



قائمة الكميات الواردة بالمستخلص جاري ٣

أعمال الجسر الترابي والأعمال الصناعية لمشروع القطر الكهربائي السريع (العين السخنه - العاصمه الاداريه - العلمين - مطروح)
قطاع (العلمين _ فوكه) في المسافه من الكم ٤٦٤+٦٠٠ الى الكم ٤٦٥+٦٠٠ بطول ١ كيلو متر اتجاه الضبعة

رقم البند و بيانه : (١-١) أعمال حفر باستخدام المعدات الميكانيكية لجميع أنواع التربة العادية
عدا التربة الصخرية

تنفيذ : شركة ايجبت ستون للتعدين والتوريدات

مقدار العمل السابق : ٠,٠٠ ٣م

الكمية					بيان الاعمال
الكمية	الابعاد (متر)		الموقع الكيلومتری		مستخلص بيان اعمال
	مساحة المقطع	طول	الى	من	
٤٧٠١٤,٦١	٤٧,٠١٥	١٠٠٠	٤٦٥+٦٠٠	٤٦٤+٦٠٠	القطاع ١
٤٧٠١٤,٦١	اجمالي الكميات خلال فترة المستخلص الحالية (م ^٢)				
٤٧٠١٤,٦١	الاجمالي الكلي (م ^٢)				

مهندس الهيئة

م / إبراهيم الحناوى

مهندسى الاستشاري
مكتب د سعد الجوشي

م / مصطفى نجم

مهندس الاستشاري
مكتب XYZ

م / محمد خليل

مهندس الشركة

م / محمد التاجر



قائمة الكميات الواردة بالمستخلص جاري ٣

أعمال الجسر الترابي والأعمال الصناعية لمشروع القطار الكهربائي السريع (العين السخنة - العاصمة الادارية - العلمين - مطروح) قطاع (العلمين - فوكة) في المسافة من الكم ٤٦٤+٦٠٠ الى الكم ٤٦٥+٦٠٠ بطول ١ كيلو متر اتجاه الضبعة
رقم البند و بيانه : (٣ - ١) أعمال توريد وتشغيل اترية صالحه للردم
تنفيذ : شركة ايجبت ستون للتعدين والتوريدات

مقدار العمل السابق : ٠,٠٠ م ٣

الكمية					بيان الاعمال
الكمية	الابعاد (متر)		الموقع الكيلومري		مستخلص بيان اعمال
	مساحة المقطع	طول	الى	من	
٤٤٣٠٨,٤٥	٤٤,٣٦	١٠٠٠	٤٦٥+٦٠٠	٤٦٤+٦٠٠	القطاع ١
٤٤٣٠٨,٤٥	اجمالي الكميات خلال فترة المستخلص الحالية (م ^٣)				
٤٤٣٠٨,٤٥	الاجمالي الكلي (م ^٣)				

مهندس الهيئة

م / ايمن الحناوي

مهندس الاستشاري
مكتب د سعد الجوشي

م / مصطفى نجم :
الشح

مهندس الاستشاري
مكتب XYZ

م / محمد خليل

مهندس الشركة

م / محمد النجار

م / محمد النجار



قائمة الكميات الواردة بالمستخلص جاري ٣

أعمال الجسر الترابي والأعمال الصناعية لمشروع القطر الكهربائي السريع (العين السخنه – العاصمه الاداريه – العلمين – مطروح) قطاع (العلمين _ فوكه) في المسافه من الكم ٤٦٤+٦٠٠ الى الكم ٤٦٥+٦٠٠ بطول ١ كيلو متر اتجاه الضبعة
رقم البند و بيانه : (١-٣) علاوة تحصيل رسوم الكارته والموازين طبقا للالحه الشركه الوطنيه
تنفيذ : شركة ايجبت ستون للتعبدين والتوريدات

مقدار العمل السابق : ٠,٠٠ ٣م

الكميه					بيان الاعمال
الكمية	الابعاد (متر)		الموقع الكيلومري		مستخلص بيان اعمال
	مساحة المقطع	طول	الى	من	
٤٤٣٠٨,٤٥	٤٤,٣١	١٠٠٠	٤٦٥+٦٠٠	٤٦٤+٦٠٠	القطاع ١
٤٤٣٠٨,٤٥	اجمالي الكميات خلال فترة المستخلص الحالية (م ^٢)				
٤٤٣٠٨,٤٥	الاجمالي الكلي (م ^٢)				

مهندس الهيئة

م / إبراهيم الحناوي

مهندس الاستشاري
مكتب د سعد الجوشي

م / مصطفى نجم

مهندس الاستشاري
مكتب XYZ

م / محمد خليل

مهندس الشركة

م / محمد النجار



قائمة الكميات الواردة بالمستخلص جاري ٢

أعمال الجسر الترابي والأعمال الصناعية لمشروع القطار الكهربائي السريع (العين السخنه – العاصمة الاداريه – العلمين – مطروح) قطاع (العلمين _ فوكة) في المسافه من الكم ٦٠٠+٤٦٤ الى الكم ٦٠٠+٤٦٥ بطول ١ كيلو متر اتجاه الضبعة

رقم البند و بيانه : (٣ - ١) علاوه مسافه النقل ٢١٢ كم

تنفيذ : شركة ايجبت ستون للتعدين والتوريدات

مقدار العمل السابق : ٠,٠٠ ٣م

الكميه					بيان الاعمال
الكمية	الابعاد (متر)		الموقع الكيلومري		مستخلص بيان اعمال
	مساحة المقطع	طول	الى	من	
٤٤٣٠٨,٤٥	٤٤,٣١	١٠٠٠	٤٦٥+٦٠٠	٤٦٤+٦٠٠	القطاع ١
٤٤٣٠٨,٤٥	اجمالي الكميات خلال فترة المستخلص الحالية (م ^٢)				
٤٤٣٠٨,٤٥	الاجمالي الكلي (م ^٢)				

مهندس الهيئة

م / إبراهيم الخناوي

مهندسى الاستشاري
مكتب د سعد الجوشي

م / مصطفى نجم

الشيخ

مهندس الاستشاري
مكتب XYZ

م / محمد خليل

مهندس الشركة

م / محمد التجار

محمد التاجر



المنطقة الخامسة - (غرب الدلتا)

السيد المهندس / رئيس قطاع التنفيذ والمناطق

تحية طيبة.. وبعد،،

بالإحالة إلى مشروع القطار الكهربائي فائق السرعة قطاع (العلمين - فوكة)
نتشرف بأن نرفق لسيادتك طيه المقايسة المعدلة بعد المفاوضة لبنود الاعمال
بتاريخ ١٨-١٢-٢٠٢٣ للقطاع الآتي:

المسلسل	اسم الشركة	من المحطة	إلى المحطة	الإتجاه
١	شركة ايجبت ستون للتعيين والتوريدات	464+600	465+600	الضبعة

برجاء من سيادتك التفضل بالأحاطه والتوجيه بالازم .

وتفضلوا بقبول فائق الاحترام والتقدير،،

رئيس الإدارة المركزية

المنطقة الخامسة- غرب الدلتا

عميد مهندس /
٢٠٢٩
" هاني محمد محمود طه "

مشروع القطار السريع (العلمين - فوكة)

شركة ايجيبت استون - من المحطة 464+600 الى المحطة 465+600

محضر تحديد مسافة نقل

(نقل الاتربة)

انه في يوم الخميس الموافق :- 2022/9/15

- بناء على طلب المقاول شركة ايجيبت استون لتحديد مسافة نقل الاتربة

على طريق وادي النظرون العلمين للمشروع المذكور اعلاه.

تم زيارة المحجر من قبل:-

- | | |
|------------------------------------|---|
| 1- السيد المهندس / ابراهيم الحناوي | ممثل الهيئة العامة للطرق والكباري |
| 2- السيد المهندس / كمال نجيب | مندوب الاستشاري مكتب د. سعد الجيوشى |
| 3- السيد المهندس / محمد خليل | ممثل استشاري المساحة مكتب |
| 4- السيد المهندس / محمد التجار | مندوب شركة ايجيبت استون للمقاولات العام |

(صم)

وتبين ان المحجر على مسافة 212 كم من منتصف قطاع شركة ايجيبت استون للمقاولات العام

احد اثني المحجر $N 30^{\circ} 33' 19.7''$ $E 29^{\circ} 45' 06.7''$

احداثي منتصف القطاع $N 31^{\circ} 02' 04.89''$ $E 28^{\circ} 18' 53.35''$

وعلى ذلك تم توقيع،،



4- محمد النجار

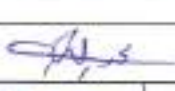
3- محمد خليل

2- Kamel

1-

RECEIPT of NOTIFICATION - Minimum Notice Period not less than 24 Hours

The Work described below will be complete and ready for inspection at planned time shown

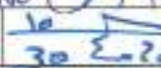
Contractor Company	Egypt Stone Co. for contracting and roads paving				Designer Company*				SGAC			
Issued by Contractor	Name	Sign	Date	Time								
			22/10/2022	08:00								
Received by ER	Name	Sign	Date	Time								
				C1	C2	C3	DO	MM	YY	HH	MM	
				465	E.W	C.S						
CODE - 1	S1 to S21 Station Reference		D1 to S3 Depot Reference				Kp XXX Noto For Kilometer point only Start Km is used					
CODE - 2	Work Activity											
CODE - 3	Sub Element of Activity											

EXPLANATION OF WORK TO BE INSPECTED		
Description	Element	Item
FERMA	UPPER EMBANKMENT	FROM (465+400) TO (465+600)

INSPECTION DETAILS The Following will be ready at the Planned Inspection Time	
Planned Inspection Date	Planned Inspection Time
22/10/2022	08:30

COMPLIANCE EVIDENCE Must be included as appropriate			
Checklist Attached ☐	Test Results Attached ☐	Calibration Attached ☐	Other as indicated ☐
Drawing Reference	ITP Reference		MS Reference

Comments by:  Civil:  Material: 	Comments by:  Survey: 
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INSPECTION RESULT					Approval Status	Please Tick if
Organisation	Name	Sign	Date	Time	A-AWC-R	Not Attend
Contractor	W. El-Sher		22/10/2022	09:00	A	
QA/QC*	Kamel		33/10/22		A	
GARB**	M. Negm		23/10/22		A	
Comments by ER	Approved as noted there are not approved cross section. The Survey of P.S open on profile No (9) The contractor's was implemented					
Employers Representative	M.A		30/10/2022		AWC	

* Designer

** Alignment. Bridges: Culvert Only



✓



Station	465+400	465+420	465+440	465+460	465+480	465+500	465+520	465+540	465+560	465+580	465+600
Design	54.186	54.144	54.102	54.06	54.018	53.976	53.934	53.892	53.85	53.808	53.766
Form level	53.286	53.244	53.202	53.16	53.118	53.076	53.034	52.992	52.95	52.908	52.866
BED CUT LEVEL	50.911	50.969	51.15	51.233	51.266	51.101	51.134	51.044	50.932	51.045	51.268
different	2.38	2.25	2.05	1.91	1.85	1.98	1.90	1.95	2.02	1.86	1.60
0	53.286	53.244	53.202	53.16	53.118	53.076	53.034	52.992	52.95	52.908	52.866
0.25	53.036	52.994	52.952	52.91	52.868	52.826	52.784	52.742	52.7	52.658	52.616
0.5	52.786	52.744	52.702	52.66	52.618	52.576	52.534	52.492	52.45	52.408	52.366
0.75	52.536	52.494	52.452	52.41	52.368	52.326	52.284	52.242	52.2	52.158	52.116
1	52.286	52.244	52.202	52.16	52.118	52.076	52.034	51.992	51.95	51.908	51.866
1.25	52.036	51.994	51.952	51.91	51.868	51.826	51.784	51.742	51.7	51.658	51.616
1.5	51.786	51.744	51.702	51.66	51.618	51.576	51.534	51.492	51.45	51.408	51.366
1.75	51.536	51.494	51.452	51.41	51.368	51.326	51.284	51.242	51.2	51.158	
2	51.286	51.244	51.202						50.95		



Handwritten signature.

Handwritten signature.

Handwritten text: 'مشروع الطريق الجديد' (New road project) and 'طريق النقل' (Transport road).

COORDINATES AND LEVELS FROM STATION 464+600 TO 465+600

Station	W-L	CATCH - L		CENTER-LINE		CATCH - R		W-R
		N	E	N	E	N	E	
465+200.00	13.82	927,778.42	358,466.25	927,791.72	358,468.24	927,801.55	358,469.72	10.32
465+220.00	13.82	927,781.39	358,446.47	927,794.68	358,448.47	927,804.51	358,449.94	10.32
465+240.00	13.82	927,784.35	358,426.69	927,797.64	358,428.69	927,807.47	358,430.16	10.32
465+260.00	13.82	927,787.32	358,406.92	927,800.61	358,408.91	927,810.44	358,410.38	10.32
465+280.00	13.82	927,790.28	358,387.14	927,803.57	358,389.13	927,813.40	358,390.60	10.32
465+300.00	13.82	927,793.24	358,367.36	927,806.54	358,369.35	927,816.37	358,370.82	10.32
465+320.00	13.82	927,796.21	358,347.58	927,809.50	358,349.57	927,819.33	358,351.04	10.32
465+340.00	13.82	927,799.17	358,327.80	927,812.46	358,329.79	927,822.29	358,331.26	10.32
465+360.00	13.82	927,802.14	358,308.02	927,815.43	358,310.01	927,825.26	358,311.48	10.32
465+380.00	13.82	927,805.10	358,288.24	927,818.39	358,290.23	927,828.22	358,291.71	10.32
465+400.00	13.82	927,808.06	358,268.46	927,821.36	358,270.45	927,831.19	358,271.93	10.32



مشروع القطار السريع

مهندس

15/11

SYSTRA



مركز الإستشارات الهندسية
للنقل والطارات والطرق
(خبراء دوليون)
دكتور / محمد الجيوشي



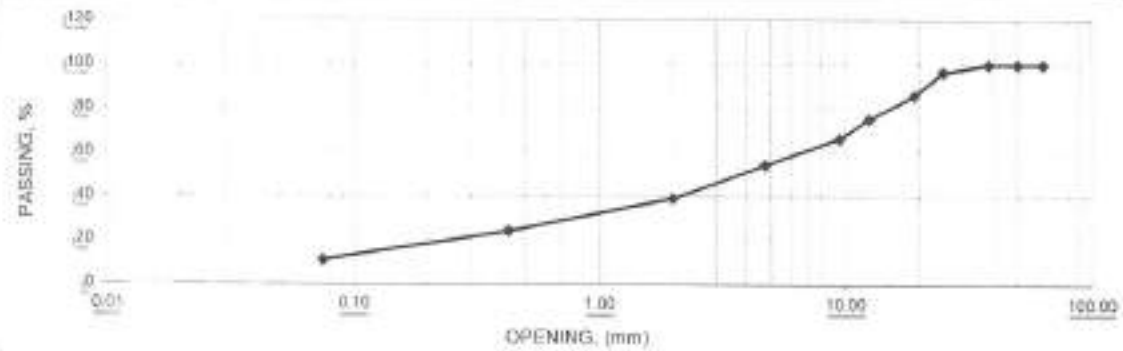
مشروع القطار السريع (العظمين - فوكه) قطاع د / سعد الجيوشي مكتب سجاك للإستشارات الهندسية

Company:	ايجيبت ستون للتعبين و التوريدات	Sample No:	
description:	تربة ردم المصرية	Sample Date :	2022-10-20
Station Represented : 465+400	to 465+600	Perma	Report Date: 2022-10-20

(ASTM:D-424//AASHTO:T-90-80)

Source of Tested Material

Sieve No.	2.5 in.	2.0 in.	1.5 in.	1.0 in.	3/4 in.	1/2 in.	3/8 in.	No.4	No.10	No.40	No.200
Opening (mm)	63.50	50.00	38.00	25.00	19.00	12.50	9.50	4.75	2.00	0.425	0.075
Passing, %	100.0	100.0	100.0	96.4	85.7	74.9	66.2	54.2	39.2	24.1	10.8



Atterberg Limits	L.L.	0.0	Max. 35	P.L.	0	P.I.	0.0	(Max. 10)
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SOIL CLASSIFICATION :

A - 1 - A

GARP Consultant Engineer's Comments :

Lab Contributor Eng.:-



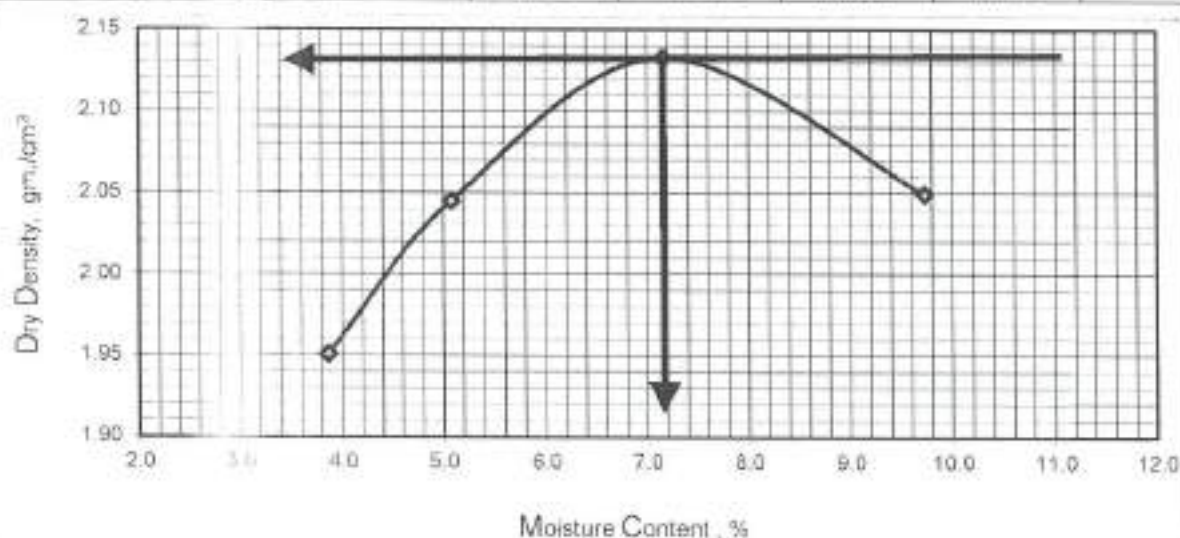
مشروع القطار السريع (العلمين - فوكه) قطاع د / سعد الجيوشي مكتب سجاك للاستشارات الهندسية

Company:	إيجيبت ستون للتعبدين والتوريدات	Sample No:	
Description :	تربة ردم المصرية	Sample Date :	2022-10-20
ation Represente	465+400 to 465+600	Report Date:	2022-10-21

Laboratory Compaction Characteristics (Proctor) of Soil Sample

ASTM D 1557 - Method "C" 6 in. mold, 5 equal layers, each compacted by 56 blows
Using 10 lb hammer dropped from 18 in. height, Producing a compactive effort of 56000 ft-lbf/m³

Weight of PROCTOR Mould, gm	5590	Volume of PROCTOR Mould, cm ³			2120
Point No.	1	2	3	4	5
Weight of Soil + Mould, gm	9885	10145	10435	10357	
Wet Density gm/cm ³	2.026	2.149	2.285	2.249	
Weight of Wet Soil Portion, gm	107.6	115.9	182.6	143.3	
Weight after Drying, gm	103.6	110.3	170.4	130.6	
Moisture Content, %	3.9	5.1	7.2	9.7	
Dry Density gm/cm ³	1.951	2.045	2.133	2.049	

Max. Dry Density= 2.133 t/m³

opti.moisture content= 7.2 %

CONSULTANT COMMENTS

Lab Contract No. Eng.:-

SGAC Consultant Eng.



مركز الاستشارات الهندسية
للنقل والطرق والمطارات
د / سعد محمد الجيوشي
مشروع القطار السريع

SYSTIA



مركز الاستشارات الهندسية
للطرق والمطارات والموانئ
(جازمينا)
مختبر سدا الجيوشى



مشروع القطار السريع (العلمين - فوكه) قطاع د / سدا الجيوشى مكتب سدا للاستشارات الهندسية

Activity : Earth Work

نتائج اختبارات المعمل

Date 2022-10-23

Density and Unit Weight of Soil in Place by the Sand-Cone Method – ASTM D 1556

Company:	ايجيبت ستون	Layer NO:	
Description :	ترية ردم المصرية	Layer Thickness:	0.25
Station Represented :	465+400 to 465+600	Sample Date :	2022-10-22

Modified Proctor Testing Results

Max. Dry Density, gm/cm ³	Optimum Moisture Content, %	Degree of Compaction Required, %	Bulk Density of Specified Sand, gm/cm ³
2.133	7.2	95%	1.410

Compaction Testing Results & Calculations

Stations	465+425	465+450	465+475	465+500	465+525	465+550	465+575	465+600
Hole No.	1	2	3	4	5	6	7	8
Wt. of Sand before Test, gm	11199	11556	11241	11220	10436	10330	10372	10137
Wt. of Sand After Test, gm	6332	6754	6391	6389	5536	5230	5715	5451
Wt. of Sand in Cone + hole, gm	4867	4802	4850	4831	4900	5100	4657	4686
Wt. of Sand in Cone	2072	2073	2074	2075	2076	2077	2078	2079
Wt. of Sand at hole, gm	2795	2729	2776	2756	2824	3023	2579	2607
Volume of the Hole, cm ³	1982	1935	1969	1955	2003	2144	1829	1849
Wt. of Soil from Hole, gm	4505	4410	4420	4405	4540	4795	4085	4184
Bulk Density of Soil, gm/cm ³	2.273	2.279	2.245	2.254	2.267	2.237	2.233	2.263
Moisture Content, %	7.4	7.3	7.3	7.3	7.4	7.3	7.3	7.4
Dry Density, gm/cm ³	2.116	2.124	2.092	2.100	2.111	2.084	2.081	2.107
Compaction, (%)	99.2%	99.6%	98.1%	98.5%	99.0%	97.7%	97.6%	98.8%

Acceptance Criteria

Comply



Not Comply



CONSULTANT COMMENTS

Lab Contractor Eng.:-

مركز الاستشارات الهندسية
للطرق والمطارات
مختبر سدا الجيوشى
مشروع القطار السريع
SGAC Consultant Eng.:-

Company Name : Egypt Stone
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (464+600) : (465+600)
Type of sample : Soil Replacement (Embankment)
Delivery Date : 14/10/2022
Reporting Date : 20/10/2022
Reporting No. : 63
Sample No. : 01

Dear Gentleman,

Attached here with the Soil Replacement delivered on 14/10/2022

Materials test

1. Sieve analysis according to ASTM D-422.
2. Material finer than sieve No. 200 according to ASTM D-1140.
3. Liquid limits and plasticity index of soil according to ASTM D-4318.
4. Soil classification according to Project Specs.
5. Proctor test according to ASTM D-1557.
6. CBR according to ASTM D-1883.

Note: The sample was brought by the client to our laboratory and the laboratory is not responsible for the way it is taken

Signature

Company Name : Egypt Stone
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (464+600) : (465+600)
Type of sample : Soil Replacement (Embankment)
Delivery Date : 14/10/2022
Reporting Date : 20/10/2022
Reporting No. : 63
Sample No. : 01

Results of Sieve Analysis According to ASTM D-422.

Sieve Size (mm)	Passing %
50	100
37.5	95.3
25	87.4
19	81.7
12.50	73.6
9.50	55.2
4.75	35.9
2.36	33.7
2.00	32.2
1.18	30.7
0.600	25.8
0.425	21.0
0.300	18.6
0.150	13.2

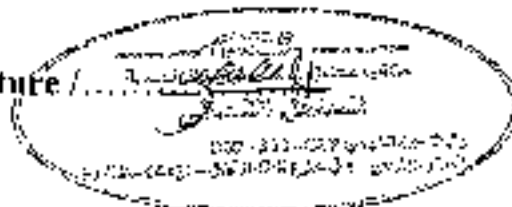
Signature

Company Name : Egypt Stone
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (464+600) : (465+600)
Type of sample : Soil Replacement (Embankment)
Delivery Date : 14/10/2022
Reporting Date : 20/10/2022
Reporting No. : 63
Sample No. : 01

**Materials finer than 75 μ m (no.200) sieve
by washing ASTM D-1140.**

Test	Results (%)
Percentage of material finer than Sieve Size 75 μ m (No.200)	7.5

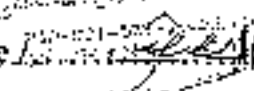
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Company Name : Egypt Stone
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (464+600) : (465+600)
Type of sample : Soil Replacement (Embankment)
Delivery Date : 14/10/2022
Reporting Date : 20/10/2022
Reporting No. : 63
Sample No. : 01

**Results of liquid limit and plasticity index
of soils according to ASTM D-4318**

Test	Results (%)
Liquid Limit	NP
Plastic Limit	NP
Plasticity Index	NP

Signature 

Company Name : Egypt Stone
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (464+600) : (465+600)
Type of sample : Soil Replacement (Embankment)
Delivery Date : 14/10/2022
Reporting Date : 20/10/2022
Reporting No. : 63
Sample No. : 01

Soil Classification According to Project Specs (Embankment)

TEST	Results (%)	Limits according Projects Specs	
• Group Classification	(A-1-a)	(A-1-a)	(A-1-b)
2.00 mm (No.10).	32.2	Max 50 %	-----
0.425 mm (No. 40).	21.0	Max 30 %	Max 50 %
0.075 mm (No. 200).	7.5	Max 15 %	Max 15 %
Characteristics of fraction passing 0.425 mm (No.40)			
Liquid Limit	NP	-----	-----
Plasticity index	NP	Max 6 %	Max 6 %

The test results are (☒ Comply - ☐ Not Comply) with specifications limits

Signature /

5

Company Name : Egypt Stone
 Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
 Location : St. (464+600) : (465+600)
 Type of sample : Soil Replacement (Embankment)
 Delivery Date : 14/10/2022
 Reporting Date : 20/10/2022
 Reporting No. : 63
 Sample No. : 01

Test Results of California Bearing Ratio on Base Materials
ASTM D 1883

penetration		stress on piston (Mpa)
mm	Inch	
0.64	0.025	2.03
1.27	0.050	2.36
1.91	0.075	2.59
2.54	0.100	2.92
3.18	0.125	3.21
3.81	0.150	3.48
4.45	0.175	3.63
5.08	0.200	3.78
5.71	0.225	3.99
6.35	0.250	4.10

CBR Result	Stress (Mpa)		CRR %
At 0.1 inch (2.54 mm) penetration	St. Value	Sample results	42.26
	6.90	2.92	

Notes:

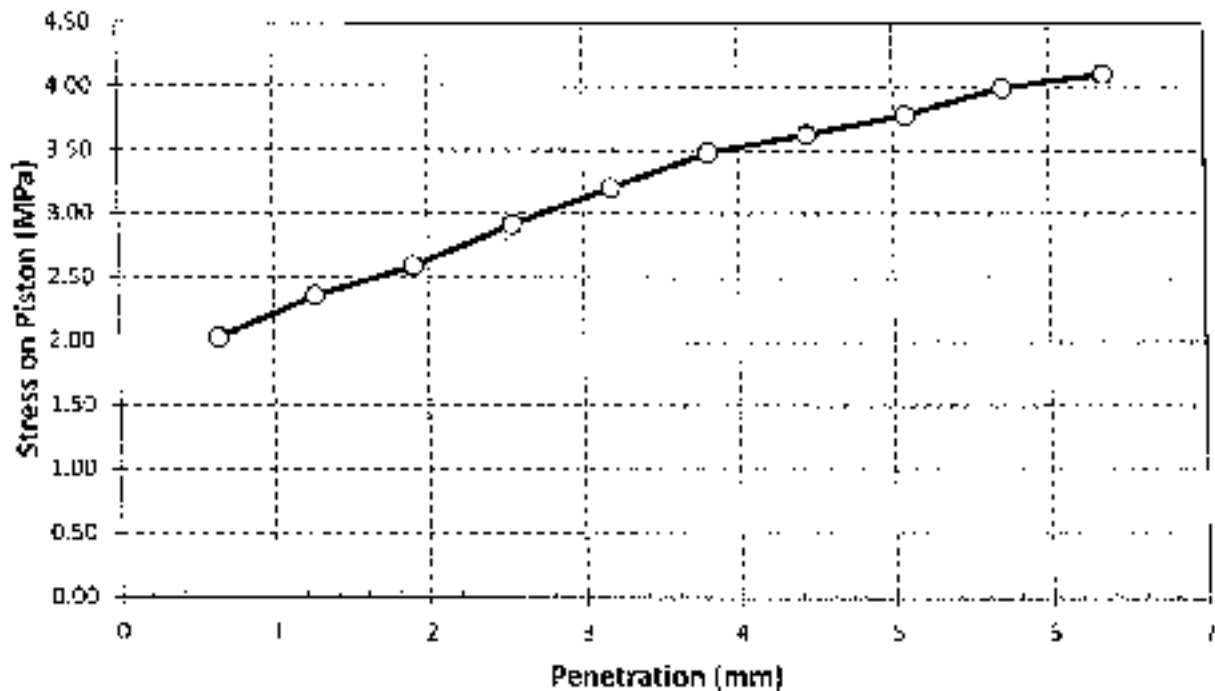
- 1- Attached graph shows penetration resistance versus penetration magnitude.
- 2- The sample was compacted to dry density of 2.13(gm /cm³)
- 3- At 8.1 % optimum water content.
- 4- Surcharge load 4.50-Kgs

Signature /

Company Name : Egypt Stone
Project : Electric Express Train, from Al Ain Sokhna to Marsa Matrouh
Location : St. (464÷600) ; (465÷600)
Type of sample : Soil Replacement (Embankment)
Delivery Date : 14/10/2022
Reporting Date : 20/10/2022
Reporting No. : 63
Sample No. : 01

Load Penetration Curve of CBR Test

ASTM D-1883



Signature

Company : Egypt Stone

Project : Electric Express Train, Al Ain Sokhna to Marsa Matrouh Priority Sector (6)
- Alamein to Foka
Subject : Determine the deformation and strength characteristics of soil by the plate loading test according specifications DIN 18134:2012 04 and project requirements
Test Location : Station (465+100 to 465+600)
Test Date : 17/11/2022
Report Date : 19/11/2022
Type of soil : A-1-a
Test level : (Fema)
Report No : 298/307

Dear Gentleman,

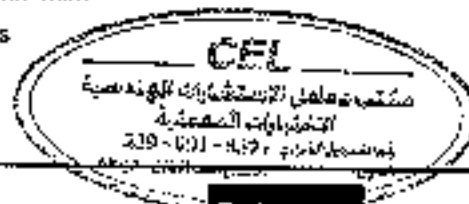
According to the above mentioned subject the test performed as follows .

Apparatus

1. Loading plates consists of two plates with 600 mm and 300 mm diameter
2. The thickness of plates 30 mm
3. Dial gauges with accuracy 0.01 mm to measuring the settlement
4. Steel straightedges with magnetic supports to fixed the dial gauges
5. Hydraulic jack with pump to transfer reactive loads to the loading plates
6. Dial indicator measuring device with scale capacity 700 Bar (Enerbar)
7. Reaction loading system by roller compactor with weight approximately 15 ton
8. Calibration certificates are attached

Test Procedure

1. Clean the ground on test area to the required level with undisturbed soil
2. Install loading plates 600 mm and 300 mm diameter, hydraulic jack and 3 dial gauges
3. Prior to starting the test applied preloading about 30 seconds.
4. The strain gauge and the dial gauge shall be set to zero
5. For a 600 mm loading plate, the limit values are 2.5 kg/cm²
6. The load shall be applied in six stages, in approximately equal increments, until the required maximum nominal stress is reached.
7. Each change in load (from stage to stage) shall be completed within one minute
8. The load shall be released in 3 stages, to 50 % , 25 % , and approximately 2 % of the maximum load
9. Following unloading, a further (2nd) loading cycle shall be carried out, in which, however, the load is to be increased only to the penultimate stage of the first cycle (so that the full load is not reached)
10. At each stage the load shall be maintained until the rate of settlement of the plate becomes less than 0.02 mm/min.
11. Remove the loads



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Report

1. Evaluation and representation of results
2. Load Settlement curve
3. The test report content the following:-
 - location of test site - Dimension of loading plate
 - Measuring device used - Type of soil
 - Type of Bedding material below the plate -Weathering condition
 - Time and date of measurements - Unusual observation made during test
 - Dial gauge reading and corresponding normal stress - Loading-settlement curve
 - Description of the soil condition below the plate after testing

Report

- Type of layer : (Forma).
- Job requirement : $E_v > 400 \text{ Kg/cm}^2$ (40 MPa).

Descriptions	
- Type of bedding material below the plate	Natural Soil
- Weather condition	Sunny
- Plate Diameter (mm)	600
- date of measurement	16/11/2022
- Unusual observation made during test	NO
- Description of the soil conditions below the plate after testing	No deformation

Evaluation and representation of results

Verification of Results						
Test No.	Station		First Cycle	Second Cycle	Ev/Ec Ratio	Remarks
	From	To	Load (kg/cm ²)	Load (kg/cm ²)		
1	465+100	465+150	672	1285	1.9	Ok
2	465+150	465+200	333	750	2.3	---
3	465+200	465+250	517	1286	2.5	Ok
4	465+250	465+300	563	1125	2.0	Ok
5	465+300	465+350	1125	1250	1.1	Ok
6	465+350	465+400	789	1500	1.9	Ok
7	465+400	465+450	1000	1286	1.3	Ok
8	465+450	465+500	1250	2368	1.9	Ok
9	465+500	465+550	1071	1552	1.4	Ok
10	465+550	465+600	563	1408	2.5	Ok

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Company Name : Egypt Stone company
Project : Elcalis Express Train from 28 Km Sukhna to Matruh Matruh Governorate Sector (B) - Abu el el to Foka
Test Date : 17/11/2022
report date : 18/11/2022
Location : Station 465+400 to 465+480
Test No. : 07

Nonrepetitive Static Plate Load Tests of Soils

DIN 18134

Data sheet

Loading Stage (1)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00
1	0.42	19.92	0.18	19.76	0.24	19.82	0.18	0.20
2	0.83	19.59	0.41	19.53	0.47	19.60	0.38	0.41
3	1.25	19.41	0.59	19.36	0.64	19.46	0.54	0.56
4	1.67	19.21	0.76	19.17	0.83	19.23	0.77	0.79
5	2.08	19.12	0.88	18.98	1.02	19.04	0.95	0.95
6	2.50	18.97	1.03	18.75	1.25	18.86	1.14	1.14

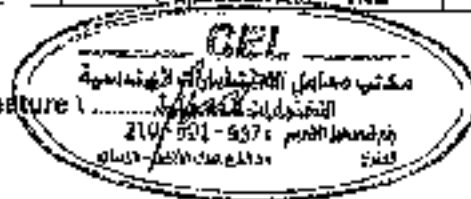
Unloading Stage (1)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	2.50	18.97	1.03	18.75	1.25	18.86	1.14	1.14
2	1.25	19.06	0.94	18.83	1.17	18.92	1.08	1.06
3	0.825	19.19	0.81	18.96	1.04	19.14	0.86	0.90
4	0.41	19.34	0.66	19.19	0.82	19.34	0.66	0.71

Loading Stage (2)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.42	19.22	0.78	19.09	0.91	19.21	0.79	0.93
1	0.83	19.07	0.91	18.91	1.06	19.07	0.93	0.97
2	1.25	18.94	1.08	18.78	1.22	18.91	1.08	1.12
3	1.67	18.81	1.19	18.57	1.43	18.78	1.22	1.28
4	2.08	18.68	1.32	18.54	1.56	18.65	1.35	1.44

Signature



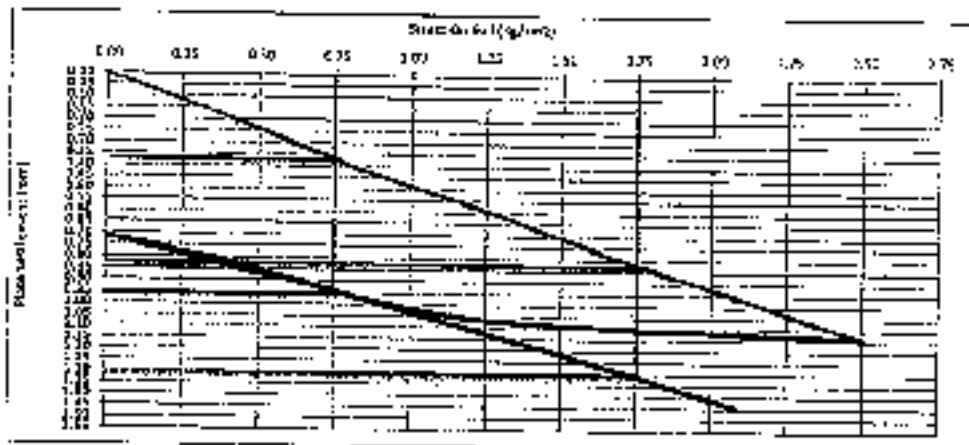
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Company Name : Egypt Stone Company
 Project : Electric Express Train from Al Ahl Sakhna to Maissa Metro Station Priority Section (B) - Almazaya Fara
 Test Date : 17/11/2022
 report date : 18/11/2022
 Location : Station 465+400 to 465+450
 Test No. : 07

Nondestructive Static Plate Load Tests of Soils DIN 18134



Loading (t)	0	1	2	3	4	5	6
Stage (Kg)	0	2186.92	2345.6	3032.5	4719.4	5878.1	7055
Stress (Kg/cm²)	0.00	0.42	0.52	1.25	1.67	2.08	2.92
Settlement (mm)	0.00	0.20	0.41	0.59	0.79	0.85	1.14

Unloading (t)	1	2	3	4
Stage (Kg)	7065	3000	1798	0
Stress (Kg/cm²)	2.50	1.25	0.625	0.0
Settlement (mm)	1.14	1.00	0.80	0.74

D (mm) = 400	S ₁ (mm) = 0.57	S ₂ (mm) = 0.82	ΔS = 0.25
Ev (Kg/cm²) = 9.75 (average)		1000	

Loading (t)	0	1	2	3	4	5
Stage (Kg)	0	2186.92	2345.6	3032.5	4719.4	5878.1
Stress (Kg/cm²)	0.00	0.42	0.52	1.25	1.67	2.08
Settlement (mm)	0.00	0.53	0.97	1.12	1.28	1.44

Ev2/Ev1 =	1.2
-----------	-----

D (mm) = 400	S ₁ (mm) = 0.93	S ₂ (mm) = 1.10	ΔS = 0.25
Ev2 (Kg/cm²) = 11.75 (average)		1265	



Ev1 = Modulus of deformation during the loading stage.
 Ev2 = Modulus of deformation during the reloading stage.
 D = Plate diameter (mm)
 S₁ = The distance between 0.5 and 0.7 from the maximum loading (stress) (kg/cm²)
 S₂ = Difference in settlement corresponding to 0.5 and 0.7 from the maximum loading (mm)

Company Name : Egypt Stone company
 Project : Station Express Track, from Al Ain, Sukhna to Marsa Matruh, Priority Sector 10 - Alexandria to Cairo
 Test Date : 17/11/2022
 report date : 19/11/2022
 Location : Station 465+450 to 465+500
 Test No. : 05

Nonrepetitive Static Plate Load Tests of Soils
DIN 18134

Data sheet

Loading Stage (1)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	23.00	0.00	23.00	0.00	23.00	0.00	0.00
1	0.42	19.75	0.25	19.84	0.16	19.88	0.12	0.18
2	0.83	19.58	0.42	19.71	0.29	19.76	0.24	0.32
3	1.25	19.41	0.59	19.54	0.46	19.62	0.38	0.48
4	1.67	19.23	0.77	19.42	0.58	19.50	0.50	0.62
5	2.08	19.13	0.87	19.35	0.65	19.41	0.59	0.70
6	2.50	19.00	1.00	19.23	0.80	19.39	0.71	0.84

Unloading Stage (1)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	2.50	19.03	1.00	19.20	0.80	19.29	0.73	0.84
2	1.25	19.05	0.94	19.23	0.72	19.35	0.65	0.77
3	0.625	19.19	0.81	19.42	0.59	19.45	0.57	0.68
4	0.31	19.54	0.48	19.68	0.32	19.55	0.44	0.41

Loading Stage (2)

Loading	Stress Kg/cm ²	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.42	19.42	0.58	19.55	0.41	19.48	0.52	0.50
1	0.83	19.34	0.87	19.51	0.49	19.39	0.61	0.59
2	1.25	19.21	0.79	19.41	0.59	19.48	0.52	0.63
3	1.67	19.12	0.88	19.30	0.70	19.35	0.65	0.74
4	2.08	19.04	0.95	19.16	0.84	19.27	0.73	0.84

Signature



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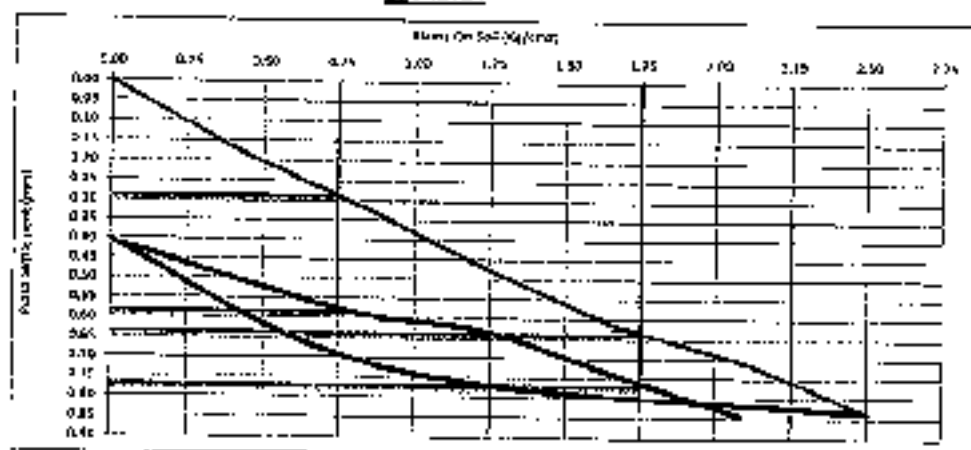
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Company Name : Egypt Stone company
Project : Electric Express Train, from El Ain Sokhna to Marsa Matruh Priority Sector (5) - Aswan to Foka
Test Date : 17/11/2022
Report Date : 17/11/2022
Location : Station 465+456 to 489+500
Test No. : 08

Nonrepulsive Static Plate Load Tests of Soils QIN 78134



Loading (t)	0	1	2	3	4	5	6
Stress (Kg/cm ²)	0.00	0.42	0.83	1.25	1.67	2.09	2.52
Settlement (mm)	0.00	0.12	0.30	0.48	0.62	0.70	0.84

UnLoading (t)	1	2	3	4
Stress (Kg/cm ²)	2.09	1.25	0.83	0.42
Settlement (mm)	0.84	0.77	0.66	0.41

D (mm) = 603	S1 (mm) = 0.38	S2 (mm) = 0.77	ΔS = 0.39
E _{s1} (kg/cm ²) = (0.75 × D ³) / (ΔS × 100)	1204		

Loading (t)	0	1	2	3	4	5
Stress (Kg/cm ²)	0.01	0.42	0.83	1.25	1.67	2.09
Settlement (mm)	0.41	0.50	0.59	0.63	0.74	0.84

$$E_{s2}/E_{s1} = 1.9$$

D (mm) = 603	S1 (mm) = 0.38	S2 (mm) = 0.77	ΔS = 0.39
E _{s2} (kg/cm ²) = (0.75 × D ³) / (ΔS × 100)	2348		



E_{s1} = Modulus of deformation during the loading stage.
E_{s2} = Modulus of deformation during the unloading stage.
D = Plate diameter (mm)
D₁ = The distance between 0.3 and 0.7 from the maximum loading (mm) (mm)
D₂ = Distance in settlement corresponding to 0.3 and 0.7 from the maximum loading (mm)

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Company Name : Egypt Stone company
 Project : Electric Express Train from A. Ain Helwan to Marsa Matruh Priority Section (E) - 40km to Foka
 Test Date : 17/11/2022
 report date : 19/11/2022
 Location : Station 465+500 to 465+550
 Test No. : 02

Nonrepetitive Static Plate Load Tests of Soils

DIN 10134

Data sheet

Loading Stage (1)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.00	20.00	0.00	20.00	0.00	20.00	0.00	0.00
1	0.42	19.80	0.20	19.63	0.17	19.86	0.14	0.17
2	0.83	19.52	0.48	19.66	0.34	19.72	0.28	0.37
3	1.25	19.28	0.72	19.54	0.46	19.60	0.40	0.53
4	1.67	19.07	0.93	19.33	0.67	19.46	0.54	0.71
5	2.08	18.94	1.09	19.21	0.79	19.31	0.69	0.86
6	2.50	18.79	1.27	19.19	0.87	19.18	0.82	0.99

Unloading Stage (1)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
1	2.50	18.79	1.27	19.19	0.87	19.19	0.82	0.99
2	1.25	18.86	1.14	19.25	0.75	19.25	0.74	0.86
3	0.825	19.10	0.90	19.41	0.59	19.35	0.65	0.71
4	0.41	19.62	0.38	19.74	0.26	19.64	0.36	0.33

Loading Stage (2)

Loading	Stress Kg/cm2	Dial 1	Settlement mm	Dial 2	Settlement mm	Dial 3	Settlement mm	Average
0	0.42	19.45	0.55	19.65	0.35	19.59	0.42	0.44
1	0.83	19.20	0.76	19.54	0.46	19.45	0.54	0.59
2	1.25	19.11	0.89	19.43	0.57	19.35	0.67	0.71
3	1.67	18.97	1.03	19.37	0.68	19.20	0.80	0.84
4	2.08	18.89	1.12	19.31	0.79	19.07	0.92	0.95

Signature



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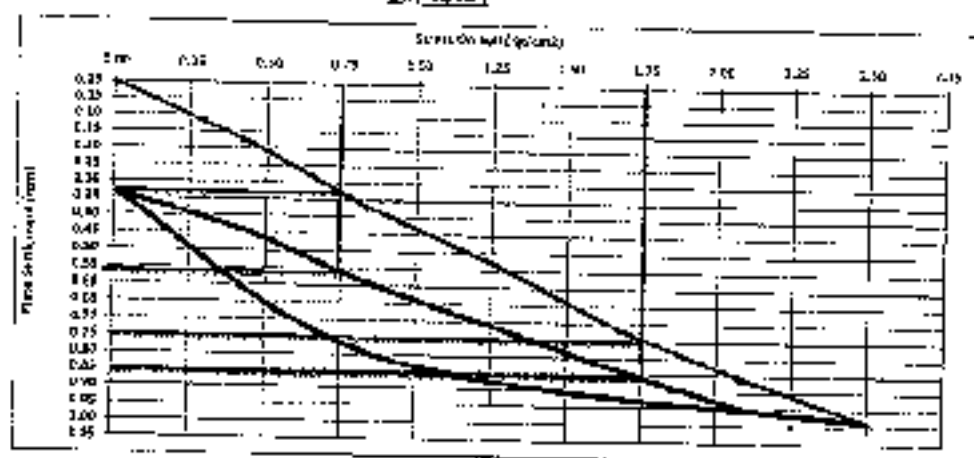
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Company Name : Egypt Stone company
 Project : Elkhadi Express Train from Al Ain Sokhna to Marks Metro in Priority Sector (at - Alameda to Fuka
 Test Date : 17/11/2022
 Report No. : 15/15/2022
 Location : Station 405+800 to 455+660
 Test No. : 08

Nonrepetitive Static Plate Load Tests of Soils DIN 18134



Loading (t)	0	1	2	3	4	5	6
Stage (Kg)	0	1186.92	2345.8	3512.6	4719.4	5878.1	7055
Stress (Kg/cm ²)	0.00	0.42	0.83	1.25	1.67	2.08	2.50
Settlement (mm)	0.00	0.17	0.37	0.53	0.71	0.86	0.93

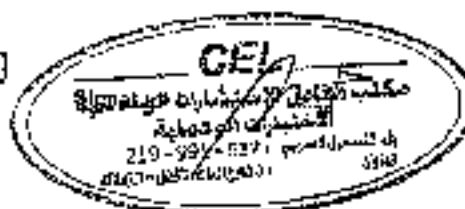
Unloading (t)	1	2	3	4
Stage (Kg)	7055	5878.1	4719.4	3512.6
Stress (Kg/cm ²)	2.50	2.08	1.67	1.25
Settlement (mm)	0.55	0.48	0.41	0.33

D (mm) = 400	S ₁ (mm) = 0.33	S ₂ (mm) = 0.15	ΔS = 0.18
Ev1 (Kg/cm ²) = 10.75*0.42/0.17			2674

Loading (2)	0	1	2	3	4	5
Stage (Kg)	0	1186.92	2345.8	3512.6	4719.4	5878.1
Stress (Kg/cm ²)	0.00	0.42	0.83	1.25	1.67	2.08
Settlement (mm)	0.00	0.44	0.59	0.71	0.84	0.95

Ev2 = 1.4

D (mm) = 400	S ₁ (mm) = 0.45	S ₂ (mm) = 0.35	ΔS = 0.10
Ev2 (Kg/cm ²) = 10.75*0.45/0.10			4838



Ev1 = Modulus of deformation during the loading stage.
 Ev2 = Modulus of deformation during the unloading stage.
 D = Plate diameter (mm)

S₁ = 12.5 difference between 0.3 and 0.7 from the maximum loading (small kg/cm²)
 S₂ = 25 difference in settlements corresponding to 0.3 and 0.7 from the maximum loading (mm)

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مكتب معامل الاستشارات الهندسية

Company Name : Egypt Stone company
Project : Electric Express Train, from El Ain Sakhel to Merut - Mubarak Poultry Rinder (B) - Almisra to Fuen
Test Date : 17/11/2022
report date : 19/11/2022
Location : Station 465+550 to 465+600
Test No. : 10

Nonrepetitive Static Plate Load Tests of Soils DIN 18194

Data sheet

Loading Stage (1)

Loading	Stress Kg/cm ²	Dial 1	Settlement	Dial 2	Settlement	Dial 3	Settlement	Average
			mm		mm		mm	
0	0.00	23.00	0.00	23.00	0.00	23.00	0.00	0.00
1	0.42	19.61	0.18	19.79	0.21	19.69	0.31	0.24
2	0.83	19.51	0.49	19.46	0.54	19.70	0.60	0.61
3	1.25	19.11	0.89	19.10	0.90	18.78	1.22	1.00
4	1.67	18.66	1.14	18.82	1.18	18.46	1.54	1.29
5	2.09	18.54	1.46	18.52	1.48	18.20	1.80	1.58
6	2.50	18.31	1.69	18.33	1.67	17.92	2.08	1.81

Unloading Stage (1)

Loading	Stress Kg/cm ²	Dial 1	Settlement	Dial 2	Settlement	Dial 3	Settlement	Average
			mm		mm		mm	
1	2.50	18.51	1.69	18.34	1.67	17.92	2.08	1.81
2	1.25	18.42	1.58	18.45	1.54	18.01	1.95	1.69
3	0.825	18.60	1.40	18.63	1.37	18.24	1.75	1.51
4	0.0*	18.95	1.05	18.96	1.04	18.68	1.32	1.14

Loading Stage (2)

Loading	Stress Kg/cm ²	Dial 1	Settlement	Dial 2	Settlement	Dial 3	Settlement	Average
			mm		mm		mm	
0	0.42	18.85	1.14	18.97	1.13	18.55	1.44	1.24
1	0.83	18.71	1.29	18.74	1.27	18.56	1.64	1.40
2	1.25	18.55	1.42	18.51	1.39	18.21	1.79	1.55
3	1.67	18.47	1.53	18.50	1.50	18.08	1.82	1.65
4	2.09	18.38	1.62	18.39	1.61	17.98	2.02	1.75

Signature



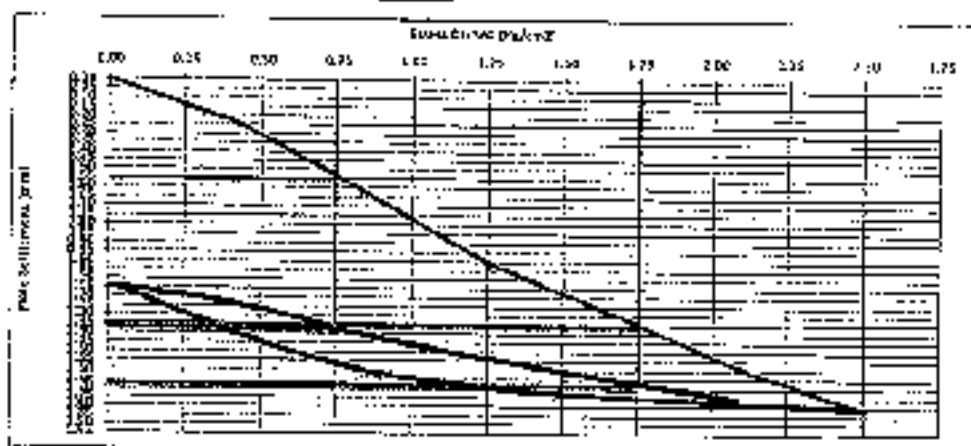
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Company Name : Egypt Stone Company
 Project : Electric Express Train, from Al Ain Sefhna to Marsa Matruh Prior by Sector 181 - Alamein to Foka
 Test Date : 17/11/2022
 Report Date : 18/11/2022
 Location : Station 485+550 to 485+000
 Test No. : 10

Nonrepertive Static Plate Load Tests of Soils DIN 18134



Loading (1)	0	1	2	3	4	5	6
Stage (Kg)	0	1186.92	2373.84	3560.76	4747.68	5934.60	7121.52
Stress (Kg/cm²)	0.00	0.42	0.83	1.25	1.67	2.08	2.50
Settlement (mm)	0.00	0.24	0.61	1.03	1.29	1.56	1.81

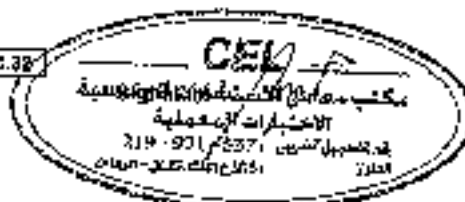
Unloading (1)	1	2	3	4
Stage (Kg)	7065	3532.5	1766.25	0
Stress (Kg/cm²)	2.50	1.25	0.625	0.00
Settlement (mm)	1.81	1.69	1.51	1.14

Plate Area = 100	Settlement at 0.5 = 0.24	Settlement at 0.7 = 0.61	Settlement at 0.9 = 1.03	Settlement at 1.1 = 1.29	Settlement at 1.3 = 1.56	Settlement at 1.5 = 1.81
Soil (kg/cm²) = 0.75 * 0.50 / 0.24	156					

Loading (2)	0	1	2	3	4	5
Stage (Kg)	0	1186.92	2373.84	3560.76	4747.68	5934.60
Stress (Kg/cm²)	0.00	0.42	0.83	1.25	1.67	2.08
Settlement (mm)	1.14	1.24	1.40	1.53	1.65	1.75

Ev2/Ev1 = 2.5

Soil (mm) = 100	Soil (mm) = 1.25	Soil (mm) = 1.38	Soil (mm) = 1.56	Soil (mm) = 1.81	Soil (mm) = 2.08	Soil (mm) = 2.35
Ev2 (kg/cm²) = 0.75 * 0.50 / 0.24	156					



Ev1 = Initial value of deformation during the loading stage
 Ev2 = Final value of deformation during the unloading stage
 D = Plate diameter (mm)
 Dx = The difference between 0.5 and 0.7 from the maximum loading (stress) (kg/cm²)
 Ds = Difference in settlements corresponding to 0.5 and 0.7 from the maximum loading (mm)

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