



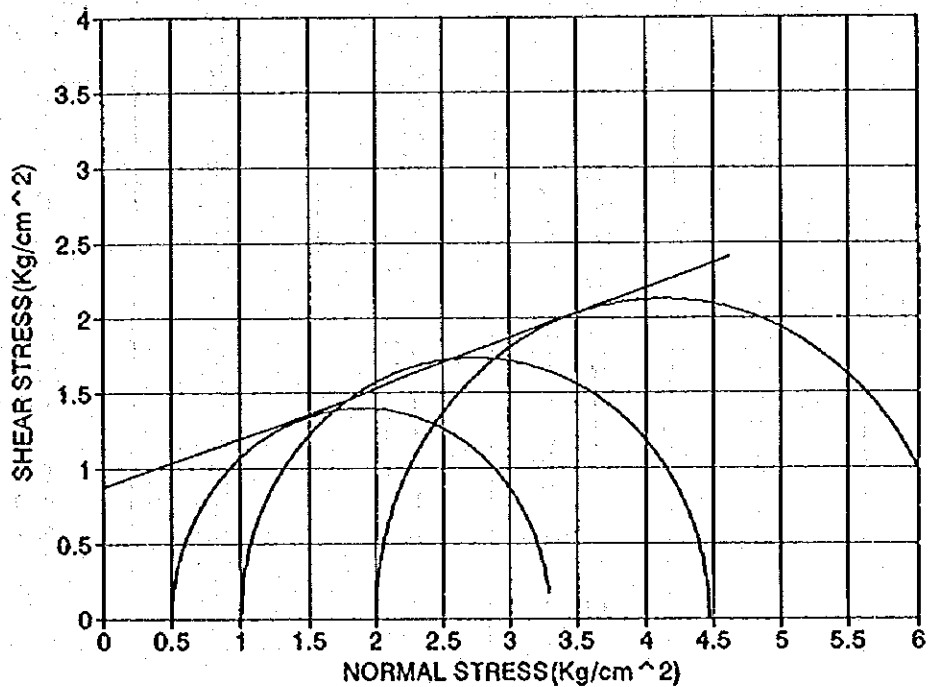
U.U. TRIAXIAL TEST



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION
CIRCULOS DE MOHR / MOHR CIRCLE

PROYECTO/PROJECT: Trasvases/Trasbasin
LOCALIZACION/SITE: Canal abierto/Open Channel
FECHA/DATE: Enero-94/January-94
CALICATA No./PIT No.: C-10
MUESTRA No./SAMPLE No.: M-1
PROFUNDIDAD/DEPTH: 0.50 - 1.40 m.
ENSAYADO/PERFORMED BY: G.S.
CALCULADO/CALCULATED BY: F.V.

No.	@desv (Kg/cm ²)	@3 (Kg/cm ²)	@1 (Kg/cm ²)	(@1-@3)/2 (Kg/cm ²)	(@1+@3)/2 (Kg/cm ²)
1	2.80	0.50	3.30	1.40	1.90
2	3.47	1.00	4.47	1.74	2.74
3	4.25	2.00	6.25	2.13	4.13



Cohesion = 0.90 Kg/cm²
Friction angle = 20°

1 122

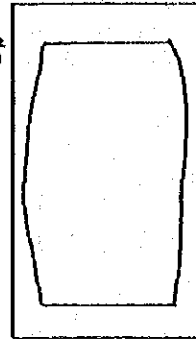


HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

PROYECTO/PROJECT: **Trasvases/Trasbaeln**
 LOCALIZACION/SITE: **Canal abierto/Open Channel**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-10**
 MUESTRA No./SAMPLE No.: **M-1**
 PROFUNDIDAD/DEPTH: **0.50 - 1.40 m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CALCULADO/CALCULATED BY: **F.V.**

PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: **0.5 Kg/cm²**

GRAFICO/GRAPHIC



DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
 ALTURA/HEIGHT: **7.12 cm.**
 PESO/WEIGHT: **110 gr.**
 VOLUMEN/VOLUME: **70.87 cm³**
 AREA/AREA: **9.95 cm²**
 DENSIDAD HUMEDA/WET DENSITY: **1.552 gr/cm³**
 DENSIDAD SECA/DRY DENSITY: **1.085 gr/cm³**
 Cte. ANILLO/RING KTE.: **0.33 Kg/div.**

DEFORMACION DEFORMATION x 1E-3inch	DIAL CARGA LOAD DIAL x 1E-4inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	17	5.610	0.18	9.97	0.56
10	29	9.570	0.36	9.99	0.96
20	46	15.180	0.71	10.03	1.51
30	58	19.140	1.07	10.06	1.90
40	67	22.110	1.43	10.10	2.19
50	73	24.090	1.78	10.13	2.38
60	77	25.410	2.14	10.17	2.50
70	80	26.400	2.50	10.21	2.59
80	82	27.060	2.85	10.25	2.64
90	84	27.720	3.21	10.28	2.70
100	86	28.380	3.57	10.32	2.75
120	88	29.040	4.28	10.40	2.79
140	89	29.370	4.99	10.48	2.60
160	90	29.700	5.71	10.56	2.81
180	91	30.030	6.42	10.64	2.82
200	92	30.360	7.13	10.72	2.83
250	93	30.690	8.92	10.93	2.81
300	94	31.020	10.70	11.15	2.78

Cap. No.	441
Wcap.+SH	12935.00
Wcap.+SS	9628.00
Wcap.	1951.00
w%	43.08



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COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

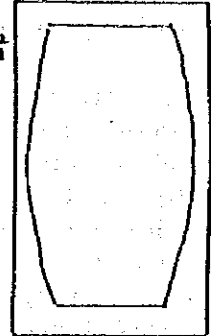
PROYECTO/PROJECT: **Trasvases/Trasbasin**
 LOCALIZACION/SITE: **Canal abierto/Open Channel**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-10**
 MUESTRA No./SAMPLE No.: **M-1**
 PROFUNDIDAD/DEPTH: **0.60 - 1.40 m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CALCULADO/CALCULATED BY: **F.V.**

PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: 1.0 Kg/cm²

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
 ALTURA/HEIGHT: **7.12 cm.**
 PESO/WEIGHT: **110.35 gr.**
 VOLUMEN/VOLUME: **70.87 cm³**
 AREA/AREA: **9.95 cm²**
 DENSIDAD HUMEDA/WET DENSITY: **1.557 gr/cm³**
 DENSIDAD SECA/DRY DENSITY: **1.087 gr/cm³**
 Cte. ANILLO/RING KTE.: **0.33 Kg/div.**

GRAFICO/GRAPHIC



DEFORMACION DEFORMATION x 1E-3inch	DIAL CARGA LOAD DIAL x 1E-4inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	20	8.600	0.18	9.97	0.66
10	36	11.880	0.36	9.99	1.19
20	58	18.480	0.71	10.03	1.84
30	68	22.440	1.07	10.06	2.23
40	76	25.080	1.43	10.10	2.48
50	82	27.060	1.78	10.13	2.67
60	87	28.710	2.14	10.17	2.82
70	91	30.030	2.50	10.21	2.94
80	95	31.350	2.85	10.25	3.06
90	98	32.340	3.21	10.28	3.14
100	101	33.330	3.57	10.32	3.23
120	106	34.980	4.28	10.40	3.38
140	110	36.300	4.89	10.48	3.46
160	113	37.290	5.71	10.56	3.53
180	116	38.280	6.42	10.64	3.60
200	119	39.270	7.13	10.72	3.66
250	121	39.930	8.92	10.93	3.65
300	128	42.240	10.70	11.15	3.79

Cap. No.	227
Wcap. + SH	13137.00
Wcap. + SS	9802.00
Wcap.	2094.00
w%	43.27



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

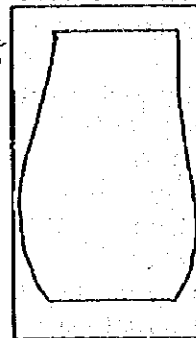
PROYECTO/PROJECT: **Trasvases/Trasbasin**
 LOCALIZACION/SITE: **Canal abierto/Open Channel**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-10**
 MUESTRA No./SAMPLE No.: **M-1**
 PROFUNDIDAD/DEPTH: **0.50 - 1.40 m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CALCULADO/CALCULATED BY: **F.V.**

PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: 2.0 Kg/cm²

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
 ALTURA/HEIGHT: **7.12 cm.**
 PESO/WEIGHT: **110.99 gr.**
 VOLUMEN/VOLUME: **70.87 cm³**
 AREA/AREA: **9.95 cm²**
 DENSIDAD HUMEDA/WET DENSITY: **1.568 gr/cm³**
 DENSIDAD SECA/DRY DENSITY: **1.095 gr/cm³**
 Cte. ANILLO/RING KTE.: **0.33 Kg/div.**

GRAFICO/GRAPHIC



DEFORMACION DEFORMATION x 1E-3inch	DIAL CARGA LOAD DIAL x 1E-4inch	CARGA LOAD Kg	DEF. UNIT. UNIT. DEF. %	AREA CORREG. CORRECT. AREA cm ²	ESF. DESVIAD. DEVIAT. STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	32	10.560	0.18	9.97	1.06
10	47	15.510	0.38	9.99	1.55
20	63	20.790	0.71	10.03	2.07
30	78	25.740	1.07	10.06	2.56
40	88	29.040	1.43	10.10	2.88
50	98	31.680	1.78	10.13	3.13
60	103	33.990	2.14	10.17	3.34
70	110	36.300	2.50	10.21	3.56
80	114	37.620	2.85	10.25	3.67
90	119	39.270	3.21	10.28	3.82
100	123	40.590	3.57	10.32	3.93
120	130	42.900	4.28	10.40	4.13
140	135	44.550	4.99	10.48	4.25
160	141	46.530	5.71	10.56	4.41
180	145	47.850	6.42	10.64	4.50
200	149	49.170	7.13	10.72	4.59
250	158	52.140	8.92	10.93	4.77
300	168	54.780	10.70	11.15	4.91

Cap. No.	423
Wcap. + SH	131.32
Wcap. + SS	97.99
Wcap.	20.52
w%	43.02

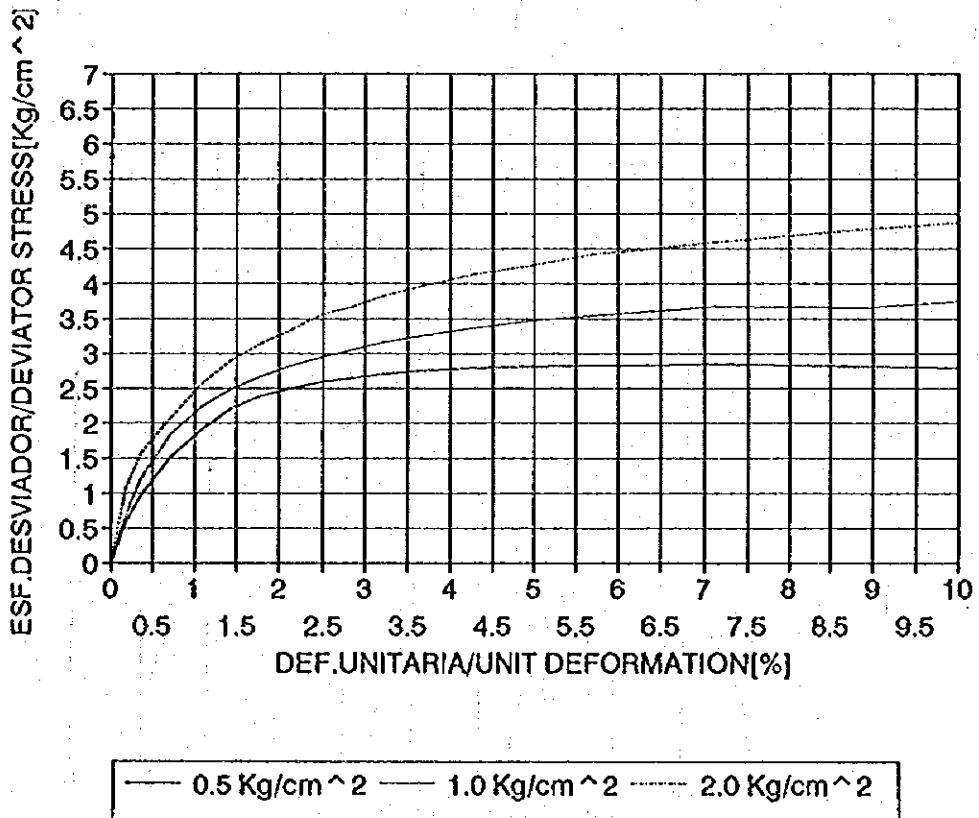


HIDROSUELOS CIA. LTDA.

COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

GRAFICO ESFUERZO-DEFORMACION/STRESS DEFORMATION GRAPHIC

PROYECTO/PROJECT:	Trasvases/Trasbasin
LOCALIZACION/SITE:	Canal abierto/Open Channel
FECHA/DATE:	Enero-94/January-94
CALICATA No./PIT No.:	C-10
MUESTRA No./SAMPLE No.:	M-1
PROFUNDIDAD/DEPTH:	0.50 - 1.40 m.
ENSAYADO/PERFORMED BY:	G.S.
CALCULADO/CALCULATED BY:	F.V.

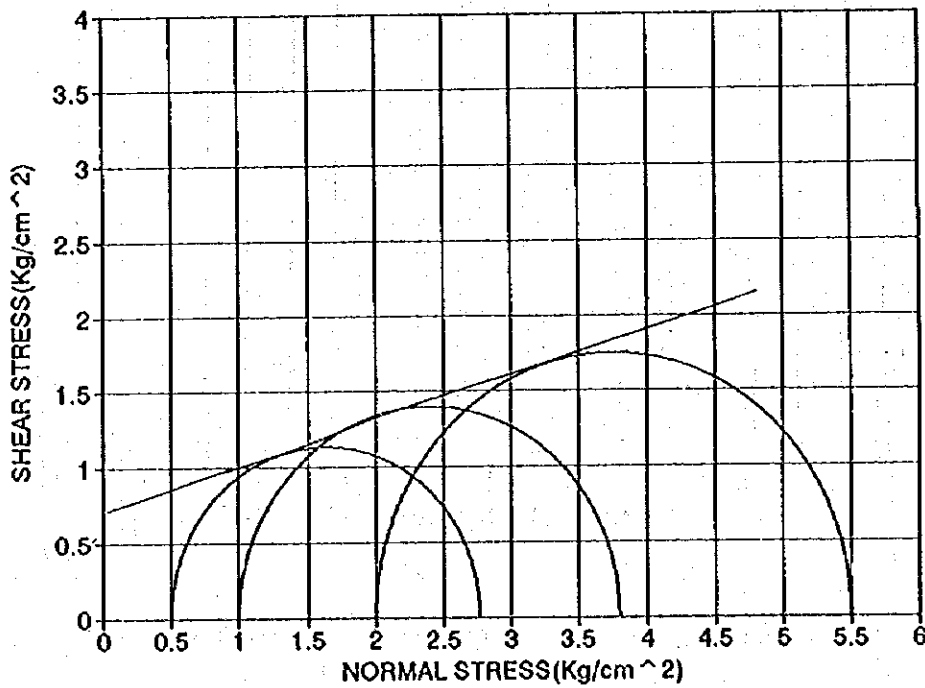




HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION
CIRCULOS DE MOHR / MOHR CIRCLE

PROYECTO/PROJECT: Trasvases/Trasbasin
LOCALIZACION/SITE: Canal abierto/Open Channel
FECHA/DATE: Enero-94/January-94
CALICATA No./PIT No.: C-11
MUESTRA No./SAMPLE No.: M-1
PROFUNDIDAD/DEPTH: 0.55-1.60m.
ENSAYADO/PERFORMED BY: G.S.
CALCULADO/CALCULATED BY: F.V.

No.	@desv (Kg/cm ²)	@3 (Kg/cm ²)	@1 (Kg/cm ²)	(@1-@3)/2 (Kg/cm ²)	(@1+@3)/2 (Kg/cm ²)
1	2.27	0.50	2.77	1.14	1.64
2	2.80	1.00	3.80	1.40	2.40
3	3.50	2.00	5.50	1.75	3.75



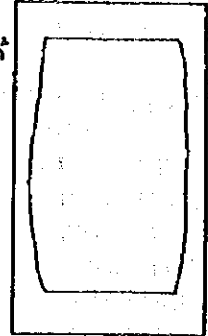
Cohesion= 0,70Kg/cm²
Friction angle= 16°



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

PROYECTO/PROJECT: **Trasvases/Trasbasin**
 LOCALIZACION/SITE: **Canal abierto/Open Channel**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-11**
 MUESTRA No./SAMPLE No.: **M-1**
 PROFUNDIDAD/DEPTH: **0.55-1.60m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CALCULADO/CALCULATED BY: **F.V.**

GRAFICO/GRAPHIC



PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: **0.5 Kg/cm²**

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
 ALTURA/HEIGHT: **7.12 cm.**
 PESO/WEIGHT: **108.99 gr.**
 VOLUMEN/VOLUME: **70.87 cm³**
 AREA/AREA: **9.95 cm²**
 DENSIDAD HUMEDA/WET DENSITY: **1.538 gr/cm³**
 DENSIDAD SECA/DRY DENSITY: **1.051 gr/cm³**
 Cte ANILLO/RING KTE.: **0.33 Kg/div.**

DEFORMACION DEFORMATION x 1E-3Inch	DIAL CARGA LOAD DIAL x 1E-4Inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	7	2.310	0.18	9.97	0.23
10	16	5.280	0.36	9.99	0.53
20	29	9.570	0.71	10.03	0.95
30	41	13.530	1.07	10.06	1.34
40	48	15.840	1.43	10.10	1.57
50	53	17.490	1.78	10.13	1.73
60	57	18.810	2.14	10.17	1.85
70	60	19.800	2.50	10.21	1.94
80	62	20.460	2.85	10.25	2.00
90	65	21.450	3.21	10.28	2.09
100	67	22.110	3.57	10.32	2.14
120	70	23.100	4.28	10.40	2.22
140	72	23.760	4.69	10.48	2.27
160	73	24.090	5.71	10.58	2.28
180	75	24.750	6.42	10.64	2.33
200	76	25.080	7.13	10.72	2.34
250	78	25.740	8.92	10.93	2.36
300	79	26.070	10.70	11.15	2.34

Cap. No.	440
Wcap.+SH	129.44
Wcap.+SS	95.00
Wcap.	20.64
w%	46.32



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

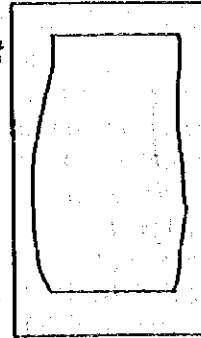
PROYECTO/PROJECT: **Trasvases/Trasbasin**
 LOCALIZACION/SITE: **Canal abierto/Open Channel**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-11**
 MUESTRA No./SAMPLE No.: **M-1**
 PROFUNDIDAD/DEPTH: **0.55-1.60m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CALCULADO/CALCULATED BY: **F.V.**

PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: **1.0 Kg/cm²**

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
 ALTURA/HEIGHT: **7.12 cm.**
 PESO/WEIGHT: **111 gr.**
 VOLUMEN/VOLUME: **70.87 cm³**
 AREA/AREA: **9.95 cm²**
 DENSIDAD HUMEDA/WET DENSITY: **1.566 gr/cm³**
 DENSIDAD SECA/DRY DENSITY: **1.067 gr/cm³**
 Cte. ANILLO/RING KTE.: **0.33 Kg/div.**

GRAFICO/GRAPHIC



DEFORMACION DEFORMATION x 1E-3inch	DIAL CARGA LOAD DIAL x 1E-4inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	12	3.960	0.18	9.97	0.40
10	22	7.260	0.36	9.99	0.73
20	37	12.210	0.71	10.03	1.22
30	49	16.170	1.07	10.06	1.61
40	57	18.810	1.43	10.10	1.88
50	63	20.790	1.78	10.13	2.05
60	68	22.440	2.14	10.17	2.21
70	73	24.090	2.50	10.21	2.36
80	76	25.080	2.85	10.25	2.45
90	78	25.740	3.21	10.28	2.50
100	81	26.730	3.57	10.32	2.59
120	85	28.050	4.28	10.40	2.70
140	89	29.370	4.99	10.48	2.80
160	92	30.360	5.71	10.56	2.88
180	94	31.020	6.42	10.64	2.92
200	97	32.010	7.13	10.72	2.99
250	102	33.660	8.92	10.93	3.08
300	106	34.980	10.70	11.15	3.14

Cap. No.	278
Wcap.+SH	131.48
Wcap.+SS	96.08
Wcap.	20.42
w%	46.79

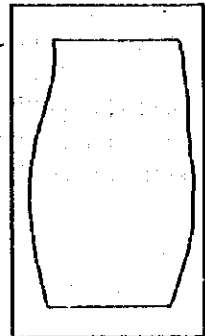


HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

PROYECTO/PROJECT: Trasvases/Trasbasin
 LOCALIZACION/SITE: Canal abierto/Open Channel
 FECHA/DATE: Enero-94/January-94
 CALICATA No./PIT No.: C-11
 MUESTRA No./SAMPLE No.: M-1
 PROFUNDIDAD/DEPTH: 0.55-1.60m.
 ENSAYADO/PERFORMED BY: G.S.
 CALCULADO/CALCULATED BY: F.V.

PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: 2.0 Kg/cm²

GRAFICO/GRAPHIC



DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: 3.56 cm.
 ALTURA/HEIGHT: 7.12 cm.
 PESO/WEIGHT: 108.8 gr.
 VOLUMEN/VOLUME: 70.87 cm³
 AREA/AREA: 9.95 cm²
 DENSIDAD HUMEDA/WET DENSITY: 1.535 gr/cm³
 DENSIDAD SECA/DRY DENSITY: 1.050 gr/cm³
 Cte. ANILLO/RING KTE.: 0.33 Kg/div.

DEFORMACION DEFORMATION x 1E-3inch	DIAL CARGA LOAD DIAL x 1E-4inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	15	4.950	0.18	9.97	0.50
10	28	9.240	0.36	9.99	0.92
20	49	16.170	0.71	10.03	1.81
30	62	20.460	1.07	10.06	2.03
40	70	23.100	1.43	10.10	2.29
50	78	25.740	1.78	10.13	2.54
60	83	27.390	2.14	10.17	2.69
70	89	29.370	2.50	10.21	2.88
80	93	30.690	2.85	10.25	3.00
90	97	32.010	3.21	10.28	3.11
100	101	33.330	3.57	10.32	3.23
120	107	35.310	4.28	10.40	3.40
140	111	36.630	4.99	10.48	3.50
160	116	38.280	5.71	10.56	3.63
180	120	39.600	6.42	10.64	3.72
200	124	40.920	7.13	10.72	3.82
250	131	43.230	8.92	10.93	3.96
300	133	43.690	10.70	11.15	3.94

Cap. No.	299
Wcap.+SH	129.30
Wcap.+SS	95.00
Wcap.	20.68
w%	46.15

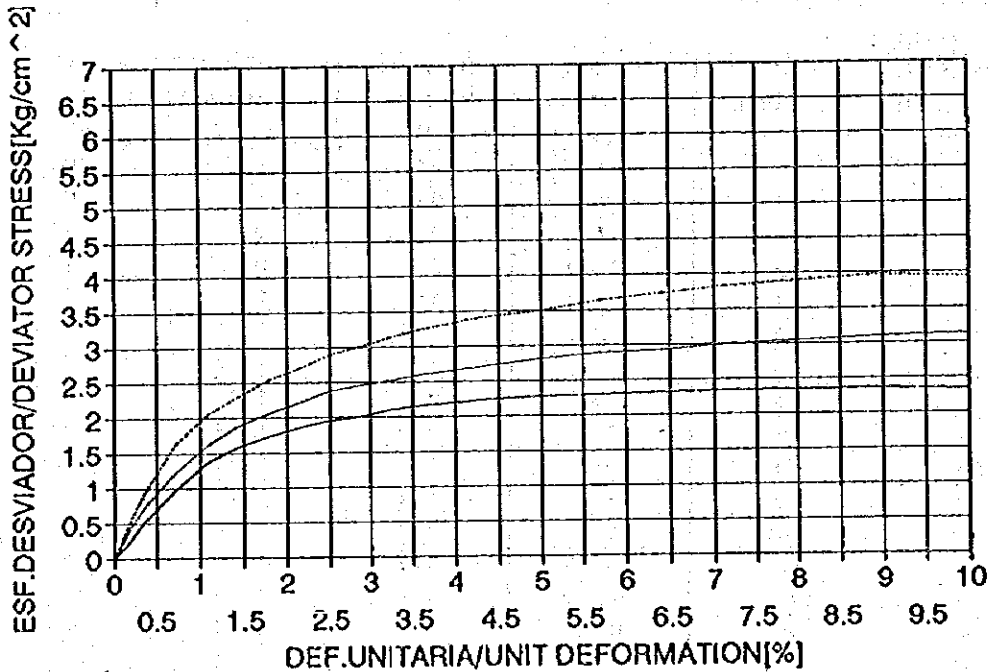


HIDROSUELOS CIA. LTDA.

COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

GRAFICO ESFUERZO-DEFORMACION/STRESS DEFORMATION GRAPHIC

PROYECTO/PROJECT:	Trasvases/Trasbasin
LOCALIZACION/SITE:	Canal abierto/Open Channel
FECHA/DATE:	Enero-94/January-94
CALICATA No./PIT No.:	C-11
MUESTRA No./SAMPLE No.:	M-1
PROFUNDIDAD/DEPTH:	0.55-1.60m.
ENSAYADO/PERFORMED BY:	G.S.
CALCULADO/CALCULATED BY:	F.V.



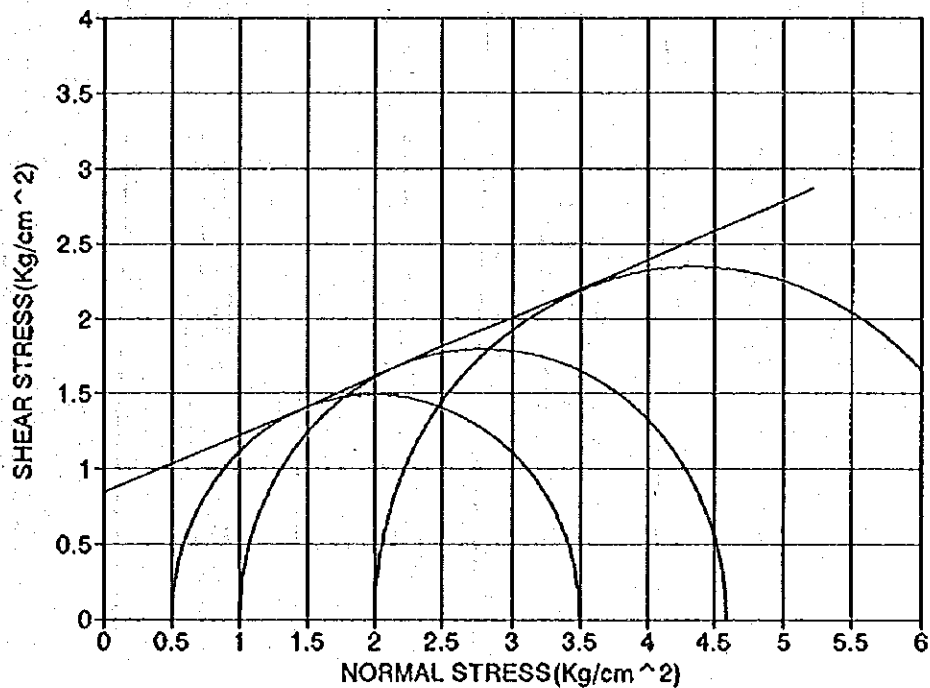
— 0.5 Kg/cm² — 1.0 Kg/cm² - - - 2.0 Kg/cm²



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION
CIRCULOS DE MOHR / MOHR CIRCLE

PROYECTO/PROJECT: **Trasvases/Trasbasin**
LOCALIZACION/SITE: **Canal abierto/Open Channel**
FECHA/DATE: **Enero-94/January-94**
CALICATA No./PIT No.: **C-12**
MUESTRA No./SAMPLE No.: **M-2**
PROFUNDIDAD/DEPTH: **2.00-3.60m.**
ENSAYADO/PERFORMED BY: **G.S.**
CALCULADO/CALCULATED BY: **F.V.**

No.	@desv (Kg/cm ²)	@3 (Kg/cm ²)	@1 (Kg/cm ²)	(@1-@3)/2 (Kg/cm ²)	(@1+@3)/2 (Kg/cm ²)
1	2.99	0.50	3.49	1.50	2.00
2	3.59	1.00	4.59	1.80	2.80
3	4.69	2.00	6.69	2.35	4.35



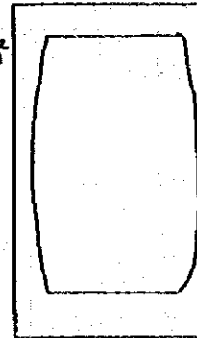
Cohesion = 0.85 Kg/cm²
Friction angle = 20°



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

PROYECTO/PROJECT: Traspases/Trasbasin
 LOCALIZACION/SITE: Canal abierto/Open Channel
 FECHA/DATE: Enero-94/January-94
 CALICATA No./PIT No.: C-12
 MUESTRA No./SAMPLE No.: M-2
 PROFUNDIDAD/DEPTH: 2.00-3.60m.
 ENSAYADO/PERFORMED BY: G.S.
 CALCULADO/CALCULATED BY: F.V.

GRAFICO/GRAPHIC



PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: 0.5 Kg/cm²

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: 3.56 cm.
 ALTURA/HEIGHT: 7.12 cm.
 PESO/WEIGHT: 109.23 gr.
 VOLUMEN/VOLUME: 70.87 cm³
 AREA/AREA: 9.95 cm²
 DENSIDAD HUMEDA/WET DENSITY: 1.541 gr/cm³
 DENSIDAD SECA/DRY DENSITY: 1.101 gr/cm³
 Cte. ANILLO/RING KTE.: 0.33 Kg/div.

DEFORMACION DEFORMATION x 1E-3inch	DIAL CARGA LOAD DIAL x 1E-4inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	17	5.610	0.18	9.97	0.56
10	30	9.900	0.36	9.99	0.99
20	52	17.160	0.71	10.03	1.71
30	63	20.790	1.07	10.06	2.07
40	71	23.430	1.43	10.10	2.32
50	76	25.080	1.78	10.13	2.47
60	80	26.400	2.14	10.17	2.60
70	85	28.050	2.50	10.21	2.75
80	90	29.700	2.85	10.25	2.90
90	91	30.030	3.21	10.28	2.92
100	92	30.360	3.57	10.32	2.94
120	93	30.690	4.28	10.40	2.95
140	95	31.350	4.99	10.48	2.99
160	95	31.350	5.71	10.56	2.87
180	95	31.350	6.42	10.64	2.95
200					
250					
300					

Cap. No.	249
Wcap.+SH	130.00
Wcap.+SS	98.78
Wcap.	20.72
w%	39.99



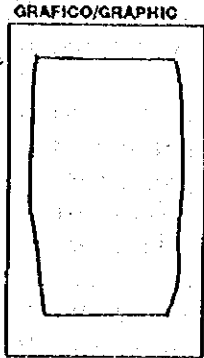
HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

PROYECTO/PROJECT: **Trasvases/Trasbasin**
 LOCALIZACION/SITE: **Canal abierto/Open Channel**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-12**
 MUESTRA No./SAMPLE No.: **M-2**
 PROFUNDIDAD/DEPTH: **2.00-3.60m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CALCULADO/CALCULATED BY: **F.V.**

PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: **1.0 Kg/cm²**

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
 ALTURA/HEIGHT: **7.12 cm.**
 PESO/WEIGHT: **109.2 gr.**
 VOLUMEN/VOLUME: **70.87 cm³**
 AREA/AREA: **9.95 cm²**
 DENSIDAD HUMEDA/WET DENSITY: **1.541 gr/cm³**
 DENSIDAD SECA/DRY DENSITY: **1.104 gr/cm³**
 Cto.ANILLO/RING KTE.: **0.33 Kg/div.**



DEFORMACION DEFORMATION x 1E-3Inch	DIAL CARGA LOAD DIAL x 1E-4Inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	25	8.250	0.18	9.97	0.83
10	42	13.860	0.36	9.99	1.39
20	65	21.450	0.71	10.03	2.14
30	76	25.080	1.07	10.06	2.49
40	84	27.720	1.43	10.10	2.75
50	87	28.710	1.78	10.13	2.83
60	94	31.020	2.14	10.17	3.05
70	99	32.670	2.50	10.21	3.20
80	103	33.990	2.85	10.25	3.32
90	106	34.980	3.21	10.28	3.40
100	109	35.970	3.57	10.32	3.48
120	112	36.960	4.28	10.40	3.55
140	114	37.620	4.99	10.48	3.59
160	115	37.950	5.71	10.56	3.59
180	117	38.610	6.42	10.64	3.63
200	119	39.270	7.13	10.72	3.66
250	122	40.260	8.92	10.93	3.68
300	125	41.250	10.70	11.15	3.70

Cap. No.	617
Wcap. + SH	133.52
Wcap. + SS	102.72
Wcap.	24.89
w%	39.57



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

PROYECTO/PROJECT: **Trasvases/Trasbasln**
 LOCALIZACION/SITE: **Canal abierto/Open Channel**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-12**
 MUESTRA No./SAMPLE No.: **M-2**
 PROFUNDIDAD/DEPTH: **2.00-3.60m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CALCULADO/CALCULATED BY: **F.V.**

PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: **2.0 Kg/cm²**

GRAFICO/GRAPHIC



DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
 ALTURA/HEIGHT: **7.12 cm.**
 PESO/WEIGHT: **109.2 gr.**
 VOLUMEN/VOLUME: **70.87 cm³**
 AREA/AREA: **9.95 cm²**
 DENSIDAD HUMEDA/WET DENSITY: **1.541 gr/cm³**
 DENSIDAD SECA/DRY DENSITY: **1.101 gr/cm³**
 Cto. ANILLO/RING KTE.: **0.33 Kg/div.**

DEFORMACION DEFORMATION x 1E-3Inch	DIAL CARGA LOAD DIAL x 1E-4Inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	27	8.910	0.18	9.97	0.89
10	45	14.850	0.36	9.99	1.49
20	70	23.100	0.71	10.03	2.30
30	90	29.700	1.07	10.06	2.95
40	103	33.990	1.43	10.10	3.37
50	113	37.280	1.78	10.13	3.68
60	121	39.930	2.14	10.17	3.93
70	126	41.580	2.60	10.21	4.07
80	130	42.900	2.85	10.25	4.19
90	138	44.850	3.21	10.28	4.36
100	139	45.870	3.57	10.32	4.44
120	144	47.520	4.28	10.40	4.57
140	149	49.170	4.99	10.48	4.69
160	153	50.490	5.71	10.56	4.78
180	158	52.140	6.42	10.64	4.90
200	160	52.800	7.13	10.72	4.93
250	166	54.780	8.92	10.93	5.01
300	169	55.770	10.70	11.15	5.00

Cap. No.	223
Wcap.+SH	131.00
Wcap.+SS	99.48
Wcap.	20.69
w%	40.01

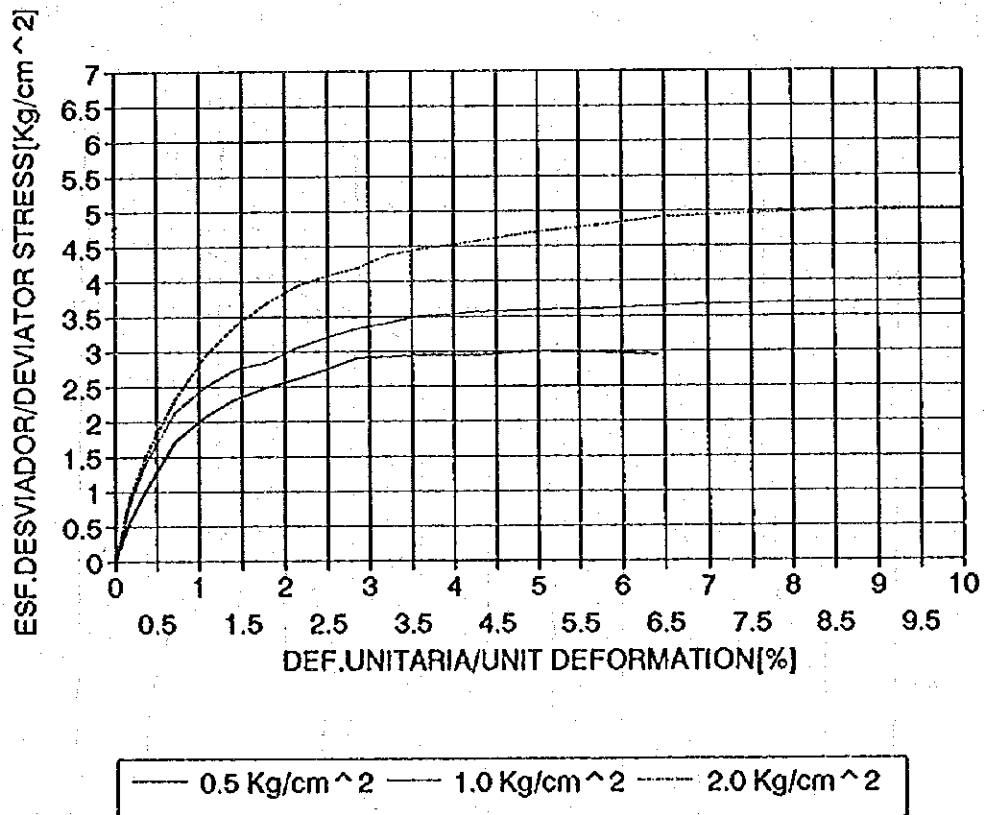


HIDROSUELOS CIA. LTDA.

COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

GRAFICO ESFUERZO-DEFORMACION/STRESS DEFORMATION GRAPHIC

PROYECTO/PROJECT:	Trasvases/Trasbasin
LOCALIZACION/SITE:	Canal abierto/Open Channel
FECHA/DATE:	Enero-94/January-94
CÁLICATA No./PIT No.:	C-12
MUESTRA No./SAMPLE No.:	M-2
PROFUNDIDAD/DEPTH:	2.00-3.60m.
ENSAYADO/PERFORMED BY:	G.S.
CALCULADO/CALCULATED BY:	F.V.

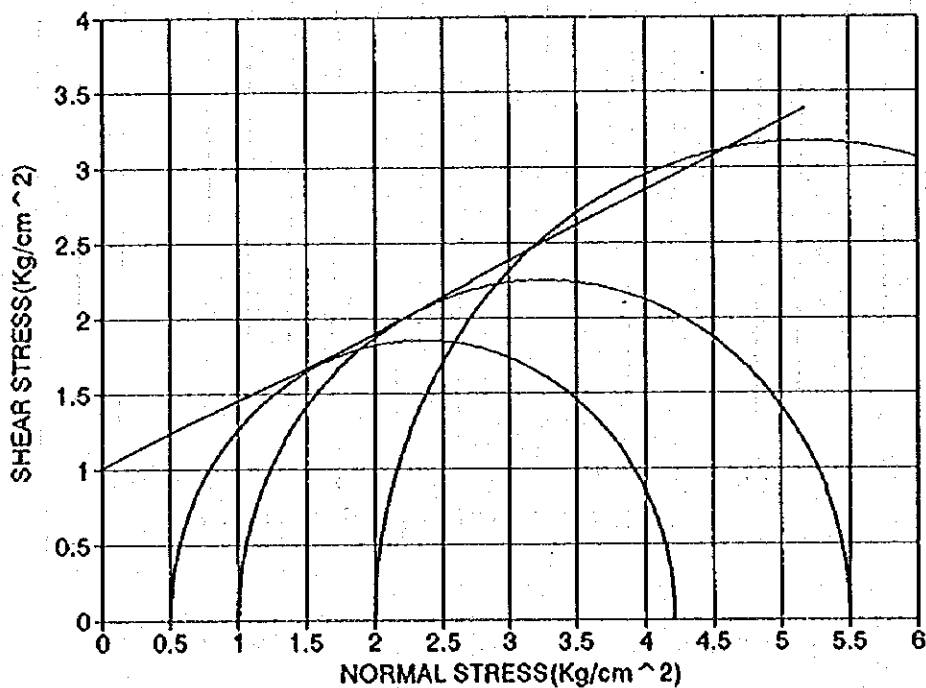




HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION
CIRCULOS DE MOHR / MOHR CIRCLE

PROYECTO/PROJECT: **Trasvases/Trasbasin**
LOCALIZACION/SITE: **Canal abierto/Open Channel**
FECHA/DATE: **Enero-94/January-94**
CALICATA No./PIT No.: **C-13**
MUESTRA No./SAMPLE No.: **M-1**
PROFUNDIDAD/DEPTH: **0.80-2.00m.**
ENSAYADO/PERFORMED BY: **G.S.**
CALCULADO/CALCULATED BY: **F.V.**

No.	@desv (Kg/cm ²)	@3 (Kg/cm ²)	@1 (Kg/cm ²)	(@1-@3)/2 (Kg/cm ²)	(@1+@3)/2 (Kg/cm ²)
1	3.71	0.50	4.21	1.86	2.36
2	4.50	1.00	5.50	2.25	3.25
3	6.35	2.00	8.35	3.18	5.18



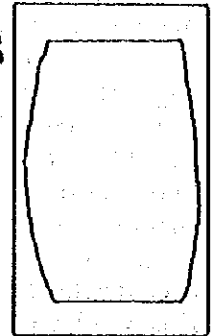
Cohesion = 1.0 Kg/cm²
Friction angle = 26°



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

PROYECTO/PROJECT: **Trasvases/Trasbasin**
 LOCALIZACION/SITE: **Canal ablorto/Open Channel**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-13**
 MUESTRA No./SAMPLE No.: **M-1**
 PROFUNDIDAD/DEPTH: **0.80-2.00m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CALCULADO/CALCULATED BY: **F.V.**

GRAFICO/GRAPHIC



PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: **0.5 Kg/cm²**

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
 ALTURA/HEIGHT: **7.12 cm.**
 PESO/WEIGHT: **109 gr.**
 VOLUMEN/VOLUME: **70.87 cm³**
 AREA/AREA: **9.95 cm²**
 DENSIDAD HUMEDA/WET DENSITY: **1.538 gr/cm³**
 DENSIDAD SECA/DRY DENSITY: **1.140 gr/cm³**
 Cte ANILLO/RING KTE.: **0.33 Kg/div.**

DEFORMACION DEFORMATION x 1E-3inch	DIAL CARGA LOAD DIAL x 1E-4inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	17	5.610	0.18	9.97	0.56
10	30	9.900	0.36	9.99	0.99
20	57	18.810	0.71	10.03	1.88
30	78	25.740	1.07	10.06	2.56
40	92	30.360	1.43	10.10	3.01
50	102	33.660	1.78	10.13	3.32
60	108	35.640	2.14	10.17	3.50
70	112	36.960	2.50	10.21	3.62
80	114	37.620	2.85	10.25	3.67
90	115	37.950	3.21	10.28	3.69
100	116	38.280	3.57	10.32	3.71
120	115	37.950	4.28	10.40	3.65
140	114	37.620	4.99	10.48	3.59
160					
180					
200					
250					
300					

Cap. No.	282
Wcap.+SH	129.99
Wcap.+SS	101.69
Wcap.	20.73
w%	34.96

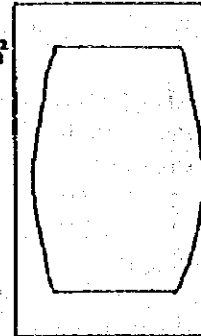
0 120



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

PROYECTO/PROJECT: Trasyases/Trasbaaln
 LOCALIZACION/SITE: Canal abierto/Open Channel
 FECHA/DATE: Enero-94/January-94
 CALICATA No./PIT No.: C-13
 MUESTRA No./SAMPLE No.: M-1
 PROFUNDIDAD/DEPTH: 0.80-2.00m.
 ENSAYADO/PERFORMED BY: G.S.
 CALCULADO/CALCULATED BY: F.V.

GRAFICO/GRAPHIC



PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: 1.0 Kg/cm²

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: 3.58 cm.
 ALTURA/HEIGHT: 7.12 cm.
 PESO/WEIGHT: 108.37 gr.
 VOLUMEN/VOLUME: 70.87 cm³
 AREA/AREA: 9.95 cm²
 DENSIDAD HUMEDA/WET DENSITY: 1.529 gr/cm³
 DENSIDAD SECA/DRY DENSITY: 1.137 gr/cm³
 Cte. ANILLO/RING KTE.: 0.33 Kg/div.

DEFORMACION DEFORMATION x 1E-3Inch	DIAL CARGA LOAD DIAL x 1E-4Inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	19	6.270	0.18	9.97	0.63
10	34	11.220	0.36	9.99	1.12
20	67	22.110	0.71	10.03	2.21
30	88	29.040	1.07	10.06	2.89
40	102	33.660	1.43	10.10	3.33
50	112	36.960	1.78	10.13	3.65
60	119	39.270	2.14	10.17	3.86
70	124	40.920	2.50	10.21	4.01
80	128	42.240	2.65	10.25	4.12
90	131	43.230	3.21	10.28	4.20
100	134	44.220	3.57	10.32	4.28
120	139	45.870	4.28	10.40	4.41
140	142	46.860	4.99	10.48	4.47
160	144	47.520	5.71	10.56	4.50
180	146	48.180	6.42	10.64	4.53
200	148	48.840	7.13	10.72	4.56
250	150	49.500	8.92	10.93	4.53
300	152	50.160	10.70	11.15	4.50

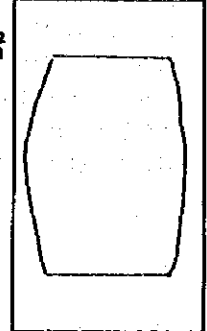
Cap. No.	264
Wcap. + SH	128.30
Wcap. + SS	100.54
Wcap.	19.96
w%	34.45



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

PROYECTO/PROJECT: Trasmases/Trasbasin
LOCALIZACION/SITE: Canal abierto/Open Channel
FECHA/DATE: Enero-94/January-94
CALICATA No./PIT No.: C-13
MUESTRA No./SAMPLE No.: M-1
PROFUNDIDAD/DEPTH: 0.60-2.00m.
ENSAYADO/PERFORMED BY: G.S.
CALCULADO/CALCULATED BY: F.V.

GRAFICO/GRAPHIC



PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: 2.0 Kg/cm²

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: 3.56 cm.
ALTURA/HEIGHT: 7.12 cm.
PESO/WEIGHT: 110.04 gr.
VOLUMEN/VOLUME: 70.87 cm³
AREA/AREA: 9.95 cm²
DENSIDAD HUMEDA/WET DENSITY: 1.553 gr/cm³
DENSIDAD SECA/DRY DENSITY: 1.153 gr/cm³
Cte. ANILLO/RING KTE.: 0.33 Kg/dlv.

DEFORMACION DEFORMATION x 1E-3Inch	DIAL CARGA LOAD DIAL x 1E-4Inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	27	6.910	0.18	9.97	0.69
10	54	17.820	0.36	9.99	1.78
20	90	29.700	0.71	10.03	2.96
30	119	39.270	1.07	10.06	3.90
40	139	45.870	1.43	10.10	4.54
50	150	49.500	1.78	10.13	4.88
60	160	52.800	2.14	10.17	5.19
70	168	55.440	2.50	10.21	5.43
80	173	57.090	2.85	10.25	5.57
90	179	59.070	3.21	10.28	5.74
100	183	60.390	3.57	10.32	5.85
120	191	63.030	4.28	10.40	6.06
140	198	65.340	4.99	10.48	6.24
160	203	66.990	5.71	10.56	6.35
180	208	68.640	6.42	10.64	6.45
200	212	69.960	7.13	10.72	6.53
250	220	72.600	8.92	10.93	6.64
300	225	74.250	10.70	11.15	6.66

Cap. No.	345
Wcap.+SH	130.81
Wcap.+SS	102.44
Wcap.	20.65
w%	34.69

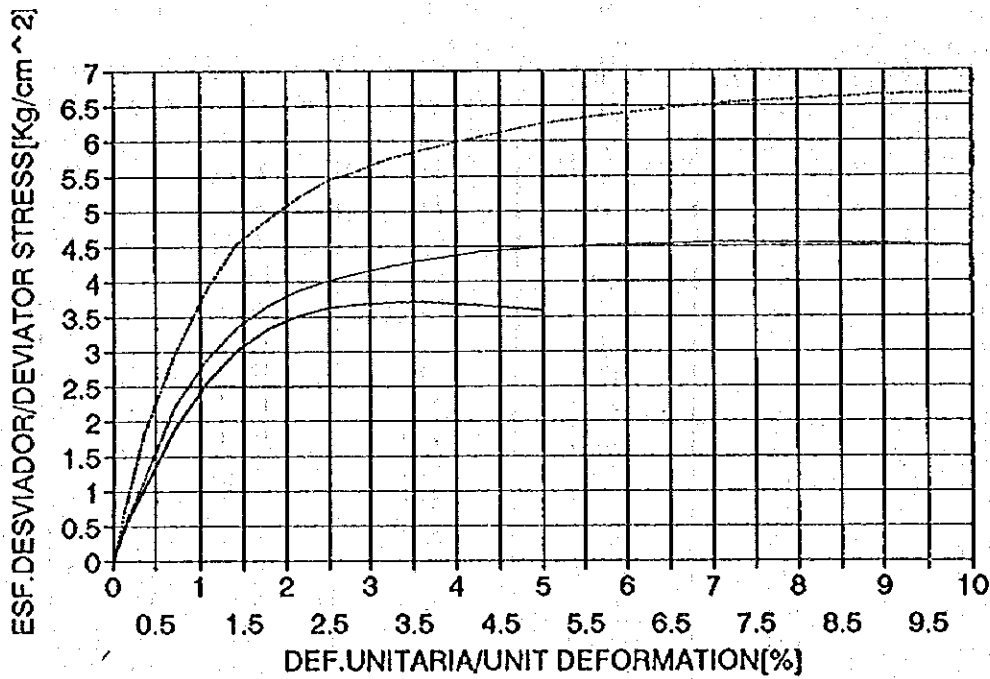


HIDROSUELOS CIA. LTDA.

COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

GRAFICO ESFUERZO-DEFORMACION/STRESS DEFORMATION GRAPHIC

PROYECTO/PROJECT: Trasvases/Trasbasin
LOCALIZACION/SITE: Canal abierto/Open Channel
FECHA/DATE: Enero-94/January-94
CALICATA No./PIT No.: C-13
MUESTRA No./SAMPLE No.: M-1
PROFUNDIDAD/DEPTH: 0.80-2.00m.
ENSAYADO/PERFORMED BY: G.S.
CALCULADO/CALCULATED BY: F.V.



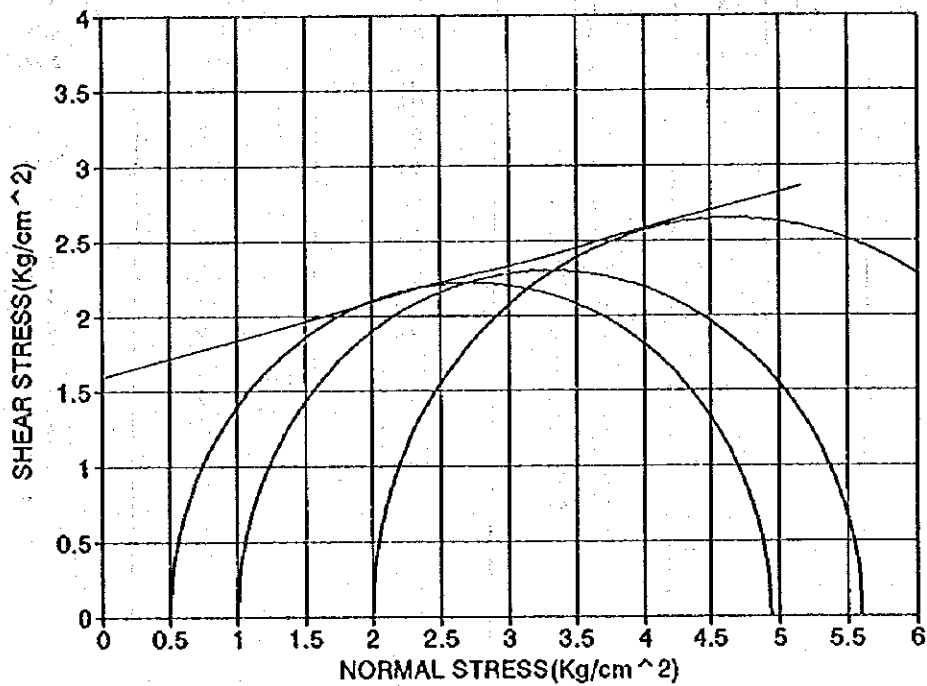
— 0.5 Kg/cm² — 1.0 Kg/cm² — 2.0 Kg/cm²



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION
CIRCULOS DE MOHR / MOHR CIRCLE

PROYECTO/PROJECT: Trasvases/Trasbasin
LOCALIZACION/SITE: Canal abierto/Open Channel
FECHA/DATE: Enero-94/January-94
CALIGATA No./PIT No.: C-14
MUESTRA No./SAMPLE No.: M-2
PROFUNDIDAD/DEPTH: 2.00-3.50m.
ENSAYADO/PERFORMED BY: G.S.
CALCULADO/CALCULATED BY: F.V.

No.	@desv (Kg/cm ²)	@3 (Kg/cm ²)	@1 (Kg/cm ²)	(@1-@3)/2 (Kg/cm ²)	(@1+@3)/2 (Kg/cm ²)
1	4.44	0.50	4.94	2.22	2.72
2	4.60	1.00	5.60	2.30	3.30
3	5.30	2.00	7.30	2.65	4.65



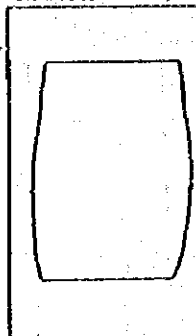
Cohesion=	1.6 Kg/cm ²
Friction angle=	14°



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

PROYECTO/PROJECT: **Trasvases/Trasbasin**
 LOCALIZACION/SITE: **Canal abierto/Open Channel**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-14**
 MUESTRA No./SAMPLE No.: **M-2**
 PROFUNDIDAD/DEPTH: **2.00-3.50m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CALCULADO/CALCULATED BY: **F.V.**

GRAFICO:GRAPHIC



PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: **0.5 Kg/cm²**

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
 ALTURA/HEIGHT: **7.12 cm.**
 PESO/WEIGHT: **113.17 gr.**
 VOLUMEN/VOLUME: **70.87 cm³**
 AREA/AREA: **9.95 cm²**
 DENSIDAD HUMEDA/WET DENSITY: **1.597 gr/cm³**
 DENSIDAD SECA/DRY DENSITY: **1.164 gr/cm³**
 Cte.ANILLO/RING KTE.: **0.33 Kg/div.**

DEFORMACION DEFORMATION x 1E-3inch	DIAL CARGA LOAD DIAL x 1E-4inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	18	5.940	0.18	9.97	0.60
10	30	9.900	0.36	9.99	0.99
20	59	19.470	0.71	10.03	1.94
30	82	27.060	1.07	10.06	2.69
40	98	32.340	1.43	10.10	3.20
50	110	36.300	1.78	10.13	3.58
60	120	39.600	2.14	10.17	3.89
70	127	41.910	2.50	10.21	4.11
80	132	43.560	2.85	10.25	4.25
90	135	44.550	3.21	10.28	4.33
100	138	45.540	3.57	10.32	4.41
120	140	46.200	4.28	10.40	4.44
140	138	45.540	4.99	10.48	4.35
160	134	44.220	5.71	10.56	4.19
180					
200					
250					
300					

Cap. No.	304
Wcap. + SH	133.88
Wcap. + SS	103.15
Wcap.	20.62
w%	37.21

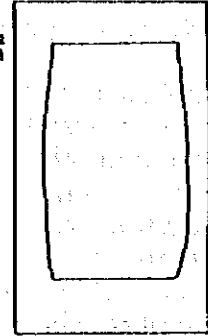


HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

PROYECTO/PROJECT: Traslases/Trasbasin
 LOCALIZACION/SITE: Canal abierto/Open Channel
 FECHA/DATE: Enero-94/January-94
 CALICATA No./PIT No.: C-14
 MUESTRA No./SAMPLE No.: M-2
 PROFUNDIDAD/DEPTH: 2.00-3.50m.
 ENSAYADO/PERFORMED BY: G.S.
 CALCULADO/CALCULATED BY: F.V.

PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: 1.0 Kg/cm²

GRAFICO/GRAPHIC



DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: 3.56 cm.
 ALTURA/HEIGHT: 7.12 cm.
 PESO/WEIGHT: 115.06 gr.
 VOLUMEN/VOLUME: 70.87 cm³
 AREA/AREA: 9.95 cm²
 DENSIDAD HUMEDA/WET DENSITY: 1.624 gr/cm³
 DENSIDAD SECA/DRY DENSITY: 1.182 gr/cm³
 Coef. ANILLO/RING KTE.: 0.33 Kg/div.

DEFORMACION DEFORMATION x 1E-3inch	DIAL CARGA LOAD DIAL x 1E-4inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	19	6.270	0.18	9.97	0.63
10	36	11.880	0.38	9.99	1.19
20	68	22.440	0.71	10.03	2.24
30	85	28.050	1.07	10.06	2.79
40	102	33.660	1.43	10.10	3.33
50	114	37.620	1.78	10.13	3.71
60	124	40.920	2.14	10.17	4.02
70	131	43.230	2.50	10.21	4.23
80	136	44.860	2.85	10.25	4.38
90	139	45.870	3.21	10.28	4.46
100	142	46.860	3.57	10.32	4.54
120	144	47.520	4.28	10.40	4.57
140	148	48.180	4.99	10.48	4.60
160	147	48.510	5.71	10.56	4.60
180	148	48.840	6.42	10.64	4.59
200	146	48.180	7.13	10.72	4.50
250					
300					

Cap. No.	375
Wcap.+SH	134.99
Wcap.+SS	103.63
Wcap.	19.68
w%	37.36

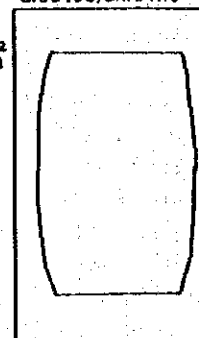


HIDROSUELOS CIA. LTDA.

COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

PROYECTO/PROJECT: Traslases/Trasbasin
LOCALIZACION/SITE: Canal abierto/Open Channel
FECHA/DATE: Enero-94/January-94
CALICATA No./PIT No.: C-14
MUESTRA No./SAMPLE No.: M-2
PROFUNDIDAD/DEPTH: 2.00-3.50m.
ENSAYADO/PERFORMED BY: G.S.
CALCULADO/CALCULATED BY: F.V.

GRAFICO/GRAPHIC



PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: 2.0 Kg/cm²

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: 3.56 cm.
ALTURA/HEIGHT: 7.12 cm.
PESO/WEIGHT: 112.99 gr.
VOLUMEN/VOLUME: 70.87 cm³
AREA/AREA: 9.95 cm²
DENSIDAD HUMEDA/WET DENSITY: 1.594 g/cm³
DENSIDAD SECA/DRY DENSITY: 1.163 g/cm³
Cte. ANILLO/RING KTE.: 0.33 Kg/diy.

DEFORMACION DEFORMATION x 1E-3Inch	DIAL CARGA LOAD DIAL x 1E-4Inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF. DESVIAD. DEVIAT. STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	34	11.220	0.16	9.97	1.13
10	56	18.480	0.36	9.99	1.85
20	83	27.390	0.71	10.03	2.73
30	102	33.660	1.07	10.06	3.35
40	115	37.950	1.43	10.10	3.78
50	125	41.250	1.78	10.13	4.07
60	132	43.560	2.14	10.17	4.28
70	138	45.540	2.50	10.21	4.46
80	144	47.520	2.85	10.25	4.64
90	149	49.170	3.21	10.28	4.78
100	154	50.820	3.57	10.32	4.92
120	161	53.130	4.28	10.40	5.11
140	167	55.110	4.69	10.48	5.26
160	171	56.430	5.71	10.56	5.35
180	176	58.080	6.42	10.64	5.46
200	180	59.400	7.13	10.72	5.54
250	188	62.040	8.92	10.83	5.68
300	194	64.020	10.70	11.15	5.74

Cap. No.	368
Wcap. + SH	133.32
Wcap. + SS	102.75
Wcap.	20.37
w%	37.11

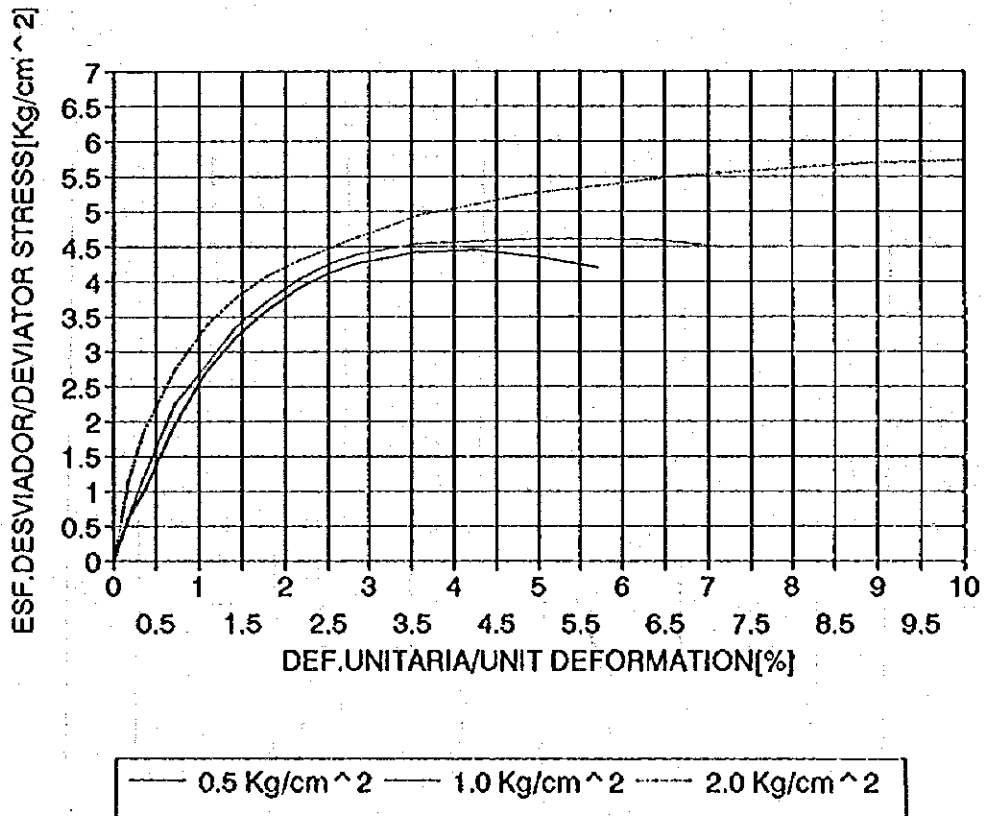


HIDROSUELOS CIA. LTDA.

COMPRESIÓN TRIAXIAL UU/UU TRIAXIAL COMPRESSION

GRAFICO ESFUERZO-DEFORMACION/STRESS DEFORMATION GRAPHIC

PROYECTO/PROJECT:	Trasvases/Trasbasin
LOCALIZACION/SITE:	Canal abierto/Open Channel
FECHA/DATE:	Enero-94/January-94
CALICATA No./PIT No.:	C-14
MUESTRA No./SAMPLE No.:	M-2
PROFUNDIDAD/DEPTH:	2.00-3.50m.
ENSAYADO/PERFORMED BY:	G.S.
CALCULADO/CALCULATED BY:	F.V.



26

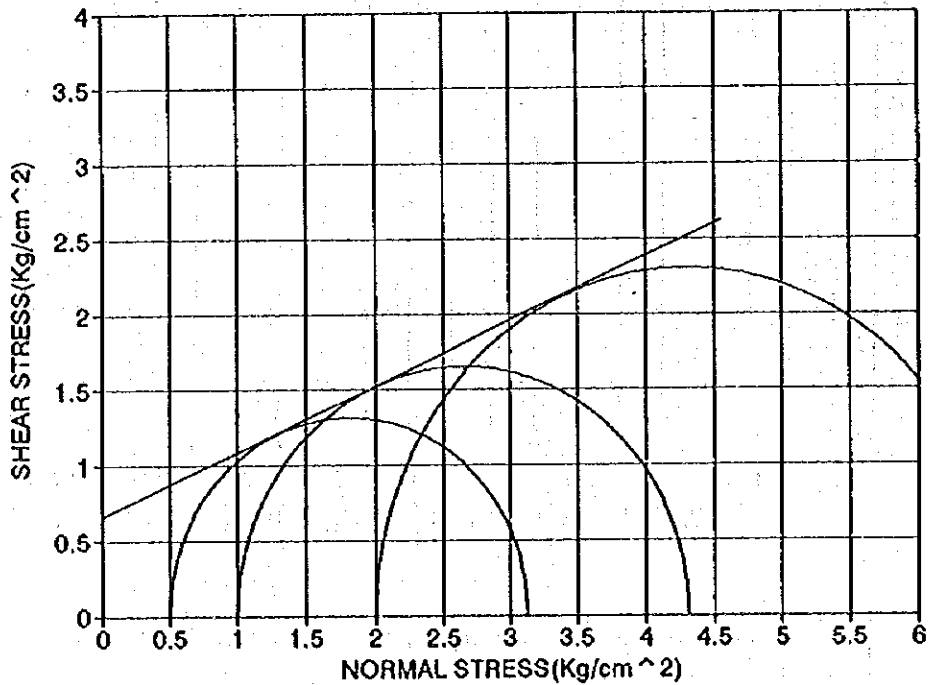
148



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION
CIRCULOS DE MOHR / MOHR CIRCLE

PROYECTO/PROJECT: **Trasvases/Trasbasin**
LOCALIZACION/SITE: **Canal abierto/Open Channel**
FECHA/DATE: **Enero-94/January-94**
CALICATA No./PIT No.: **C-15**
MUESTRA No./SAMPLE No.: **M-1**
PROFUNDIDAD/DEPTH: **0.40-1.00m.**
ENSAYADO/PERFORMED BY: **G.S.**
CALCULADO/CALCULATED BY: **F.V.**

No.	@desv (Kg/cm ²)	@3 (Kg/cm ²)	@1 (Kg/cm ²)	(@1-@3)/2 (Kg/cm ²)	(@1+@3)/2 (Kg/cm ²)
1	2.63	0.50	3.13	1.32	1.82
2	3.31	1.00	4.31	1.66	2.66
3	4.61	2.00	6.61	2.31	4.31



Cohesion= 0.7 Kg/cm²
Friction angle= 22°



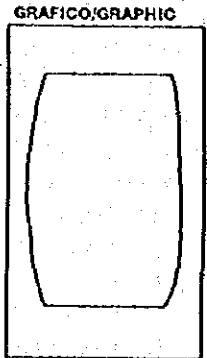
HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

PROYECTO/PROJECT: Traspases/Trasbasin
 LOCALIZACION/SITE: Canal abierto/Open Channel
 FECHA/DATE: Enero-94/January-94
 CALICATA No./PIT No.: C-15
 MUESTRA No./SAMPLE No.: M-1
 PROFUNDIDAD/DEPTH: 0.40-1.00m.
 ENSAYADO/PERFORMED BY: G.S.
 CALCULADO/CALCULATED BY: F.V.

PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: 0.5 Kg/cm²

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: 3.56 cm.
 ALTURA/HEIGHT: 7.12 cm.
 PESO/WEIGHT: 100.35 gr.
 VOLUMEN/VOLUME: 70.87 cm³
 AREA/AREA: 9.95 cm²
 DENSIDAD HUMEDA/WET DENSITY: 1.416 gr/cm³
 DENSIDAD SECA/DRY DENSITY: 1.055 gr/cm³
 Cte. ANILLO/RING KTE.: 0.33 Kg/div.



DEFORMACION DEFORMATION x 1E-3inch	DIAL CARGA LOAD DIAL x 1E-4inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	19	6.270	0.18	9.97	0.63
10	32	10.560	0.38	9.99	1.08
20	55	18.150	0.71	10.03	1.81
30	68	22.440	1.07	10.06	2.23
40	78	25.740	1.43	10.10	2.55
60	80	26.400	2.14	10.17	2.60
70	81	26.730	2.50	10.21	2.62
80	80	26.400	2.85	10.25	2.58
90	80	26.400	3.21	10.28	2.57
100					
120					
140					
160					
180					
200					
250					
300					

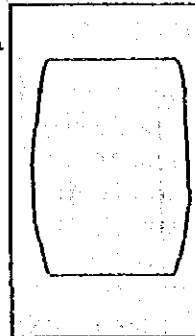
Cap. No.	217
Wcap. + SH	120.85
Wcap. + SS	95.24
Wcap.	20.47
w%	34.25



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

PROYECTO/PROJECT: **Trasvases/Trasbasin**
 LOCALIZACION/SITE: **Canal abierto/Open Channel**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-15**
 MUESTRA No./SAMPLE No.: **M-1**
 PROFUNDIDAD/DEPTH: **0.40-1.00m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CALCULADO/CALCULATED BY: **F.V.**

GRAFICO/GRAPHIC



PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: **1.0 Kg/cm²**

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
 ALTURA/HEIGHT: **7.12 cm.**
 PESO/WEIGHT: **99.27 gr.**
 VOLUMEN/VOLUME: **70.87 cm³**
 AREA/AREA: **9.95 cm²**
 DENSIDAD HUMEDA/WET DENSITY: **1.401 gr/cm³**
 DENSIDAD SECA/DRY DENSITY: **1.041 gr/cm³**
 Cto. ANILLO/RING KTE.: **0.33 Kg/div.**

DEFORMACION DEFORMATION x 1E-3inch	DIAL CARGA LOAD DIAL x 1E-4inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	20	6.600	0.18	9.97	0.66
10	37	12.210	0.36	9.99	1.22
20	57	18.810	0.71	10.03	1.88
30	70	23.100	1.07	10.06	2.30
40	78	25.740	1.43	10.10	2.55
50	85	28.050	1.78	10.13	2.77
60	89	29.370	2.14	10.17	2.89
70	94	31.020	2.50	10.21	3.04
80	96	31.680	2.85	10.25	3.09
90	98	32.340	3.21	10.28	3.14
100	100	33.000	3.57	10.32	3.20
120	103	33.990	4.28	10.40	3.27
140	105	34.650	4.99	10.48	3.31
160	107	35.310	5.71	10.56	3.34
180	108	35.640	6.42	10.64	3.35
200	109	35.970	7.13	10.72	3.36
250	111	36.630	8.92	10.93	3.35
300					

Cap. No.	276
Wcap.+SH	119.99
Wcap.+SS	94.40
Wcap.	20.45
w%	34.60



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COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

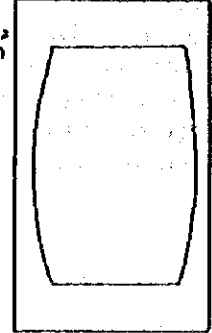
PROYECTO/PROJECT: **Trasvases/Trasbasin**
 LOCALIZACION/SITE: **Canal abierto/Open Channel**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-15**
 MUESTRA No./SAMPLE No.: **M-1**
 PROFUNDIDAD/DEPTH: **0.40-1.00m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CALCULADO/CALCULATED BY: **F.V.**

PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: 2.0 Kg/cm²

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
 ALTURA/HEIGHT: **7.12 cm.**
 PESO/WEIGHT: **100.53 gr.**
 VOLUMEN/VOLUME: **70.87 cm³**
 AREA/AREA: **9.95 cm²**
 DENSIDAD HUMEDA/WET DENSITY: **1.418 gr/cm³**
 DENSIDAD SECA/DRY DENSITY: **1.056 gr/cm³**
 Cte. ANILLO/RING KTE.: **0.33 Kg/div.**

GRAFICO: GRAPHIC



DEFORMACION DEFORMATION x 1E-3inch	DIAL CARGA LOAD DIAL x 1E-4inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	22	7.260	0.18	9.97	0.73
10	39	12.870	0.38	9.99	1.29
20	67	22.110	0.71	10.03	2.21
30	82	27.060	1.07	10.06	2.69
40	94	31.020	1.43	10.10	3.07
50	104	34.320	1.78	10.13	3.39
60	112	36.960	2.14	10.17	3.63
70	118	38.940	2.50	10.21	3.81
80	123	40.590	2.85	10.25	3.98
90	128	42.240	3.21	10.28	4.11
100	133	43.890	3.57	10.32	4.25
120	141	48.530	4.28	10.40	4.47
140	148	48.840	4.99	10.48	4.66
160	154	50.820	5.71	10.56	4.81
180	160	52.800	6.42	10.64	4.96
200	166	54.780	7.13	10.72	5.11
250	176	59.080	8.92	10.93	5.31
300	184	60.720	10.70	11.15	5.45

Cap. No.	352
Wcap. + SH	120.99
Wcap. + SS	95.24
Wcap.	20.24
w%	34.33

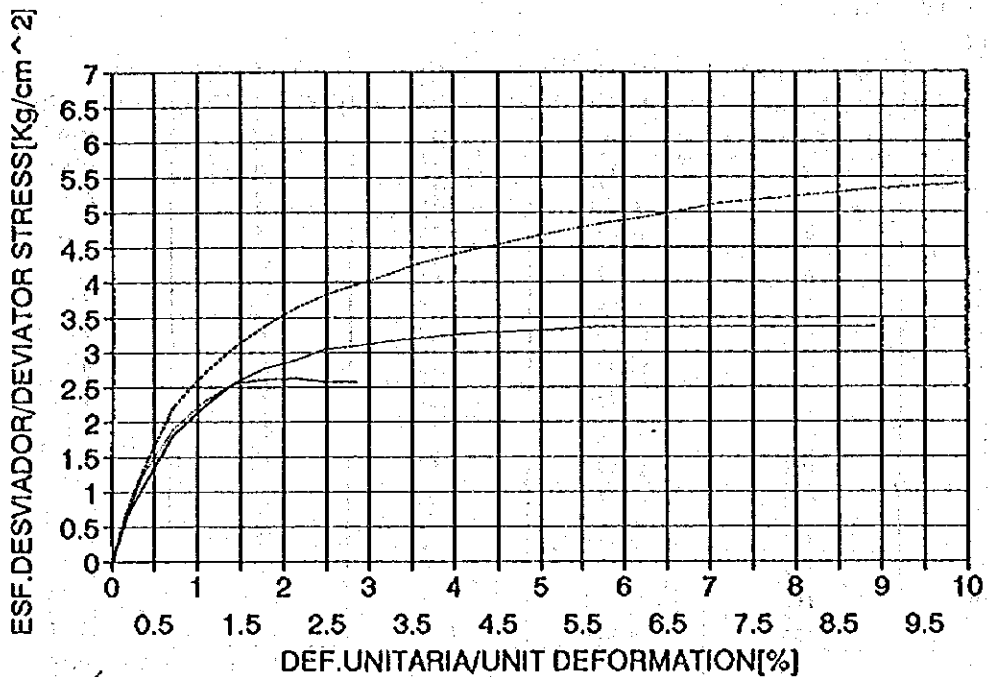


HIDROSUELOS CIA. LTDA.

COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

GRAFICO ESFUERZO-DEFORMACION/STRESS DEFORMATION GRAPHIC

PROYECTO/PROJECT: **Trasvases/Trasbasin**
LOCALIZACION/SITE: **Canal abierto/Open Channel**
FECHA/DATE: **Enero-94/January-94**
CALICATA No./PIT No.: **C-15**
MUESTRA No./SAMPLE No.: **M-1**
PROFUNDIDAD/DEPTH: **0.40-1.00m.**
ENSAYADO/PERFORMED BY: **G.S.**
CALCULADO/CALCULATED BY: **F.V.**



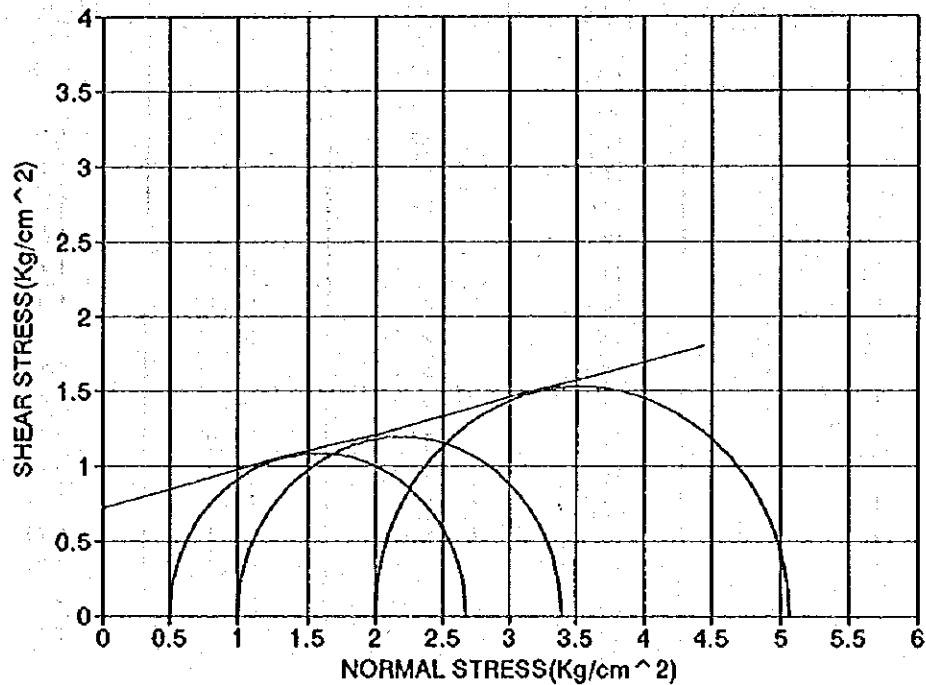
— 0.5 Kg/cm² — 1.0 Kg/cm² — 2.0 Kg/cm²



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION
CIRCULOS DE MOHR / MOHR CIRCLE

PROYECTO/PROJECT: **Trasvases/Trasbasin**
LOCALIZACION/SITE: **Canal abierto/Open Channel**
FECHA/DATE: **Enero-94/January-94**
CALICATA No./PIT No.: **C-16**
MUESTRA No./SAMPLE No.: **M-2**
PROFUNDIDAD/DEPTH: **2.00-3.50m.**
ENSAYADO/PERFORMED BY: **G.S.**
CALCULADO/CALCULATED BY: **F.V.**

No.	@desv (Kg/cm ²)	@3 (Kg/cm ²)	@1 (Kg/cm ²)	(@1-@3)/2 (Kg/cm ²)	(@1+@3)/2 (Kg/cm ²)
1	2.17	0.50	2.67	1.09	1.59
2	2.39	1.00	3.39	1.20	2.20
3	3.06	2.00	5.06	1.53	3.53



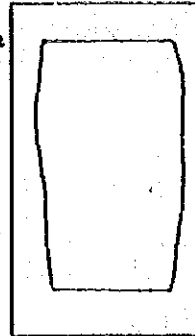
Cohesion= 0.7 Kg/cm²
Friction angle= 12°



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

PROYECTO/PROJECT: Traspases/Trasbasin
 LOCALIZACION/SITE: Canal abierto/Open Channel
 FECHA/DATE: Enero-94/January-94
 CALICATA No./PIT No.: C-16
 MUESTRA No./SAMPLE No.: M-2
 PROFUNDIDAD/DEPTH: 2.00-3.50m.
 ENSAYADO/PERFORMED BY: G.S.
 CALCULADO/CALCULATED BY: F.V.

GRAFICO/GRAPHIC



PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: 0.5 Kg/cm²

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: 3.58 cm.
 ALTURA/HEIGHT: 7.12 cm.
 PESO/WEIGHT: 119 gr.
 VOLUMEN/VOLUME: 70.87 cm³
 AREA/AREA: 9.95 cm²
 DENSIDAD HUMEDA/WET DENSITY: 1.679 gr/cm³
 DENSIDAD SECA/DRY DENSITY: 1.262 gr/cm³
 Clo. ANILLO/RING KTE.: 0.33 Kg/div.

DEFORMACION DEFORMATION x 1E-3inch	DIAL CARGA LOAD DIAL x 1E-4inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	19	6.270	0.18	9.97	0.63
10	25	8.250	0.36	9.99	0.83
20	35	11.550	0.71	10.03	1.15
30	43	14.190	1.07	10.06	1.41
40	48	15.840	1.43	10.10	1.57
50	52	17.160	1.78	10.13	1.69
60	55	18.150	2.14	10.17	1.78
70	58	19.140	2.50	10.21	1.87
80	60	19.800	2.85	10.25	1.93
90	62	20.460	3.21	10.28	1.99
100	64	21.120	3.57	10.32	2.05
120	67	22.110	4.28	10.40	2.13
140	69	22.770	4.99	10.48	2.17
160	71	23.430	5.71	10.56	2.22
180	73	24.090	6.42	10.64	2.26
200	75	24.750	7.13	10.72	2.31
250	78	25.740	8.92	10.93	2.36
300	80	26.400	10.70	11.15	2.37

Cap. No.	253
Wcap.+SH	139.78
Wcap.+SS	109.99
Wcap.	19.93
w%	33.08

155



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

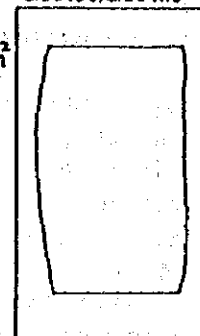
PROYECTO/PROJECT: **Trasvases/Trasbasin**
LOCALIZACION/SITE: **Canal abierto/Open Channel**
FECHA/DATE: **Enero-94/January-94**
CALICATA No./PIT No.: **C-16**
MUESTRA No./SAMPLE No.: **M-2**
PROFUNDIDAD/DEPTH: **2.00-3.50m.**
ENSAYADO/PERFORMED BY: **G.S.**
CALCULADO/CALCULATED BY: **F.V.**

PRESSION DE CONFINAMIENTO/CONFINEMENT PRESSURE: 1.0 Kg/cm²

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
ALTURA/HEIGHT: **7.12 cm.**
PESO/WEIGHT: **119.61 gr.**
VOLUMEN/VOLUME: **70.87 cm³**
AREA/AREA: **9.95 cm²**
DENSIDAD HUMEDA/WET DENSITY: **1.688 gr/cm³**
DENSIDAD SECA/DRY DENSITY: **1.262 gr/cm³**
Cto. ANILLO/RING KTE.: **0.33 Kg/div.**

GRAFICO/GRAPHIC



DEFORMACION DEFORMATION x 1E-3inch	DIAL CARGA LOAD DIAL x 1E-4inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	23	7.590	0.18	9.97	0.76
10	28	9.240	0.38	9.99	0.92
20	38	12.540	0.71	10.03	1.25
30	48	15.840	1.07	10.06	1.57
40	53	17.490	1.43	10.10	1.73
50	59	19.470	1.78	10.13	1.92
60	62	20.460	2.14	10.17	2.01
70	65	21.450	2.50	10.21	2.10
80	67	22.110	2.85	10.25	2.16
90	69	22.770	3.21	10.28	2.21
100	71	23.430	3.57	10.32	2.27
120	74	24.420	4.28	10.40	2.35
140	76	25.080	4.99	10.48	2.39
160	78	25.740	5.71	10.56	2.44
180	80	26.400	6.42	10.64	2.48
200	82	27.060	7.13	10.72	2.52
250	85	28.050	8.92	10.93	2.57
300	87	28.710	10.70	11.15	2.58

Cap. No.	209
Wcap. + SH	140.40
Wcap. + SS	110.25
Wcap.	20.80
w%	33.71



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/JU TRIAXIAL COMPRESSION

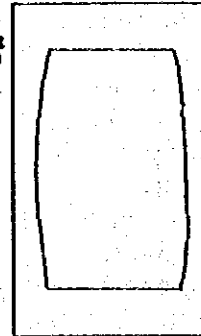
PROYECTO/PROJECT: **Trasvases/Trasbasin**
 LOCALIZACION/SITE: **Canal abierto/Open Channel**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-16**
 MUESTRA No./SAMPLE No.: **M-2**
 PROFUNDIDAD/DEPTH: **2.00-3.50m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CALCULADO/CALCULATED BY: **F.V.**

PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: 2.0 Kg/cm²

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
 ALTURA/HEIGHT: **7.12 cm.**
 PESO/WEIGHT: **120.1 gr.**
 VOLUMEN/VOLUME: **70.87 cm³**
 AREA/AREA: **9.95 cm²**
 DENSIDAD HUMEDA/WET DENSITY: **1.695 gr/cm³**
 DENSIDAD SECA/DRY DENSITY: **1.269 gr/cm³**
 Cto. ANILLO/RING KTE.: **0.33 Kg/div.**

GRAFICO/GRAPHIC



DEFORMACION DEFORMATION x 1E-3Inch	DIAL CARGA LOAD DIAL x 1E-4Inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	25	8.250	0.18	9.97	0.83
10	37	12.210	0.36	9.99	1.22
20	49	16.170	0.71	10.03	1.61
30	58	19.140	1.07	10.06	1.90
40	66	21.780	1.43	10.10	2.18
50	71	23.430	1.78	10.13	2.31
60	76	25.080	2.14	10.17	2.47
70	80	26.400	2.50	10.21	2.59
80	83	27.390	2.85	10.25	2.67
90	85	28.380	3.21	10.28	2.76
100	90	29.700	3.57	10.32	2.88
120	94	31.020	4.28	10.40	2.98
140	97	32.010	4.99	10.48	3.08
160	102	33.660	5.71	10.56	3.19
180	106	34.980	6.42	10.64	3.29
200	109	35.970	7.13	10.72	3.36
250	117	38.610	8.92	10.93	3.53
300	122	40.260	10.70	11.15	3.61

Cap. No.	454
Wcap. + SH	140.48
Wcap. + SS	110.26
Wcap.	20.23
w%	33.57

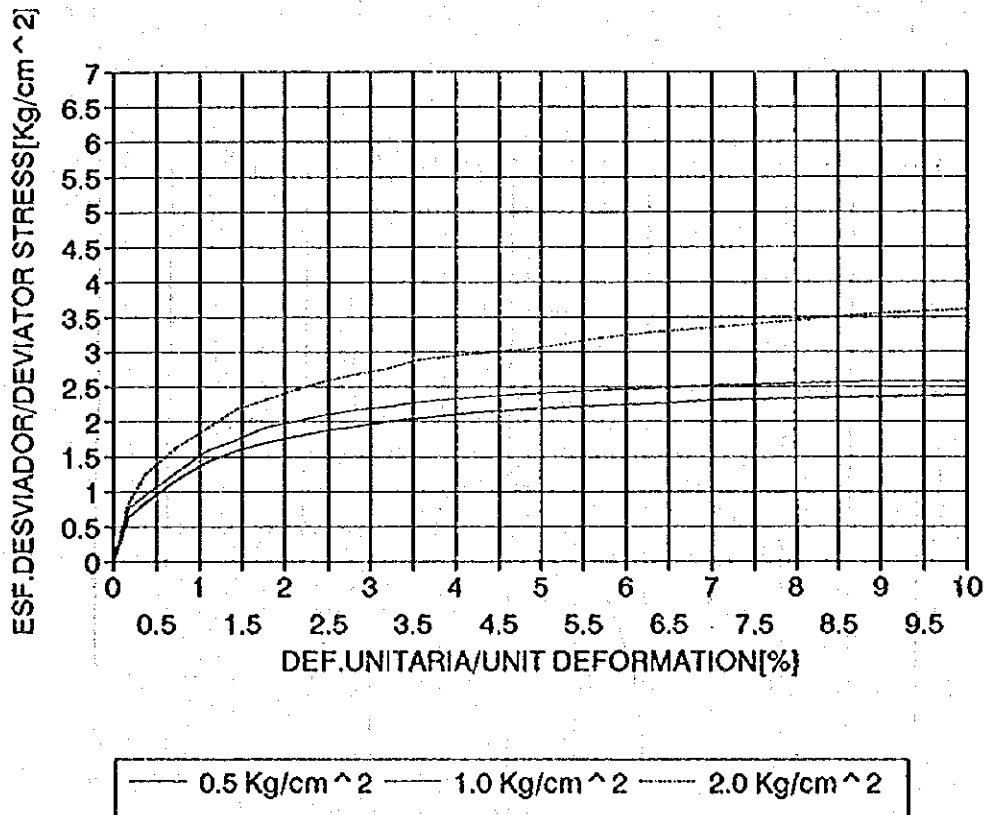


HIDROSUELOS CIA. LTDA.

COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

GRAFICO ESFUERZO-DEFORMACION/STRESS DEFORMATION GRAPHIC

PROYECTO/PROJECT:	Trasvases/Trasbasin
LOCALIZACION/SITE:	Canal abierto/Open Channel
FECHA/DATE:	Enero-94/January-94
CALICATA No./PIT No.:	C-16
MUESTRA No./SAMPLE No.:	M-2
PROFUNDIDAD/DEPTH:	2.00-3.50m.
ENSAYADO/PERFORMED BY:	G.S.
CALCULADO/CALCULATED BY:	F.V.

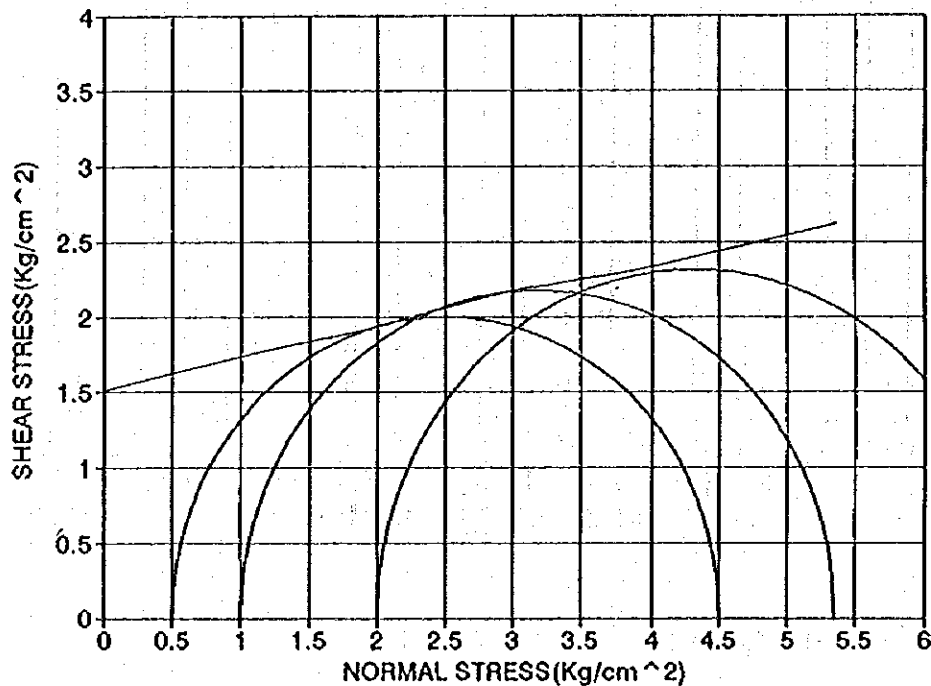




HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION
CIRCULOS DE MOHR / MOHR CIRCLE

PROYECTO/PROJECT: **Trasvases/Trasbasin**
LOCALIZACION/SITE: **Canal abierto/Open Channel**
FECHA/DATE: **Enero-94/January-94**
CALICATA No./PIT No.: **C-17**
MUESTRA No./SAMPLE No.: **M-1**
PROFUNDIDAD/DEPTH: **0.40-1.60m.**
ENSAYADO/PERFORMED BY: **G.S.**
CALCULADO/CALCULATED BY: **F.V.**

No.	@desv (Kg/cm ²)	@3 (Kg/cm ²)	@1 (Kg/cm ²)	(@1-@3)/2 (Kg/cm ²)	(@1+@3)/2 (Kg/cm ²)
1	4.00	0.50	4.50	2.00	2.50
2	4.35	1.00	5.35	2.18	3.18
3	4.63	2.00	6.63	2.32	4.32



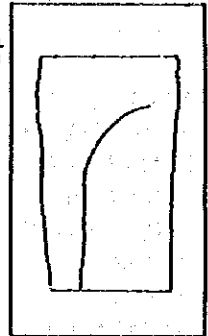
Cohesion=	1.5 Kg/cm ²
Friction angle=	11°



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

PROYECTO/PROJECT: Trasvases/Trasbasin
LOCALIZACION/SITE: Canal abierto/Open Channel
FECHA/DATE: Enero-94/January-94
CALICATA No./PIT No.: C-17
MUESTRA No./SAMPLE No.: M-1
PROFUNDIDAD/DEPTH: 0.40-1.60m.
ENSAYADO/PERFORMED BY: G.S.
CALCULADO/CALCULATED BY: F.V.

GRAFICO/GRAPHIC



PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: 0.5 Kg/cm²

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: 3.56 cm.
ALTURA/HEIGHT: 7.12 cm.
PESO/WEIGHT: 108.39 gr.
VOLUMEN/VOLUME: 70.87 cm³
AREA/AREA: 9.95 cm²
DENSIDAD HUMEDA/WET DENSITY: 1.529 gr/cm³
DENSIDAD SECA/DRY DENSITY: 1.166 gr/cm³
Cto. ANILLO/RING KTE.: 0.33 Kg/dlv.

DEFORMACION DEFORMATION x 1E-3Inch	DIAL CARGA LOAD DIAL x 1E-4Inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	14	4.620	0.18	9.97	0.46
10	30	9.900	0.36	9.99	0.99
20	51	16.830	0.71	10.03	1.68
30	73	24.090	1.07	10.06	2.39
40	84	27.720	1.43	10.10	2.75
50	92	30.360	1.78	10.13	3.00
60	102	33.660	2.14	10.17	3.31
70	108	35.640	2.50	10.21	3.49
80	115	37.950	2.85	10.25	3.70
90	118	38.940	3.21	10.28	3.79
100	125	41.250	3.57	10.32	4.00
120					
140					
160					
180					
200					
250					
300					

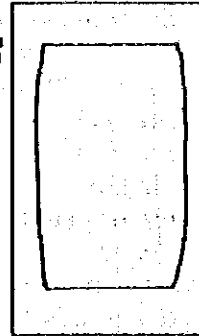
Cap. No.	392
Wcap.+SH	128.77
Wcap.+SS	102.99
Wcap.	20.39
w%	31.21



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

PROYECTO/PROJECT: **Trasvases/Trasbasin**
 LOCALIZACION/SITE: **Canal abierto/Open Channel**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-17**
 MUESTRA No./SAMPLE No.: **M-1**
 PROFUNDIDAD/DEPTH: **0.40-1.60m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CALCULADO/CALCULATED BY: **F.V.**

GRAFICO/GRAPHIC



PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: **1.0 Kg/cm²**

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
 ALTURA/HEIGHT: **7.12 cm.**
 PESO/WEIGHT: **106.58 gr.**
 VOLUMEN/VOLUME: **70.87 cm³**
 AREA/AREA: **9.95 cm²**
 DENSIDAD HUMEDA/WET DENSITY: **1.504 gr/cm³**
 DENSIDAD SECA/DRY DENSITY: **1.139 gr/cm³**
 Coef. ANILLO/RING KTE.: **0.33 Kg/dlv.**

DEFORMACION DEFORMATION x 1E-3inch	DIAL CARGA LOAD DIAL x 1E-4inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	18	5.940	0.18	9.97	0.60
10	36	11.880	0.36	9.99	1.19
20	61	20.130	0.71	10.03	2.01
30	78	25.740	1.07	10.06	2.58
40	89	29.370	1.43	10.10	2.91
50	97	32.010	1.78	10.13	3.18
60	105	34.650	2.14	10.17	3.41
70	112	36.960	2.50	10.21	3.62
80	118	38.940	2.85	10.25	3.80
90	122	40.260	3.21	10.28	3.91
100	128	42.240	3.57	10.32	4.09
120	132	43.560	4.28	10.40	4.19
140	138	45.540	4.99	10.48	4.35
160	142	46.860	5.71	10.58	4.44
180	145	47.850	6.42	10.64	4.50
200	148	48.840	7.13	10.72	4.56
250	154	50.820	8.92	10.93	4.65
300	157	51.810	10.70	11.15	4.65

Cap. No.	212
Wcap. + SH	126.57
Wcap. + SS	100.66
Wcap.	19.69
w%	32.00



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

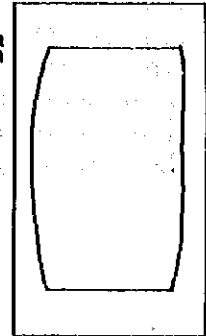
PROYECTO/PROJECT: **Trasvases/Trasbasin**
 LOCALIZACION/SITE: **Canal abierto/Open Channel**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-17**
 MUESTRA No./SAMPLE No.: **M-1**
 PROFUNDIDAD/DEPTH: **0.40-1.60m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CALCULADO/CALCULATED BY: **F.V.**

PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: **2.0 Kg/cm²**

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
 ALTURA/HEIGHT: **7.12 cm.**
 PESO/WEIGHT: **104.34 gr.**
 VOLUMEN/VOLUME: **70.87 cm³**
 AREA/AREA: **9.95 cm²**
 DENSIDAD HUMEDA/WET DENSITY: **1.472 gr/cm³**
 DENSIDAD SECA/DRY DENSITY: **1.114 gr/cm³**
 Cte.ANILLO/RING KTE.: **0.33 Kg/div.**

GRAFICO/GRAPHIC



DEFORMACION DEFORMATION x 1E-3inch	DIAL CARGA LOAD DIAL x 1E-4inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	21	6.930	0.18	9.97	0.69
10	37	12.210	0.36	9.99	1.22
20	62	20.460	0.71	10.03	2.04
30	79	26.070	1.07	10.08	2.59
40	90	29.700	1.43	10.10	2.94
50	100	33.000	1.78	10.13	3.26
60	108	35.640	2.14	10.17	3.50
70	115	37.950	2.50	10.21	3.72
80	120	39.600	2.85	10.25	3.86
90	126	41.580	3.21	10.28	4.04
100	131	43.230	3.57	10.32	4.19
120	140	46.200	4.28	10.40	4.44
140	147	48.510	4.99	10.48	4.63
160	152	50.160	5.71	10.56	4.75
180	158	52.140	6.42	10.64	4.90
200	160	52.800	7.13	10.72	4.93
250	169	55.770	8.92	10.93	5.10
300	173	57.090	10.70	11.15	5.12

Cap. No.	341
Wcap.+SH	124.99
Wcap.+SS	100.55
Wcap.	24.43
w%	32.11

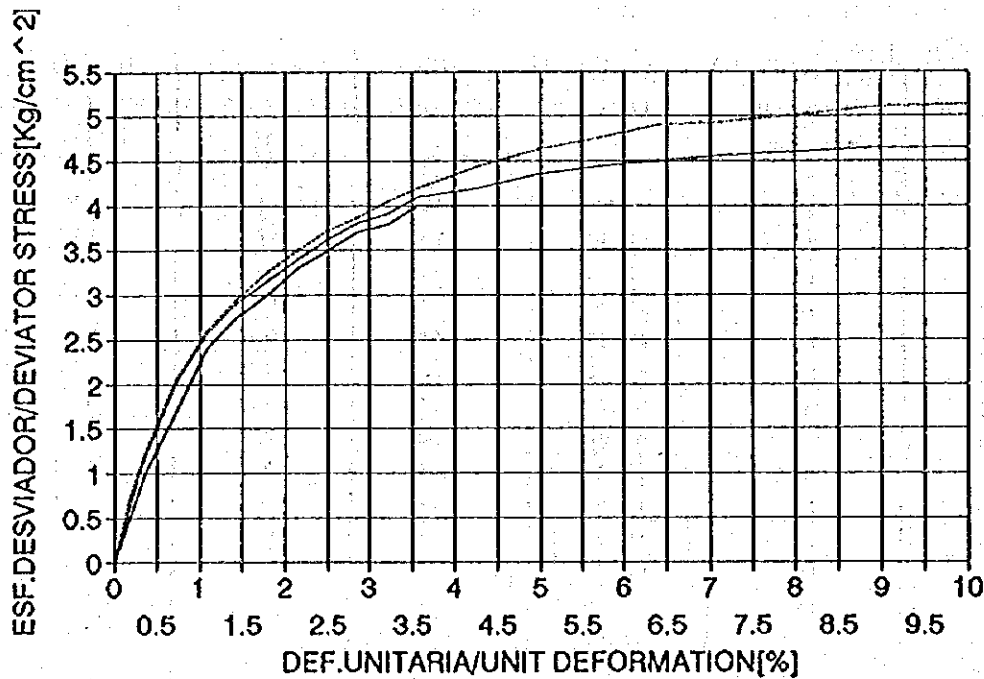


HIDROSUELOS CIA. LTDA.

COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

GRAFICO ESFUERZO-DEFORMACION/STRESS DEFORMATION GRAPHIC

PROYECTO/PROJECT: Travesaños/Trasbasin
LOCALIZACION/SITE: Canal abierto/Open Channel
FECHA/DATE: Enero-94/January-94
CALICATA No./PIT No.: C-17
MUESTRA No./SAMPLE No.: M-1
PROFUNDIDAD/DEPTH: 0.40-1.60m.
ENSAYADO/PERFORMED BY: G.S.
CALCULADO/CALCULATED BY: F.V.



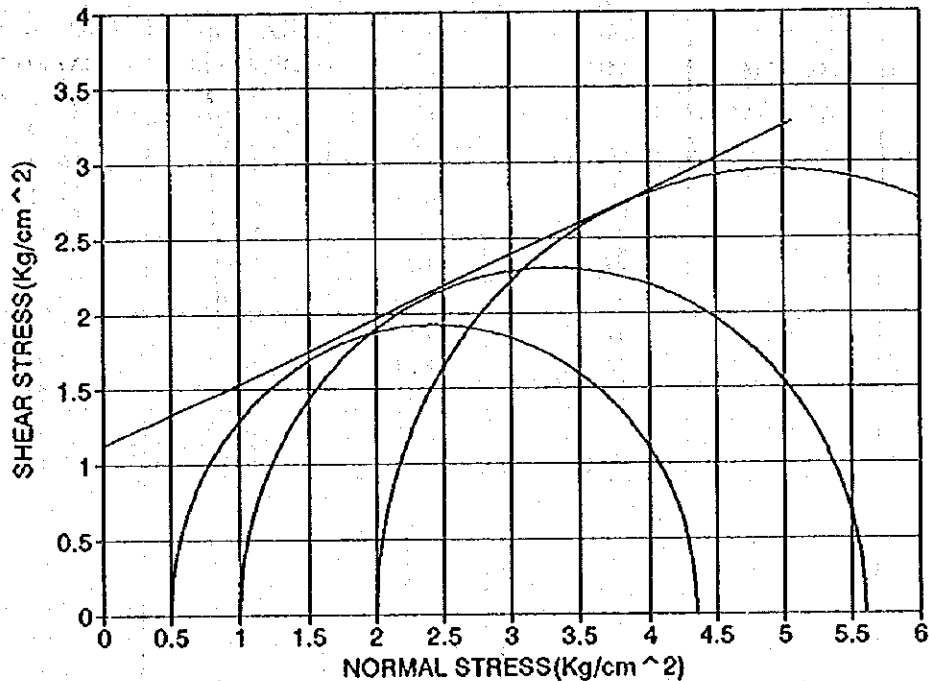
— 0.5 Kg/cm² — 1.0 Kg/cm² 2.0 Kg/cm²



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION
CIRCULOS DE MOHR / MOHR CIRCLE

PROYECTO/PROJECT: Trásvases/Trásbasin
LOCALIZACION/SITE: Canal abierto/Open Channel
FECHA/DATE: Enero-94/January-94
CALICATA No./PIT No.: C-18
MUESTRA No./SAMPLE No.: M-1
PROFUNDIDAD/DEPTH: 0.30-1.60m.
ENSAYADO/PERFORMED BY: G.S.
CALCULADO/CALCULATED BY: F.V.

No.	@desv (Kg/cm ²)	@3 (Kg/cm ²)	@1 (Kg/cm ²)	(@1-@3)/2 (Kg/cm ²)	(@1+@3)/2 (Kg/cm ²)
1	3.85	0.50	4.35	1.93	2.43
2	4.60	1.00	5.60	2.30	3.30
3	5.90	2.00	7.90	2.95	4.95



Cohesion=	1.2 Kg/cm ²
Fricction=	22°

REMARKS:	Deviator stress	Unit deformation
	3.85	2.50%
	4.60	4.28%
	5.90	4.99%

42

167



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COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

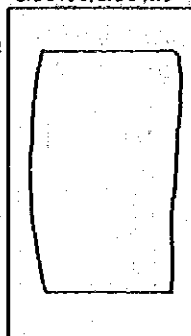
PROYECTO/PROJECT: **Trasvases/Trasbasin**
 LOCALIZACION/SITE: **Canal abierto/Open Channel**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-18**
 MUESTRA No./SAMPLE No.: **M-1**
 PROFUNDIDAD/DEPTH: **0.30-1.60m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CALCULADO/CALCULATED BY: **F.V.**

PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: **0.5 Kg/cm²**

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
 ALTURA/HEIGHT: **7.12 cm.**
 PESO/WEIGHT: **110.2 gr.**
 VOLUMEN/VOLUME: **70.87 cm³**
 AREA/AREA: **9.95 cm²**
 DENSIDAD HUMEDA/WET DENSITY: **1.555 gr/cm³**
 DENSIDAD SECA/DRY DENSITY: **1.169 gr/cm³**
 Cle.ANILLO/RING KTE.: **0.33 Kg/div.**

GRAFICO/GRAPHIC



DEFORMACION DEFORMATION x 1E-3Inch	DIAL CARGA LOAD DIAL x 1E-4Inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	20	6.600	0.18	9.97	0.68
10	40	13.200	0.36	9.99	1.32
20	69	22.770	0.71	10.03	2.27
30	89	29.370	1.07	10.06	2.92
40	102	33.660	1.43	10.10	3.33
50	113	37.290	1.78	10.13	3.68
60	118	38.940	2.14	10.17	3.83
70	119	39.270	2.50	10.21	3.85
80	118	38.940	2.85	10.25	3.80
90	116	38.280	3.21	10.28	3.72
100					
120					
140					
160					
180					
200					
250					
300					

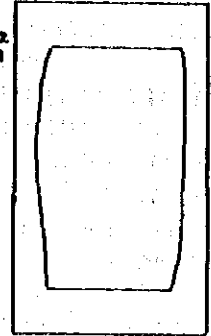
Cap. No.	468
Wcap.+SH	135.81
Wcap.+SS	107.57
Wcap.	24.89
w%	34.16



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

PROYECTO/PROJECT: Trasvasos/Trasbasin
 LOCALIZACION/SITE: Canal abierto/Open Channel
 FECHA/DATE: Enero-94/January-94
 CALICATA No./PIT No.: C-18
 MUESTRA No./SAMPLE No.: M-1
 PROFUNDIDAD/DEPTH: 0.30-1.60m.
 ENSAYADO/PERFORMED BY: G.S.
 CALCULADO/CALCULATED BY: F.V.

GRAFICO/GRAPHIC



PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: 1.0 Kg/cm²

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: 3.56 cm.
 ALTURA/HEIGHT: 7.12 cm.
 PESO/WEIGHT: 111.31 gr.
 VOLUMEN/VOLUME: 70.87 cm³
 AREA/AREA: 9.95 cm²
 DENSIDAD HUMEDA/WET DENSITY: 1.571 gr/cm³
 DENSIDAD SECA/DRY DENSITY: 1.196 gr/cm³
 Cte ANILLO/RING KTE.: 0.33 Kg/div.

DEFORMACION DEFORMATION x 1E-3Inch	DIAL CARGA LOAD DIAL x 1E-4Inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	21	6.930	0.18	9.97	0.69
10	42	13.860	0.38	9.99	1.39
20	74	24.420	0.71	10.03	2.44
30	94	31.020	1.07	10.06	3.08
40	113	37.290	1.43	10.10	3.69
50	117	38.610	1.78	10.13	3.81
60	124	40.920	2.14	10.17	4.02
70	131	43.230	2.50	10.21	4.23
80	136	44.880	2.85	10.25	4.38
90	139	45.870	3.21	10.28	4.46
100	142	46.860	3.57	10.32	4.54
120	145	47.850	4.28	10.40	4.60
140	146	48.160	4.99	10.48	4.60
160	147	48.510	5.71	10.56	4.60
180	148	48.840	6.42	10.64	4.59
200					
250					
300					

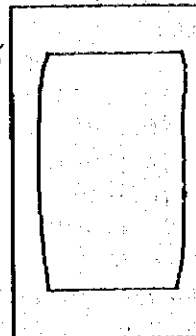
Cap. No.	412
Wcap. + SH	131.36
Wcap. + SS	104.66
Wcap.	20.17
w%	31.29



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/JU TRIAXIAL COMPRESSION

PROYECTO/PROJECT: **Trasvases/Trasbasin**
 LOCALIZACION/SITE: **Canal abierto/Open Channel**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-18**
 MUESTRA No./SAMPLE No.: **M-1**
 PROFUNDIDAD/DEPTH: **0.30-1.60m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CALCULADO/CALCULATED BY: **F.V.**

GRAFICO/GRAPHIC



PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: 2.0 Kg/cm²

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
 ALTURA/HEIGHT: **7.12 cm.**
 PESO/WEIGHT: **110.99 gr.**
 VOLUMEN/VOLUME: **70.87 cm³**
 AREA/AREA: **9.95 cm²**
 DENSIDAD HUMEDA/WET DENSITY: **1.566 gr/cm³**
 DENSIDAD SECA/DRY DENSITY: **1.193 gr/cm³**
 Cle.ANILLO/RING KTE.: **0.33 Kg/div.**

DEFORMACION DEFORMATION x 1E-3inch	DIAL CARGA LOAD DIAL x 1E-4inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	22	7.260	0.18	9.97	0.73
10	44	14.520	0.38	9.99	1.45
20	80	26.400	0.71	10.03	2.63
30	111	36.630	1.07	10.06	3.64
40	133	43.890	1.43	10.10	4.35
50	151	49.830	1.78	10.13	4.92
60	163	53.790	2.14	10.17	5.29
70	171	56.430	2.50	10.21	5.53
80	177	58.410	2.85	10.25	5.70
90	180	59.400	3.21	10.28	5.78
100	183	60.390	3.57	10.32	5.85
120	186	61.380	4.28	10.40	5.90
140	187	61.710	4.89	10.48	5.89
160	187	61.710	5.71	10.56	5.85
180	187	61.710	6.42	10.64	5.80
200					
250					
300					

Cap. No.	455
Wcap. + SH	135.56
Wcap. + SS	109.15
Wcap.	24.65
w%	31.25

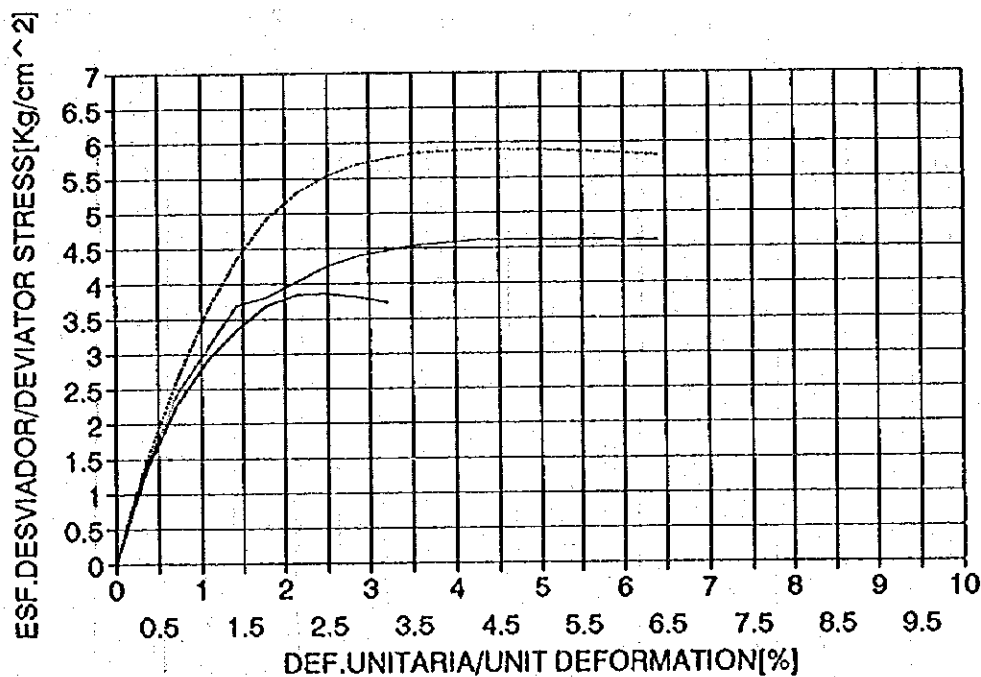


HIDROSUELOS CIA. LTDA.

COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

GRAFICO ESFUERZO-DEFORMACION/STRESS DEFORMATION GRAPHIC

PROYECTO/PROJECT:	Trasvases/Trasbasin
LOCALIZACION/SITE:	Canal abierto/Open Channel
FECHA/DATE:	Enero-94/January-94
CALICATA No./PIT No.:	C-18
MUESTRA No./SAMPLE No.:	M-1
PROFUNDIDAD/DEPTH:	0.30-1.60m.
ENSAYADO/PERFORMED BY:	G.S.
CALCULADO/CALCULATED BY:	F.V.



— 0.5 Kg/cm² — 1.0 Kg/cm² — 2.0 Kg/cm²

46

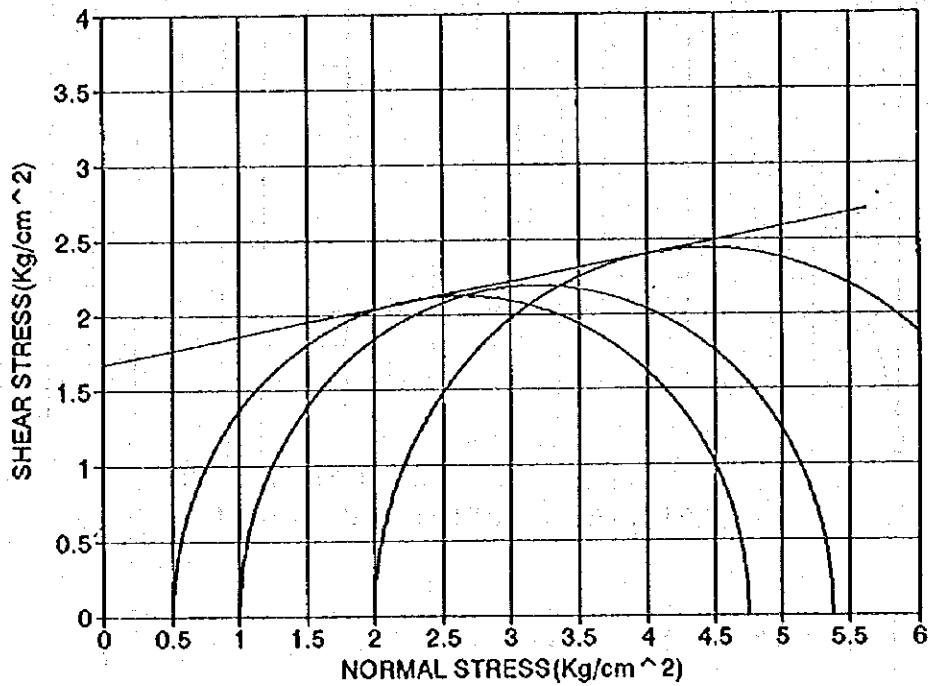
168



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION
CIRCULOS DE MOHR / MOHR CIRCLE

PROYECTO/PROJECT: Trasvases/Trasbasin
LOCALIZACION/SITE: Canal abierto/Open Channel
FECHA/DATE: Enero-94/January-94
CALICATA No./PIT No.: C-19
MUESTRA No./SAMPLE No.: M-2
PROFUNDIDAD/DEPTH: 2.00-4.00m.
ENSAYADO/PERFORMED BY: G.S.
CALCULADO/CALCULATED BY: F.V.

No.	@desv (Kg/cm ²)	@3 (Kg/cm ²)	@1 (Kg/cm ²)	(@1-@3)/2 (Kg/cm ²)	(@1+@3)/2 (Kg/cm ²)
1	4.25	0.50	4.75	2.13	2.63
2	4.38	1.00	5.38	2.19	3.19
3	4.88	2.00	6.88	2.44	4.44



Cohesion = 1.65 Kg/cm²
Friction angle = 10°



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

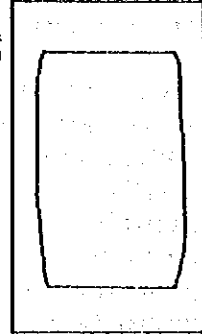
PROYECTO/PROJECT: **Trasvases/Trasbasin**
 LOCALIZACION/SITE: **Canal abierto/Open Channel**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-19**
 MUESTRA No./SAMPLE No.: **M-2**
 PROFUNDIDAD/DEPTH: **2.00-4.00m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CALCULADO/CALCULATED BY: **F.V.**

PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: 0.5 Kg/cm²

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
 ALTURA/HEIGHT: **7.12 cm.**
 PESO/WEIGHT: **129.63 gr.**
 VOLUMEN/VOLUME: **70.87 cm³**
 AREA/AREA: **9.95 cm²**
 DENSIDAD HUMEDA/WET DENSITY: **1.829 gr/cm³**
 DENSIDAD SECA/DRY DENSITY: **1.411 gr/cm³**
 Cte. ANILLO/RING KTE.: **0.33 Kg/div.**

GRAFICO/GRAPHIC



DEFORMACION DEFORMATION x 1E-3Inch	DIAL CARGA LOAD DIAL x 1E-4Inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	21	6.930	0.18	9.97	0.69
10	37	12.210	0.36	9.99	1.22
20	67	22.110	0.71	10.03	2.21
30	80	26.400	1.07	10.06	2.62
40	84	27.720	1.43	10.10	2.75
50	90	29.700	1.78	10.13	2.93
60	108	35.640	2.14	10.17	3.50
70	112	36.960	2.50	10.21	3.62
80	117	38.610	2.85	10.25	3.77
90	120	39.600	3.21	10.28	3.85
100	123	40.590	3.57	10.32	3.93
120	130	42.900	4.26	10.40	4.13
140	135	44.550	4.99	10.48	4.25
160	139	45.870	5.71	10.56	4.35
180	142	46.860	6.42	10.64	4.41
200	145	47.850	7.13	10.72	4.46
250	153	50.490	8.92	10.93	4.62
300	159	52.470	10.70	11.15	4.71

Cap. No.	244
Wcap.+SH	150.20
Wcap.+SS	120.58
Wcap.	20.52
w%	29.60



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COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

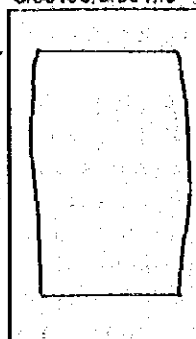
PROYECTO/PROJECT: **Trasvases/Trasbasin**
 LOCALIZACION/SITE: **Canal abierto/Open Channel**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-19**
 MUESTRA No./SAMPLE No.: **M-2**
 PROFUNDIDAD/DEPTH: **2.00-4.00m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CALCULADO/CALCULATED BY: **F.V.**

PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: 1.0 Kg/cm²

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: 3.56 cm.
 ALTURA/HEIGHT: 7.12 cm.
 PESO/WEIGHT: 128.25 gr.
 VOLUMEN/VOLUME: 70.87 cm³
 AREA/AREA: 9.95 cm²
 DENSIDAD HUMEDA/WET DENSITY: 1.810 gr/cm³
 DENSIDAD SECA/DRY DENSITY: 1.401 gr/cm³
 Cte.ANILLO/RING KTE.: 0.33 Kg/div.

GRAFICO/GRAPHIC



DEFORMACION DEFORMATION x 1E-3Inch	DIAL CARGA LOAD DIAL x 1E-4Inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	27	8.910	0.18	9.97	0.89
10	47	15.510	0.36	9.89	1.55
20	70	23.100	0.71	10.03	2.30
30	82	27.060	1.07	10.06	2.69
40	93	30.690	1.43	10.10	3.04
50	101	33.330	1.78	10.13	3.29
60	109	35.970	2.14	10.17	3.54
70	117	38.610	2.50	10.21	3.78
80	121	39.930	2.85	10.25	3.90
90	127	41.910	3.21	10.28	4.08
100	130	42.900	3.57	10.32	4.16
120	134	44.220	4.28	10.40	4.25
140	139	45.870	4.99	10.48	4.38
160	143	47.190	5.71	10.56	4.47
180	146	48.180	6.42	10.64	4.53
200	149	49.170	7.13	10.72	4.59
250	157	51.810	8.92	10.93	4.74
300	163	53.790	10.70	11.15	4.83

Cap. No.	400
Wcap. + SH	148.99
Wcap. + SS	120.00
Wcap.	20.52
w%	29.14



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COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

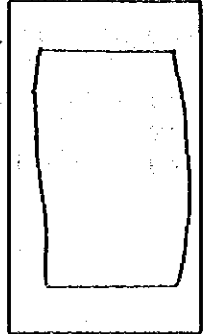
PROYECTO/PROJECT: **Trasvases/Trasbasin**
 LOCALIZACION/SITE: **Canal abierto/Open Channel**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-19**
 MUESTRA No./SAMPLE No.: **M-2**
 PROFUNDIDAD/DEPTH: **2.00-4.00m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CALCULADO/CALCULATED BY: **F.V.**

PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: **2.0 Kg/cm²**

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
 ALTURA/HEIGHT: **7.12 cm.**
 PESO/WEIGHT: **129.82 gr.**
 VOLUMEN/VOLUME: **70.87 cm³**
 AREA/AREA: **9.95 cm²**
 DENSIDAD HUMEDA/WET DENSITY: **1.832 gr/cm³**
 DENSIDAD SECA/DRY DENSITY: **1.435 gr/cm³**
 Cto. ANILLO/RING KTE.: **0.33 Kg/div.**

GRAFICO/GRAPHIC



DEFORMACION DEFORMATION x 1E-3Inch	DIAL CARGA LOAD DIAL x 1E-4Inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	36	11.880	0.18	9.97	1.19
10	54	17.820	0.36	9.99	1.78
20	81	26.730	0.71	10.03	2.67
30	95	31.350	1.07	10.06	3.12
40	106	34.980	1.43	10.10	3.46
50	115	37.950	1.78	10.13	3.74
60	122	40.260	2.14	10.17	3.96
70	127	41.910	2.50	10.21	4.11
80	131	43.230	2.85	10.25	4.22
90	134	44.220	3.21	10.28	4.30
100	137	45.210	3.57	10.32	4.38
120	142	48.860	4.28	10.40	4.51
140	155	51.150	4.99	10.48	4.88
160	160	52.800	5.71	10.56	5.00
180	164	54.120	6.42	10.64	5.09
200	168	55.440	7.13	10.72	5.17
250	177	58.410	8.92	10.93	5.34
300	184	60.720	10.70	11.15	5.45

Cap. No.	474
Wcap.+SH	154.08
Wcap.+SS	125.99
Wcap.	24.28
w%	27.62

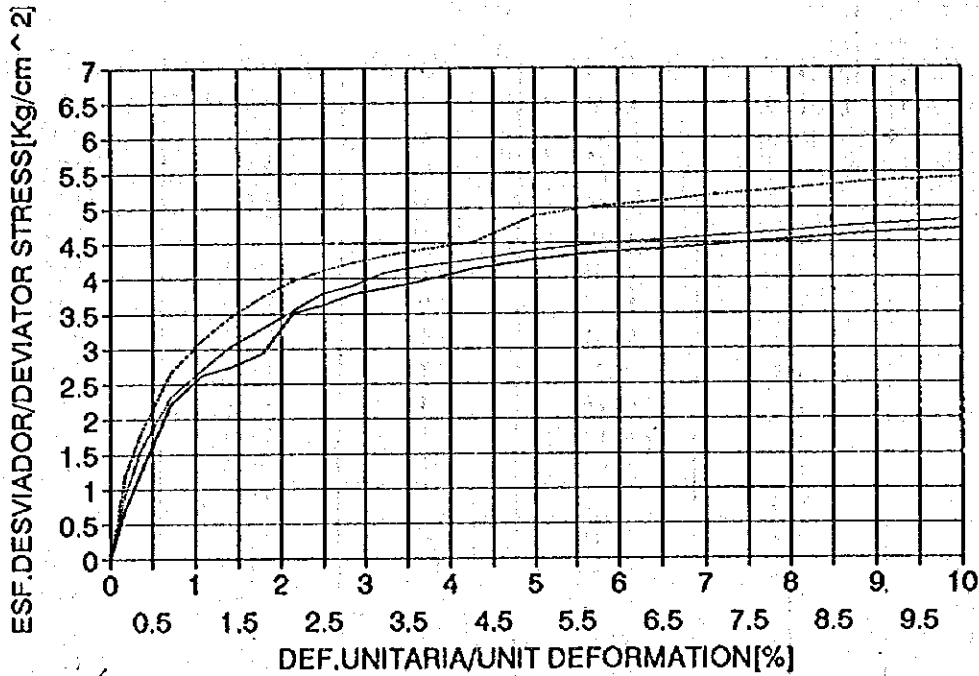


HIDROSUELOS CIA. LTDA.

COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

GRAFICO ESFUERZO-DEFORMACION/STRESS DEFORMATION GRAPHIC

PROYECTO/PROJECT:	Trasvases/Trasbasin
LOCALIZACION/SITE:	Canal abierto/Open Channel
FECHA/DATE:	Enero-94/January-94
CALICATA No./PIT No.:	C-19
MUESTRA No./SAMPLE No.:	M-2
PRÓFUNDIDAD/DEPTH:	2.00-4.00m.
ENSAYADO/PERFORMED BY:	G.S.
CALCULADO/CALCULATED BY:	F.V.



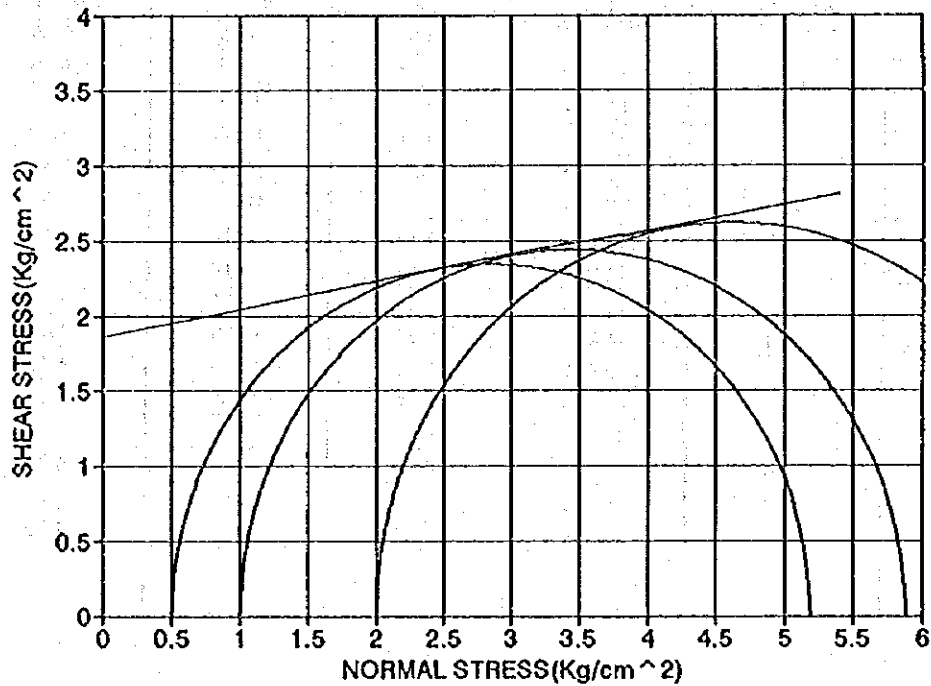
— 0.5 Kg/cm² — 1.0 Kg/cm² — 2.0 Kg/cm²



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION
CIRCULOS DE MOHR / MOHR CIRCLE

PROYECTO/PROJECT: Traszases/Trasbasin
LOCALIZACION/SITE: Línea de Transmisión / Transmission Line
FECHA/DATE: Enero-94/January-94
CALICATA No./PIT No.: C-20
MUESTRA No./SAMPLE No.: M-1
PROFUNDIDAD/DEPTH: 0.35-1.10m.
ENSAYADO/PERFORMED BY: G.S.
CALCULADO/CALCULATED BY: F.V.

No.	@desv (Kg/cm ²)	@3 (Kg/cm ²)	@1 (Kg/cm ²)	(@1-@3)/2 (Kg/cm ²)	(@1+@3)/2 (Kg/cm ²)
1	4.69	0.50	5.19	2.35	2.85
2	4.88	1.00	5.88	2.44	3.44
3	5.24	2.00	7.24	2.62	4.62



Cohesion= 1.80Kg/cm²
Friction angle= 10°

52

174



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COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

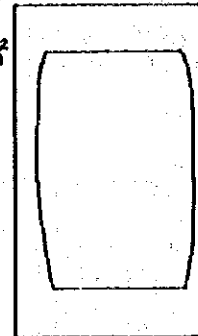
PROYECTO/PROJECT: **Trasvases/Trasbasin**
 LOCALIZACION/SITE: **Linea de Transmision / Transmission Line**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-20**
 MUESTRA No./SAMPLE No.: **M-1**
 PROFUNDIDAD/DEPTH: **0.35-1.10m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CALCULADO/CALCULATED BY: **F.V.**

PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: **0.5 Kg/cm²**

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
 ALTURA/HEIGHT: **7.12 cm.**
 PESO/WEIGHT: **112.8 gr.**
 VOLUMEN/VOLUME: **70.87 cm³**
 AREA/AREA: **9.95 cm²**
 DENSIDAD HUMEDA/WET DENSITY: **1.592 gr/cm³**
 DENSIDAD SECA/DRY DENSITY: **1.154 gr/cm³**
 Cte. ANILLO/RING KTE.: **0.33 Kg/div.**

GRAFICO/GRAPHIC



DEFORMACION DEFORMATION x 1E-3Inch	DIAL CARGA LOAD DIAL x 1E-4Inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	24	7.920	0.18	9.97	0.79
10	43	14.190	0.36	9.99	1.42
20	73	24.090	0.71	10.03	2.40
30	95	31.350	1.07	10.06	3.12
40	108	35.640	1.43	10.10	3.53
50	119	39.270	1.78	10.13	3.87
60	125	41.250	2.14	10.17	4.06
70	130	42.900	2.50	10.21	4.20
80	134	44.220	2.85	10.25	4.32
90	138	45.540	3.21	10.28	4.43
100	141	46.530	3.57	10.32	4.51
120	145	47.850	4.28	10.40	4.60
140	149	49.170	4.89	10.48	4.69
160	150	49.500	5.71	10.56	4.69
180	151	49.830	6.42	10.64	4.68
200					
250					
300					

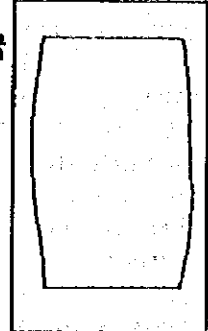
Cap. No.	465
Wcap.+SH	137.25
Wcap.+SS	106.28
Wcap.	24.69
w%	37.96



HIDROSUELOS CIA. LTDA.
COMPRESIÓN TRIAXIAL UU/UU TRIAXIAL COMPRESSION

PROYECTO/PROJECT: **Trasvases/Trasbasin**
 LOCALIZACION/SITE: **Línea de Transmisión / Transmission Line**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-20**
 MUESTRA No./SAMPLE No.: **M-1**
 PROFUNDIDAD/DEPTH: **0.35-1.10m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CALCULADO/CALCULATED BY: **F.V.**

GRAFICO/GRAPHIC



PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: **1.0 Kg/cm²**

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
 ALTURA/HEIGHT: **7.12 cm.**
 PESO/WEIGHT: **111.76 gr.**
 VOLUMEN/VOLUME: **70.87 cm³**
 AREA/AREA: **9.95 cm²**
 DENSIDAD HUMEDA/WET DENSITY: **1.577 gr/cm³**
 DENSIDAD SECA/DRY DENSITY: **1.149 gr/cm³**
 Clo.ANILLO/RING KTE.: **0.33 Kg/div.**

DEFORMACION DEFORMATION x 1E-3Inch	DIAL CARGA LOAD DIAL x 1E-4Inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	25	8.250	0.18	9.97	0.83
10	46	15.180	0.38	9.99	1.52
20	76	25.030	0.71	10.03	2.50
30	106	34.980	1.07	10.06	3.48
40	115	37.950	1.43	10.10	3.76
50	120	39.600	1.78	10.13	3.91
60	126	41.580	2.14	10.17	4.09
70	132	43.560	2.50	10.21	4.27
80	135	44.550	2.85	10.25	4.35
90	140	46.200	3.21	10.28	4.49
100	143	47.190	3.57	10.32	4.57
120	150	49.500	4.28	10.40	4.76
140	155	51.150	4.99	10.48	4.88
160	158	52.140	5.71	10.58	4.94
180	165	54.450	6.42	10.64	5.12
200	168	55.440	7.13	10.72	5.17
250	175	57.750	8.92	10.93	5.28
300					

Cap. No.	299
Wcap. + SH	132.33
Wcap. + SS	102.00
Wcap.	20.68
w%	37.30



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COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

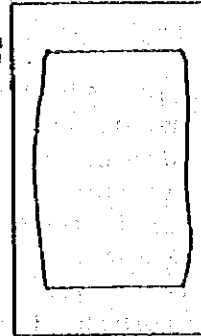
PROYECTO/PROJECT: **Trasvases/Trasbasin**
 LOCALIZACION/SITE: **Línea de Transmisión / Transmission Line**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-20**
 MUESTRA No./SAMPLE No.: **M-1**
 PROFUNDIDAD/DEPTH: **0.35-1.10m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CÁLCULADO/CALCULATED BY: **F.V.**

PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: **2.0 Kg/cm²**

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
 ALTURA/HEIGHT: **7.12 cm.**
 PESO/WEIGHT: **110.69 gr.**
 VOLUMEN/VOLUME: **70.87 cm³**
 AREA/AREA: **9.95 cm²**
 DENSIDAD HUMEDA/WET DENSITY: **1.562 gr/cm³**
 DENSIDAD SECA/DRY DENSITY: **1.138 gr/cm³**
 Cle.ANILLO/RING KTE.: **0.33 Kg/div.**

GRAFICO/GRAPHIC



DEFORMACION DEFORMATION x 1E-3Inch	DIAL CARGA LOAD DIAL x 1E-4Inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	29	9.570	0.18	9.97	0.86
10	50	18.500	0.36	9.99	1.65
20	79	28.070	0.71	10.03	2.60
30	97	32.010	1.07	10.06	3.18
40	109	35.970	1.43	10.10	3.56
50	120	39.600	1.78	10.13	3.91
60	126	41.580	2.14	10.17	4.09
70	132	43.560	2.50	10.21	4.27
80	138	45.540	2.85	10.25	4.44
90	144	47.520	3.21	10.28	4.62
100	150	49.500	3.57	10.32	4.80
120	160	52.800	4.28	10.40	5.08
140	168	55.440	4.99	10.46	5.29
160	175	57.750	5.71	10.56	5.47
180	183	60.390	6.42	10.64	5.68
200	189	62.370	7.13	10.72	5.82
250	204	67.320	8.92	10.93	6.16
300	208	68.640	10.70	11.15	6.16

Cap. No.	278
Wcap. + SH	131.00
Wcap. + SS	101.00
Wcap.	20.42
w%	37.23

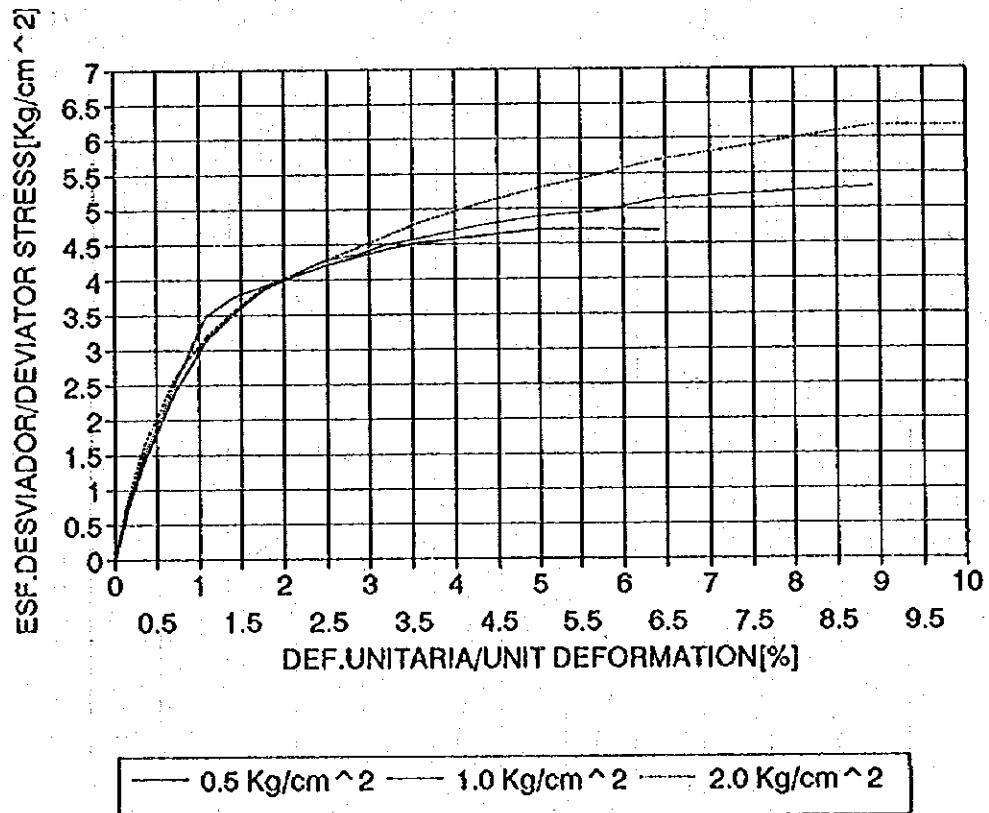


HIDROSUELOS CIA. LTDA.

COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

GRAFICO ESFUERZO-DEFORMACION/STRESS DEFORMATION GRAPHIC

PROYECTO/PROJECT:	Trasvases/Trasbasin
LOCALIZACION/SITE:	Linea de Transmision / Transmission Line
FECHA/DATE:	Enero-94/January-94
CALICATA No./PIT No.:	C-20
MUESTRA No./SAMPLE No.:	M-1
PROFUNDIDAD/DEPTH:	0.35-1.10m.
ENSAYADO/PERFORMED BY:	G.S.
CALCULADO/CALCULATED BY:	F.V.



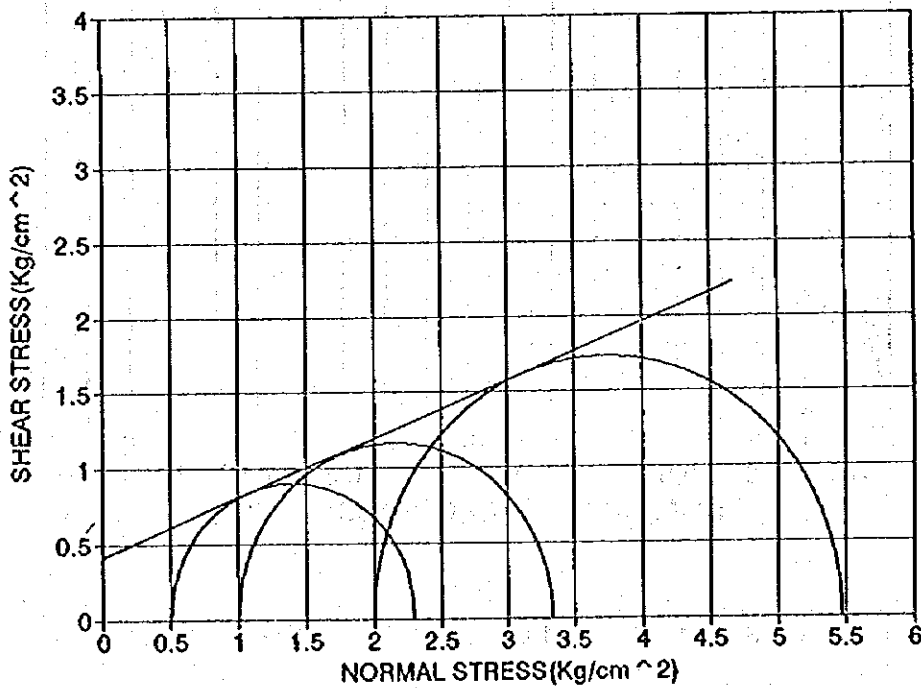
170



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION
CIRCULOS DE MOHR / MOHR CIRCLE

PROYECTO/PROJECT: **Trasvases/Trasbasin**
LOCALIZACION/SITE: **Linea de Transmision / Transmission Line**
FECHA/DATE: **Enero-94/January-94**
CALICATA No./PIT No.: **C-21**
MUESTRA No./SAMPLE No.: **M-1**
PROFUNDIDAD/DEPTH: **0.40-1.00m.**
ENSAYADO/PERFORMED BY: **G.S.**
CALCULADO/CALCULATED BY: **F.V.**

No.	@desv (Kg/cm ²)	@3 (Kg/cm ²)	@1 (Kg/cm ²)	(@1-@3)/2 (Kg/cm ²)	(@1+@3)/2 (Kg/cm ²)
1	1.80	0.50	2.30	0.90	1.40
2	2.33	1.00	3.33	1.17	2.17
3	3.47	2.00	5.47	1.74	3.74



Cohesion = 0.40 Kg/cm²
Friction angle = 20°



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

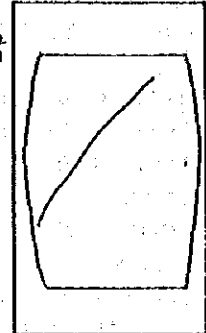
PROYECTO/PROJECT: Travesases/Trasbasin
LOCALIZACION/SITE: Linea de Transmision / Transmission Line
FECHA/DATE: Enero-94/January-94
CALICATA No./PIT No.: C-21
MUESTRA No./SAMPLE No.: M-1
PROFUNDIDAD/DEPTH: 0.40-1.00m.
ENSAYADO/PERFORMED BY: G.S.
CÁLCULADO/CALCULATED BY: F.V.

PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: 0.5 Kg/cm²

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: 3.56 cm.
ALTURA/HEIGHT: 7.12 cm.
PESO/WEIGHT: 124.32 gr.
VOLUMEN/VOLUME: 70.87 cm³
AREA/AREA: 9.95 cm²
DENSIDAD HUMEDA/WET DENSITY: 1.754 gr/cm³
DENSIDAD SECA/DRY DENSITY: 1.358 gr/cm³
Cte. ANILLO/RING KTE.: 0.33 Kg/div.

GRAFICO/GRAPHIC



DEFORMACION DEFORMATION x 1E-3Inch	DIAL CARGA LOAD DIAL x 1E-4Inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	12	3.960	0.18	9.97	0.40
10	21	6.930	0.36	9.99	0.69
20	28	9.240	0.71	10.03	0.92
30	33	10.890	1.07	10.06	1.08
40	37	12.210	1.43	10.10	1.21
50	40	13.200	1.78	10.13	1.30
60	42	13.860	2.14	10.17	1.36
70	44	14.520	2.50	10.21	1.42
80	47	15.510	2.85	10.25	1.51
90	49	16.170	3.21	10.28	1.57
100	50	16.500	3.57	10.32	1.60
120	53	17.490	4.28	10.40	1.68
140	57	18.810	4.99	10.48	1.80
160	59	19.470	5.71	10.56	1.84
180	60	19.800	6.42	10.64	1.86
200	62	20.460	7.13	10.72	1.91
250	64	21.120	8.92	10.93	1.93
300	65	21.450	10.70	11.15	1.92

Cap. No.	364
Wcap.+SH	144.05
Wcap.+SS	115.99
Wcap.	19.88
w%	29.20



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/UU TRIAXIAL COMPRESSION

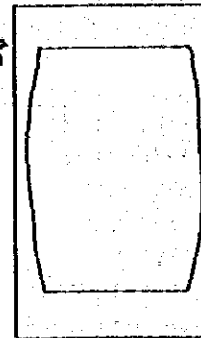
PROYECTO/PROJECT: **Trasvases/Trasbasin**
 LOCALIZACION/SITE: **Línea de Transmisión / Transmission Line**
 FECHA/DATE: **Enero-94/January-94**
 CALICATA No./PIT No.: **C-21**
 MUESTRA No./SAMPLE No.: **M-1**
 PROFUNDIDAD/DEPTH: **0.40-1.00m.**
 ENSAYADO/PERFORMED BY: **G.S.**
 CALCULADO/CALCULATED BY: **F.V.**

PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: 1.0 Kg/cm²

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: **3.56 cm.**
 ALTURA/HEIGHT: **7.12 cm.**
 PESO/WEIGHT: **121.99 gr.**
 VOLUMEN/VOLUME: **70.87 cm³**
 AREA/AREA: **9.95 cm²**
 DENSIDAD HUMEDA/WET DENSITY: **1.721 gr/cm³**
 DENSIDAD SECA/DRY DENSITY: **1.328 gr/cm³**
 Cte. ANILLO/RING KTE.: **0.33 Kg/dlv.**

GRAFICO/GRAPHIC



DEFORMACION DEFORMATION x 1E-3inch	DIAL CARGA LOAD DIAL x 1E-4inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	14	4.620	0.18	9.97	0.46
10	23	7.590	0.36	9.99	0.76
20	30	9.900	0.71	10.03	0.99
30	38	12.540	1.07	10.08	1.25
40	42	13.860	1.43	10.10	1.37
50	45	14.850	1.78	10.13	1.47
60	47	15.510	2.14	10.17	1.52
70	49	16.170	2.50	10.21	1.58
80	52	17.160	2.85	10.25	1.67
90	59	19.470	3.21	10.28	1.89
100	63	20.790	3.57	10.32	2.01
120	68	22.440	4.28	10.40	2.16
140	74	24.420	4.99	10.48	2.33
160	77	25.410	5.71	10.56	2.41
180	80	26.400	6.42	10.64	2.48
200	83	27.390	7.13	10.72	2.56
250	89	29.370	8.92	10.93	2.69
300	92	30.360	10.70	11.15	2.72

Cap. No.	465
Wcap. + SH	148.59
Wcap. + SS	118.77
Wcap.	24.69
w%	29.57



HIDROSUELOS CIA. LTDA.
COMPRESION TRIAXIAL UU/JU TRIAXIAL COMPRESSION

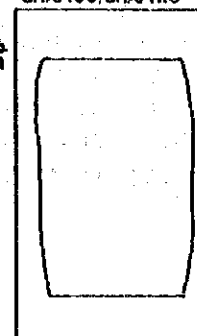
PROYECTO/PROJECT: Traasases/Traasbasin
LOCALIZACION/SITE: Linea de Transmision / Transmission Line
FECHA/DATE: Enero-94/January-94
CALICATA No./PIT No.: C-21
MUESTRA No./SAMPLE No.: M-1
PROFUNDIDAD/DEPTH: 0.40-1.00m.
ENSAYADO/PERFORMED BY: G.S.
CALCULADO/CALCULATED BY: F.V.

PRESION DE CONFINAMIENTO/CONFINEMENT PRESSURE: 2.0 Kg/cm²

DATOS DE LA MUESTRA/SAMPLE DATAS:

DIAMETRO/DIAMETER: 3.56 cm.
ALTURA/HEIGHT: 7.12 cm.
PESO/WEIGHT: 125 gr.
VOLUMEN/VOLUME: 70.87 cm³
AREA/AREA: 9.95 cm²
DENSIDAD HUMEDA/WET DENSITY: 1.764 gr/cm³
DENSIDAD SECA/DRY DENSITY: 1.361 gr/cm³
Cto. ANILLO/RING KTE.: 0.33 Kg/div.

GRAFICO/GRAPHIC



DEFORMACION DEFORMATION x 1E-3inch	DIAL CARGA LOAD DIAL x 1E-4inch	CARGA LOAD Kg	DEF.UNIT. UNIT.DEF. %	AREA CORREG. CORRECT.AREA cm ²	ESF.DESVIAD. DEVIAT.STRESS Kg/cm ²
0	0	0	0.00	9.95	0.00
5	17	5.610	0.18	9.97	0.56
10	27	8.910	0.36	9.99	0.89
20	47	15.510	0.71	10.03	1.55
30	62	20.460	1.07	10.06	2.03
40	73	24.090	1.43	10.10	2.39
50	80	26.400	1.78	10.13	2.60
60	86	28.380	2.14	10.17	2.79
70	91	30.030	2.50	10.21	2.94
80	94	31.020	2.85	10.25	3.03
90	97	32.010	3.21	10.28	3.11
100	99	32.670	3.57	10.32	3.17
120	105	34.650	4.28	10.40	3.33
140	110	36.300	4.99	10.48	3.46
160	115	37.950	5.71	10.56	3.59
180	119	39.270	6.42	10.64	3.69
200	122	40.260	7.13	10.72	3.76
250	129	42.670	8.92	10.93	3.90
300	135	44.550	10.70	11.15	4.00

Cap. No.	294
Wcap. + SH	145.65
Wcap. + SS	117.10
Wcap.	20.66
w%	29.60

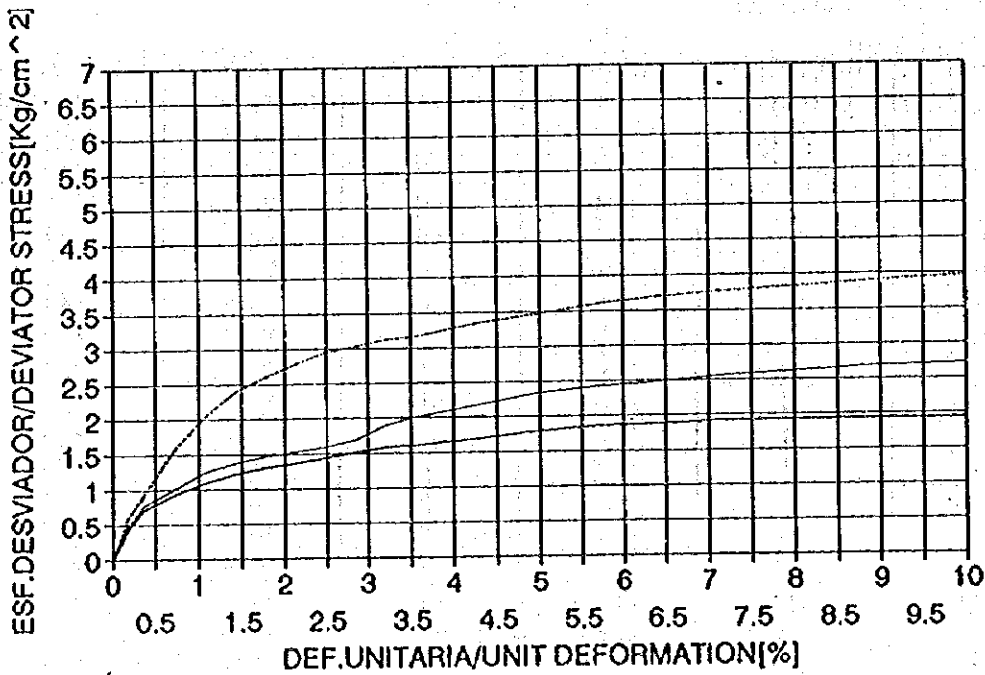


HIDROSUELOS CIA. LTDA.

COMPRESIÓN TRIAXIAL UU/UU TRIAXIAL COMPRESSION

GRAFICO ESFUERZO-DEFORMACION/STRESS DEFORMATION GRAPHIC

PROYECTO/PROJECT: Trasvases/Trasbasin
LOCALIZACION/SITE: Linea de Transmision / Transmission Line
FECHA/DATE: Enero-94/January-94
CALICATA No./PIT No.: C-21
MUESTRA No./SAMPLE No.: M-1
PROFUNDIDAD/DEPTH: 0.40-1.00m.
ENSAYADO/PERFORMED BY: G.S.
CALCULADO/CALCULATED BY: F.V.



— 0.5 Kg/cm² — 1.0 Kg/cm² — 2.0 Kg/cm²



0

0

UNDISTURBED SAMPLE

0

52

1.84

**ESCUELA POLITÉCNICA NACIONAL
FACULTAD DE INGENIERÍA CIVIL
LABORATORIO DE ENSAYO DE MATERIALES
Y MECÁNICA DE SUELOS**

TRIAXIAL UU

PERFORAC C-22

MUESTRA: M-1

ENSAYO UU-1(S/sat)

TPO: NALTERADA

PROF(m): 0.6-0.9

PESO (gr) = 136.98

Hm (cm) = 8.10

ρ_m (gr/cm³) = 1.718

W % Inc = 45.43

W % fin = 45.43

ρ_d (gr/cm³) = 1.181

Ds (cm) = 3.54

Dm (cm) = 3.54

Di (cm) = 3.54

Ao (cm²) = 9.84

V (cm³) = 79.72

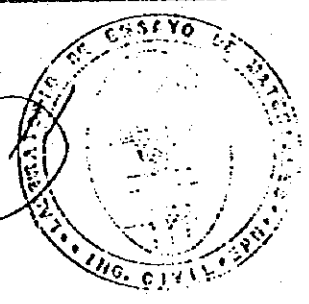
σ_3 (kg/cm²) = 0.50

CTE ANLL (kg/dv) = 102

TIEMPO	LECT DIAL	CARGA (kg)	DEFORMACION (mm ^{10E-2})	DEFORMACION UNITARIA (%)	AREA CORREGIDA (cm ²)	ESFUERZO (kg/cm ²)
	0.000	0.00	0	0.00	9.84	0.00
	0.086	8.80	10	0.12	9.85	0.89
	0.197	20.12	20	0.25	9.87	2.04
	0.236	24.02	30	0.37	9.88	2.43
	0.278	28.30	40	0.49	9.89	2.86
	0.313	31.90	50	0.62	9.90	3.22
	0.378	38.56	75	0.93	9.93	3.88
	0.418	42.61	100	1.23	9.97	4.28
	0.440	44.83	125	1.54	10.00	4.48
	0.435	44.37	150	1.85	10.03	4.42
	0.413	42.08	175	2.16	10.06	4.18
	0.396	40.39	200	2.47	10.09	4.00
	0.351	35.80	250	3.09	10.16	3.53
	0.297	30.29	300	3.70	10.22	2.96
	0.275	28.00	350	4.32	10.29	2.72
	0.259	26.39	400	4.94	10.35	2.55
	0.250	25.47	450	5.56	10.42	2.44
	0.248	25.32	500	6.17	10.49	2.41
			600	7.41	10.63	
			700	8.64	10.77	
			800	9.88	10.92	
			900	11.11	11.07	
			1000	12.35	11.23	

Germán Luna H

Ing. Germán Luna H
Jefe de Laboratorio



ESCUELA POLITÉCNICA NACIONAL
FACULTAD DE INGENIERÍA CIVIL
LABORATORIO DE ENSAYO DE MATERIALES
Y MECÁNICA DE SUELOS

TRIAXIAL UU

PERFORAC: C-22

MUESTRA: M-1

ENSAYO: UU-2(S/sal)

TPO: NALTERADA

PROF(m): 0.6-0.9

PESO (gr) = 139.65

Hm (cm) = 7.99

ρ_m (gr/cm³) = 1.717

W % Inc = 43.73

W % fin = 43.73

ρ_d (gr/cm³) = 1.195

Ds (cm) = 3.60

Dm (cm) = 3.60

Di (cm) = 3.60

Ao (cm²) = 10.18

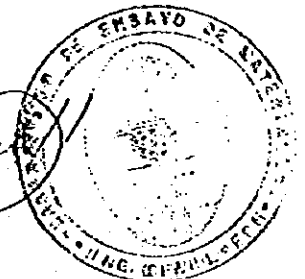
V (cm³) = 81.33

σ_3 (kg/cm²) = 1.00

CTE ANLL (kg/dv) = 102

TIEMPO	LECT DIAL	CARGA (kg)	DEFORMACION (mm*E-2)	DEFORMACION UNITARIA (%)	AREA CORREGIDA (cm ²)	ESFUERZO (kg/cm ²)
	0.000	0.00	0	0.00	10.18	0.00
	0.072	7.30	10	0.13	10.19	0.72
	0.143	14.59	20	0.25	10.20	1.43
	0.237	24.20	30	0.38	10.22	2.37
	0.337	34.40	40	0.50	10.23	3.36
	0.399	40.73	50	0.63	10.24	3.98
	0.485	49.44	75	0.94	10.28	4.81
	0.541	55.17	100	1.25	10.31	5.35
	0.570	58.15	125	1.56	10.34	5.62
	0.566	57.71	150	1.88	10.37	5.56
	0.553	56.44	175	2.19	10.41	5.42
	0.542	55.25	200	2.50	10.44	5.29
	0.529	53.98	250	3.13	10.51	5.14
	0.520	53.02	300	3.75	10.58	5.01
	0.515	52.49	350	4.38	10.65	4.93
	0.506	51.60	400	5.01	10.72	4.82
	0.500	51.01	450	5.63	10.79	4.73
	0.489	49.89	500	6.26	10.86	4.59
			600	7.51	11.01	
			700	8.76	11.16	
			800	10.01	11.31	
			900	11.26	11.47	
			1000	12.52	11.63	

Ing. Germán Luna H.
Jefe de Laboratorio

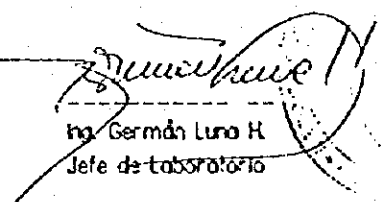


ESCUOLA POLITÉCNICA NACIONAL
FACULTAD DE INGENIERÍA CIVIL
LABORATORIO DE ENSAYO DE MATERIALES
Y MECÁNICA DE SUELOS

TRIAxIAL UU

PERFORAC: C-22	PESO (gr) = 142.4	Ds (cm) = 3.60
MUESTRA: M-1	Hm (cm) = 7.99	Dm (cm) = 3.60
ENSAYO: UU-3(S/sat)	ρ_m (gr/cm ³) = 1.751	Di (cm) = 3.60
TPO: NALTERADA	W % inc = 46.05	Ao (cm ²) = 10.18
PROF(m): 0.6-0.9	W % fin = 46.05	V (cm ³) = 81.33
	ρ_d (gr/cm ³) = 1.199	σ_3 (kg/cm ²) = 2.00
	CTE ANLL (kg/dv) = 102	

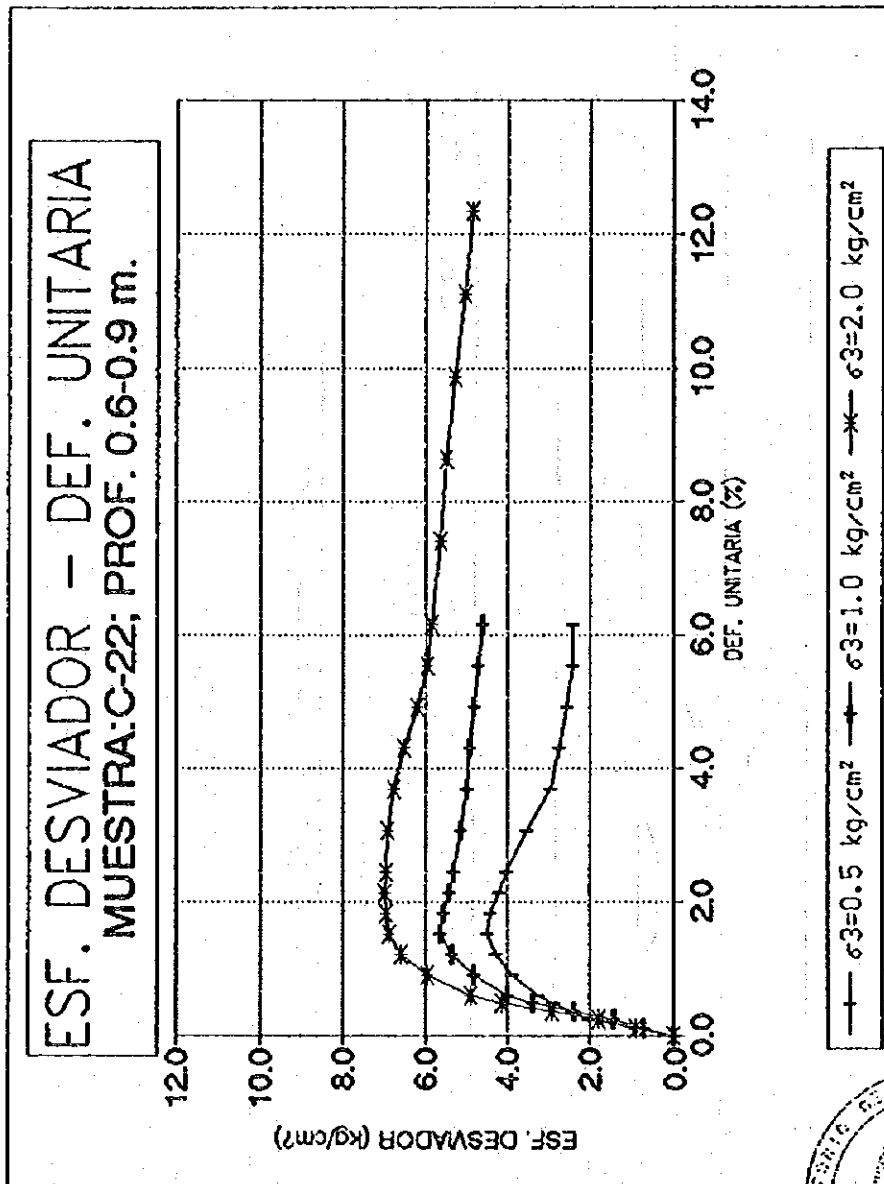
TIEMPO	LECT DIAL	CARGA (kg)	DEFORMACION (mm*E-2)	DEFORMACION UNITARIA (%)	AREA CORREGIDA (cm ²)	ESFUERZO (kg/cm ²)
	0.000	0.00	0	0.00	10.18	0.00
	0.088	9.00	10	0.13	10.19	0.88
	0.176	17.99	20	0.25	10.20	1.76
	0.293	29.84	30	0.38	10.22	2.92
	0.416	42.41	40	0.50	10.23	4.15
	0.492	50.21	50	0.63	10.24	4.90
	0.598	60.96	75	0.94	10.28	5.93
	0.667	68.02	100	1.25	10.31	6.60
	0.698	71.15	125	1.56	10.34	6.88
	0.709	72.34	150	1.88	10.37	6.97
	0.713	72.71	175	2.19	10.41	6.99
	0.714	72.80	200	2.50	10.44	6.97
	0.711	72.52	250	3.13	10.51	6.90
	0.700	71.42	300	3.75	10.58	6.75
	0.680	69.40	350	4.38	10.65	6.52
	0.652	66.46	400	5.01	10.72	6.20
	0.632	64.44	450	5.63	10.79	5.97
	0.623	63.53	500	6.26	10.86	5.85
	0.608	61.97	600	7.51	11.01	5.63
	0.599	61.14	700	8.76	11.16	5.48
	0.583	59.49	800	10.01	11.31	5.26
	0.568	57.93	900	11.26	11.47	5.05
	0.554	56.46	1000	12.52	11.63	4.85


 Ing. Germán Luna H.
 Jefe de Laboratorio

C-22
M-1

ESCUELA POLITÉCNICA NACIONAL
FACULTAD DE INGENIERÍA CIVIL
LABORATORIO DE MECÁNICA DE ROCAS

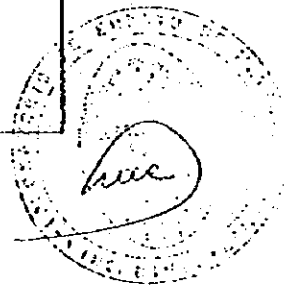
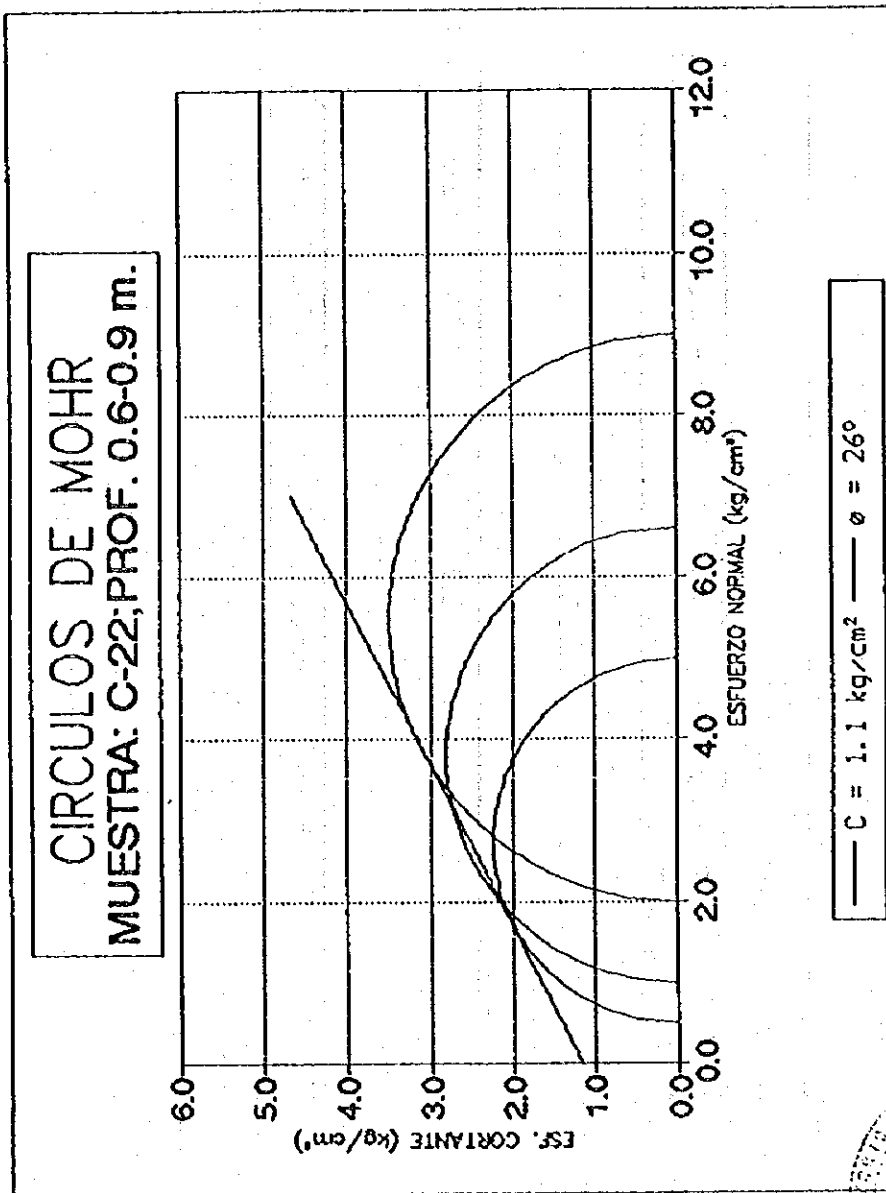
PROYECTO "TRASVASES MANABI"



22
1-1

ESCUELA POLITÉCNICA NACIONAL
FACULTAD DE INGENIERÍA CIVIL
LABORATORIO DE MECÁNICA DE ROCAS

PROYECTO "TRASVASES NANABI"



159

**ESCUELA POLITÉCNICA NACIONAL
FACULTAD DE INGENIERÍA CIVIL
LABORATORIO DE ENSAYO DE MATERIALES
Y MECÁNICA DE SUELOS**

TRIAxIAL UU

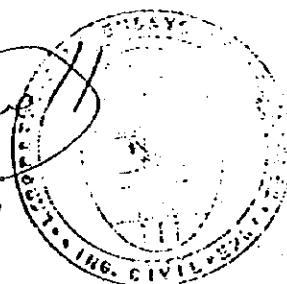
PERFORAD: C-23
MUESTRA: H-1
ENSAYO #: UU-1(S/sol)
TPO: NATURADA
PROF(m): 1.2-1.5

PESO (gr) = 136.88
Hn (cm) = 7.90
 $\rho_m(\text{gr/cm}^3) = 1.690$
W % lnc = 41.58
W % ln = 41.58
 $\rho(\text{gr/cm}^3) = 1.193$
CTE AMEL (kg/dv) = 102

Ds (cm) = 3.82
Dm (cm) = 3.81
Df (cm) = 3.82
Ao (cm²) = 10.25
V (cm³) = 81.01
 $\sigma_3(\text{kg/cm}^2) = 0.50$

TIEMPO	LECTURAL	CARGA (kg)	DEFORMACION (mm ² E-2)	DEFORMACION UNITARIA (%)	AREA CORREGIDA (cm ²)	ESFUERZO (kg/cm ²)
	0.000	0.00	0	0.00	10.25	0.00
	0.077	7.88	10	0.13	10.27	0.77
	0.173	17.87	20	0.25	10.28	1.72
	0.252	25.70	30	0.38	10.29	2.50
	0.313	31.90	40	0.51	10.31	3.10
	0.353	38.03	50	0.63	10.32	3.49
	0.458	48.51	75	0.95	10.35	4.49
	0.532	54.24	100	1.27	10.39	5.22
	0.587	59.90	125	1.58	10.42	5.75
	0.631	64.34	150	1.90	10.45	6.15
	0.688	68.09	175	2.22	10.49	6.49
	0.691	70.48	200	2.53	10.52	6.70
	0.727	74.13	250	3.18	10.59	7.00
	0.734	74.82	300	3.80	10.66	7.02
	0.699	71.30	350	4.43	10.73	6.64
	0.623	63.67	400	5.08	10.80	5.89
	0.537	54.77	450	5.70	10.87	5.04
	0.476	48.58	500	6.33	10.95	4.44
			600	7.59	11.10	
			700	8.86	11.25	
			800	10.13	11.41	
			900	11.39	11.57	
			1000	12.66	11.74	

Ing. Germán Luna H.
Jefe de Laboratorio



ESCUELA POLITECNICA NACIONAL
FACULTAD DE INGENIERIA CIVIL
LABORATORIO DE ENSAYO DE MATERIALES
Y MECANICA DE SUELOS

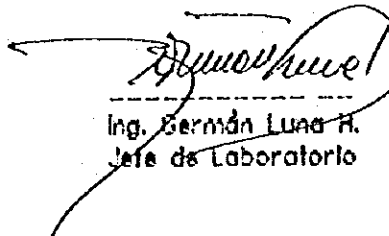
TRIAxIAL UU

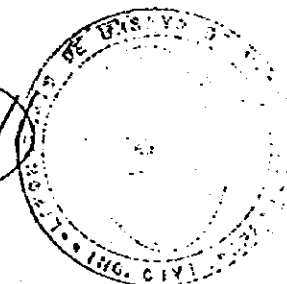
PERFORAC: C-23
 MUESTRA: M-1
 ENSAYO #: UU-2(S/sol)
 TPO: HALTERADA
 PROF(m): 1.2-1.5

PESO (gr) = 134.01
 Hm (cm) = 8.00
 ρ_m (gr/cm³) = 1.656
 W % Inc = 42.61
 W % fin = 42.61
 ρ_d (gr/cm³) = 1.168
 CTE AREL (kg/dry) = 102

Ds (cm) = 3.58
 Dm (cm) = 3.58
 Df (cm) = 3.57
 A_d (cm²) = 10.06
 V (cm³) = 80.45
 σ_3 (kg/cm²) = 1.00

TIEMPO	LECTURAL	CARGA (kg)	DEFORMACION (mm*E-2)	DEFORMACION UNITARIA (%)	AREA CORREGIDA (cm ²)	ESFUERZO (kg/cm ²)
	0.000	0.00	0	0.00	10.08	0.00
	0.096	9.79	10	0.13	10.07	0.97
	0.192	19.58	20	0.25	10.08	1.94
	0.285	27.00	30	0.38	10.09	2.68
	0.321	32.74	40	0.50	10.11	3.24
	0.362	38.95	50	0.63	10.12	3.65
	0.455	46.44	75	0.94	10.15	4.57
	0.523	53.32	100	1.25	10.18	5.24
	0.582	59.38	125	1.58	10.22	5.81
	0.626	63.88	150	1.88	10.25	6.23
	0.663	67.63	175	2.19	10.28	6.58
	0.692	70.53	200	2.50	10.31	6.84
	0.734	74.82	250	3.13	10.38	7.21
	0.762	77.72	300	3.75	10.45	7.44
	0.784	77.88	350	4.38	10.52	7.41
	0.739	75.35	400	5.00	10.59	7.12
	0.676	68.93	450	5.63	10.66	6.47
	0.641	65.41	500	6.25	10.73	6.10
			600	7.50	10.87	
			700	8.75	11.02	
			800	10.00	11.17	
			900	11.25	11.33	
			1000	12.50	11.49	


 Ing. Germán Luna H.
 Jefe de Laboratorio



**ESCUELA POLITECNICA NACIONAL
FACULTAD DE INGENIERIA CIVIL
LABORATORIO DE ENSAYO DE MATERIALES
Y MECANICA DE SUELOS**

TRIAxIAL UU

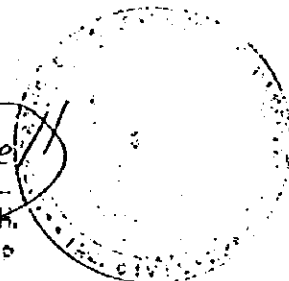
PERFORAC: C-23
MESTRA: M-1
ENSAYO #: UU-3(S/sat)
TPO: NATERADA
PROF(m): 1.2-1.5

PESO (gr) = 137.25
Hm (cm) = 7.98
 ρ_m (gr/cm³) = 1.880
W % Inc = 42.94
W % fin = 42.94
 ρ_d (gr/cm³) = 1.162
CTE ANLL (kg/div) = 102

Ds (cm) = 3.83
Dm (cm) = 3.83
Df (cm) = 3.84
Ao (cm²) = 10.36
V (cm³) = 82.66
 σ_3 (kg/cm²) = 2.00

TIEMPO	LECT DAL	CARGA (kg)	DEFORMACION (mmE-2)	DEFORMACION UNITARIA (%)	AREA CORREGIDA (cm ²)	ESFUERZO (kg/cm ²)
	0.000	0.00	0	0.00	10.36	0.00
	0.106	10.86	10	0.13	10.37	1.05
	0.217	22.11	20	0.25	10.38	2.13
	0.299	30.52	30	0.38	10.40	2.94
	0.365	37.18	40	0.50	10.41	3.57
	0.415	42.30	50	0.63	10.42	4.06
	0.520	53.01	75	0.94	10.46	5.07
	0.601	61.28	100	1.25	10.49	5.84
	0.662	67.47	125	1.57	10.52	6.41
	0.708	72.22	150	1.88	10.56	6.84
	0.750	76.50	175	2.19	10.59	7.22
	0.781	79.64	200	2.51	10.62	7.50
	0.813	82.93	250	3.13	10.69	7.75
	0.827	84.38	300	3.76	10.76	7.84
	0.824	84.00	350	4.39	10.83	7.75
	0.794	80.94	400	5.01	10.91	7.42
	0.764	77.88	450	5.64	10.98	7.09
	0.752	76.65	500	6.27	11.05	6.94
			600	7.52	11.20	
			700	8.77	11.35	
			800	10.03	11.51	
			900	11.28	11.68	
			1000	12.53	11.84	


 Ing. Germán Luna H.
 Jefe de Laboratorio



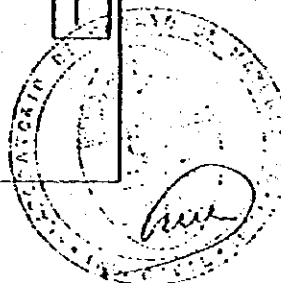
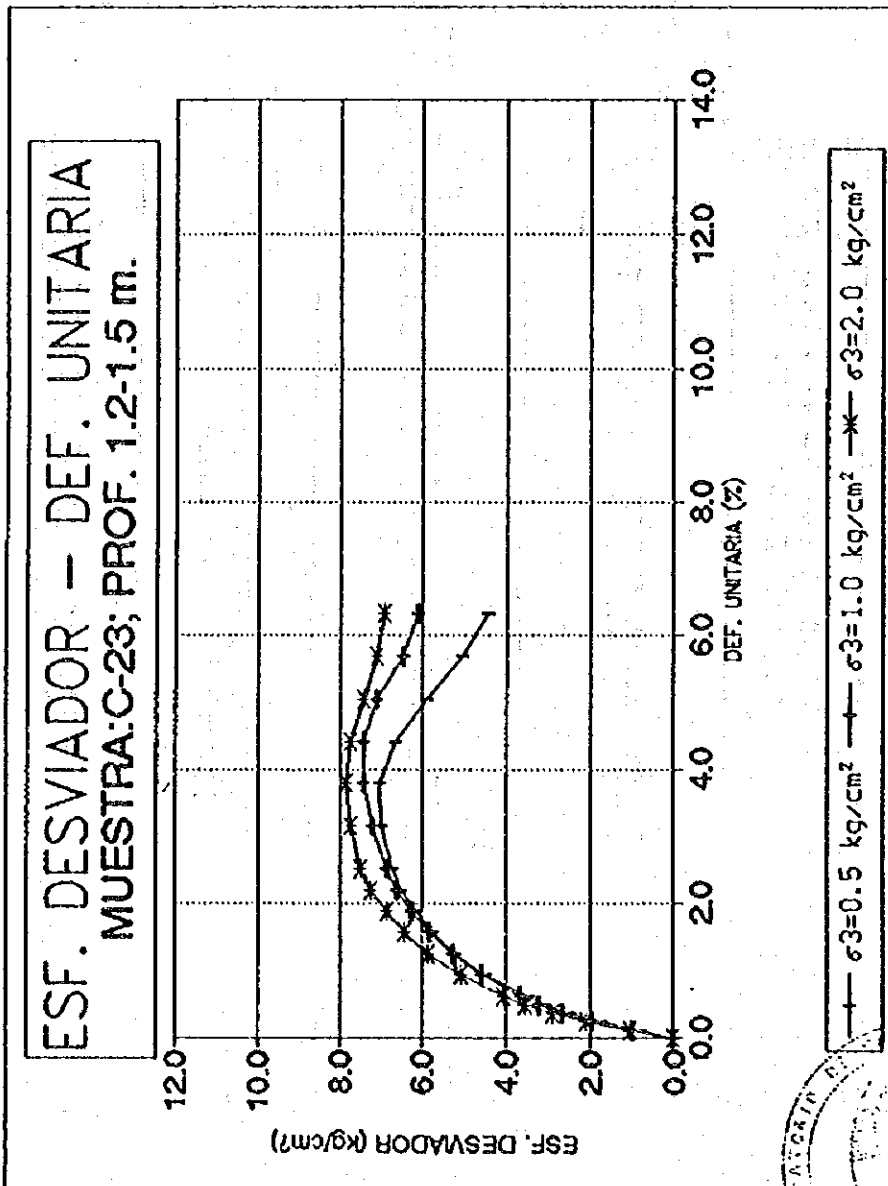
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223
M-1

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LABORATORIO DE MECANICA DE ROCAS

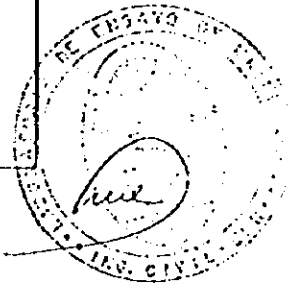
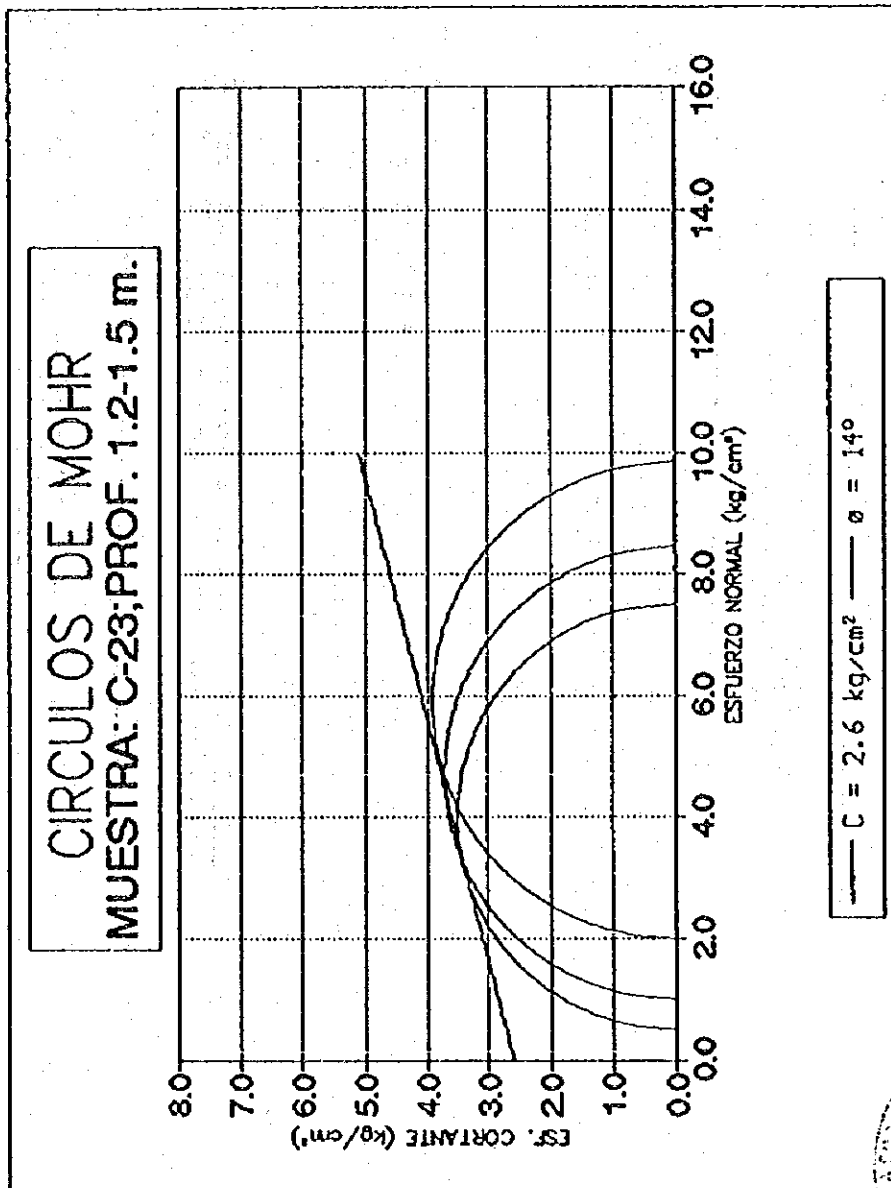
PROYECTO "TRASVASES MANABI"



C-23
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FACULTAD DE INGENIERÍA CIVIL
LABORATORIO DE MECÁNICA DE ROCAS

PROYECTO "TRASVASES NANABI"



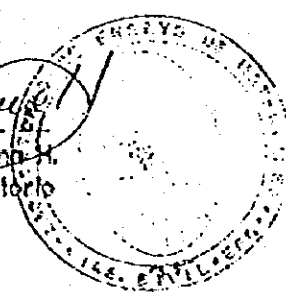
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LABORATORIO DE ENSAYO DE MATERIALES
Y MECANICA DE SUELOS**

TRIAxIAL UU

PERFORAD: C-24	PESO (gr) = 138.88	Ds (cm) = 3.63
MUESTRA: M-1	Hm (cm) = 7.98	Dm (cm) = 3.63
ENSAYO #: UU-1(S/sol)	ρ_m (gr/cm ³) = 1.880	Dt (cm) = 3.64
TPD: HALTERADA	W % lno = 41.15	As (cm ²) = 10.38
PROF(m): 1.5-1.8	W % fln = 41.15	V (cm ³) = 82.66
	ρ_s (gr/cm ³) = 1.190	σ_3 (kg/cm ²) = 0.50
	GTE ANPL (kg/dv) = 102	

TIEMPO	LECT DAL	CARGA (kg)	DEFORMACION (mm+E=2)	DEFORMACION UNITARIA (%)	AREA CORREGIDA (cm ²)	ESFUERZO (kg/cm ²)
	0.000	0.00	0	0.00	10.38	0.00
	0.038	3.89	10	0.13	10.37	0.38
	0.077	7.86	20	0.25	10.38	0.76
	0.121	12.34	30	0.38	10.40	1.19
	0.153	15.64	40	0.50	10.41	1.50
	0.184	18.73	50	0.83	10.42	1.80
	0.222	22.82	75	0.94	10.48	2.16
	0.238	24.24	100	1.25	10.49	2.31
	0.249	25.41	125	1.57	10.52	2.41
	0.225	22.99	150	1.88	10.56	2.18
	0.208	21.00	175	2.19	10.59	1.98
	0.159	16.23	200	2.51	10.62	1.53
	0.127	12.93	250	3.13	10.69	1.21
	0.110	11.24	300	3.76	10.78	1.04
	0.105	10.80	350	4.39	10.83	1.00
	0.089	9.03	400	5.01	10.91	0.83
	0.084	8.59	450	5.64	10.98	0.78
	0.076	7.78	500	6.27	11.05	0.70
			600	7.52	11.20	
			700	8.77	11.35	
			800	10.03	11.51	
			900	11.28	11.68	
			1000	12.53	11.84	

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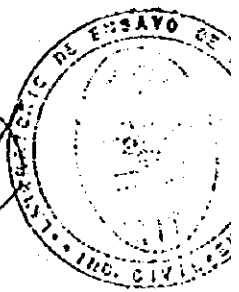
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TRIAXIAL UU

PERFORAC:	C-24	PESO (gr) =	136.17	D_s (cm) =	3.80
MUESTRA:	M-1	Hm (cm) =	7.91	D_m (cm) =	3.50
ENSAYO #:	UL-2(S/sol)	ρ_m (gr/cm ³) =	1.690	D_l (cm) =	3.61
TPD:	NALTERADA	W % lno =	43.56	A_d (cm ²) =	10.19
PROF(m):	1.5-1.8	W % fin =	43.56	V (cm ³) =	80.59
		ρ_s (gr/cm ³) =	1.177	σ_3 (kg/cm ²) =	1.00
		CTE ANIL (kg/dv) =	102		

	LECTURAL	CARGA (kg)	DEFORMACION (mm*E-2)	DEFORMACION UNITARIA (%)	AREA CORREGIDA (cm ²)	ESFUERZO (kg/cm ²)
	0.000	0.00	0	0.00	10.19	0.00
	0.043	4.41	10	0.13	10.20	0.43
	0.087	8.89	20	0.25	10.21	0.87
	0.118	12.08	30	0.38	10.23	1.18
	0.157	15.99	40	0.51	10.24	1.58
	0.183	18.89	50	0.63	10.25	1.82
	0.239	24.40	75	0.95	10.29	2.37
	0.271	27.68	100	1.26	10.32	2.68
	0.284	28.97	125	1.58	10.35	2.80
	0.279	28.48	150	1.90	10.39	2.74
	0.269	27.42	175	2.21	10.42	2.63
	0.254	25.95	200	2.53	10.45	2.48
	0.238	24.32	250	3.16	10.52	2.31
	0.230	23.42	300	3.79	10.59	2.21
	0.216	22.03	350	4.42	10.66	2.07
	0.202	20.64	400	5.06	10.73	1.92
	0.190	19.42	450	5.69	10.80	1.80
	0.182	18.52	500	6.32	10.88	1.70
			600	7.59	11.02	
			700	8.85	11.18	
			800	10.11	11.33	
			900	11.38	11.50	
			1000	12.64	11.66	


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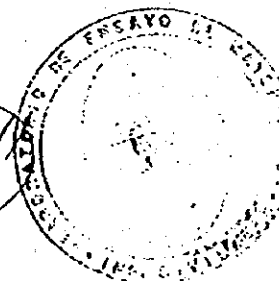
TRIAxIAL UU

PERFORAC: C-24
 MUESTRA: M-1
 ENSAYO #: UU-3(S/sat)
 TPO: NALTERADA
 PROF(m): 1.5-1.8

PESO (gr) = 141.1 D_s (cm) = 3.88
 Hm (cm) = 7.98 D_m (cm) = 3.67
 ρ_m (gr/cm³) = 1.675 D_f (cm) = 3.86
 W % lnc = 43.48 A_0 (cm²) = 10.58
 W % fln = 43.48 V (cm³) = 34.28
 ρ_d (gr/cm³) = 1.167 σ_3 (kg/cm²) = 2.00
 CTE AMAL (kg/dv) = 102

LECT DIAL	CARGA (kg)	DEFORMACION (mm*E-2)	DEFORMACION UNITARIA (%)	AREA CORREGIDA (cm ²)	ESFUERZO (kg/cm ²)
0.000	0.00	0	0.00	10.58	0.00
0.050	5.14	10	0.13	10.57	0.49
0.095	9.64	20	0.25	10.59	0.91
0.129	13.13	30	0.38	10.60	1.24
0.165	16.80	40	0.50	10.61	1.58
0.199	20.29	50	0.63	10.63	1.91
0.258	26.35	75	0.94	10.66	2.47
0.284	29.01	100	1.25	10.69	2.71
0.307	31.30	125	1.57	10.73	2.92
0.319	32.50	150	1.88	10.76	3.02
0.334	34.05	175	2.19	10.80	3.15
0.345	35.15	200	2.51	10.83	3.25
0.353	35.99	250	3.13	10.90	3.30
0.358	36.54	300	3.76	10.97	3.33
0.361	36.81	350	4.39	11.04	3.33
0.366	36.26	400	5.01	11.12	3.26
0.339	34.61	450	5.64	11.19	3.09
0.329	33.51	500	6.27	11.27	2.97
		600	7.52	11.42	
		700	8.77	11.57	
		800	10.03	11.74	
		900	11.28	11.90	
		1000	12.53	12.07	

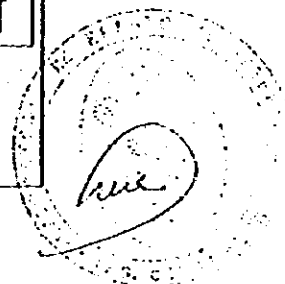
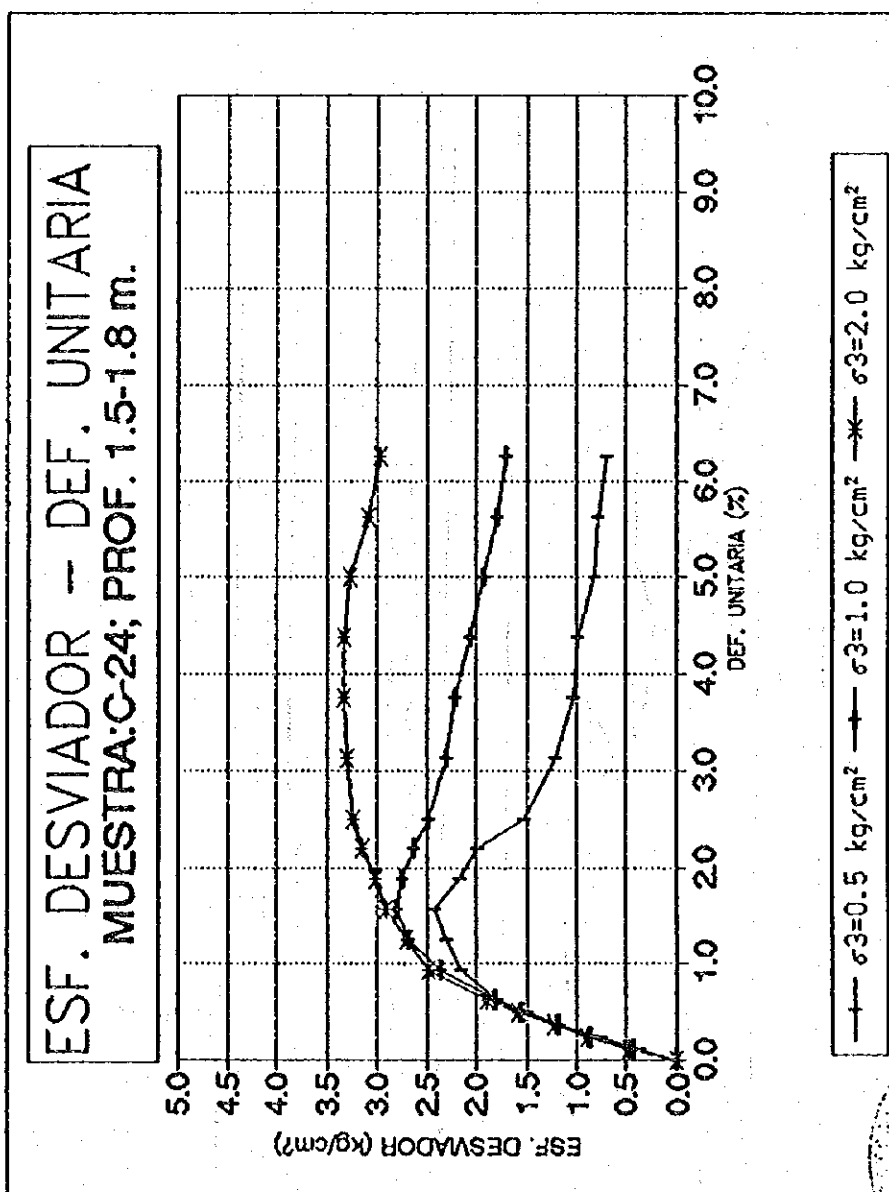
Ing. Germán Luna H.
Jefe de Laboratorio



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M-1

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LABORATORIO DE MECÁNICA DE ROCAS

PROYECTO "TRASVASES MANABI"



C-24
15-1

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