.50
68.08	51.04	-	-	-	-	-	-
73.38	51.85	-	-	-	-	-	-
75.82	53.21	-	-	-	-	-	-
84.19	53.61	-	-	-	-	-	-
85.52	52.71	-	-	-	-	-	-
91.39	56.07	-	-	-	-	-	-
94.10	56.40	-	-	-	-	-	-
101.48	60.74	-	-	-	-	-	-
111.60	63.30	-	-	-	-	-	-
119.84	66.26	-	-	-	-	-	-
131.00	69.53	-	-	-	-	-	-
133.02	71.23	-	-	-	-	-	-
157.83	77.62	-	-	-	-	-	-
170.31	80.51	-	-	-	-	-	-

---- SUP FALDA -----

X Y (in m)

0.00	30.73
12.70	33.89
20.07	36.34
78.38	39.13
79.25	41.11
81.84	45.27
89.54	55.01
139.52	57.54
145.20	66.31
150.21	70.78
161.42	78.45
170.31	80.51

----- GESTIONE ACQUIFERI -----

Strati esclusi da acquifero:

Esclusione sovraccarico pendio sommerso: NON ATTIVATA

EFFETTO TENSION CRACK IN TESTA RIEMPITO DI ACQUA: ----> DISATTIVATO

In caso di superfici con tension crack in testa, la frattura di tensione

puo' venir viene considerata completamente riempita di acqua per la sua intera profondita'.

Viene quindi considerato una forza in testa, prodotta dalla pressione idrostatica.

La forza applicata ha un effetto destabilizzante aggiuntivo alle altre forze destabilizzanti agenti.

Peso unitario fluido (kN/m³): 9.81

Parametri funzione dissipazione superficiale pressione dei fluidi:

Coefficiente A 0
 Coefficiente K 0.000800
 Pressione minima fluidi Uo_Min (kPa) 0.01
 Coefficiente di soprappressione oltre pressione idrostatica 1.00
 Limitazione dissipazione a Pressione Idrostatica = ATTIVA
 STABILITE CONDIZIONI PER LA VERIFICA CON SOVRAPPRESSIONE ACQUIFERI CON DISSIPAZIONE IN DIREZIONE DELLA SUPERFICIE

CALCOLO EFFETTO DI FILTRAZIONE NON ATTIVATO

----- PARAMETRI GEOMECCANICI -----

	fi'	C'	Cu	Gamm	Gamm_sat	STR_IDX	sgci	GSI	mi	D
STRATO 1	23.00	18.00	18.00	0.00	20.00	20.00	1.953	0.00	0.00	0.00
STRATO 2	23.00	18.00	18.00	0.00	20.00	20.00	1.953	0.00	0.00	0.00
STRATO 3	25.00	50.00	50.00	0.00	20.00	20.00	4.881	0.00	0.00	0.00
STRATO 4	35.00	0.00	0.00	0.00	20.00	20.00	2.404	0.00	0.00	0.00

LEGENDA: fi' _____ Angolo di attrito interno efficace(in gradi)

C' _____ Coesione efficace (in Kpa)

Cu _____ Resistenza al taglio Non drenata (in Kpa)

Gamm _____ Peso di volume terreno fuori falda (in KN/m³)

Gamm_sat _____ Peso di volume terreno immerso (in KN/m³)

STR_IDX _____ Indice di resistenza (usato in solo in 'SNIFF SEARCH) (adimensionale)

---- SOLO Per AMMASSI ROCCIOSI FRATTURATI - Parametri Criterio di Rottura di Hoek (2002)-

sigci _____ Resistenza Compressione Uniassiale Roccia Intatta (in MPa)

GSI _____ Geological Strenght Index ammasso(adimensionale)

mi _____ Indice litologico ammasso(adimensionale)

D _____ Fattore di disturbo ammasso(adimensionale)

Fattore di riduzione NTC2018: gammaPHI=1.25 e gammaC=1.25 - DISATTIVATO (solo per ROCCE)

Uso CRITERIO DI ROTTURA Hoek et al.(2002,2006) - non-lineare - Generalizzato, secondo Lei et al.(2016)

----- SOVRACCARICHI PRESENTI -----

Nota Bene:

##Nota: la distribuzione del carico e delle forze unitarie puo' variare
in modo lineare tra gli estremi di coordinate X1 e X2

TABELLA SOVRACCARICHI IN SUPERFICIE

N.	da X1	a X2	SX1	SX2	Alpha	Wsh1	Wsh2	Wsv1	Wsv2
(-)	(m)	(m)	(kPa)	(kPa)	(°)	(kN/m)	(kN/m)	(kN/m)	(kN/m)
1	75.0000	84.0000	25.00	25.00	90.00	0.00	0.00	25.00	25.00

LEGENDA SIMBOLI

N.(-) : NUMERO SOVRACCARICO

X1(m) : Posizione carico da X1

X2(m) : a X2

SX1(kPa) : Carico in X1 (Kpa)

SX2(kPa) : Carico in X2 (Kpa)

Alpha(°) : Inclinazione carico (gradi):

Componenti distribuzione forza unitaria applicata:

Wsh1,Wsh2(kN/m) : forza unitaria Orizzontale (per metro di proiezione Verticale) : da X1 a X2 (vedasi cap.2 manuale)

Wsv1,Wsv2(kN/m) : forza unitaria Verticale (per metro di proiezione Orizzontale) : da X1 a X2 (vedasi Cap.2 manuale)

----- INFORMAZIONI GENERAZIONE SUPERFICI RANDOM -----

*** PARAMETRI PER LA GENERAZIONE DELLE SUPERFICI

MOTORE DI RICERCA: CONVEX RANDOM - Chen (1992)

FILTRAGGIO SUPERFICI : ATTIVATO

COORDINATE X1,X2,Y OSTACOLO : 0.00 0.00 0.00

LUNGHEZZA MEDIA SEGMENTI (m)*: 6.8 (+/-) 50%

INTERVALLO ASCISSE RANDOM STARTING POINT (Xmin .. Xmax): 3.41 156.69

LIVELLO MINIMO CONSIDERATO (Ymin): 29.00

INTERVALLO ASCISSE AMMESSO PER LA TERMINAZIONE (Xmin .. Xmax): 40.00 166.90

TOTALE SUPERFICI GENERATE : 10000

*NOTA IMPORTANTE: La lunghezza media dei segmenti non viene cosiderata nel caso
di uso del motore di ricerca NEW RANOM SEARCH

----- INFORMAZIONI PARAMETRI DI CALCOLO -----

METODO DI CALCOLO : MORGENSTERN - PRICE (Morgenstern & Price, 1965)
 METODO DI ESPLORAZIONE CAMPO VALORI (λ_0, F_s0) ADOTTATO : A (rapido)
 COEFFICIENTE SISMICO UTILIZZATO K_h : 0.0480
 COEFFICIENTE SISMICO UTILIZZATO K_v (assunto Positivo): 0.0240
 COEFFICIENTE $c=K_v/K_h$ UTILIZZATO : 0.5000
 FORZA ORIZZONTALE ADDIZIONALE IN TESTA (kN/m): 0.00
 FORZA ORIZZONTALE ADDIZIONALE ALLA BASE (kN/m): 0.00

N.B. Le forze orizzontali addizionali in testa e alla base sono poste uguali a 0 durante le tutte le verifiche globali.
 I valori >0 impostati dall'utente sono utilizzati solo in caso di verifica singola

----- RISULTATO FINALE ELABORAZIONI -----

* DATI RELATIVI ALLE 10 SUPERFICI GENERATE CON MINOR F_s *

Fattore di sicurezza (FS) 1.4473 - Min. - X Y Lambda= 0.4077
 8.81 32.92
 13.58 30.43
 21.56 31.41
 25.71 32.69
 31.89 34.59
 38.74 39.18
 41.89 41.29
 43.30 42.36
 43.30 44.95

Fattore di sicurezza (FS) 1.4695 - N.2 -- X Y Lambda= 0.4028
 9.28 33.04
 12.26 31.31
 14.39 30.83
 17.63 30.09
 19.51 30.60
 23.11 31.57
 25.68 32.36
 27.46 32.91
 28.99 33.44
 31.03 34.15
 34.50 35.46
 36.55 36.24
 38.61 37.29
 40.97 39.05
 43.03 41.44
 44.09 42.67
 44.09 45.09

Fattore di sicurezza (FS) 1.4767 - N.3 -- X Y Lambda= 0.3934
 6.53 32.35
 9.82 31.42
 13.10 30.68
 20.60 31.19
 28.00 33.33
 32.30 34.81
 38.30 38.81
 42.96 41.91
 43.69 42.50
 43.69 45.02

Fattore di sicurezza (FS) 1.4823 - N.4 -- X Y Lambda= 0.4387
 86.00 52.98
 88.85 51.36
 90.08 50.73
 92.46 50.69
 94.78 50.83
 96.68 51.41
 99.40 52.24
 101.16 53.29
 102.25 53.93

105.00 55.61
106.97 57.20
107.94 58.37
108.72 59.32
109.54 60.31
109.54 62.78

Fattore di sicurezza (FS) 1.4994 - N.5 -- X Y Lambda= 0.4603

86.13 53.06
92.02 50.70
95.82 51.59
99.80 52.52
105.12 53.97
109.10 55.05
112.63 57.35
116.21 59.66
123.22 64.66
123.22 67.25

Fattore di sicurezza (FS) 1.5013 - N.6 -- X Y Lambda= 0.4427

11.41 33.57
13.24 32.58
16.01 31.15
20.96 31.91
24.65 32.48
26.59 33.03
29.60 34.04
34.30 35.61
38.04 36.87
40.21 38.15
42.30 39.44
45.65 41.53
47.31 43.20
47.31 45.68

Fattore di sicurezza (FS) 1.5074 - N.7 -- X Y Lambda= 0.4537

86.84 53.47
99.38 51.58
110.91 55.24
122.61 60.45
130.83 64.11
140.00 70.32
140.00 73.03

Fattore di sicurezza (FS) 1.5112 - N.8 -- X Y Lambda= 0.4373

83.05 53.56
89.28 51.00
95.24 51.20
100.57 52.52
103.26 53.22
110.63 56.04
117.15 59.72
121.02 63.09
122.14 64.36
122.14 66.93

Fattore di sicurezza (FS) 1.5150 - N.9 -- X Y Lambda= 0.4166

82.31 53.52
85.18 52.55
89.87 52.00
95.17 51.55
101.79 53.08
109.39 54.83
113.67 56.34
118.30 57.97
121.74 59.31
129.07 62.18
132.30 63.62

136.03 65.29
139.63 67.08
144.54 70.62
145.73 72.01
145.73 74.50

Fattore di sicurezza (FS) 1.5161 - N.10 -- X Y Lambda= 0.4087
7.79 32.67
10.51 31.33
15.09 31.63
18.95 31.88
21.89 32.12
25.96 32.73
29.14 33.53
33.93 35.89
38.08 38.96
41.77 41.68
42.47 42.20
42.47 44.80

----- ANALISI DEFICIT DI RESISTENZA -----

DATI RELATIVI ALLE 10 SUPERFICIE GENERATE CON MINOR FS *
Analisi Deficit in riferimento a FS(progetto) = 1.200

Sup N.	FS	FTR(kN/m)	FTA(kN/m)	Bilancio(kN/m)	ESITO
1	1.447	1647.1	1138.1	281.4	Surplus
2	1.469	1833.1	1247.5	336.1	Surplus
3	1.477	1722.3	1166.3	322.7	Surplus
4	1.482	1343.6	906.4	255.9	Surplus
5	1.499	2244.6	1496.9	448.2	Surplus
6	1.501	1856.2	1236.4	372.5	Surplus
7	1.507	3496.5	2319.6	713.0	Surplus
8	1.511	2315.2	1532.0	476.8	Surplus
9	1.515	4156.8	2743.7	864.3	Surplus
10	1.516	1590.0	1048.7	331.5	Surplus

Esito analisi: SURPLUS di RESISTENZA!

Valore minimo di SURPLUS di RESISTENZA (kN/m): 255.9

Note: FTR --> Forza totale Resistente lungo la superficie di scivolamento
FTA --> Forza totale Agente lungo la superficie di scivolamento

IMPORTANTE! : Il Deficit o il Surplus di resistenza viene espresso in kN per metro di LARGHEZZA rispetto al fronte della scarpata

TABELLA PARAMETRI CONCI DELLA SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	dx (m)	alpha (°)	W (kN/m)	ru (-)	U (kPa)	phi' (°)	(c',Cu) (kPa)
8.815	0.354	-27.66	0.99	0.49	1.34	23.00	18.00
9.168	0.354	-27.66	2.97	0.49	4.02	23.00	18.00
9.522	0.354	-27.66	4.95	0.49	6.70	23.00	18.00
9.876	0.354	-27.66	6.93	0.49	9.39	23.00	18.00
10.230	0.354	-27.66	8.91	0.49	12.07	23.00	18.00
10.583	0.354	-27.66	10.89	0.49	15.04	23.00	18.00
10.937	0.354	-27.66	12.87	0.49	17.85	23.00	18.00
11.291	0.354	-27.66	14.85	0.49	20.52	23.00	18.00
11.645	0.189	-27.66	8.73	0.49	23.20	23.00	18.00
11.833	0.354	-27.66	17.89	0.49	24.58	23.00	18.00
12.187	0.354	-27.66	19.87	0.49	27.02	23.00	18.00
12.541	0.159	-27.66	9.60	0.49	29.30	23.00	18.00
12.700	0.354	-27.66	22.85	0.49	30.27	23.00	18.00
13.054	0.354	-27.66	25.04	0.49	32.33	23.00	18.00
13.407	0.170	-27.66	12.79	0.49	34.20	23.00	18.00
13.577	0.354	7.00	27.46	0.49	35.03	23.00	18.00
13.931	0.354	7.00	28.00	0.49	36.58	23.00	18.00

14.285	0.354	7.00	28.53	0.49	37.84	23.00	18.00
14.638	0.354	7.00	29.07	0.49	38.97	23.00	18.00
14.992	0.354	7.00	29.61	0.49	39.94	23.00	18.00
15.346	0.354	7.00	30.14	0.49	40.76	23.00	18.00
15.699	0.354	7.00	30.68	0.49	41.55	23.00	18.00
16.053	0.354	7.00	31.22	0.49	42.28	23.00	18.00
16.407	0.354	7.00	31.75	0.49	43.01	23.00	18.00
16.761	0.354	7.00	32.29	0.49	43.73	23.00	18.00
17.114	0.354	7.00	32.82	0.49	44.45	23.00	18.00
17.468	0.354	7.00	33.36	0.49	45.16	23.00	18.00
17.822	0.354	7.00	33.90	0.49	45.85	23.00	18.00
18.176	0.354	7.00	34.43	0.49	46.55	23.00	18.00
18.529	0.354	7.00	34.97	0.49	47.18	23.00	18.00
18.883	0.354	7.00	35.51	0.49	47.73	23.00	18.00
19.237	0.354	7.00	36.04	0.49	48.20	23.00	18.00
19.590	0.354	7.00	36.58	0.48	48.56	23.00	18.00
19.944	0.126	7.00	13.14	0.48	48.80	23.00	18.00
20.070	0.354	7.00	37.29	0.48	48.86	23.00	18.00
20.424	0.354	7.00	37.83	0.47	48.92	23.00	18.00
20.777	0.354	7.00	38.37	0.47	48.85	23.00	18.00
21.131	0.354	7.00	38.90	0.46	48.64	23.00	18.00
21.485	0.072	7.00	7.99	0.45	48.29	23.00	18.00
21.557	0.354	17.09	39.31	0.45	48.19	23.00	18.00
21.911	0.354	17.09	39.37	0.44	47.65	23.00	18.00
22.264	0.354	17.09	39.44	0.43	46.95	23.00	18.00
22.618	0.354	17.09	39.50	0.42	46.16	23.00	18.00
22.972	0.354	17.09	39.56	0.41	45.27	23.00	18.00
23.326	0.354	17.09	39.62	0.40	44.31	23.00	18.00
23.679	0.354	17.09	39.69	0.39	43.25	23.00	18.00
24.033	0.354	17.09	39.75	0.39	42.29	23.00	18.00
24.387	0.354	17.09	39.81	0.38	41.35	23.00	18.00
24.741	0.354	17.09	39.87	0.37	40.43	23.00	18.00
25.094	0.354	17.09	39.94	0.36	39.49	23.00	18.00
25.448	0.263	17.09	29.77	0.35	38.53	23.00	18.00
25.711	0.354	17.10	40.05	0.34	37.85	23.00	18.00
26.065	0.354	17.10	40.11	0.33	36.95	23.00	18.00
26.419	0.354	17.10	40.17	0.33	36.02	23.00	18.00
26.773	0.354	17.10	40.23	0.32	35.13	23.00	18.00
27.126	0.124	17.10	14.09	0.31	34.30	23.00	18.00
27.250	0.354	17.10	40.48	0.30	34.02	23.00	18.00
27.604	0.354	17.10	40.86	0.29	33.23	23.00	18.00
27.957	0.354	17.10	41.25	0.29	32.44	23.00	18.00
28.311	0.157	17.10	18.42	0.28	31.66	23.00	18.00
28.468	0.354	17.10	41.80	0.27	31.31	23.00	18.00
28.822	0.354	17.10	42.18	0.26	30.47	23.00	18.00
29.176	0.354	17.10	42.57	0.25	29.55	23.00	18.00
29.529	0.354	17.10	42.95	0.24	28.57	23.00	18.00
29.883	0.354	17.10	43.34	0.23	27.53	23.00	18.00
30.237	0.354	17.10	43.72	0.22	26.42	23.00	18.00
30.590	0.354	17.10	44.10	0.21	25.23	23.00	18.00
30.944	0.354	17.10	44.49	0.20	24.04	23.00	18.00
31.298	0.354	17.10	44.87	0.19	22.76	23.00	18.00
31.652	0.236	17.10	30.19	0.18	21.38	23.00	18.00
31.888	0.354	33.85	45.05	0.17	20.39	23.00	18.00
32.242	0.354	33.85	44.50	0.16	18.75	23.00	18.00
32.595	0.354	33.85	43.96	0.14	16.96	23.00	18.00
32.949	0.354	33.85	43.41	0.13	15.04	23.00	18.00
33.303	0.354	33.85	42.86	0.11	13.04	23.00	18.00
33.657	0.354	33.85	42.32	0.09	10.86	23.00	18.00
34.010	0.354	33.85	41.77	0.07	8.74	23.00	18.00
34.364	0.354	33.85	41.23	0.06	6.86	23.00	18.00
34.718	0.354	33.85	40.68	0.04	5.18	23.00	18.00
35.071	0.354	33.85	40.13	0.03	3.75	23.00	18.00
35.425	0.187	33.85	20.96	0.02	2.56	23.00	18.00
35.612	0.354	33.85	39.30	0.00	0.00	23.00	18.00
35.966	0.354	33.85	38.75	0.00	0.00	23.00	18.00
36.319	0.354	33.85	38.21	0.00	0.00	23.00	18.00
36.673	0.354	33.85	37.66	0.00	0.00	23.00	18.00
37.027	0.354	33.85	37.11	0.00	0.00	23.00	18.00
37.380	0.354	33.85	36.57	0.00	0.00	23.00	18.00
37.734	0.354	33.85	36.02	0.00	0.00	23.00	18.00
38.088	0.354	33.85	35.48	0.00	0.00	23.00	18.00
38.442	0.294	33.85	29.07	0.00	0.00	23.00	18.00

38.736	0.354	33.86	34.48	0.00	0.00	23.00	18.00
39.089	0.181	33.86	17.40	0.00	0.00	23.00	18.00
39.270	0.354	33.86	33.30	0.00	0.00	23.00	18.00
39.624	0.354	33.86	32.04	0.00	0.00	23.00	18.00
39.977	0.354	33.86	30.79	0.00	0.00	23.00	18.00
40.331	0.354	33.86	29.53	0.00	0.00	23.00	18.00
40.685	0.354	33.86	28.28	0.00	0.00	23.00	18.00
41.039	0.075	33.86	5.85	0.00	0.00	23.00	18.00
41.114	0.210	33.86	16.05	0.00	0.00	23.00	18.00
41.324	0.354	33.86	26.01	0.00	0.00	23.00	18.00
41.678	0.209	33.86	14.80	0.00	0.00	23.00	18.00
41.887	0.354	37.04	23.90	0.00	0.00	23.00	18.00
42.241	0.354	37.04	22.43	0.00	0.00	23.00	18.00
42.594	0.354	37.04	20.97	0.00	0.00	23.00	18.00
42.948	0.354	37.04	19.50	0.00	0.00	23.00	18.00

LEGENDA SIMBOLI

- X(m) : Ascissa sinistra concio
 dx(m) : Larghezza concio
 alpha(°) : Angolo pendenza base concio
 W(kN/m) : Forza peso concio
 ru(-) : Coefficiente locale pressione interstiziale
 U(kPa) : Pressione totale dei pori base concio
 phi'(°) : Angolo di attrito efficace base concio
 c'/Cu (kPa) : Coesione efficace o Resistenza al taglio in condizioni non drenate

TABELLA DIAGRAMMA DELLE FORZE DELLA SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	ht (m)	yt (m)	yt' (-)	E(x) (kN/m)	T(x) (kN/m)	E' (kN)	rho(x) (kN)	FS_qFEM (-)	FS_srmFEM (-)			
8.815	0.000	32.923	-0.328	0.0000000000E+000	0.0000000000E+000	0.0000000000E+000	6.4364922175E-001	0.048	20.461	21.368		
9.168	0.069	32.807	-0.328	6.3939963595E-001	1.6491067541E-003	2.9715750883E+000	0.048	20.461	21.368			
9.522	0.139	32.691	-0.319	2.1022474587E+000	3.0601403376E-002	6.7678591839E+000	0.048	14.488	15.192			
9.876	0.214	32.581	-0.302	5.4273367897E+000	2.5232361675E-001	1.1933713845E+001	0.048	20.417	11.173			
10.230	0.296	32.477	-0.300	1.0544780075E+001	1.0541671940E+000	2.0852627764E+001	0.066	21.663	6.776			
10.583	0.372	32.368	-0.292	2.0179575055E+001	2.9773256637E+000	3.2476493667E+001	0.136	19.804	4.756			
10.937	0.460	32.271	-0.266	3.3520348335E+001	5.7247502243E+000	3.8898028167E+001	0.197	20.725	3.934			
11.291	0.555	32.180	-0.252	4.7698072294E+001	8.64889993739E+000	4.3379783621E+001	0.237	21.905	3.500			
11.645	0.652	32.093	-0.241	6.4209473519E+001	1.2023527811E+001	4.9285123200E+001	0.269	20.276	3.209			
11.833	0.708	32.050	-0.210	7.3770079327E+001	1.4022866483E+001	5.1293112925E+001	0.285	18.436	3.097			
12.187	0.823	31.979	-0.183	9.2323462389E+001	1.8008896202E+001	5.2990814221E+001	0.311	14.640	2.942			
12.541	0.949	31.920	-0.156	1.1125854966E+002	2.2276215123E+001	5.2331301019E+001	0.334	11.113	2.834			
12.700	1.012	31.899	-0.114	1.1950979968E+002	2.4204495352E+001	5.2082078828E+001	0.343	9.728	2.798			
13.054	1.160	31.862	-0.082	1.3816100046E+002	2.8798437698E+001	5.1418375257E+001	0.361	7.113	2.724			
13.407	1.325	31.841	-0.043	1.5588584454E+002	3.3521032577E+001	4.7809957456E+001	0.379	5.288	2.653			
13.577	1.411	31.839	0.023	1.6381021456E+002	3.5835487905E+001	4.4726160499E+001	0.387	4.601	2.618			
13.931	1.382	31.853	0.071	1.7816998062E+002	4.0593268163E+001	3.6163038734E+001	0.416	3.636	2.540			
14.285	1.374	31.889	0.126	1.8939383739E+002	4.4993804911E+001	2.9217174780E+001	0.443	3.030	2.461			
14.638	1.384	31.942	0.170	1.9883973642E+002	4.9239405843E+001	2.4181799846E+001	0.468	2.617	2.382			
14.992	1.408	32.009	0.202	2.0650130591E+002	5.3188020926E+001	1.8650340760E+001	0.491	2.343	2.309			
15.346	1.440	32.085	0.224	2.1203396181E+002	5.6578607236E+001	1.4583154914E+001	0.511	2.173	2.247			
15.699	1.480	32.168	0.227	2.1681819155E+002	5.9734801691E+001	1.2659146439E+001	0.529	2.064	2.195			
16.053	1.514	32.246	0.221	2.2098970334E+002	6.2400189227E+001	1.1721588168E+001	0.543	2.003	2.159			
16.407	1.549	32.324	0.221	2.2511065538E+002	6.4917593509E+001	1.1596987154E+001	0.554	1.953	2.132			
16.761	1.584	32.403	0.221	2.2919401790E+002	6.7356249292E+001	1.1506380579E+001	0.565	1.912	2.111			
17.114	1.619	32.481	0.222	2.3325087012E+002	6.9768340438E+001	1.1444793624E+001	0.576	1.878	2.093			
17.468	1.654	32.559	0.222	2.3729066281E+002	7.2192651697E+001	1.1406752189E+001	0.586	1.850	2.075			
17.822	1.689	32.638	0.232	2.4132060253E+002	7.4651195671E+001	1.1837254166E+001	0.596	1.826	2.055			
18.176	1.731	32.724	0.238	2.4566495481E+002	7.7355012389E+001	1.2086002185E+001	0.607	1.806	2.028			
18.529	1.770	32.807	0.231	2.4987087188E+002	7.9998473488E+001	1.1705170199E+001	0.617	1.789	1.998			
18.883	1.808	32.887	0.225	2.5394580371E+002	8.2563470966E+001	1.1345624556E+001	0.626	1.776	1.966			
19.237	1.842	32.965	0.228	2.5789735941E+002	8.5028231904E+001	1.1548372931E+001	0.635	1.766	1.932			
19.590	1.882	33.049	0.230	2.6211572604E+002	8.7557623613E+001	1.1411349607E+001	0.643	1.755	1.894			
19.944	1.918	33.128	0.223	2.6597034427E+002	8.9833842277E+001	1.0481102098E+001	0.650	1.740	1.858			
20.070	1.930	33.156	0.220	2.6727042759E+002	9.0598592835E+001	1.0065864414E+001	0.652	1.734	1.846			
20.424	1.964	33.233	0.222	2.7056522184E+002	9.2542761611E+001	8.6221090651E+000	0.657	1.714	1.812			
20.777	2.000	33.313	0.228	2.7337015798E+002	9.4255776964E+001	7.0357608981E+000	0.661	1.690	1.781			
21.131	2.039	33.395	0.236	2.7554268666E+002	9.5696076889E+001	5.0499065511E+000	0.663	1.661	1.751			
21.485	2.081	33.480	0.242	2.7694272569E+002	9.6830998221E+001	1.9256144005E+000	0.665	1.627	1.725			
21.557	2.090	33.498	0.265	2.7705167469E+002	9.6998451030E+001	1.2915599878E+000	0.665	1.619	1.720			

21.911	2.076	33.593	0.284	2.7712681808E+002	9.7725681567E+001	-9.4104863732E-001	0.670	1.584	1.695
22.264	2.073	33.699	0.299	2.7638592772E+002	9.8176533572E+001	-3.3050455417E+000	0.674	1.552	1.671
22.618	2.070	33.805	0.309	2.7478865620E+002	9.8231080065E+001	-5.2987784854E+000	0.676	1.526	1.651
22.972	2.074	33.917	0.327	2.7263729500E+002	9.8029824446E+001	-6.6551500450E+000	0.677	1.505	1.630
23.326	2.084	34.036	0.349	2.7008045538E+002	9.7616755759E+001	-7.6909854760E+000	0.677	1.488	1.609
23.679	2.103	34.164	0.348	2.6719629008E+002	9.7019995759E+001	-7.7520263213E+000	0.676	1.476	1.587
24.033	2.113	34.282	0.329	2.6459626698E+002	9.6361631222E+001	-7.1088819731E+000	0.674	1.469	1.568
24.387	2.118	34.397	0.322	2.6216709559E+002	9.5682007747E+001	-6.6944114507E+000	0.672	1.464	1.548
24.741	2.123	34.510	0.323	2.5986029059E+002	9.5014112079E+001	-6.4432384744E+000	0.670	1.459	1.530
25.094	2.129	34.625	0.331	2.5760881208E+002	9.4368381842E+001	-6.2930504163E+000	0.667	1.454	1.510
25.448	2.139	34.744	0.328	2.5540825796E+002	9.3763696609E+001	-5.9230868135E+000	0.665	1.450	1.491
25.711	2.142	34.828	0.321	2.5390680488E+002	9.3372726927E+001	-5.6118456411E+000	0.664	1.447	1.477
26.065	2.147	34.941	0.334	2.5196421774E+002	9.2910266354E+001	-5.4909533822E+000	0.662	1.442	1.458
26.419	2.160	35.064	0.341	2.5002221760E+002	9.2523190738E+001	-5.2798695463E+000	0.661	1.437	1.438
26.773	2.171	35.183	0.334	2.4822896219E+002	9.2231382380E+001	-4.8681212451E+000	0.660	1.432	1.417
27.126	2.179	35.300	0.328	2.4657825431E+002	9.2034563806E+001	-4.4289857625E+000	0.660	1.427	1.397
27.250	2.180	35.339	0.333	2.4604038705E+002	9.1986530173E+001	-4.3415887047E+000	0.660	1.426	1.390
27.604	2.191	35.459	0.343	2.4450894844E+002	9.1917516275E+001	-4.2669703091E+000	0.659	1.420	1.369
27.957	2.206	35.582	0.348	2.4302170934E+002	9.1930209953E+001	-4.0521707531E+000	0.658	1.414	1.346
28.311	2.219	35.705	0.346	2.4164223115E+002	9.1902515825E+001	-3.7512470882E+000	0.657	1.408	1.322
28.468	2.225	35.759	0.360	2.4106400517E+002	9.2090807272E+001	-3.7165941189E+000	0.657	1.405	1.311
28.822	2.246	35.889	0.379	2.3972441929E+002	9.2270922459E+001	-3.8004461528E+000	0.657	1.398	1.284
29.176	2.275	36.027	0.399	2.3837537102E+002	9.2477519615E+001	-3.7858751397E+000	0.657	1.391	1.255
29.529	2.311	36.171	0.408	2.3704609344E+002	9.2661266615E+001	-3.6082738520E+000	0.657	1.384	1.226
29.883	2.346	36.316	0.411	2.3582268960E+002	9.2720114556E+001	-3.6305946260E+000	0.656	1.370	1.198
30.237	2.384	36.462	0.418	2.3447762113E+002	9.2594867935E+001	-4.3783295019E+000	0.653	1.345	1.172
30.590	2.425	36.612	0.395	2.3272523057E+002	9.2182294493E+001	-5.7275115831E+000	0.649	1.311	1.148
30.944	2.446	36.742	0.368	2.3042568022E+002	9.1382737156E+001	-7.7401400587E+000	0.643	1.269	1.130
31.298	2.467	36.872	0.368	2.2724945113E+002	9.0127805800E+001	-1.0537005564E+001	0.635	1.221	1.115
31.652	2.488	37.002	0.368	2.2297125201E+002	8.8358923793E+001	-1.4065077823E+001	0.625	1.167	1.104
31.888	2.502	37.089	0.498	2.1933696663E+002	8.6862783920E+001	-1.7029621571E+001	0.617	1.128	1.099
32.242	2.472	37.296	0.578	2.1244025585E+002	8.4098090938E+001	-2.1367316839E+001	0.610	1.081	1.094
32.595	2.437	37.498	0.549	2.0422061043E+002	8.0761075736E+001	-2.4667772687E+001	0.600	1.045	1.091
32.949	2.386	37.684	0.537	1.9498898476E+002	7.6929940400E+001	-2.7100712234E+001	0.586	1.019	1.091
33.303	2.343	37.878	0.575	1.8504815080E+002	7.2712019332E+001	-2.9500145814E+001	0.571	1.002	1.091
33.657	2.318	38.090	0.602	1.7411904046E+002	6.7972526272E+001	-3.0728757194E+001	0.551	0.995	1.093
34.010	2.294	38.304	0.584	1.6330902262E+002	6.3216224573E+001	-2.9123871362E+001	0.529	0.997	1.095
34.364	2.257	38.504	0.560	1.5351529237E+002	5.8816924046E+001	-2.6838801778E+001	0.508	1.004	1.097
34.718	2.216	38.700	0.548	1.4432185213E+002	5.4660836632E+001	-2.5213723429E+001	0.487	1.010	1.099
35.071	2.170	38.891	0.536	1.3567778719E+002	5.0779151260E+001	-2.3724375755E+001	0.466	1.016	1.100
35.425	2.120	39.079	0.531	1.2753798931E+002	4.7172468695E+001	-2.2602632460E+001	0.446	1.022	1.100
35.612	2.094	39.178	0.531	1.2335898636E+002	4.5341370415E+001	-2.2147470644E+001	0.435	1.025	1.100
35.966	2.045	39.366	0.537	1.1568527532E+002	4.2018544734E+001	-2.1579950539E+001	0.416	1.030	1.099
36.319	2.000	39.558	0.556	1.0809220197E+002	3.8768815852E+001	-2.1613571302E+001	0.397	1.035	1.097
36.673	1.964	39.759	0.573	1.0039470584E+002	3.5506835684E+001	-2.1627834793E+001	0.375	1.040	1.095
37.027	1.931	39.964	0.597	9.2791541750E+001	3.2315599106E+001	-2.1938321598E+001	0.354	1.046	1.094
37.380	1.912	40.182	0.613	8.4874391038E+001	2.9033412035E+001	-2.2040178663E+001	0.329	1.054	1.095
37.734	1.890	40.397	0.579	7.7199167939E+001	2.5892158544E+001	-2.0517546823E+001	0.305	1.064	1.097
38.088	1.847	40.591	0.536	7.0359206536E+001	2.3143236933E+001	-1.8797741744E+001	0.282	1.075	1.102
38.442	1.795	40.776	0.511	6.3900663396E+001	2.0583724677E+001	-1.7795561588E+001	0.260	1.088	1.108
38.736	1.744	40.923	0.502	5.8782163612E+001	1.8574185901E+001	-1.7528835820E+001	0.242	1.101	1.116
39.089	1.685	41.101	0.515	5.2531488624E+001	1.6132969499E+001	-1.8359595824E+001	0.218	1.119	1.128
39.270	1.661	41.198	0.495	4.9151234960E+001	1.4813346933E+001	-1.8041932008E+001	0.204	1.131	1.136
39.624	1.591	41.366	0.468	4.3232943181E+001	1.2510280026E+001	-1.6427281615E+001	0.182	1.153	1.152
39.977	1.517	41.529	0.443	3.7529717750E+001	1.0299800976E+001	-1.5419538442E+001	0.159	1.178	1.171
40.331	1.430	41.679	0.412	3.2324356138E+001	8.3012072808E+000	-1.4055761588E+001	0.136	1.202	1.192
40.685	1.334	41.820	0.385	2.7585937700E+001	6.5280748847E+000	-1.2612258970E+001	0.113	1.227	1.214
41.039	1.228	41.952	0.366	2.3401785251E+001	5.0384133657E+000	-1.1333444243E+001	0.093	1.254	1.237
41.114	1.203	41.978	0.358	2.2557043581E+001	4.7317041934E+000	-1.1361539263E+001	0.088	1.260	1.242
41.324	1.138	42.054	0.343	2.0090608954E+001	3.8367551985E+000	-1.1057975539E+001	0.074	1.272	1.255
41.678	1.018	42.171	0.336	1.6581762685E+001	2.6560831467E+000	-9.7335498092E+000	0.055	1.291	1.279
41.887	0.950	42.243	0.428	1.4567964925E+001	2.0444174793E+000	-1.0665865262E+001	0.048	1.298	1.297
42.241	0.851	42.411	0.504	1.0171876769E+001	8.7884634041E-001	-1.2164039435E+001	0.048	1.317	1.340
42.594	0.772	42.599	0.549	5.9624879538E+000	1.6026579849E-001	-1.0646456353E+001	0.048	1.376	1.402
42.948	0.706	42.800	0.549	2.6400173516E+000	2.0806689641E-002	-8.4281137284E+000	0.048	1.438	1.458

LEGENDA SIMBOLI

X(m) : Ascissa sinistra concio
 ht(m) : Altezza linea di thrust da nodo sinistro base concio
 yt(m) : coordinata Y linea di trust
 yt'(-) : gradiente pendenza locale linea di trust
 E(x)(kN/m) : Forza Normale interconcio

T(x)(kN/m) : Forza Tangenziale interconcio
 E' (kN) : derivata Forza normale interconcio
 Rho(x) (-) : fattore mobilitazione resistenza al taglio verticale interconcio ZhU et al.(2003)
 FS_qFEM(x)(-) : fattore di sicurezza locale stimato (locale in X) by qFEM
 FS_srmFEM(x)(-) : fattore di sicurezza locale stimato (locale in X) by SRM Procedure

TABELLA SFORZI DI TAGLIO DISTRIBUITI LUNGO SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	dx (m)	dl (m)	alpha (°)	TauStress (kPa)	TauF (kN/m)	TauStrength (kPa)	TauS (kN/m)
8.815	0.354	0.399	-27.656	-1.045	-0.418	18.391	7.344
9.168	0.354	0.399	-27.656	-3.136	-1.253	19.236	7.682
9.522	0.354	0.399	-27.656	-5.227	-2.088	20.514	8.192
9.876	0.354	0.399	-27.656	-7.318	-2.923	22.810	9.109
10.230	0.354	0.399	-27.656	-9.409	-3.758	26.525	10.593
10.583	0.354	0.399	-27.656	-11.500	-4.593	29.336	11.715
10.937	0.354	0.399	-27.656	-13.591	-5.428	30.519	12.188
11.291	0.354	0.399	-27.656	-15.682	-6.263	32.479	12.970
11.645	0.189	0.213	-27.656	-17.285	-3.682	33.787	7.197
11.833	0.354	0.399	-27.656	-18.888	-7.543	35.293	14.094
12.187	0.354	0.399	-27.656	-20.979	-8.378	36.904	14.738
12.541	0.159	0.180	-27.656	-22.496	-4.046	37.359	6.720
12.700	0.354	0.399	-27.656	-24.125	-9.634	39.259	15.678
13.054	0.354	0.399	-27.656	-26.442	-10.560	40.840	16.309
13.407	0.170	0.192	-27.656	-28.156	-5.393	41.880	8.022
13.577	0.354	0.356	7.005	13.067	4.657	38.671	13.782
13.931	0.354	0.356	7.005	13.321	4.748	38.397	13.684
14.285	0.354	0.356	7.005	13.576	4.838	38.387	13.681
14.638	0.354	0.356	7.005	13.831	4.929	38.334	13.662
14.992	0.354	0.356	7.005	14.086	5.020	38.167	13.602
15.346	0.354	0.356	7.005	14.340	5.111	38.290	13.646
15.699	0.354	0.356	7.005	14.595	5.201	38.247	13.631
16.053	0.354	0.356	7.005	14.850	5.292	38.467	13.709
16.407	0.354	0.356	7.005	15.104	5.383	38.735	13.805
16.761	0.354	0.356	7.005	15.359	5.474	39.040	13.913
17.114	0.354	0.356	7.005	15.614	5.565	39.373	14.032
17.468	0.354	0.356	7.005	15.869	5.655	39.725	14.158
17.822	0.354	0.356	7.005	16.123	5.746	40.232	14.338
18.176	0.354	0.356	7.005	16.378	5.837	40.524	14.442
18.529	0.354	0.356	7.005	16.633	5.928	40.832	14.552
18.883	0.354	0.356	7.005	16.888	6.018	41.158	14.668
19.237	0.354	0.356	7.005	17.142	6.109	41.635	14.838
19.590	0.354	0.356	7.005	17.397	6.200	41.937	14.946
19.944	0.126	0.127	7.005	17.570	2.227	42.176	5.346
20.070	0.354	0.356	7.005	17.747	6.325	42.421	15.118
20.424	0.354	0.356	7.005	18.002	6.416	42.867	15.277
20.777	0.354	0.356	7.005	18.257	6.507	43.340	15.446
21.131	0.354	0.356	7.005	18.512	6.598	43.849	15.627
21.485	0.072	0.073	7.005	18.666	1.356	44.161	3.207
21.557	0.354	0.370	17.092	36.094	13.357	39.965	14.790
21.911	0.354	0.370	17.092	36.151	13.379	40.280	14.906
22.264	0.354	0.370	17.092	36.209	13.400	40.665	15.049
22.618	0.354	0.370	17.092	36.266	13.421	41.083	15.203
22.972	0.354	0.370	17.092	36.324	13.442	41.538	15.372
23.326	0.354	0.370	17.092	36.381	13.464	42.024	15.552
23.679	0.354	0.370	17.092	36.439	13.485	42.543	15.744
24.033	0.354	0.370	17.092	36.497	13.506	43.021	15.921
24.387	0.354	0.370	17.092	36.554	13.528	43.486	16.093
24.741	0.354	0.370	17.092	36.612	13.549	43.945	16.263
25.094	0.354	0.370	17.092	36.669	13.570	44.408	16.434
25.448	0.263	0.276	17.092	36.719	10.117	44.872	12.363
25.711	0.354	0.370	17.102	36.785	13.614	45.211	16.732
26.065	0.354	0.370	17.102	36.842	13.635	45.656	16.897
26.419	0.354	0.370	17.102	36.899	13.656	46.112	17.066
26.773	0.354	0.370	17.102	36.957	13.677	46.550	17.228
27.126	0.124	0.129	17.102	36.995	4.791	46.945	6.079
27.250	0.354	0.370	17.102	37.182	13.761	47.278	17.497
27.604	0.354	0.370	17.102	37.534	13.891	48.026	17.774
27.957	0.354	0.370	17.102	37.887	14.022	48.773	18.050
28.311	0.157	0.164	17.102	38.142	6.261	49.401	8.110
28.468	0.354	0.370	17.102	38.396	14.210	49.845	18.447

28.822	0.354	0.370	17.102	38.749	14.341	50.615	18.732
29.176	0.354	0.370	17.102	39.102	14.471	51.420	19.030
29.529	0.354	0.370	17.102	39.455	14.602	52.259	19.340
29.883	0.354	0.370	17.102	39.808	14.732	53.127	19.662
30.237	0.354	0.370	17.102	40.160	14.863	54.027	19.995
30.590	0.354	0.370	17.102	40.513	14.994	54.968	20.343
30.944	0.354	0.370	17.102	40.866	15.124	55.912	20.693
31.298	0.354	0.370	17.102	41.219	15.255	56.897	21.057
31.652	0.236	0.247	17.102	41.513	10.263	57.855	14.302
31.888	0.354	0.426	33.849	63.130	26.888	48.375	20.604
32.242	0.354	0.426	33.849	62.364	26.562	49.243	20.973
32.595	0.354	0.426	33.849	61.599	26.236	50.092	21.335
32.949	0.354	0.426	33.849	60.834	25.910	50.880	21.671
33.303	0.354	0.426	33.849	60.068	25.584	51.849	22.083
33.657	0.354	0.426	33.849	59.303	25.258	52.354	22.298
34.010	0.354	0.426	33.849	58.538	24.932	52.439	22.335
34.364	0.354	0.426	33.849	57.773	24.606	52.540	22.377
34.718	0.354	0.426	33.849	57.007	24.280	52.520	22.369
35.071	0.354	0.426	33.849	56.242	23.954	52.400	22.318
35.425	0.187	0.225	33.849	55.657	12.510	52.426	11.784
35.612	0.354	0.426	33.849	55.073	23.456	53.020	22.582
35.966	0.354	0.426	33.849	54.308	23.130	52.505	22.363
36.319	0.354	0.426	33.849	53.542	22.804	52.080	22.182
36.673	0.354	0.426	33.849	52.777	22.478	51.567	21.963
37.027	0.354	0.426	33.849	52.012	22.153	51.227	21.818
37.380	0.354	0.426	33.849	51.246	21.827	50.639	21.568
37.734	0.354	0.426	33.849	50.481	21.501	49.784	21.204
38.088	0.354	0.426	33.849	49.716	21.175	49.145	20.931
38.442	0.294	0.354	33.849	49.015	17.350	48.593	17.201
38.736	0.354	0.426	33.859	48.320	20.583	48.212	20.537
39.089	0.181	0.218	33.859	47.741	10.386	48.033	10.449
39.270	0.354	0.426	33.859	46.666	19.878	47.120	20.071
39.624	0.354	0.426	33.859	44.907	19.129	46.016	19.601
39.977	0.354	0.426	33.859	43.148	18.380	44.785	19.077
40.331	0.354	0.426	33.859	41.389	17.630	43.540	18.546
40.685	0.354	0.426	33.859	39.631	16.881	42.233	17.990
41.039	0.075	0.091	33.859	38.564	3.494	41.573	3.766
41.114	0.210	0.253	33.859	37.855	9.582	41.235	10.437
41.324	0.354	0.426	33.859	36.453	15.528	40.088	17.076
41.678	0.209	0.252	33.859	35.053	8.833	39.131	9.861
41.887	0.354	0.443	37.040	34.560	15.315	37.017	16.404
42.241	0.354	0.443	37.040	32.436	14.374	35.396	15.686
42.594	0.354	0.443	37.040	30.311	13.432	33.617	14.897
42.948	0.354	0.443	37.040	28.187	12.491	32.391	14.354

 LEGENDA SIMBOLI

X(m) : Ascissa sinistra concio
 dx(m) : Larghezza concio
 dl(m) : lunghezza base concio
 alpha(°) : Angolo pendenza base concio
 TauStress(kPa) : Sforzo di taglio su base concio
 TauF (kN/m) : Forza di taglio su base concio
 TauStrength(kPa) : Resistenza al taglio su base concio
 TauS (kN/m) : Forza resistente al taglio su base concio

CASO C -PROGETTO-

Report elaborazioni

SSAP 5.0.2 - Slope Stability Analysis Program (1991,2021)
WWW.SSAP.EU
Build No. 12007
BY
Dr. Geol. LORENZO BORSELLI *,**
*UASLP, San Luis Potosi, Mexico
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** Gia' Ricercatore CNR-IRPI fino a Luglio 2011

Ultima Revisione struttura tabelle del report: 21 Febbraio 2021

Modello pendio: CASO C PROGETTO.mod

----- PARAMETRI DEL MODELLO DEL PENDIO -----

___ PARAMETRI GEOMETRICI - Coordinate X Y (in m) ___

SUP T.		SUP 2		SUP 3		SUP 4	
X	Y	X	Y	X	Y	X	Y
0.00	30.73	0.00	27.50	0.00	24.00	0.00	15.50
12.70	33.89	45.62	42.31	45.59	38.80	45.60	30.30
27.25	38.72	76.05	47.93	75.84	43.13	76.05	38.61
39.27	44.22	94.85	51.93	95.41	50.10	94.85	44.93
62.06	48.35	170.31	76.50	170.31	74.49	170.31	69.50
68.08	51.04	-	-	-	-	-	-
73.38	51.85	-	-	-	-	-	-
75.82	53.21	-	-	-	-	-	-
84.19	53.61	-	-	-	-	-	-
85.52	52.71	-	-	-	-	-	-
91.39	56.07	-	-	-	-	-	-
94.10	56.40	-	-	-	-	-	-
101.48	60.74	-	-	-	-	-	-
111.60	63.30	-	-	-	-	-	-
119.84	66.26	-	-	-	-	-	-
131.00	69.53	-	-	-	-	-	-
133.02	71.23	-	-	-	-	-	-
157.83	77.62	-	-	-	-	-	-
170.31	80.51	-	-	-	-	-	-

---- SUP FALDA -----

X Y (in m)

0.00	30.73
12.70	33.89
20.07	36.34
78.38	39.13
79.25	41.11
81.84	45.27
89.54	55.01
139.52	57.54
145.20	66.31
150.21	70.78
161.42	78.45
170.31	80.51

----- GESTIONE ACQUIFERI -----

Strati esclusi da acquifero:

Esclusione sovraccarico pendio sommerso: NON ATTIVATA

EFFETTO TENSION CRACK IN TESTA RIEMPITO DI ACQUA: ----> DISATTIVATO

In caso di superfici con tension crack in testa, la frattura di tensione

puo' venir viene considerata completamente riempita di acqua per la sua intera profondita'.

Viene quindi considerato una forza in testa, prodotta dalla pressione idrostatica.

La forza applicata ha un effetto destabilizzante aggiuntivo alle altre forze destabilizzanti agenti.

Peso unitario fluido (kN/m³): 9.81

Parametri funzione dissipazione superficiale pressione dei fluidi:

Coefficiente A 0
 Coefficiente K 0.000800
 Pressione minima fluidi Uo_Min (kPa) 0.01
 Coefficiente di soprappressione oltre pressione idrostatica 1.00
 Limitazione dissipazione a Pressione Idrostatica = ATTIVA
 STABILITE CONDIZIONI PER LA VERIFICA CON SOVRAPPRESSIONE ACQUIFERI CON DISSIPAZIONE IN DIREZIONE DELLA SUPERFICIE

CALCOLO EFFETTO DI FILTRAZIONE NON ATTIVATO

----- PARAMETRI GEOMECCANICI -----

	fi'	C'	Cu	Gamm	Gamm_sat	STR_IDX	sgci	GSI	mi	D
STRATO 1	18.00	11.00	11.00	0.00	18.00	20.00	1.269	0.00	0.00	0.00
STRATO 2	18.00	11.00	11.00	0.00	18.00	20.00	1.269	0.00	0.00	0.00
STRATO 3	25.00	50.00	50.00	0.00	20.00	20.00	4.881	0.00	0.00	0.00
STRATO 4	35.00	0.00	0.00	0.00	20.00	20.00	2.404	0.00	0.00	0.00

LEGENDA: fi' _____ Angolo di attrito interno efficace(in gradi)

C' _____ Coesione efficace (in Kpa)

Cu _____ Resistenza al taglio Non drenata (in Kpa)

Gamm _____ Peso di volume terreno fuori falda (in KN/m³)

Gamm_sat _____ Peso di volume terreno immerso (in KN/m³)

STR_IDX _____ Indice di resistenza (usato in solo in 'SNIFF SEARCH) (adimensionale)

---- SOLO Per AMMASSI ROCCIOSI FRATTURATI - Parametri Criterio di Rottura di Hoek (2002)-

sigci _____ Resistenza Compressione Uniassiale Roccia Intatta (in MPa)

GSI _____ Geological Strenght Index ammasso(adimensionale)

mi _____ Indice litologico ammasso(adimensionale)

D _____ Fattore di disturbo ammasso(adimensionale)

Fattore di riduzione NTC2018: gammaPHI=1.25 e gammaC=1.25 - DISATTIVATO (solo per ROCCE)

Uso CRITERIO DI ROTTURA Hoek et al.(2002,2006) - non-lineare - Generalizzato, secondo Lei et al.(2016)

----- SOVRACCARICHI PRESENTI -----

Nota Bene:

##Nota: la distribuzione del carico e delle forze unitarie puo' variare
in modo lineare tra gli estremi di coordinate X1 e X2

TABELLA SOVRACCARICHI IN SUPERFICIE

N.	da X1	a X2	SX1	SX2	Alpha	WsH1	WsH2	WsV1	WsV2
(-)	(m)	(m)	(kPa)	(kPa)	(°)	(kN/m)	(kN/m)	(kN/m)	(kN/m)
1	75.0000	84.0000	25.00	25.00	90.00	0.00	0.00	25.00	25.00

LEGENDA SIMBOLI

N.(-) : NUMERO SOVRACCARICO

X1(m) : Posizione carico da X1

X2(m) : a X2

SX1(kPa) : Carico in X1 (Kpa)

SX2(kPa) : Carico in X2 (Kpa)

Alpha(°) : Inclinazione carico (gradi):

Componenti distribuzione forza unitaria applicata:

WsH1, WsH2(kN/m) : forza unitaria Orizzontale (per metro di proiezione Verticale) : da X1 a X2 (vedasi cap.2 manuale)

WsV1, WsV2(kN/m) : forza unitaria Verticale (per metro di proiezione Orizzontale) : da X1 a X2 (vedasi Cap.2 manuale)

----- INFORMAZIONI GENERAZIONE SUPERFICI RANDOM -----

*** PARAMETRI PER LA GENERAZIONE DELLE SUPERFICI

MOTORE DI RICERCA: CONVEX RANDOM - Chen (1992)

FILTRAGGIO SUPERFICI : ATTIVATO

COORDINATE X1,X2,Y OSTACOLO : 0.00 0.00 0.00

LUNGHEZZA MEDIA SEGMENTI (m)*: 6.8 (+/-) 50%

INTERVALLO ASCISSE RANDOM STARTING POINT (Xmin .. Xmax): 3.41 156.69

LIVELLO MINIMO CONSIDERATO (Ymin): 29.00

INTERVALLO ASCISSE AMMESSO PER LA TERMINAZIONE (Xmin .. Xmax): 40.00 166.90

TOTALE SUPERFICI GENERATE : 10000

*NOTA IMPORTANTE: La lunghezza media dei segmenti non viene considerata nel caso di uso del motore di ricerca NEW RANOM SEARCH

----- INFORMAZIONI PARAMETRI DI CALCOLO -----

METODO DI CALCOLO : MORGENSTERN - PRICE (Morgenstern & Price, 1965)
 METODO DI ESPLORAZIONE CAMPO VALORI (λ_0, F_s0) ADOTTATO : A (rapido)
 COEFFICIENTE SISMICO UTILIZZATO K_h : 0.0000
 COEFFICIENTE SISMICO UTILIZZATO K_v (assunto Positivo): 0.0000
 COEFFICIENTE $c=K_v/K_h$ UTILIZZATO : 0.5000
 FORZA ORIZZONTALE ADDIZIONALE IN TESTA (kN/m): 0.00
 FORZA ORIZZONTALE ADDIZIONALE ALLA BASE (kN/m): 0.00

N.B. Le forze orizzontali addizionali in testa e alla base sono poste uguali a 0 durante le tutte le verifiche globali.
 I valori >0 impostati dall'utente sono utilizzati solo in caso di verifica singola

----- RISULTATO FINALE ELABORAZIONI -----

* DATI RELATIVI ALLE 10 SUPERFICI GENERATE CON MINOR F_s *

Fattore di sicurezza (FS) 1.2248 - Min. - X Y Lambda= 0.3611
 85.82 52.88
 88.07 51.53
 91.22 50.50
 94.40 49.77
 97.62 50.86
 104.19 53.08
 109.94 55.03
 114.11 57.23
 118.06 60.55
 122.15 64.62
 123.58 66.05
 123.58 67.35

Fattore di sicurezza (FS) 1.2304 - N.2 -- X Y Lambda= 0.3197
 6.43 32.33
 10.55 29.66
 15.96 30.31
 19.40 30.74
 24.67 32.92
 29.82 35.06
 34.00 36.99
 39.41 39.49
 43.66 41.90
 46.36 44.13
 46.36 45.51

Fattore di sicurezza (FS) 1.2389 - N.3 -- X Y Lambda= 0.3164
 11.23 33.52
 14.89 31.15
 19.55 31.26
 25.61 33.06
 28.17 33.82
 32.67 36.24
 36.39 38.68
 39.09 40.46
 43.79 43.54
 43.79 45.04

Fattore di sicurezza (FS) 1.2393 - N.4 -- X Y Lambda= 0.3575
 83.78 53.59
 89.86 50.33
 94.42 51.16
 101.01 53.50
 105.68 55.16
 114.42 60.91
 119.85 64.49
 120.58 64.97
 120.58 66.48

Fattore di sicurezza (FS) 1.2409 - N.5 -- X Y Lambda= 0.3590

86.41 53.22
90.48 50.68
93.66 50.53
97.70 51.80
100.19 52.58
104.26 54.97
107.72 57.01
110.06 59.37
112.46 62.11
112.46 63.61

Fattore di sicurezza (FS) 1.2436 - N.6 -- X Y Lambda= 0.3661

82.80 53.54
88.85 50.47
97.00 51.01
103.16 53.12
108.11 54.81
114.00 56.83
117.72 58.14
124.89 61.46
129.25 64.43
131.80 66.53
135.24 70.65
135.24 71.80

Fattore di sicurezza (FS) 1.2485 - N.7 -- X Y Lambda= 0.3437

83.21 53.56
88.20 50.30
95.11 50.05
107.95 54.20
115.54 60.09
119.07 64.27
119.41 64.68
119.41 66.11

Fattore di sicurezza (FS) 1.2495 - N.8 -- X Y Lambda= 0.3100

8.29 32.79
10.63 31.86
13.24 30.99
15.64 30.35
17.07 30.72
19.61 31.38
21.18 31.79
22.59 32.16
25.81 33.29
29.49 34.59
32.86 36.17
35.82 37.57
38.00 38.60
40.23 40.67
42.26 42.55
43.28 43.50
43.28 44.95

Fattore di sicurezza (FS) 1.2523 - N.9 -- X Y Lambda= 0.2742

5.19 32.02
8.92 29.79
13.65 29.29
20.58 31.02
24.81 32.15
29.00 34.07
37.02 37.75
40.35 39.29
47.82 42.73
52.09 45.06
52.09 46.54

Fattore di sicurezza (FS) 1.2562 - N.10 -- X Y Lambda= 0.3206

11.56 33.61
18.60 30.79
26.68 32.74
37.92 36.84
45.56 42.77
47.37 44.18
47.37 45.69

----- ANALISI DEFICIT DI RESISTENZA -----

DATI RELATIVI ALLE 10 SUPERFICI GENERATE CON MINOR Fs *

Analisi Deficit in riferimento a FS(progetto) = 1.200

Sup N.	FS	FTR(kN/m)	FTA(kN/m)	Bilancio(kN/m)	ESITO
1	1.225	1611.9	1316.1	32.6	Surplus
2	1.230	1193.6	970.1	29.5	Surplus
3	1.239	972.6	785.0	30.5	Surplus
4	1.239	1260.8	1017.3	40.0	Surplus
5	1.241	988.3	796.4	32.6	Surplus
6	1.244	2193.6	1763.9	76.8	Surplus
7	1.249	1474.2	1180.7	57.3	Surplus
8	1.250	1056.9	845.9	41.9	Surplus
9	1.252	1459.6	1165.6	60.9	Surplus
10	1.256	1218.5	970.0	54.5	Surplus

Esito analisi: SURPLUS di RESISTENZA!

Valore minimo di SURPLUS di RESISTENZA (kN/m): 29.5

Note: FTR --> Forza totale Resistente lungo la superficie di scivolamento

FTA --> Forza totale Agente lungo la superficie di scivolamento

IMPORTANTE! : Il Deficit o il Surplus di resistenza viene espresso in kN per metro di LARGHEZZA rispetto al fronte della scarpata

TABELLA PARAMETRI CONCI DELLA SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	dx (m)	alpha (°)	W (kN/m)	ru (-)	U (kPa)	phi' (°)	(c',Cu) (kPa)
85.825	0.357	-31.02	1.35	0.00	0.00	0.00	18.00 11.00
86.182	0.357	-31.02	4.04	0.00	0.00	0.00	18.00 11.00
86.539	0.357	-31.02	6.73	0.00	0.00	0.00	18.00 11.00
86.896	0.308	-31.02	7.97	0.00	0.00	0.00	18.00 11.00
87.204	0.357	-31.02	11.75	0.00	0.00	0.00	18.00 11.00
87.561	0.357	-31.02	15.16	0.20	9.47	18.00	11.00
87.918	0.155	-31.02	7.55	0.27	14.57	18.00	11.00
88.073	0.357	-18.21	19.35	0.30	16.94	18.00	11.00
88.430	0.357	-18.21	21.83	0.34	21.45	18.00	11.00
88.787	0.357	-18.21	24.30	0.38	25.66	18.00	11.00
89.144	0.357	-18.21	26.78	0.42	29.94	18.00	11.00
89.501	0.039	-18.21	3.05	0.44	33.71	18.00	11.00
89.540	0.357	-18.21	29.37	0.44	34.09	18.00	11.00
89.897	0.105	-18.21	9.01	0.44	37.16	18.00	11.00
90.002	0.357	-18.21	32.17	0.44	37.97	18.00	11.00
90.359	0.357	-18.21	34.33	0.44	40.56	18.00	11.00
90.716	0.357	-18.21	36.50	0.44	42.60	18.00	11.00
91.073	0.144	-18.21	15.36	0.43	44.33	18.00	11.00
91.217	0.173	-12.95	18.84	0.43	44.96	18.00	11.00
91.390	0.357	-12.95	39.82	0.43	45.61	18.00	11.00
91.747	0.357	-12.95	40.70	0.42	46.90	18.00	11.00
92.104	0.357	-12.95	41.58	0.42	48.02	18.00	11.00
92.461	0.357	-12.95	42.46	0.41	48.92	18.00	11.00
92.818	0.357	-12.95	43.34	0.41	49.65	18.00	11.00
93.175	0.357	-12.95	44.21	0.41	50.27	18.00	11.00
93.532	0.357	-12.95	45.09	0.40	50.77	18.00	11.00
93.890	0.210	-12.95	26.99	0.40	51.07	18.00	11.00
94.100	0.301	-12.95	39.48	0.40	51.18	18.00	11.00
94.401	0.357	18.69	47.94	0.39	51.22	18.00	11.00
94.758	0.092	18.69	12.46	0.38	51.09	18.00	11.00

94.850	0.357	18.69	48.57	0.38	51.04	18.00	11.00
95.207	0.203	18.69	27.83	0.37	50.67	18.00	11.00
95.410	0.357	18.69	49.35	0.37	50.32	18.00	11.00
95.767	0.357	18.69	49.85	0.36	49.59	18.00	11.00
96.124	0.357	18.69	50.36	0.35	48.72	18.00	11.00
96.481	0.357	18.69	50.86	0.34	47.73	18.00	11.00
96.838	0.357	18.69	51.36	0.32	46.71	18.00	11.00
97.195	0.357	18.69	51.86	0.31	45.66	18.00	11.00
97.552	0.067	18.69	9.82	0.30	44.70	18.00	11.00
97.620	0.357	18.70	52.45	0.30	44.52	18.00	11.00
97.977	0.357	18.70	52.95	0.29	43.61	18.00	11.00
98.334	0.357	18.70	53.45	0.28	42.67	18.00	11.00
98.691	0.357	18.70	53.95	0.28	41.70	18.00	11.00
99.048	0.357	18.70	54.45	0.27	40.69	18.00	11.00
99.405	0.357	18.70	54.95	0.26	39.62	18.00	11.00
99.762	0.357	18.70	55.45	0.25	38.52	18.00	11.00
100.119	0.357	18.70	55.95	0.24	37.44	18.00	11.00
100.476	0.357	18.70	56.45	0.23	36.43	18.00	11.00
100.833	0.357	18.70	56.95	0.22	35.42	18.00	11.00
101.190	0.290	18.70	46.55	0.22	34.42	18.00	11.00
101.480	0.357	18.70	57.47	0.21	33.59	18.00	11.00
101.837	0.357	18.70	57.20	0.20	32.55	18.00	11.00
102.194	0.357	18.70	56.93	0.20	31.47	18.00	11.00
102.551	0.357	18.70	56.66	0.19	30.40	18.00	11.00
102.908	0.357	18.70	56.39	0.19	29.34	18.00	11.00
103.265	0.357	18.70	56.12	0.18	28.30	18.00	11.00
103.622	0.357	18.70	55.85	0.17	27.28	18.00	11.00
103.980	0.209	18.70	32.64	0.17	26.31	18.00	11.00
104.189	0.357	18.71	55.42	0.17	25.73	18.00	11.00
104.546	0.357	18.71	55.15	0.16	24.77	18.00	11.00
104.903	0.357	18.71	54.88	0.15	23.79	18.00	11.00
105.260	0.357	18.71	54.61	0.15	22.79	18.00	11.00
105.617	0.357	18.71	54.34	0.14	21.77	18.00	11.00
105.974	0.357	18.71	54.07	0.14	20.73	18.00	11.00
106.331	0.357	18.71	53.80	0.13	19.66	18.00	11.00
106.689	0.340	18.71	50.93	0.12	18.62	18.00	11.00
107.028	0.357	18.71	53.28	0.12	17.64	18.00	11.00
107.385	0.357	18.71	53.01	0.11	16.59	18.00	11.00
107.742	0.357	18.71	52.74	0.11	15.45	18.00	11.00
108.099	0.357	18.71	52.47	0.10	14.27	18.00	11.00
108.456	0.357	18.71	52.20	0.09	13.11	18.00	11.00
108.814	0.357	18.71	51.93	0.08	11.96	18.00	11.00
109.171	0.357	18.71	51.66	0.08	10.81	18.00	11.00
109.528	0.357	18.71	51.39	0.07	9.64	18.00	11.00
109.885	0.054	18.71	7.68	0.06	8.38	18.00	11.00
109.938	0.357	27.80	50.84	0.06	8.20	18.00	11.00
110.295	0.357	27.80	50.08	0.05	6.95	18.00	11.00
110.652	0.357	27.80	49.33	0.04	5.71	18.00	11.00
111.010	0.357	27.80	48.58	0.03	4.54	18.00	11.00
111.367	0.233	27.80	31.35	0.02	3.45	18.00	11.00
111.600	0.357	27.80	47.46	0.02	2.78	18.00	11.00
111.957	0.116	27.80	15.27	0.00	0.00	18.00	11.00
112.073	0.357	27.80	46.85	0.00	0.00	18.00	11.00
112.430	0.357	27.80	46.46	0.00	0.00	18.00	11.00
112.787	0.357	27.80	46.08	0.00	0.00	18.00	11.00
113.144	0.357	27.80	45.69	0.00	0.00	18.00	11.00
113.501	0.357	27.80	45.31	0.00	0.00	18.00	11.00
113.858	0.253	27.80	31.91	0.00	0.00	18.00	11.00
114.112	0.233	40.12	28.97	0.00	0.00	18.00	11.00
114.344	0.357	40.12	43.56	0.00	0.00	18.00	11.00
114.701	0.357	40.12	42.45	0.00	0.00	18.00	11.00
115.058	0.357	40.12	41.34	0.00	0.00	18.00	11.00
115.415	0.357	40.12	40.23	0.00	0.00	18.00	11.00
115.772	0.226	40.12	24.94	0.00	0.00	18.00	11.00
115.999	0.357	40.12	38.42	0.00	0.00	18.00	11.00
116.356	0.357	40.12	37.31	0.00	0.00	18.00	11.00
116.713	0.357	40.12	36.20	0.00	0.00	18.00	11.00
117.070	0.357	40.12	35.09	0.00	0.00	18.00	11.00
117.427	0.357	40.12	33.98	0.00	0.00	18.00	11.00
117.784	0.274	40.12	25.28	0.00	0.00	18.00	11.00
118.058	0.357	44.89	31.85	0.00	0.00	18.00	11.00
118.415	0.357	44.89	30.39	0.00	0.00	18.00	11.00
118.772	0.357	44.89	28.92	0.00	0.00	18.00	11.00

119.129	0.357	44.89	27.46	0.00	0.00	18.00	11.00
119.486	0.354	44.89	25.78	0.00	0.00	18.00	11.00
119.840	0.357	44.89	24.48	0.00	0.00	18.00	11.00
120.197	0.357	44.89	22.86	0.00	0.00	18.00	11.00
120.554	0.357	44.89	21.25	0.00	0.00	18.00	11.00
120.911	0.357	44.89	19.63	0.00	0.00	18.00	11.00
121.268	0.357	44.89	18.02	0.00	0.00	18.00	11.00
121.625	0.357	44.89	16.41	0.00	0.00	18.00	11.00
121.982	0.165	44.89	7.02	0.00	0.00	18.00	11.00
122.147	0.357	44.90	14.05	0.00	0.00	18.00	11.00
122.504	0.357	44.90	12.43	0.00	0.00	18.00	11.00
122.861	0.357	44.90	10.82	0.00	0.00	18.00	11.00
123.218	0.357	44.90	9.21	0.00	0.00	18.00	11.00

LEGENDA SIMBOLI

- X(m) : Ascissa sinistra concio
 dx(m) : Larghezza concio
 alpha(°) : Angolo pendenza base concio
 W(kN/m) : Forza peso concio
 ru(-) : Coefficiente locale pressione interstiziale
 U(kPa) : Pressione totale dei pori base concio
 phi'(°) : Angolo di attrito efficace base concio
 c'/Cu (kPa) : Coesione efficace o Resistenza al taglio in condizioni non drenate
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TABELLA DIAGRAMMA DELLE FORZE DELLA SUPERFICIE INDIVIDUATA CON MINOR FS

X	ht	yt	yt'	E(x)	T(x)	E'	rho(x)	FS_qFEM	FS_srmFEM			
(m)	(m)	(m)	(--)	(kN/m)	(kN/m)		(kN)	(--)	(--)			
85.825	0.000	52.885	-0.310	0.0000000000E+000	0.0000000000E+000	0.0000000000E+000	0.0000000000E+000	0.0000000000E+000	0.041	5.958	6.417	
86.182	0.105	52.775	-0.310	7.5039401894E-001	1.9762943693E-003	4.3431026344E+000	0.041	5.958	6.417			
86.539	0.208	52.663	-0.289	3.1016303953E+000	6.9289121473E-002	9.5990352580E+000	0.041	4.014	4.300			
86.896	0.328	52.569	-0.263	7.605531132E+000	4.3237315651E-001	1.8188150941E+001	0.041	3.481	3.767			
87.204	0.433	52.488	-0.210	1.4687940673E+001	1.4621641303E+000	2.5229989266E+001	0.079	3.157	3.352			
87.561	0.589	52.429	-0.134	2.4621651336E+001	3.1187908164E+000	3.4777907386E+001	0.128	2.949	3.037			
87.918	0.767	52.392	-0.092	3.9524612451E+001	5.9890352568E+000	4.9649535360E+001	0.188	2.767	2.773			
88.073	0.849	52.382	-0.058	4.7737603606E+001	7.6722326427E+000	5.0978067298E+001	0.216	2.690	2.668			
88.430	0.947	52.363	-0.050	6.4209689502E+001	1.1111886776E+001	4.5677699607E+001	0.261	2.549	2.490			
88.787	1.049	52.347	-0.030	8.0358371157E+001	1.4567442979E+001	5.0111634140E+001	0.294	2.433	2.351			
89.144	1.161	52.341	-0.005	9.9996955125E+001	1.9038435961E+001	5.5192807835E+001	0.331	2.326	2.225			
89.501	1.280	52.343	0.005	1.1977436124E+002	2.3719781790E+001	5.5681464519E+001	0.363	2.241	2.125			
89.540	1.293	52.344	0.018	1.2192916281E+002	2.4241160473E+001	5.5760073147E+001	0.366	2.233	2.115			
89.897	1.418	52.350	0.020	1.4199378266E+002	2.9237518689E+001	5.6434835078E+001	0.393	2.167	2.040			
90.002	1.454	52.353	0.025	1.4790220068E+002	3.0740115916E+001	5.7385403685E+001	0.401	2.150	2.021			
90.359	1.581	52.362	0.024	1.6946536234E+002	3.6428469669E+001	6.0095770319E+001	0.428	2.095	1.962			
90.716	1.706	52.370	0.020	1.9081964554E+002	4.2376735348E+001	6.0957990965E+001	0.453	2.050	1.917			
91.073	1.830	52.376	0.016	2.1299856281E+002	4.8844684113E+001	6.4377860433E+001	0.478	2.013	1.881			
91.217	1.879	52.378	0.009	2.2241674498E+002	5.1688485794E+001	6.4395662920E+001	0.488	2.000	1.868			
91.390	1.920	52.379	-0.000	2.3336422472E+002	5.5100048068E+001	6.5850025958E+001	0.501	1.984	1.855			
91.747	2.001	52.377	-0.010	2.5874330741E+002	6.3240131419E+001	7.4478148653E+001	0.538	1.948	1.828			
92.104	2.077	52.371	-0.020	2.8655285715E+002	7.2439758579E+001	7.7305128906E+001	0.575	1.906	1.802			
92.461	2.150	52.363	-0.017	3.1395083017E+002	8.1701866103E+001	7.6316448051E+001	0.608	1.857	1.777			
92.818	2.229	52.359	0.004	3.4105431264E+002	9.1115601299E+001	7.4595052339E+001	0.639	1.793	1.749			
93.175	2.317	52.366	0.034	3.6722294947E+002	1.0045287548E+002	6.9684772191E+001	0.667	1.722	1.718			
93.532	2.417	52.383	0.070	3.9081975125E+002	1.0905791639E+002	5.7718801098E+001	0.690	1.650	1.685			
93.890	2.531	52.415	0.102	4.0844287977E+002	1.1571138025E+002	4.2453189521E+001	0.706	1.583	1.653			
94.100	2.605	52.441	0.148	4.1652197122E+002	1.1890676485E+002	3.4783892430E+001	0.713	1.545	1.634			
94.401	2.724	52.491	0.202	4.2543544773E+002	1.2279948961E+002	2.5032973306E+001	0.717	1.489	1.606			
94.758	2.686	52.574	0.240	4.3242211693E+002	1.2659839832E+002	1.5817473432E+001	0.727	1.432	1.571			
94.850	2.680	52.599	0.292	4.3379085844E+002	1.2749347724E+002	1.3279644826E+001	0.730	1.418	1.561			
95.207	2.666	52.705	0.331	4.3636073990E+002	1.3018138301E+002	2.2796564233E+000	0.739	1.372	1.522			
95.410	2.676	52.784	0.407	4.3625626088E+002	1.3138331282E+002	-1.8493591961E+000	0.744	1.348	1.495			
95.767	2.704	52.933	0.438	4.3475740315E+002	1.3312481277E+002	-6.5762757342E+000	0.753	1.308	1.445			
96.124	2.747	53.097	0.475	4.3155980804E+002	1.3437447026E+002	-1.0613553337E+001	0.760	1.274	1.393			
96.481	2.802	53.272	0.487	4.2717772511E+002	1.3523641472E+002	-1.3093507918E+001	0.766	1.245	1.339			
96.838	2.854	53.445	0.485	4.2220906836E+002	1.3565454846E+002	-1.3912243935E+001	0.771	1.225	1.289			
97.195	2.907	53.619	0.464	4.1724228442E+002	1.3584400774E+002	-1.3153952812E+001	0.774	1.206	1.239			
97.552	2.944	53.776	0.442	4.1281516190E+002	1.3582279862E+002	-1.2432119272E+001	0.775	1.190	1.195			
97.620	2.951	53.806	0.426	4.1197921786E+002	1.3581180278E+002	-1.2304668706E+001	0.775	1.187	1.187			
97.977	2.981	53.957	0.429	4.0783940245E+002	1.3567444012E+002	-1.1695884881E+001	0.776	1.174	1.147			
98.334	3.016	54.113	0.444	4.0362659185E+002	1.3548090440E+002	-1.1906044158E+001	0.776	1.161	1.108			

98.691	3.056	54.274	0.459	3.9933669101E+002	1.3524416075E+002	-1.2127329803E+001	0.776	1.149	1.070
99.048	3.102	54.440	0.479	3.9496584908E+002	1.3496423669E+002	-1.2480098158E+001	0.776	1.138	1.034
99.405	3.156	54.616	0.497	3.9042401842E+002	1.3461916797E+002	-1.2792739567E+001	0.776	1.127	1.000
99.762	3.215	54.795	0.495	3.8582990337E+002	1.3420010014E+002	-1.2687405697E+001	0.775	1.118	0.970
100.119	3.268	54.970	0.465	3.8136329699E+002	1.3369490432E+002	-1.1911277631E+001	0.774	1.110	0.944
100.476	3.305	55.127	0.431	3.7732345444E+002	1.3310634440E+002	-1.1153417175E+001	0.771	1.105	0.924
100.833	3.335	55.278	0.411	3.7339807474E+002	1.3239634053E+002	-1.0827139100E+001	0.768	1.100	0.908
101.190	3.357	55.421	0.394	3.6959124396E+002	1.3155259532E+002	-1.0615555764E+001	0.763	1.098	0.896
101.480	3.371	55.532	0.374	3.6652782213E+002	1.3074514383E+002	-1.0476931597E+001	0.759	1.096	0.889
101.837	3.380	55.662	0.358	3.6283152575E+002	1.2960034829E+002	-1.0349780567E+001	0.758	1.096	0.883
102.194	3.385	55.788	0.342	3.5913651764E+002	1.2827856947E+002	-1.0147281370E+001	0.755	1.097	0.881
102.551	3.383	55.907	0.323	3.5558483623E+002	1.2686210622E+002	-9.7446512374E+000	0.752	1.099	0.881
102.908	3.374	56.019	0.308	3.5217736678E+002	1.2537821147E+002	-9.3414280335E+000	0.748	1.101	0.883
103.265	3.361	56.127	0.297	3.4891364755E+002	1.2385541176E+002	-8.9412233313E+000	0.744	1.105	0.887
103.622	3.344	56.231	0.285	3.4579198462E+002	1.2232067330E+002	-8.4170739610E+000	0.739	1.109	0.892
103.980	3.323	56.330	0.277	3.4290258711E+002	1.2083938486E+002	-7.9461152916E+000	0.734	1.113	0.899
104.189	3.310	56.388	0.277	3.4125596357E+002	1.1997326610E+002	-7.7586624590E+000	0.732	1.116	0.903
104.546	3.288	56.487	0.279	3.3854759799E+002	1.1851904803E+002	-7.5175426465E+000	0.727	1.121	0.912
104.903	3.267	56.588	0.284	3.3588730417E+002	1.1705865638E+002	-7.3545845250E+000	0.722	1.127	0.921
105.260	3.249	56.690	0.289	3.3329531527E+002	1.1560809534E+002	-7.1602137658E+000	0.717	1.133	0.931
105.617	3.232	56.794	0.293	3.3077383149E+002	1.1416984467E+002	-6.9587649884E+000	0.712	1.139	0.941
105.974	3.216	56.899	0.298	3.2832570740E+002	1.1274442345E+002	-6.7485262979E+000	0.707	1.146	0.952
106.331	3.203	57.006	0.296	3.2595436577E+002	1.1133082473E+002	-6.3864411614E+000	0.702	1.153	0.964
106.689	3.186	57.111	0.290	3.2376482508E+002	1.0998516712E+002	-5.8935468612E+000	0.697	1.161	0.975
107.028	3.169	57.208	0.287	3.2184000855E+002	1.0875289697E+002	-5.4963380674E+000	0.692	1.168	0.986
107.385	3.150	57.311	0.298	3.1994140583E+002	1.0746862549E+002	-5.2966288177E+000	0.687	1.176	0.998
107.742	3.139	57.421	0.309	3.1805741663E+002	1.0604452501E+002	-5.2241526863E+000	0.681	1.182	1.011
108.099	3.129	57.532	0.307	3.1621057280E+002	1.0456043975E+002	-5.2579500232E+000	0.675	1.183	1.025
108.456	3.117	57.640	0.300	3.1430244720E+002	1.0304248765E+002	-5.6324135196E+000	0.668	1.180	1.039
108.814	3.102	57.746	0.297	3.1218817995E+002	1.0145536855E+002	-6.3946475474E+000	0.661	1.172	1.054
109.171	3.087	57.852	0.300	3.0973570428E+002	9.9769119674E+001	-7.7727213002E+000	0.654	1.160	1.069
109.528	3.075	57.961	0.318	3.0663728450E+002	9.7885559866E+001	-1.0012727553E+001	0.645	1.145	1.085
109.885	3.072	58.079	0.328	3.0258510649E+002	9.5717638831E+001	-1.1903976515E+001	0.636	1.126	1.103
109.938	3.070	58.095	0.337	3.0194368083E+002	9.5400297900E+001	-1.2268118085E+001	0.635	1.123	1.106
110.295	3.004	58.217	0.347	2.9689378880E+002	9.3063630381E+001	-1.4955410356E+001	0.629	1.107	1.125
110.652	2.942	58.343	0.358	2.9126326196E+002	9.0589376622E+001	-1.6355682901E+001	0.622	1.096	1.144
111.010	2.883	58.473	0.368	2.8521336411E+002	8.8006547502E+001	-1.7317687170E+001	0.614	1.090	1.162
111.367	2.828	58.606	0.380	2.7889582111E+002	8.5343860102E+001	-1.8104388727E+001	0.606	1.088	1.180
111.600	2.796	58.697	0.402	2.7460760310E+002	8.3528374854E+001	-1.8668643021E+001	0.600	1.089	1.191
111.957	2.754	58.844	0.417	2.6778032179E+002	8.0596378530E+001	-1.9788953959E+001	0.589	1.092	1.206
112.073	2.744	58.895	0.439	2.6546477513E+002	7.9586972968E+001	-1.9983630615E+001	0.585	1.093	1.210
112.430	2.713	59.052	0.435	2.5835352466E+002	7.6458673616E+001	-1.9560772137E+001	0.572	1.095	1.221
112.787	2.678	59.205	0.439	2.5149543327E+002	7.3418752280E+001	-1.9823043929E+001	0.559	1.095	1.229
113.144	2.650	59.366	0.461	2.4419688118E+002	7.0241766712E+001	-2.1303645723E+001	0.545	1.092	1.235
113.501	2.631	59.535	0.498	2.3628141678E+002	6.6901381439E+001	-2.3930612397E+001	0.530	1.084	1.240
113.858	2.629	59.721	0.525	2.2710681423E+002	6.3215997122E+001	-2.6434825781E+001	0.513	1.073	1.246
114.112	2.629	59.855	0.534	2.2027613960E+002	6.0605268174E+001	-2.7894262139E+001	0.500	1.064	1.249
114.344	2.559	59.981	0.539	2.1359019646E+002	5.8158365244E+001	-2.9063034844E+001	0.492	1.056	1.253
114.701	2.450	60.172	0.547	2.0304151321E+002	5.4494197644E+001	-3.0401506761E+001	0.478	1.048	1.259
115.058	2.348	60.372	0.569	1.9187893487E+002	5.0724430973E+001	-3.1900053913E+001	0.463	1.044	1.266
115.415	2.255	60.579	0.599	1.8026006291E+002	4.6868707439E+001	-3.3378693488E+001	0.447	1.042	1.274
115.772	2.174	60.800	0.617	1.6804151287E+002	4.2863321844E+001	-3.3867189872E+001	0.429	1.042	1.281
115.999	2.123	60.939	0.636	1.6042154840E+002	4.0381335027E+001	-3.4021958957E+001	0.416	1.044	1.286
116.356	2.054	61.171	0.649	1.4806060482E+002	3.6388846302E+001	-3.3984694291E+001	0.395	1.049	1.292
116.713	1.984	61.402	0.640	1.3615135042E+002	3.2576748712E+001	-3.2199599421E+001	0.372	1.054	1.298
117.070	1.909	61.628	0.638	1.2506523384E+002	2.9081694983E+001	-3.0760530457E+001	0.350	1.057	1.301
117.427	1.838	61.858	0.653	1.1418369175E+002	2.5741409833E+001	-3.0246735254E+001	0.328	1.059	1.304
117.784	1.774	62.094	0.669	1.0346450244E+002	2.2562177885E+001	-2.9832911563E+001	0.304	1.060	1.306
118.058	1.729	62.280	0.692	9.5344035986E+001	2.0247797823E+001	-2.9669556689E+001	0.286	1.060	1.307
118.415	1.624	62.531	0.696	8.4759328849E+001	1.7345670227E+001	-2.8680858263E+001	0.263	1.061	1.308
118.772	1.515	62.777	0.699	7.4861576961E+001	1.4769323017E+001	-2.7308040357E+001	0.241	1.062	1.310
119.129	1.412	63.030	0.714	6.5257268885E+001	1.2367176812E+001	-2.6351893067E+001	0.218	1.065	1.314
119.486	1.313	63.287	0.740	5.6042350386E+001	1.0146356442E+001	-2.5484704193E+001	0.194	1.070	1.319
119.840	1.230	63.556	0.771	4.7135539729E+001	8.0896107012E+000	-2.4490018908E+001	0.169	1.078	1.327
120.197	1.153	63.836	0.766	3.8634135109E+001	6.2145328438E+000	-2.2212972160E+001	0.143	1.091	1.341
120.554	1.065	64.103	0.742	3.1272126998E+001	4.6768719251E+000	-1.9336787098E+001	0.120	1.109	1.359
120.911	0.972	64.366	0.723	2.4824752357E+001	3.4099613495E+000	-1.7026930009E+001	0.097	1.131	1.382
121.268	0.870	64.619	0.710	1.9112330627E+001	2.3410103257E+000	-1.5692953403E+001	0.075	1.157	1.408
121.625	0.768	64.873	0.700	1.3617616499E+001	1.3549687045E+000	-1.3923707232E+001	0.049	1.190	1.445
121.982	0.658	65.119	0.681	9.1687034083E+000	6.8346527443E+000	-1.0834084173E+001	0.041	1.234	1.494
122.147	0.603	65.228	0.678	7.5082144647E+000	4.7333167634E+000	-9.5639063274E+000	0.041	1.258	1.520
122.504	0.493	65.473	0.797	4.4964306173E+000	1.8196933738E+000	-8.1757684947E+000	0.041	1.330	1.604
122.861	0.461	65.797	0.857	1.6694825252E+000	3.0368294690E+000	-5.9210159337E+000	0.041	1.486	1.786

123.218 0.393 66.085 0.857 2.6793211359E-001 1.5697519866E-003 -2.3377169518E+000 0.041 1.654 1.985

LEGENDA SIMBOLI

X(m) : Ascissa sinistra concio
 ht(m) : Altezza linea di thrust da nodo sinistro base concio
 yt(m) : coordinata Y linea di trust
 yt'(-) : gradiente pendenza locale linea di trust
 E(x)(kN/m) : Forza Normale interconcio
 T(x)(kN/m) : Forza Tangenziale interconcio
 E' (kN) : derivata Forza normale interconcio
 Rho(x) (-) : fattore mobilitazione resistenza al taglio verticale interconcio ZhU et al.(2003)
 FS_qFEM(x)(-) : fattore di sicurezza locale stimato (locale in X) by qFEM
 FS_srmFEM(x)(-) : fattore di sicurezza locale stimato (locale in X) by SRM Procedure

TABELLA SFORZI DI TAGLIO DISTRIBUITI LUNGO SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	dx (m)	dl (m)	alpha (°)	TauStress (kPa)	TauF (kN/m)	TauStrength (kPa)	TauS (kN/m)
85.825	0.357	0.417	-31.017	-1.666	-0.694	11.904	4.960
86.182	0.357	0.417	-31.017	-4.997	-2.082	13.847	5.769
86.539	0.357	0.417	-31.017	-8.328	-3.470	16.293	6.789
86.896	0.308	0.359	-31.017	-11.431	-4.108	19.784	7.109
87.204	0.357	0.417	-31.017	-14.533	-6.055	22.470	9.362
87.561	0.357	0.417	-31.017	-18.747	-7.811	24.321	10.134
87.918	0.155	0.181	-31.017	-21.556	-3.892	26.394	4.765
88.073	0.357	0.376	-18.209	-16.089	-6.048	27.715	10.418
88.430	0.357	0.376	-18.209	-18.146	-6.821	28.310	10.642
88.787	0.357	0.376	-18.209	-20.204	-7.595	30.841	11.593
89.144	0.357	0.376	-18.209	-22.262	-8.368	31.871	11.980
89.501	0.039	0.041	-18.209	-23.402	-0.953	32.016	1.304
89.540	0.357	0.376	-18.209	-24.413	-9.177	33.226	12.490
89.897	0.105	0.110	-18.209	-25.577	-2.815	33.628	3.702
90.002	0.357	0.376	-18.209	-26.741	-10.052	35.539	13.359
90.359	0.357	0.376	-18.209	-28.541	-10.728	36.951	13.890
90.716	0.357	0.376	-18.209	-30.341	-11.405	39.023	14.669
91.073	0.144	0.152	-18.209	-31.604	-4.799	40.762	6.190
91.217	0.173	0.177	-12.946	-23.797	-4.222	41.396	7.344
91.390	0.357	0.366	-12.946	-24.348	-8.921	43.728	16.021
91.747	0.357	0.366	-12.946	-24.886	-9.118	45.777	16.772
92.104	0.357	0.366	-12.946	-25.423	-9.315	46.273	16.954
92.461	0.357	0.366	-12.946	-25.960	-9.511	46.987	17.215
92.818	0.357	0.366	-12.946	-26.497	-9.708	47.385	17.361
93.175	0.357	0.366	-12.946	-27.034	-9.905	46.761	17.133
93.532	0.357	0.366	-12.946	-27.571	-10.102	44.208	16.197
93.890	0.210	0.216	-12.946	-27.998	-6.047	42.728	9.227
94.100	0.301	0.309	-12.946	-28.658	-8.844	42.334	13.064
94.401	0.357	0.377	18.685	40.746	15.359	32.652	12.308
94.758	0.092	0.097	18.685	41.014	3.991	33.023	3.213
94.850	0.357	0.377	18.685	41.281	15.561	33.474	12.618
95.207	0.203	0.214	18.685	41.614	8.914	34.042	7.292
95.410	0.357	0.377	18.685	41.948	15.812	34.560	13.027
95.767	0.357	0.377	18.685	42.373	15.972	35.315	13.312
96.124	0.357	0.377	18.685	42.798	16.132	36.093	13.605
96.481	0.357	0.377	18.685	43.223	16.293	36.923	13.918
96.838	0.357	0.377	18.685	43.648	16.453	37.714	14.216
97.195	0.357	0.377	18.685	44.073	16.613	38.512	14.517
97.552	0.067	0.071	18.685	44.326	3.145	39.075	2.772
97.620	0.357	0.377	18.695	44.598	16.812	39.388	14.848
97.977	0.357	0.377	18.695	45.023	16.972	40.104	15.118
98.334	0.357	0.377	18.695	45.448	17.132	40.827	15.390
98.691	0.357	0.377	18.695	45.873	17.292	41.560	15.667
99.048	0.357	0.377	18.695	46.298	17.453	42.311	15.950
99.405	0.357	0.377	18.695	46.723	17.613	43.082	16.240
99.762	0.357	0.377	18.695	47.147	17.773	43.867	16.536
100.119	0.357	0.377	18.695	47.572	17.933	44.646	16.830
100.476	0.357	0.377	18.695	47.997	18.093	45.410	17.118
100.833	0.357	0.377	18.695	48.422	18.253	46.175	17.406
101.190	0.290	0.306	18.695	48.807	14.921	46.904	14.339
101.480	0.357	0.377	18.695	48.864	18.420	47.263	17.817
101.837	0.357	0.377	18.695	48.635	18.334	47.420	17.876

102.194	0.357	0.377	18.695	48.406	18.247	47.573	17.933
102.551	0.357	0.377	18.695	48.177	18.161	47.717	17.988
102.908	0.357	0.377	18.695	47.948	18.075	47.849	18.037
103.265	0.357	0.377	18.695	47.719	17.988	47.970	18.083
103.622	0.357	0.377	18.695	47.490	17.902	48.069	18.121
103.980	0.209	0.221	18.695	47.308	10.462	48.208	10.661
104.189	0.357	0.377	18.705	47.148	17.774	48.211	18.175
104.546	0.357	0.377	18.705	46.918	17.687	48.304	18.210
104.903	0.357	0.377	18.705	46.688	17.601	48.401	18.246
105.260	0.357	0.377	18.705	46.459	17.514	48.502	18.285
105.617	0.357	0.377	18.705	46.229	17.428	48.611	18.326
105.974	0.357	0.377	18.705	45.999	17.341	48.727	18.370
106.331	0.357	0.377	18.705	45.770	17.255	48.838	18.411
106.689	0.340	0.359	18.705	45.546	16.333	48.950	17.554
107.028	0.357	0.377	18.705	45.322	17.086	49.052	18.492
107.385	0.357	0.377	18.705	45.092	16.999	49.202	18.549
107.742	0.357	0.377	18.705	44.862	16.913	49.366	18.610
108.099	0.357	0.377	18.705	44.633	16.826	49.536	18.674
108.456	0.357	0.377	18.705	44.403	16.739	49.709	18.740
108.814	0.357	0.377	18.705	44.173	16.653	49.885	18.806
109.171	0.357	0.377	18.705	43.944	16.566	50.081	18.880
109.528	0.357	0.377	18.705	43.714	16.480	50.306	18.965
109.885	0.054	0.056	18.705	43.582	2.462	50.576	2.857
109.938	0.357	0.404	27.803	58.738	23.711	46.171	18.638
110.295	0.357	0.404	27.803	57.870	23.361	46.142	18.626
110.652	0.357	0.404	27.803	57.002	23.011	46.084	18.603
111.010	0.357	0.404	27.803	56.134	22.660	45.987	18.564
111.367	0.233	0.264	27.803	55.417	14.622	45.980	12.132
111.600	0.357	0.404	27.803	54.840	22.138	45.950	18.549
111.957	0.116	0.131	27.803	54.429	7.122	46.728	6.114
112.073	0.357	0.404	27.803	54.134	21.853	46.556	18.794
112.430	0.357	0.404	27.803	53.688	21.673	46.220	18.658
112.787	0.357	0.404	27.803	53.243	21.493	46.041	18.586
113.144	0.357	0.404	27.803	52.797	21.313	45.882	18.521
113.501	0.357	0.404	27.803	52.351	21.133	45.850	18.508
113.858	0.253	0.286	27.803	51.970	14.885	45.611	13.064
114.112	0.233	0.304	40.121	61.382	18.667	39.018	11.866
114.344	0.357	0.467	40.121	60.118	28.072	38.423	17.942
114.701	0.357	0.467	40.121	58.586	27.357	37.955	17.723
115.058	0.357	0.467	40.121	57.055	26.642	37.464	17.494
115.415	0.357	0.467	40.121	55.524	25.927	37.047	17.299
115.772	0.226	0.296	40.121	54.272	16.075	36.458	10.798
115.999	0.357	0.467	40.121	53.021	24.759	36.067	16.842
116.356	0.357	0.467	40.121	51.490	24.044	35.268	16.469
116.713	0.357	0.467	40.121	49.959	23.329	34.310	16.021
117.070	0.357	0.467	40.121	48.427	22.614	33.541	15.662
117.427	0.357	0.467	40.121	46.896	21.899	32.764	15.299
117.784	0.274	0.358	40.121	45.544	16.290	32.060	11.467
118.058	0.357	0.504	44.888	44.594	22.475	29.198	14.716
118.415	0.357	0.504	44.888	42.547	21.444	28.120	14.173
118.772	0.357	0.504	44.888	40.500	20.412	27.233	13.726
119.129	0.357	0.504	44.888	38.453	19.381	26.338	13.274
119.486	0.354	0.500	44.888	36.416	18.192	25.489	12.733
119.840	0.357	0.504	44.888	34.272	17.273	24.538	12.367
120.197	0.357	0.504	44.888	32.012	16.134	23.377	11.782
120.554	0.357	0.504	44.888	29.753	14.995	22.299	11.239
120.911	0.357	0.504	44.888	27.493	13.856	21.313	10.742
121.268	0.357	0.504	44.888	25.234	12.718	20.472	10.318
121.625	0.357	0.504	44.888	22.974	11.579	19.339	9.747
121.982	0.165	0.232	44.888	21.323	4.956	18.529	4.306
122.147	0.357	0.504	44.898	19.672	9.916	17.781	8.963
122.504	0.357	0.504	44.898	17.411	8.777	16.868	8.503
122.861	0.357	0.504	44.898	15.151	7.637	15.977	8.054
123.218	0.357	0.504	44.898	12.890	6.498	15.205	7.665

LEGENDA SIMBOLI

X(m) : Ascissa sinistra concio
 dx(m) : Larghezza concio
 dl(m) : lunghezza base concio
 alpha(°) : Angolo pendenza base concio
 TauStress(kPa) : Sforzo di taglio su base concio
 TauF (kN/m) : Forza di taglio su base concio
 TauStrength(kPa) : Resistenza al taglio su base concio

TauS (kN/m) : Forza resistente al taglio su base concio

CASO C sisma -PROGETTO-

Report elaborazioni

SSAP 5.0.2 - Slope Stability Analysis Program (1991,2021)
WWW.SSAP.EU
Build No. 12007
BY
Dr. Geol. LORENZO BORSELLI *,**
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** Gia' Ricercatore CNR-IRPI fino a Luglio 2011

Ultima Revisione struttura tabelle del report: 21 Febbraio 2021

Modello pendio: CASO C PROGETTO SISMA.mod

----- PARAMETRI DEL MODELLO DEL PENDIO -----

___ PARAMETRI GEOMETRICI - Coordinate X Y (in m) ___

SUP T.		SUP 2		SUP 3		SUP 4	
X	Y	X	Y	X	Y	X	Y
0.00	30.73	0.00	27.50	0.00	24.00	0.00	15.50
12.70	33.89	45.62	42.31	45.59	38.80	45.60	30.30
27.25	38.72	76.05	47.93	75.84	43.13	76.05	38.61
39.27	44.22	94.85	51.93	95.41	50.10	94.85	44.93
62.06	48.35	170.31	76.50	170.31	74.49	170.31	69.50
68.08	51.04	-	-	-	-	-	-
73.38	51.85	-	-	-	-	-	-
75.82	53.21	-	-	-	-	-	-
84.19	53.61	-	-	-	-	-	-
85.52	52.71	-	-	-	-	-	-
91.39	56.07	-	-	-	-	-	-
94.10	56.40	-	-	-	-	-	-
101.48	60.74	-	-	-	-	-	-
111.60	63.30	-	-	-	-	-	-
119.84	66.26	-	-	-	-	-	-
131.00	69.53	-	-	-	-	-	-
133.02	71.23	-	-	-	-	-	-
157.83	77.62	-	-	-	-	-	-
170.31	80.51	-	-	-	-	-	-

---- SUP FALDA -----

X Y (in m)

0.00	30.73
12.70	33.89
20.07	36.34
78.38	39.13
79.25	41.11
81.84	45.27
89.54	55.01
139.52	57.54
145.20	66.31
150.21	70.78
161.42	78.45
170.31	80.51

----- GESTIONE ACQUIFERI -----

Strati esclusi da acquifero:

Esclusione sovraccarico pendio sommerso: NON ATTIVATA

EFFETTO TENSION CRACK IN TESTA RIEMPITO DI ACQUA: ----> DISATTIVATO

In caso di superfici con tension crack in testa, la frattura di tensione

puo' venir viene considerata completamente riempita di acqua per la sua intera profondita'.

Viene quindi considerato una forza in testa, prodotta dalla pressione idrostatica.

La forza applicata ha un effetto destabilizzante aggiuntivo alle altre forze destabilizzanti agenti.

Peso unitario fluido (kN/m³): 9.81

Parametri funzione dissipazione superficiale pressione dei fluidi:

Coefficiente A 0
 Coefficiente K 0.000800
 Pressione minima fluidi Uo_Min (kPa) 0.01
 Coefficiente di soprappressione oltre pressione idrostatica 1.00
 Limitazione dissipazione a Pressione Idrostatica = ATTIVA
 STABILITE CONDIZIONI PER LA VERIFICA CON SOVRAPPRESSIONE ACQUIFERI CON DISSIPAZIONE IN DIREZIONE DELLA SUPERFICIE

CALCOLO EFFETTO DI FILTRAZIONE NON ATTIVATO

----- PARAMETRI GEOMECCANICI -----

	fi'	C'	Cu	Gamm	Gamm_sat	STR_IDX	sgci	GSI	mi	D
STRATO 1	18.00	11.00	11.00	0.00	18.00	20.00	1.269	0.00	0.00	0.00
STRATO 2	18.00	11.00	11.00	0.00	18.00	20.00	1.269	0.00	0.00	0.00
STRATO 3	25.00	50.00	50.00	0.00	20.00	20.00	4.881	0.00	0.00	0.00
STRATO 4	35.00	0.00	0.00	0.00	20.00	20.00	2.404	0.00	0.00	0.00

LEGENDA: fi' _____ Angolo di attrito interno efficace(in gradi)

C' _____ Coesione efficace (in Kpa)

Cu _____ Resistenza al taglio Non drenata (in Kpa)

Gamm _____ Peso di volume terreno fuori falda (in KN/m³)

Gamm_sat _____ Peso di volume terreno immerso (in KN/m³)

STR_IDX _____ Indice di resistenza (usato in solo in 'SNIFF SEARCH) (adimensionale)

---- SOLO Per AMMASSI ROCCIOSI FRATTURATI - Parametri Criterio di Rottura di Hoek (2002)-

sigci _____ Resistenza Compressione Uniassiale Roccia Intatta (in MPa)

GSI _____ Geological Strenght Index ammasso(adimensionale)

mi _____ Indice litologico ammasso(adimensionale)

D _____ Fattore di disturbo ammasso(adimensionale)

Fattore di riduzione NTC2018: gammaPHI=1.25 e gammaC=1.25 - DISATTIVATO (solo per ROCCE)

Uso CRITERIO DI ROTTURA Hoek et al.(2002,2006) - non-lineare - Generalizzato, secondo Lei et al.(2016)

----- SOVRACCARICHI PRESENTI -----

Nota Bene:

##Nota: la distribuzione del carico e delle forze unitarie puo' variare
in modo lineare tra gli estremi di coordinate X1 e X2

TABELLA SOVRACCARICHI IN SUPERFICIE

N.	da X1	a X2	SX1	SX2	Alpha	Wsh1	Wsh2	Wsv1	Wsv2
(-)	(m)	(m)	(kPa)	(kPa)	(°)	(kN/m)	(kN/m)	(kN/m)	(kN/m)
1	75.0000	84.0000	25.00	25.00	90.00	0.00	0.00	25.00	25.00

LEGENDA SIMBOLI

N.(-) : NUMERO SOVRACCARICO

X1(m) : Posizione carico da X1

X2(m) : a X2

SX1(kPa) : Carico in X1 (Kpa)

SX2(kPa) : Carico in X2 (Kpa)

Alpha(°) : Inclinazione carico (gradi):

Componenti distribuzione forza unitaria applicata:

Wsh1,Wsh2(kN/m) : forza unitaria Orizzontale (per metro di proiezione Verticale) : da X1 a X2 (vedasi cap.2 manuale)

Wsv1,Wsv2(kN/m) : forza unitaria Verticale (per metro di proiezione Orizzontale) : da X1 a X2 (vedasi Cap.2 manuale)

----- INFORMAZIONI GENERAZIONE SUPERFICI RANDOM -----

*** PARAMETRI PER LA GENERAZIONE DELLE SUPERFICI

MOTORE DI RICERCA: CONVEX RANDOM - Chen (1992)

FILTRAGGIO SUPERFICI : ATTIVATO

COORDINATE X1,X2,Y OSTACOLO : 0.00 0.00 0.00

LUNGHEZZA MEDIA SEGMENTI (m)*: 6.8 (+/-) 50%

INTERVALLO ASCISSE RANDOM STARTING POINT (Xmin .. Xmax): 3.41 156.69

LIVELLO MINIMO CONSIDERATO (Ymin): 29.00

INTERVALLO ASCISSE AMMESSO PER LA TERMINAZIONE (Xmin .. Xmax): 40.00 166.90

TOTALE SUPERFICI GENERATE : 10000

*NOTA IMPORTANTE: La lunghezza media dei segmenti non viene considerata nel caso di uso del motore di ricerca NEW RANOM SEARCH

----- INFORMAZIONI PARAMETRI DI CALCOLO -----

METODO DI CALCOLO : MORGENSTERN - PRICE (Morgenstern & Price, 1965)
 METODO DI ESPLORAZIONE CAMPO VALORI (λ_0, F_s0) ADOTTATO : A (rapido)
 COEFFICIENTE SISMICO UTILIZZATO K_h : 0.0480
 COEFFICIENTE SISMICO UTILIZZATO K_v (assunto Positivo): 0.0240
 COEFFICIENTE $c=K_v/K_h$ UTILIZZATO : 0.5000
 FORZA ORIZZONTALE ADDIZIONALE IN TESTA (kN/m): 0.00
 FORZA ORIZZONTALE ADDIZIONALE ALLA BASE (kN/m): 0.00

N.B. Le forze orizzontali addizionali in testa e alla base sono poste uguali a 0 durante le tutte le verifiche globali.
 I valori >0 impostati dall'utente sono utilizzati solo in caso di verifica singola

----- RISULTATO FINALE ELABORAZIONI -----

* DATI RELATIVI ALLE 10 SUPERFICI GENERATE CON MINOR F_s *

Fattore di sicurezza (FS) 1.0203 - Min. - X Y Lambda= 0.4632
 85.85 52.90
 88.22 51.18
 89.89 49.98
 94.76 50.13
 98.01 51.08
 100.30 51.81
 102.33 52.47
 105.56 53.50
 107.87 54.24
 110.89 56.02
 114.43 58.94
 116.85 60.94
 119.41 63.05
 121.56 65.41
 121.56 66.76

Fattore di sicurezza (FS) 1.0432 - N.2 -- X Y Lambda= 0.3959
 8.50 32.85
 11.65 30.62
 14.83 29.72
 21.33 31.46
 27.05 33.45
 29.85 34.43
 36.82 36.86
 39.92 39.24
 42.77 41.77
 45.03 43.77
 45.03 45.26

Fattore di sicurezza (FS) 1.0478 - N.3 -- X Y Lambda= 0.3615
 3.83 31.68
 5.95 30.68
 10.53 29.42
 15.23 29.51
 17.20 30.03
 20.48 31.19
 23.14 32.14
 26.57 33.37
 28.99 34.30
 31.86 36.21
 35.52 38.72
 37.17 39.85
 40.20 42.20
 41.47 43.19
 41.47 44.62

Fattore di sicurezza (FS) 1.0517 - N.4 -- X Y Lambda= 0.4823
 85.81 52.87
 88.53 50.94
 90.83 51.02
 92.60 51.11

94.42 51.30
96.33 51.86
99.89 53.00
103.23 54.33
107.05 55.85
110.14 57.89
112.62 59.98
114.36 61.46
116.90 63.74
116.90 65.20

Fattore di sicurezza (FS) 1.0586 - N.5 -- X Y Lambda= 0.4018
6.11 32.25
11.69 29.93
20.30 31.81
28.52 33.61
37.61 37.67
41.93 40.98
45.60 43.86
45.60 45.37

Fattore di sicurezza (FS) 1.0599 - N.6 -- X Y Lambda= 0.3918
6.40 32.32
14.63 29.53
20.33 30.90
30.72 34.40
38.93 37.30
43.27 40.43
46.73 44.15
46.73 45.57

Fattore di sicurezza (FS) 1.0885 - N.7 -- X Y Lambda= 0.4557
86.28 53.14
89.21 51.50
91.77 50.19
93.85 50.47
96.83 51.27
100.35 52.58
103.36 54.55
106.57 56.97
107.96 58.02
110.70 60.10
113.33 62.10
114.26 62.83
114.26 64.25

Fattore di sicurezza (FS) 1.0903 - N.8 -- X Y Lambda= 0.3782
10.64 33.38
18.17 30.75
24.13 32.36
31.25 34.96
38.84 38.52
45.40 43.96
45.40 45.33

Fattore di sicurezza (FS) 1.0938 - N.9 -- X Y Lambda= 0.3907
6.36 32.31
11.81 30.82
14.99 29.95
18.61 31.01
21.34 31.81
25.48 33.23
30.52 34.96
35.85 36.79
40.72 39.53
43.61 41.14
45.92 42.45
48.21 44.50

48.21 45.84

Fattore di sicurezza (FS)	1.0968	- N.10	--	X	Y	Lambda=	0.3701
	6.91	32.45					
	10.08	31.47					
	12.34	31.33					
	14.19	31.25					
	18.71	31.07					
	21.03	31.62					
	26.27	32.87					
	30.22	34.55					
	34.04	36.18					
	36.01	37.97					
	39.59	41.93					
	40.58	43.03					
	40.58	44.46					

----- ANALISI DEFICIT DI RESISTENZA -----

DATI RELATIVI ALLE 10 SUPERFICI GENERATE CON MINOR FS *

Analisi Deficit in riferimento a FS(progetto) = 1.200

Sup N.	FS	FTR(kN/m)	FTA(kN/m)	Bilancio(kN/m)	ESITO
1	1.020	1495.7	1466.0	-263.5	Deficit
2	1.043	1198.4	1148.7	-180.1	Deficit
3	1.048	1082.0	1032.7	-157.2	Deficit
4	1.052	1136.3	1080.5	-160.2	Deficit
5	1.059	1215.5	1148.2	-162.3	Deficit
6	1.060	1354.2	1277.6	-178.9	Deficit
7	1.088	1046.3	961.3	-107.2	Deficit
8	1.090	1120.7	1028.0	-112.8	Deficit
9	1.094	1300.4	1188.9	-126.3	Deficit
10	1.097	1001.9	913.5	-94.3	Deficit

Esito analisi: DEFICIT di RESISTENZA!

Valore massimo di DEFICIT di RESISTENZA(kN/m): -263.5

Note: FTR --> Forza totale Resistente lungo la superficie di scivolamento

FTA --> Forza totale Agente lungo la superficie di scivolamento

IMPORTANTE! : Il Deficit o il Surplus di resistenza viene espresso in kN per metro di LARGHEZZA rispetto al fronte della scarpata

----- TABELLA PARAMETRI CONCI DELLA SUPERFICIE INDIVIDUATA CON MINOR FS -----

X (m)	dx (m)	alpha (°)	W (kN/m)	ru (-)	U (kPa)	phi' (°)	(c',Cu) (kPa)
85.846	0.344	-35.85	1.41	0.00	0.00	18.00	11.00
86.190	0.344	-35.85	4.24	0.00	0.00	18.00	11.00
86.534	0.344	-35.85	7.06	0.00	0.00	18.00	11.00
86.878	0.256	-35.85	7.08	0.00	0.00	18.00	11.00
87.134	0.344	-35.85	12.22	0.13	6.26	18.00	11.00
87.478	0.344	-35.85	15.53	0.22	11.89	18.00	11.00
87.822	0.344	-35.85	18.83	0.29	17.53	18.00	11.00
88.166	0.055	-35.85	3.30	0.33	22.93	18.00	11.00
88.221	0.344	-35.77	22.66	0.34	23.65	18.00	11.00
88.565	0.344	-35.77	25.96	0.38	28.24	18.00	11.00
88.908	0.022	-35.77	1.74	0.41	32.58	18.00	11.00
88.930	0.344	-35.77	29.47	0.41	32.83	18.00	11.00
89.274	0.266	-35.77	25.05	0.43	36.92	18.00	11.00
89.540	0.344	-35.77	35.17	0.44	39.68	18.00	11.00
89.884	0.003	-35.77	0.32	0.45	42.83	18.00	11.00
89.887	0.344	1.72	37.30	0.45	42.85	18.00	11.00
90.231	0.344	1.72	38.48	0.45	45.41	18.00	11.00
90.575	0.344	1.72	39.67	0.44	47.47	18.00	11.00
90.919	0.344	1.72	40.86	0.44	48.86	18.00	11.00
91.263	0.127	1.72	15.42	0.43	49.81	18.00	11.00

91.390	0.344	1.72	42.00	0.43	49.97	18.00	11.00
91.734	0.344	1.72	42.20	0.42	50.25	18.00	11.00
92.078	0.344	1.72	42.41	0.42	50.31	18.00	11.00
92.422	0.344	1.72	42.61	0.41	50.22	18.00	11.00
92.766	0.344	1.72	42.82	0.41	50.06	18.00	11.00
93.110	0.344	1.72	43.02	0.41	49.89	18.00	11.00
93.454	0.344	1.72	43.23	0.40	49.71	18.00	11.00
93.798	0.302	1.72	38.17	0.40	49.57	18.00	11.00
94.100	0.344	1.72	44.12	0.39	49.45	18.00	11.00
94.444	0.319	1.72	41.96	0.39	49.30	18.00	11.00
94.763	0.087	16.40	11.68	0.38	49.10	18.00	11.00
94.850	0.344	16.40	46.30	0.38	49.04	18.00	11.00
95.194	0.216	16.40	29.38	0.37	48.70	18.00	11.00
95.410	0.344	16.40	47.25	0.36	48.42	18.00	11.00
95.754	0.344	16.40	47.83	0.36	47.90	18.00	11.00
96.098	0.344	16.40	48.41	0.34	47.20	18.00	11.00
96.442	0.344	16.40	48.99	0.33	46.39	18.00	11.00
96.786	0.344	16.40	49.58	0.32	45.50	18.00	11.00
97.130	0.344	16.40	50.16	0.31	44.56	18.00	11.00
97.474	0.344	16.40	50.74	0.30	43.67	18.00	11.00
97.818	0.188	16.40	28.00	0.29	42.82	18.00	11.00
98.006	0.344	17.73	51.61	0.29	42.34	18.00	11.00
98.350	0.344	17.73	52.13	0.28	41.45	18.00	11.00
98.694	0.344	17.73	52.65	0.27	40.55	18.00	11.00
99.038	0.344	17.73	53.17	0.26	39.65	18.00	11.00
99.382	0.344	17.73	53.69	0.25	38.70	18.00	11.00
99.726	0.344	17.73	54.21	0.25	37.76	18.00	11.00
100.069	0.226	17.73	35.93	0.24	36.83	18.00	11.00
100.296	0.344	17.74	55.07	0.23	36.22	18.00	11.00
100.640	0.344	17.74	55.59	0.22	35.35	18.00	11.00
100.984	0.344	17.74	56.11	0.22	34.51	18.00	11.00
101.327	0.153	17.74	25.05	0.21	33.69	18.00	11.00
101.480	0.344	17.74	56.49	0.21	33.35	18.00	11.00
101.824	0.344	17.74	56.28	0.20	32.52	18.00	11.00
102.168	0.164	17.74	26.70	0.20	31.66	18.00	11.00
102.332	0.344	17.75	55.97	0.20	31.21	18.00	11.00
102.675	0.344	17.75	55.76	0.19	30.33	18.00	11.00
103.019	0.344	17.75	55.55	0.19	29.39	18.00	11.00
103.363	0.344	17.75	55.33	0.18	28.39	18.00	11.00
103.707	0.344	17.75	55.12	0.17	27.29	18.00	11.00
104.051	0.344	17.75	54.91	0.17	26.27	18.00	11.00
104.395	0.344	17.75	54.70	0.16	25.26	18.00	11.00
104.739	0.344	17.75	54.49	0.16	24.33	18.00	11.00
105.083	0.344	17.75	54.28	0.15	23.36	18.00	11.00
105.427	0.134	17.75	21.03	0.15	22.45	18.00	11.00
105.561	0.344	17.76	53.98	0.15	22.09	18.00	11.00
105.905	0.344	17.76	53.77	0.14	21.14	18.00	11.00
106.249	0.344	17.76	53.56	0.13	20.19	18.00	11.00
106.592	0.344	17.76	53.34	0.13	19.23	18.00	11.00
106.936	0.092	17.76	14.19	0.12	18.24	18.00	11.00
107.028	0.344	17.76	53.08	0.12	17.97	18.00	11.00
107.372	0.344	17.76	52.86	0.11	16.86	18.00	11.00
107.716	0.150	17.76	22.95	0.11	15.62	18.00	11.00
107.866	0.344	30.56	52.23	0.10	15.06	18.00	11.00
108.210	0.344	30.56	51.37	0.09	13.68	18.00	11.00
108.554	0.344	30.56	50.50	0.08	12.15	18.00	11.00
108.898	0.344	30.56	49.63	0.07	10.33	18.00	11.00
109.242	0.344	30.56	48.77	0.06	8.40	18.00	11.00
109.586	0.344	30.56	47.90	0.05	6.65	18.00	11.00
109.930	0.344	30.56	47.03	0.04	5.03	18.00	11.00
110.273	0.344	30.56	46.16	0.03	3.71	18.00	11.00
110.617	0.270	30.56	35.58	0.02	2.64	18.00	11.00
110.887	0.090	39.49	11.74	0.01	1.94	18.00	11.00
110.977	0.344	39.49	44.05	0.00	0.00	18.00	11.00
111.321	0.279	39.49	34.82	0.00	0.00	18.00	11.00
111.600	0.344	39.49	41.91	0.00	0.00	18.00	11.00
111.944	0.344	39.49	40.90	0.00	0.00	18.00	11.00
112.288	0.344	39.49	39.89	0.00	0.00	18.00	11.00
112.632	0.344	39.49	38.87	0.00	0.00	18.00	11.00
112.976	0.179	39.49	19.87	0.00	0.00	18.00	11.00
113.155	0.344	39.49	37.33	0.00	0.00	18.00	11.00
113.499	0.344	39.49	36.32	0.00	0.00	18.00	11.00
113.843	0.344	39.49	35.30	0.00	0.00	18.00	11.00

114.187	0.157	39.49	15.79	0.00	0.00	18.00	11.00
114.344	0.081	39.49	8.08	0.00	0.00	18.00	11.00
114.425	0.344	39.50	33.59	0.00	0.00	18.00	11.00
114.769	0.344	39.50	32.57	0.00	0.00	18.00	11.00
115.113	0.344	39.50	31.56	0.00	0.00	18.00	11.00
115.457	0.344	39.50	30.54	0.00	0.00	18.00	11.00
115.801	0.344	39.50	29.53	0.00	0.00	18.00	11.00
116.145	0.344	39.50	28.52	0.00	0.00	18.00	11.00
116.489	0.344	39.50	27.50	0.00	0.00	18.00	11.00
116.833	0.021	39.50	1.63	0.00	0.00	18.00	11.00
116.854	0.344	39.51	26.42	0.00	0.00	18.00	11.00
117.198	0.344	39.51	25.41	0.00	0.00	18.00	11.00
117.542	0.344	39.51	24.39	0.00	0.00	18.00	11.00
117.886	0.344	39.51	23.38	0.00	0.00	18.00	11.00
118.230	0.344	39.51	22.36	0.00	0.00	18.00	11.00
118.573	0.344	39.51	21.35	0.00	0.00	18.00	11.00
118.917	0.344	39.51	20.33	0.00	0.00	18.00	11.00
119.261	0.153	39.51	8.70	0.00	0.00	18.00	11.00
119.414	0.344	47.73	18.57	0.00	0.00	18.00	11.00
119.758	0.082	47.73	4.19	0.00	0.00	18.00	11.00
119.840	0.344	47.73	16.50	0.00	0.00	18.00	11.00
120.184	0.344	47.73	14.74	0.00	0.00	18.00	11.00
120.528	0.344	47.73	12.98	0.00	0.00	18.00	11.00
120.872	0.344	47.73	11.21	0.00	0.00	18.00	11.00
121.216	0.344	47.73	9.45	0.00	0.00	18.00	11.00

LEGENDA SIMBOLI

- X(m) : Ascissa sinistra concio
 dx(m) : Larghezza concio
 alpha(°) : Angolo pendenza base concio
 W(kN/m) : Forza peso concio
 ru(-) : Coefficiente locale pressione interstiziale
 U(kPa) : Pressione totale dei pori base concio
 phi'(°) : Angolo di attrito efficace base concio
 c'/Cu (kPa) : Coesione efficace o Resistenza al taglio in condizioni non drenate
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TABELLA DIAGRAMMA DELLE FORZE DELLA SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	ht (m)	yt (m)	yt' (--)	E(x) (kN/m)	T(x) (kN/m)	E' (kN)	rho(x) (kN)	FS_qFEM (--)	FS_srmFEM (--)			
85.846	0.000	52.897	-0.412	0.0000000000E+000	0.0000000000E+000	0.0000000000E+000	0.0000000000E+000	0.034	5.236	6.176		
86.190	0.112	52.760	-0.412	8.8667492753E-001	2.8492540072E-003	5.5776764904E+000	0.034	5.236	6.176			
86.534	0.214	52.614	-0.383	3.8368631433E+000	1.1502113283E-001	1.2372757217E+001	0.034	3.522	4.128			
86.878	0.345	52.497	-0.339	9.3978491109E+000	6.9759255222E-001	2.2462045828E+001	0.040	3.100	3.577			
87.134	0.444	52.410	-0.327	1.6339031673E+001	2.2671116513E+000	3.0184694032E+001	0.100	2.771	3.127			
87.478	0.583	52.301	-0.296	2.8128589075E+001	5.9768248251E+000	4.2555405390E+001	0.193	2.387	2.625			
87.822	0.737	52.207	-0.258	4.5612738525E+001	1.1056040404E+001	6.2666444651E+001	0.269	2.105	2.276			
88.166	0.902	52.123	-0.238	7.1236605867E+001	1.7587766000E+001	5.9426210242E+001	0.327	1.949	2.026			
88.221	0.930	52.112	-0.198	7.4354533560E+001	1.8398152903E+001	5.8077042388E+001	0.331	1.933	1.999			
88.565	1.110	52.044	-0.176	9.6594969673E+001	2.4246113671E+001	6.7695283351E+001	0.361	1.848	1.842			
88.908	1.305	51.991	-0.153	1.2092187000E+002	3.0674681819E+001	6.9883110608E+001	0.386	1.793	1.718			
88.930	1.318	51.988	-0.104	1.2243158135E+002	3.1073266806E+001	7.0472220866E+001	0.387	1.791	1.712			
89.274	1.530	51.953	-0.082	1.5018462644E+002	3.8756057156E+001	8.0779445583E+001	0.414	1.768	1.612			
89.540	1.707	51.938	-0.031	1.7168859573E+002	4.5020755278E+001	8.0155740879E+001	0.433	1.770	1.551			
89.884	1.951	51.934	-0.012	1.9894970975E+002	5.3482677847E+001	7.4449823476E+001	0.456	1.793	1.490			
89.887	1.953	51.934	0.058	1.9917388354E+002	5.3558401195E+001	7.4374426997E+001	0.456	1.794	1.489			
90.231	1.963	51.954	0.082	2.2344853113E+002	6.2356979454E+001	6.8208181331E+001	0.491	1.826	1.446			
90.575	1.989	51.990	0.125	2.4609404062E+002	7.1427766089E+001	6.0563862191E+001	0.526	1.846	1.415			
90.919	2.028	52.040	0.154	2.6511018918E+002	8.0034675688E+001	5.1733706524E+001	0.557	1.852	1.397			
91.263	2.074	52.096	0.164	2.8168146706E+002	8.8371101307E+001	3.9149306940E+001	0.585	1.842	1.387			
91.390	2.091	52.117	0.163	2.8623796839E+002	9.0994228216E+001	3.5558134539E+001	0.594	1.832	1.385			
91.734	2.137	52.173	0.162	2.9823537469E+002	9.8059782229E+001	3.3603321285E+001	0.624	1.795	1.382			
92.078	2.182	52.228	0.145	3.0935356951E+002	1.0485090207E+002	3.1105252245E+001	0.652	1.742	1.378			
92.422	2.216	52.273	0.130	3.1963256330E+002	1.1063953210E+002	3.0778296419E+001	0.673	1.686	1.371			
92.766	2.250	52.318	0.132	3.3052584641E+002	1.1627272213E+002	3.1538919463E+001	0.691	1.619	1.359			
93.110	2.286	52.364	0.145	3.4132807000E+002	1.2164775857E+002	3.0811839632E+001	0.707	1.546	1.342			
93.454	2.330	52.418	0.163	3.5172119757E+002	1.2680583369E+002	2.7793460595E+001	0.721	1.469	1.320			
93.798	2.378	52.476	0.181	3.6044708932E+002	1.3122749544E+002	2.2879169968E+001	0.733	1.397	1.297			
94.100	2.427	52.534	0.208	3.6670288109E+002	1.3456947204E+002	1.8714662401E+001	0.742	1.337	1.275			
94.444	2.492	52.610	0.235	3.7236702265E+002	1.3788096697E+002	1.4121406565E+001	0.744	1.269	1.250			

94.763	2.563	52.690	0.251	3.7617380656E+002	1.4053190426E+002	8.7845570267E+000	0.745	1.205	1.226
94.850	2.559	52.712	0.290	3.7686594314E+002	1.4113596937E+002	7.3560519450E+000	0.746	1.192	1.219
95.194	2.561	52.815	0.318	3.7863749244E+002	1.4346856901E+002	3.2870711881E+000	0.752	1.144	1.191
95.410	2.572	52.890	0.362	3.7909476035E+002	1.4482420168E+002	9.4365563302E-001	0.756	1.118	1.171
95.754	2.599	53.018	0.402	3.7877714649E+002	1.4668699066E+002	-2.4807389571E+000	0.762	1.084	1.137
96.098	2.646	53.166	0.443	3.7738826915E+002	1.4837423971E+002	-5.1620240624E+000	0.768	1.055	1.099
96.442	2.701	53.323	0.466	3.7522620912E+002	1.4980081790E+002	-7.0596170278E+000	0.774	1.034	1.060
96.786	2.764	53.486	0.482	3.7253198456E+002	1.5102984610E+002	-8.2129699294E+000	0.779	1.018	1.020
97.130	2.831	53.654	0.469	3.6957653731E+002	1.5207245314E+002	-8.2870252492E+000	0.784	1.007	0.982
97.474	2.884	53.809	0.437	3.6683137037E+002	1.5281251786E+002	-7.8394699988E+000	0.787	0.996	0.948
97.818	2.929	53.955	0.431	3.6418379473E+002	1.5336268292E+002	-8.0423705152E+000	0.788	0.985	0.919
98.006	2.956	54.038	0.444	3.6263522797E+002	1.5362488769E+002	-8.3357346318E+000	0.789	0.979	0.902
98.350	3.000	54.191	0.447	3.5970228549E+002	1.5400956944E+002	-8.6589284313E+000	0.791	0.969	0.875
98.694	3.044	54.346	0.451	3.5667878295E+002	1.5430817718E+002	-8.8851427966E+000	0.792	0.961	0.849
99.038	3.090	54.502	0.469	3.5359022844E+002	1.5452509347E+002	-9.3191036274E+000	0.793	0.954	0.826
99.382	3.147	54.668	0.482	3.5026820584E+002	1.5464659196E+002	-9.6074108336E+000	0.793	0.948	0.805
99.726	3.202	54.833	0.472	3.4698132586E+002	1.5467406660E+002	-9.4336075646E+000	0.793	0.943	0.787
100.069	3.252	54.993	0.465	3.4377886189E+002	1.5459803477E+002	-9.3375494205E+000	0.792	0.940	0.771
100.296	3.284	55.098	0.440	3.4166320819E+002	1.5445230785E+002	-9.0264531583E+000	0.792	0.939	0.763
100.640	3.320	55.244	0.409	3.3873048118E+002	1.5413828166E+002	-8.3012560639E+000	0.789	0.938	0.753
100.984	3.346	55.380	0.381	3.3595280468E+002	1.5370074610E+002	-7.8567630066E+000	0.786	0.937	0.745
101.327	3.362	55.506	0.354	3.3332584281E+002	1.5313425036E+002	-7.1642920075E+000	0.782	0.937	0.740
101.480	3.363	55.556	0.329	3.3226502726E+002	1.5285046452E+002	-7.0424675399E+000	0.780	0.937	0.738
101.824	3.367	55.669	0.323	3.2977444612E+002	1.5205948259E+002	-7.1786761031E+000	0.780	0.937	0.736
102.168	3.365	55.778	0.319	3.2732684237E+002	1.5111083242E+002	-7.2934064921E+000	0.779	0.938	0.735
102.332	3.366	55.831	0.301	3.2611967169E+002	1.5058124939E+002	-7.1628441553E+000	0.779	0.939	0.735
102.675	3.356	55.931	0.291	3.2381137129E+002	1.4941390135E+002	-6.7161169800E+000	0.777	0.940	0.737
103.019	3.346	56.031	0.298	3.2149967952E+002	1.4809336527E+002	-6.8050158760E+000	0.774	0.942	0.739
103.363	3.340	56.135	0.314	3.1913022589E+002	1.4659804294E+002	-6.9861434601E+000	0.770	0.945	0.743
103.707	3.341	56.247	0.312	3.1669393713E+002	1.4494217457E+002	-6.6643403946E+000	0.765	0.948	0.748
104.051	3.334	56.350	0.300	3.1454585065E+002	1.4337999389E+002	-6.0714015535E+000	0.760	0.951	0.754
104.395	3.327	56.453	0.289	3.1251744233E+002	1.4184697490E+002	-5.5333959793E+000	0.755	0.954	0.760
104.739	3.313	56.549	0.285	3.1073944790E+002	1.4044893681E+002	-5.0578822601E+000	0.751	0.958	0.766
105.083	3.303	56.649	0.282	3.0903814373E+002	1.3902983403E+002	-4.6605492565E+000	0.746	0.962	0.773
105.427	3.287	56.743	0.274	3.0753347321E+002	1.3769917943E+002	-4.2095615345E+000	0.741	0.966	0.780
105.561	3.281	56.780	0.278	3.0697964455E+002	1.3716992772E+002	-4.0919102985E+000	0.739	0.967	0.783
105.905	3.267	56.876	0.277	3.0561961776E+002	1.3572932479E+002	-4.0285647878E+000	0.734	0.967	0.791
106.249	3.251	56.970	0.273	3.0420840965E+002	1.3422075586E+002	-4.4655943542E+000	0.728	0.960	0.799
106.592	3.234	57.063	0.271	3.0254775182E+002	1.3257532811E+002	-5.4478054952E+000	0.722	0.949	0.807
106.936	3.217	57.156	0.274	3.0046088428E+002	1.3071425784E+002	-7.1607122954E+000	0.715	0.933	0.816
107.028	3.214	57.182	0.285	2.9977713448E+002	1.3014643202E+002	-7.7227742769E+000	0.713	0.928	0.819
107.372	3.202	57.280	0.296	2.9677223249E+002	1.2778857863E+002	-1.0165927183E+001	0.705	0.904	0.829
107.716	3.197	57.386	0.310	2.9278403057E+002	1.2492890194E+002	-1.3445619899E+001	0.694	0.877	0.840
107.866	3.196	57.433	0.325	2.9065006983E+002	1.2352645977E+002	-1.5097288690E+001	0.690	0.863	0.845
108.210	3.107	57.547	0.346	2.8478889468E+002	1.1993781435E+002	-1.8849132923E+001	0.681	0.838	0.858
108.554	3.028	57.672	0.400	2.7768382062E+002	1.1569533155E+002	-2.3451736241E+001	0.670	0.820	0.873
108.898	2.975	57.822	0.452	2.6865653157E+002	1.1029262313E+002	-2.7560256115E+001	0.654	0.806	0.892
109.242	2.933	57.983	0.460	2.5872522180E+002	1.0435659866E+002	-2.8767676779E+001	0.635	0.797	0.912
109.586	2.886	58.138	0.454	2.4886735252E+002	9.8560570395E+001	-2.8739572662E+001	0.616	0.796	0.933
109.930	2.840	58.295	0.445	2.3895537547E+002	9.2819430642E+001	-2.7879066499E+001	0.596	0.798	0.953
110.273	2.786	58.445	0.429	2.2968944521E+002	8.7522346367E+001	-2.6295708190E+001	0.577	0.804	0.972
110.617	2.728	58.590	0.426	2.2086665452E+002	8.2591299905E+001	-2.5705845770E+001	0.559	0.808	0.989
110.887	2.685	58.706	0.443	2.1392399322E+002	7.8845714646E+001	-2.7680438105E+001	0.546	0.810	1.001
110.977	2.654	58.750	0.484	2.1137515208E+002	7.7531144209E+001	-2.8366820312E+001	0.541	0.811	1.005
111.321	2.538	58.916	0.495	2.0156372365E+002	7.2594920805E+001	-2.8911850454E+001	0.526	0.815	1.021
111.600	2.449	59.058	0.525	1.9340951926E+002	6.8603130426E+001	-2.9777198044E+001	0.513	0.819	1.032
111.944	2.351	59.243	0.591	1.8293355531E+002	6.3591474958E+001	-3.2631216900E+001	0.494	0.825	1.045
112.288	2.288	59.464	0.656	1.7096262517E+002	5.8027923717E+001	-3.5098335963E+001	0.471	0.833	1.059
112.632	2.236	59.694	0.667	1.5878953909E+002	5.2495663127E+001	-3.4719542562E+001	0.447	0.842	1.072
112.976	2.180	59.923	0.658	1.4707917954E+002	4.7293074684E+001	-3.3033486769E+001	0.422	0.852	1.084
113.155	2.149	60.039	0.604	1.4124865010E+002	4.4755082199E+001	-3.0924483213E+001	0.409	0.858	1.089
113.499	2.065	60.239	0.576	1.3165460877E+002	4.0708518421E+001	-2.7139727963E+001	0.389	0.866	1.097
113.843	1.978	60.435	0.556	1.2257933105E+002	3.7009836698E+001	-2.5208884218E+001	0.370	0.874	1.104
114.187	1.881	60.621	0.537	1.1431351003E+002	3.3777301428E+001	-2.3063118821E+001	0.353	0.881	1.110
114.344	1.834	60.704	0.530	1.1076009507E+002	3.2432353388E+001	-2.2504487841E+001	0.346	0.883	1.111
114.425	1.810	60.747	0.583	1.0893764503E+002	3.1746869551E+001	-2.2786812249E+001	0.343	0.885	1.112
114.769	1.732	60.952	0.625	1.0606144254E+002	2.8676405330E+001	-2.4833023695E+001	0.325	0.890	1.116
115.113	1.673	61.177	0.661	9.1855099363E+001	2.5531391834E+001	-2.5200090657E+001	0.305	0.895	1.118
115.457	1.619	61.407	0.660	8.3266392857E+001	2.2502909956E+001	-2.4056553301E+001	0.284	0.900	1.119
115.801	1.560	61.631	0.658	7.5306684826E+001	1.9757037493E+001	-2.2822022474E+001	0.263	0.904	1.119
116.145	1.505	61.859	0.669	6.7567207535E+001	1.713800069E+001	-2.2176520761E+001	0.242	0.908	1.118
116.489	1.453	62.091	0.635	6.0051537758E+001	1.4647857555E+001	-1.9980030204E+001	0.219	0.912	1.118
116.833	1.375	62.297	0.593	5.3823018243E+001	1.2660028036E+001	-1.5859848071E+001	0.201	0.917	1.119

116.854	1.369	62.308	0.578	5.3495609163E+001	1.2558272782E+001	-1.5750383407E+001	0.200	0.917	1.119
117.198	1.285	62.508	0.604	4.7926644331E+001	1.0864085959E+001	-1.6268591696E+001	0.183	0.923	1.121
117.542	1.217	62.723	0.663	4.2304504770E+001	9.2035526698E+000	-1.6630389262E+001	0.165	0.931	1.128
117.886	1.174	62.964	0.698	3.6486660723E+001	7.5515677985E+000	-1.6382606009E+001	0.145	0.941	1.139
118.230	1.130	63.203	0.696	3.1034970351E+001	6.0583648703E+000	-1.5346356465E+001	0.124	0.953	1.154
118.573	1.086	63.443	0.699	2.5929958553E+001	4.7210450083E+000	-1.4347809673E+001	0.104	0.968	1.174
118.917	1.043	63.684	0.688	2.1165164847E+001	3.5384137058E+000	-1.2936206645E+001	0.084	0.985	1.200
119.261	0.992	63.916	0.652	1.7031189581E+001	2.5867088320E+000	-1.1251391015E+001	0.066	1.002	1.227
119.414	0.958	64.008	0.606	1.5365895585E+001	2.2005752446E+000	-1.0751848221E+001	0.058	1.009	1.241
119.758	0.788	64.217	0.604	1.1790923018E+001	1.4512876962E+000	-9.5499694201E+000	0.043	1.025	1.276
119.840	0.746	64.266	0.652	1.1024062652E+001	1.3109850323E+000	-9.4111069208E+000	0.040	1.030	1.285
120.184	0.597	64.495	0.780	7.6971168144E+000	7.8819529949E-001	-1.0306680316E+001	0.034	1.060	1.337
120.528	0.526	64.802	0.942	3.9341351706E+000	3.2314353114E-001	-9.6830817114E+000	0.034	1.151	1.450
120.872	0.488	65.143	0.934	1.0361605189E+000	3.8440645724E-002	-5.9256522516E+000	0.034	1.279	1.604
121.216	0.412	65.445	0.934	-1.4209921906E-001	-1.1328910370E-003	-1.5062742534E+000	0.034	1.431	1.788

LEGENDA SIMBOLI

- X(m) : Ascissa sinistra concio
 ht(m) : Altezza linea di thrust da nodo sinistro base concio
 yt(m) : coordinata Y linea di trust
 yt'(-) : gradiente pendenza locale linea di trust
 E(x)(kN/m) : Forza Normale interconcio
 T(x)(kN/m) : Forza Tangenziale interconcio
 E' (kN) : derivata Forza normale interconcio
 Rho(x) (-) : fattore mobilitazione resistenza al taglio verticale interconcio ZhU et al.(2003)
 FS_qFEM(x)(-) : fattore di sicurezza locale stimato (locale in X) by qFEM
 FS_srmFEM(x)(-) : fattore di sicurezza locale stimato (locale in X) by SRM Procedure

TABELLA SFORZI DI TAGLIO DISTRIBUITI LUNGO SUPERFICIE INDIVIDUATA CON MINOR FS

X (m)	dx (m)	dl (m)	alpha (°)	TauStress (kPa)	TauF (kN/m)	TauStrength (kPa)	TauS (kN/m)
85.846	0.344	0.424	-35.847	-1.819	-0.772	11.912	5.055
86.190	0.344	0.424	-35.847	-5.457	-2.315	13.948	5.918
86.534	0.344	0.424	-35.847	-9.095	-3.859	16.715	7.093
86.878	0.256	0.315	-35.847	-12.266	-3.870	21.397	6.751
87.134	0.344	0.424	-35.847	-15.748	-6.682	24.342	10.329
87.478	0.344	0.424	-35.847	-20.006	-8.489	27.414	11.633
87.822	0.344	0.424	-35.847	-24.265	-10.296	30.652	13.006
88.166	0.055	0.067	-35.847	-26.732	-1.803	27.216	1.836
88.221	0.344	0.424	-35.772	-29.166	-12.364	29.760	12.616
88.565	0.344	0.424	-35.772	-33.413	-14.165	31.567	13.382
88.908	0.022	0.027	-35.772	-35.670	-0.951	31.110	0.829
88.930	0.344	0.424	-35.772	-37.928	-16.078	34.878	14.786
89.274	0.266	0.328	-35.772	-41.694	-13.668	36.282	11.894
89.540	0.344	0.424	-35.772	-45.271	-19.191	37.903	16.068
89.884	0.003	0.004	-35.772	-47.222	-0.175	38.228	0.142
89.887	0.344	0.344	1.719	8.451	2.908	39.749	13.678
90.231	0.344	0.344	1.719	8.720	3.001	40.270	13.857
90.575	0.344	0.344	1.719	8.989	3.093	40.324	13.876
90.919	0.344	0.344	1.719	9.258	3.186	40.760	14.026
91.263	0.127	0.127	1.719	9.443	1.202	40.153	5.112
91.390	0.344	0.344	1.719	9.516	3.274	40.382	13.896
91.734	0.344	0.344	1.719	9.562	3.290	40.250	13.850
92.078	0.344	0.344	1.719	9.609	3.306	39.567	13.615
92.422	0.344	0.344	1.719	9.655	3.322	39.658	13.646
92.766	0.344	0.344	1.719	9.701	3.338	39.681	13.654
93.110	0.344	0.344	1.719	9.748	3.354	39.745	13.676
93.454	0.344	0.344	1.719	9.794	3.370	39.366	13.546
93.798	0.302	0.302	1.719	9.838	2.976	39.065	11.817
94.100	0.344	0.344	1.719	9.997	3.440	39.345	13.539
94.444	0.319	0.319	1.719	10.264	3.272	40.119	12.789
94.763	0.087	0.091	16.395	42.065	3.834	34.577	3.151
94.850	0.344	0.359	16.395	42.399	15.201	34.907	12.515
95.194	0.216	0.225	16.395	42.833	9.646	35.411	7.975
95.410	0.344	0.359	16.395	43.266	15.512	35.887	12.867
95.754	0.344	0.359	16.395	43.799	15.703	36.546	13.103
96.098	0.344	0.359	16.395	44.332	15.894	37.255	13.357
96.442	0.344	0.359	16.395	44.865	16.085	38.002	13.625
96.786	0.344	0.359	16.395	45.397	16.276	38.779	13.903

97.130	0.344	0.359	16.395	45.930	16.467	39.562	14.184
97.474	0.344	0.359	16.395	46.463	16.658	40.337	14.462
97.818	0.188	0.196	16.395	46.875	9.193	40.992	8.039
98.006	0.344	0.361	17.731	50.059	18.076	40.794	14.731
98.350	0.344	0.361	17.731	50.563	18.258	41.522	14.994
98.694	0.344	0.361	17.731	51.067	18.440	42.252	15.257
99.038	0.344	0.361	17.731	51.572	18.623	42.984	15.521
99.382	0.344	0.361	17.731	52.076	18.805	43.732	15.792
99.726	0.344	0.361	17.731	52.580	18.987	44.479	16.061
100.069	0.226	0.237	17.731	52.998	12.583	45.143	10.718
100.296	0.344	0.361	17.741	53.438	19.298	45.700	16.503
100.640	0.344	0.361	17.741	53.942	19.480	46.421	16.763
100.984	0.344	0.361	17.741	54.446	19.662	47.132	17.020
101.327	0.153	0.160	17.741	54.810	8.778	47.715	7.642
101.480	0.344	0.361	17.741	54.819	19.796	47.834	17.274
101.824	0.344	0.361	17.741	54.614	19.722	47.928	17.308
102.168	0.164	0.172	17.741	54.463	9.356	48.077	8.259
102.332	0.344	0.361	17.751	54.334	19.622	48.084	17.365
102.675	0.344	0.361	17.751	54.128	19.548	48.194	17.405
103.019	0.344	0.361	17.751	53.923	19.474	48.320	17.450
103.363	0.344	0.361	17.751	53.717	19.400	48.470	17.504
103.707	0.344	0.361	17.751	53.512	19.325	48.648	17.569
104.051	0.344	0.361	17.751	53.306	19.251	48.801	17.624
104.395	0.344	0.361	17.751	53.101	19.177	48.949	17.678
104.739	0.344	0.361	17.751	52.895	19.103	49.072	17.722
105.083	0.344	0.361	17.751	52.690	19.028	49.208	17.771
105.427	0.134	0.140	17.751	52.547	7.371	49.380	6.927
105.561	0.344	0.361	17.761	52.426	18.934	49.367	17.830
105.905	0.344	0.361	17.761	52.220	18.860	49.498	17.877
106.249	0.344	0.361	17.761	52.013	18.785	49.627	17.923
106.592	0.344	0.361	17.761	51.807	18.711	49.762	17.972
106.936	0.092	0.096	17.761	51.677	4.979	49.972	4.814
107.028	0.344	0.361	17.761	51.546	18.617	49.948	18.039
107.372	0.344	0.361	17.761	51.340	18.542	50.131	18.105
107.716	0.150	0.157	17.761	51.192	8.049	50.407	7.926
107.866	0.344	0.399	30.560	71.892	28.716	43.804	17.497
108.210	0.344	0.399	30.560	70.699	28.239	44.052	17.596
108.554	0.344	0.399	30.560	69.506	27.763	44.654	17.836
108.898	0.344	0.399	30.560	68.313	27.286	44.975	17.964
109.242	0.344	0.399	30.560	67.120	26.810	44.928	17.946
109.586	0.344	0.399	30.560	65.927	26.333	44.875	17.925
109.930	0.344	0.399	30.560	64.734	25.857	44.544	17.792
110.273	0.344	0.399	30.560	63.541	25.380	44.165	17.641
110.617	0.270	0.313	30.560	62.477	19.564	43.896	13.745
110.887	0.090	0.117	39.493	67.747	7.900	39.100	4.559
110.977	0.344	0.446	39.493	66.524	29.650	39.213	17.477
111.321	0.279	0.362	39.493	64.821	23.437	38.590	13.953
111.600	0.344	0.446	39.493	63.293	28.210	38.124	16.992
111.944	0.344	0.446	39.493	61.762	27.527	38.070	16.968
112.288	0.344	0.446	39.493	60.231	26.845	37.494	16.711
112.632	0.344	0.446	39.493	58.700	26.163	36.652	16.336
112.976	0.179	0.232	39.493	57.536	13.374	35.935	8.353
113.155	0.344	0.446	39.493	56.371	25.125	34.786	15.504
113.499	0.344	0.446	39.493	54.840	24.442	33.927	15.121
113.843	0.344	0.446	39.493	53.310	23.760	32.963	14.692
114.187	0.157	0.204	39.493	52.195	10.625	32.307	6.576
114.344	0.081	0.105	39.493	51.664	5.436	32.080	3.375
114.425	0.344	0.446	39.503	50.720	22.609	31.886	14.214
114.769	0.344	0.446	39.503	49.188	21.926	31.405	13.999
115.113	0.344	0.446	39.503	47.657	21.244	30.753	13.708
115.457	0.344	0.446	39.503	46.125	20.561	29.952	13.352
115.801	0.344	0.446	39.503	44.593	19.878	29.291	13.057
116.145	0.344	0.446	39.503	43.061	19.195	28.628	12.761
116.489	0.344	0.446	39.503	41.529	18.512	27.631	12.317
116.833	0.021	0.027	39.503	40.717	1.099	27.066	0.730
116.854	0.344	0.446	39.513	39.906	17.791	26.784	11.941
117.198	0.344	0.446	39.513	38.373	17.108	26.205	11.683
117.542	0.344	0.446	39.513	36.840	16.425	25.650	11.435
117.886	0.344	0.446	39.513	35.308	15.741	24.960	11.128
118.230	0.344	0.446	39.513	33.775	15.058	24.272	10.821
118.573	0.344	0.446	39.513	32.242	14.374	23.586	10.515
118.917	0.344	0.446	39.513	30.709	13.691	22.831	10.179
119.261	0.153	0.198	39.513	29.602	5.857	22.363	4.424

119.414	0.344	0.511	47.733	28.043	14.341	19.302	9.871
119.758	0.082	0.122	47.733	26.532	3.236	18.728	2.284
119.840	0.344	0.511	47.733	24.912	12.739	18.226	9.320
120.184	0.344	0.511	47.733	22.254	11.380	17.452	8.925
120.528	0.344	0.511	47.733	19.595	10.021	16.551	8.464
120.872	0.344	0.511	47.733	16.937	8.661	15.581	7.968
121.216	0.344	0.511	47.733	14.279	7.302	14.826	7.582

 LEGENDA SIMBOLI

X(m) : Ascissa sinistra concio
 dx(m) : Larghezza concio
 dl(m) : lunghezza base concio
 alpha(°) : Angolo pendenza base concio
 TauStress(kPa) : Sforzo di taglio su base concio
 TauF (kN/m) : Forza di taglio su base concio
 TauStrength(kPa) : Resistenza al taglio su base concio
 TauS (kN/m) : Forza resistente al taglio su base concio

ANALISI FILTRAZIONE

Dati

Metodo di Calcolo Sistema Riferimento e Convenzioni di Segno

Metodo di calcolo utilizzato : Metodo degli Elementi Finiti (FEM)

Ipotesi di Deformazione Piana in regime di piccole deformazioni

Calcolo eseguito per fasi

Asse X diretto da sinistra a destra

Asse Y diretto dal basso verso alto

Rotazioni POSITIVE antiorarie

Carichi, spostamenti e reazioni seguono convenzione segno assi

TENSIONI DI TRAZIONE POSITIVE

TENSIONI DI COMPRESSIONE NEGATIVE

Simbologia adottata

n° Indice progressivo coordinate punto
X, Y Ascissa e Ordinata del punto, espresse in [m]

Falde

n° Indice punto
X, Y Ascissa e Ordinata punto falda, espresse in [m]

Vincoli puntuali e vincoli di linea

n° Indice identificativo del vincolo puntuale
X, Y Ascissa e Ordinata vincolo puntuale, espresse in [m]
Vx, Vy Tipo di vincolo in direzione X e Y (L: Libero, V: Vincolato rigidamente, E: Vincolato elasticamente, I: Spostamento imposto)
Rx, Ry Rigidezza in direzione X e Y del vincolo, espresso in [kg/cm]
Sx, Sy Spostamento impresso in direzione X e Y del vincolo, espresso in [cm]

Descrizione materiali

Materiali 1

Tipo materiale	Terreno
Descrizione	strato 1
Comportamento	Isotropo
Criterio	Mohr-Coulomb Modificato
Comportamento in falda	Drenato
Peso Volume γ [kg/mc]	2000.0
Peso Volume Saturo ϕ_{sat} [kg/mc]	2000.0
Angolo di attrito ϕ°	18.0
Coesione efficace [kPa]	0.092
Angolo di attrito non drenato $^\circ$	0.00
Coesione non drenata [kPa]	0.469
Angolo di dilatanza ψ°	0.00
Modulo Elastico E(Young) [kPa]	200.00
Modulo di Poisson ν	0.35
Rigidezza a taglio G [kPa]	74.07
Rigidezza volumetrica K(Bulk Modulus) [kPa]	222.22
Modulo Elastico Carico-Scarico E_{UR} (Young) [kPa]	200.00
Coefficiente permeabilità K_x (cm/sec)	0.00001100
Coefficiente permeabilità K_y (cm/sec)	0.00001100

Materiali 4

Tipo materiale	Terreno
Descrizione	strato 2
Comportamento	Isotropo
Criterio	Mohr-Coulomb Modificato
Comportamento in falda	Drenato
Peso Volume γ [kg/mc]	2000.0
Peso Volume Saturo ϕ_{sat} [kg/mc]	2000.0
Angolo di attrito ϕ°	18.0
Coesione efficace [kPa]	0.092
Angolo di attrito non drenato $^\circ$	0.00
Coesione non drenata [kPa]	0.469
Angolo di dilatanza ψ°	0.00
Modulo Elastico E(Young) [kPa]	200.00
Modulo di Poisson ν	0.35
Rigidezza a taglio G [kPa]	74.07
Rigidezza volumetrica K(Bulk Modulus) [kPa]	222.22
Modulo Elastico Carico-Scarico E_{UR} (Young) [kPa]	200.00
Coefficiente permeabilità K_x (cm/sec)	0.00000300
Coefficiente permeabilità K_y (cm/sec)	0.00000300

Materiali 5

Tipo materiale	Terreno
Descrizione	strato 3
Comportamento	Isotropo
Criterio	Mohr-Coulomb Modificato
Comportamento in falda	Drenato
Peso Volume γ [kg/mc]	2000.0
Peso Volume Saturo ϕ_{sat} [kg/mc]	2000.0
Angolo di attrito ϕ°	25.0
Coesione efficace [kPa]	0.510
Angolo di attrito non drenato $^\circ$	0.00
Coesione non drenata [kPa]	0.469
Angolo di dilatanza ψ°	0.00
Modulo Elastico E(Young) [kPa]	200.00
Modulo di Poisson ν	0.35
Rigidezza a taglio G [kPa]	74.07
Rigidezza volumetrica K(Bulk Modulus) [kPa]	222.22
Modulo Elastico Carico-Scarico E_{UR} (Young) [kPa]	200.00
Coefficiente permeabilità K_x (cm/sec)	0.00000300
Coefficiente permeabilità K_y (cm/sec)	0.00000300

Materiali 6

Tipo materiale	Terreno
Descrizione	strato 4
Comportamento	Isotropo
Criterio	Mohr-Coulomb Modificato
Comportamento in falda	Drenato
Peso Volume γ [kg/mc]	2000.0
Peso Volume Saturo ϕ_{sat} [kg/mc]	2000.0
Angolo di attrito ϕ°	35.0
Coesione efficace [kPa]	0.000
Angolo di attrito non drenato $^\circ$	0.00
Coesione non drenata [kPa]	0.469
Angolo di dilatanza ψ°	0.00
Modulo Elastico E(Young) [kPa]	1943.69
Modulo di Poisson ν	0.35
Rigidezza a taglio G [kPa]	719.88
Rigidezza volumetrica K(Bulk Modulus) [kPa]	2159.65

Modulo Elastico Carico-Scarico $E_{UR}(Young)$ [kPa]	1943.69
Coefficiente permeabilità K_x (cm/sec)	0.00000000
Coefficiente permeabilità K_y (cm/sec)	0.00000000

Materiale 7

Tipo materiale	Terreno
Descrizione	Microdreno
Comportamento	Isotropo
Criterio	Mohr-Coulomb Modificato
Comportamento in falda	Drenato
Peso Volume γ [kg/mc]	1800.0
Peso Volume Saturo ϕ_{sat} [kg/mc]	1800.0
Angolo di attrito ϕ°	30.0
Coesione efficace [kPa]	0.100
Angolo di attrito non drenato $^\circ$	0.00
Coesione non drenata [kPa]	0.200
Angolo di dilatazione ψ°	0.00
Modulo Elastico E(Young) [kPa]	200.00
Modulo di Poisson ν	0.35
Rigidezza a taglio G [kPa]	74.07
Rigidezza volumetrica K(Bulk Modulus) [kPa]	222.22
Modulo Elastico Carico-Scarico $E_{UR}(Young)$ [kPa]	200.00
Coefficiente permeabilità K_x (cm/sec)	0.01000000
Coefficiente permeabilità K_y (cm/sec)	0.01000000

Impostazioni analisi

Analisi Elastoplastica

Metodo di Analisi **Newton-Raphson Modificato**

Usa Matrice Tangente

Numero Passi di Carico 20

Numero Massimo Iterazioni 100

TOLLERANZA SOLUZIONE

Usa Tolleranza su Norma Energia 1.000000E-04

Usa Tolleranza su Norma Spostamenti 1.000000E-02

Usa Tolleranza su Incremento Carico 5.000000E-02

Usa Tolleranza su Carico Corrente 1.000000E-03

Metodo Rientro Elastoplastico **Backward Eulero Single Step**

Tolleranza Rientro Elastoplastico 1.000000E-10

Fase n° 1 - Descrizione Fase

Tipo Analisi **Filtrazione**
Modalità Analisi **Steady State**

Profilo e superfici

n°	X [m]	Y [m]
1	0,00	70,51
2	77,78	46,25
3	81,19	44,77
4	86,12	43,61
5	94,49	43,21
6	115,21	37,10
7	151,19	26,17
8	171,28	20,49

n°	X [m]	Y [m]
1	0,00	66,50
2	75,47	41,93
3	94,27	37,93
4	124,69	32,31
5	171,28	17,18

n°	X [m]	Y [m]
1	0,00	64,48
2	74,90	40,10
3	94,47	33,13
4	124,72	28,80
5	171,28	13,68

n°	X [m]	Y [m]
1	0,00	59,50
2	75,47	34,93
3	93,00	29,00
4	124,71	20,30
5	171,28	5,19

Falde

Falda n° 1

n°	X [m]	Y [m]
1	0,00	70,51
2	9,86	67,36
3	77,78	46,25
4	81,19	44,77
5	86,21	43,61
6	94,49	43,21
7	115,21	37,10
8	151,19	26,17
9	161,23	23,42
10	171,28	20,49

Linee di vincolo

n°	Descrizione	X [m]	Y [m]	Vx	Rx [kg/cm]	Sx [cm]	Vy	Ry [kg/cm]	Sy [cm]
1	Linea di Vincolo	0,00	0,00	V	--	--	L	--	--
		0,00	70,51	V	--	--	L	--	--
2	Linea di Vincolo	171,28	0,00	V	--	--	L	--	--
		171,28	20,49	V	--	--	L	--	--
3	Linea di Vincolo	0,00	0,00	V	--	--	V	--	--
		171,28	0,00	V	--	--	V	--	--

Inclusioni

Inclusione n° 1 - Inclusione

n°	X [m]	Y [m]	n°	X [m]	Y [m]	n°	X [m]	Y [m]	n°	X [m]	Y [m]
1	151,19	26,17	2	93,59	29,07	3	93,59	28,97	4	151,19	26,07

Inclusione n° 2 - Inclusione

n°	X [m]	Y [m]	n°	X [m]	Y [m]	n°	X [m]	Y [m]	n°	X [m]	Y [m]
1	81,19	44,77	2	31,19	47,27	3	31,19	47,17	4	81,19	44,67

Risultati

Sintesi

Simbologia adottata

Ifa Indice fase
 Lambda Moltiplicatore
 F_phi, F_c Fattore riduzione angolo di attrito e cosione

n°	Lambda	F_phi	F_c
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Filtrazione

Simbologia adottata

Ifa Indice fase
 H_{min}, H_{max} Potenziale min e max, espresso in [m]
 V_{X, min}, V_{X, max} Velocità in direzione Y minima e massima, espressa in [cm/sec]
 V_{Y, min}, V_{Y, max} Velocità in direzione Y minima e massima, espressa in [cm/sec]
 Q_{ent}, Q_{usc} Portata entrante ed uscente, espressa in [cmc/sec]

Ifa	H _{min} [m]	H _{max} [m]	V _{X, min} [cm/sec]	V _{X, max} [cm/sec]	V _{Y, min} [cm/sec]	V _{Y, max} [cm/sec]	Q _{ent} [cmc/sec]	Q _{usc} [cmc/sec]
1	20,49	70,51	-1,59700E-6	1,36387E-3	-1,45091E-4	6,32404E-5	4,14421E-9	-4,14421E-9

Risultati filtrazione

Simbologia adottata

In Indice nodo
 X, Y Coordinate nodo, espresse in [m]
 H Potenziale, espresso in [m]
 P Pressione, espressa in [kPa]
 V_x, V_y Velocità, espresse in [cm/sec]
 Q Portata, espressa in [cmc/sec]

Ie	(X, Y) [m]	H [m]	P [kPa]	V _x [cm/sec]	V _y [cm/sec]	Q [cmc/sec]
1	0.00;0.00	70,51	70,51	5,09994E-11	-2,26001E-14	3,78442E-9
2	0.00;2.23	70,51	68,28	5,10589E-11	0,00000E+0	1,51510E-8
3	0.00;4.45	70,51	66,06	5,11382E-11	-1,27728E-15	7,60857E-9
4	0.00;6.69	70,51	63,82	5,13503E-11	0,00000E+0	1,53057E-8
5	0.00;8.93	70,51	61,58	5,15672E-11	1,51490E-15	7,70777E-9
6	0.00;11.17	70,51	59,34	5,19243E-11	0,00000E+0	1,55472E-8
7	0.00;13.42	70,51	57,09	5,22786E-11	-1,75704E-16	7,85005E-9
8	0.00;15.68	70,51	54,83	5,27660E-11	0,00000E+0	1,58731E-8
9	0.00;17.94	70,51	52,57	5,32512E-11	-1,47728E-15	8,03271E-9
10	0.00;20.20	70,51	50,31	5,38488E-11	0,00000E+0	1,62755E-8
11	0.00;22.47	70,51	48,04	5,44448E-11	-2,40317E-15	8,25019E-9
12	0.00;24.75	70,51	45,76	5,51129E-11	0,00000E+0	1,67376E-8
13	0.00;27.03	70,51	43,48	5,57802E-11	-2,89901E-15	8,49091E-9
14	0.00;29.32	70,51	41,19	5,64541E-11	0,00000E+0	1,72287E-8
15	0.00;31.61	70,51	38,90	5,71288E-11	-2,55233E-15	8,73546E-9
16	0.00;33.90	70,51	36,61	5,77214E-11	0,00000E+0	1,77018E-8
17	0.00;36.20	70,51	34,31	5,83164E-11	-1,24317E-15	8,95714E-9
18	0.00;38.51	70,51	32,00	5,87390E-11	0,00000E+0	1,81000E-8
19	0.00;40.82	70,51	29,69	5,91648E-11	6,30297E-16	9,12811E-9
20	0.00;43.14	70,51	27,37	5,93734E-11	0,00000E+0	1,83768E-8
21	0.00;45.46	70,51	25,05	5,95901E-11	5,18012E-15	9,23471E-9
22	0.00;47.79	70,51	22,72	5,96719E-11	0,00000E+0	1,85378E-8
23	0.00;50.12	70,51	20,39	5,98496E-11	5,84537E-14	9,31374E-9
24	0.00;52.46	70,51	18,05	6,03972E-11	0,00000E+0	1,87379E-8
25	0.00;54.80	70,51	15,71	6,13663E-11	3,12322E-13	9,58672E-9
26	0.00;57.15	70,51	13,36	6,20696E-11	0,00000E+0	1,99886E-8
27	-0.00;59.50	70,51	11,01	1,29084E-6	-1,03916E-7	2,13742E-4
28	0.00;61.99	70,51	8,52	1,58072E-6	0,00000E+0	5,08603E-4
29	-0.00;64.48	70,51	6,03	1,36077E-6	7,62188E-9	1,59039E-4
30	0.00;65.49	70,51	5,02	1,36075E-6	0,00000E+0	1,77510E-4
31	-0.00;66.50	70,51	4,01	3,15201E-6	0,00000E+0	4,25252E-4
32	0.00;68.51	70,51	2,01	4,10752E-6	0,00000E+0	1,01445E-3
33	0.00;70.51	70,51	0,00	3,39961E-6	-8,89154E-8	1,59178E-4
34	1.25;65.08	69,96	4,88	1,27913E-6	-1,14139E-8	0,00000E+0
35	1.25;66.09	69,96	3,87	2,88415E-6	-2,69011E-7	0,00000E+0
36	1.25;68.10	70,06	1,96	2,16159E-6	-2,42009E-7	0,00000E+0
37	1.53;1.47	69,73	68,27	5,09878E-11	4,93180E-14	0,00000E+0
38	1.53;3.69	69,73	66,04	5,10636E-11	5,70198E-14	0,00000E+0
39	1.76;69.96	69,95	-0,01	3,25431E-6	-1,96883E-7	0,00000E+0
40	1.87;5.51	69,55	64,04	5,11745E-11	1,74468E-13	0,00000E+0
41	1.87;7.74	69,55	61,80	5,13849E-11	1,77387E-13	0,00000E+0
42	1.92;41.97	69,37	27,40	5,93698E-11	1,69146E-13	0,00000E+0
43	1.92;44.29	69,37	25,08	5,95745E-11	1,69430E-13	0,00000E+0
44	1.94;37.40	69,38	31,98	5,86335E-11	3,58846E-13	0,00000E+0
45	1.94;39.71	69,37	29,66	5,90613E-11	3,58295E-13	0,00000E+0
46	1.96;32.82	69,38	36,57	5,75014E-11	5,13501E-13	0,00000E+0
47	1.96;35.12	69,37	34,26	5,81045E-11	5,13917E-13	0,00000E+0
48	1.97;46.53	69,34	22,80	5,96553E-11	4,44043E-14	0,00000E+0
49	1.97;48.86	69,33	20,47	5,97280E-11	7,60618E-14	0,00000E+0

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
50	1.98;28.24	69,40	41,16	5,61498E-11	5,90907E-13	0,00000E+0
51	1.98;30.52	69,39	38,86	5,68346E-11	5,91558E-13	0,00000E+0
52	1.99;23.66	69,42	45,76	5,47690E-11	5,90539E-13	0,00000E+0
53	1.99;25.94	69,41	43,47	5,54455E-11	5,90895E-13	0,00000E+0
54	2.00;19.10	69,44	50,34	5,35070E-11	5,31311E-13	0,00000E+0
55	2.00;21.37	69,43	48,06	5,41097E-11	5,31281E-13	0,00000E+0
56	2.01;14.55	69,46	54,90	5,24571E-11	4,35727E-13	0,00000E+0
57	2.01;16.81	69,45	52,64	5,29463E-11	4,35206E-13	0,00000E+0
58	2.03;9.99	69,46	59,47	5,16656E-11	3,20109E-13	0,00000E+0
59	2.03;12.24	69,45	57,21	5,20202E-11	3,19985E-13	0,00000E+0
60	2.15;56.45	69,17	12,72	5,96998E-11	3,72063E-12	0,00000E+0
61	2.15;58.80	69,06	10,26	8,71493E-7	-2,05303E-7	0,00000E+0
62	2.18;61.28	69,35	8,07	1,59985E-6	-2,63730E-7	0,00000E+0
63	2.18;63.77	69,51	5,74	1,32496E-6	-1,84868E-7	0,00000E+0
64	2.35;0.00	69,31	69,31	5,09431E-11	-7,50826E-15	0,00000E+0
65	2.43;51.37	69,06	17,68	5,95821E-11	3,22696E-13	0,00000E+0
66	2.43;53.71	69,04	15,33	5,99155E-11	3,73652E-13	0,00000E+0
67	2.47;69.72	69,72	0,00	1,52964E-6	-8,54338E-7	-2,54303E-4
68	2.49;65.69	69,45	3,76	1,96318E-6	-3,39256E-7	0,00000E+0
69	3.05;2.93	68,95	66,02	5,09913E-11	1,26293E-13	0,00000E+0
70	3.40;4.75	68,77	64,03	5,11009E-11	2,32398E-13	0,00000E+0
71	3.43;64.37	69,01	4,64	1,24331E-6	-2,06883E-7	0,00000E+0
72	3.52;69.41	69,39	-0,02	1,19011E-6	-1,65941E-6	0,00000E+0
73	3.54;65.35	69,04	3,69	2,56524E-6	-6,29833E-7	0,00000E+0
74	3.71;67.31	69,16	1,85	3,68550E-6	-1,02065E-6	0,00000E+0
75	3.74;6.56	68,59	62,03	5,12078E-11	3,52991E-13	0,00000E+0
76	3.84;43.12	68,23	25,11	5,95742E-11	3,32307E-13	0,00000E+0
77	3.85;40.86	68,23	27,37	5,92638E-11	5,25288E-13	0,00000E+0
78	3.87;38.59	68,23	29,64	5,89583E-11	7,17831E-13	0,00000E+0
79	3.88;1.47	68,53	67,07	5,09092E-11	7,68113E-14	0,00000E+0
80	3.89;45.36	68,19	22,83	5,96394E-11	1,78978E-13	0,00000E+0
81	3.89;36.31	68,24	31,93	5,84196E-11	8,84449E-13	0,00000E+0
82	3.90;8.81	68,50	59,69	5,14867E-11	4,91055E-13	0,00000E+0
83	3.92;34.03	68,25	34,22	5,78847E-11	1,03112E-12	0,00000E+0
84	3.93;31.74	68,26	36,52	5,72064E-11	1,12282E-12	0,00000E+0
85	3.94;47.61	68,16	20,55	5,96968E-11	4,85044E-14	0,00000E+0
86	3.95;29.44	68,28	38,83	5,65292E-11	1,18775E-12	0,00000E+0
87	3.96;27.15	68,30	41,15	5,58152E-11	1,19905E-12	0,00000E+0
88	3.98;24.85	68,32	43,47	5,51004E-11	1,18662E-12	0,00000E+0
89	3.99;22.56	68,34	45,78	5,44345E-11	1,13484E-12	0,00000E+0
90	4.00;20.26	68,36	48,10	5,37671E-11	1,06644E-12	0,00000E+0
91	4.01;17.97	68,38	50,41	5,32027E-11	9,74348E-13	0,00000E+0
92	4.02;15.68	68,39	52,71	5,26372E-11	8,72538E-13	0,00000E+0
93	4.04;13.37	68,40	55,03	5,21990E-11	7,57897E-13	0,00000E+0
94	4.06;11.06	68,41	57,35	5,17602E-11	6,38247E-13	0,00000E+0
95	4.23;69.17	69,16	-0,01	1,71779E-6	-2,75025E-7	0,00000E+0
96	4.30;58.10	67,82	9,72	7,37809E-7	-2,44406E-7	0,00000E+0
97	4.34;60.58	68,19	7,61	1,37116E-6	-4,26272E-7	0,00000E+0
98	4.37;63.06	68,49	5,43	1,28316E-6	-3,63735E-7	0,00000E+0
99	4.40;50.12	67,88	17,77	5,95039E-11	9,89863E-14	0,00000E+0
100	4.48;64.03	68,56	4,53	1,18848E-6	-3,32951E-7	0,00000E+0
101	4.58;65.01	68,63	3,62	2,52026E-6	-7,73942E-7	0,00000E+0
102	4.58;55.36	67,75	12,38	5,84554E-11	2,07226E-12	0,00000E+0
103	4.70;0.00	68,12	68,12	5,08429E-11	-5,67366E-15	0,00000E+0
104	4.76;66.97	68,78	1,81	3,56477E-6	-1,18817E-6	0,00000E+0
105	4.86;52.62	67,61	14,98	5,92447E-11	2,63934E-13	0,00000E+0
106	4.93;68.94	68,94	0,00	2,78006E-6	-6,26992E-7	1,34707E-4
107	4.94;3.29	67,99	64,70	5,08890E-11	2,46187E-13	0,00000E+0
108	5.28;5.11	67,81	62,71	5,09708E-11	3,65591E-13	0,00000E+0
109	5.28;68.86	68,82	-0,04	2,46142E-6	-1,82941E-6	0,00000E+0
110	5.66;48.33	67,13	18,80	5,97588E-11	-1,53039E-13	0,00000E+0
111	5.66;44.22	67,13	22,92	5,98544E-11	2,67238E-13	0,00000E+0
112	5.72;46.46	67,10	20,64	5,98853E-11	1,32944E-13	0,00000E+0
113	5.74;42.04	67,10	25,05	5,97165E-11	6,87022E-13	0,00000E+0
114	5.76;1.82	67,58	65,75	5,07890E-11	1,58991E-13	0,00000E+0
115	5.76;39.78	67,10	27,32	5,94071E-11	8,77645E-13	0,00000E+0
116	5.82;37.53	67,09	29,56	5,89489E-11	1,28521E-12	0,00000E+0
117	5.85;35.25	67,11	31,86	5,83837E-11	1,43988E-12	0,00000E+0
118	5.89;32.96	67,12	34,16	5,76951E-11	1,69618E-12	0,00000E+0
119	5.91;30.67	67,15	36,48	5,69805E-11	1,77336E-12	0,00000E+0
120	5.95;28.36	67,17	38,81	5,61991E-11	1,84507E-12	0,00000E+0
121	5.96;26.07	67,20	41,14	5,54531E-11	1,84448E-12	0,00000E+0
122	5.98;23.75	67,23	43,48	5,46942E-11	1,76529E-12	0,00000E+0
123	5.99;68.62	68,58	-0,05	1,95224E-6	-3,16354E-7	0,00000E+0
124	5.99;21.45	67,27	45,81	5,40062E-11	1,70572E-12	0,00000E+0
125	6.01;19.14	67,30	48,16	5,33465E-11	1,52757E-12	0,00000E+0
126	6.02;16.85	67,33	50,48	5,27694E-11	1,43120E-12	0,00000E+0
127	6.04;14.55	67,35	52,80	5,22473E-11	1,20290E-12	0,00000E+0
128	6.05;12.24	67,36	55,12	5,18010E-11	1,08841E-12	0,00000E+0
129	6.12;50.84	66,86	16,02	5,94639E-11	-7,30574E-14	0,00000E+0
130	6.13;7.47	67,36	59,90	5,11113E-11	6,90850E-13	0,00000E+0
131	6.29;9.72	67,27	57,55	5,13766E-11	8,41700E-13	0,00000E+0
132	6.45;57.40	66,64	9,24	7,52774E-7	-2,36235E-7	0,00000E+0
133	6.52;59.87	67,02	7,15	1,46944E-6	-5,40739E-7	0,00000E+0
134	6.55;62.35	67,43	5,08	1,35702E-6	-4,91729E-7	0,00000E+0
135	6.73;54.66	66,50	11,84	5,81690E-11	-2,73329E-13	0,00000E+0
136	6.77;63.29	67,50	4,22	1,29282E-6	-5,72972E-7	0,00000E+0
137	6.82;3.65	67,03	63,38	5,07569E-11	3,57851E-13	0,00000E+0
138	6.87;64.26	67,65	3,38	2,83233E-6	-1,20446E-6	0,00000E+0
139	7.05;68.31	68,20	-0,11	-6,78359E-7	-3,96853E-6	0,00000E+0
140	7.05;66.23	67,90	1,68	1,90389E-6	-9,91927E-7	0,00000E+0
141	7.05;0.00	66,92	66,92	5,06223E-11	3,04171E-15	0,00000E+0
142	7.31;52.32	66,16	13,84	5,90625E-11	-3,48659E-13	0,00000E+0

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
143	7.38;49.05	66,10	17,05	5,97707E-11	-3,10515E-13	0,00000E+0
144	7.44;47.18	66,07	18,88	5,99283E-11	-9,27384E-14	0,00000E+0
145	7.49;45.31	66,03	20,72	6,01110E-11	1,91657E-13	0,00000E+0
146	7.57;43.14	66,00	22,86	5,99868E-11	6,00926E-13	0,00000E+0
147	7.65;40.97	65,97	25,00	5,98697E-11	1,03950E-12	0,00000E+0
148	7.67;6.01	66,59	60,58	5,08608E-11	6,72336E-13	0,00000E+0
149	7.71;38.72	65,96	27,24	5,93889E-11	1,46723E-12	0,00000E+0
150	7.78;36.46	65,96	29,49	5,89168E-11	1,86358E-12	0,00000E+0
151	7.82;34.18	65,98	31,80	5,81901E-11	2,15141E-12	0,00000E+0
152	7.87;31.89	66,00	34,11	5,74675E-11	2,37855E-12	0,00000E+0
153	7.91;29.59	66,04	36,45	5,66503E-11	2,47802E-12	0,00000E+0
154	7.94;27.28	66,08	38,79	5,58334E-11	2,51946E-12	0,00000E+0
155	7.97;24.96	66,12	41,16	5,50488E-11	2,45898E-12	0,00000E+0
156	7.99;22.65	66,16	43,52	5,42626E-11	2,35688E-12	0,00000E+0
157	8.00;20.33	66,21	45,88	5,35879E-11	2,18889E-12	0,00000E+0
158	8.02;18.01	66,25	48,24	5,29112E-11	1,99712E-12	0,00000E+0
159	8.04;15.71	66,28	50,57	5,23806E-11	1,77412E-12	0,00000E+0
160	8.05;13.42	66,31	52,89	5,18497E-11	1,54023E-12	0,00000E+0
161	8.10;65.92	67,48	1,56	1,79959E-6	-1,15040E-6	0,00000E+0
162	8.11;1.82	66,39	64,56	5,05462E-11	2,01878E-13	0,00000E+0
163	8.29;10.89	66,23	55,33	5,14106E-11	1,29667E-12	0,00000E+0
164	8.45;67.84	67,90	0,06	1,95028E-6	2,01389E-7	0,00000E+0
165	8.52;8.37	66,13	57,76	5,09879E-11	1,03296E-12	0,00000E+0
166	8.57;50.53	65,40	14,87	5,95054E-11	-7,13752E-13	0,00000E+0
167	8.61;56.70	65,44	8,74	7,65798E-7	-2,51793E-7	0,00000E+0
168	8.67;59.17	65,84	6,67	1,48931E-6	-5,53329E-7	0,00000E+0
169	8.74;61.64	66,28	4,65	1,39991E-6	-6,06957E-7	0,00000E+0
170	8.81;67.76	67,78	0,02	2,54335E-6	-4,96094E-6	0,00000E+0
171	8.95;62.58	66,39	3,81	1,39858E-6	-6,84294E-7	0,00000E+0
172	9.08;48.41	65,08	16,67	6,01327E-11	-4,84373E-13	0,00000E+0
173	9.14;46.54	65,04	18,51	6,03951E-11	-2,28989E-13	0,00000E+0
174	9.16;3.85	65,85	62,00	5,04833E-11	5,24229E-13	0,00000E+0
175	9.16;63.52	66,52	3,00	3,11550E-6	-1,49108E-6	0,00000E+0
176	9.18;54.36	65,08	10,72	5,78787E-11	-1,28884E-12	0,00000E+0
177	9.38;44.37	64,90	20,53	6,05892E-11	4,54266E-13	0,00000E+0
178	9.40;0.00	65,74	65,74	5,03579E-11	-1,21369E-16	0,00000E+0
179	9.45;42.20	64,87	22,67	6,05012E-11	8,79488E-13	0,00000E+0
180	9.51;65.44	66,81	1,37	5,35448E-6	-3,39963E-6	0,00000E+0
181	9.60;39.96	64,81	24,85	6,01826E-11	1,69728E-12	0,00000E+0
182	9.66;37.71	64,81	27,11	5,96664E-11	2,10416E-12	0,00000E+0
183	9.76;52.02	64,71	12,70	5,91811E-11	-1,27384E-12	0,00000E+0
184	9.76;35.43	64,81	29,38	5,89210E-11	2,70366E-12	0,00000E+0
185	9.81;33.14	64,85	31,71	5,81231E-11	2,95641E-12	0,00000E+0
186	9.86;67.36	67,36	0,00	5,69584E-6	-7,96414E-7	1,25109E-3
187	9.87;30.84	64,88	34,05	5,71861E-11	3,20205E-12	0,00000E+0
188	9.88;12.56	65,38	52,82	5,14428E-11	1,75580E-12	0,00000E+0
189	9.90;28.53	64,94	36,41	5,63021E-11	3,27133E-12	0,00000E+0
190	9.96;26.20	64,98	38,79	5,53668E-11	3,22148E-12	0,00000E+0
191	9.99;23.88	65,04	41,16	5,45353E-11	3,14115E-12	0,00000E+0
192	10.01;6.21	65,40	59,19	5,05561E-11	8,85078E-13	0,00000E+0
193	10.02;16.87	65,22	48,36	5,23736E-11	2,35558E-12	0,00000E+0
194	10.02;21.52	65,10	43,58	5,37157E-11	2,89062E-12	0,00000E+0
195	10.03;19.20	65,15	45,95	5,30153E-11	2,71211E-12	0,00000E+0
196	10.04;14.57	65,26	50,69	5,18329E-11	2,12560E-12	0,00000E+0
197	10.12;10.04	65,30	55,26	5,09948E-11	1,49348E-12	0,00000E+0
198	10.22;67.29	67,13	-0,16	1,61477E-6	-1,67656E-6	0,00000E+0
199	10.27;49.89	64,38	14,49	5,99418E-11	-1,04033E-12	0,00000E+0
200	10.45;2.03	65,21	63,18	5,02462E-11	3,16444E-13	0,00000E+0
201	10.57;67.21	66,89	-0,32	1,42334E-8	3,84868E-9	0,00000E+0
202	10.76;56.00	64,20	8,20	7,90865E-7	-2,59122E-7	0,00000E+0
203	10.78;47.76	64,05	16,29	6,05998E-11	-6,93917E-13	0,00000E+0
204	10.86;58.46	64,59	6,13	1,56900E-6	-5,64103E-7	0,00000E+0
205	10.92;60.92	65,05	4,12	1,53618E-6	-6,35084E-7	0,00000E+0
206	11.02;45.60	63,90	18,30	6,08667E-11	-4,94242E-14	0,00000E+0
207	11.17;8.29	64,79	56,50	5,05847E-11	1,34704E-12	0,00000E+0
208	11.24;61.83	65,08	3,25	1,55315E-6	-6,67426E-7	0,00000E+0
209	11.26;43.43	63,76	20,33	6,11285E-11	7,08914E-13	0,00000E+0
210	11.33;53.66	63,81	10,15	5,89720E-11	-2,27453E-12	0,00000E+0
211	11.40;41.19	63,70	22,50	6,07905E-11	1,54346E-12	0,00000E+0
212	11.45;62.77	65,19	2,42	3,67702E-6	-1,54609E-6	0,00000E+0
213	11.49;4.05	64,67	60,62	5,01578E-11	6,81847E-13	0,00000E+0
214	11.55;38.95	63,65	24,70	6,04752E-11	2,36654E-12	0,00000E+0
215	11.65;36.67	63,66	26,98	5,96571E-11	3,02370E-12	0,00000E+0
216	11.71;11.70	64,46	52,76	5,10278E-11	1,99101E-12	0,00000E+0
217	11.74;34.40	63,68	29,28	5,88515E-11	3,57292E-12	0,00000E+0
218	11.74;0.00	64,56	64,56	4,99804E-11	3,91632E-15	0,00000E+0
219	11.78;64.74	65,44	0,70	5,99405E-6	-2,18026E-6	0,00000E+0
220	11.81;32.09	63,73	31,64	5,78396E-11	3,87342E-12	0,00000E+0
221	11.85;51.35	63,45	12,10	5,98632E-11	-1,86788E-12	0,00000E+0
222	11.86;13.71	64,34	50,63	5,14313E-11	2,35369E-12	0,00000E+0
223	11.87;29.78	63,78	34,00	5,68290E-11	4,05948E-12	0,00000E+0
224	11.93;27.45	63,84	36,40	5,58379E-11	4,04600E-12	0,00000E+0
225	11.98;66.74	65,85	-0,89	1,05331E-6	-5,27606E-7	0,00000E+0
226	11.99;25.11	63,91	38,80	5,48460E-11	3,95033E-12	0,00000E+0
227	12.02;15.72	64,21	48,49	5,18220E-11	2,72234E-12	0,00000E+0
228	12.02;22.75	63,98	41,23	5,39933E-11	3,71900E-12	0,00000E+0
229	12.03;18.06	64,13	46,08	5,24816E-11	3,09050E-12	0,00000E+0
230	12.05;20.39	64,05	43,66	5,31374E-11	3,44109E-12	0,00000E+0
231	12.13;66.66	65,73	-0,93	1,23198E-6	-5,64428E-7	0,00000E+0
232	12.33;66.66	65,60	-1,06	3,11075E-9	-8,32263E-10	0,00000E+0
233	12.37;49.23	63,11	13,88	6,06754E-11	-1,57177E-12	0,00000E+0
234	12.65;6.13	64,07	57,94	5,01216E-11	1,14559E-12	0,00000E+0
235	12.76;46.94	62,84	15,90	6,15041E-11	-7,60572E-13	0,00000E+0

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
236	12.76;9.96	63,96	54,00	5,05577E-11	1,84442E-12	0,00000E+0
237	12.79;2.03	64,03	62,01	4,98417E-11	3,65005E-13	0,00000E+0
238	12.91;55.30	62,93	7,63	8,09265E-7	-2,64010E-7	0,00000E+0
239	13.00;44.78	62,69	17,91	6,19179E-11	-3,91681E-14	0,00000E+0
240	13.01;57.76	63,32	5,56	1,61453E-6	-5,63998E-7	0,00000E+0
241	13.11;60.21	63,74	3,53	1,39235E-6	-5,25347E-7	0,00000E+0
242	13.23;42.50	62,56	20,06	6,19986E-11	1,42374E-12	0,00000E+0
243	13.38;40.26	62,51	22,25	6,16554E-11	2,24695E-12	0,00000E+0
244	13.43;61.12	63,76	2,64	1,64600E-6	-6,33506E-7	0,00000E+0
245	13.43;53.00	62,55	9,56	5,96478E-11	-2,81579E-12	0,00000E+0
246	13.55;37.96	62,47	24,50	6,08586E-11	3,53243E-12	0,00000E+0
247	13.65;35.68	62,49	26,81	5,99148E-11	4,12083E-12	0,00000E+0
248	13.74;62.03	63,78	1,75	2,18157E-6	-7,98752E-7	0,00000E+0
249	13.75;33.37	62,54	29,17	5,86827E-11	4,72771E-12	0,00000E+0
250	13.81;8.21	63,46	55,25	5,01138E-11	1,65770E-12	0,00000E+0
251	13.82;31.07	62,61	31,55	5,75416E-11	4,96486E-12	0,00000E+0
252	13.89;28.74	62,68	33,94	5,63060E-11	4,99330E-12	0,00000E+0
253	13.90;4.07	63,47	59,39	4,96973E-11	8,31213E-13	0,00000E+0
254	13.93;12.27	63,32	51,04	5,07035E-11	2,52987E-12	0,00000E+0
255	13.95;50.69	62,18	11,49	6,05737E-11	-2,51492E-12	0,00000E+0
256	13.95;26.40	62,77	36,37	5,52279E-11	4,93993E-12	0,00000E+0
257	14.07;63.99	63,97	-0,02	6,12463E-6	-1,99606E-6	0,00000E+0
258	14.08;16.86	63,11	46,24	5,17246E-11	3,50352E-12	0,00000E+0
259	14.08;23.99	62,81	38,82	5,41358E-11	4,64213E-12	0,00000E+0
260	14.09;14.28	63,18	48,90	5,10804E-11	2,90384E-12	0,00000E+0
261	14.09;0.00	63,39	63,39	4,95510E-11	1,87909E-15	0,00000E+0
262	14.09;19.20	63,01	43,81	5,23961E-11	3,85690E-12	0,00000E+0
263	14.10;66.11	64,36	-1,76	2,44192E-9	-4,05421E-10	0,00000E+0
264	14.11;21.63	62,90	41,27	5,32345E-11	4,38929E-12	0,00000E+0
265	14.24;66.03	64,25	-1,78	1,58299E-9	-6,57220E-10	0,00000E+0
266	14.34;48.41	61,89	13,48	6,16378E-11	-1,83311E-12	0,00000E+0
267	14.39;65.95	64,15	-1,81	1,12752E-6	-3,41718E-7	0,00000E+0
268	14.73;46.13	61,61	15,48	6,26038E-11	-8,44215E-13	0,00000E+0
269	14.97;43.84	61,46	17,61	6,27309E-11	5,76154E-13	0,00000E+0
270	14.98;10.53	62,83	52,30	5,02061E-11	2,33122E-12	0,00000E+0
271	15.06;54.60	61,63	7,04	8,18624E-7	-2,68807E-7	0,00000E+0
272	15.06;6.15	62,87	56,72	4,96299E-11	1,34675E-12	0,00000E+0
273	15.19;57.04	62,00	4,96	1,63461E-6	-5,45415E-7	0,00000E+0
274	15.20;2.05	62,84	60,79	4,93516E-11	4,66433E-13	0,00000E+0
275	15.21;41.56	61,34	19,78	6,29156E-11	2,13773E-12	0,00000E+0
276	15.29;59.50	62,41	2,91	1,64600E-6	-5,77464E-7	0,00000E+0
277	15.38;39.26	61,30	22,03	6,19997E-11	3,52512E-12	0,00000E+0
278	15.56;36.97	61,28	24,31	6,11257E-11	4,73647E-12	0,00000E+0
279	15.58;52.29	61,24	8,95	6,00549E-11	-3,44134E-12	0,00000E+0
280	15.61;60.41	62,41	2,00	1,66569E-6	-5,86131E-7	0,00000E+0
281	15.66;34.66	61,34	26,68	5,97416E-11	5,45396E-12	0,00000E+0
282	15.76;32.35	61,41	29,07	5,83576E-11	5,94057E-12	0,00000E+0
283	15.84;30.02	61,51	31,49	5,70211E-11	6,03444E-12	0,00000E+0
284	15.86;65.56	63,23	-2,34	6,37537E-10	-1,91049E-10	0,00000E+0
285	15.91;27.70	61,61	33,91	5,56812E-11	5,97807E-12	0,00000E+0
286	16.01;65.48	63,13	-2,36	6,34817E-10	-1,87627E-10	0,00000E+0
287	16.03;61.28	62,35	1,07	3,93008E-6	-1,31596E-6	0,00000E+0
288	16.04;25.29	61,68	36,39	5,45220E-11	5,71403E-12	0,00000E+0
289	16.09;49.90	60,85	10,95	6,16706E-11	-3,49425E-12	0,00000E+0
290	16.14;18.01	62,00	43,99	5,16364E-11	4,28956E-12	0,00000E+0
291	16.15;15.43	62,09	46,67	5,09766E-11	3,68321E-12	0,00000E+0
292	16.16;20.44	61,88	41,43	5,25048E-11	4,83788E-12	0,00000E+0
293	16.16;12.84	62,18	49,33	5,03390E-11	3,06654E-12	0,00000E+0
294	16.17;22.88	61,74	38,86	5,33655E-11	5,36216E-12	0,00000E+0
295	16.24;8.23	62,25	54,02	4,95587E-11	1,96544E-12	0,00000E+0
296	16.32;4.09	62,27	58,18	4,91781E-11	9,79738E-13	0,00000E+0
297	16.36;63.24	62,53	-0,72	2,91345E-6	-9,28870E-7	0,00000E+0
298	16.43;0.00	62,24	62,24	4,90145E-11	1,38535E-15	0,00000E+0
299	16.48;47.61	60,54	12,92	6,31091E-11	-2,62439E-12	0,00000E+0
300	16.65;65.25	62,72	-2,54	9,96731E-10	-3,10897E-10	0,00000E+0
301	16.79;45.20	60,30	15,09	6,45004E-11	-4,20050E-13	0,00000E+0
302	17.03;42.92	60,15	17,23	6,48216E-11	1,13033E-12	0,00000E+0
303	17.19;40.61	60,11	19,50	6,41024E-11	3,83633E-12	0,00000E+0
304	17.21;53.90	60,33	6,43	8,26004E-7	-2,68731E-7	0,00000E+0
305	17.34;56.34	60,70	4,35	1,65352E-6	-5,46491E-7	0,00000E+0
306	17.37;38.31	60,10	21,79	6,29838E-11	5,08445E-12	0,00000E+0
307	17.41;10.55	61,62	51,07	4,96242E-11	2,70045E-12	0,00000E+0
308	17.48;58.79	61,07	2,28	1,38119E-6	-4,58302E-7	0,00000E+0
309	17.49;6.17	61,67	55,50	4,90475E-11	1,59758E-12	0,00000E+0
310	17.55;2.05	61,69	59,64	4,87879E-11	5,13566E-13	0,00000E+0
311	17.62;65.01	62,12	-2,89	6,31211E-10	-1,60933E-10	0,00000E+0
312	17.68;31.34	60,36	29,03	5,77314E-11	7,21868E-12	0,00000E+0
313	17.70;35.96	60,03	24,07	6,12150E-11	6,66927E-12	0,00000E+0
314	17.72;51.50	59,91	8,42	6,14081E-11	-4,61269E-12	0,00000E+0
315	17.76;29.01	60,49	31,48	5,62486E-11	7,24528E-12	0,00000E+0
316	17.80;33.65	60,13	26,48	5,95503E-11	7,23892E-12	0,00000E+0
317	17.86;16.94	61,16	44,22	5,08581E-11	4,47624E-12	0,00000E+0
318	17.87;14.36	61,26	46,90	5,02058E-11	3,86272E-12	0,00000E+0
319	17.90;59.66	61,00	1,34	1,66060E-6	-5,53691E-7	0,00000E+0
320	18.01;26.71	60,51	33,80	5,48033E-11	6,92783E-12	0,00000E+0
321	18.14;24.31	60,61	36,30	5,35545E-11	6,62420E-12	0,00000E+0
322	18.23;49.10	59,48	10,39	6,30208E-11	-4,53904E-12	0,00000E+0
323	18.27;64.78	61,72	-3,06	6,16774E-10	-2,00156E-10	0,00000E+0
324	18.32;60.54	60,93	0,39	2,72240E-6	-8,93492E-7	0,00000E+0
325	18.51;19.18	60,72	41,53	5,13713E-11	5,41278E-12	0,00000E+0
326	18.52;21.62	60,57	38,95	5,22519E-11	5,96046E-12	0,00000E+0
327	18.54;46.69	59,19	12,50	6,48940E-11	-2,73728E-12	0,00000E+0
328	18.62;62.54	61,12	-1,42	3,08488E-6	-9,85322E-7	0,00000E+0

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
329	18.66;8.25	61,06	52,81	4,89448E-11	2,26938E-12	0,00000E+0
330	18.67;12.51	60,93	48,42	4,95901E-11	3,45779E-12	0,00000E+0
331	18.69;4.09	61,11	57,03	4,85524E-11	1,11565E-12	0,00000E+0
332	18.78;0.00	61,09	61,09	4,84241E-11	1,71373E-15	0,00000E+0
333	18.86;44.28	58,94	14,66	6,68427E-11	1,55892E-14	0,00000E+0
334	18.92;64.55	61,31	-3,24	7,41466E-10	-2,31813E-10	0,00000E+0
335	19.01;41.97	58,87	16,91	6,59012E-11	2,93449E-12	0,00000E+0
336	19.17;39.65	58,87	19,22	6,50863E-11	5,57114E-12	0,00000E+0
337	19.36;53.20	59,02	5,82	8,28079E-7	-2,70303E-7	0,00000E+0
338	19.39;64.46	61,03	-3,43	6,14442E-10	-2,01309E-10	0,00000E+0
339	19.51;37.30	58,81	21,52	6,30290E-11	7,38101E-12	0,00000E+0
340	19.53;55.63	59,36	3,73	1,65369E-6	-5,40959E-7	0,00000E+0
341	19.58;15.88	60,34	44,46	5,00969E-11	4,67735E-12	0,00000E+0
342	19.60;30.32	59,34	29,02	5,69466E-11	8,60518E-12	0,00000E+0
343	19.66;58.08	59,73	1,65	1,65756E-6	-5,48118E-7	0,00000E+0
344	19.72;32.63	59,07	26,44	5,89207E-11	8,77642E-12	0,00000E+0
345	19.84;34.94	58,80	23,86	6,09619E-11	8,72519E-12	0,00000E+0
346	19.85;28.03	59,40	31,37	5,53636E-11	8,33174E-12	0,00000E+0
347	19.87;6.16	60,51	54,35	4,83955E-11	1,78357E-12	0,00000E+0
348	19.87;50.80	58,55	7,76	6,10828E-11	-6,62780E-12	0,00000E+0
349	19.92;2.04	60,54	58,50	4,81359E-11	6,03094E-13	0,00000E+0
350	19.93;10.22	60,39	50,17	4,88402E-11	3,03370E-12	0,00000E+0
351	20.04;64.23	60,63	-3,60	6,18058E-10	-1,84657E-10	0,00000E+0
352	20.09;58.95	59,66	0,71	1,66337E-6	-5,43911E-7	0,00000E+0
353	20.10;25.73	59,45	33,72	5,38146E-11	7,92934E-12	0,00000E+0
354	20.23;18.12	59,90	41,78	5,05741E-11	5,59198E-12	0,00000E+0
355	20.39;14.03	60,02	45,99	4,94278E-11	4,29084E-12	0,00000E+0
356	20.49;23.05	59,45	36,40	5,24316E-11	7,29208E-12	0,00000E+0
357	20.61;59.79	59,52	-0,27	1,28699E-6	-4,19678E-7	0,00000E+0
358	20.63;48.12	57,88	9,76	6,68005E-11	-6,98194E-12	0,00000E+0
359	20.76;43.22	57,66	14,44	7,00286E-11	2,96689E-12	0,00000E+0
360	20.88;20.36	59,44	39,07	5,10818E-11	6,56108E-12	0,00000E+0
361	20.91;61.80	59,71	-2,08	5,64298E-9	-1,79964E-9	0,00000E+0
362	20.92;40.91	57,64	16,73	6,85701E-11	5,45139E-12	0,00000E+0
363	20.94;45.71	57,54	11,83	7,00360E-11	-4,13340E-12	0,00000E+0
364	20.99;38.85	57,73	18,89	6,58596E-11	8,41213E-12	0,00000E+0
365	21.04;8.18	59,90	51,73	4,82127E-11	2,51647E-12	0,00000E+0
366	21.06;31.34	58,41	27,08	5,75454E-11	1,00431E-11	0,00000E+0
367	21.07;4.08	59,97	55,89	4,78722E-11	1,25077E-12	0,00000E+0
368	21.12;0.00	59,97	59,97	4,77328E-11	-6,01272E-16	0,00000E+0
369	21.15;63.91	59,95	-3,96	6,14469E-10	-1,89184E-10	0,00000E+0
370	21.18;33.65	58,11	24,46	5,96843E-11	1,01196E-11	0,00000E+0
371	21.18;63.84	59,92	-3,92	6,13832E-10	-1,91243E-10	0,00000E+0
372	21.19;12.18	59,70	47,52	4,87706E-11	3,84676E-12	0,00000E+0
373	21.33;36.49	57,73	21,24	6,33205E-11	9,88580E-12	0,00000E+0
374	21.51;52.50	57,70	5,21	8,31611E-7	-2,69780E-7	0,00000E+0
375	21.54;29.59	58,31	28,72	5,59410E-11	9,89656E-12	0,00000E+0
376	21.57;15.94	59,34	43,40	4,94397E-11	5,22304E-12	0,00000E+0
377	21.63;34.93	57,71	22,78	6,12308E-11	1,08235E-11	0,00000E+0
378	21.68;54.93	58,05	3,12	1,65959E-6	-5,43392E-7	0,00000E+0
379	21.79;27.30	58,40	31,10	5,42268E-11	9,54283E-12	0,00000E+0
380	21.85;57.37	58,40	1,03	1,28058E-6	-4,19724E-7	0,00000E+0
381	22.22;18.19	58,90	40,71	4,98744E-11	6,20868E-12	0,00000E+0
382	22.25;6.09	59,37	53,28	4,76342E-11	1,98595E-12	0,00000E+0
383	22.27;2.04	59,42	57,38	4,74206E-11	6,46169E-13	0,00000E+0
384	22.27;49.82	56,95	7,14	6,61844E-11	-1,04367E-11	0,00000E+0
385	22.30;63.53	59,24	-4,28	6,11559E-10	-1,91185E-10	0,00000E+0
386	22.31;10.14	59,24	49,09	4,80821E-11	3,33338E-12	0,00000E+0
387	22.34;25.00	58,32	33,32	5,26023E-11	8,84482E-12	0,00000E+0
388	22.38;58.21	58,26	0,05	1,65237E-6	-5,39259E-7	0,00000E+0
389	22.38;14.10	59,04	44,95	4,87265E-11	4,77061E-12	0,00000E+0
390	22.52;32.35	57,46	25,11	5,83230E-11	1,15183E-11	0,00000E+0
391	22.66;42.16	56,34	14,18	7,26922E-11	5,70618E-12	0,00000E+0
392	22.72;22.31	58,35	36,03	5,11387E-11	8,12907E-12	0,00000E+0
393	22.73;40.10	56,45	16,34	6,94497E-11	9,03151E-12	0,00000E+0
394	22.81;38.05	56,61	18,57	6,59867E-11	1,13655E-11	0,00000E+0
395	22.85;44.65	56,14	11,49	7,34962E-11	-1,36495E-12	0,00000E+0
396	22.90;59.04	58,12	-0,92	2,10676E-6	-6,84713E-7	0,00000E+0
397	22.92;63.36	58,87	-4,49	6,10379E-10	-1,90884E-10	0,00000E+0
398	22.96;33.64	57,05	23,41	5,98756E-11	1,21976E-11	0,00000E+0
399	23.00;30.61	57,39	26,78	5,64859E-11	1,14728E-11	0,00000E+0
400	23.03;47.14	56,14	9,00	7,20132E-11	-9,71152E-12	0,00000E+0
401	23.11;36.48	56,60	20,12	6,36214E-11	1,23365E-11	0,00000E+0
402	23.17;61.09	58,33	-2,76	6,07733E-10	-1,93775E-10	0,00000E+0
403	23.41;34.92	56,61	21,69	6,12940E-11	1,30244E-11	0,00000E+0
404	23.42;4.06	58,85	54,79	4,70977E-11	1,36275E-12	0,00000E+0
405	23.42;8.10	58,77	50,66	4,74222E-11	2,76598E-12	0,00000E+0
406	23.44;20.07	58,16	38,09	4,99524E-11	7,33869E-12	0,00000E+0
407	23.45;63.14	58,54	-4,60	6,09456E-10	-1,90351E-10	0,00000E+0
408	23.46;0.00	58,86	58,86	4,69921E-11	2,21327E-15	0,00000E+0
409	23.47;12.11	58,60	46,49	4,79336E-11	4,20609E-12	0,00000E+0
410	23.48;28.87	57,32	28,45	5,47487E-11	1,12344E-11	0,00000E+0
411	23.57;16.01	58,36	42,35	4,87139E-11	5,75527E-12	0,00000E+0
412	23.66;51.80	56,38	4,59	8,35425E-7	-2,71879E-7	0,00000E+0
413	23.87;54.22	56,71	2,49	1,65790E-6	-5,50289E-7	0,00000E+0
414	24.03;26.57	57,28	30,71	5,30025E-11	1,06083E-11	0,00000E+0
415	24.03;56.66	57,07	0,41	1,47317E-6	-4,90650E-7	0,00000E+0
416	24.06;62.98	58,17	-4,81	6,08221E-10	-1,90036E-10	0,00000E+0
417	24.22;37.30	55,78	18,48	6,51060E-11	1,39747E-11	0,00000E+0
418	24.30;43.01	55,05	12,04	7,98195E-11	5,68622E-12	0,00000E+0
419	24.37;41.13	55,17	14,05	7,37770E-11	1,14422E-11	0,00000E+0
420	24.37;32.54	56,36	23,82	5,78925E-11	1,37308E-11	0,00000E+0
421	24.42;49.12	55,43	6,31	6,32999E-11	-1,70894E-11	0,00000E+0

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
422	24.44;39.07	55,38	16,32	6,91750E-11	1,42545E-11	0,00000E+0
423	24.49;45.49	54,88	9,39	8,14269E-11	-4,26848E-12	0,00000E+0
424	24.52;35.74	55,81	20,08	6,24312E-11	1,50134E-11	0,00000E+0
425	24.56;57.49	56,93	-0,57	1,41555E-6	-4,67718E-7	0,00000E+0
426	24.57;24.27	57,23	32,96	5,12670E-11	9,80213E-12	0,00000E+0
427	24.59;10.07	58,15	48,08	4,72177E-11	3,64141E-12	0,00000E+0
428	24.59;6.07	58,26	52,19	4,68378E-11	2,14074E-12	0,00000E+0
429	24.62;2.02	58,31	56,29	4,66237E-11	7,18773E-13	0,00000E+0
430	24.66;14.02	57,94	43,92	4,78651E-11	5,18530E-12	0,00000E+0
431	24.68;62.81	57,80	-5,01	6,07065E-10	-1,89329E-10	0,00000E+0
432	24.78;17.89	57,65	39,76	4,86882E-11	6,90672E-12	0,00000E+0
433	24.82;33.82	55,92	22,09	5,92905E-11	1,45402E-11	0,00000E+0
434	24.85;30.80	56,32	25,52	5,58516E-11	1,34943E-11	0,00000E+0
435	25.19;58.30	56,73	-1,57	3,82795E-10	-1,25873E-10	0,00000E+0
436	25.29;22.02	57,08	35,05	4,99758E-11	9,01069E-12	0,00000E+0
437	25.44;60.39	56,96	-3,42	6,02925E-10	-1,92359E-10	0,00000E+0
438	25.59;47.07	54,12	7,05	8,90490E-11	-2,16058E-11	0,00000E+0
439	25.63;36.56	54,98	18,42	6,39744E-11	1,70829E-11	0,00000E+0
440	25.66;28.34	56,20	27,86	5,31706E-11	1,25775E-11	0,00000E+0
441	25.71;62.44	57,17	-5,27	6,04650E-10	-1,89073E-10	0,00000E+0
442	25.74;8.08	57,68	49,60	4,65512E-11	2,97261E-12	0,00000E+0
443	25.75;12.04	57,52	45,49	4,70402E-11	4,56313E-12	0,00000E+0
444	25.77;4.04	57,75	53,71	4,62758E-11	1,47477E-12	0,00000E+0
445	25.77;15.93	57,31	41,38	4,77450E-11	6,20646E-12	0,00000E+0
446	25.80;0.00	57,77	57,77	4,61637E-11	-2,05952E-15	0,00000E+0
447	25.82;51.10	55,05	3,96	8,46107E-7	-2,72180E-7	0,00000E+0
448	25.85;38.32	54,53	16,21	6,85426E-11	1,74696E-11	0,00000E+0
449	25.93;34.64	55,12	20,48	6,03414E-11	1,67248E-11	0,00000E+0
450	25.95;43.85	53,62	9,78	9,04131E-11	7,11294E-12	0,00000E+0
451	26.00;19.78	56,92	37,14	4,87019E-11	8,13402E-12	0,00000E+0
452	26.01;41.97	53,79	11,83	8,08359E-11	1,43827E-11	0,00000E+0
453	26.02;53.52	55,39	1,87	1,67070E-6	-5,60905E-7	0,00000E+0
454	26.07;40.09	54,06	13,98	7,28079E-11	1,78767E-11	0,00000E+0
455	26.20;26.04	56,20	30,15	5,12819E-11	1,18161E-11	0,00000E+0
456	26.22;55.95	55,73	-0,21	1,08234E-6	-3,71250E-7	0,00000E+0
457	26.23;32.73	55,26	22,53	5,71512E-11	1,59614E-11	0,00000E+0
458	26.33;62.27	56,80	-5,47	6,03587E-10	-1,87941E-10	0,00000E+0
459	26.45;62.26	56,74	-5,53	6,03226E-10	-1,88205E-10	0,00000E+0
460	26.85;23.67	56,14	32,47	4,96831E-11	1,04693E-11	0,00000E+0
461	26.85;56.75	55,54	-1,21	9,70705E-7	-3,32431E-7	0,00000E+0
462	26.86;13.94	56,90	42,97	4,68562E-11	5,58915E-12	0,00000E+0
463	26.91;10.04	57,07	47,03	4,63254E-11	3,89167E-12	0,00000E+0
464	26.92;6.05	57,19	51,14	4,59447E-11	2,30899E-12	0,00000E+0
465	26.96;2.02	57,23	55,21	4,57767E-11	7,53551E-13	0,00000E+0
466	26.99;49.05	53,57	4,51	9,35123E-11	-3,22109E-11	0,00000E+0
467	26.99;17.81	56,60	38,79	4,76817E-11	7,42892E-12	0,00000E+0
468	27.03;30.27	55,20	24,92	5,42402E-11	1,51505E-11	0,00000E+0
469	27.05;45.43	52,54	7,11	1,07202E-10	-9,24263E-12	0,00000E+0
470	27.48;57.55	55,35	-2,21	2,13905E-7	-7,30534E-8	0,00000E+0
471	27.56;21.42	56,01	34,59	4,83449E-11	9,62349E-12	0,00000E+0
472	27.61;36.82	53,68	16,86	6,29234E-11	2,18915E-11	0,00000E+0
473	27.73;59.64	55,58	-4,06	5,98182E-10	-1,92219E-10	0,00000E+0
474	27.83;38.58	53,13	14,55	6,67628E-11	2,20206E-11	0,00000E+0
475	27.84;27.82	55,13	27,31	5,13605E-11	1,39497E-11	0,00000E+0
476	27.86;43.38	51,94	8,56	9,38588E-11	2,88515E-11	0,00000E+0
477	27.91;34.90	53,89	18,99	5,89488E-11	2,07674E-11	0,00000E+0
478	27.92;41.49	52,34	10,84	8,05326E-11	2,75911E-11	0,00000E+0
479	27.94;19.46	56,01	36,55	4,75565E-11	8,48643E-12	0,00000E+0
480	27.97;50.40	53,70	3,31	8,63263E-7	-2,79830E-7	0,00000E+0
481	27.97;15.84	56,27	40,43	4,67038E-11	6,66756E-12	0,00000E+0
482	27.97;61.73	55,81	-5,92	5,99840E-10	-1,86938E-10	0,00000E+0
483	28.02;12.03	56,47	44,44	4,60537E-11	4,85574E-12	0,00000E+0
484	28.06;8.05	56,61	48,56	4,56334E-11	3,17873E-12	0,00000E+0
485	28.09;61.72	55,74	-5,98	5,99502E-10	-1,87168E-10	0,00000E+0
486	28.10;4.04	56,69	52,65	4,53784E-11	1,55932E-12	0,00000E+0
487	28.14;0.00	56,70	56,70	4,52952E-11	2,88128E-15	0,00000E+0
488	28.15;47.01	51,55	4,54	1,15995E-10	-3,91327E-11	0,00000E+0
489	28.20;52.81	54,03	1,22	1,17407E-6	-4,16821E-7	0,00000E+0
490	28.21;61.71	55,68	-6,03	5,99238E-10	-1,86972E-10	0,00000E+0
491	28.40;55.23	54,40	-0,83	6,28157E-7	-2,28809E-7	0,00000E+0
492	28.48;25.44	55,12	29,68	4,96881E-11	1,25766E-11	0,00000E+0
493	28.66;32.16	54,00	21,84	5,42786E-11	1,80254E-11	0,00000E+0
494	28.93;17.49	55,71	38,21	4,65207E-11	7,74773E-12	0,00000E+0
495	28.96;44.96	50,36	5,40	8,59928E-11	3,61159E-12	0,00000E+0
496	29.04;56.04	54,22	-1,82	4,49923E-7	-1,63532E-7	0,00000E+0
497	29.13;23.07	55,09	32,02	4,80107E-11	1,11615E-11	0,00000E+0
498	29.13;13.94	55,85	41,92	4,58459E-11	5,92921E-12	0,00000E+0
499	29.14;48.35	51,12	2,77	6,70177E-11	-7,75685E-11	0,00000E+0
500	29.17;10.04	56,03	45,99	4,53150E-11	4,14495E-12	0,00000E+0
501	29.25;6.04	56,13	50,09	4,50316E-11	2,42570E-12	0,00000E+0
502	29.29;2.02	56,17	54,16	4,48635E-11	8,08769E-13	0,00000E+0
503	29.46;29.71	54,01	24,30	5,11298E-11	1,70130E-11	0,00000E+0
504	29.50;21.11	55,12	34,01	4,72023E-11	9,99957E-12	0,00000E+0
505	29.59;37.08	52,38	15,30	6,11361E-11	2,64478E-11	0,00000E+0
506	29.67;47.09	48,80	1,71	2,63554E-10	-7,95955E-12	0,00000E+0
507	29.67;47.14	48,83	1,69	2,73132E-10	-1,17311E-10	0,00000E+0
508	29.68;39.99	51,46	11,47	7,38579E-11	3,32259E-11	0,00000E+0
509	29.77;42.90	50,31	7,41	8,47042E-11	3,67727E-11	0,00000E+0
510	29.77;56.81	53,97	-2,83	3,74446E-10	-1,31202E-10	0,00000E+0
511	29.86;61.17	54,69	-6,48	5,92913E-10	-1,89331E-10	0,00000E+0
512	29.88;19.14	55,13	35,99	4,63901E-11	8,87149E-12	0,00000E+0
513	29.98;61.16	54,63	-6,53	5,93817E-10	-1,85057E-10	0,00000E+0
514	29.99;58.94	54,24	-4,70	5,90534E-10	-1,90474E-10	0,00000E+0

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
515	30.12;49.69	52,31	2,62	7,84917E-7	-2,42824E-7	0,00000E+0
516	30.15;15.96	55,26	39,30	4,55881E-11	7,07952E-12	0,00000E+0
517	30.18;27.15	54,05	26,90	4,89502E-11	1,45552E-11	0,00000E+0
518	30.24;61.03	54,46	-6,57	5,93711E-10	-1,82761E-10	0,00000E+0
519	30.29;12.03	55,44	43,41	4,50164E-11	5,14691E-12	0,00000E+0
520	30.34;34.34	52,63	18,29	5,58332E-11	2,34883E-11	0,00000E+0
521	30.35;52.11	52,67	0,56	1,72843E-6	-6,33341E-7	0,00000E+0
522	30.37;8.05	55,56	47,51	4,46432E-11	3,32304E-12	0,00000E+0
523	30.43;4.03	55,64	51,61	4,44457E-11	1,64349E-12	0,00000E+0
524	30.48;45.04	48,28	3,25	1,62575E-10	1,03961E-10	0,00000E+0
525	30.48;0.00	55,65	55,65	4,43622E-11	-3,16977E-15	0,00000E+0
526	30.59;54.52	53,06	-1,46	8,90784E-7	-3,58878E-7	0,00000E+0
527	30.65;48.48	49,18	0,70	1,30776E-10	-3,03135E-10	0,00000E+0
528	30.82;24.78	54,07	29,30	4,72652E-11	1,31965E-11	0,00000E+0
529	31.09;31.60	52,83	21,23	5,09962E-11	2,02373E-11	0,00000E+0
530	31.10;17.61	54,70	37,09	4,53710E-11	8,20378E-12	0,00000E+0
531	31.19;47.17	43,56	-3,61	1,77891E-10	-9,95098E-11	0,00000E+0
532	31.19;47.22	43,56	-3,66	2,46859E-10	-2,25531E-12	0,00000E+0
533	31.19;47.27	43,56	-3,71	9,87329E-11	-2,36389E-12	0,00000E+0
534	31.30;14.05	54,86	40,81	4,47023E-11	6,29410E-12	0,00000E+0
535	31.33;55.29	52,83	-2,46	1,22621E-7	-4,99092E-8	0,00000E+0
536	31.49;10.04	54,99	44,95	4,43104E-11	4,32146E-12	0,00000E+0
537	31.53;22.03	54,08	32,05	4,59695E-11	1,10456E-11	0,00000E+0
538	31.56;6.04	55,10	49,05	4,40270E-11	2,54386E-12	0,00000E+0
539	31.58;43.60	48,29	4,69	8,49415E-11	5,12227E-11	0,00000E+0
540	31.63;2.02	55,14	53,12	4,39196E-11	8,31201E-13	0,00000E+0
541	31.67;38.78	50,58	11,80	5,81382E-11	3,77847E-11	0,00000E+0
542	31.74;60.61	53,58	-7,02	5,90625E-10	-1,80296E-10	0,00000E+0
543	31.76;41.69	49,29	7,60	7,06545E-11	4,86163E-11	0,00000E+0
544	31.80;29.04	52,96	23,92	4,87223E-11	1,76897E-11	0,00000E+0
545	31.90;20.06	54,11	34,05	4,52470E-11	9,90494E-12	0,00000E+0
546	32.06;36.22	51,19	14,97	5,40615E-11	2,81480E-11	0,00000E+0
547	32.06;56.06	52,62	-3,44	1,42498E-6	-5,07914E-7	0,00000E+0
548	32.12;60.47	53,36	-7,11	5,89793E-10	-1,77863E-10	0,00000E+0
549	32.27;48.99	50,85	1,85	9,67138E-7	-3,11363E-7	0,00000E+0
550	32.28;58.19	52,89	-5,31	5,82240E-10	-1,92835E-10	0,00000E+0
551	32.29;45.73	45,56	-0,17	5,57793E-11	1,39400E-10	0,00000E+0
552	32.32;16.08	54,27	38,19	4,44087E-11	7,47735E-12	0,00000E+0
553	32.50;60.32	53,13	-7,19	5,84554E-10	-1,82574E-10	0,00000E+0
554	32.52;26.48	53,04	26,55	4,65070E-11	1,52093E-11	0,00000E+0
555	32.54;51.40	51,24	-0,16	8,84267E-7	-3,79731E-7	0,00000E+0
556	32.57;12.08	54,42	42,34	4,38927E-11	5,33697E-12	0,00000E+0
557	32.69;8.06	54,54	46,48	4,36198E-11	3,46651E-12	0,00000E+0
558	32.76;4.03	54,61	50,58	4,34619E-11	1,68855E-12	0,00000E+0
559	32.77;53.81	51,71	-2,10	1,62958E-10	-7,71051E-11	0,00000E+0
560	32.81;47.78	46,07	-1,71	-3,14558E-12	-3,07385E-11	0,00000E+0
561	32.81;33.48	51,54	18,06	4,93065E-11	2,50049E-11	0,00000E+0
562	32.82;0.00	54,62	54,62	4,34036E-11	3,50334E-15	0,00000E+0
563	33.07;47.13	43,56	-3,56	-2,21673E-10	5,95293E-11	0,00000E+0
564	33.07;47.18	43,56	-3,61	-1,11525E-10	-1,02052E-12	0,00000E+0
565	33.13;18.53	53,71	35,18	4,41993E-11	9,12310E-12	0,00000E+0
566	33.16;47.07	43,56	-3,51	-1,43419E-10	-5,09443E-11	0,00000E+0
567	33.22;23.73	53,10	29,37	4,52489E-11	1,29968E-11	0,00000E+0
568	33.38;44.29	46,53	2,23	4,72798E-11	6,67912E-11	0,00000E+0
569	33.45;30.93	51,81	20,88	4,72366E-11	2,04231E-11	0,00000E+0
570	33.51;60.06	52,55	-7,50	5,78707E-10	-1,76063E-10	0,00000E+0
571	33.51;54.58	51,51	-3,07	1,63690E-7	-8,04569E-8	0,00000E+0
572	33.57;42.39	47,76	5,37	5,42772E-11	6,15033E-11	0,00000E+0
573	33.59;14.10	53,85	39,75	4,35625E-11	6,52324E-12	0,00000E+0
574	33.76;40.48	48,67	8,19	5,31362E-11	4,72871E-11	0,00000E+0
575	33.77;10.09	53,99	43,90	4,31716E-11	4,48502E-12	0,00000E+0
576	33.89;6.05	54,08	48,04	4,30361E-11	2,60666E-12	0,00000E+0
577	33.89;59.92	52,33	-7,58	5,68800E-10	-1,98766E-10	0,00000E+0
578	33.93;20.99	53,11	32,13	4,40118E-11	1,08816E-11	0,00000E+0
579	33.96;2.02	54,12	52,11	4,29288E-11	8,61286E-13	0,00000E+0
580	34.14;37.92	49,54	11,62	5,09639E-11	3,73977E-11	0,00000E+0
581	34.16;28.37	51,97	23,60	4,51386E-11	1,79835E-11	0,00000E+0
582	34.26;45.63	44,92	-0,72	2,76053E-11	7,27022E-11	0,00000E+0
583	34.35;55.32	51,28	-4,04	3,55886E-10	-1,45360E-10	0,00000E+0
584	34.42;48.29	49,25	0,96	8,00845E-7	-1,58584E-7	0,00000E+0
585	34.53;35.36	50,19	14,83	4,76464E-11	2,93934E-11	0,00000E+0
586	34.57;57.45	51,56	-5,88	5,61433E-10	-1,98731E-10	0,00000E+0
587	34.64;16.22	53,24	37,03	4,30569E-11	7,72152E-12	0,00000E+0
588	34.69;47.69	46,49	-1,20	-1,89723E-11	-1,85355E-10	0,00000E+0
589	34.69;50.70	49,72	-0,97	1,54920E-6	-6,80430E-7	0,00000E+0
590	34.77;59.62	51,83	-7,79	5,70570E-10	-1,66172E-10	0,00000E+0
591	34.86;12.13	53,42	41,30	4,27325E-11	5,52464E-12	0,00000E+0
592	34.92;25.89	52,04	26,15	4,39372E-11	1,50505E-11	0,00000E+0
593	34.96;47.08	43,56	-3,52	-8,11218E-10	4,70728E-12	0,00000E+0
594	34.96;53.10	50,32	-2,78	5,57933E-7	-3,37705E-7	0,00000E+0
595	35.01;8.07	53,54	45,47	4,25498E-11	3,51710E-12	0,00000E+0
596	35.05;47.03	43,56	-3,46	-1,51197E-9	-2,03648E-11	0,00000E+0
597	35.07;43.84	46,09	2,25	4,09235E-11	7,18039E-11	0,00000E+0
598	35.09;4.04	53,61	49,58	4,24595E-11	1,73340E-12	0,00000E+0
599	35.14;46.97	43,56	-3,41	-7,88604E-10	4,64824E-10	0,00000E+0
600	35.16;0.00	53,62	53,62	4,24135E-11	-4,14805E-15	0,00000E+0
601	35.17;32.81	50,58	17,77	4,56836E-11	2,48157E-11	0,00000E+0
602	35.25;41.93	47,19	5,26	4,37041E-11	5,37327E-11	0,00000E+0
603	35.28;59.51	51,55	-7,96	5,69293E-10	-1,61471E-10	0,00000E+0
604	35.44;18.67	52,69	34,02	4,28034E-11	9,43999E-12	0,00000E+0
605	35.63;23.14	52,12	28,98	4,27842E-11	1,29102E-11	0,00000E+0
606	35.80;53.84	50,13	-3,70	1,46982E-10	-9,81464E-11	0,00000E+0
607	35.80;30.26	50,87	20,61	4,37109E-11	2,06251E-11	0,00000E+0

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
608	35.85;39.73	48,00	8,27	4,41894E-11	4,34194E-11	0,00000E+0
609	35.91;14.24	52,85	38,60	4,21890E-11	6,73128E-12	0,00000E+0
610	35.94;45.18	44,87	-0,31	1,60062E-11	6,12749E-11	0,00000E+0
611	36.09;10.11	53,00	42,89	4,20974E-11	4,55055E-12	0,00000E+0
612	36.15;59.21	51,06	-8,16	5,66675E-10	-1,40923E-10	0,00000E+0
613	36.21;6.06	53,10	47,04	4,19622E-11	2,64834E-12	0,00000E+0
614	36.24;37.17	48,83	11,66	4,30381E-11	3,45500E-11	0,00000E+0
615	36.29;2.02	53,13	51,11	4,19374E-11	8,67710E-13	0,00000E+0
616	36.56;27.78	51,02	23,24	4,26149E-11	1,76717E-11	0,00000E+0
617	36.57;47.59	47,03	-0,56	1,41821E-10	-3,10476E-10	0,00000E+0
618	36.63;20.79	51,97	31,18	4,19636E-11	1,08393E-11	0,00000E+0
619	36.64;54.57	49,98	-4,59	2,98683E-8	-2,04221E-8	0,00000E+0
620	36.75;43.39	45,80	2,41	2,67128E-11	4,93346E-11	0,00000E+0
621	36.78;34.65	49,39	14,74	4,25241E-11	2,80989E-11	0,00000E+0
622	36.84;56.74	50,30	-6,44	5,39869E-10	-1,97838E-10	0,00000E+0
623	36.84;46.99	43,56	-3,42	7,60557E-10	-4,10871E-11	0,00000E+0
624	36.87;49.99	47,99	-1,99	6,35076E-7	-3,06824E-7	0,00000E+0
625	36.93;46.93	43,56	-3,37	1,67694E-9	-6,27469E-11	0,00000E+0
626	36.96;16.36	52,25	35,89	4,16511E-11	7,96473E-12	0,00000E+0
627	37.03;58.92	50,57	-8,35	5,48343E-10	-1,70783E-10	0,00000E+0
628	37.04;58.96	50,57	-8,39	5,43661E-10	-1,73798E-10	0,00000E+0
629	37.11;46.87	43,56	-3,31	1,06679E-9	7,07622E-11	0,00000E+0
630	37.14;52.39	48,94	-3,44	1,42608E-10	-1,32244E-10	0,00000E+0
631	37.19;12.15	52,44	40,29	4,15178E-11	5,52990E-12	0,00000E+0
632	37.33;25.29	51,10	25,81	4,14899E-11	1,48910E-11	0,00000E+0
633	37.33;8.09	52,57	44,48	4,14664E-11	3,56794E-12	0,00000E+0
634	37.35;41.18	46,74	5,56	3,44982E-11	4,72621E-11	0,00000E+0
635	37.41;32.10	49,78	17,68	4,11004E-11	2,37019E-11	0,00000E+0
636	37.42;4.04	52,64	48,60	4,14415E-11	1,72709E-12	0,00000E+0
637	37.49;0.00	52,64	52,64	4,14161E-11	3,67126E-15	0,00000E+0
638	37.92;45.08	44,55	-0,53	1,67622E-11	4,58926E-11	0,00000E+0
639	37.92;58.66	50,09	-8,57	5,24720E-10	-1,98716E-10	0,00000E+0
640	37.95;38.98	47,47	8,49	3,72748E-11	3,86911E-11	0,00000E+0
641	37.99;53.12	48,85	-4,27	1,32335E-10	-1,21908E-10	0,00000E+0
642	38.09;29.67	50,03	20,36	4,05424E-11	1,97451E-11	0,00000E+0
643	38.15;18.48	51,58	33,10	4,07825E-11	9,37078E-12	0,00000E+0
644	38.24;14.27	51,88	37,61	4,09726E-11	6,74846E-12	0,00000E+0
645	38.33;22.94	51,01	28,07	4,07213E-11	1,27981E-11	0,00000E+0
646	38.42;10.13	52,03	41,90	4,08824E-11	4,55417E-12	0,00000E+0
647	38.49;36.46	48,15	11,69	3,79437E-11	3,21095E-11	0,00000E+0
648	38.54;6.06	52,13	46,07	4,09477E-11	2,64154E-12	0,00000E+0
649	38.62;2.02	52,17	50,15	4,09229E-11	8,64033E-13	0,00000E+0
650	38.72;46.89	43,56	-3,34	2,63758E-9	-3,59872E-10	0,00000E+0
651	38.81;58.40	49,63	-8,78	5,17034E-10	-1,74427E-10	0,00000E+0
652	38.85;27.19	50,18	22,99	3,96503E-11	1,69171E-11	0,00000E+0
653	38.90;46.83	43,56	-3,28	6,25140E-9	-9,29624E-10	0,00000E+0
654	38.93;53.82	48,74	-5,08	3,02757E-10	-1,82407E-10	0,00000E+0
655	38.97;43.11	45,33	2,22	2,58477E-11	5,00910E-11	0,00000E+0
656	39.02;33.94	48,68	14,74	3,81842E-11	2,63824E-11	0,00000E+0
657	39.03;49.29	46,13	-3,16	1,80126E-10	-2,77451E-10	0,00000E+0
658	39.09;46.78	43,55	-3,22	2,23246E-9	-2,07976E-10	0,00000E+0
659	39.10;56.04	49,11	-6,93	4,99012E-10	-1,93156E-10	0,00000E+0
660	39.29;58.21	49,37	-8,84	5,06823E-10	-1,71266E-10	0,00000E+0
661	39.33;51.68	47,62	-4,06	2,48891E-7	-2,94342E-7	0,00000E+0
662	39.34;20.59	50,89	30,29	3,99241E-11	1,07689E-11	0,00000E+0
663	39.35;16.32	51,28	34,96	4,01927E-11	7,79964E-12	0,00000E+0
664	39.52;12.18	51,48	39,31	4,02956E-11	5,53776E-12	0,00000E+0
665	39.57;40.91	46,15	5,24	3,03316E-11	4,03948E-11	0,00000E+0
666	39.65;8.09	51,61	43,52	4,03832E-11	3,50136E-12	0,00000E+0
667	39.67;24.90	50,22	25,31	3,92349E-11	1,42441E-11	0,00000E+0
668	39.70;31.51	49,01	17,50	3,79980E-11	2,24113E-11	0,00000E+0
669	39.75;4.04	51,68	47,64	4,04255E-11	1,72121E-12	0,00000E+0
670	39.83;0.00	51,69	51,69	4,04265E-11	-4,78824E-15	0,00000E+0
671	40.06;38.24	47,00	8,76	3,31450E-11	3,47412E-11	0,00000E+0
672	40.14;44.80	44,29	-0,51	1,54745E-11	3,86302E-11	0,00000E+0
673	40.18;57.96	48,93	-9,03	5,04515E-10	-1,27040E-10	0,00000E+0
674	40.28;52.38	47,59	-4,79	1,13723E-10	-1,51726E-10	0,00000E+0
675	40.37;29.09	49,25	20,17	3,76849E-11	1,87742E-11	0,00000E+0
676	40.54;18.43	50,62	32,19	3,93412E-11	9,18890E-12	0,00000E+0
677	40.58;57.85	48,74	-9,11	4,84805E-10	-1,64126E-10	0,00000E+0
678	40.60;35.72	47,61	11,90	3,42314E-11	2,86108E-11	0,00000E+0
679	40.63;14.22	50,92	36,69	3,95263E-11	6,59995E-12	0,00000E+0
680	40.67;22.55	50,14	27,58	3,85487E-11	1,22149E-11	0,00000E+0
681	40.75;10.14	51,09	40,96	3,98080E-11	4,47861E-12	0,00000E+0
682	40.87;6.07	51,19	45,12	3,98733E-11	2,58668E-12	0,00000E+0
683	40.96;2.02	51,22	49,20	3,99425E-11	8,52470E-13	0,00000E+0
684	40.98;46.16	43,53	-2,62	1,74321E-12	-5,62607E-13	0,00000E+0
685	41.17;46.72	43,54	-3,19	1,14330E-8	-6,34618E-10	0,00000E+0
686	41.19;42.83	44,93	2,10	1,70803E-11	3,16280E-11	0,00000E+0
687	41.19;26.80	49,34	22,54	3,74367E-11	1,60901E-11	0,00000E+0
688	41.20;33.29	48,05	14,76	3,49375E-11	2,42555E-11	0,00000E+0
689	41.21;48.57	44,91	-3,67	4,26188E-11	-2,43125E-10	0,00000E+0
690	41.22;53.08	47,61	-5,47	2,59720E-10	-1,99473E-10	0,00000E+0
691	41.35;46.66	43,53	-3,13	5,92663E-9	-2,31851E-10	0,00000E+0
692	41.39;55.29	47,99	-7,30	4,47594E-10	-1,96706E-10	0,00000E+0
693	41.51;50.97	46,41	-4,56	9,12266E-11	-1,50759E-10	0,00000E+0
694	41.56;57.51	48,27	-9,24	4,70699E-10	-1,47537E-10	0,00000E+0
695	41.68;40.17	45,84	5,67	2,62698E-11	3,58451E-11	0,00000E+0
696	41.69;20.42	49,99	29,57	3,82237E-11	1,02697E-11	0,00000E+0
697	41.74;16.27	50,34	34,06	3,87481E-11	7,64340E-12	0,00000E+0
698	41.85;12.17	50,56	38,39	3,91042E-11	5,33847E-12	0,00000E+0
699	41.87;30.86	48,36	17,49	3,50391E-11	2,04925E-11	0,00000E+0
700	41.95;57.41	48,08	-9,32	4,60599E-10	-1,55265E-10	0,00000E+0

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
701	41.98;8.10	50,69	42,59	3,93118E-11	3,43634E-12	0,00000E+0
702	42.01;24.51	49,38	24,87	3,71255E-11	1,35719E-11	0,00000E+0
703	42.03;44.19	44,20	0,01	1,84064E-11	4,10683E-11	0,00000E+0
704	42.08;4.04	50,75	46,71	3,94373E-11	1,66022E-12	0,00000E+0
705	42.16;0.00	50,75	50,75	3,94503E-11	3,21839E-15	0,00000E+0
706	42.17;37.50	46,58	9,08	2,96967E-11	3,04739E-11	0,00000E+0
707	42.35;57.30	47,91	-9,40	4,51666E-10	-1,52753E-10	0,00000E+0
708	42.41;44.06	44,18	0,12	1,27560E-11	2,76659E-11	0,00000E+0
709	42.46;51.67	46,56	-5,11	6,82922E-11	-1,56236E-10	0,00000E+0
710	42.55;28.59	48,55	19,96	3,53345E-11	1,73887E-11	0,00000E+0
711	42.77;35.07	47,08	12,01	3,10033E-11	2,60197E-11	0,00000E+0
712	42.88;45.54	43,51	-2,04	1,15924E-9	-3,65045E-10	0,00000E+0
713	42.89;18.26	49,73	31,47	3,76851E-11	8,72963E-12	0,00000E+0
714	42.97;14.22	50,01	35,79	3,83528E-11	6,37572E-12	0,00000E+0
715	43.03;22.38	49,27	26,89	3,68808E-11	1,16234E-11	0,00000E+0
716	43.09;10.13	50,18	40,05	3,86341E-11	4,30333E-12	0,00000E+0
717	43.18;41.80	44,89	3,09	2,16625E-11	3,61972E-11	0,00000E+0
718	43.20;6.07	50,27	44,20	3,88994E-11	2,50554E-12	0,00000E+0
719	43.24;46.04	43,50	-2,54	4,82537E-12	-2,00759E-12	0,00000E+0
720	43.24;46.67	43,51	-3,16	7,85364E-9	-5,74069E-10	0,00000E+0
721	43.26;45.42	43,50	-1,92	2,85540E-12	-2,33231E-14	0,00000E+0
722	43.29;2.02	50,30	48,28	3,89685E-11	8,12451E-13	0,00000E+0
723	43.37;32.64	47,47	14,83	3,21429E-11	2,19620E-11	0,00000E+0
724	43.38;26.30	48,63	22,33	3,52378E-11	1,48297E-11	0,00000E+0
725	43.40;47.86	44,25	-3,62	1,43812E-11	-1,90715E-10	0,00000E+0
726	43.51;52.33	46,64	-5,70	2,12482E-10	-1,87103E-10	0,00000E+0
727	43.61;46.55	43,50	-3,05	7,05057E-9	-6,61667E-10	0,00000E+0
728	43.62;45.92	43,50	-2,43	1,22435E-8	-4,95055E-9	0,00000E+0
729	43.63;45.29	43,49	-1,80	1,08454E-8	-3,51910E-9	0,00000E+0
730	43.65;54.59	47,01	-7,58	3,87369E-10	-1,81425E-10	0,00000E+0
731	43.67;39.13	45,67	6,54	2,53116E-11	3,08678E-11	0,00000E+0
732	43.70;50.26	45,58	-4,68	5,05172E-11	-1,50212E-10	0,00000E+0
733	43.72;56.85	47,31	-9,55	4,14793E-10	-1,36930E-10	0,00000E+0
734	43.82;56.81	47,26	-9,54	4,14065E-10	-1,29354E-10	0,00000E+0
735	44.04;20.25	49,12	28,88	3,65971E-11	9,76195E-12	0,00000E+0
736	44.06;30.36	47,72	17,35	3,27343E-11	1,88321E-11	0,00000E+0
737	44.06;16.23	49,46	33,23	3,74268E-11	7,22064E-12	0,00000E+0
738	44.12;56.75	47,15	-9,60	4,12441E-10	-1,08246E-10	0,00000E+0
739	44.17;24.21	48,63	24,43	3,53849E-11	1,26084E-11	0,00000E+0
740	44.19;12.16	49,66	37,50	3,79407E-11	5,14204E-12	0,00000E+0
741	44.29;36.75	46,20	9,45	2,73024E-11	2,70412E-11	0,00000E+0
742	44.31;8.10	49,79	41,69	3,82955E-11	3,25874E-12	0,00000E+0
743	44.40;43.03	44,21	1,18	1,77088E-11	3,52136E-11	0,00000E+0
744	44.41;4.05	49,84	45,80	3,84727E-11	1,60025E-12	0,00000E+0
745	44.50;0.00	49,84	49,84	3,85223E-11	-4,88252E-15	0,00000E+0
746	44.74;28.08	47,88	19,80	3,32315E-11	1,59397E-11	0,00000E+0
747	44.75;50.92	45,71	-5,21	5,51935E-11	-1,42354E-10	0,00000E+0
748	44.89;34.32	46,63	12,31	2,88296E-11	2,28592E-11	0,00000E+0
749	45.17;40.76	44,82	4,05	1,85138E-11	2,78853E-11	0,00000E+0
750	45.18;22.08	48,53	26,45	3,52152E-11	1,07385E-11	0,00000E+0
751	45.21;18.22	48,88	30,66	3,63950E-11	8,25143E-12	0,00000E+0
752	45.28;14.17	49,14	34,96	3,70636E-11	5,99383E-12	0,00000E+0
753	45.41;10.13	49,29	39,16	3,76391E-11	4,09338E-12	0,00000E+0
754	45.50;32.02	46,94	14,92	3,00318E-11	1,96930E-11	0,00000E+0
755	45.52;6.07	49,38	43,31	3,79040E-11	2,35913E-12	0,00000E+0
756	45.53;25.99	47,93	21,93	3,35352E-11	1,37114E-11	0,00000E+0
757	45.62;2.02	49,41	47,38	3,80594E-11	7,83519E-13	0,00000E+0
758	45.69;46.50	43,46	-3,03	2,07562E-8	-1,29090E-9	0,00000E+0
759	45.79;38.38	45,38	7,00	2,29877E-11	2,72878E-11	0,00000E+0
760	45.80;51.59	45,82	-5,77	5,71593E-7	-4,15689E-7	0,00000E+0
761	45.87;46.44	43,46	-2,98	1,05699E-8	-4,62451E-10	0,00000E+0
762	45.88;49.55	44,88	-4,67	4,23942E-11	-1,29799E-10	0,00000E+0
763	45.88;56.20	46,47	-9,73	3,59807E-10	-1,13104E-10	0,00000E+0
764	45.89;45.18	43,45	-1,74	6,03962E-9	-2,44810E-9	0,00000E+0
765	45.91;44.55	43,44	-1,11	1,48167E-8	-4,73941E-9	0,00000E+0
766	45.94;53.85	46,16	-7,69	3,21331E-10	-1,60250E-10	0,00000E+0
767	45.99;56.15	46,43	-9,72	3,56854E-10	-1,12582E-10	0,00000E+0
768	46.09;56.10	46,40	-9,71	3,54822E-10	-1,11903E-10	0,00000E+0
769	46.18;29.74	47,15	17,41	3,07998E-11	1,67263E-11	0,00000E+0
770	46.25;20.19	48,33	28,15	3,51918E-11	9,04823E-12	0,00000E+0
771	46.32;23.91	47,93	24,02	3,37847E-11	1,16243E-11	0,00000E+0
772	46.37;16.19	48,61	32,42	3,61605E-11	6,79800E-12	0,00000E+0
773	46.41;36.00	45,83	9,83	2,52439E-11	2,35698E-11	0,00000E+0
774	46.50;12.16	48,80	36,64	3,68750E-11	4,78392E-12	0,00000E+0
775	46.63;8.10	48,91	40,81	3,73160E-11	3,08311E-12	0,00000E+0
776	46.68;42.29	44,06	1,77	1,46109E-11	2,68421E-11	0,00000E+0
777	46.73;4.05	48,96	44,91	3,75775E-11	1,49171E-12	0,00000E+0
778	46.79;27.59	47,29	19,71	3,16251E-11	1,43524E-11	0,00000E+0
779	46.83;0.00	48,96	48,96	3,76275E-11	2,22202E-15	0,00000E+0
780	46.94;50.21	45,04	-5,17	3,81277E-11	-1,29589E-10	0,00000E+0
781	47.02;33.70	46,18	12,48	2,67569E-11	2,03437E-11	0,00000E+0
782	47.34;39.98	44,61	4,63	1,92436E-11	2,72897E-11	0,00000E+0
783	47.40;22.02	47,77	25,75	3,38465E-11	9,93543E-12	0,00000E+0
784	47.42;18.16	48,09	29,93	3,50341E-11	7,59835E-12	0,00000E+0
785	47.59;25.50	47,32	21,82	3,20427E-11	1,22333E-11	0,00000E+0
786	47.59;14.18	48,29	34,12	3,60294E-11	5,58577E-12	0,00000E+0
787	47.63;31.40	46,44	15,04	2,81921E-11	1,73510E-11	0,00000E+0
788	47.65;55.65	45,87	-9,77	3,17070E-10	-9,90918E-11	0,00000E+0
789	47.72;10.13	48,43	38,30	3,66040E-11	3,78016E-12	0,00000E+0
790	47.75;55.60	45,84	-9,76	3,18626E-10	-8,47381E-11	0,00000E+0
791	47.77;46.44	43,41	-3,03	1,25077E-8	-7,43052E-10	0,00000E+0
792	47.84;6.08	48,51	42,43	3,70328E-11	2,21287E-12	0,00000E+0
793	47.92;47.64	43,89	-3,75	1,55101E-11	-1,18339E-10	0,00000E+0

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
794	47.94;2.03	48,53	46,50	3,71877E-11	7,12257E-13	0,00000E+0
795	47.95;46.38	43,41	-2,97	2,52440E-8	-1,24161E-9	0,00000E+0
796	47.96;37.60	45,09	7,49	2,16362E-11	2,35237E-11	0,00000E+0
797	48.07;48.83	44,34	-4,49	2,59108E-11	-1,15514E-10	0,00000E+0
798	48.09;50.84	45,15	-5,70	1,37857E-10	-1,49899E-10	0,00000E+0
799	48.12;23.70	47,35	23,65	3,26120E-11	1,06434E-11	0,00000E+0
800	48.13;46.32	43,41	-2,92	1,44811E-8	-7,16290E-10	0,00000E+0
801	48.16;45.07	43,39	-1,68	4,37302E-8	-1,66828E-8	0,00000E+0
802	48.18;43.81	43,38	-0,43	2,47951E-8	-7,87471E-9	0,00000E+0
803	48.24;53.10	45,44	-7,66	2,70406E-10	-1,35549E-10	0,00000E+0
804	48.24;29.25	46,61	17,37	2,92271E-11	1,49471E-11	0,00000E+0
805	48.35;55.40	45,66	-9,74	2,96377E-10	-1,06229E-10	0,00000E+0
806	48.47;20.13	47,58	27,45	3,38676E-11	8,32438E-12	0,00000E+0
807	48.56;35.29	45,46	10,17	2,36442E-11	2,05341E-11	0,00000E+0
808	48.67;16.22	47,79	31,57	3,50283E-11	6,19503E-12	0,00000E+0
809	48.81;12.16	47,96	35,80	3,58650E-11	4,42867E-12	0,00000E+0
810	48.85;41.51	43,94	2,43	1,52533E-11	2,66514E-11	0,00000E+0
811	48.85;27.10	46,73	19,63	3,02000E-11	1,27279E-11	0,00000E+0
812	48.94;8.11	48,05	39,94	3,64347E-11	2,81864E-12	0,00000E+0
813	49.06;4.06	48,10	44,04	3,67257E-11	1,38467E-12	0,00000E+0
814	49.16;0.00	48,09	48,09	3,68166E-11	-4,43915E-15	0,00000E+0
815	49.16;32.99	45,75	12,76	2,53048E-11	1,74728E-11	0,00000E+0
816	49.19;21.82	47,19	25,37	3,27019E-11	9,02642E-12	0,00000E+0
817	49.23;49.47	44,49	-4,97	2,67634E-11	-1,09905E-10	0,00000E+0
818	49.38;25.30	46,78	21,48	3,08824E-11	1,11391E-11	0,00000E+0
819	49.42;55.09	45,35	-9,74	2,69575E-10	-9,85343E-11	0,00000E+0
820	49.51;39.20	44,41	5,21	1,78912E-11	2,33749E-11	0,00000E+0
821	49.72;18.19	47,30	29,11	3,39499E-11	6,93014E-12	0,00000E+0
822	49.72;30.74	45,97	15,23	2,68661E-11	1,50563E-11	0,00000E+0
823	49.89;14.21	47,48	33,27	3,49401E-11	5,04561E-12	0,00000E+0
824	49.92;23.50	46,80	23,30	3,15405E-11	9,66122E-12	0,00000E+0
825	50.02;54.89	45,19	-9,70	2,53691E-10	-1,01575E-10	0,00000E+0
826	50.03;46.33	43,36	-2,97	1,32741E-8	-6,46402E-10	0,00000E+0
827	50.03;10.14	47,60	37,45	3,57538E-11	3,46471E-12	0,00000E+0
828	50.10;46.93	43,56	-3,37	7,46672E-12	-1,01646E-10	0,00000E+0
829	50.11;36.89	44,80	7,90	2,00879E-11	2,03399E-11	0,00000E+0
830	50.16;6.09	47,66	41,57	3,61819E-11	1,99571E-12	0,00000E+0
831	50.21;46.27	43,35	-2,92	2,66496E-8	-1,49535E-9	0,00000E+0
832	50.25;48.12	43,95	-4,17	1,65771E-11	-1,00026E-10	0,00000E+0
833	50.27;2.03	47,67	45,65	3,64037E-11	6,69089E-13	0,00000E+0
834	50.33;28.59	46,10	17,51	2,80366E-11	1,27754E-11	0,00000E+0
835	50.38;50.10	44,60	-5,50	1,21005E-10	-1,29307E-10	0,00000E+0
836	50.43;44.33	43,32	-1,00	2,53760E-8	-9,13492E-9	0,00000E+0
837	50.46;43.07	43,31	0,24	4,23096E-8	-1,35822E-8	0,00000E+0
838	50.50;52.40	44,86	-7,54	2,18821E-10	-1,16384E-10	0,00000E+0
839	50.61;54.69	45,04	-9,66	2,47119E-10	-7,68447E-11	0,00000E+0
840	50.70;34.59	45,11	10,52	2,22475E-11	1,74622E-11	0,00000E+0
841	50.82;26.39	46,23	19,83	2,93083E-11	1,09769E-11	0,00000E+0
842	50.85;20.45	46,76	26,31	3,25116E-11	7,46492E-12	0,00000E+0
843	50.96;16.25	47,00	30,74	3,39776E-11	5,59816E-12	0,00000E+0
844	51.10;12.18	47,14	34,97	3,49935E-11	3,95080E-12	0,00000E+0
845	51.12;40.77	43,79	3,02	1,42330E-11	2,26778E-11	0,00000E+0
846	51.19;54.54	44,90	-9,64	2,34369E-10	-8,58794E-11	0,00000E+0
847	51.26;8.13	47,22	39,10	3,56105E-11	2,55668E-12	0,00000E+0
848	51.26;32.34	45,34	13,00	2,40164E-11	1,49960E-11	0,00000E+0
849	51.35;24.59	46,25	21,66	3,00953E-11	9,43939E-12	0,00000E+0
850	51.38;4.07	47,25	43,18	3,59751E-11	1,24215E-12	0,00000E+0
851	51.41;48.75	44,08	-4,67	2,21518E-11	-9,16219E-11	0,00000E+0
852	51.49;0.00	47,24	47,24	3,60557E-11	8,46712E-16	0,00000E+0
853	51.58;22.13	46,40	24,26	3,13773E-11	8,11400E-12	0,00000E+0
854	51.72;38.47	44,18	5,72	1,67451E-11	1,98536E-11	0,00000E+0
855	51.79;54.34	44,76	-9,58	2,36036E-10	-3,88004E-11	0,00000E+0
856	51.82;30.09	45,51	15,42	2,57342E-11	1,27126E-11	0,00000E+0
857	52.10;18.51	46,49	27,98	3,26513E-11	6,13889E-12	0,00000E+0
858	52.18;14.22	46,68	32,46	3,41093E-11	4,49675E-12	0,00000E+0
859	52.29;46.22	43,29	-2,92	1,12516E-8	-5,54324E-10	0,00000E+0
860	52.30;27.89	45,64	17,75	2,71697E-11	1,08712E-11	0,00000E+0
861	52.31;36.16	44,50	8,34	1,90485E-11	1,69376E-11	0,00000E+0
862	52.33;10.16	46,79	36,63	3,49221E-11	3,04911E-12	0,00000E+0
863	52.36;46.81	43,46	-3,35	8,53778E-12	-8,45200E-11	0,00000E+0
864	52.44;47.41	43,63	-3,78	1,25998E-11	-8,41079E-11	0,00000E+0
865	52.47;46.16	43,29	-2,87	2,82484E-8	-1,46194E-9	1,81899E-12
866	52.48;6.10	46,83	40,73	3,54624E-11	1,80233E-12	0,00000E+0
867	52.60;2.04	46,84	44,80	3,56833E-11	5,76077E-13	0,00000E+0
868	52.65;46.10	43,28	-2,81	1,41950E-8	-6,99029E-10	0,00000E+0
869	52.65;46.72	43,43	-3,29	7,75609E-12	-8,24766E-11	0,00000E+0
870	52.67;49.35	44,15	-5,20	8,93285E-11	-1,03526E-10	0,00000E+0
871	52.73;47.32	43,59	-3,73	1,18299E-11	-8,23204E-11	0,00000E+0
872	52.73;42.33	43,24	0,90	3,04642E-8	-9,63978E-9	0,00000E+0
873	52.76;51.69	44,38	-7,32	1,80745E-10	-9,91994E-11	0,00000E+0
874	52.79;25.69	45,73	20,04	2,85630E-11	9,18234E-12	0,00000E+0
875	52.87;33.88	44,75	10,87	2,12612E-11	1,45521E-11	0,00000E+0
876	52.88;53.99	44,53	-9,46	2,06816E-10	-6,52813E-11	0,00000E+0
877	52.96;53.99	44,51	-9,48	2,03805E-10	-6,63338E-11	0,00000E+0
878	53.01;23.23	45,87	22,64	2,99269E-11	7,82272E-12	0,00000E+0
879	53.02;47.22	43,55	-3,67	1,11348E-11	-8,02666E-11	0,00000E+0
880	53.23;16.21	46,24	30,03	3,31464E-11	4,81216E-12	0,00000E+0
881	53.24;20.76	45,98	25,21	3,12438E-11	6,57714E-12	0,00000E+0
882	53.33;40.03	43,64	3,60	1,31277E-11	1,90780E-11	0,00000E+0
883	53.40;12.19	46,35	34,16	3,41988E-11	3,47663E-12	0,00000E+0
884	53.42;31.63	44,93	13,29	2,31678E-11	1,22170E-11	0,00000E+0
885	53.57;8.16	46,41	38,24	3,49114E-11	2,23713E-12	0,00000E+0
886	53.70;48.01	43,73	-4,28	1,62185E-11	-7,61952E-11	0,00000E+0

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
887	53.70;4.08	46,43	42,34	3,52828E-11	1,10186E-12	0,00000E+0
888	53.82;0.00	46,41	46,41	3,54040E-11	-3,37643E-15	0,00000E+0
889	53.93;37.73	43,96	6,22	1,57202E-11	1,63106E-11	0,00000E+0
890	53.93;29.37	45,06	15,69	2,50517E-11	1,04100E-11	0,00000E+0
891	53.99;47.91	43,69	-4,23	1,56806E-11	-7,44349E-11	0,00000E+0
892	54.05;53.64	44,30	-9,34	1,74426E-10	-9,43962E-11	0,00000E+0
893	54.37;18.46	45,76	27,30	3,18616E-11	5,23679E-12	0,00000E+0
894	54.42;27.17	45,14	17,97	2,66205E-11	8,67595E-12	0,00000E+0
895	54.45;14.18	45,92	31,75	3,33329E-11	3,79994E-12	0,00000E+0
896	54.48;35.45	44,21	8,75	1,81068E-11	1,38700E-11	0,00000E+0
897	54.55;46.10	43,23	-2,87	1,48589E-8	-8,22964E-10	-2,42470E-12
898	54.64;10.20	45,99	35,79	3,42615E-11	2,66574E-12	0,00000E+0
899	54.74;53.44	44,18	-9,26	1,79469E-10	-4,04098E-11	0,00000E+0
900	54.79;6.14	46,02	39,88	3,47998E-11	1,54143E-12	0,00000E+0
901	54.88;24.88	45,20	20,32	2,81693E-11	7,40958E-12	0,00000E+0
902	54.91;46.61	43,34	-3,27	8,65514E-12	-6,89349E-11	0,00000E+0
903	54.93;2.04	46,01	43,97	3,50631E-11	5,23840E-13	0,00000E+0
904	54.95;44.10	43,19	-0,91	7,14622E-8	-3,06417E-8	0,00000E+0
905	54.96;48.61	43,79	-4,81	6,40213E-11	-8,26238E-11	0,00000E+0
906	55.00;41.59	43,16	1,57	4,49923E-8	-1,47398E-8	0,00000E+0
907	55.03;33.17	44,39	11,22	2,04520E-11	1,16006E-11	0,00000E+0
908	55.05;50.95	43,98	-6,97	1,46263E-10	-7,86250E-11	0,00000E+0
909	55.10;22.42	45,30	22,88	2,96290E-11	6,14104E-12	0,00000E+0
910	55.14;53.29	44,10	-9,18	1,67402E-10	-5,29465E-11	0,00000E+0
911	55.50;16.16	45,50	29,34	3,24286E-11	4,03302E-12	0,00000E+0
912	55.54;30.91	44,52	13,61	2,25187E-11	9,73466E-12	0,00000E+0
913	55.60;39.29	43,48	4,18	1,22656E-11	1,53059E-11	0,00000E+0
914	55.66;12.26	45,58	33,33	3,35665E-11	2,94053E-12	0,00000E+0
915	55.67;20.18	45,26	25,07	3,06925E-11	5,18427E-12	0,00000E+0
916	55.82;53.09	43,99	-9,09	1,64580E-10	-2,38571E-11	0,00000E+0
917	55.88;8.20	45,61	37,41	3,42835E-11	1,92088E-12	0,00000E+0
918	55.89;47.30	43,45	-3,84	1,31632E-11	-6,34327E-11	0,00000E+0
919	56.03;4.11	45,61	41,50	3,47096E-11	9,42643E-13	0,00000E+0
920	56.05;28.65	44,60	15,95	2,45434E-11	8,05811E-12	0,00000E+0
921	56.15;0.00	45,59	45,59	3,48132E-11	-6,66340E-16	0,00000E+0
922	56.15;37.01	43,72	6,72	1,50061E-11	1,28390E-11	0,00000E+0
923	56.51;52.89	43,89	-8,99	1,51870E-10	-3,24727E-11	0,00000E+0
924	56.51;26.36	44,65	18,29	2,62387E-11	6,73545E-12	0,00000E+0
925	56.70;34.73	43,90	9,17	1,75323E-11	1,05276E-11	0,00000E+0
926	56.71;14.24	45,17	30,93	3,27473E-11	3,18141E-12	0,00000E+0
927	56.80;17.88	45,01	27,13	3,14012E-11	3,95073E-12	0,00000E+0
928	56.81;45.99	43,16	-2,83	1,56697E-8	-8,35394E-10	0,00000E+0
929	56.90;10.26	45,21	34,96	3,36731E-11	2,20200E-12	0,00000E+0
930	56.97;24.08	44,67	20,59	2,79067E-11	5,58077E-12	0,00000E+0
931	56.99;45.93	43,15	-2,78	3,14343E-8	-1,61011E-9	0,00000E+0
932	57.12;6.17	45,21	39,04	3,42617E-11	1,32355E-12	0,00000E+0
933	57.17;45.87	43,15	-2,72	4,14489E-8	-1,77272E-8	0,00000E+0
934	57.22;32.45	44,02	11,58	2,00818E-11	8,70739E-12	0,00000E+0
935	57.22;43.36	43,11	-0,26	9,59113E-8	-4,15260E-8	0,00000E+0
936	57.26;47.86	43,50	-4,36	5,74997E-11	-7,02407E-11	0,00000E+0
937	57.26;2.07	45,20	43,13	3,45233E-11	4,20463E-13	0,00000E+0
938	57.28;40.85	43,07	2,22	5,40317E-8	-1,70191E-8	0,00000E+0
939	57.32;50.24	43,66	-6,59	1,18631E-10	-6,65777E-11	0,00000E+0
940	57.40;52.58	43,76	-8,82	1,41157E-10	-3,07282E-11	0,00000E+0
941	57.41;16.01	44,89	28,87	3,20199E-11	3,31684E-12	0,00000E+0
942	57.54;21.84	44,62	22,78	2,91141E-11	4,60484E-12	0,00000E+0
943	57.73;30.19	44,09	13,91	2,23095E-11	6,97758E-12	0,00000E+0
944	57.83;38.56	43,31	4,74	1,16099E-11	1,16971E-11	0,00000E+0
945	57.93;12.32	44,83	32,51	3,30179E-11	2,40347E-12	0,00000E+0
946	58.09;52.38	43,67	-8,71	1,22875E-10	-5,91852E-11	0,00000E+0
947	58.11;19.60	44,54	24,94	3,03008E-11	3,76772E-12	0,00000E+0
948	58.18;46.55	43,23	-3,33	9,39617E-12	-5,17077E-11	0,00000E+0
949	58.21;27.91	44,12	16,22	2,44635E-11	5,82715E-12	0,00000E+0
950	58.23;8.29	44,80	36,51	3,37881E-11	1,58010E-12	0,00000E+0
951	58.28;52.33	43,65	-8,68	1,27196E-10	-3,77972E-11	0,00000E+0
952	58.37;4.14	44,81	40,67	3,42035E-11	7,86816E-13	0,00000E+0
953	58.38;36.28	43,48	7,20	1,44523E-11	9,33049E-12	0,00000E+0
954	58.47;0.00	44,79	44,79	3,43413E-11	-1,13628E-15	0,00000E+0
955	58.63;14.09	44,55	30,46	3,23697E-11	2,53415E-12	0,00000E+0
956	58.67;45.38	43,09	-2,29	9,58407E-12	-5,62161E-12	0,00000E+0
957	58.68;25.62	44,13	18,50	2,62966E-11	4,61712E-12	0,00000E+0
958	58.72;17.74	44,42	26,68	3,10100E-11	3,13749E-12	0,00000E+0
959	58.72;42.87	43,05	0,17	5,40055E-8	-2,51908E-8	0,00000E+0
960	58.82;45.84	43,10	-2,74	3,21659E-8	-1,60780E-9	0,00000E+0
961	58.89;34.00	43,59	9,59	1,72083E-11	7,42627E-12	0,00000E+0
962	59.00;45.78	43,09	-2,69	1,61218E-8	-8,48907E-10	0,00000E+0
963	59.16;23.35	44,09	20,74	2,79307E-11	3,95233E-12	0,00000E+0
964	59.25;10.35	44,43	34,07	3,32247E-11	1,79147E-12	0,00000E+0
965	59.33;15.87	44,28	28,41	3,17072E-11	2,58431E-12	0,00000E+0
966	59.40;31.72	43,64	11,92	1,99173E-11	5,76339E-12	0,00000E+0
967	59.44;42.64	43,02	0,37	6,54122E-8	-3,16087E-8	0,00000E+0
968	59.47;6.26	44,41	38,15	3,38067E-11	1,04833E-12	0,00000E+0
969	59.55;47.11	43,27	-3,85	5,23500E-11	-5,88359E-11	0,00000E+0
970	59.55;40.11	42,97	2,86	6,36039E-8	-2,09548E-8	0,00000E+0
971	59.58;2.07	44,40	42,34	3,40828E-11	3,66023E-13	0,00000E+0
972	59.61;49.50	43,39	-6,10	9,57034E-11	-5,25130E-11	0,00000E+0
973	59.67;51.88	43,48	-8,40	1,09464E-10	-3,65161E-11	0,00000E+0
974	59.73;21.12	44,01	22,89	2,92455E-11	3,06455E-12	0,00000E+0
975	59.86;51.83	43,46	-8,37	1,08388E-10	-3,06989E-11	0,00000E+0
976	59.89;29.44	43,65	14,21	2,22599E-11	4,54377E-12	0,00000E+0
977	60.05;51.78	43,44	-8,34	1,06193E-10	-3,09504E-11	0,00000E+0
978	60.10;37.82	43,12	5,30	1,10401E-11	7,76638E-12	0,00000E+0
979	60.17;44.89	43,03	-1,86	3,08402E-8	-1,93799E-8	0,00000E+0

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
980	60.20;18.88	43,93	25,05	3,03743E-11	2,69661E-12	0,00000E+0
981	60.38;27.17	43,63	16,46	2,45670E-11	3,54308E-12	0,00000E+0
982	60.38;12.74	44,01	31,28	3,25578E-11	1,82675E-12	0,00000E+0
983	60.47;45.81	43,04	-2,76	1,64162E-8	-8,61042E-10	0,00000E+0
984	60.50;45.29	43,03	-2,26	3,35740E-9	-2,25519E-9	0,00000E+0
985	60.58;8.39	44,01	35,63	3,33766E-11	1,24883E-12	0,00000E+0
986	60.61;35.54	43,21	7,67	1,43500E-11	5,69637E-12	0,00000E+0
987	60.71;4.15	44,01	39,86	3,38215E-11	6,31099E-13	0,00000E+0
988	60.80;0.00	43,99	43,99	3,39327E-11	-2,50357E-15	0,00000E+0
989	60.81;17.02	43,79	26,77	3,11311E-11	2,09858E-12	0,00000E+0
990	60.83;45.69	43,03	-2,66	1,75693E-8	-1,55687E-9	0,00000E+0
991	60.86;24.90	43,58	18,68	2,63454E-11	2,83783E-12	0,00000E+0
992	60.89;44.66	43,00	-1,66	8,90905E-9	-5,72894E-9	0,00000E+0
993	61.09;14.51	43,75	29,24	3,19746E-11	1,90104E-12	0,00000E+0
994	61.13;33.26	43,24	9,98	1,73295E-11	3,97296E-12	0,00000E+0
995	61.22;45.06	43,00	-2,06	9,07247E-10	-6,38983E-10	0,00000E+0
996	61.35;22.63	43,50	20,87	2,81009E-11	2,28654E-12	0,00000E+0
997	61.60;44.43	42,97	-1,45	4,66238E-8	-3,28640E-8	0,00000E+0
998	61.61;30.98	43,23	12,25	2,03079E-11	2,93114E-12	0,00000E+0
999	61.63;51.28	43,29	-7,99	9,43379E-11	-2,13264E-11	0,00000E+0
1000	61.71;10.77	43,61	32,84	3,28208E-11	1,30147E-12	0,00000E+0
1001	61.71;41.90	42,91	1,01	1,29338E-7	-6,38944E-8	0,00000E+0
1002	61.82;6.28	43,62	37,34	3,34576E-11	8,30434E-13	0,00000E+0
1003	61.82;20.40	43,41	23,02	2,93223E-11	1,90564E-12	0,00000E+0
1004	61.82;51.23	43,27	-7,96	8,90808E-11	-3,25142E-11	0,00000E+0
1005	61.83;39.37	42,86	3,48	7,41774E-8	-2,28194E-8	0,00000E+0
1006	61.84;46.37	43,08	-3,29	3,77066E-11	-4,80235E-11	0,00000E+0
1007	61.87;48.79	43,19	-5,61	7,58311E-11	-4,39755E-11	0,00000E+0
1008	61.93;2.09	43,61	41,52	3,37326E-11	2,64012E-13	0,00000E+0
1009	61.93;51.18	43,26	-7,92	8,76664E-11	-3,30647E-11	0,00000E+0
1010	62.10;28.70	43,18	14,48	2,28445E-11	1,86253E-12	0,00000E+0
1011	62.29;18.16	43,31	25,15	3,05255E-11	1,60872E-12	0,00000E+0
1012	62.34;37.09	42,92	5,83	1,10211E-11	3,85341E-12	0,00000E+0
1013	62.48;45.66	42,97	-2,68	3,36336E-8	-1,74801E-9	0,00000E+0
1014	62.57;15.66	43,26	27,61	3,13862E-11	1,42853E-12	0,00000E+0
1015	62.57;26.42	43,11	16,69	2,51611E-11	1,56170E-12	0,00000E+0
1016	62.66;45.60	42,97	-2,63	1,68661E-8	-7,99856E-10	0,00000E+0
1017	62.84;13.15	43,21	30,06	3,22099E-11	1,25300E-12	0,00000E+0
1018	62.85;34.81	42,92	8,11	1,45220E-11	2,00482E-12	0,00000E+0
1019	62.98;8.39	43,22	34,82	3,31251E-11	9,24332E-13	0,00000E+0
1020	63.05;44.97	42,94	-2,03	1,26575E-8	-9,82400E-9	0,00000E+0
1021	63.05;24.15	43,01	18,86	2,70654E-11	9,54246E-13	0,00000E+0
1022	63.06;4.17	43,22	39,05	3,35063E-11	4,78121E-13	0,00000E+0
1023	63.12;0.00	43,21	43,21	3,36328E-11	2,59323E-15	0,00000E+0
1024	63.33;32.52	42,87	10,35	1,77620E-11	8,47218E-13	0,00000E+0
1025	63.50;21.87	42,91	21,03	2,86619E-11	1,02553E-12	0,00000E+0
1026	63.59;50.68	43,12	-7,55	7,28975E-11	-2,57560E-11	0,00000E+0
1027	63.82;43.71	42,87	-0,83	5,10424E-8	-4,43268E-8	0,00000E+0
1028	63.82;30.24	42,79	12,55	2,09587E-11	3,23420E-14	0,00000E+0
1029	63.89;50.57	43,10	-7,47	6,87784E-11	-2,99957E-11	0,00000E+0
1030	63.93;41.18	42,79	1,61	1,11518E-7	-6,69826E-8	0,00000E+0
1031	63.97;19.64	42,79	23,15	2,99416E-11	6,92315E-13	0,00000E+0
1032	64.10;38.63	42,72	4,09	9,30645E-8	-3,11077E-8	0,00000E+0
1033	64.11;10.78	42,82	32,05	3,26131E-11	8,84635E-13	0,00000E+0
1034	64.13;45.62	42,92	-2,70	1,47503E-8	-7,89299E-10	0,00000E+0
1035	64.16;48.05	43,02	-5,03	5,92621E-11	-3,77581E-11	0,00000E+0
1036	64.20;50.47	43,08	-7,39	7,03925E-11	-1,89037E-11	0,00000E+0
1037	64.22;6.29	42,82	36,54	3,32462E-11	5,69583E-13	0,00000E+0
1038	64.25;2.09	42,83	40,74	3,34577E-11	2,17558E-13	0,00000E+0
1039	64.29;27.95	42,68	14,72	2,34586E-11	-3,27880E-13	0,00000E+0
1040	64.31;45.56	42,91	-2,65	3,44452E-8	-1,76336E-9	0,00000E+0
1041	64.38;17.40	42,68	25,28	3,09229E-11	8,70093E-13	0,00000E+0
1042	64.49;45.51	42,91	-2,60	2,93423E-8	-1,65399E-8	0,00000E+0
1043	64.61;36.35	42,68	6,33	1,12381E-11	-6,50471E-13	0,00000E+0
1044	64.66;14.89	42,61	27,72	3,17830E-11	7,03510E-13	0,00000E+0
1045	64.75;25.67	42,55	16,88	2,59329E-11	-4,71817E-13	0,00000E+0
1046	65.09;34.06	42,59	8,52	1,54721E-11	-1,76780E-12	0,00000E+0
1047	65.20;23.39	42,42	19,03	2,76280E-11	-4,18201E-13	0,00000E+0
1048	65.26;44.25	42,84	-1,41	6,45282E-8	-6,79997E-8	0,00000E+0
1049	65.36;50.12	43,00	-7,12	6,07746E-11	-2,79842E-11	0,00000E+0
1050	65.38;12.76	42,40	29,63	3,22955E-11	7,32456E-13	0,00000E+0
1051	65.38;8.40	42,43	34,02	3,29578E-11	6,01626E-13	0,00000E+0
1052	65.40;4.16	42,44	38,28	3,33006E-11	3,63518E-13	0,00000E+0
1053	65.45;0.00	42,43	42,43	3,33868E-11	-4,63435E-15	0,00000E+0
1054	65.58;31.78	42,45	10,67	1,90409E-11	-2,68433E-12	0,00000E+0
1055	65.65;21.11	42,29	21,17	2,93126E-11	-2,67312E-13	0,00000E+0
1056	65.67;50.02	42,99	-7,04	7,10427E-11	1,12680E-11	0,00000E+0
1057	66.04;42.99	42,76	-0,23	9,00778E-8	-9,31426E-8	0,00000E+0
1058	66.04;29.49	42,30	12,81	2,23387E-11	-2,45933E-12	0,00000E+0
1059	66.06;18.88	42,16	23,28	3,03291E-11	-9,20021E-14	0,00000E+0
1060	66.20;40.44	42,64	2,20	1,86864E-7	-1,13939E-7	0,00000E+0
1061	66.37;37.89	42,54	4,65	1,21402E-7	-3,71040E-8	0,00000E+0
1062	66.41;44.88	42,83	-2,05	4,51926E-11	-2,75169E-11	0,00000E+0
1063	66.43;47.34	42,89	-4,46	4,53717E-11	-2,93580E-11	0,00000E+0
1064	66.46;49.77	42,94	-6,83	5,35591E-11	-3,12616E-11	0,00000E+0
1065	66.47;16.64	42,03	25,40	3,13415E-11	1,02541E-13	0,00000E+0
1066	66.47;45.51	42,84	-2,67	1,71840E-8	-8,64569E-10	0,00000E+0
1067	66.50;27.20	42,13	14,93	2,50235E-11	-2,68631E-12	0,00000E+0
1068	66.56;6.27	42,04	35,77	3,30624E-11	4,05800E-13	0,00000E+0
1069	66.60;2.07	42,04	39,97	3,32741E-11	1,40717E-13	0,00000E+0
1070	66.64;10.39	42,00	31,61	3,27283E-11	4,35813E-13	0,00000E+0
1071	66.65;45.45	42,83	-2,62	3,43182E-8	-1,78304E-9	0,00000E+0
1072	66.85;35.61	42,39	6,79	1,22681E-11	-4,95236E-12	0,00000E+0

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
1073	66.95;24.89	41,96	17,07	2,72351E-11	-1,91179E-12	0,00000E+0
1074	67.14;49.57	42,90	-6,67	4,77789E-11	-3,55649E-11	0,00000E+0
1075	67.18;43.62	42,74	-0,88	4,56755E-8	-6,80331E-8	0,00000E+0
1076	67.19;14.50	41,81	27,30	3,19067E-11	1,41506E-13	0,00000E+0
1077	67.33;33.32	42,20	8,88	1,68687E-11	-5,64331E-12	0,00000E+0
1078	67.39;22.62	41,79	19,18	2,89947E-11	-1,80819E-12	0,00000E+0
1079	67.74;8.32	41,65	33,32	3,29237E-11	4,17079E-13	0,00000E+0
1080	67.75;4.15	41,66	37,51	3,31450E-11	2,48692E-13	0,00000E+0
1081	67.77;0.00	41,66	41,66	3,32170E-11	6,50114E-15	0,00000E+0
1082	67.78;20.31	41,64	21,34	3,02782E-11	-9,90583E-13	0,00000E+0
1083	67.79;31.03	41,98	10,96	2,04413E-11	-5,51781E-12	0,00000E+0
1084	67.91;12.37	41,58	29,21	3,24548E-11	2,18417E-13	0,00000E+0
1085	67.93;49.32	42,86	-6,46	3,78306E-11	-5,49342E-11	0,00000E+0
1086	68.01;43.35	42,70	-0,65	6,47699E-8	-1,08073E-7	0,00000E+0
1087	68.20;18.07	41,50	23,43	3,12821E-11	-8,08651E-13	0,00000E+0
1088	68.25;42.26	42,62	0,36	1,47275E-7	-1,98636E-7	0,00000E+0
1089	68.25;28.73	41,76	13,02	2,39873E-11	-5,03403E-12	0,00000E+0
1090	68.33;44.26	42,74	-1,51	1,82883E-8	-3,92573E-8	0,00000E+0
1091	68.35;16.11	41,44	25,33	3,18152E-11	-2,43860E-13	0,00000E+0
1092	68.42;39.72	42,45	2,74	2,28383E-7	-1,74544E-7	0,00000E+0
1093	68.65;37.15	42,31	5,16	1,65199E-7	-5,40077E-8	0,00000E+0
1094	68.66;45.30	42,76	-2,53	1,70944E-8	-8,89895E-10	0,00000E+0
1095	68.69;26.43	41,54	15,11	2,63224E-11	-4,27563E-12	0,00000E+0
1096	68.72;49.06	42,82	-6,24	4,77358E-11	-1,35807E-11	0,00000E+0
1097	68.77;47.23	42,79	-4,44	4,27408E-11	-1,79578E-11	0,00000E+0
1098	68.82;45.39	42,76	-2,63	9,37732E-8	-4,15275E-8	0,00000E+0
1099	68.91;49.02	42,81	-6,20	4,36663E-11	-2,58422E-11	0,00000E+0
1100	68.92;2.07	41,27	39,20	3,31155E-11	1,15002E-13	0,00000E+0
1101	68.93;6.20	41,26	35,07	3,30504E-11	2,52166E-13	0,00000E+0
1102	69.01;10.31	41,23	30,92	3,27109E-11	2,02030E-13	0,00000E+0
1103	69.07;13.97	41,20	27,23	3,23940E-11	-1,92314E-13	0,00000E+0
1104	69.13;34.87	42,04	7,17	1,45253E-11	-1,00696E-11	0,00000E+0
1105	69.14;24.12	41,33	17,21	2,86463E-11	-3,39225E-12	0,00000E+0
1106	69.15;43.99	42,70	-1,28	1,51052E-8	-3,70342E-8	0,00000E+0
1107	69.53;21.81	41,15	19,34	2,99404E-11	-2,54907E-12	0,00000E+0
1108	69.58;32.58	41,74	9,16	1,94840E-11	-8,95607E-12	0,00000E+0
1109	69.70;48.76	42,78	-5,99	5,87532E-11	3,23035E-11	0,00000E+0
1110	69.92;19.50	40,98	21,48	3,12574E-11	-1,73133E-12	0,00000E+0
1111	69.98;43.72	42,66	-1,06	9,80862E-8	-1,14450E-7	0,00000E+0
1112	70.04;30.28	41,44	11,16	2,33677E-11	-8,62300E-12	0,00000E+0
1113	70.08;17.54	40,90	23,36	3,17621E-11	-1,12864E-12	0,00000E+0
1114	70.08;4.13	40,89	36,76	3,30522E-11	2,15640E-13	0,00000E+0
1115	70.09;0.00	40,89	40,89	3,30771E-11	-6,53064E-15	0,00000E+0
1116	70.11;8.24	40,87	32,62	3,29408E-11	2,28513E-13	0,00000E+0
1117	70.17;12.34	40,84	28,50	3,26991E-11	1,58345E-14	0,00000E+0
1118	70.22;42.63	42,56	-0,07	1,24214E-7	-2,65982E-7	0,00000E+0
1119	70.24;15.57	40,83	25,26	3,22671E-11	-6,20380E-13	0,00000E+0
1120	70.47;41.54	42,44	0,90	1,57930E-7	-2,34222E-7	0,00000E+0
1121	70.48;27.98	41,15	13,18	2,64330E-11	-6,65917E-12	0,00000E+0
1122	70.58;44.67	42,68	-2,00	1,53116E-10	-1,80414E-10	0,00000E+0
1123	70.68;48.46	42,73	-5,73	4,62138E-11	7,83675E-13	0,00000E+0
1124	70.69;38.98	42,19	3,21	3,27309E-7	-2,36986E-7	0,00000E+0
1125	70.80;47.13	42,71	-4,41	4,09150E-11	-1,34597E-11	0,00000E+0
1126	70.83;45.24	42,69	-2,55	3,39756E-8	-1,71603E-9	0,00000E+0
1127	70.85;45.29	42,69	-2,60	1,70055E-8	-8,57517E-10	0,00000E+0
1128	70.92;25.67	40,89	15,22	2,88462E-11	-5,85179E-12	0,00000E+0
1129	70.92;36.41	41,99	5,58	2,28404E-7	-7,25654E-8	0,00000E+0
1130	70.99;48.36	42,72	-5,64	4,41046E-11	-4,77379E-12	0,00000E+0
1131	71.26;2.05	40,50	38,45	3,30267E-11	9,24065E-14	0,00000E+0
1132	71.26;6.17	40,49	34,32	3,29606E-11	1,99544E-13	0,00000E+0
1133	71.27;10.28	40,48	30,21	3,29747E-11	4,09869E-14	0,00000E+0
1134	71.33;13.94	40,47	26,52	3,26548E-11	-4,35225E-13	0,00000E+0
1135	71.37;23.29	40,64	17,35	3,05136E-11	-3,96323E-12	0,00000E+0
1136	71.37;34.12	41,59	7,47	1,71313E-11	-1,40535E-11	0,00000E+0
1137	71.41;44.40	42,63	-1,77	1,14793E-10	-1,43800E-10	0,00000E+0
1138	71.76;20.98	40,43	19,45	3,17593E-11	-3,15688E-12	0,00000E+0
1139	71.82;31.83	41,19	9,36	2,25693E-11	-1,24426E-11	0,00000E+0
1140	71.97;48.06	42,68	-5,38	2,82190E-11	-4,74634E-11	0,00000E+0
1141	72.20;18.31	40,23	21,92	3,24751E-11	-1,66219E-12	0,00000E+0
1142	72.26;29.52	40,82	11,30	2,58098E-11	-1,04657E-11	0,00000E+0
1143	72.36;16.35	40,15	23,80	3,28173E-11	-1,10065E-12	0,00000E+0
1144	72.41;0.00	40,12	40,12	3,29567E-11	9,28795E-15	0,00000E+0
1145	72.42;4.11	40,12	36,01	3,29767E-11	1,81499E-13	0,00000E+0
1146	72.43;12.31	40,10	27,79	3,29975E-11	-1,65897E-13	0,00000E+0
1147	72.43;8.23	40,10	31,88	3,30127E-11	2,46188E-13	0,00000E+0
1148	72.46;47.91	42,66	-5,25	4,28605E-11	2,94974E-12	0,00000E+0
1149	72.68;40.82	42,20	1,37	2,80297E-7	-4,14187E-7	0,00000E+0
1150	72.70;27.22	40,48	13,27	2,90149E-11	-8,35348E-12	0,00000E+0
1151	72.72;42.82	42,48	-0,34	3,80447E-7	-4,30393E-7	0,00000E+0
1152	72.84;45.09	42,62	-2,47	1,69329E-8	-9,71373E-10	0,00000E+0
1153	72.86;45.14	42,62	-2,52	3,37836E-8	-1,73098E-9	0,00000E+0
1154	72.87;45.19	42,62	-2,57	8,69163E-8	-2,80070E-8	0,00000E+0
1155	72.91;38.26	41,83	3,58	4,49585E-7	-3,56014E-7	0,00000E+0
1156	72.97;41.74	42,31	0,57	1,88714E-7	-4,73528E-7	0,00000E+0
1157	73.06;46.42	42,63	-3,79	3,59601E-11	-1,18055E-11	0,00000E+0
1158	73.15;24.84	40,17	15,33	3,06826E-11	-6,41746E-12	0,00000E+0
1159	73.20;35.67	41,54	5,87	3,17163E-7	-9,85917E-8	0,00000E+0
1160	73.25;47.66	42,63	-5,02	3,55266E-11	-1,33084E-11	0,00000E+0
1161	73.45;14.71	39,77	25,06	3,32601E-11	-7,63012E-13	0,00000E+0
1162	73.58;2.05	39,74	37,68	3,28975E-11	9,86235E-14	0,00000E+0
1163	73.59;6.16	39,72	33,57	3,30307E-11	2,18220E-13	0,00000E+0
1164	73.60;10.26	39,71	29,46	3,30424E-11	3,81114E-14	0,00000E+0
1165	73.60;22.47	39,90	17,43	3,23460E-11	-4,52096E-12	0,00000E+0

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
1166	73.65;33.38	41,01	7,63	2,28103E-11	-1,84253E-11	0,00000E+0
1167	73.74;47.51	42,62	-4,89	4,01520E-11	4,18092E-12	0,00000E+0
1168	74.04;19.80	39,66	19,87	3,29297E-11	-2,91031E-12	0,00000E+0
1169	74.05;31.10	40,54	9,45	2,69278E-11	-1,41384E-11	0,00000E+0
1170	74.15;43.51	42,44	-1,07	4,83227E-9	-4,94550E-9	0,00000E+0
1171	74.23;47.36	42,60	-4,76	4,00724E-11	6,69222E-12	0,00000E+0
1172	74.48;17.12	39,46	22,34	3,35152E-11	-1,49608E-12	0,00000E+0
1173	74.49;28.79	40,11	11,32	3,01931E-11	-1,21513E-11	0,00000E+0
1174	74.56;45.05	42,56	-2,49	3,18074E-8	-2,10387E-9	0,00000E+0
1175	74.58;45.10	42,56	-2,54	1,59176E-8	-8,13861E-10	0,00000E+0
1176	74.73;0.00	39,36	39,36	3,28286E-11	-8,07497E-15	0,00000E+0
1177	74.74;4.09	39,35	35,25	3,28900E-11	2,59530E-13	0,00000E+0
1178	74.76;8.21	39,33	31,12	3,30943E-11	2,63197E-13	0,00000E+0
1179	74.77;46.34	42,57	-3,77	3,42432E-11	-1,18651E-11	0,00000E+0
1180	74.78;12.36	39,32	26,96	3,33788E-11	-3,27888E-15	0,00000E+0
1181	74.90;40.10	41,83	1,73	3,16725E-7	-5,19694E-7	0,00000E+0
1182	74.93;44.98	42,55	-2,43	1,57323E-8	-5,41755E-10	0,00000E+0
1183	74.94;26.50	39,73	13,24	3,21794E-11	-8,64005E-12	0,00000E+0
1184	75.19;37.51	41,32	3,80	6,26104E-7	-4,53560E-7	0,00000E+0
1185	75.19;41.01	41,99	0,98	2,58102E-7	-6,70179E-7	0,00000E+0
1186	75.39;24.12	39,40	15,28	3,37662E-11	-6,76413E-12	0,00000E+0
1187	75.47;34.93	40,93	6,00	4,17920E-7	-1,44936E-7	0,00000E+0
1188	75.47;41.93	42,19	0,26	6,01369E-7	-7,48526E-7	0,00000E+0
1189	75.52;46.95	42,55	-4,40	3,61313E-11	-1,24877E-12	0,00000E+0
1190	75.80;14.77	38,99	24,22	3,36727E-11	-6,65841E-13	0,00000E+0
1191	75.88;32.65	40,32	7,67	2,71657E-11	-2,02917E-11	0,00000E+0
1192	75.90;2.04	38,97	36,93	3,27909E-11	1,50168E-13	0,00000E+0
1193	75.92;6.15	38,96	32,81	3,29240E-11	3,17399E-13	0,00000E+0
1194	75.92;21.79	39,10	17,30	3,43916E-11	-4,06635E-12	0,00000E+0
1195	75.95;10.31	38,93	28,62	3,34270E-11	1,96232E-13	0,00000E+0
1196	76.01;46.80	42,54	-4,26	2,50044E-11	-3,48407E-11	0,00000E+0
1197	76.24;43.40	42,28	-1,12	3,15083E-7	-7,23480E-7	0,00000E+0
1198	76.28;30.36	39,78	9,42	3,13483E-11	-1,59625E-11	0,00000E+0
1199	76.29;45.02	42,51	-2,51	1,54198E-8	-6,30224E-10	0,00000E+0
1200	76.36;19.12	38,85	19,74	3,48060E-11	-2,58939E-12	0,00000E+0
1201	76.65;44.95	42,50	-2,45	2,95267E-8	-1,15256E-9	0,00000E+0
1202	76.73;28.07	39,31	11,24	3,33232E-11	-1,23762E-11	0,00000E+0
1203	77.01;44.88	42,49	-2,39	1,43435E-8	-1,01676E-9	0,00000E+0
1204	77.03;45.63	42,50	-3,14	3,09729E-11	-1,30892E-11	0,00000E+0
1205	77.05;0.00	38,60	38,60	3,26413E-11	1,01432E-14	0,00000E+0
1206	77.07;4.08	38,59	34,50	3,27749E-11	3,35415E-13	0,00000E+0
1207	77.10;8.19	38,56	30,37	3,31330E-11	5,50011E-13	0,00000E+0
1208	77.13;12.41	38,53	26,12	3,37847E-11	1,45805E-13	0,00000E+0
1209	77.16;16.83	38,54	21,71	3,46379E-11	-8,64002E-13	0,00000E+0
1210	77.18;25.78	38,92	13,14	3,52705E-11	-8,91897E-12	0,00000E+0
1211	77.35;39.23	41,19	1,96	7,05879E-7	-7,60475E-7	0,00000E+0
1212	77.54;40.51	41,52	1,00	6,28775E-7	-9,75484E-7	0,00000E+0
1213	77.63;36.64	40,54	3,89	9,29746E-7	-5,66584E-7	0,00000E+0
1214	77.66;34.19	40,16	5,97	5,28527E-7	-1,76191E-7	0,00000E+0
1215	77.67;44.95	42,47	-2,48	1,32357E-8	-2,08734E-10	0,00000E+0
1216	77.71;23.45	38,55	15,10	3,57425E-11	-6,15211E-12	0,00000E+0
1217	77.78;46.25	42,48	-3,77	2,97169E-11	-1,16139E-11	0,00000E+0
1218	77.82;41.43	41,78	0,35	1,47519E-6	-1,42764E-6	0,00000E+0
1219	78.04;44.88	42,46	-2,42	2,52939E-8	-2,25703E-9	0,00000E+0
1220	78.07;31.90	39,49	7,58	3,44061E-11	-2,13199E-11	0,00000E+0
1221	78.22;2.04	38,21	36,17	3,25717E-11	1,96486E-13	0,00000E+0
1222	78.25;21.12	38,25	17,13	3,62670E-11	-3,58709E-12	0,00000E+0
1223	78.26;6.13	38,19	32,06	3,29270E-11	5,52778E-13	0,00000E+0
1224	78.29;10.29	38,15	27,86	3,34330E-11	5,26884E-13	0,00000E+0
1225	78.42;45.56	42,46	-3,10	2,68524E-11	-1,18454E-11	0,00000E+0
1226	78.49;29.66	38,92	9,26	3,63966E-11	-1,55788E-11	0,00000E+0
1227	78.49;14.48	38,07	23,59	3,47007E-11	-5,72129E-14	0,00000E+0
1228	78.59;42.90	41,90	-1,00	2,31594E-8	-1,48958E-8	0,00000E+0
1229	78.94;27.37	38,44	11,07	3,81950E-11	-1,20832E-11	0,00000E+0
1230	79.05;18.83	37,90	19,07	3,59182E-11	-1,78535E-12	0,00000E+0
1231	79.06;44.88	42,44	-2,44	1,33319E-8	-5,03882E-10	0,00000E+0
1232	79.10;44.77	42,44	-2,34	1,09720E-8	-1,04865E-9	0,00000E+0
1233	79.37;0.00	37,84	37,84	3,24001E-11	-7,97397E-15	0,00000E+0
1234	79.39;4.07	37,83	33,76	3,25539E-11	5,35742E-13	0,00000E+0
1235	79.41;25.17	38,04	12,87	3,86053E-11	-7,63332E-12	0,00000E+0
1236	79.44;8.17	37,78	29,61	3,31159E-11	8,28965E-13	0,00000E+0
1237	79.49;45.51	42,43	-3,08	2,33087E-11	-1,01817E-11	0,00000E+0
1238	79.52;12.32	37,72	25,40	3,40741E-11	8,57244E-13	0,00000E+0
1239	79.79;38.36	40,24	1,88	8,63463E-7	-7,06000E-7	0,00000E+0
1240	79.82;35.90	39,64	3,74	1,14274E-6	-6,12902E-7	0,00000E+0
1241	79.84;16.54	37,59	21,06	3,56594E-11	-1,76520E-13	0,00000E+0
1242	79.85;33.45	39,21	5,76	6,23726E-7	-2,13223E-7	0,00000E+0
1243	79.94;22.84	37,69	14,85	3,88887E-11	-5,01760E-12	0,00000E+0
1244	79.98;39.64	40,57	0,93	1,01442E-6	-1,03308E-6	0,00000E+0
1245	80.12;44.77	42,41	-2,36	1,87559E-8	-1,33798E-9	0,00000E+0
1246	80.12;44.82	42,41	-2,41	9,37438E-9	-1,56403E-10	0,00000E+0
1247	80.17;40.93	41,00	0,07	2,10031E-6	-1,11929E-6	0,00000E+0
1248	80.27;31.20	38,53	7,32	3,94267E-11	-2,05430E-11	0,00000E+0
1249	80.54;2.03	37,46	35,43	3,23043E-11	3,28621E-13	0,00000E+0
1250	80.56;20.70	37,38	16,68	3,81235E-11	-1,97616E-12	0,00000E+0
1251	80.58;6.11	37,42	31,31	3,26607E-11	8,26865E-13	0,00000E+0
1252	80.68;10.20	37,35	27,15	3,36436E-11	1,13909E-12	0,00000E+0
1253	80.68;42.80	41,34	-1,46	2,95742E-6	-2,86814E-6	0,00000E+0
1254	80.70;28.96	37,96	9,00	4,12256E-11	-1,50684E-11	0,00000E+0
1255	80.88;14.38	37,23	22,85	3,49104E-11	7,79017E-13	0,00000E+0
1256	81.16;26.76	37,48	10,72	4,14119E-11	-1,05795E-11	0,00000E+0
1257	81.19;44.67	42,40	-2,27	1,52851E-6	-1,79568E-6	0,00000E+0
1258	81.19;44.72	42,40	-2,32	8,30920E-9	-1,51301E-9	0,00000E+0

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
1259	81.19;44.77	42,40	-2,37	5,53931E-9	-5,25116E-10	0,00000E+0
1260	81.35;18.41	37,05	18,64	3,75754E-11	-3,60604E-13	0,00000E+0
1261	81.62;41.95	40,62	-1,33	6,63877E-7	-3,39995E-7	0,00000E+0
1262	81.63;24.56	37,10	12,54	4,17244E-11	-6,27550E-12	0,00000E+0
1263	81.69;0.00	37,10	37,10	3,20124E-11	7,49775E-15	0,00000E+0
1264	81.69;44.60	41,75	-2,86	1,28545E-9	-3,44033E-10	0,00000E+0
1265	81.69;44.65	41,76	-2,89	1,25947E-9	-3,09473E-10	0,00000E+0
1266	81.72;4.06	37,07	33,02	3,22511E-11	7,33474E-13	0,00000E+0
1267	81.77;8.13	37,01	28,88	3,29183E-11	1,37901E-12	0,00000E+0
1268	81.92;12.23	36,90	24,68	3,42368E-11	1,55525E-12	0,00000E+0
1269	82.04;32.71	38,12	5,42	7,04197E-7	-2,47231E-7	0,00000E+0
1270	82.13;43.82	41,01	-2,81	8,69060E-10	-5,39595E-10	0,00000E+0
1271	82.19;44.53	41,19	-3,35	1,62305E-9	-6,04157E-10	0,00000E+0
1272	82.19;16.34	36,75	20,41	3,63154E-11	1,31273E-12	0,00000E+0
1273	82.24;37.49	39,04	1,55	1,26843E-6	-8,27104E-7	0,00000E+0
1274	82.25;22.42	36,75	14,33	4,06255E-11	-3,09957E-12	0,00000E+0
1275	82.27;35.03	38,45	3,42	1,34413E-6	-6,08178E-7	0,00000E+0
1276	82.33;39.14	39,48	0,34	1,00490E-6	-6,88142E-7	0,00000E+0
1277	82.47;30.46	37,45	6,98	4,58099E-11	-1,91011E-11	0,00000E+0
1278	82.52;40.43	39,84	-0,59	4,81411E-7	-3,96102E-7	0,00000E+0
1279	82.63;43.75	40,59	-3,16	8,14401E-10	-3,21131E-10	0,00000E+0
1280	82.86;2.03	36,72	34,69	3,18642E-11	4,14006E-13	0,00000E+0
1281	82.86;20.28	36,47	16,19	3,96775E-11	-3,23120E-13	0,00000E+0
1282	82.87;28.31	36,91	8,61	4,64320E-11	-1,27327E-11	0,00000E+0
1283	82.91;6.07	36,67	30,59	3,23884E-11	1,27518E-12	0,00000E+0
1284	83.01;44.34	40,44	-3,90	8,55469E-10	-2,44704E-10	0,00000E+0
1285	83.01;10.16	36,57	26,41	3,33751E-11	1,81970E-12	0,00000E+0
1286	83.06;42.97	40,08	-2,89	2,26464E-8	-8,80599E-9	0,00000E+0
1287	83.23;14.18	36,41	22,23	3,53938E-11	2,08583E-12	0,00000E+0
1288	83.34;26.11	36,47	10,36	4,65220E-11	-8,25085E-12	0,00000E+0
1289	83.45;43.56	39,97	-3,59	7,02602E-10	-2,15798E-10	0,00000E+0
1290	83.70;18.21	36,16	17,95	3,81042E-11	1,44199E-12	0,00000E+0
1291	83.75;24.07	36,16	12,09	4,47021E-11	-3,06246E-12	0,00000E+0
1292	83.83;44.15	39,82	-4,33	7,18050E-10	-1,59620E-10	0,00000E+0
1293	83.97;41.45	39,24	-2,21	6,37690E-10	-2,00593E-10	0,00000E+0
1294	84.00;0.00	36,36	36,36	3,15266E-11	-5,01702E-15	0,00000E+0
1295	84.04;4.04	36,33	32,29	3,17487E-11	1,02857E-12	0,00000E+0
1296	84.11;8.09	36,25	28,16	3,25870E-11	1,92507E-12	0,00000E+0
1297	84.23;12.15	36,11	23,96	3,40788E-11	2,68440E-12	0,00000E+0
1298	84.24;31.97	36,91	4,95	7,92142E-7	-2,57119E-7	0,00000E+0
1299	84.37;21.93	35,86	13,92	4,32192E-11	-2,48649E-13	0,00000E+0
1300	84.46;34.29	37,25	2,96	1,51323E-6	-6,48807E-7	0,00000E+0
1301	84.54;16.14	35,89	19,76	3,66873E-11	2,82492E-12	0,00000E+0
1302	84.59;43.29	39,19	-4,10	6,98005E-10	-1,87809E-10	0,00000E+0
1303	84.64;29.81	36,28	6,46	5,11439E-11	-1,68057E-11	0,00000E+0
1304	84.69;36.61	37,69	1,07	1,15727E-6	-5,89707E-7	0,00000E+0
1305	84.78;38.27	38,07	-0,20	1,45951E-6	-7,62638E-7	0,00000E+0
1306	84.87;39.93	38,48	-1,45	4,55018E-7	-2,43351E-7	0,00000E+0
1307	84.98;43.88	39,03	-4,85	7,20699E-10	-1,46017E-10	0,00000E+0
1308	85.01;20.03	35,61	15,57	4,07449E-11	2,48526E-12	0,00000E+0
1309	85.04;27.66	35,77	8,12	5,18200E-11	-1,00192E-11	0,00000E+0
1310	85.18;2.01	35,99	33,97	3,12955E-11	6,08778E-13	0,00000E+0
1311	85.23;6.06	35,92	29,86	3,18213E-11	1,68985E-12	0,00000E+0
1312	85.33;10.08	35,80	25,72	3,30837E-11	2,78402E-12	0,00000E+0
1313	85.46;25.62	35,42	9,80	4,91842E-11	-4,57029E-12	0,00000E+0
1314	85.50;41.77	38,41	-3,36	3,37090E-9	-7,92384E-10	0,00000E+0
1315	85.54;14.11	35,60	21,49	3,51155E-11	3,46954E-12	0,00000E+0
1316	85.85;17.96	35,34	17,38	3,88264E-11	3,89018E-12	0,00000E+0
1317	85.87;23.59	35,18	11,59	4,70831E-11	1,65458E-13	0,00000E+0
1318	86.12;43.61	38,25	-5,36	1,50188E-9	-2,44932E-10	0,00000E+0
1319	86.32;0.00	35,64	35,64	3,08251E-11	1,18802E-15	0,00000E+0
1320	86.35;4.03	35,60	31,57	3,11204E-11	1,32300E-12	0,00000E+0
1321	86.42;8.07	35,50	27,44	3,19604E-11	2,63329E-12	0,00000E+0
1322	86.43;31.22	35,57	4,35	8,66863E-7	-2,83557E-7	0,00000E+0
1323	86.52;21.69	34,92	13,23	4,40583E-11	3,18507E-12	0,00000E+0
1324	86.55;12.07	35,33	23,25	3,36794E-11	3,81588E-12	0,00000E+0
1325	86.67;41.71	37,74	-3,97	5,97947E-10	-1,09823E-10	0,00000E+0
1326	86.77;16.06	35,08	19,01	3,64975E-11	4,91754E-12	0,00000E+0
1327	86.83;29.07	34,96	5,89	5,94654E-11	-1,59360E-11	0,00000E+0
1328	86.91;33.42	35,79	2,37	1,60138E-6	-7,25582E-7	0,00000E+0
1329	87.13;37.77	36,79	-0,98	7,08900E-7	-3,61859E-7	0,00000E+0
1330	87.13;35.74	36,26	0,52	1,26086E-6	-6,92831E-7	0,00000E+0
1331	87.14;27.03	34,58	7,56	5,78193E-11	-2,58088E-12	0,00000E+0
1332	87.16;19.79	34,73	14,95	4,12717E-11	5,36337E-12	0,00000E+0
1333	87.22;39.43	37,16	-2,27	3,52154E-10	-1,24414E-10	0,00000E+0
1334	87.29;43.55	37,53	-6,02	6,39111E-10	-6,60145E-11	0,00000E+0
1335	87.49;2.01	35,27	33,26	3,05316E-11	7,17122E-13	0,00000E+0
1336	87.54;6.04	35,20	29,16	3,10996E-11	2,26566E-12	0,00000E+0
1337	87.56;24.99	34,32	9,33	5,41578E-11	1,49028E-12	0,00000E+0
1338	87.64;10.06	35,05	24,99	3,23664E-11	3,68231E-12	0,00000E+0
1339	87.65;23.24	34,33	11,10	4,85489E-11	4,94569E-12	0,00000E+0
1340	87.78;14.03	34,82	20,79	3,46799E-11	5,27041E-12	0,00000E+0
1341	88.09;17.89	34,48	16,59	3,84214E-11	6,47542E-12	0,00000E+0
1342	88.29;21.34	34,15	12,81	4,48001E-11	7,38320E-12	0,00000E+0
1343	88.47;43.50	36,88	-6,62	5,82111E-10	-3,02176E-11	0,00000E+0
1344	88.62;30.48	34,10	3,62	1,05979E-6	-2,50328E-7	0,00000E+0
1345	88.63;0.00	34,93	34,93	2,99998E-11	5,52419E-16	0,00000E+0
1346	88.67;4.02	34,89	30,87	3,02355E-11	1,64571E-12	0,00000E+0
1347	88.73;8.04	34,77	26,73	3,11499E-11	3,34283E-12	0,00000E+0
1348	88.84;12.05	34,57	22,51	3,28040E-11	5,11224E-12	0,00000E+0
1349	88.93;28.44	33,54	5,10	6,17641E-11	-9,77958E-12	0,00000E+0
1350	89.01;15.98	34,27	18,28	3,58493E-11	7,01934E-12	0,00000E+0
1351	89.02;41.21	36,46	-4,75	5,47167E-10	-9,49854E-11	0,00000E+0

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
1352	89.10;32.68	34,35	1,68	1,86829E-6	-8,62497E-7	0,00000E+0
1353	89.24;26.40	33,31	6,91	6,23058E-11	2,22431E-12	0,00000E+0
1354	89.27;19.85	33,86	14,01	4,09315E-11	9,21492E-12	0,00000E+0
1355	89.33;24.64	33,37	8,73	5,72329E-11	8,00699E-12	0,00000E+0
1356	89.42;22.89	33,49	10,60	4,89445E-11	1,05053E-11	0,00000E+0
1357	89.57;38.93	35,94	-2,99	3,72204E-7	-2,09675E-7	0,00000E+0
1358	89.57;36.90	35,39	-1,51	8,89213E-7	-5,39544E-7	0,00000E+0
1359	89.58;34.87	34,76	-0,11	1,01390E-6	-6,46677E-7	0,00000E+0
1360	89.81;2.01	34,58	32,57	2,95777E-11	9,31032E-13	0,00000E+0
1361	89.86;6.03	34,49	28,46	3,01467E-11	2,72437E-12	0,00000E+0
1362	89.86;43.43	36,18	-7,25	5,26375E-10	-3,18419E-11	0,00000E+0
1363	89.92;10.04	34,32	24,28	3,13415E-11	4,78244E-12	0,00000E+0
1364	90.07;14.01	34,04	20,03	3,36638E-11	6,89733E-12	0,00000E+0
1365	90.19;17.95	33,67	15,73	3,75905E-11	9,75731E-12	0,00000E+0
1366	90.40;21.40	33,21	11,81	4,35892E-11	1,19894E-11	0,00000E+0
1367	90.41;41.15	35,80	-5,35	4,95350E-10	-9,02453E-11	0,00000E+0
1368	90.81;29.74	32,17	2,43	1,33738E-6	-7,43262E-7	0,00000E+0
1369	90.95;0.00	34,25	34,25	2,89394E-11	-6,75585E-15	0,00000E+0
1370	90.98;4.02	34,20	30,18	2,92112E-11	1,97029E-12	0,00000E+0
1371	91.04;8.04	34,06	26,02	2,99927E-11	4,02148E-12	0,00000E+0
1372	91.12;12.03	33,83	21,80	3,16315E-11	6,41761E-12	0,00000E+0
1373	91.12;27.70	31,82	4,12	9,24685E-11	1,46567E-11	0,00000E+0
1374	91.25;16.01	33,48	17,47	3,43607E-11	9,17041E-12	0,00000E+0
1375	91.26;43.36	35,54	-7,82	4,78403E-10	-2,60319E-11	0,00000E+0
1376	91.38;19.91	33,00	13,09	3,95428E-11	1,28426E-11	0,00000E+0
1377	91.39;25.60	32,02	6,42	5,87297E-11	1,65133E-11	0,00000E+0
1378	91.49;23.84	32,32	8,48	4,97114E-11	2,05171E-11	0,00000E+0
1379	91.54;31.81	32,50	0,70	1,07211E-6	-6,77941E-7	0,00000E+0
1380	91.92;38.43	34,84	-3,59	2,84016E-10	-1,27434E-10	0,00000E+0
1381	91.92;36.40	34,19	-2,21	4,08162E-7	-3,32516E-7	0,00000E+0
1382	92.02;34.00	33,23	-0,77	4,21593E-7	-4,26498E-7	0,00000E+0
1383	92.12;2.01	33,90	31,89	2,84619E-11	1,03330E-12	0,00000E+0
1384	92.16;6.03	33,81	27,77	2,89047E-11	3,27870E-12	0,00000E+0
1385	92.23;10.04	33,61	23,57	3,01006E-11	5,65154E-12	0,00000E+0
1386	92.30;14.03	33,31	19,27	3,19264E-11	8,72879E-12	0,00000E+0
1387	92.43;17.97	32,85	14,88	3,58798E-11	1,25544E-11	0,00000E+0
1388	92.46;22.35	32,15	9,80	4,37439E-11	2,04173E-11	0,00000E+0
1389	92.76;40.65	34,76	-5,89	4,41044E-10	-9,81793E-11	0,00000E+0
1390	92.87;43.29	34,88	-8,40	4,15985E-10	-4,29202E-11	0,00000E+0
1391	93.00;29.00	29,46	0,46	1,72477E-6	-1,00123E-6	0,00000E+0
1392	93.26;0.00	33,59	33,59	2,77625E-11	6,51849E-15	0,00000E+0
1393	93.27;26.90	30,31	3,41	7,75447E-11	4,80205E-11	0,00000E+0
1394	93.28;28.92	28,95	0,02	2,37525E-6	-7,35492E-7	0,00000E+0
1395	93.30;29.04	28,97	-0,07	2,57453E-6	-5,31460E-7	0,00000E+0
1396	93.30;4.02	33,54	29,52	2,79395E-11	2,23028E-12	0,00000E+0
1397	93.35;8.04	33,39	25,34	2,86578E-11	4,70772E-12	0,00000E+0
1398	93.42;12.07	33,12	21,05	2,99428E-11	7,46503E-12	0,00000E+0
1399	93.48;16.03	32,73	16,70	3,23491E-11	1,13551E-11	0,00000E+0
1400	93.55;24.80	31,05	6,25	3,70453E-11	3,14746E-11	0,00000E+0
1401	93.55;26.82	30,16	3,34	5,46320E-11	6,29417E-11	0,00000E+0
1402	93.56;28.85	28,50	-0,35	9,32662E-7	-9,50469E-8	0,00000E+0
1403	93.57;19.96	32,15	12,19	3,63233E-11	1,60355E-11	0,00000E+0
1404	93.57;28.96	28,48	-0,48	2,02101E-6	1,53879E-7	0,00000E+0
1405	93.59;29.07	28,45	-0,62	7,20535E-5	-2,97087E-6	0,00000E+0
1406	93.74;31.07	30,62	-0,45	1,56779E-6	-2,01408E-6	0,00000E+0
1407	94.03;31.10	30,50	-0,60	1,00990E-6	-2,26426E-6	0,00000E+0
1408	94.27;37.93	33,85	-4,08	2,07205E-7	-2,18477E-7	0,00000E+0
1409	94.37;35.53	32,89	-2,64	4,53746E-7	-5,68752E-7	0,00000E+0
1410	94.38;40.57	34,14	-6,43	3,83617E-10	-1,12744E-10	0,00000E+0
1411	94.44;2.01	33,26	31,25	2,71398E-11	1,20795E-12	0,00000E+0
1412	94.47;33.13	31,71	-1,42	1,77244E-7	-7,12598E-7	0,00000E+0
1413	94.48;6.04	33,15	27,12	2,75826E-11	3,64757E-12	0,00000E+0
1414	94.49;43.21	34,31	-8,90	3,59221E-10	-5,95748E-11	0,00000E+0
1415	94.53;10.07	32,93	22,86	2,83082E-11	6,55145E-12	0,00000E+0
1416	94.60;14.06	32,59	18,53	3,01268E-11	1,00470E-11	0,00000E+0
1417	94.62;18.02	32,10	14,07	3,21516E-11	1,52660E-11	0,00000E+0
1418	94.65;22.41	31,24	8,83	3,92828E-11	2,52615E-11	0,00000E+0
1419	95.54;26.28	29,55	3,27	3,71136E-11	4,23202E-11	0,00000E+0
1420	95.54;28.30	28,37	0,07	3,14338E-8	-1,23864E-7	0,00000E+0
1421	95.56;28.41	28,37	-0,05	1,31486E-7	9,14951E-8	0,00000E+0
1422	95.57;0.00	32,97	32,97	2,63977E-11	-1,27445E-14	0,00000E+0
1423	95.61;4.03	32,91	28,88	2,65575E-11	2,49492E-12	0,00000E+0
1424	95.68;8.07	32,73	24,67	2,70288E-11	5,14530E-12	0,00000E+0
1425	95.72;12.10	32,45	20,35	2,80210E-11	8,53679E-12	0,00000E+0
1426	95.75;16.11	32,01	15,90	2,95647E-11	1,25713E-11	0,00000E+0
1427	95.76;20.02	31,39	11,37	3,21276E-11	1,96771E-11	0,00000E+0
1428	95.83;28.96	28,36	-0,60	1,07530E-4	-6,81100E-6	0,00000E+0
1429	95.85;28.91	28,36	-0,55	1,23155E-4	-8,24396E-6	0,00000E+0
1430	96.06;24.14	30,23	6,09	3,50587E-11	3,31560E-11	0,00000E+0
1431	96.27;40.01	33,43	-6,59	3,74574E-10	-1,35262E-10	0,00000E+0
1432	96.27;30.99	29,81	-1,18	3,26480E-7	-8,86923E-7	0,00000E+0
1433	96.38;42.65	33,66	-8,99	3,57352E-10	-8,51939E-11	0,00000E+0
1434	96.44;37.53	33,04	-4,49	2,24170E-10	-1,37039E-10	0,00000E+0
1435	96.54;35.13	32,01	-3,12	2,04458E-7	-3,09055E-7	0,00000E+0
1436	96.63;32.82	30,84	-1,98	7,90493E-11	-1,64691E-10	0,00000E+0
1437	96.75;2.01	32,65	30,64	2,57429E-11	1,27380E-12	0,00000E+0
1438	96.81;6.06	32,53	26,47	2,59116E-11	4,01352E-12	0,00000E+0
1439	96.87;10.09	32,29	22,20	2,66356E-11	7,10065E-12	0,00000E+0
1440	96.87;14.15	31,93	17,78	2,72589E-11	1,11367E-11	0,00000E+0
1441	96.89;18.11	31,39	13,28	2,92099E-11	1,67121E-11	0,00000E+0
1442	97.16;21.75	30,57	8,82	2,80368E-11	2,52740E-11	0,00000E+0
1443	97.53;27.76	28,32	0,56	-7,70456E-9	-1,01970E-7	0,00000E+0
1444	97.71;19.89	30,83	10,94	2,77303E-11	1,96335E-11	0,00000E+0

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
1445	97.82;28.25	28,32	0,07	4,45374E-8	-1,35207E-8	0,00000E+0
1446	97.88;0.00	32,37	32,37	2,49579E-11	9,95591E-15	0,00000E+0
1447	97.94;4.03	32,31	28,28	2,50116E-11	2,61518E-12	0,00000E+0
1448	98.01;8.09	32,12	24,03	2,52963E-11	5,59633E-12	0,00000E+0
1449	98.02;16.19	31,36	15,17	2,65530E-11	1,38483E-11	0,00000E+0
1450	98.05;25.62	29,14	3,51	2,02266E-11	3,78287E-11	0,00000E+0
1451	98.07;28.84	28,31	-0,53	3,87055E-5	-2,29009E-6	0,00000E+0
1452	98.10;28.79	28,31	-0,48	1,02355E-4	-5,47770E-6	0,00000E+0
1453	98.10;12.19	31,80	19,61	2,57413E-11	8,98272E-12	0,00000E+0
1454	98.12;28.74	28,31	-0,43	6,07898E-5	-3,69172E-6	0,00000E+0
1455	98.27;42.10	33,00	-9,10	3,49578E-10	-1,04331E-10	0,00000E+0
1456	98.43;30.68	29,34	-1,34	1,51732E-7	-1,07402E-6	0,00000E+0
1457	98.44;39.61	32,68	-6,93	3,34875E-10	-1,31460E-10	0,00000E+0
1458	98.56;23.49	29,72	6,23	2,36016E-11	2,92276E-11	0,00000E+0
1459	98.62;37.13	32,30	-4,83	1,79537E-7	-2,88271E-7	0,00000E+0
1460	98.70;34.82	31,32	-3,49	1,27717E-7	-2,68414E-7	0,00000E+0
1461	98.79;32.51	30,23	-2,28	8,19339E-8	-2,42833E-7	0,00000E+0
1462	98.84;17.98	30,88	12,90	2,50813E-11	1,67792E-11	0,00000E+0
1463	99.07;2.02	32,07	30,05	2,41804E-11	1,35658E-12	0,00000E+0
1464	99.11;21.63	30,08	8,46	2,41667E-11	2,40665E-11	0,00000E+0
1465	99.14;6.06	31,94	25,88	2,43488E-11	4,17856E-12	0,00000E+0
1466	99.25;10.18	31,68	21,50	2,43497E-11	7,51381E-12	0,00000E+0
1467	99.25;14.24	31,30	17,06	2,49826E-11	1,16505E-11	0,00000E+0
1468	99.66;19.76	30,35	10,59	2,38053E-11	1,95546E-11	0,00000E+0
1469	99.80;27.14	28,27	1,14	2,95513E-8	-8,74646E-9	0,00000E+0
1470	100.09;27.63	28,27	0,64	5,97422E-8	-1,84454E-8	0,00000E+0
1471	100.19;0.00	31,82	31,82	2,34279E-11	-1,33245E-14	0,00000E+0
1472	100.25;41.51	32,33	-9,18	3,28267E-10	-9,54337E-11	0,00000E+0
1473	100.26;4.03	31,74	27,71	2,34187E-11	2,74125E-12	0,00000E+0
1474	100.31;25.00	28,91	3,91	1,76594E-11	2,92375E-11	0,00000E+0
1475	100.31;28.73	28,27	-0,46	7,63511E-5	-4,31621E-6	0,00000E+0
1476	100.34;28.68	28,27	-0,41	1,55727E-4	-8,50391E-6	0,00000E+0
1477	100.37;8.09	31,55	23,46	2,34299E-11	5,65411E-12	0,00000E+0
1478	100.38;28.63	28,27	-0,36	8,76915E-5	-4,44810E-6	0,00000E+0
1479	100.42;39.03	32,03	-6,99	3,10561E-10	-1,26293E-10	0,00000E+0
1480	100.48;12.28	31,21	18,93	2,34094E-11	9,45917E-12	0,00000E+0
1481	100.59;16.62	30,67	14,05	2,30587E-11	1,41240E-11	0,00000E+0
1482	100.67;30.57	29,10	-1,46	8,09982E-8	-4,59239E-7	0,00000E+0
1483	100.73;22.80	29,44	6,64	1,98483E-11	2,54627E-11	0,00000E+0
1484	100.79;36.73	31,64	-5,08	1,76666E-10	-1,30336E-10	0,00000E+0
1485	100.88;34.42	30,73	-3,69	2,87118E-8	-6,65934E-8	0,00000E+0
1486	100.95;32.20	29,80	-2,40	3,62245E-11	-1,28606E-10	0,00000E+0
1487	101.28;20.94	29,76	8,82	2,03342E-11	2,05815E-11	0,00000E+0
1488	101.38;2.02	31,53	29,51	2,26487E-11	1,37002E-12	0,00000E+0
1489	101.41;18.40	30,21	11,81	2,16488E-11	1,70118E-11	0,00000E+0
1490	101.50;6.06	31,39	25,33	2,24960E-11	4,23703E-12	0,00000E+0
1491	101.60;10.19	31,13	20,94	2,24943E-11	7,55821E-12	0,00000E+0
1492	101.82;14.66	30,65	15,99	2,15856E-11	1,19267E-11	0,00000E+0
1493	102.06;26.51	28,22	1,71	3,48409E-8	-9,44939E-9	0,00000E+0
1494	102.23;40.93	31,72	-9,21	3,00907E-10	-8,92961E-11	0,00000E+0
1495	102.35;27.51	28,22	0,71	6,89704E-8	-2,26824E-8	0,00000E+0
1496	102.47;24.32	28,77	4,45	1,34855E-11	2,51198E-11	0,00000E+0
1497	102.50;0.00	31,29	31,29	2,18822E-11	9,84112E-15	0,00000E+0
1498	102.55;28.62	28,23	-0,39	8,64653E-5	-6,83234E-6	0,00000E+0
1499	102.59;4.02	31,22	27,20	2,17933E-11	2,69741E-12	0,00000E+0
1500	102.60;38.63	31,41	-7,22	2,77511E-10	-1,14132E-10	0,00000E+0
1501	102.60;28.57	28,22	-0,34	1,91907E-4	-1,01664E-5	0,00000E+0
1502	102.65;28.51	28,22	-0,29	1,07876E-4	-5,46644E-6	0,00000E+0
1503	102.73;8.10	31,02	22,92	2,15707E-11	5,72316E-12	0,00000E+0
1504	102.83;30.26	28,85	-1,41	4,01379E-8	-3,39761E-7	0,00000E+0
1505	102.89;22.12	29,21	7,09	1,64281E-11	2,13524E-11	0,00000E+0
1506	102.93;12.25	30,67	18,42	2,10606E-11	9,09745E-12	0,00000E+0
1507	102.96;36.32	31,05	-5,27	8,22657E-8	-1,46310E-7	0,00000E+0
1508	103.03;19.58	29,68	10,10	1,81203E-11	1,76447E-11	0,00000E+0
1509	103.04;34.11	30,27	-3,84	4,06217E-8	-1,00214E-7	0,00000E+0
1510	103.11;31.89	29,45	-2,45	2,75749E-11	-1,10956E-10	0,00000E+0
1511	103.16;17.04	30,06	13,02	1,96136E-11	1,42782E-11	0,00000E+0
1512	103.71;2.00	31,02	29,02	2,10409E-11	1,33976E-12	0,00000E+0
1513	103.82;6.05	30,89	24,83	2,08875E-11	4,16618E-12	0,00000E+0
1514	104.05;10.16	30,61	20,45	2,02335E-11	7,28422E-12	0,00000E+0
1515	104.27;14.63	30,15	15,52	1,92840E-11	1,13660E-11	0,00000E+0
1516	104.30;40.32	31,13	-9,19	2,71872E-10	-7,96121E-11	0,00000E+0
1517	104.33;25.89	28,16	2,27	3,81212E-8	-1,02683E-8	0,00000E+0
1518	104.62;26.89	28,16	1,27	7,54172E-8	-2,41743E-8	0,00000E+0
1519	104.67;38.01	30,85	-7,16	2,49002E-10	-1,04737E-10	0,00000E+0
1520	104.74;23.70	28,61	4,92	1,25043E-11	2,07164E-11	0,00000E+0
1521	104.80;28.51	28,17	-0,33	9,76747E-5	-5,73632E-6	0,00000E+0
1522	104.80;0.00	30,81	30,81	2,03560E-11	-8,59269E-15	0,00000E+0
1523	104.84;28.45	28,17	-0,28	2,16343E-4	-1,13458E-5	0,00000E+0
1524	104.91;28.40	28,17	-0,23	1,18968E-4	-5,99564E-6	0,00000E+0
1525	104.92;4.01	30,73	26,72	2,01896E-11	2,65550E-12	0,00000E+0
1526	105.08;30.14	28,70	-1,44	4,98619E-8	-3,19534E-7	0,00000E+0
1527	105.08;8.04	30,54	22,49	1,97936E-11	5,43318E-12	0,00000E+0
1528	105.12;21.40	29,01	7,61	1,45275E-11	1,84493E-11	0,00000E+0
1529	105.13;35.92	30,53	-5,39	1,38636E-10	-1,06998E-10	0,00000E+0
1530	105.21;33.71	29,84	-3,87	3,73591E-11	-9,48624E-11	0,00000E+0
1531	105.26;18.86	29,41	10,55	1,63137E-11	1,49970E-11	0,00000E+0
1532	105.27;31.58	29,15	-2,43	2,40696E-11	-9,64915E-11	0,00000E+0
1533	105.37;12.21	30,18	17,97	1,88618E-11	8,74237E-12	0,00000E+0
1534	105.82;16.57	29,64	13,07	1,70498E-11	1,26194E-11	0,00000E+0
1535	106.01;2.00	30,55	28,55	1,95388E-11	1,30570E-12	0,00000E+0
1536	106.17;6.00	30,42	24,42	1,91614E-11	3,92781E-12	0,00000E+0
1537	106.37;39.71	30,60	-9,10	2,42828E-10	-7,16552E-11	0,00000E+0

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
1538	106.40;10.10	30,15	20,05	1,85048E-11	6,88614E-12	0,00000E+0
1539	106.59;25.27	28,10	2,83	4,71616E-8	-1,29209E-8	0,00000E+0
1540	106.84;37.61	30,35	-7,26	2,21459E-10	-9,06912E-11	0,00000E+0
1541	106.88;26.78	28,10	1,32	8,16359E-8	-2,62854E-8	0,00000E+0
1542	106.93;14.16	29,72	15,56	1,69122E-11	9,90055E-12	0,00000E+0
1543	106.97;22.98	28,49	5,52	1,06028E-11	1,77169E-11	0,00000E+0
1544	107.04;28.39	28,11	-0,28	1,06997E-4	-6,03426E-6	0,00000E+0
1545	107.11;28.34	28,11	-0,23	2,42094E-4	-1,25709E-5	0,00000E+0
1546	107.11;0.00	30,35	30,35	1,88678E-11	7,42491E-15	0,00000E+0
1547	107.17;28.29	28,11	-0,18	1,59617E-4	-8,06920E-6	0,00000E+0
1548	107.23;3.98	30,28	26,30	1,86793E-11	2,48888E-12	0,00000E+0
1549	107.24;29.83	28,51	-1,32	4,02570E-8	-2,83863E-7	0,00000E+0
1550	107.31;35.52	30,07	-5,45	3,68835E-8	-6,52053E-8	0,00000E+0
1551	107.36;20.68	28,83	8,15	1,27836E-11	1,54617E-11	0,00000E+0
1552	107.37;33.40	29,49	-3,91	1,82050E-8	-4,42841E-8	0,00000E+0
1553	107.43;7.99	30,09	22,11	1,81032E-11	5,13651E-12	0,00000E+0
1554	107.43;31.27	28,90	-2,37	2,09518E-11	-8,26844E-11	0,00000E+0
1555	107.74;12.02	29,77	17,75	1,70422E-11	7,95496E-12	0,00000E+0
1556	107.92;18.39	29,08	10,69	1,38463E-11	1,30514E-11	0,00000E+0
1557	108.33;1.98	30,12	28,14	1,80672E-11	1,18891E-12	0,00000E+0
1558	108.48;16.10	29,27	13,17	1,48300E-11	1,08630E-11	0,00000E+0
1559	108.48;5.97	29,99	24,02	1,76885E-11	3,68957E-12	0,00000E+0
1560	108.54;39.07	30,12	-8,95	2,15069E-10	-6,32145E-11	0,00000E+0
1561	108.77;9.91	29,75	19,84	1,67765E-11	6,18195E-12	0,00000E+0
1562	108.86;24.65	28,03	3,38	4,36886E-8	-1,21052E-8	0,00000E+0
1563	109.00;36.98	29,89	-7,08	1,94862E-10	-8,12090E-11	0,00000E+0
1564	109.15;26.66	28,04	1,37	8,61231E-8	-2,77918E-8	0,00000E+0
1565	109.24;22.35	28,36	6,01	1,00004E-11	1,48650E-11	0,00000E+0
1566	109.28;28.28	28,05	-0,23	1,19440E-4	-6,63575E-6	0,00000E+0
1567	109.29;13.96	29,36	15,40	1,51575E-11	8,91067E-12	0,00000E+0
1568	109.35;28.23	28,05	-0,18	2,62970E-4	-1,36240E-5	0,00000E+0
1569	109.42;0.00	29,94	29,94	1,74886E-11	-2,95793E-15	0,00000E+0
1570	109.44;28.17	28,04	-0,13	1,43831E-4	-7,23389E-6	0,00000E+0
1571	109.48;29.72	28,39	-1,33	5,01821E-8	-2,73400E-7	0,00000E+0
1572	109.48;35.12	29,66	-5,46	1,08814E-10	-8,15727E-11	0,00000E+0
1573	109.54;3.96	29,87	25,91	1,72367E-11	2,31803E-12	0,00000E+0
1574	109.54;33.00	29,16	-3,83	2,90098E-11	-7,05152E-11	0,00000E+0
1575	109.60;30.97	28,68	-2,29	1,90680E-11	-7,13540E-11	0,00000E+0
1576	109.67;20.11	28,63	8,52	1,15069E-11	1,32960E-11	0,00000E+0
1577	109.72;7.91	29,70	21,79	1,66326E-11	4,67953E-12	0,00000E+0
1578	110.11;11.83	29,41	17,58	1,53878E-11	7,11749E-12	0,00000E+0
1579	110.23;17.82	28,84	11,02	1,26554E-11	1,10405E-11	0,00000E+0
1580	110.63;1.98	29,72	27,74	1,67276E-11	1,12465E-12	0,00000E+0
1581	110.70;38.43	29,69	-8,74	1,88826E-10	-5,54941E-11	0,00000E+0
1582	110.74;15.71	28,99	13,28	1,34551E-11	9,50719E-12	0,00000E+0
1583	110.78;5.89	29,61	23,71	1,62734E-11	3,30320E-12	0,00000E+0
1584	111.06;9.83	29,39	19,56	1,53555E-11	5,61159E-12	0,00000E+0
1585	111.12;24.03	27,96	3,93	4,60631E-8	-1,26248E-8	0,00000E+0
1586	111.18;36.57	29,50	-7,07	1,72724E-10	-6,90971E-11	0,00000E+0
1587	111.41;26.04	27,96	1,92	9,10131E-8	-2,88000E-8	0,00000E+0
1588	111.52;28.17	27,98	-0,18	1,08384E-4	-5,92541E-6	0,00000E+0
1589	111.55;21.79	28,22	6,44	8,77722E-12	1,26766E-11	0,00000E+0
1590	111.56;13.58	29,06	15,49	1,38390E-11	7,66908E-12	0,00000E+0
1591	111.61;28.11	27,98	-0,13	2,84135E-4	-1,45906E-5	0,00000E+0
1592	111.64;29.41	28,23	-1,18	4,74736E-8	-2,50205E-7	0,00000E+0
1593	111.65;34.72	29,30	-5,42	2,01115E-8	-3,33807E-8	0,00000E+0
1594	111.70;28.06	27,98	-0,08	1,50475E-4	-7,64754E-6	0,00000E+0
1595	111.70;32.69	28,89	-3,79	1,59967E-8	-3,57290E-8	0,00000E+0
1596	111.72;0.00	29,55	29,55	1,61821E-11	4,74742E-15	0,00000E+0
1597	111.76;30.66	28,48	-2,18	2,92080E-8	-1,02988E-7	0,00000E+0
1598	111.83;3.94	29,49	25,55	1,59609E-11	2,09404E-12	0,00000E+0
1599	111.99;19.54	28,45	8,90	1,03548E-11	1,11282E-11	0,00000E+0
1600	112.01;7.83	29,34	21,51	1,52656E-11	4,20750E-12	0,00000E+0
1601	112.30;11.67	29,09	17,42	1,41189E-11	6,31702E-12	0,00000E+0
1602	112.49;17.44	28,61	11,17	1,12977E-11	9,57403E-12	0,00000E+0
1603	112.92;1.96	29,35	27,39	1,54986E-11	9,70854E-13	0,00000E+0
1604	112.96;37.76	29,29	-8,47	1,65260E-10	-4,86284E-11	0,00000E+0
1605	113.00;15.33	28,74	13,41	1,22074E-11	8,11682E-12	0,00000E+0
1606	113.07;5.87	29,25	23,37	1,50431E-11	2,99421E-12	0,00000E+0
1607	113.25;9.67	29,07	19,40	1,41424E-11	4,89588E-12	0,00000E+0
1608	113.39;23.41	27,88	4,47	4,80272E-8	-1,32023E-8	0,00000E+0
1609	113.43;35.91	29,13	-6,78	1,50236E-10	-6,10666E-11	0,00000E+0
1610	113.68;25.93	27,89	1,96	9,42258E-8	-3,02170E-8	0,00000E+0
1611	113.75;13.42	28,79	15,37	1,26108E-11	6,75526E-12	0,00000E+0
1612	113.76;28.05	27,91	-0,14	1,37304E-4	-7,36017E-6	0,00000E+0
1613	113.80;29.10	28,09	-1,01	2,82053E-8	-1,35152E-7	0,00000E+0
1614	113.82;21.17	28,10	6,94	8,34768E-12	1,05679E-11	0,00000E+0
1615	113.83;34.32	28,98	-5,33	8,53946E-11	-5,99832E-11	0,00000E+0
1616	113.85;28.00	27,91	-0,09	3,00829E-4	-1,54636E-5	0,00000E+0
1617	113.88;32.29	28,64	-3,65	2,34426E-11	-5,11701E-11	0,00000E+0
1618	113.92;30.35	28,30	-2,05	3,58214E-8	-1,14646E-7	0,00000E+0
1619	113.97;27.94	27,91	-0,04	1,57809E-4	-7,95188E-6	0,00000E+0
1620	114.02;0.00	29,19	29,19	1,50416E-11	0,00000E+0	0,00000E+0
1621	114.12;3.92	29,14	25,22	1,47734E-11	1,86440E-12	0,00000E+0
1622	114.18;18.95	28,29	9,34	9,62847E-12	9,45639E-12	0,00000E+0
1623	114.26;7.81	29,01	21,20	1,41209E-11	3,72283E-12	0,00000E+0
1624	114.50;11.51	28,81	17,29	1,29601E-11	5,49108E-12	0,00000E+0
1625	114.69;16.84	28,42	11,58	1,06036E-11	7,97131E-12	0,00000E+0
1626	114.85;14.98	28,55	13,57	1,14410E-11	7,10733E-12	0,00000E+0
1627	115.21;37.10	28,95	-8,15	1,43212E-10	-4,24901E-11	0,00000E+0
1628	115.22;1.96	29,00	27,05	1,44048E-11	8,91839E-13	0,00000E+0
1629	115.31;5.85	28,92	23,07	1,39491E-11	2,58884E-12	0,00000E+0
1630	115.50;9.65	28,77	19,12	1,30463E-11	4,31806E-12	0,00000E+0

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
1631	115.59;13.07	28,58	15,51	1,18716E-11	5,81446E-12	0,00000E+0
1632	115.60;35.51	28,83	-6,68	1,32917E-10	-5,18281E-11	0,00000E+0
1633	115.65;22.79	27,80	5,01	5,02012E-8	-1,36459E-8	0,00000E+0
1634	115.94;25.31	27,81	2,51	9,84060E-8	-3,13977E-8	0,00000E+0
1635	116.00;33.92	28,70	-5,21	1,70068E-8	-2,53681E-8	0,00000E+0
1636	116.00;27.94	27,84	-0,10	1,42070E-4	-7,50629E-6	0,00000E+0
1637	116.02;20.57	27,98	7,41	7,64094E-12	8,88200E-12	0,00000E+0
1638	116.04;31.98	28,42	-3,55	2,12814E-8	-4,16490E-8	0,00000E+0
1639	116.04;28.99	27,99	-1,00	5,41871E-8	-2,04746E-7	0,00000E+0
1640	116.08;30.04	28,14	-1,90	2,35352E-8	-6,83923E-8	0,00000E+0
1641	116.12;27.89	27,84	-0,05	3,12227E-4	-1,59585E-5	0,00000E+0
1642	116.23;27.83	27,83	0,00	1,62992E-4	-8,08808E-6	0,00000E+0
1643	116.33;0.00	28,86	28,86	1,39912E-11	2,71773E-15	0,00000E+0
1644	116.38;18.36	28,14	9,78	8,95484E-12	7,78593E-12	0,00000E+0
1645	116.40;3.92	28,81	24,90	1,37766E-11	1,62146E-12	0,00000E+0
1646	116.50;7.78	28,71	20,92	1,30768E-11	3,23002E-12	0,00000E+0
1647	116.53;16.49	28,26	11,77	9,83395E-12	6,91799E-12	0,00000E+0
1648	116.64;11.59	28,54	16,95	1,19758E-11	4,79489E-12	0,00000E+0
1649	116.69;14.63	28,36	13,73	1,07288E-11	6,06948E-12	0,00000E+0
1650	117.36;36.45	28,66	-7,79	1,26914E-10	-3,81778E-11	0,00000E+0
1651	117.50;1.96	28,69	26,73	1,34571E-11	7,29867E-13	0,00000E+0
1652	117.59;5.85	28,62	22,77	1,30015E-11	2,25906E-12	0,00000E+0
1653	117.64;9.72	28,49	18,77	1,21089E-11	3,70436E-12	0,00000E+0
1654	117.74;13.15	28,33	15,19	1,09408E-11	5,05574E-12	0,00000E+0
1655	117.75;34.86	28,56	-6,30	1,17438E-10	-4,61520E-11	0,00000E+0
1656	117.92;22.16	27,72	5,55	5,23725E-8	-1,44926E-8	0,00000E+0
1657	118.17;33.51	28,45	-5,06	6,77969E-11	-4,31997E-11	0,00000E+0
1658	118.20;28.68	27,87	-0,81	4,37343E-8	-1,48288E-7	0,00000E+0
1659	118.20;25.19	27,74	2,54	1,01006E-7	-3,37253E-8	0,00000E+0
1660	118.21;31.58	28,22	-3,35	8,95594E-9	-1,65487E-8	0,00000E+0
1661	118.24;29.73	28,00	-1,73	3,55017E-8	-9,12151E-8	0,00000E+0
1662	118.24;27.83	27,77	-0,06	1,52029E-4	-7,95914E-6	0,00000E+0
1663	118.28;19.95	27,86	7,91	7,35581E-12	7,16448E-12	0,00000E+0
1664	118.36;27.77	27,76	-0,01	3,31807E-4	-1,70499E-5	0,00000E+0
1665	118.49;27.72	27,76	0,04	1,67038E-4	-8,29900E-6	0,00000E+0
1666	118.62;17.33	28,01	10,69	8,72510E-12	6,23281E-12	0,00000E+0
1667	118.63;0.00	28,54	28,54	1,31347E-11	6,36899E-16	0,00000E+0
1668	118.68;3.92	28,51	24,59	1,28761E-11	1,37531E-12	0,00000E+0
1669	118.75;7.82	28,42	20,61	1,22240E-11	2,73715E-12	0,00000E+0
1670	118.77;15.46	28,11	12,64	9,59350E-12	5,38789E-12	0,00000E+0
1671	118.79;11.66	28,28	16,63	1,10913E-11	4,09981E-12	0,00000E+0
1672	119.50;35.80	28,41	-7,39	1,11732E-10	-3,37764E-11	0,00000E+0
1673	119.80;1.96	28,39	26,43	1,26500E-11	6,44699E-13	0,00000E+0
1674	119.82;13.98	28,08	14,10	9,83265E-12	4,45702E-12	0,00000E+0
1675	119.83;5.88	28,33	22,45	1,21982E-11	1,85183E-12	0,00000E+0
1676	119.89;9.75	28,23	18,48	1,13086E-11	3,12282E-12	0,00000E+0
1677	119.92;34.45	28,32	-6,13	1,04775E-10	-3,89707E-11	0,00000E+0
1678	120.18;21.54	27,63	6,09	5,49097E-8	-1,50857E-8	0,00000E+0
1679	120.34;33.11	28,23	-4,88	1,96983E-8	-2,49233E-8	0,00000E+0
1680	120.37;31.27	28,05	-3,22	2,89725E-8	-4,69529E-8	0,00000E+0
1681	120.40;29.42	27,86	-1,56	3,44808E-8	-7,64852E-8	0,00000E+0
1682	120.44;28.57	27,78	-0,79	6,45826E-8	-1,70793E-7	0,00000E+0
1683	120.47;24.57	27,65	3,08	1,05123E-7	-3,59381E-8	0,00000E+0
1684	120.48;27.72	27,69	-0,02	1,55807E-4	-8,00391E-6	0,00000E+0
1685	120.52;18.92	27,77	8,85	7,13632E-12	5,60398E-12	0,00000E+0
1686	120.62;27.66	27,69	0,03	3,34677E-4	-1,68556E-5	0,00000E+0
1687	120.76;27.60	27,68	0,08	1,52267E-4	-7,88654E-6	0,00000E+0
1688	120.85;16.29	27,88	11,58	8,51595E-12	4,71251E-12	0,00000E+0
1689	120.93;0.00	28,25	28,25	1,23753E-11	1,16749E-15	0,00000E+0
1690	120.95;3.93	28,23	24,30	1,21730E-11	1,12304E-12	0,00000E+0
1691	120.99;7.85	28,16	20,31	1,14717E-11	2,24268E-12	0,00000E+0
1692	121.05;11.76	28,04	16,28	1,03618E-11	3,34155E-12	0,00000E+0
1693	121.55;35.17	28,19	-6,98	1,00609E-10	-3,03652E-11	0,00000E+0
1694	121.77;22.45	27,58	5,13	1,12028E-7	-3,53857E-8	0,00000E+0
1695	121.97;33.83	28,12	-5,72	9,42460E-11	-3,44812E-11	0,00000E+0
1696	122.06;25.48	27,61	2,13	1,05788E-7	-4,09402E-8	0,00000E+0
1697	122.08;1.97	28,11	26,13	1,19968E-11	4,78242E-13	0,00000E+0
1698	122.08;14.08	27,86	13,78	9,15541E-12	3,59378E-12	0,00000E+0
1699	122.11;5.90	28,06	22,17	1,15459E-11	1,51220E-12	0,00000E+0
1700	122.15;9.86	27,98	18,12	1,06276E-11	2,46191E-12	0,00000E+0
1701	122.45;20.92	27,54	6,62	5,90118E-8	-1,64721E-8	0,00000E+0
1702	122.52;32.71	28,03	-4,68	5,57741E-11	-3,04892E-11	0,00000E+0
1703	122.54;30.86	27,88	-2,98	1,97300E-8	-2,79627E-8	0,00000E+0
1704	122.56;29.11	27,74	-1,37	3,74290E-8	-7,14105E-8	0,00000E+0
1705	122.60;28.26	27,67	-0,59	6,04156E-8	-1,37247E-7	0,00000E+0
1706	122.73;27.60	27,61	0,01	1,63382E-4	-8,38613E-6	0,00000E+0
1707	122.78;18.30	27,64	9,34	7,06710E-12	4,12838E-12	0,00000E+0
1708	122.86;27.55	27,61	0,06	3,44287E-4	-1,76556E-5	0,00000E+0
1709	123.23;0.00	27,97	27,97	1,18190E-11	1,55377E-16	0,00000E+0
1710	123.23;3.94	27,96	24,01	1,15692E-11	8,69644E-13	0,00000E+0
1711	123.25;7.88	27,90	20,03	1,09182E-11	1,73276E-12	0,00000E+0
1712	123.31;11.87	27,81	15,94	9,73599E-12	2,58721E-12	0,00000E+0
1713	123.36;23.36	27,53	4,17	8,70181E-8	-3,14151E-8	0,00000E+0
1714	123.41;15.99	27,68	11,68	8,07357E-12	3,47228E-12	0,00000E+0
1715	123.59;34.55	28,00	-6,55	9,08205E-11	-2,70471E-11	0,00000E+0
1716	123.70;25.44	27,55	2,11	1,07687E-7	-4,42390E-8	0,00000E+0
1717	124.03;21.83	27,49	5,65	1,20446E-7	-3,95327E-8	0,00000E+0
1718	124.14;33.43	27,93	-5,51	8,63434E-11	-3,03710E-11	0,00000E+0
1719	124.37;5.92	27,81	21,88	1,10421E-11	1,08910E-12	0,00000E+0
1720	124.38;1.97	27,84	25,86	1,14909E-11	3,91226E-13	0,00000E+0
1721	124.41;9.88	27,74	17,86	1,01261E-11	1,86249E-12	0,00000E+0
1722	124.64;13.78	27,64	13,86	8,76104E-12	2,44026E-12	0,00000E+0
1723	124.69;32.31	27,85	-4,46	2,44742E-8	-2,27719E-8	0,00000E+0

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
1724	124.71;30.56	27,74	-2,81	3,78396E-8	-4,45656E-8	0,00000E+0
1725	124.71;20.30	27,44	7,14	6,33881E-8	-1,88921E-8	0,00000E+0
1726	124.72;28.80	27,63	-1,17	5,55708E-8	-8,64279E-8	0,00000E+0
1727	124.84;28.15	27,58	-0,56	9,06449E-8	-1,58245E-7	0,00000E+0
1728	124.97;27.49	27,54	0,05	1,22180E-4	-6,56611E-6	0,00000E+0
1729	125.00;23.32	27,47	4,15	1,16713E-7	-4,64005E-8	0,00000E+0
1730	125.10;27.43	27,53	0,10	3,46109E-4	-1,72927E-5	0,00000E+0
1731	125.19;28.65	27,60	-1,05	6,16370E-8	-9,37617E-8	0,00000E+0
1732	125.29;27.37	27,53	0,15	1,73150E-4	-9,05727E-6	0,00000E+0
1733	125.31;27.99	27,56	-0,44	6,46642E-8	-1,10973E-7	0,00000E+0
1734	125.34;18.00	27,47	9,47	6,71679E-12	2,82785E-12	0,00000E+0
1735	125.50;3.96	27,70	23,74	1,11657E-11	6,13323E-13	0,00000E+0
1736	125.51;7.90	27,66	19,76	1,04654E-11	1,22120E-12	0,00000E+0
1737	125.52;0.00	27,71	27,71	1,13625E-11	-1,74146E-16	0,00000E+0
1738	125.53;33.96	27,83	-6,13	8,17884E-11	-2,49516E-11	0,00000E+0
1739	125.54;11.82	27,60	15,78	9,35934E-12	1,81810E-12	0,00000E+0
1740	125.65;28.50	27,57	-0,92	4,31912E-8	-6,43760E-8	0,00000E+0
1741	125.68;21.79	27,42	5,63	1,23388E-7	-4,53607E-8	0,00000E+0
1742	125.97;15.69	27,48	11,79	7,73008E-12	2,22141E-12	0,00000E+0
1743	126.08;32.84	27,77	-5,08	7,68622E-11	-2,81862E-11	0,00000E+0
1744	126.64;23.28	27,40	4,13	1,17254E-7	-5,17850E-8	0,00000E+0
1745	126.64;5.94	27,56	21,62	1,06902E-11	7,46525E-13	0,00000E+0
1746	126.64;9.84	27,52	17,68	9,79784E-12	1,17160E-12	0,00000E+0
1747	126.65;1.99	27,58	25,59	1,11372E-11	2,21808E-13	0,00000E+0
1748	126.88;13.74	27,45	13,71	8,42592E-12	1,58873E-12	0,00000E+0
1749	126.88;31.60	27,68	-3,92	4,31964E-11	-2,27424E-11	0,00000E+0
1750	126.90;29.84	27,59	-2,25	1,36789E-11	-1,50611E-11	0,00000E+0
1751	127.04;19.54	27,33	7,78	6,82803E-8	-2,22945E-8	0,00000E+0
1752	127.21;27.38	27,46	0,08	1,66352E-4	-8,49250E-6	0,00000E+0
1753	127.36;29.69	27,56	-2,13	3,54660E-8	-3,80388E-8	0,00000E+0
1754	127.48;33.37	27,68	-5,69	7,18410E-11	-2,23442E-11	0,00000E+0
1755	127.55;27.88	27,47	-0,41	4,98862E-8	-6,58897E-8	0,00000E+0
1756	127.67;17.24	27,33	10,09	6,78688E-12	1,60023E-12	0,00000E+0
1757	127.74;7.94	27,43	19,49	1,02102E-11	7,11508E-13	0,00000E+0
1758	127.78;3.98	27,45	23,47	1,08629E-11	3,57417E-13	0,00000E+0
1759	127.78;11.78	27,39	15,61	9,07813E-12	1,03620E-12	0,00000E+0
1760	127.82;0.00	27,45	27,45	1,11080E-11	-5,38122E-16	0,00000E+0
1761	127.91;15.41	27,34	11,93	7,64438E-12	1,32872E-12	0,00000E+0
1762	128.00;21.03	27,31	6,27	1,34317E-7	-5,21245E-8	0,00000E+0
1763	128.23;25.21	27,38	2,17	1,10773E-7	-6,31250E-8	0,00000E+0
1764	128.27;32.13	27,61	-4,52	6,48541E-11	-2,43818E-11	0,00000E+0
1765	128.81;13.45	27,29	13,84	8,36710E-12	7,65757E-13	0,00000E+0
1766	128.88;5.98	27,32	21,34	1,04853E-11	3,22819E-13	0,00000E+0
1767	128.88;9.88	27,31	17,42	9,59720E-12	5,79250E-13	0,00000E+0
1768	128.95;1.99	27,32	25,34	1,09330E-11	1,35469E-13	0,00000E+0
1769	129.07;30.89	27,54	-3,35	1,99345E-8	-1,56117E-8	0,00000E+0
1770	129.24;22.87	27,29	4,42	1,28430E-7	-6,73975E-8	0,00000E+0
1771	129.26;29.08	27,46	-1,62	2,35996E-8	-2,19523E-8	0,00000E+0
1772	129.32;32.82	27,56	-5,25	6,35144E-11	-1,94439E-11	0,00000E+0
1773	129.37;18.79	27,20	8,41	7,43714E-8	-2,44394E-8	0,00000E+0
1774	129.45;27.26	27,38	0,12	1,40965E-4	-7,77248E-6	0,00000E+0
1775	129.60;16.96	27,20	10,25	6,70485E-12	6,41595E-13	0,00000E+0
1776	129.63;27.21	27,37	0,17	3,43610E-4	-1,87857E-5	0,00000E+0
1777	129.81;27.15	27,37	0,22	1,49781E-4	-6,09490E-6	0,00000E+0
1778	129.84;15.13	27,19	12,07	7,62700E-12	4,23255E-13	0,00000E+0
1779	129.93;11.93	27,20	15,27	8,92910E-12	2,81160E-13	0,00000E+0
1780	129.98;7.99	27,20	19,22	1,00578E-11	2,02732E-13	0,00000E+0
1781	130.04;4.01	27,20	23,20	1,07557E-11	1,03207E-13	0,00000E+0
1782	130.11;31.57	27,49	-4,08	5,76219E-11	-2,09967E-11	0,00000E+0
1783	130.12;0.00	27,20	27,20	1,09536E-11	-1,86638E-15	0,00000E+0
1784	130.60;20.63	27,18	6,55	1,45153E-7	-6,43564E-8	0,00000E+0
1785	130.83;24.80	27,27	2,47	1,20963E-7	-7,90596E-8	0,00000E+0
1786	130.96;13.61	27,11	13,50	8,29045E-12	-3,58727E-14	0,00000E+0
1787	131.03;10.04	27,10	17,06	9,49848E-12	-9,20034E-14	0,00000E+0
1788	131.14;6.01	27,09	21,08	1,04302E-11	-1,68987E-14	0,00000E+0
1789	131.16;32.26	27,45	-4,80	5,63390E-11	-1,70817E-11	0,00000E+0
1790	131.21;2.02	27,08	25,06	1,08750E-11	-3,26340E-14	0,00000E+0
1791	131.26;30.18	27,41	-2,77	1,10668E-8	-7,75855E-9	0,00000E+0
1792	131.45;28.37	27,35	-1,02	2,74048E-8	-2,22833E-8	0,00000E+0
1793	131.58;27.16	27,31	0,15	1,80148E-4	-9,48809E-6	0,00000E+0
1794	131.70;18.03	27,07	9,03	8,46932E-8	-2,83283E-8	0,00000E+0
1795	131.76;27.10	27,30	0,20	3,61245E-4	-1,93760E-5	0,00000E+0
1796	131.84;22.46	27,16	4,70	1,39437E-7	-8,18993E-8	0,00000E+0
1797	131.93;16.20	27,04	10,84	7,09726E-12	-6,35689E-13	0,00000E+0
1798	131.94;27.04	27,29	0,25	1,81548E-4	-7,18260E-6	0,00000E+0
1799	132.07;12.09	27,01	14,92	8,88611E-12	-4,65075E-13	0,00000E+0
1800	132.12;26.40	27,27	0,87	1,08736E-7	-9,34753E-8	0,00000E+0
1801	132.20;8.06	26,98	18,92	1,00978E-11	-3,08037E-13	0,00000E+0
1802	132.30;30.86	27,37	-3,49	5,15812E-11	-1,83205E-11	0,00000E+0
1803	132.31;4.04	26,96	22,92	1,07494E-11	-1,47813E-13	0,00000E+0
1804	132.41;0.00	26,95	26,95	1,09909E-11	-2,51871E-16	0,00000E+0
1805	132.89;31.73	27,36	-4,37	5,16697E-11	-1,59572E-11	0,00000E+0
1806	132.93;19.87	27,04	7,17	1,67196E-7	-7,45808E-8	0,00000E+0
1807	133.05;14.68	26,95	12,26	7,80795E-12	-1,06507E-12	0,00000E+0
1808	133.13;24.06	27,15	3,10	1,28433E-7	-9,60183E-8	0,00000E+0
1809	133.25;10.11	26,89	16,78	9,60037E-12	-6,96015E-13	0,00000E+0
1810	133.37;6.08	26,85	20,77	1,05234E-11	-4,35754E-13	0,00000E+0
1811	133.45;29.47	27,30	-2,17	8,74569E-9	-5,43739E-9	0,00000E+0
1812	133.51;2.02	26,83	24,81	1,09591E-11	-1,14472E-13	0,00000E+0
1813	133.58;28.26	27,26	-1,00	5,50887E-8	-3,63324E-8	0,00000E+0
1814	133.70;27.05	27,23	0,18	1,86537E-4	-8,24931E-6	0,00000E+0
1815	133.74;22.18	27,06	4,88	1,49910E-7	-9,94731E-8	0,00000E+0
1816	133.89;26.99	27,22	0,23	3,79362E-4	-1,71325E-5	0,00000E+0

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
1817	134.02;17.28	26,91	9,63	9,75447E-8	-3,15380E-8	0,00000E+0
1818	134.04;30.33	27,29	-3,05	4,71373E-11	-1,65577E-11	0,00000E+0
1819	134.07;26.93	27,21	0,28	2,17043E-4	-1,60704E-5	0,00000E+0
1820	134.23;12.17	26,82	14,65	9,08066E-12	-1,28768E-12	0,00000E+0
1821	134.24;26.29	27,18	0,89	1,09214E-7	-1,07711E-7	0,00000E+0
1822	134.42;8.13	26,76	18,63	1,02474E-11	-8,12170E-13	0,00000E+0
1823	134.42;25.65	27,15	1,50	9,25111E-8	-8,92191E-8	0,00000E+0
1824	134.59;4.08	26,71	22,63	1,09276E-11	-3,85121E-13	0,00000E+0
1825	134.63;31.20	27,27	-3,93	4,72933E-11	-1,43764E-11	0,00000E+0
1826	134.71;0.00	26,69	26,69	1,11239E-11	-4,50946E-15	0,00000E+0
1827	134.83;19.59	26,92	7,33	1,79413E-7	-8,99914E-8	0,00000E+0
1828	135.03;23.78	27,06	3,28	1,39681E-7	-1,14640E-7	0,00000E+0
1829	135.21;14.76	26,78	12,01	8,05288E-12	-2,03590E-12	0,00000E+0
1830	135.41;10.19	26,68	16,49	9,85844E-12	-1,38724E-12	0,00000E+0
1831	135.63;21.90	26,95	5,05	1,62355E-7	-1,15230E-7	0,00000E+0
1832	135.64;6.13	26,61	20,48	1,07506E-11	-7,57730E-13	0,00000E+0
1833	135.64;28.76	27,20	-1,56	2,58151E-8	-1,62240E-8	0,00000E+0
1834	135.77;27.55	27,16	-0,38	7,22451E-8	-4,82010E-8	0,00000E+0
1835	135.78;2.06	26,58	24,51	1,11827E-11	-2,71854E-13	0,00000E+0
1836	135.83;26.94	27,15	0,20	1,77738E-4	-8,27780E-6	0,00000E+0
1837	136.01;26.88	27,14	0,26	3,53005E-4	-2,05133E-5	0,00000E+0
1838	136.23;29.62	27,19	-2,44	5,01810E-11	-1,75088E-11	0,00000E+0
1839	136.27;30.70	27,20	-3,50	4,42013E-11	-1,35342E-11	0,00000E+0
1840	136.35;16.52	26,73	10,21	1,14531E-7	-3,62201E-8	0,00000E+0
1841	136.39;12.25	26,62	14,37	9,41917E-12	-2,09248E-12	0,00000E+0
1842	136.43;18.62	26,79	8,16	2,06677E-7	-1,01739E-7	0,00000E+0
1843	136.55;25.54	27,07	1,52	1,21057E-7	-1,33045E-7	0,00000E+0
1844	136.66;8.22	26,52	18,30	1,06020E-11	-1,28793E-12	0,00000E+0
1845	136.73;24.90	27,03	2,13	1,26447E-7	-1,40949E-7	0,00000E+0
1846	136.86;4.13	26,46	22,34	1,12020E-11	-6,15526E-13	0,00000E+0
1847	137.00;0.00	26,43	26,43	1,14184E-11	3,62604E-15	0,00000E+0
1848	137.24;20.94	26,82	5,89	1,87415E-7	-1,28330E-7	0,00000E+0
1849	137.33;23.03	26,91	3,88	1,53442E-7	-1,45006E-7	0,00000E+0
1850	137.54;14.01	26,56	12,55	9,02966E-12	-3,06270E-12	0,00000E+0
1851	137.64;10.28	26,45	16,17	1,02771E-11	-1,97043E-12	0,00000E+0
1852	137.83;28.04	27,11	-0,94	8,68332E-8	-4,07899E-8	0,00000E+0
1853	137.87;29.13	27,12	-2,01	2,82743E-9	-9,95767E-10	0,00000E+0
1854	137.88;6.22	26,37	20,15	1,11615E-11	-1,13940E-12	0,00000E+0
1855	137.89;27.44	27,09	-0,35	8,58927E-8	-5,62326E-8	0,00000E+0
1856	137.90;30.21	27,13	-3,08	3,06221E-9	-9,35895E-10	0,00000E+0
1857	137.96;26.84	27,08	0,24	1,27655E-4	-1,00212E-5	0,00000E+0
1858	138.08;2.06	26,31	24,25	1,15128E-11	-3,39107E-13	0,00000E+0
1859	138.14;26.78	27,07	0,29	3,22634E-4	-6,25523E-6	0,00000E+0
1860	138.25;27.91	27,09	-0,82	3,72158E-8	-2,09376E-8	0,00000E+0
1861	138.31;27.30	27,07	-0,23	7,05035E-8	-4,58585E-8	0,00000E+0
1862	138.32;12.10	26,43	14,33	9,99628E-12	-2,66076E-12	0,00000E+0
1863	138.32;26.72	27,06	0,35	1,59035E-4	-1,89951E-5	0,00000E+0
1864	138.66;27.77	27,07	-0,70	2,19986E-8	-1,18237E-8	0,00000E+0
1865	138.68;15.77	26,52	10,75	1,33521E-7	-4,35849E-8	0,00000E+0
1866	138.76;17.87	26,58	8,72	2,41421E-7	-1,17342E-7	0,00000E+0
1867	138.85;19.97	26,67	6,70	2,15745E-7	-1,44299E-7	0,00000E+0
1868	138.89;8.31	26,28	17,97	1,10659E-11	-1,75564E-12	0,00000E+0
1869	138.94;22.06	26,77	4,71	1,76403E-7	-1,64407E-7	0,00000E+0
1870	139.03;24.15	26,89	2,73	1,24667E-7	-1,58860E-7	0,00000E+0
1871	139.19;4.22	26,20	21,98	1,16413E-11	-7,98362E-13	0,00000E+0
1872	139.29;0.00	26,17	26,17	1,17917E-11	-7,42232E-15	0,00000E+0
1873	139.40;28.66	27,06	-1,60	1,37499E-10	-4,71528E-11	0,00000E+0
1874	139.43;29.74	27,07	-2,67	3,89402E-11	-1,16176E-11	0,00000E+0
1875	139.46;13.85	26,37	12,52	9,61901E-12	-3,76320E-12	0,00000E+0
1876	139.57;10.13	26,25	16,12	1,09187E-11	-2,44859E-12	0,00000E+0
1877	139.82;28.52	27,04	-1,48	6,67762E-9	-2,45180E-9	0,00000E+0
1878	140.08;26.73	27,01	0,28	1,47119E-4	-7,05956E-6	0,00000E+0
1879	140.21;6.31	26,10	19,79	1,16361E-11	-1,40144E-12	0,00000E+0
1880	140.25;11.94	26,23	14,28	1,07213E-11	-3,26926E-12	0,00000E+0
1881	140.37;16.92	26,41	9,49	2,80413E-7	-1,27103E-7	0,00000E+0
1882	140.41;2.15	26,04	23,89	1,19848E-11	-4,63321E-13	0,00000E+0
1883	140.44;27.20	27,01	-0,19	3,97210E-8	-2,08691E-8	0,00000E+0
1884	140.46;19.02	26,50	7,48	2,53485E-7	-1,54466E-7	0,00000E+0
1885	140.80;25.33	26,90	1,57	1,04109E-7	-2,22592E-7	0,00000E+0
1886	140.97;29.28	27,01	-2,26	8,80434E-8	-3,54680E-8	0,00000E+0
1887	141.01;15.01	26,27	11,26	1,57630E-7	-5,08540E-8	0,00000E+0
1888	141.24;21.32	26,58	5,26	2,20452E-7	-2,11422E-7	0,00000E+0
1889	141.33;23.41	26,72	3,32	1,72924E-7	-2,31731E-7	0,00000E+0
1890	141.41;8.72	26,01	17,28	1,18075E-11	-2,21895E-12	0,00000E+0
1891	141.52;4.30	25,92	21,62	1,21615E-11	-9,70235E-13	0,00000E+0
1892	141.58;0.00	25,89	25,89	1,22616E-11	1,34941E-14	0,00000E+0
1893	141.59;27.95	26,98	-0,97	1,81027E-7	-4,46320E-8	0,00000E+0
1894	141.79;13.10	26,10	13,00	1,11871E-11	-4,31273E-12	0,00000E+0
1895	142.07;18.07	26,30	8,23	2,91275E-7	-1,66720E-7	0,00000E+0
1896	142.08;10.54	25,97	15,44	1,17830E-11	-2,97601E-12	0,00000E+0
1897	142.21;26.62	26,95	0,33	8,82576E-5	-1,47732E-5	0,00000E+0
1898	142.39;26.56	26,95	0,38	2,41846E-4	-3,50520E-5	0,00000E+0
1899	142.40;28.84	26,96	-1,88	6,63648E-11	-2,08321E-11	0,00000E+0
1900	142.58;26.50	26,94	0,44	1,09883E-4	-2,87828E-6	0,00000E+0
1901	142.70;2.15	25,76	23,61	1,24649E-11	-4,95719E-13	0,00000E+0
1902	142.70;16.16	26,14	9,98	3,27308E-7	-1,43960E-7	0,00000E+0
1903	142.72;6.72	25,81	19,09	1,24334E-11	-1,75779E-12	0,00000E+0
1904	142.85;20.36	26,38	6,01	2,62868E-7	-2,25462E-7	0,00000E+0
1905	143.02;27.51	26,93	-0,59	1,20495E-8	-1,12863E-9	0,00000E+0
1906	143.11;24.58	26,73	2,15	1,36004E-7	-2,99814E-7	0,00000E+0
1907	143.34;14.25	25,98	11,73	1,82291E-7	-5,97394E-8	0,00000E+0
1908	143.63;11.69	25,83	14,13	1,21984E-11	-3,89292E-12	0,00000E+0
1909	143.64;22.66	26,51	3,85	2,19533E-7	-2,81829E-7	0,00000E+0

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
1910	143.83;28.41	26,90	-1,50	2,02056E-8	-5,76324E-9	0,00000E+0
1911	143.87;0.00	25,61	25,61	1,27660E-11	-1,32144E-14	0,00000E+0
1912	143.91;4.28	25,62	21,34	1,27767E-11	-9,59428E-13	0,00000E+0
1913	143.92;9.13	25,71	16,57	1,26979E-11	-2,63598E-12	0,00000E+0
1914	143.95;17.87	26,09	8,22	3,30009E-7	-1,90709E-7	0,00000E+0
1915	144.35;27.11	26,87	-0,24	1,05677E-7	-4,02516E-9	0,00000E+0
1916	144.56;25.86	26,82	0,96	4,21019E-7	-5,06198E-7	0,00000E+0
1917	144.56;26.50	26,86	0,35	3,03162E-4	-2,96410E-5	0,00000E+0
1918	144.59;15.97	25,91	9,94	3,67882E-7	-1,65323E-7	0,00000E+0
1919	144.74;20.17	26,18	6,01	3,04022E-7	-2,55412E-7	0,00000E+0
1920	144.74;26.44	26,84	0,40	6,38526E-4	-1,38983E-6	0,00000E+0
1921	145.08;2.13	25,46	23,32	1,30776E-11	-4,90328E-13	0,00000E+0
1922	145.09;23.94	26,54	2,60	2,28808E-7	-3,77834E-7	0,00000E+0
1923	145.11;6.70	25,50	18,80	1,30687E-11	-1,77779E-12	0,00000E+0
1924	145.16;28.00	26,83	-1,17	2,93898E-8	-6,65617E-9	0,00000E+0
1925	145.50;23.80	26,49	2,69	2,48556E-7	-3,86265E-7	0,00000E+0
1926	145.67;13.50	25,65	12,15	2,05749E-7	-6,54346E-8	0,00000E+0
1927	145.84;17.68	25,86	8,18	3,72832E-7	-2,12380E-7	0,00000E+0
1928	145.94;21.91	26,23	4,31	3,13371E-7	-3,16809E-7	0,00000E+0
1929	145.96;10.94	25,50	14,56	1,38448E-11	-3,59774E-12	0,00000E+0
1930	146.16;0.00	25,31	25,31	1,32624E-11	1,85982E-14	0,00000E+0
1931	146.24;26.37	26,73	0,36	4,51745E-4	-1,64666E-5	0,00000E+0
1932	146.29;4.27	25,31	21,05	1,34029E-11	-9,65136E-13	0,00000E+0
1933	146.49;27.60	26,72	-0,88	3,06992E-7	-9,25160E-8	0,00000E+0
1934	146.52;8.64	25,35	16,71	1,37796E-11	-2,23461E-12	0,00000E+0
1935	146.54;25.22	26,61	1,39	6,45602E-7	-5,14262E-7	0,00000E+0
1936	146.70;26.99	26,69	-0,30	5,77685E-7	-1,07703E-7	0,00000E+0
1937	146.91;26.39	26,66	0,28	4,08978E-4	-1,06000E-6	0,00000E+0
1938	146.92;15.21	25,56	10,35	4,11650E-7	-1,76772E-7	0,00000E+0
1939	146.95;25.08	26,55	1,47	7,61159E-7	-6,54447E-7	0,00000E+0
1940	147.04;19.42	25,85	6,43	3,90191E-7	-2,76207E-7	0,00000E+0
1941	147.36;24.95	26,49	1,54	6,65866E-7	-5,66490E-7	0,00000E+0
1942	147.37;2.13	25,15	23,02	1,35457E-11	-4,51849E-13	0,00000E+0
1943	147.71;6.20	25,14	18,94	1,40368E-11	-1,41320E-12	0,00000E+0
1944	147.71;27.23	26,60	-0,63	6,37084E-8	-1,95824E-8	0,00000E+0
1945	147.79;17.44	25,59	8,15	4,18488E-7	-2,14740E-7	0,00000E+0
1946	147.80;23.06	26,16	3,10	3,32072E-7	-4,18188E-7	0,00000E+0
1947	147.92;26.62	26,56	-0,06	5,21500E-7	-1,92933E-7	0,00000E+0
1948	148.00;12.74	25,27	12,53	2,57135E-7	-8,49738E-8	0,00000E+0
1949	148.22;25.73	26,46	0,73	1,41132E-6	-1,09061E-6	0,00000E+0
1950	148.24;21.16	25,87	4,71	3,95512E-7	-3,37754E-7	0,00000E+0
1951	148.40;26.31	26,49	0,18	6,42594E-4	-3,49439E-5	0,00000E+0
1952	148.45;0.00	25,00	25,00	1,37153E-11	-1,36993E-14	0,00000E+0
1953	148.56;10.44	25,11	14,66	1,49123E-11	-2,96691E-12	0,00000E+0
1954	148.58;4.14	25,00	20,85	1,39228E-11	-7,20602E-13	0,00000E+0
1955	148.63;25.59	26,39	0,79	1,47857E-6	-1,07257E-6	0,00000E+0
1956	148.87;14.97	25,27	10,30	4,56206E-7	-1,84142E-7	0,00000E+0
1957	148.94;26.85	26,44	-0,41	8,27611E-7	1,50723E-7	0,00000E+0
1958	148.99;19.18	25,56	6,38	4,36389E-7	-2,79096E-7	0,00000E+0
1959	149.13;8.14	24,97	16,83	1,47041E-11	-1,77550E-12	0,00000E+0
1960	149.42;26.54	26,36	-0,19	1,28974E-6	8,28052E-8	0,00000E+0
1961	149.66;2.01	24,84	22,83	1,40014E-11	-2,80433E-13	0,00000E+0
1962	149.74;17.20	25,28	8,09	4,62810E-7	-2,23674E-7	0,00000E+0
1963	149.75;24.17	26,08	1,91	1,19776E-6	-7,80949E-7	0,00000E+0
1964	149.90;26.24	26,28	0,04	4,00880E-4	-3,50785E-5	0,00000E+0
1965	150.00;6.08	24,81	18,73	1,44973E-11	-1,05139E-12	0,00000E+0
1966	150.07;26.51	26,26	-0,25	3,67288E-7	-1,94907E-7	0,00000E+0
1967	150.19;22.28	25,72	3,43	5,15902E-7	-4,09001E-7	0,00000E+0
1968	150.32;11.99	24,88	12,89	2,35152E-7	-8,02690E-8	0,00000E+0
1969	150.54;26.15	26,20	0,05	4,13366E-4	-5,43181E-5	0,00000E+0
1970	150.54;26.20	26,20	0,00	4,12896E-4	-2,10012E-5	0,00000E+0
1971	150.55;20.42	25,44	5,02	4,95564E-7	-3,07296E-7	0,00000E+0
1972	150.74;0.00	24,68	24,68	1,40184E-11	1,12003E-14	0,00000E+0
1973	150.87;4.02	24,67	20,65	1,43406E-11	-4,65835E-13	0,00000E+0
1974	150.89;9.69	24,73	15,04	1,59077E-11	-1,78356E-12	0,00000E+0
1975	150.89;13.73	24,88	11,15	4,75876E-7	-1,59968E-7	0,00000E+0
1976	151.02;24.82	25,92	1,10	2,44296E-6	-1,07467E-6	0,00000E+0
1977	151.09;7.81	24,67	16,86	1,51861E-11	-1,12592E-12	0,00000E+0
1978	151.19;26.07	26,17	0,10	2,84003E-6	-6,23415E-6	0,00000E+0
1979	151.19;26.12	26,17	0,05	1,11747E-5	2,20899E-5	0,00000E+0
1980	151.19;26.17	26,17	0,00	1,20442E-5	3,48261E-5	-2,43160E-3
1981	151.30;18.43	25,13	6,70	5,09476E-7	-2,43605E-7	0,00000E+0
1982	151.67;24.73	25,77	1,04	2,44663E-6	-1,87379E-6	0,00000E+0
1983	151.77;15.96	24,87	8,91	4,89399E-7	-1,95312E-7	0,00000E+0
1984	151.95;2.01	24,51	22,50	1,42299E-11	-1,77243E-13	0,00000E+0
1985	151.96;5.75	24,52	18,78	1,48897E-11	-5,02849E-13	0,00000E+0
1986	152.14;23.40	25,50	2,11	1,91790E-6	-7,33324E-7	0,00000E+0
1987	152.32;25.80	25,73	-0,07	2,27314E-6	-8,41101E-7	0,00000E+0
1988	152.32;25.85	25,73	-0,12	2,07279E-6	-5,82451E-7	0,00000E+0
1989	152.50;21.53	25,20	3,67	6,04938E-7	-3,26206E-7	0,00000E+0
1990	152.65;11.23	24,46	13,23	1,95865E-7	-6,36144E-8	0,00000E+0
1991	152.80;24.46	25,45	0,99	1,64577E-6	-6,02105E-7	0,00000E+0
1992	152.85;9.35	24,41	15,06	1,64064E-11	-8,62394E-13	0,00000E+0
1993	152.85;19.67	24,95	5,29	5,65748E-7	-2,52535E-7	0,00000E+0
1994	153.03;0.00	24,36	24,36	1,41897E-11	-1,27312E-14	0,00000E+0
1995	153.04;7.47	24,37	16,89	1,54818E-11	-3,82500E-13	0,00000E+0
1996	153.07;4.14	24,36	20,22	1,45360E-11	-7,36532E-14	0,00000E+0
1997	153.22;12.98	24,46	11,48	4,95783E-7	-1,59259E-7	0,00000E+0
1998	153.32;17.20	24,69	7,49	5,33291E-7	-1,98483E-7	0,00000E+0
1999	153.45;25.53	25,37	-0,16	1,20945E-6	-4,77511E-7	0,00000E+0
2000	153.79;14.73	24,46	9,73	5,06370E-7	-1,61067E-7	0,00000E+0
2001	153.96;24.14	25,13	1,00	2,31062E-6	-7,97154E-7	0,00000E+0
2002	154.15;2.13	24,20	22,07	1,43301E-11	9,20061E-14	0,00000E+0

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
2003	154.16;5.86	24,19	18,33	1,49222E-11	-2,82290E-14	0,00000E+0
2004	154.54;22.62	24,87	2,25	1,62624E-6	-6,00671E-7	0,00000E+0
2005	154.61;25.20	25,05	-0,15	1,38586E-6	-3,55920E-7	0,00000E+0
2006	154.89;20.76	24,64	3,88	6,29652E-7	-2,19303E-7	0,00000E+0
2007	154.98;10.48	24,05	13,58	2,34677E-7	-7,18231E-8	0,00000E+0
2008	155.15;18.92	24,46	5,54	5,88720E-7	-1,90038E-7	0,00000E+0
2009	155.18;8.60	24,03	15,43	1,61421E-11	7,01145E-13	0,00000E+0
2010	155.27;4.25	24,03	19,78	1,45402E-11	2,87206E-13	0,00000E+0
2011	155.31;0.00	24,04	24,04	1,41001E-11	-5,70612E-15	0,00000E+0
2012	155.55;12.22	24,05	11,82	4,74554E-7	-1,44856E-7	0,00000E+0
2013	155.63;16.45	24,23	7,78	5,51146E-7	-1,47041E-7	0,00000E+0
2014	155.78;24.87	24,74	-0,13	1,78817E-6	-5,08127E-7	0,00000E+0
2015	156.16;14.54	24,05	9,51	5,12834E-7	-1,18659E-7	0,00000E+0
2016	156.29;6.99	23,87	16,88	1,54369E-11	1,03108E-12	0,00000E+0
2017	156.35;23.36	24,50	1,14	2,60608E-6	-7,69655E-7	0,00000E+0
2018	156.43;2.13	23,87	21,75	1,41675E-11	2,50059E-13	0,00000E+0
2019	156.93;21.84	24,26	2,41	1,67200E-6	-5,00760E-7	0,00000E+0
2020	156.97;24.54	24,43	-0,10	1,63871E-6	-4,70386E-7	0,00000E+0
2021	157.19;20.01	24,10	4,09	6,50708E-7	-1,52988E-7	0,00000E+0
2022	157.31;9.72	23,66	13,94	2,18655E-7	-7,03031E-8	0,00000E+0
2023	157.46;18.17	23,96	5,78	6,05694E-7	-1,25201E-7	0,00000E+0
2024	157.51;4.29	23,71	19,43	1,41411E-11	7,58299E-13	0,00000E+0
2025	157.55;23.02	24,20	1,18	1,53825E-6	-4,48708E-7	0,00000E+0
2026	157.60;0.00	23,71	23,71	1,38381E-11	2,96631E-14	0,00000E+0
2027	157.92;12.03	23,66	11,63	4,72430E-7	-1,07194E-7	0,00000E+0
2028	158.00;16.26	23,78	7,52	5,55588E-7	-9,54378E-8	0,00000E+0
2029	158.16;24.20	24,13	-0,07	1,28768E-6	-3,62305E-7	0,00000E+0
2030	158.53;7.02	23,53	16,51	1,49421E-11	1,88656E-12	0,00000E+0
2031	158.54;14.35	23,63	9,28	5,10316E-7	-7,71494E-8	0,00000E+0
2032	158.67;2.16	23,56	21,40	1,36559E-11	4,85415E-13	0,00000E+0
2033	158.77;22.68	23,89	1,21	2,55993E-6	-6,92534E-7	0,00000E+0
2034	159.32;21.07	23,66	2,59	1,60846E-6	-4,27855E-7	0,00000E+0
2035	159.39;23.85	23,82	-0,03	2,25788E-6	-6,15463E-7	0,00000E+0
2036	159.59;19.23	23,54	4,31	6,68595E-7	-7,94149E-8	0,00000E+0
2037	159.64;8.96	23,31	14,35	1,88927E-7	-6,39105E-8	0,00000E+0
2038	159.68;11.09	23,37	12,29	4,21524E-7	-7,34070E-8	0,00000E+0
2039	159.75;4.32	23,40	19,08	1,34333E-11	1,12835E-12	0,00000E+0
2040	159.76;17.42	23,47	6,04	6,04417E-7	-3,91932E-8	0,00000E+0
2041	159.88;0.00	23,40	23,40	1,34765E-11	-9,79573E-14	0,00000E+0
2042	160.30;13.40	23,33	9,92	4,65931E-7	-4,04039E-8	0,00000E+0
2043	160.30;15.51	23,35	7,83	5,43458E-7	-1,64863E-8	0,00000E+0
2044	160.61;23.51	23,51	0,00	1,43705E-6	-4,65684E-7	-4,84333E-5
2045	160.86;6.26	23,22	16,96	1,28409E-11	2,66139E-12	0,00000E+0
2046	160.96;2.16	23,25	21,10	1,33795E-11	5,20778E-13	0,00000E+0
2047	161.16;21.90	23,29	1,39	2,37237E-6	-6,98873E-7	0,00000E+0
2048	161.71;20.29	23,06	2,77	1,76117E-6	-4,17029E-7	0,00000E+0
2049	161.89;18.48	23,02	4,54	6,73373E-7	-1,94929E-8	0,00000E+0
2050	161.90;23.14	23,23	0,09	2,53307E-6	-9,29055E-7	1,00318E-4
2051	161.97;8.21	23,01	14,80	1,54767E-7	-4,95156E-8	0,00000E+0
2052	161.98;4.02	23,11	19,09	1,24760E-11	4,29429E-13	0,00000E+0
2053	162.01;10.33	23,06	12,72	3,61706E-7	-4,35795E-8	0,00000E+0
2054	162.06;12.46	23,06	10,60	4,14097E-7	4,54101E-9	0,00000E+0
2055	162.06;14.57	23,04	8,48	5,02583E-7	3,75766E-8	0,00000E+0
2056	162.07;16.68	23,01	6,33	5,88008E-7	4,74210E-8	0,00000E+0
2057	162.16;0.00	23,10	23,10	1,30692E-11	1,56120E-13	0,00000E+0
2058	162.45;21.53	22,96	1,42	2,03090E-6	-5,30347E-7	0,00000E+0
2059	163.09;5.97	22,95	16,99	1,19036E-11	2,26013E-12	0,00000E+0
2060	163.18;1.86	22,97	21,10	1,24251E-11	-2,14944E-14	0,00000E+0
2061	163.18;22.78	22,85	0,07	1,49094E-6	-4,02299E-7	-1,84745E-5
2062	163.77;21.16	22,60	1,44	2,83802E-6	-4,96458E-7	0,00000E+0
2063	163.89;9.41	22,85	13,44	2,77012E-7	-1,44096E-8	0,00000E+0
2064	163.93;11.53	22,83	11,30	3,32446E-7	3,51767E-8	0,00000E+0
2065	164.10;19.51	22,45	2,94	1,66738E-6	-1,28699E-7	0,00000E+0
2066	164.21;3.72	22,85	19,12	1,14063E-11	-4,67721E-13	0,00000E+0
2067	164.28;17.71	22,51	4,81	6,58885E-7	2,02507E-7	0,00000E+0
2068	164.29;7.45	22,78	15,33	1,08744E-7	-3,66038E-8	0,00000E+0
2069	164.37;13.82	22,71	8,89	4,12218E-7	1,42266E-7	0,00000E+0
2070	164.37;15.93	22,60	6,68	5,14170E-7	1,61424E-7	0,00000E+0
2071	164.44;0.00	22,80	22,80	1,38984E-11	-4,62482E-13	0,00000E+0
2072	164.50;22.41	22,47	0,06	3,04467E-6	-5,81269E-7	-5,88712E-5
2073	165.42;5.21	22,73	17,52	8,07670E-12	4,68362E-13	0,00000E+0
2074	165.47;1.86	22,67	20,81	1,45299E-11	-4,04896E-13	0,00000E+0
2075	165.80;10.61	22,67	12,06	2,49015E-7	7,09792E-8	0,00000E+0
2076	165.82;22.03	22,08	0,05	2,06589E-6	-1,04517E-7	-6,38597E-5
2077	166.12;3.42	22,63	19,21	1,03857E-11	-5,05471E-12	0,00000E+0
2078	166.16;20.39	21,98	1,59	2,66005E-6	-7,78640E-8	0,00000E+0
2079	166.21;8.65	22,67	14,01	1,87545E-7	1,49985E-8	0,00000E+0
2080	166.24;12.90	22,53	9,64	3,20056E-7	1,81902E-7	0,00000E+0
2081	166.50;18.74	21,90	3,16	1,50549E-6	-1,19485E-7	0,00000E+0
2082	166.58;16.96	22,11	5,15	6,07548E-7	3,70106E-7	0,00000E+0
2083	166.62;6.70	22,64	15,94	7,20476E-8	-2,06222E-8	0,00000E+0
2084	166.67;15.18	22,30	7,12	4,17357E-7	3,08308E-7	0,00000E+0
2085	166.72;0.00	22,47	22,47	1,33569E-11	2,61775E-12	0,00000E+0
2086	167.17;21.65	21,69	0,04	3,31557E-6	3,76680E-7	-1,98248E-4
2087	167.28;9.97	22,58	12,61	1,74351E-7	8,26125E-8	0,00000E+0
2088	167.28;11.20	22,54	11,33	2,03432E-7	1,42466E-7	0,00000E+0
2089	167.32;4.91	22,58	17,67	7,98643E-12	-2,96174E-12	0,00000E+0
2090	167.37;1.56	22,38	20,82	8,47103E-12	-2,04857E-12	0,00000E+0
2091	167.51;20.00	21,66	1,65	2,71199E-6	4,42428E-7	0,00000E+0
2092	167.69;8.01	22,60	14,58	1,14382E-7	2,63734E-8	0,00000E+0
2093	167.72;13.49	22,35	8,86	2,72219E-7	2,68062E-7	0,00000E+0
2094	168.02;3.12	22,42	19,30	7,69835E-12	-6,14067E-12	0,00000E+0
2095	168.52;21.27	21,30	0,03	3,01553E-6	1,58552E-6	-4,48589E-5

Ie	(X, Y) [m]	H [m]	P [kPa]	Vx [cm/sec]	Vy [cm/sec]	Q [cm/sec]
2096	168.75;9.33	22,53	13,20	1,03254E-7	9,13367E-8	0,00000E+0
2097	168.75;10.56	22,48	11,92	1,25297E-7	1,46306E-7	0,00000E+0
2098	168.76;11.80	22,41	10,61	1,45936E-7	2,12376E-7	0,00000E+0
2099	168.89;17.96	21,51	3,55	8,10361E-7	6,27323E-7	0,00000E+0
2100	168.95;5.94	22,56	16,62	2,58611E-8	-6,58359E-9	0,00000E+0
2101	168.95;7.02	22,57	15,54	6,38723E-8	7,85991E-9	0,00000E+0
2102	168.98;14.43	22,14	7,71	2,02210E-7	3,55466E-7	0,00000E+0
2103	168.98;16.18	21,88	5,69	2,76784E-7	5,87697E-7	0,00000E+0
2104	169.00;0.00	21,91	21,91	4,33468E-11	-1,23101E-11	0,00000E+0
2105	169.65;1.56	21,89	20,33	3,16269E-11	-2,88103E-11	0,00000E+0
2106	169.65;4.15	22,39	18,23	-2,80625E-13	-5,89190E-12	0,00000E+0
2107	169.90;19.23	21,28	2,05	1,87565E-6	1,76874E-6	0,00000E+0
2108	169.90;20.88	20,89	0,01	3,79841E-7	5,38452E-7	-1,02555E-3
2109	170.01;8.34	22,53	14,19	5,00376E-8	6,91138E-8	0,00000E+0
2110	170.01;9.76	22,48	12,73	5,48909E-8	1,21058E-7	0,00000E+0
2111	170.02;10.99	22,42	11,43	6,69712E-8	1,78964E-7	0,00000E+0
2112	170.02;12.74	22,29	9,55	7,25338E-8	2,94817E-7	0,00000E+0
2113	171.28;0.00	20,49	20,49	5,98080E-11	-5,49177E-11	-1,04600E-8
2114	171.28;2.59	22,01	19,42	1,16010E-11	-3,97330E-11	0,00000E+0
2115	171.28;5.19	22,55	17,37	-6,60838E-9	-9,41615E-10	0,00000E+0
2116	171.28;6.27	22,55	16,28	-7,80921E-9	1,93109E-8	0,00000E+0
2117	171.28;7.35	22,54	15,18	-8,03848E-10	4,26955E-8	0,00000E+0
2118	171.28;8.77	22,51	13,74	-2,26358E-9	8,91508E-8	0,00000E+0
2119	171.28;10.18	22,45	12,27	-2,06475E-9	1,45884E-7	0,00000E+0
2120	171.28;11.93	22,34	10,41	3,45883E-9	2,45430E-7	0,00000E+0
2121	171.28;13.68	22,17	8,48	-7,46784E-9	3,68212E-7	0,00000E+0
2122	171.28;15.43	21,89	6,46	5,63563E-8	5,86624E-7	0,00000E+0
2123	171.28;17.18	21,48	4,30	-3,23984E-7	1,00584E-6	0,00000E+0
2124	171.28;18.84	21,30	2,46	-1,59700E-6	1,69723E-6	0,00000E+0
2125	171.28;20.49	20,97	0,48	-4,56031E-7	6,74618E-7	0,00000E+0