Owner Consultant	Contractor Consultant		Contarctor	Owner

Plate Load Test Results

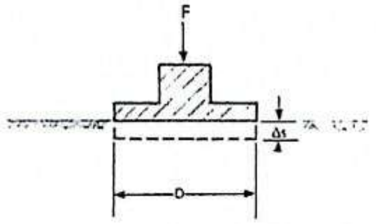
Company Name	AL ANOD			
Location	525+500	To	525+600	
Taste Date	20-07-2023			
Layer level	**P.S.G +0.50**			

Station	525+575

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett. 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.80	19.87		0.200	0.130		0.165
2.000	17.1	5.652	0.08	19.61	19.65		0.390	0.350		0.370
0.080	34.2	11.304	0.16	19.39	19.45		0.610	0.550		0.580
4.000	53.3	17.663	0.25	19.21	19.27		0.790	0.730		0.760
5.000	70.5	23.315	0.33	19.12	19.08		0.880	0.920		0.900
6.000	89.8	29.673	0.42	19.02	18.97		0.980	1.030		1.005
7.000	106.8	35.325	0.50	18.91	18.84		1.090	1.160		1.125
8.000	53.4	17.663	0.25	18.95	18.90		1.050	1.100		1.075
9.000	26.7	8.831	0.12	19.02	18.97		0.980	1.030		1.005
9.000	2.1	0.707	0.01	19.17	19.12		0.830	0.880		0.855
10.000	2.1	0.707	0.01	19.17	19.12		0.830	0.880		0.855
11.000	17.1	5.652	0.08	19.12	19.09		0.880	0.910		0.895
12.000	34.2	11.304	0.16	19.07	19.04		0.930	0.960		0.945
13.000	53.3	17.663	0.25	19.00	19.00		1.000	1.000		1.000
14.000	70.5	23.315	0.33	18.95	18.92		1.050	1.080		1.065
15.000	89.8	29.673	0.42	18.87	18.88		1.130	1.120		1.125

		s	ΔS	Δσ
0.7 σ_1	0.35	0.9	0.34625	0.2
0.3 σ_1	0.15	0.55375		
0.7σ_2	0.35	1.07833	0.14333	0.2
0.3σ_2	0.15	0.935		
D (mm)	300			
Ev_1	129.96			
Ev_2	313.96			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.42		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

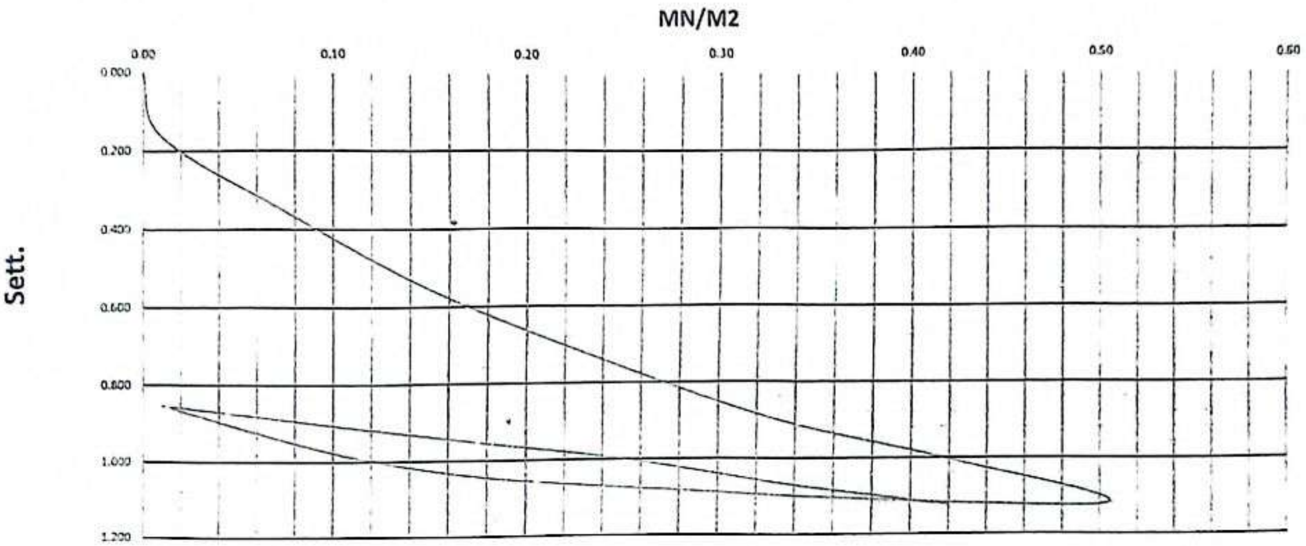
E_v = deformation modulus

D_σ = load increment

D_s = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name : Hassan
Sign :	Sign :	Sign : 25-7-2023

Owner Consultant | Contractor Consultant | Contarctor | Owner

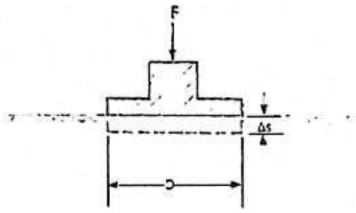
Plate Load Test Results

Company Name	AL ANOD			
Location	525+500	To	525+600	Station 525+550
Taste Date	20-07-2023			
Layer level	**P.S.G +0.50**			

EQUIPMENT AND TEST PROCEDURE :-

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter *D* of the plate is generally 0.30 m. For very coarse grained material also plates with diameter *D* = 0.60 m and *D* = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading Stage No.	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg. Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.98	19.95		0.020	0.050		0.035
2.000	17.1	5.652	0.08	19.86	19.62		0.140	0.380		0.260
0.080	34.2	11.304	0.16	19.80	19.35		0.200	0.650		0.425
4.000	53.3	17.663	0.25	19.70	19.19		0.300	0.810		0.555
5.000	70.5	23.315	0.33	19.59	19.00		0.410	1.000		0.705
6.000	89.8	29.673	0.42	19.52	18.85		0.480	1.150		0.815
7.000	106.8	35.325	0.50	19.42	18.60		0.580	1.400		0.990
8.000	53.4	17.663	0.25	19.43	18.70		0.570	1.300		0.935
9.000	26.7	8.831	0.12	19.46	18.80		0.540	1.200		0.870
9.000	2.1	0.707	0.01	19.57	18.95		0.430	1.050		0.740
10.000	2.1	0.707	0.01	19.57	18.95		0.430	1.050		0.740
11.000	17.1	5.652	0.08	19.55	18.94		0.450	1.060		0.755
12.000	34.2	11.304	0.16	19.52	18.88		0.480	1.120		0.800
13.000	53.3	17.663	0.25	19.49	18.80		0.510	1.200		0.855
14.000	70.5	23.315	0.33	19.43	18.73		0.570	1.270		0.920
15.000	89.8	29.673	0.42	19.41	18.70		0.590	1.300		0.945

		s	ΔS	Δσ
$0.7\ \sigma_1$	0.35	0.66188	0.2575	0.2
$0.3\ \sigma_1$	0.15	0.40437		
$0.7\sigma_2$	0.35	0.92556	0.15555	0.2
$0.3\sigma_2$	0.15	0.77		
D (mm)	300			
Ev_1	174.76			
Ev_2	289.29			
Area (Sq.m)	0.07065			

Ev2/Ev1	1.66		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

E_v = deformation modulus

Ds = load increment

Ds = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and [illegible] are usually taken from the load span between [illegible] and 0.7 σ_{max}

MN/M2

Sett.

Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name : Hassan
Sign :	Sign :	Sign : 25-7-2023

Owner Consultant | Contractor Consultant | Contarctor | الهيئة القومية للأنفاق Owner

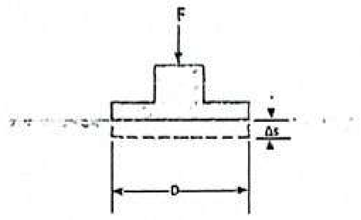
Plate Load Test Results

Company Name	AL ANOD					
Location	525+500	To	525+600		Station	525+525
Taste Date	20-07-2023					
Layer level	**P.S.G +0.50**					

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett. 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.96	19.95		0.040	0.050		0.045
2.000	17.1	5.652	0.08	19.87	19.65		0.130	0.350		0.240
0.080	34.2	11.304	0.16	19.83	19.44		0.170	0.560		0.365
4.000	53.3	17.663	0.25	19.76	19.21		0.240	0.790		0.515
5.000	70.5	23.315	0.33	19.70	19.03		0.300	0.970		0.635
6.000	89.8	29.673	0.42	19.65	18.87		0.350	1.130		0.740
7.000	106.8	35.325	0.50	19.56	18.62		0.440	1.380		0.910
8.000	53.4	17.663	0.25	19.58	18.67		0.420	1.330		0.875
9.000	26.7	8.831	0.12	19.62	18.75		0.380	1.250		0.815
9.000	2.1	0.707	0.01	19.74	18.97		0.260	1.030		0.645
10.000	2.1	0.707	0.01	19.74	18.97		0.260	1.030		0.645
11.000	17.1	5.652	0.08	19.72	18.93		0.280	1.070		0.675
12.000	34.2	11.304	0.16	19.69	18.85		0.310	1.150		0.730
13.000	53.3	17.663	0.25	19.66	18.77		0.340	1.230		0.785
14.000	70.5	23.315	0.33	19.64	18.72		0.360	1.280		0.820
15.000	89.8	29.673	0.42	19.60	18.62		0.400	1.380		0.890

		s	ΔS	Δσ
0.7 σ_1	0.35	0.59125	0.24188	0.2
0.3 σ_1	0.15	0.34938		
0.7σ_2	0.35	0.83556	0.13055	0.2
0.3σ_2	0.15	0.705		
D (mm)	300			
Ev_1	186.05			
Ev_2	344.69			
Area (Sq.m)	0.07065			

Ev2/Ev1	1.85		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

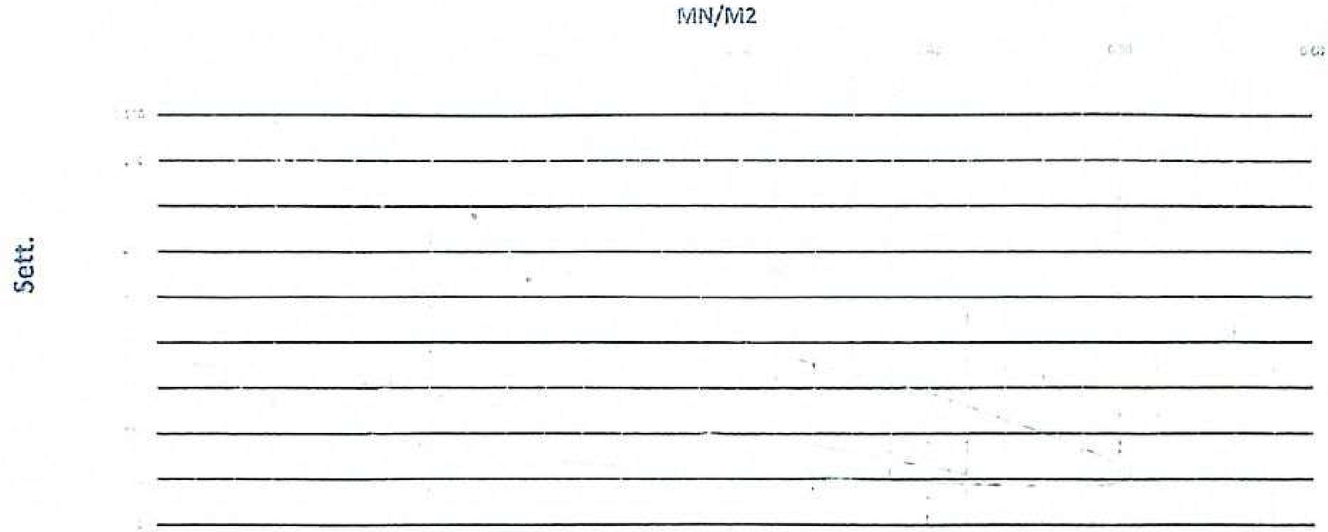
E_v = deformation modulus

Ds = load increment

Ds = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name : Hassan
Sign :	Sign :	Sign : 25 2023

Owner Consultant | Contractor Consultant | Contarctor | Owner

Plate Load Test Results

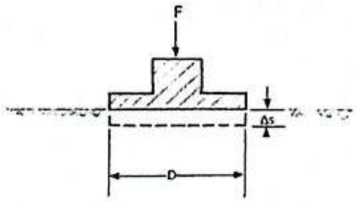
Company Name	AL ANOD		
Location	525+500	To	525+600
Taste Date	20-07-2023		
Layer level	**P.S.G +0.50**		

Station	525+600

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter *D* of the plate is generally 0.30 m. For very coarse grained material also plates with diameter *D* = 0.60 m and *D* = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.99	19.90		0.010	0.100		0.055
2.000	17.1	5.652	0.08	19.79	19.45		0.210	0.550		0.380
0.080	34.2	11.304	0.16	19.70	19.06		0.300	0.940		0.620
4.000	53.3	17.663	0.25	19.60	18.82		0.400	1.180		0.790
5.000	70.5	23.315	0.33	19.52	18.63		0.480	1.370		0.925
6.000	89.8	29.673	0.42	19.46	18.45		0.540	1.550		1.045
7.000	106.8	35.325	0.50	19.36	18.24		0.640	1.760		1.200
8.000	53.4	17.663	0.25	19.40	18.31		0.600	1.690		1.145
9.000	26.7	8.831	0.12	19.43	18.39		0.570	1.610		1.090
9.000	2.1	0.707	0.01	19.51	18.55		0.490	1.450		0.970
10.000	2.1	0.707	0.01	19.51	18.55		0.490	1.450		0.970
11.000	17.1	5.652	0.08	19.50	18.53		0.500	1.470		0.985
12.000	34.2	11.304	0.16	19.47	18.45		0.530	1.550		1.040
13.000	53.3	17.663	0.25	19.45	18.36		0.550	1.640		1.095
14.000	70.5	23.315	0.33	19.43	18.30		0.570	1.700		1.135
15.000	89.8	29.673	0.42	19.40	18.25		0.600	1.750		1.175

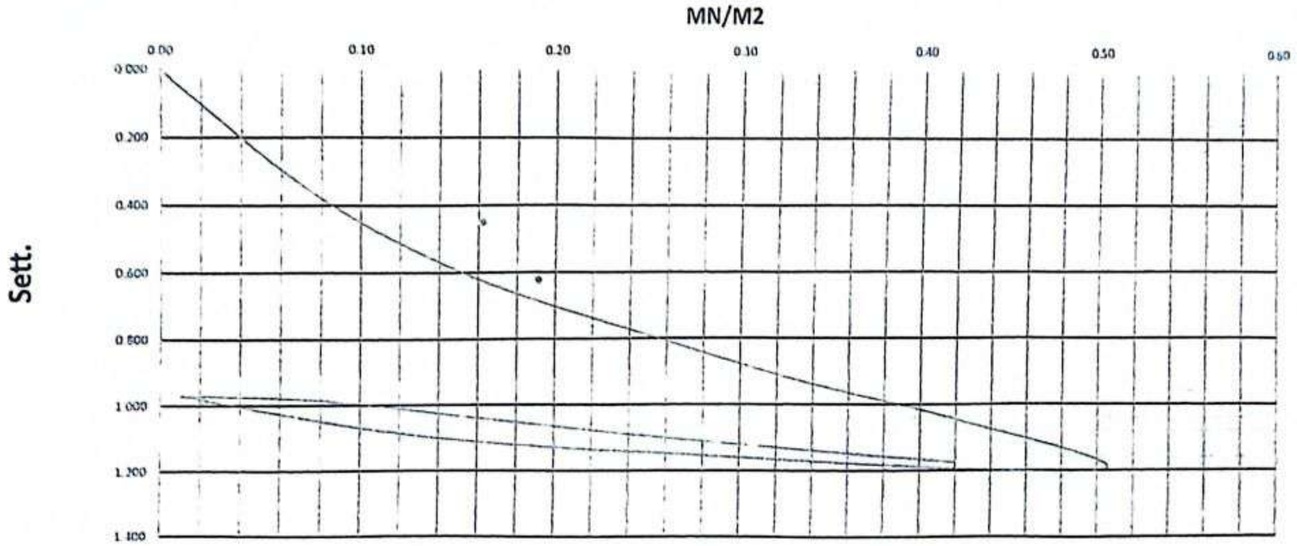
		s	ΔS	Δσ
$0.7\ \sigma_1$	0.35	0.90937	0.31937	0.2
$0.3\ \sigma_1$	0.15	0.59		
$0.7\sigma_2$	0.35	1.14389	0.14389	0.2
$0.3\sigma_2$	0.15	1		
D (mm)	300			
Ev_1	140.90			
Ev_2	312.74			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.22		

$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$

E_v	= deformation modulus
D_σ	= load increment
D_s	= settlement increment
D	= diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name : Hassan
Sign :	Sign :	Sign : 25/7/2023

المسوحة ضوئيا بـ CamScanner

Owner Consultant	Contractor Consultant		Contarctor	Owner

Plate Load Test Results

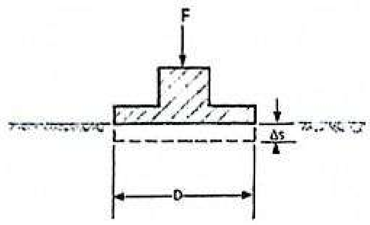
Company Name	AL ANOD		
Location	525+600	To	525+700
Taste Date	20-07-2023		
Layer level	**P.S.G +0.50**		

Station	525+625

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

ds = settlement

D = diameter of the plate

The diameter *D* of the plate is generally 0.30 m. For very coarse grained material also plates with diameter *D* = 0.60 m and *D* = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.96	19.80		0.040	0.200		0.120
2.000	17.1	5.652	0.08	19.82	19.40		0.180	0.600		0.390
0.080	34.2	11.304	0.16	19.70	19.15		0.300	0.850		0.575
4.000	53.3	17.663	0.25	19.60	18.90		0.400	1.100		0.750
5.000	70.5	23.315	0.33	19.51	18.75		0.490	1.250		0.870
6.000	89.8	29.673	0.42	19.42	18.57		0.580	1.430		1.005
7.000	106.8	35.325	0.50	19.35	18.30		0.650	1.700		1.175
8.000	53.4	17.663	0.25	19.36	18.35		0.640	1.650		1.145
9.000	26.7	8.831	0.12	19.41	18.45		0.590	1.550		1.070
9.000	2.1	0.707	0.01	19.51	18.58		0.490	1.420		0.955
10.000	2.1	0.707	0.01	19.51	18.58		0.490	1.420		0.955
11.000	17.1	5.652	0.08	19.48	18.57		0.520	1.430		0.975
12.000	34.2	11.304	0.16	19.44	18.49		0.560	1.510		1.035
13.000	53.3	17.663	0.25	19.41	18.44		0.590	1.560		1.075
14.000	70.5	23.315	0.33	19.39	18.39		0.610	1.610		1.110
15.000	89.8	29.673	0.42	19.35	18.32		0.650	1.680		1.165

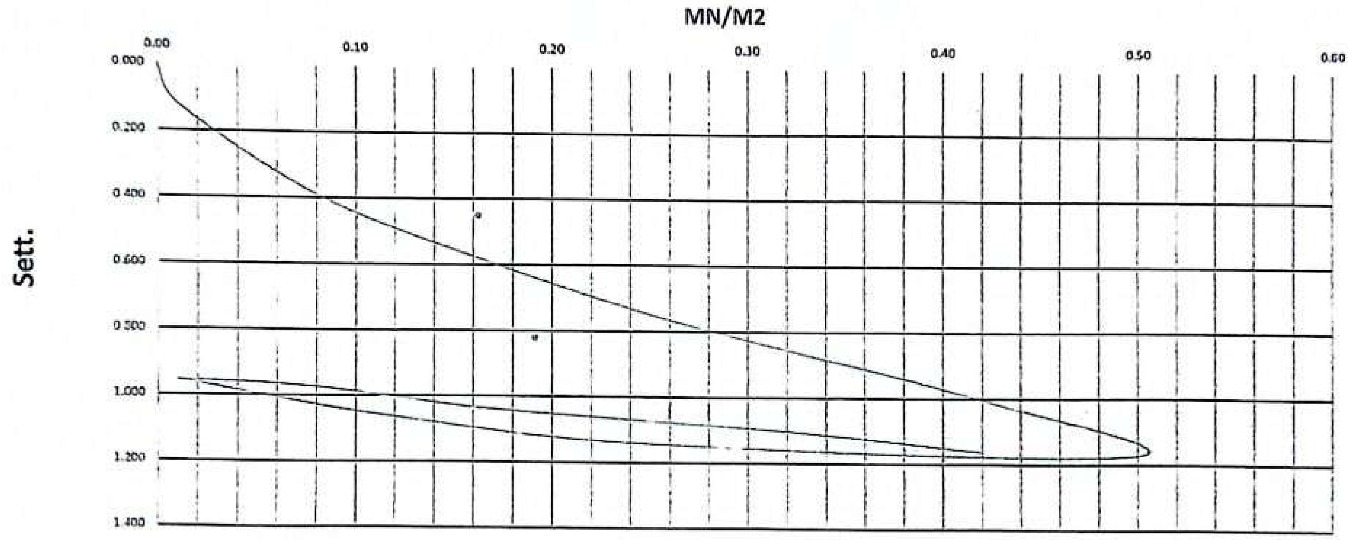
		s	ΔS	Δσ
0.7 σ_1	0.35	0.85625	0.30437	0.2
0.3 σ_1	0.15	0.55188		
0.7σ_2	0.35	1.12222	0.12722	0.2
0.3σ_2	0.15	0.995		
D (mm)	300			
Ev_1	147.84			
Ev_2	353.72			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.39		

$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$

E_v	= deformation modulus
D_σ	= load increment
D_s	= settlement increment
D	= diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name : Hassan
Sign :	Sign :	Sign : 25/7/2023

Owner Consultant	Contractor Consultant		Contarctor	Owner

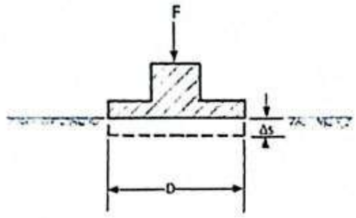
Plate Load Test Results

Company Name	AL ANOD					
Location	525+600	To	525+700		Station	525+650
Taste Date	20-07-2023					
Layer level	**P.S.G +0.50**					

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.94	19.80		0.060	0.200		0.130
2.000	17.1	5.652	0.08	19.75	19.60		0.250	0.400		0.325
0.080	34.2	11.304	0.16	19.61	19.37		0.390	0.630		0.510
4.000	53.3	17.663	0.25	19.30	19.22		0.700	0.780		0.740
5.000	70.5	23.315	0.33	19.10	19.12		0.900	0.880		0.890
6.000	89.8	29.673	0.42	18.94	19.02		1.060	0.980		1.020
7.000	106.8	35.325	0.50	18.70	18.91		1.300	1.090		1.195
8.000	53.4	17.663	0.25	18.73	18.94		1.270	1.060		1.165
9.000	26.7	8.831	0.12	18.87	19.00		1.130	1.000		1.065
9.000	2.1	0.707	0.01	19.14	19.10		0.860	0.900		0.880
10.000	2.1	0.707	0.01	19.14	19.10		0.860	0.900		0.880
11.000	17.1	5.652	0.08	19.11	19.09		0.890	0.910		0.900
12.000	34.2	11.304	0.16	19.04	19.00		0.960	1.000		0.980
13.000	53.3	17.663	0.25	18.95	18.96		1.050	1.040		1.045
14.000	70.5	23.315	0.33	18.90	18.90		1.100	1.100		1.100
15.000	89.8	29.673	0.42	18.82	18.81		1.180	1.190		1.185

		s	ΔS	Δσ
0.7 σ_1	0.35	0.86687	0.38	0.2
0.3 σ_1	0.15	0.48688		
0.7σ_2	0.35	1.11889	0.19889	0.2
0.3σ_2	0.15	0.92		
D (mm)	300			
Ev_1	118.42			
Ev_2	226.26			
Area (Sq.m)	0.07065			

Ev2/Ev1	1.91		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

E_v = deformation modulus

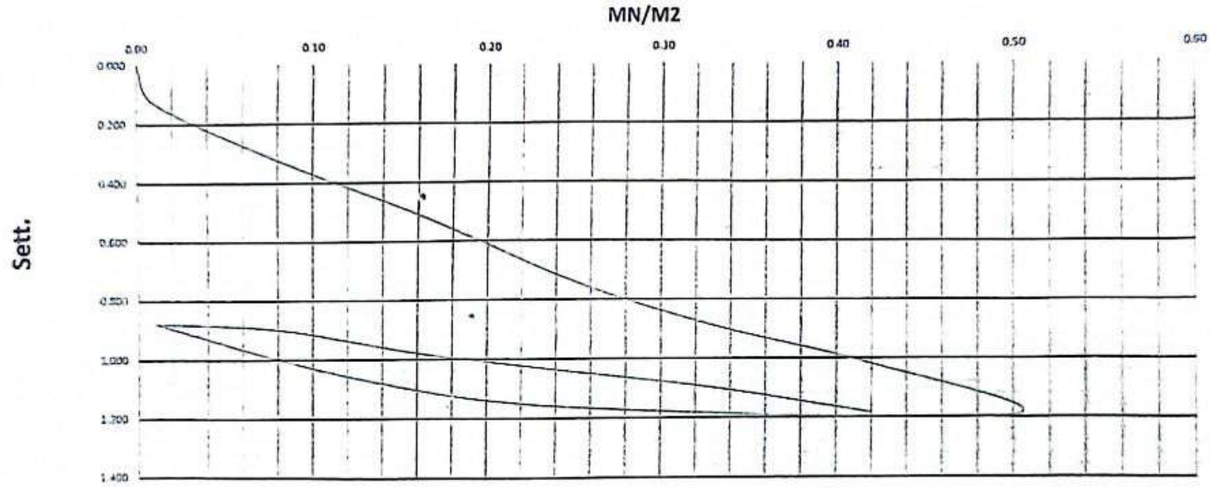
D_σ = load increment

D_s = settlement increment

D = diameter of the plate, generally 0.30 m

Owner Consultant

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name : Hassan
Sign :	Sign :	Sign : 25/7/2023

Owner Consultant | Contractor Consultant | Contractor | Owner

Plate Load Test Results

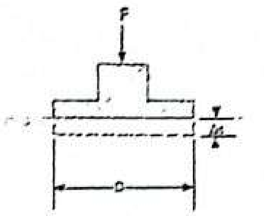
Company Name	AL ANOD		
Location	525+600	To	525+700
Taste Date	20-07-2023		
Layer level	**P.S.G +0.50**		

Station	525+075

EQUIPMENT AND TEST PROCEDURE :-

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load
Δs = settlement
D = diameter of the plate

The diameter *D* of the plate is generally 0.30 m. For very coarse grained material also plates with diameter *D* = 0.60 m and *D* = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading Stage No.	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg. Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.90	19.96		0.100	0.040		0.070
2.000	17.1	5.652	0.08	19.42	19.65		0.580	0.350		0.465
0.080	34.2	11.304	0.16	19.02	19.40		0.980	0.600		0.790
4.000	53.3	17.663	0.25	18.72	19.21		1.280	0.790		1.035
5.000	70.5	23.315	0.33	18.51	19.10		1.490	0.900		1.195
6.000	89.8	29.673	0.42	18.37	18.99		1.630	1.010		1.320
7.000	106.8	35.325	0.50	18.05	18.85		1.950	1.150		1.550
8.000	53.4	17.663	0.25	18.09	18.86		1.910	1.140		1.525
9.000	26.7	8.831	0.12	18.21	18.89		1.790	1.110		1.450
9.000	2.1	0.707	0.01	18.42	18.98		1.580	1.020		1.300
10.000	2.1	0.707	0.01	18.42	18.98		1.580	1.020		1.300
11.000	17.1	5.652	0.08	18.40	18.97		1.600	1.030		1.315
12.000	34.2	11.304	0.16	18.35	18.95		1.650	1.050		1.350
13.000	53.3	17.663	0.25	18.26	18.91		1.740	1.090		1.415
14.000	70.5	23.315	0.33	18.19	18.90		1.810	1.100		1.455
15.000	89.8	29.673	0.42	18.10	18.89		1.900	1.110		1.505

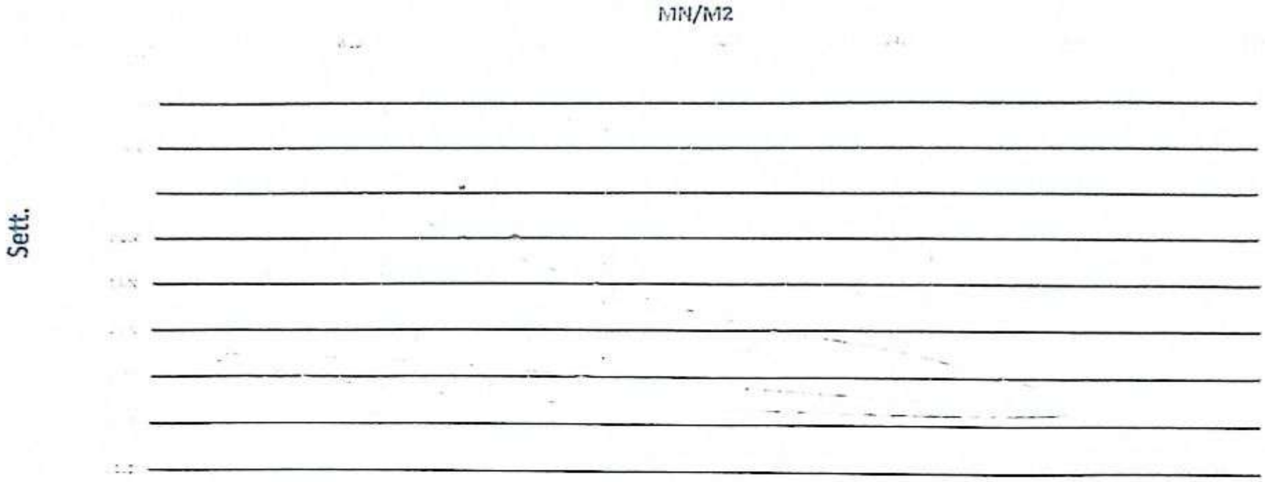
		s	Δs	Δσ
$0.7\ \sigma_1$	0.35	1.11875	0.36938	0.2
$0.3\ \sigma_1$	0.15	0.74938		
$0.7\sigma_2$	0.35	1.46611	0.13611	0.2
$0.3\sigma_2$	0.15	1.33		
D (mm)	300			
Ev_1	121.83			
Ev_2	330.62			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.71		

$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$

E_v = deformation modulus
$D\sigma$ = load increment
Ds = settlement increment
D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between $0.3\ \sigma_{max}$ and $0.7\ \sigma_{max}$



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name : Hassan
Sign :	Sign :	Sign : 25/7/2023

Owner Consultant	Contractor Consultant	Contarctor	Owner

Plate Load Test Results

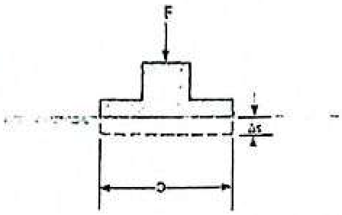
Company Name	AL ANOD		
Location	525+600	To	525+700
Taste Date	20-07-2023		
Layer level	**P.S.G +0.50**		

Station	525+700

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.80	19.87		0.200	0.130		0.165
2.000	17.1	5.652	0.08	19.43	19.53		0.570	0.470		0.520
0.080	34.2	11.304	0.16	19.21	19.31		0.790	0.690		0.740
4.000	53.3	17.663	0.25	19.07	19.21		0.930	0.790		0.860
5.000	70.5	23.315	0.33	18.90	19.08		1.100	0.920		1.010
6.000	89.8	29.673	0.42	18.81	18.99		1.190	1.010		1.100
7.000	106.8	35.325	0.50	18.60	18.80		1.400	1.200		1.300
8.000	53.4	17.663	0.25	18.65	18.83		1.350	1.170		1.260
9.000	26.7	8.831	0.12	18.81	18.89		1.190	1.110		1.150
9.000	2.1	0.707	0.01	18.95	18.97		1.050	1.030		1.040
10.000	2.1	0.707	0.01	18.95	18.97		1.050	1.030		1.040
11.000	17.1	5.652	0.08	18.91	18.94		1.090	1.060		1.075
12.000	34.2	11.304	0.16	18.83	18.92		1.170	1.080		1.125
13.000	53.3	17.663	0.25	18.74	18.88		1.260	1.120		1.190
14.000	70.5	23.315	0.33	18.68	18.85		1.320	1.150		1.235
15.000	89.8	29.673	0.42	18.62	18.82		1.380	1.180		1.280

		s	ΔS	Δσ
$0.7\ \sigma_1$	0.35	0.925	0.2125	0.2
$0.3\ \sigma_1$	0.15	0.7125		
$0.7\sigma_2$	0.35	1.245	0.135	0.2
$0.3\sigma_2$	0.15	1.11		
D (mm)	300			
Ev_1	211.76			
Ev_2	333.34			
Area (Sq.m)	0.07065			

Ev2/Ev1	1.57		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

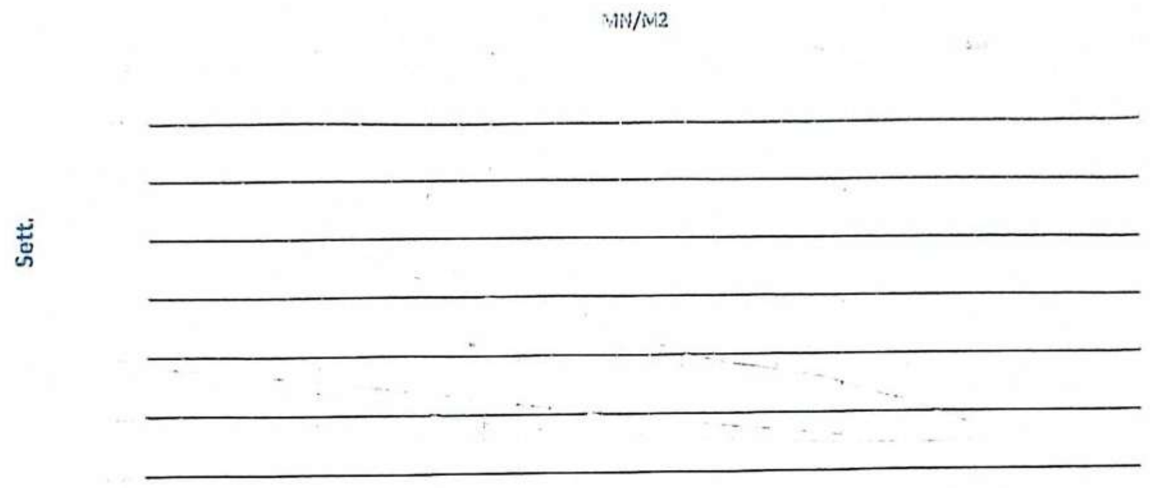
E_v = deformation modulus

$D\sigma$ = load increment

Ds = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between $0.3\ \sigma_{max}$ and $0.7\ \sigma_{max}$.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name : Hassan
Sign :	Sign :	Sign : 25/7/2023

Owner Consultant	Contractor Consultant		Contarctor	Owner

Plate Load Test Results

Company Name AL ANOD

Location 525+700 To 525+820 | Station 525+725

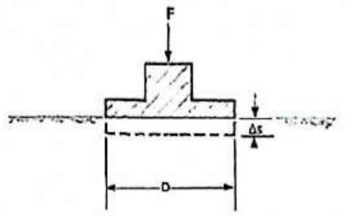
Taste Date 20-07-2023

Layer level **P.S.G +0.50**

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.86	19.96		0.140	0.040		0.090
2.000	17.1	5.652	0.08	19.55	19.76		0.450	0.240		0.345
0.080	34.2	11.304	0.16	19.20	19.62		0.800	0.380		0.590
4.000	53.3	17.663	0.25	18.90	19.52		1.100	0.480		0.790
5.000	70.5	23.315	0.33	18.75	19.42		1.250	0.580		0.915
6.000	89.8	29.673	0.42	18.52	19.26		1.480	0.740		1.110
7.000	106.8	35.325	0.50	18.18	19.10		1.820	0.900		1.360
8.000	53.4	17.663	0.25	18.25	19.15		1.750	0.850		1.300
9.000	26.7	8.831	0.12	18.30	19.20		1.700	0.800		1.250
9.000	2.1	0.707	0.01	18.55	19.35		1.450	0.650		1.050
10.000	2.1	0.707	0.01	18.55	19.35		1.450	0.650		1.050
11.000	17.1	5.652	0.08	18.45	19.30		1.550	0.700		1.125
12.000	34.2	11.304	0.16	18.38	19.26		1.620	0.740		1.180
13.000	53.3	17.663	0.25	18.30	19.20		1.700	0.800		1.250
14.000	70.5	23.315	0.33	18.21	19.15		1.790	0.850		1.320
15.000	89.8	29.673	0.42	18.17	19.12		1.830	0.880		1.355

		s	ΔS	Δσ
$0.7\,\sigma_1$	0.35	0.89125	0.33188	0.2
$0.3\,\sigma_1$	0.15	0.55938		
$0.7\sigma_2$	0.35	1.32778	0.12777	0.2
$0.3\sigma_2$	0.15	1.20001		
D (mm)	300			
Ev_1	135.59			
Ev_2	352.19			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.60		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma \,/\, \Delta s$$

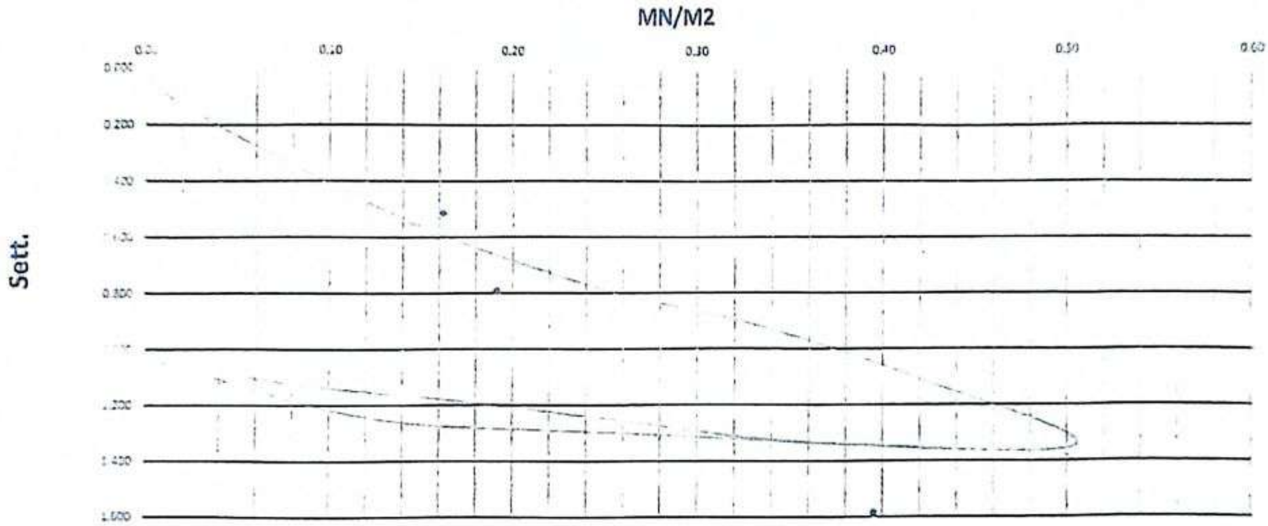
E_v = deformation modulus

Ds = load increment

Ds = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name : Mansur	Name :	Name : Hassan
Sign :	Sign :	Sign : 25/7/2023

Owner Consultant | Contractor Consultant | Contarctor | Owner

Plate Load Test Results

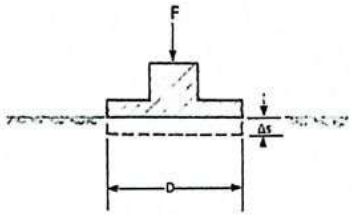
Company Name	AL ANOD		
Location	525+700	To	525+820
Taste Date	20-07-2023		
Layer level	**P.S.G +0.50**		

Station	525+750

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter *D* of the plate is generally 0.30 m. For very coarse grained material also plates with diameter *D* = 0.60 m and *D* = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett. 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.96	19.98		0.040	0.020		0.030
2.000	17.1	5.652	0.08	19.91	19.85		0.090	0.150		0.120
0.080	34.2	11.304	0.16	19.61	19.79		0.390	0.210		0.300
4.000	53.3	17.663	0.25	19.30	19.66		0.700	0.340		0.520
5.000	70.5	23.315	0.33	19.00	19.55		1.000	0.450		0.725
6.000	89.8	29.673	0.42	18.72	19.42		1.280	0.580		0.930
7.000	106.8	35.325	0.50	18.40	19.30		1.600	0.700		1.150
8.000	53.4	17.663	0.25	18.42	19.37		1.580	0.630		1.105
9.000	26.7	8.831	0.12	18.55	19.45		1.450	0.550		1.000
9.000	2.1	0.707	0.01	18.89	19.70		1.110	0.300		0.705
10.000	2.1	0.707	0.01	18.89	19.70		1.110	0.300		0.705
11.000	17.1	5.652	0.08	18.83	19.65		1.170	0.350		0.760
12.000	34.2	11.304	0.16	18.75	19.54		1.250	0.460		0.855
13.000	53.3	17.663	0.25	18.62	19.46		1.380	0.540		0.960
14.000	70.5	23.315	0.33	18.50	19.38		1.500	0.620		1.060
15.000	89.8	29.673	0.42	18.42	19.31		1.580	0.690		1.135

		s	ΔS	Δσ
$0.7\ \sigma_1$	0.35	0.7375	0.46	0.2
$0.3\ \sigma_1$	0.15	0.2775		
$0.7\sigma_2$	0.35	1.07667	0.26166	0.2
$0.3\sigma_2$	0.15	0.81501		
D (mm)	300			
Ev_1	97.83			
Ev_2	171.98			
Area (Sq.m)	0.07065			

Ev2/Ev1	1.76		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

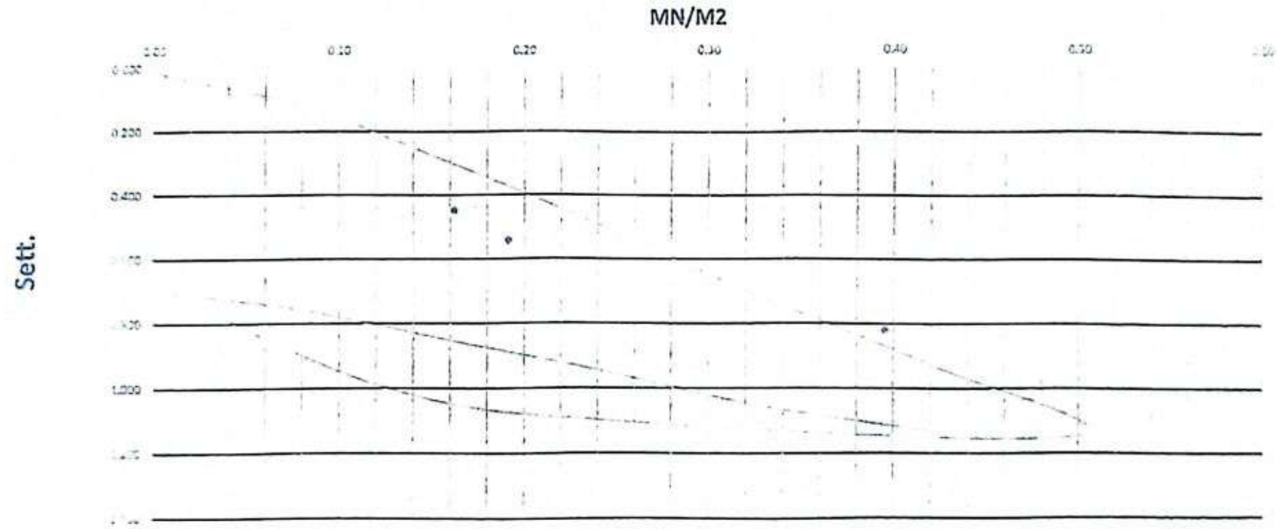
E_v = deformation modulus

Ds = load increment

Ds = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name : Hassan
Sign :	Sign :	Sign : 25/7/2023

Owner Consultant | Contractor Consultant | Contarctor | Owner

Plate Load Test Results

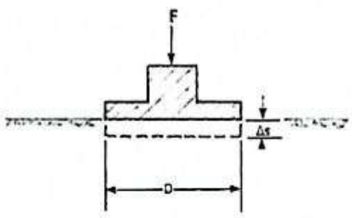
Company Name AL ANOD

Location	525+700	To	525+820		Station	525+775
Taste Date	20-07-2023					
Layer level	**P.S.G +0.50**					

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.95	19.90		0.050	0.100		0.075
2.000	17.1	5.652	0.08	19.87	19.52		0.130	0.480		0.305
0.080	34.2	11.304	0.16	19.72	19.28		0.280	0.720		0.500
4.000	53.3	17.663	0.25	19.56	19.02		0.440	0.980		0.710
5.000	70.5	23.315	0.33	19.44	18.72		0.560	1.280		0.920
6.000	89.8	29.673	0.42	19.33	18.45		0.670	1.550		1.110
7.000	106.8	35.325	0.50	19.30	18.29		0.700	1.710		1.205
8.000	53.4	17.663	0.25	19.32	18.37		0.680	1.630		1.155
9.000	26.7	8.831	0.12	19.44	18.50		0.560	1.500		1.030
9.000	2.1	0.707	0.01	19.54	18.68		0.460	1.320		0.890
10.000	2.1	0.707	0.01	19.54	18.68		0.460	1.320		0.890
11.000	17.1	5.652	0.08	19.53	18.66		0.470	1.340		0.905
12.000	34.2	11.304	0.16	19.50	18.53		0.500	1.470		0.985
13.000	53.3	17.663	0.25	19.46	18.40		0.540	1.600		1.070
14.000	70.5	23.315	0.33	19.42	18.28		0.580	1.720		1.150
15.000	89.8	29.673	0.42	19.40	18.20		0.600	1.800		1.200

		s	Δs	Δσ
$0.7\sigma_1$	0.35	1.02688	0.55125	0.2
$0.3\sigma_1$	0.15	0.47563		
$0.7\sigma_2$	0.35	1.16111	0.24111	0.2
$0.3\sigma_2$	0.15	0.92		
D (mm)	300			
Ev_1	81.63			
Ev_2	186.64			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.29		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma \,/\, \Delta s$$

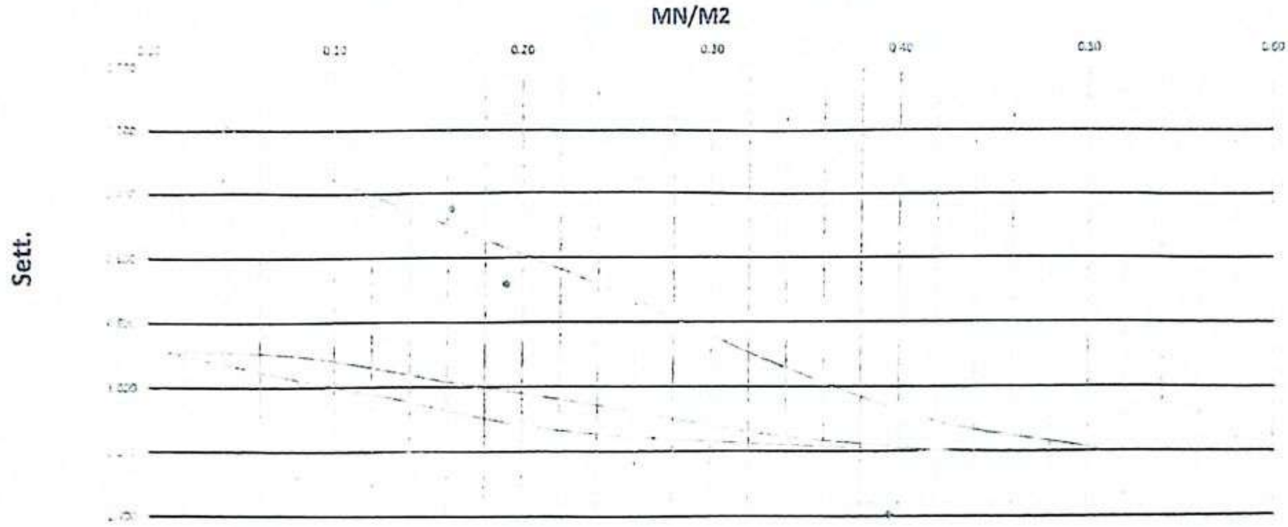
E_v = deformation modulus

$D\sigma$ = load increment

Ds = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist
Name :
Sign :

Lab. Engineer
Name :
Sign :

Consultant Engineer
Name : Hassan
Sign : 25/7/2023

Owner Consultant	Contractor Consultant		Contarctor	Owner

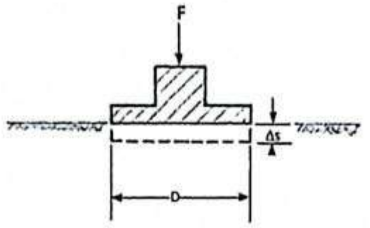
Plate Load Test Results

Company Name	AL ANOD					
Location	525+700	To	525+820		Station	525+800
Taste Date	20-07-2023					
Layer level	**P.S.G +0.50**					

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter *D* of the plate is generally 0.30 m. For very coarse grained material also plates with diameter *D* = 0.60 m and *D* = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett. 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.90	19.96		0.100	0.040		0.070
2.000	17.1	5.652	0.08	19.21	19.62		0.790	0.380		0.585
0.080	34.2	11.304	0.16	18.65	19.35		1.350	0.650		1.000
4.000	53.3	17.663	0.25	18.25	19.30		1.750	0.700		1.225
5.000	70.5	23.315	0.33	18.05	19.22		1.950	0.780		1.365
6.000	89.8	29.673	0.42	17.75	19.18		2.250	0.820		1.535
7.000	106.8	35.325	0.50	17.40	18.96		2.600	1.040		1.820
8.000	53.4	17.663	0.25	17.43	18.98		2.570	1.020		1.795
9.000	26.7	8.831	0.12	17.49	18.99		2.510	1.010		1.760
9.000	2.1	0.707	0.01	17.70	19.04		2.300	0.960		1.630
10.000	2.1	0.707	0.01	17.70	19.04		2.300	0.960		1.630
11.000	17.1	5.652	0.08	17.68	19.02		2.320	0.980		1.650
12.000	34.2	11.304	0.16	17.60	18.99		2.400	1.010		1.705
13.000	53.3	17.663	0.25	17.52	18.95		2.480	1.050		1.765
14.000	70.5	23.315	0.33	17.45	18.94		2.550	1.060		1.805
15.000	89.8	29.673	0.42	17.40	18.93		2.600	1.070		1.835

		s	ΔS	Δσ
$0.7\ \sigma_1$	0.35	1.28563	0.3375	0.2
$0.3\ \sigma_1$	0.15	0.94813		
$0.7\sigma_2$	0.35	1.81167	0.14166	0.2
$0.3\sigma_2$	0.15	1.67		
D (mm)	300			
Ev_1	133.33			
Ev_2	317.65			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.38		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

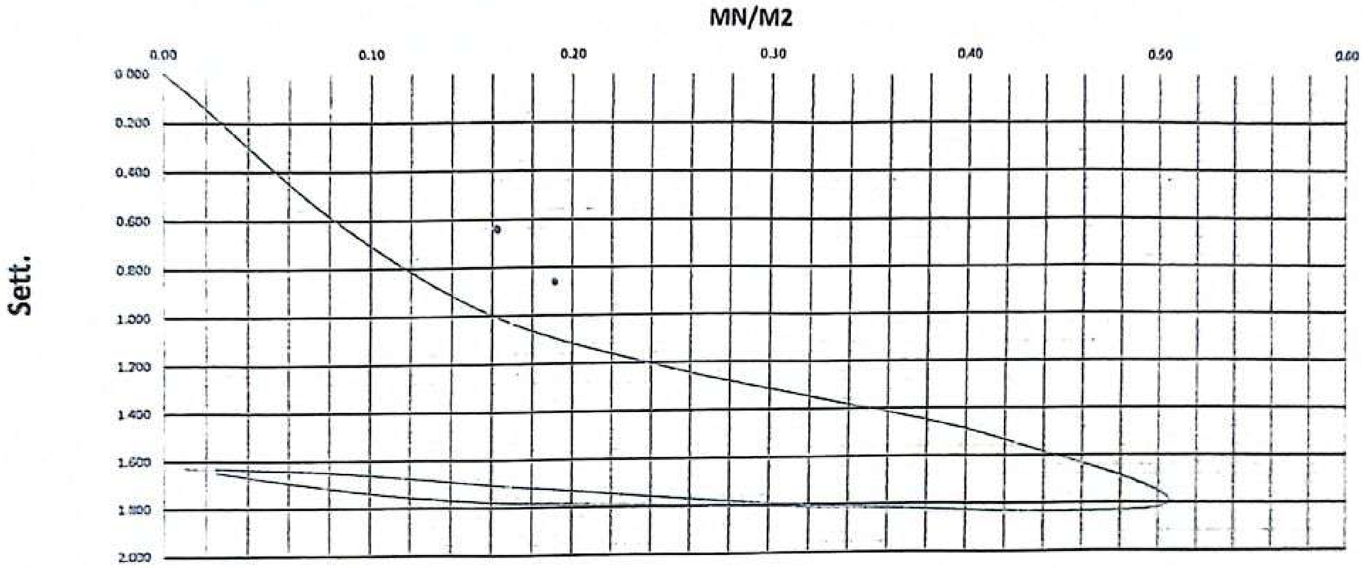
E_v = deformation modulus

D_σ = load increment

D_s = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name : Hassan
Sign :	Sign :	Sign : 25-7-2023

CamScanner المسوحة ضوئيا بـ

Owner Consultant | Contractor Consultant | Contarctor | Owner

Plate Load Test Results

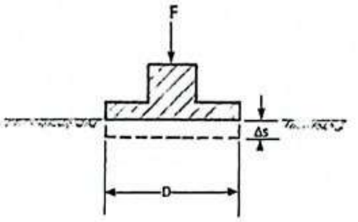
Company Name	AL ANOD		
Location	525+700	To	525+820
Taste Date	20-07-2023		
Layer level	**P.S.G +0.50**		

Station	525+820

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.91	19.95		0.090	0.050		0.070
2.000	17.1	5.652	0.08	19.27	19.62		0.730	0.380		0.555
0.080	34.2	11.304	0.16	18.75	19.50		1.250	0.500		0.875
4.000	53.3	17.663	0.25	18.45	19.30		1.550	0.700		1.125
5.000	70.5	23.315	0.33	18.25	19.18		1.750	0.820		1.285
6.000	89.8	29.673	0.42	18.02	19.13		1.980	0.870		1.425
7.000	106.8	35.325	0.50	17.65	18.98		2.350	1.020		1.685
8.000	53.4	17.663	0.25	17.70	19.02		2.300	0.980		1.640
9.000	26.7	8.831	0.12	17.79	19.10		2.210	0.900		1.555
9.000	2.1	0.707	0.01	17.98	19.17		2.020	0.830		1.425
10.000	2.1	0.707	0.01	17.98	19.17		2.020	0.830		1.425
11.000	17.1	5.652	0.08	17.91	19.16		2.090	0.840		1.465
12.000	34.2	11.304	0.16	17.86	19.12		2.140	0.880		1.510
13.000	53.3	17.663	0.25	17.77	19.09		2.230	0.910		1.570
14.000	70.5	23.315	0.33	17.70	19.05		2.300	0.950		1.625
15.000	89.8	29.673	0.42	17.62	19.02		2.380	0.980		1.680

		s	ΔS	Δσ
$0.7\ \sigma_1$	0.35	1.1975	0.3625	0.2
$0.3\ \sigma_1$	0.15	0.835		
$0.7\sigma_2$	0.35	1.63722	0.13222	0.2
$0.3\sigma_2$	0.15	1.505		
D (mm)	300			
Ev_1	124.14			
Ev_2	340.35			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.74		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

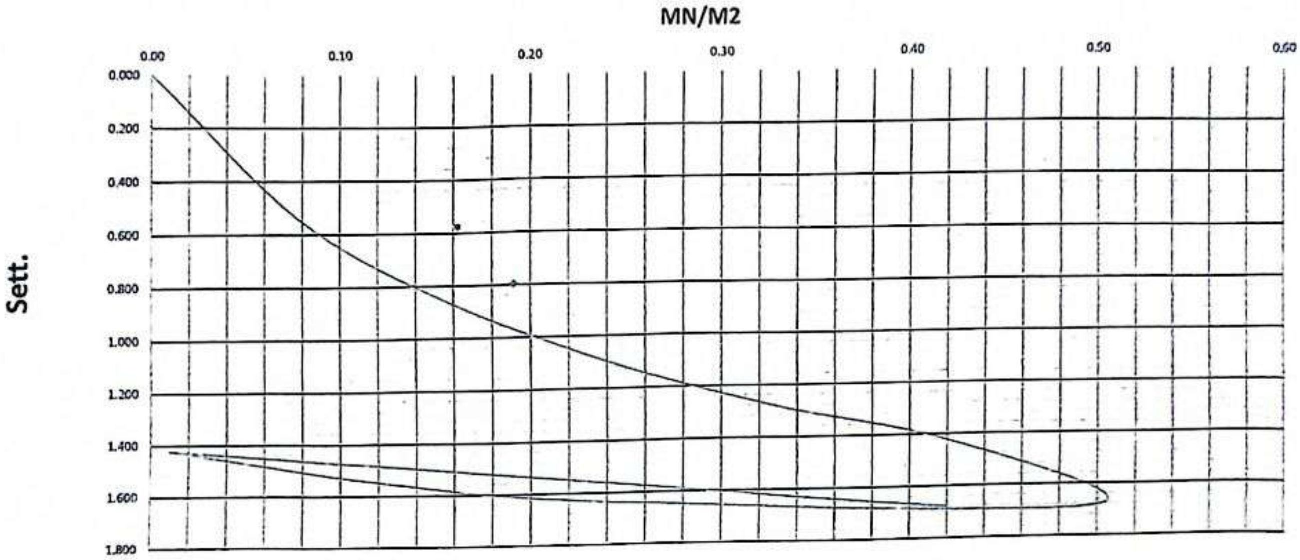
E_v = deformation modulus

D_σ = load increment

D_s = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name :	Name : Hassan
Sign :	Sign :	Sign : 25/7/2023

Plate Load Test Results

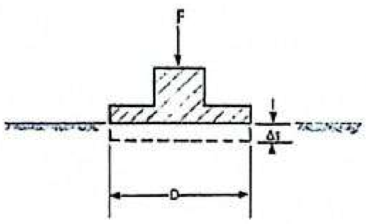
Company Name	AL ANOD		
Location	525+500	To	525+600
Taste Date	21-08-2023		
Layer level	sub ballast +0.90		

Station	525+525

EQUIPMENT AND TEST PROCEDURE :-

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

ds = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett. 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.97	19.94		0.030	0.060		0.045
2.000	17.1	5.652	0.08	19.90	19.72		0.100	0.280		0.190
0.080	34.2	11.304	0.16	19.80	19.50		0.200	0.500		0.350
4.000	53.3	17.663	0.25	19.71	19.32		0.290	0.680		0.485
5.000	70.5	23.315	0.33	19.55	19.09		0.450	0.910		0.680
6.000	89.8	29.673	0.42	19.33	18.90		0.670	1.100		0.885
7.000	106.8	35.325	0.50	19.17	18.75		0.830	1.250		1.040
8.000	53.4	17.663	0.25	19.21	18.81		0.790	1.190		0.990
9.000	26.7	8.831	0.12	19.28	18.93		0.720	1.070		0.895
9.000	2.1	0.707	0.01	19.48	19.22		0.520	0.780		0.650
10.000	2.1	0.707	0.01	19.48	19.22		0.520	0.780		0.650
11.000	17.1	5.652	0.08	19.46	19.20		0.540	0.800		0.670
12.000	34.2	11.304	0.16	19.40	19.11		0.600	0.890		0.745
13.000	53.3	17.663	0.25	19.31	19.00		0.690	1.000		0.845
14.000	70.5	23.315	0.33	19.27	18.88		0.730	1.120		0.925
15.000	89.8	29.673	0.42	19.18	18.77		0.820	1.230		1.025

		s	ΔS	Δσ
$0.7\ \sigma_1$	0.35	0.74938	0.41938	0.2
$0.3\ \sigma_1$	0.15	0.33		
$0.7\sigma_2$	0.35	0.94722	0.25722	0.2
$0.3\sigma_2$	0.15	0.69		
D (mm)	300			
Ev_1	107.30			
Ev_2	174.95			
Area (Sq.m)	0.07065			

Ev2/Ev1	1.63

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

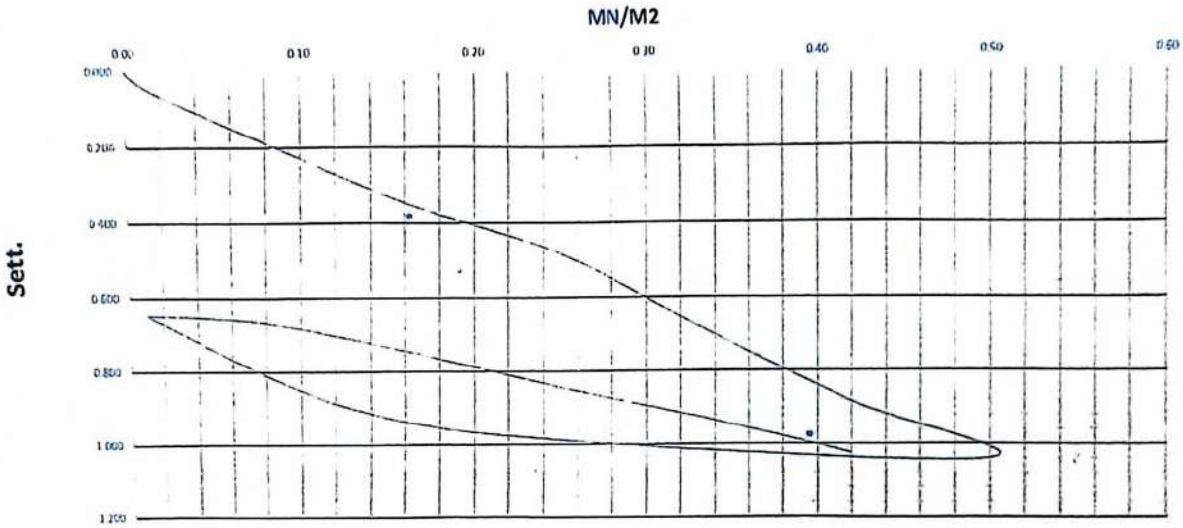
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name:	Name: Ahmed Haleem	Name: Hassan
Sign:	Sign:	Sign: 26/8/2023

Owner Consultant	Contractor Consultant		Contarctor	الهيئة القومية للأنفاق Owner

Plate Load Test Results

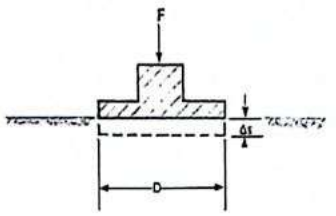
Company Name	AL ANOD		
Location	525+500	To	525+600
Taste Date	21-08-2023		
Layer level	**sub ballast +0.90**		

Station	525+540

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.95	19.93		0.050	0.070		0.060
2.000	17.1	5.652	0.08	19.70	19.67		0.300	0.330		0.315
0.080	34.2	11.304	0.16	19.45	19.47		0.550	0.530		0.540
4.000	53.3	17.663	0.25	19.21	19.31		0.790	0.690		0.740
5.000	70.5	23.315	0.33	19.02	19.12		0.980	0.880		0.930
6.000	89.8	29.673	0.42	18.85	18.90		1.150	1.100		1.125
7.000	106.8	35.325	0.50	18.70	18.74		1.300	1.260		1.280
8.000	53.4	17.663	0.25	18.76	18.83		1.240	1.170		1.205
9.000	26.7	8.831	0.12	18.91	18.99		1.090	1.010		1.050
9.000	2.1	0.707	0.01	19.15	19.24		0.850	0.760		0.805
10.000	2.1	0.707	0.01	19.15	19.24		0.850	0.760		0.805
11.000	17.1	5.652	0.08	19.13	19.21		0.870	0.790		0.830
12.000	34.2	11.304	0.16	19.06	19.14		0.940	0.860		0.900
13.000	53.3	17.663	0.25	19.00	19.03		1.000	0.970		0.985
14.000	70.5	23.315	0.33	18.86	18.92		1.140	1.080		1.110
15.000	89.8	29.673	0.42	18.72	18.76		1.280	1.240		1.260

		s	ΔS	Δσ
$0.7\,\sigma_1$	0.35	0.98937	0.4775	0.2
$0.3\,\sigma_1$	0.15	0.51188		
$0.7\sigma_2$	0.35	1.14333	0.28833	0.2
$0.3\sigma_2$	0.15	0.855		
D (mm)	300			
Ev_1	94.24			
Ev_2	156.07			
Area (Sq.m)	0.07065			

Ev2/Ev1	1.66		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

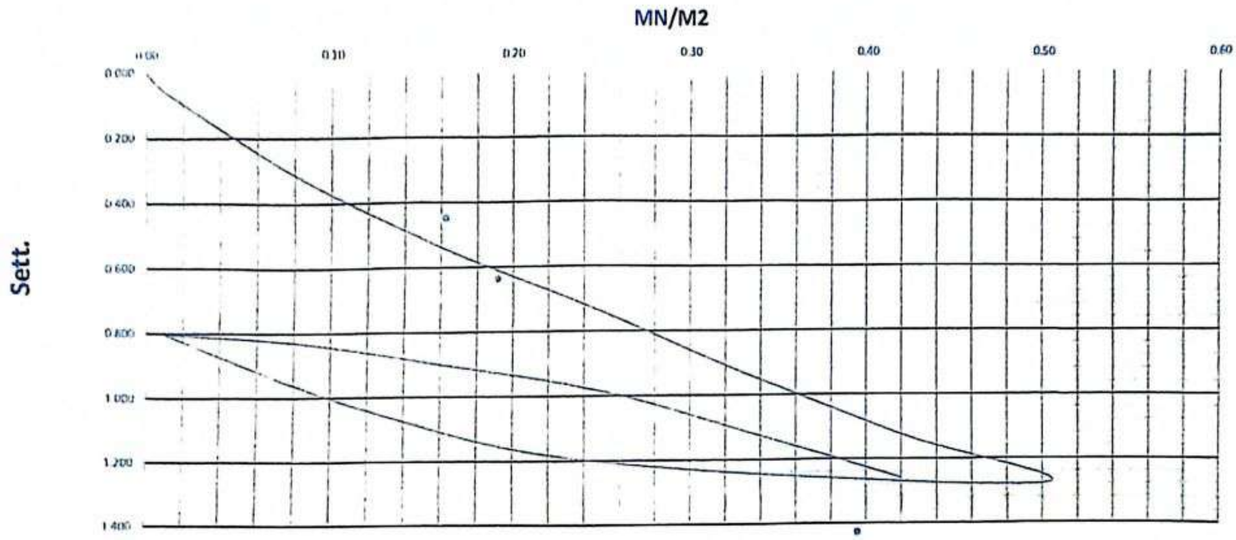
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name : Hassan
Sign :	Sign :	Sign : 26/8/2023

Plate Load Test Results

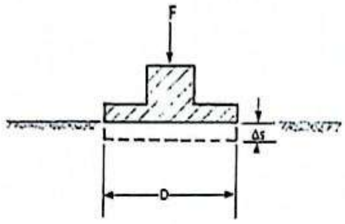
Company Name	AL ANOD		
Location	525+500	To	525+600
Taste Date	21-08-2023		
Layer level	**sub ballast +0.90**		

Station	515+565

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter *D* of the plate is generally 0.30 m. For very coarse grained material also plates with diameter *D* = 0.60 m and *D* = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett. 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.91	19.94		0.090	0.060		0.075
2.000	17.1	5.652	0.08	19.68	19.70		0.320	0.300		0.310
0.080	34.2	11.304	0.16	19.51	19.54		0.490	0.460		0.475
4.000	53.3	17.663	0.25	19.25	19.29		0.750	0.710		0.730
5.000	70.5	23.315	0.33	19.00	19.07		1.000	0.930		0.965
6.000	89.8	29.673	0.42	18.83	18.81		1.170	1.190		1.180
7.000	106.8	35.325	0.50	18.66	18.60		1.340	1.400		1.370
8.000	53.4	17.663	0.25	18.72	18.69		1.280	1.310		1.295
9.000	26.7	8.831	0.12	18.87	18.87		1.130	1.130		1.130
9.000	2.1	0.707	0.01	18.99	19.00		1.010	1.000		1.005
10.000	2.1	0.707	0.01	18.99	19.00		1.010	1.000		1.005
11.000	17.1	5.652	0.08	18.98	18.98		1.020	1.020		1.020
12.000	34.2	11.304	0.16	18.90	18.91		1.100	1.090		1.095
13.000	53.3	17.663	0.25	18.83	18.83		1.170	1.170		1.170
14.000	70.5	23.315	0.33	18.74	18.70		1.260	1.300		1.280
15.000	89.8	29.673	0.42	18.67	18.62		1.330	1.380		1.355

		s	ΔS	Δσ
$0.7\,\sigma_1$	0.35	1.01375	0.55938	0.2
$0.3\,\sigma_1$	0.15	0.45438		
$0.7\sigma_2$	0.35	1.29667	0.26167	0.2
$0.3\sigma_2$	0.15	1.035		
D (mm)	300			
Ev_1	80.45			
Ev_2	171.98			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.14		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

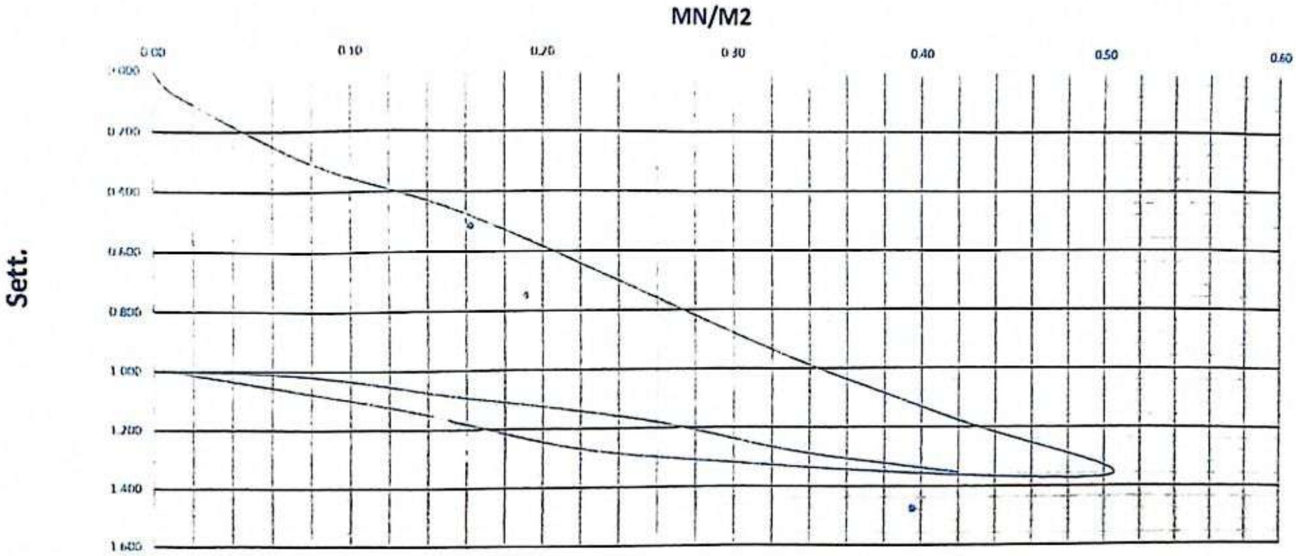
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name : Hassan
Sign :	Sign :	Sign : 26/8/2023

Owner Consultant | Contractor Consultant | Contarctor | Owner

Plate Load Test Results

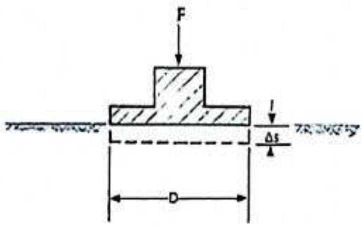
Company Name	AL ANOD		
Location	525+500	To	525+600
Taste Date	21-08-2023		
Layer level	**sub ballast +0.90**		

Station	525+590

EQUIPMENT AND TEST PROCEDURE :-

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.95	19.95		0.050	0.050		0.050
2.000	17.1	5.652	0.08	19.80	19.74		0.200	0.260		0.230
0.080	34.2	11.304	0.16	19.65	19.61		0.350	0.390		0.370
4.000	53.3	17.663	0.25	19.48	19.35		0.520	0.650		0.585
5.000	70.5	23.315	0.33	19.33	19.19		0.670	0.810		0.740
6.000	89.8	29.673	0.42	19.21	19.05		0.790	0.950		0.870
7.000	106.8	35.325	0.50	19.05	18.91		0.950	1.090		1.020
8.000	53.4	17.663	0.25	19.11	18.97		0.890	1.030		0.960
9.000	26.7	8.831	0.12	19.24	19.06		0.760	0.940		0.850
9.000	2.1	0.707	0.01	19.38	19.21		0.620	0.790		0.705
10.000	2.1	0.707	0.01	19.38	19.21		0.620	0.790		0.705
11.000	17.1	5.652	0.08	19.36	19.18		0.640	0.820		0.730
12.000	34.2	11.304	0.16	19.30	19.14		0.700	0.860		0.780
13.000	53.3	17.663	0.25	19.25	19.07		0.750	0.930		0.840
14.000	70.5	23.315	0.33	19.14	19.00		0.860	1.000		0.930
15.000	89.8	29.673	0.42	19.06	18.92		0.940	1.080		1.010

		s	ΔS	Δσ
$0.7\,\sigma_1$	0.35	0.73875	0.38625	0.2
$0.3\,\sigma_1$	0.15	0.3525		
$0.7\sigma_2$	0.35	0.94778	0.19278	0.2
$0.3\sigma_2$	0.15	0.755		
D (mm)	300			
Ev_1	116.50			
Ev_2	233.43			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.00		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

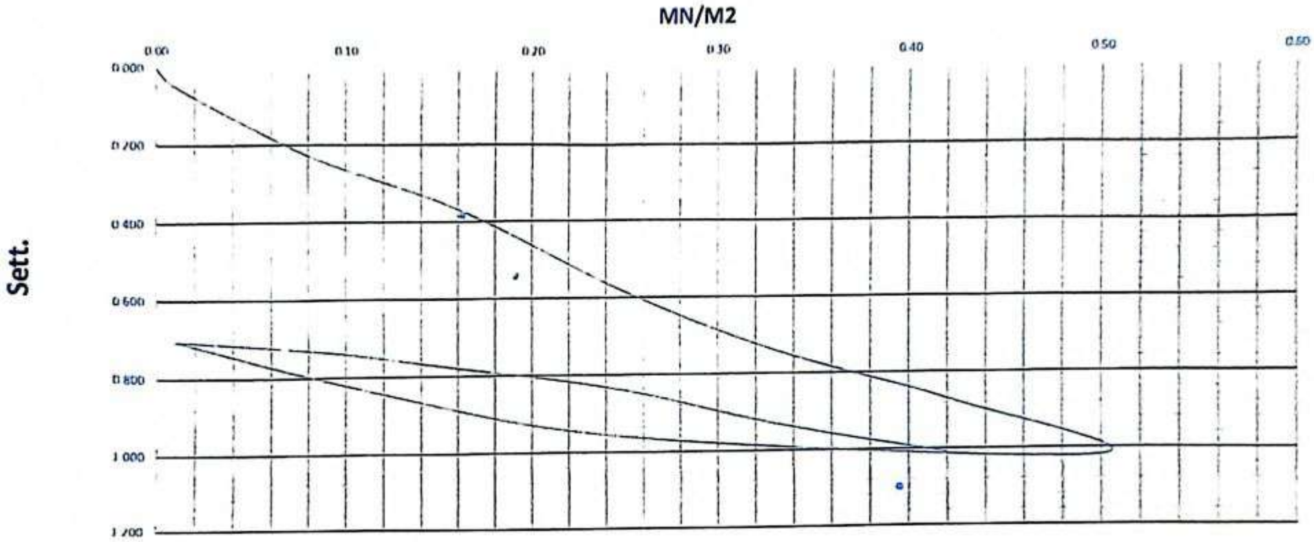
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name : Hassan
Sign :	Sign :	Sign :

2023

Owner Consultant | Contractor Consultant | Contarutor | Owner

Plate Load Test Results

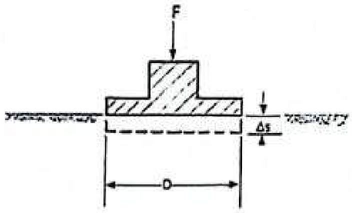
Company Name	AL ANOD		
Location	525+600	To	525+700
Taste Date	13-08-2023		
Layer level	**sub ballast +0.90**		

Station	525+620

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter *D* of the plate is generally 0.30 m. For very coarse grained material also plates with diameter *D* = 0.60 m and *D* = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading Stage No.	Load Bar	Load KN	Stress MN/M2	Dial 1 mm	Dial 2 mm	Dial 3 mm	Sett. 1 mm	Sett. 2 mm	Sett. 3 mm	Avg. Sett. mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.89	19.80		0.110	0.200		0.155
2.000	17.1	5.652	0.08	19.72	19.55		0.280	0.450		0.365
0.080	34.2	11.304	0.16	19.66	19.40		0.340	0.600		0.470
4.000	53.3	17.663	0.25	19.57	19.22		0.430	0.780		0.605
5.000	70.5	23.315	0.33	19.53	19.11		0.470	0.890		0.680
6.000	89.8	29.673	0.42	19.46	18.99		0.540	1.010		0.775
7.000	106.8	35.325	0.50	19.40	18.85		0.600	1.150		0.875
8.000	53.4	17.663	0.25	19.45	18.95		0.550	1.050		0.800
9.000	26.7	8.831	0.12	19.48	19.01		0.520	0.990		0.755
9.000	2.1	0.707	0.01	19.59	19.16		0.410	0.840		0.625
10.000	2.1	0.707	0.01	19.59	19.16		0.410	0.840		0.625
11.000	17.1	5.652	0.08	19.55	19.11		0.450	0.890		0.670
12.000	34.2	11.304	0.16	19.50	19.05		0.500	0.950		0.725
13.000	53.3	17.663	0.25	19.46	19.00		0.540	1.000		0.770
14.000	70.5	23.315	0.33	19.44	18.94		0.560	1.060		0.810
15.000	89.8	29.673	0.42	19.41	18.89		0.590	1.110		0.850

		s	ΔS	Δσ
$0.7\ \sigma_1$	0.35	0.6875	0.23063	0.2
$0.3\ \sigma_1$	0.15	0.45688		
$0.7\sigma_2$	0.35	0.81889	0.10388	0.2
$0.3\sigma_2$	0.15	0.715		
D (mm)	300			
Ev_1	195.12			
Ev_2	433.17			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.22		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

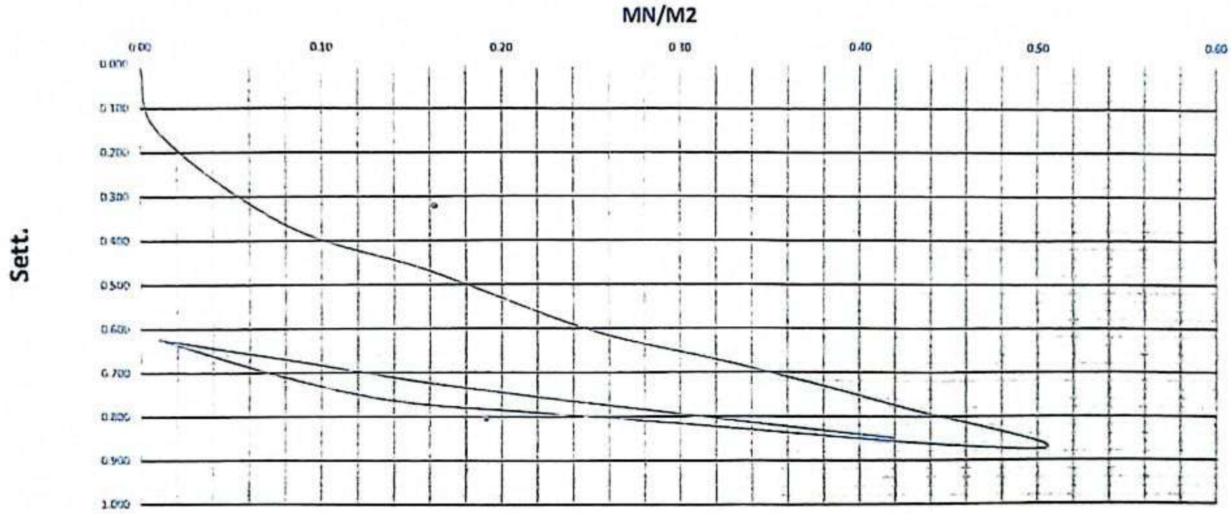
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name : Hassan
Sign :	Sign :	Sign : 16/8/2023

Owner Consultant | Contractor Consultant | Contarctor | الهيئة القومية للأنفاق Owner

Plate Load Test Results

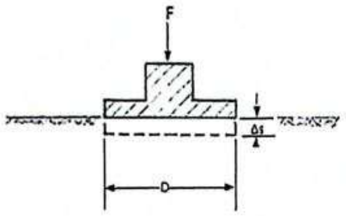
Company Name	AL ANOD		
Location	525+600	To	525+700
Taste Date	13-08-2023		
Layer level	**sub ballast +0.90**		

Station	525+645

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

ds = settlement

D = diameter of the plate

The diameter *D* of the plate is generally 0.30 m. For very coarse grained material also plates with diameter *D* = 0.60 m and *D* = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.97	19.96		0.030	0.040		0.035
2.000	17.1	5.652	0.08	19.87	19.81		0.130	0.190		0.160
0.080	34.2	11.304	0.16	19.81	19.76		0.190	0.240		0.215
4.000	53.3	17.663	0.25	19.72	19.60		0.280	0.400		0.340
5.000	70.5	23.315	0.33	19.65	19.45		0.350	0.550		0.450
6.000	89.8	29.673	0.42	19.62	19.39		0.380	0.610		0.495
7.000	106.8	35.325	0.50	19.58	19.30		0.420	0.700		0.560
8.000	53.4	17.663	0.25	19.61	19.39		0.390	0.610		0.500
9.000	26.7	8.831	0.12	19.66	19.45		0.340	0.550		0.445
9.000	2.1	0.707	0.01	19.76	19.59		0.240	0.410		0.325
10.000	2.1	0.707	0.01	19.76	19.59		0.240	0.410		0.325
11.000	17.1	5.652	0.08	19.73	19.54		0.270	0.460		0.365
12.000	34.2	11.304	0.16	19.69	19.50		0.310	0.500		0.405
13.000	53.3	17.663	0.25	19.64	19.43		0.360	0.570		0.465
14.000	70.5	23.315	0.33	19.60	19.38		0.400	0.620		0.510
15.000	89.8	29.673	0.42	19.59	19.34		0.410	0.660		0.535

		s	ΔS	$\Delta\sigma$
$0.7\,\sigma_1$	0.35	0.43812	0.23	0.2
$0.3\,\sigma_1$	0.15	0.20813		
$0.7\sigma_2$	0.35	0.51556	0.11055	0.2
$0.3\sigma_2$	0.15	0.405		
D (mm)	300			
Ev_1	195.65			
Ev_2	407.05			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.08		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

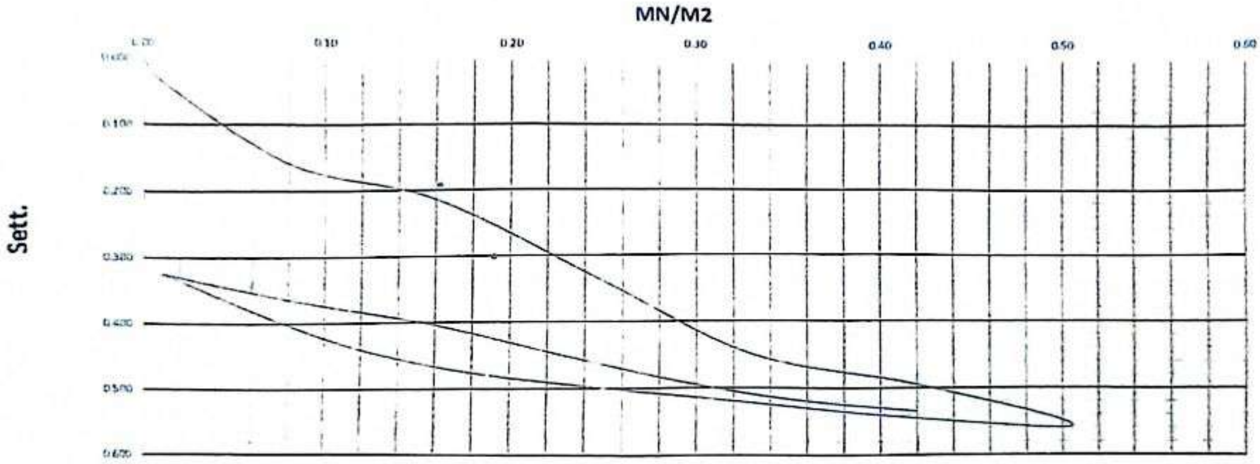
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name : Hassan
Sign :	Sign :	Sign : 16/8/2023

Owner Consultant | Contractor Consultant | Contarctor | Owner

Plate Load Test Results

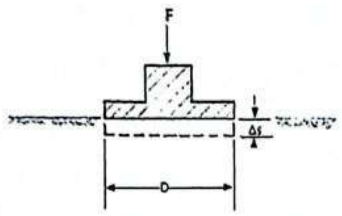
Company Name	AL ANOD		
Location	525+600	To	525+700
Taste Date	13-08-2023		
Layer level	**sub ballast +0.90**		

Station	525+665

EQUIPMENT AND TEST PROCEDURE :-

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

ds = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.98	19.98		0.020	0.020		0.020
2.000	17.1	5.652	0.08	19.94	19.92		0.060	0.080		0.070
0.080	34.2	11.304	0.16	19.90	19.85		0.100	0.150		0.125
4.000	53.3	17.663	0.25	19.82	19.77		0.180	0.230		0.205
5.000	70.5	23.315	0.33	19.75	19.53		0.250	0.470		0.360
6.000	89.8	29.673	0.42	19.66	19.36		0.340	0.640		0.490
7.000	106.8	35.325	0.50	19.61	19.22		0.390	0.777		0.584
8.000	53.4	17.663	0.25	19.65	19.38		0.350	0.620		0.485
9.000	26.7	8.831	0.12	19.70	19.45		0.300	0.550		0.425
9.000	2.1	0.707	0.01	19.76	19.58		0.240	0.420		0.330
10.000	2.1	0.707	0.01	19.76	19.58		0.240	0.420		0.330
11.000	17.1	5.652	0.08	19.75	19.56		0.250	0.440		0.345
12.000	34.2	11.304	0.16	19.73	19.52		0.270	0.480		0.375
13.000	53.3	17.663	0.25	19.67	19.44		0.330	0.560		0.445
14.000	70.5	23.315	0.33	19.61	19.32		0.390	0.680		0.535
15.000	89.8	29.673	0.42	19.58	19.26		0.420	0.740		0.580

		s	ΔS	Δσ
$0.7\ \sigma_1$	0.35	0.40819	0.29006	0.2
$0.3\ \sigma_1$	0.15	0.11813		
$0.7\sigma_2$	0.35	0.545	0.185	0.2
$0.3\sigma_2$	0.15	0.36		
D (mm)	300			
Ev_1	155.14			
Ev_2	243.25			
Area (Sq.m)	0.07065			

Ev2/Ev1	1.57		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

E_v = deformation modulus

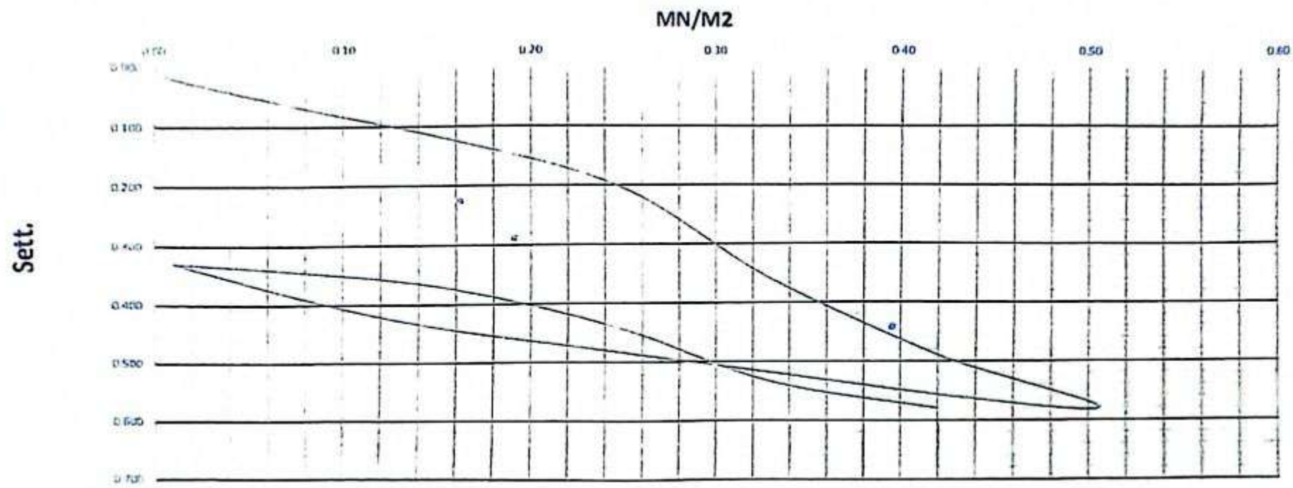
$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

720

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name : Hassan
Sign :	Sign :	Sign : 16/8/2023

Owner Consultant | Contractor Consultant | Contarctor | الهيئة القومية للأنفاق Owner

Plate Load Test Results

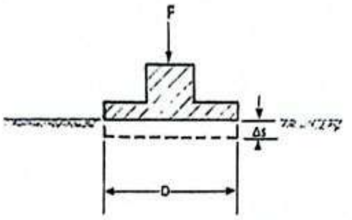
Company Name	AL ANOD		
Location	525+600	To	525+700
Taste Date	13-08-2023		
Layer level	**sub ballast +0.90**		

Station	525+685

EQUIPMENT AND TEST PROCEDURE :-

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter *D* of the plate is generally 0.30 m. For very coarse grained material also plates with diameter *D* = 0.60 m and *D* = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.97	19.98		0.030	0.020		0.025
2.000	17.1	5.652	0.08	19.93	19.90		0.070	0.100		0.085
0.080	34.2	11.304	0.16	19.85	19.84		0.150	0.160		0.155
4.000	53.3	17.663	0.25	19.80	19.70		0.200	0.300		0.250
5.000	70.5	23.315	0.33	19.70	19.69		0.300	0.310		0.305
6.000	89.8	29.673	0.42	19.65	19.63		0.350	0.370		0.360
7.000	106.8	35.325	0.50	19.62	19.62		0.380	0.380		0.380
8.000	53.4	17.663	0.25	19.64	19.64		0.360	0.360		0.360
9.000	26.7	8.831	0.12	19.71	19.70		0.290	0.300		0.295
9.000	2.1	0.707	0.01	19.77	19.76		0.230	0.240		0.235
10.000	2.1	0.707	0.01	19.77	19.76		0.230	0.240		0.235
11.000	17.1	5.652	0.08	19.76	19.74		0.240	0.260		0.250
12.000	34.2	11.304	0.16	19.72	19.70		0.280	0.300		0.290
13.000	53.3	17.663	0.25	19.67	19.66		0.330	0.340		0.335
14.000	70.5	23.315	0.33	19.61	19.60		0.390	0.400		0.395
15.000	89.8	29.673	0.42	19.57	19.55		0.430	0.450		0.440

		s	ΔS	Δσ
$0.7\,\sigma_1$	0.35	0.3425	0.19625	0.2
$0.3\,\sigma_1$	0.15	0.14625		
$0.7\sigma_2$	0.35	0.405	0.14	0.2
$0.3\sigma_2$	0.15	0.265		
D (mm)	300			
Ev_1	229.30			
Ev_2	321.43			
Area (Sq.m)	0.07065			

Ev2/Ev1	1.40 ✓	

$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$

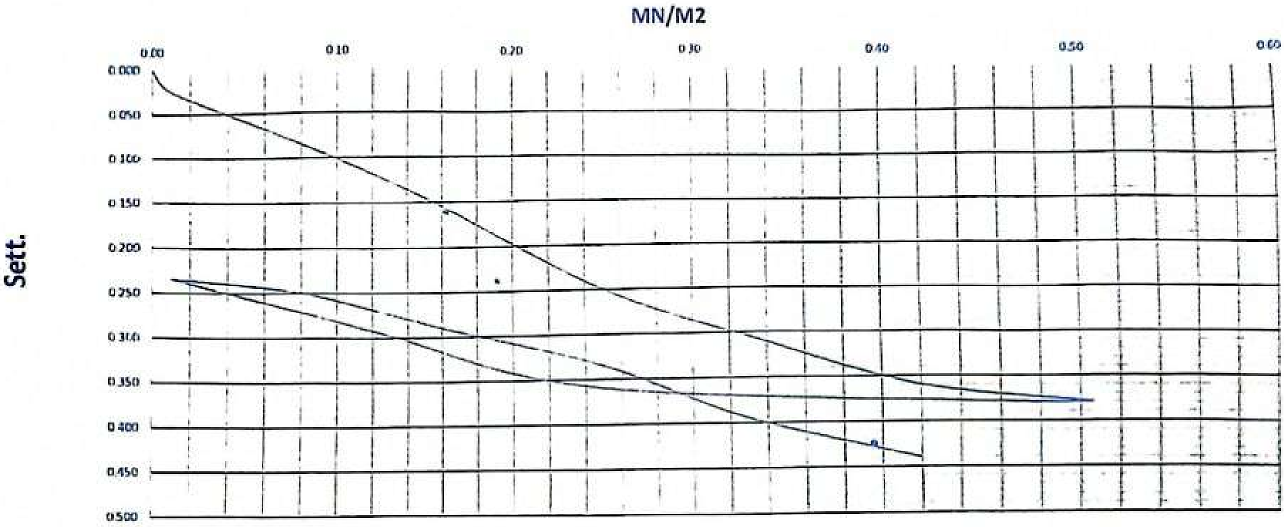
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name : Hassan
Sign :	Sign :	Sign : 16 / 8 / 2023

Owner Consultant | Contrnctor Consultant | Contarctor | Owner الهيئة القومية للأنفاق

Plate Load Test Results

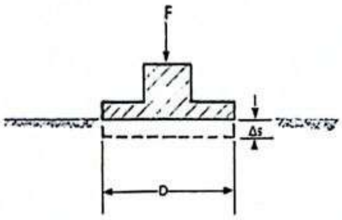
Company Name	AL ANOD		
Location	525+700	To	525+820
Taste Date	13-08-2023		
Layer level	**sub ballast +0.90**		

Station	525+720

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter *D* of the plate is generally 0.30 m. For very coarse grained material also plates with diameter *D* = 0.60 m and *D* = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.98	19.88		0.020	0.120		0.070
2.000	17.1	5.652	0.08	19.95	19.33		0.050	0.667		0.359
0.080	34.2	11.304	0.16	19.80	19.03		0.200	0.970		0.585
4.000	53.3	17.663	0.25	19.70	18.80		0.300	1.200		0.750
5.000	70.5	23.315	0.33	19.65	18.50		0.350	1.500		0.925
6.000	89.8	29.673	0.42	19.61	18.37		0.390	1.630		1.010
7.000	106.8	35.325	0.50	19.56	18.16		0.440	1.840		1.140
8.000	53.4	17.663	0.25	19.59	18.23		0.410	1.773		1.092
9.000	26.7	8.831	0.12	19.63	18.30		0.370	1.700		1.035
9.000	2.1	0.707	0.01	19.74	18.50		0.260	1.500		0.880
10.000	2.1	0.707	0.01	19.74	18.50		0.260	1.500		0.880
11.000	17.1	5.652	0.08	19.73	18.45		0.270	1.550		0.910
12.000	34.2	11.304	0.16	19.69	18.35		0.310	1.650		0.980
13.000	53.3	17.663	0.25	19.65	18.28		0.350	1.720		1.035
14.000	70.5	23.315	0.33	19.61	18.25		0.390	1.750		1.070
15.000	89.8	29.673	0.42	19.55	18.19		0.450	1.810		1.130

		s	ΔS	Δσ
$0.7\,\sigma_1$	0.35	0.89625	0.33956	0.2
$0.3\,\sigma_1$	0.15	0.55669		
$0.7\sigma_2$	0.35	1.08333	0.14333	0.2
$0.3\sigma_2$	0.15	0.94		
D (mm)	300			
Ev_1	132.52			
Ev_2	313.96			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.37		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

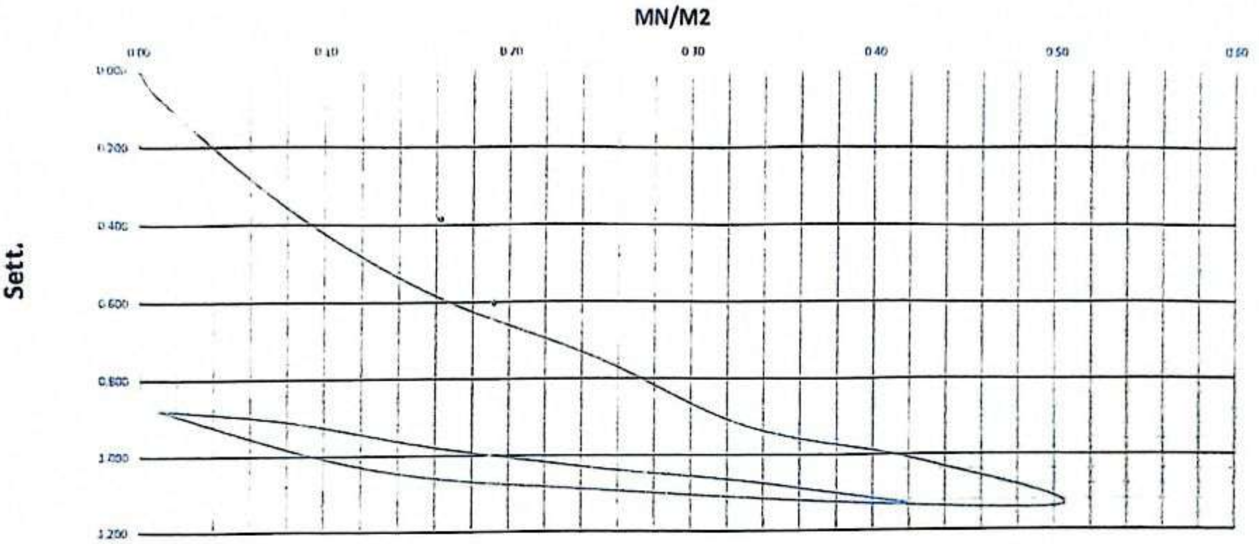
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name : Hassan
Sign :	Sign :	Sign : 16/8/2023

Owner Consultant | Contractor Consultant | Contarctor | Owner

Plate Load Test Results

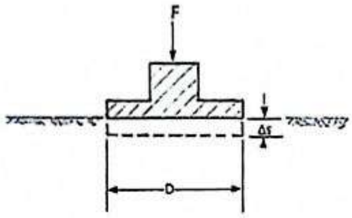
Company Name	AL ANOD		
Location	525+700	To	525+820
Taste Date	13-08-2023		
Layer level	**sub ballast +0.90**		

Station	525+740

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett. 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.98	19.97		0.020	0.030		0.025
2.000	17.1	5.652	0.08	19.88	19.75		0.120	0.250		0.185
0.080	34.2	11.304	0.16	19.75	19.56		0.250	0.440		0.345
4.000	53.3	17.663	0.25	19.54	19.34		0.460	0.660		0.560
5.000	70.5	23.315	0.33	19.44	19.24		0.560	0.760		0.660
6.000	89.8	29.673	0.42	19.34	19.07		0.660	0.930		0.795
7.000	106.8	35.325	0.50	19.20	18.90		0.800	1.100		0.950
8.000	53.4	17.663	0.25	19.26	19.03		0.740	0.970		0.855
9.000	26.7	8.831	0.12	19.31	19.10		0.690	0.900		0.795
9.000	2.1	0.707	0.01	19.48	19.30		0.520	0.700		0.610
10.000	2.1	0.707	0.01	19.48	19.30		0.520	0.700		0.610
11.000	17.1	5.652	0.08	19.44	19.26		0.560	0.740		0.650
12.000	34.2	11.304	0.16	19.33	19.20		0.670	0.800		0.735
13.000	53.3	17.663	0.25	19.31	19.13		0.690	0.870		0.780
14.000	70.5	23.315	0.33	19.24	19.05		0.760	0.950		0.855
15.000	89.8	29.673	0.42	19.18	19.00		0.820	1.000		0.910

		s	ΔS	Δσ
$0.7\sigma_1$	0.35	0.65937	0.33437	0.2
$0.3\sigma_1$	0.15	0.325		
$0.7\sigma_2$	0.35	0.86722	0.17722	0.2
$0.3\sigma_2$	0.15	0.69		
D (mm)	300			
Ev_1	134.58			
Ev_2	253.92			
Area (Sq.m)	0.07065			

Ev2/Ev1	1.89		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

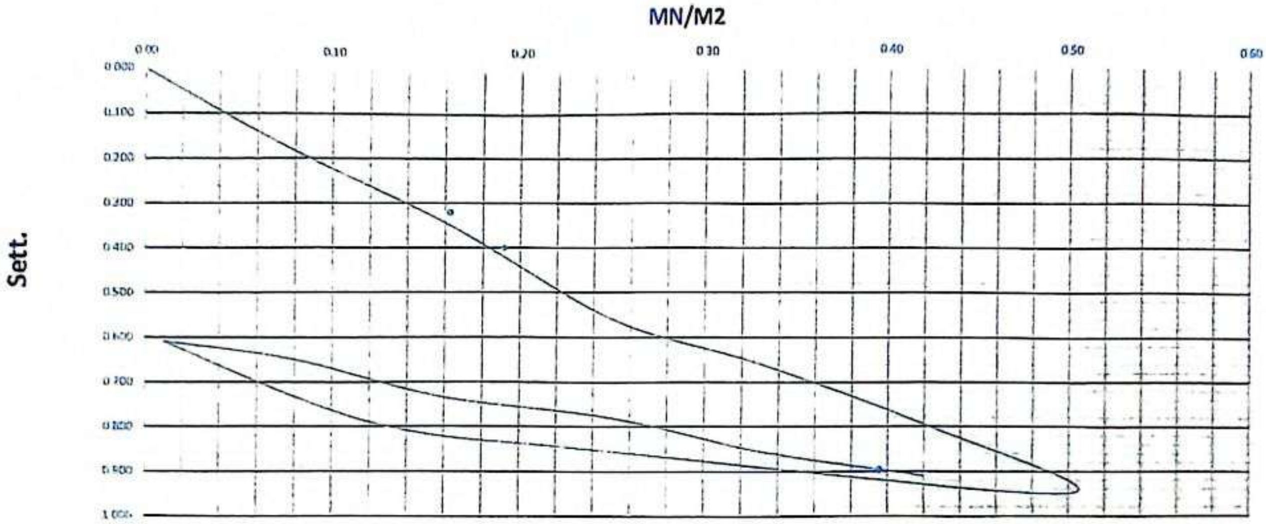
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name : Hassan
Sign :	Sign :	Sign : 16/8/2023

Owner Consultant | Contractor Consultant | Contarctor | الهيئة القومية للأنفاق Owner

Plate Load Test Results

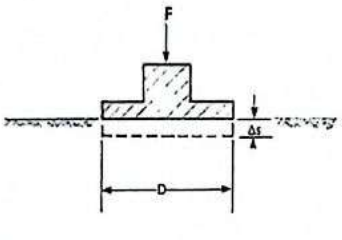
Company Name	AL ANOD		
Location	525+700	To	525+820
Taste Date	13-08-2023		
Layer level	**sub ballast +0.90**		

Station	525+760

EQUIPMENT AND TEST PROCEDURE :-

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett. 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.97	19.98		0.030	0.020		0.025
2.000	17.1	5.652	0.08	19.91	19.95		0.090	0.050		0.070
0.080	34.2	11.304	0.16	19.80	19.86		0.200	0.140		0.170
4.000	53.3	17.663	0.25	19.70	19.76		0.300	0.240		0.270
5.000	70.5	23.315	0.33	19.61	19.68		0.390	0.320		0.355
6.000	89.8	29.673	0.42	19.56	19.57		0.440	0.430		0.435
7.000	106.8	35.325	0.50	19.48	19.50		0.520	0.500		0.510
8.000	53.4	17.663	0.25	19.53	19.56		0.470	0.440		0.455
9.000	26.7	8.831	0.12	19.59	19.61		0.410	0.390		0.400
9.000	2.1	0.707	0.01	19.70	19.72		0.300	0.280		0.290
10.000	2.1	0.707	0.01	19.70	19.72		0.300	0.280		0.290
11.000	17.1	5.652	0.08	19.68	19.69		0.320	0.310		0.315
12.000	34.2	11.304	0.16	19.66	19.66		0.340	0.340		0.340
13.000	53.3	17.663	0.25	19.60	19.61		0.400	0.390		0.395
14.000	70.5	23.315	0.33	19.55	19.58		0.450	0.420		0.435
15.000	89.8	29.673	0.42	19.50	19.53		0.500	0.470		0.485

		s	ΔS	Δσ
0.7 σ_1	0.35	0.36938	0.21188	0.2
0.3 σ_1	0.15	0.1575		
0.7σ_2	0.35	0.44611	0.10611	0.2
0.3σ_2	0.15	0.34		
D (mm)	300			
Ev_1	212.39			
Ev_2	424.09			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.00		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

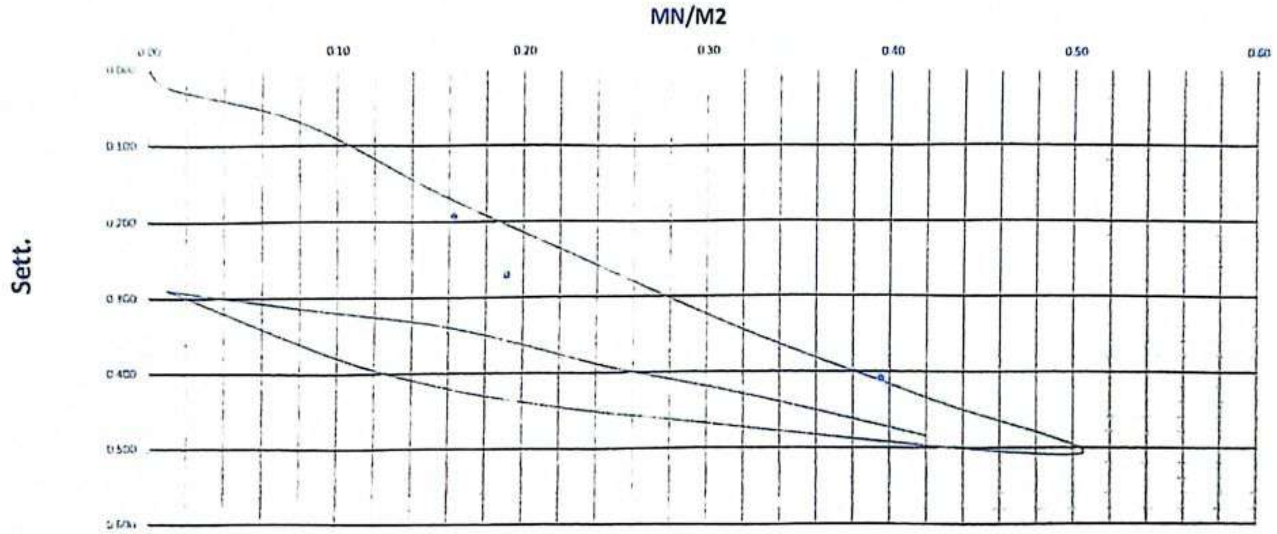
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name : Hassan
Sign :	Sign :	Sign : 16/8/2023

Owner Consultant | Contractor Consultant | Contarctor | Owner

Plate Load Test Results

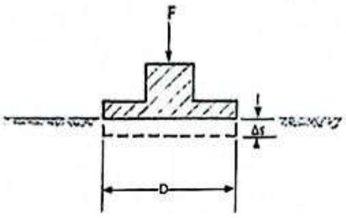
Company Name	AL ANOD		
Location	525+700	To	525+820
Taste Date	13-08-2023		
Layer level	**sub ballast +0.90**		

Station	525+785

EQUIPMENT AND TEST PROCEDURE :-

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

Δs = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett . 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.91	19.93		0.090	0.070		0.080
2.000	17.1	5.652	0.08	19.65	19.78		0.350	0.220		0.285
0.080	34.2	11.304	0.16	19.30	19.63		0.700	0.370		0.535
4.000	53.3	17.663	0.25	19.07	19.50		0.930	0.500		0.715
5.000	70.5	23.315	0.33	18.80	19.46		1.200	0.540		0.870
6.000	89.8	29.673	0.42	18.56	19.38		1.440	0.620		1.030
7.000	106.8	35.325	0.50	18.29	19.26		1.711	0.740		1.226
8.000	53.4	17.663	0.25	18.31	19.29		1.690	0.710		1.200
9.000	26.7	8.831	0.12	18.39	19.33		1.610	0.670		1.140
9.000	2.1	0.707	0.01	18.55	19.39		1.450	0.610		1.030
10.000	2.1	0.707	0.01	18.55	19.39		1.450	0.610		1.030
11.000	17.1	5.652	0.08	18.54	19.36		1.460	0.640		1.050
12.000	34.2	11.304	0.16	18.48	19.30		1.520	0.700		1.110
13.000	53.3	17.663	0.25	18.41	19.30		1.590	0.700		1.145
14.000	70.5	23.315	0.33	18.30	19.27		1.700	0.730		1.215
15.000	89.8	29.673	0.42	18.23	19.21		1.770	0.790		1.280

		s	ΔS	Δσ
$0.7\,\sigma_1$	0.35	0.85894	0.35519	0.2
$0.3\,\sigma_1$	0.15	0.50375		
$0.7\sigma_2$	0.35	1.22944	0.15944	0.2
$0.3\sigma_2$	0.15	1.07		
D (mm)	300			
Ev_1	126.69			
Ev_2	282.23			
Area (Sq.m)	0.07065			

Ev2/Ev1	2.23		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

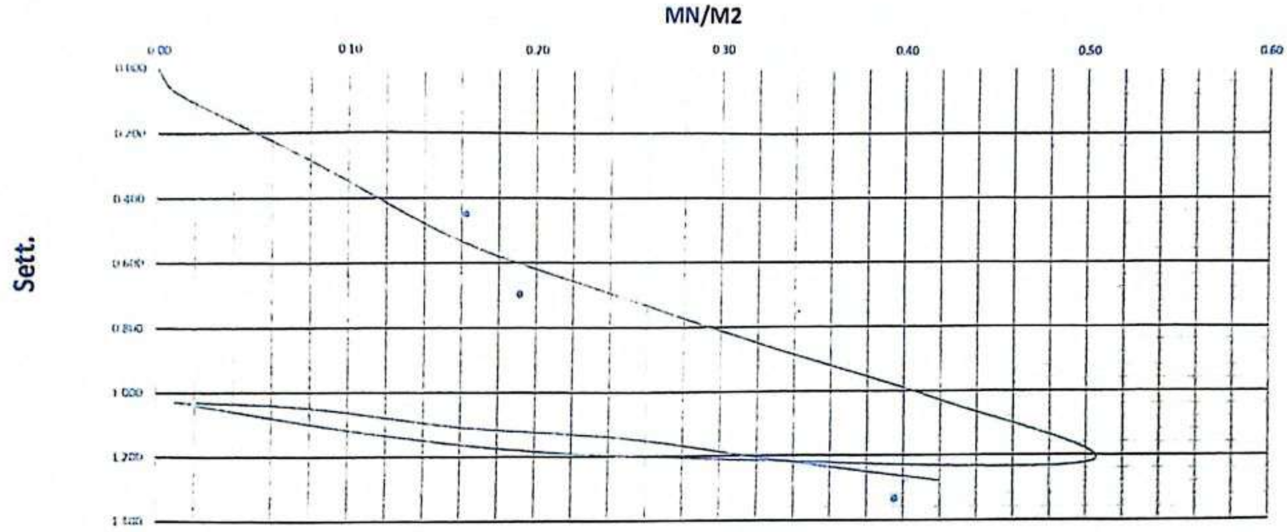
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name : Hassan
Sign :	Sign :	Sign : 16/8/2023

Owner Consultant | Contractor Consultant | Contarctor | Owner

Plate Load Test Results

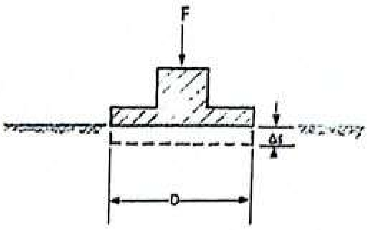
Company Name	AL ANOD		
Location	525+700	To	525+820
Taste Date	13-08-2023		
Layer level	**sub ballast +0.90**		

Station	525+815

EQUIPMENT AND TEST PROCEDURE : -

The basis of the given equation is Boussinesq's theory of the relationship between the modulus of elasticity and the settlement of a circular rigid plate with the diameter D.

The load is applied to a circular rigid steel bearing plate by a hydraulic jack in several steps. The settlement under each load step is recorded. The following sketch shows the principle of the test.



F = load

ds = settlement

D = diameter of the plate

The diameter D of the plate is generally 0.30 m. For very coarse grained material also plates with diameter D = 0.60 m and D = 0.762 m are used

The load is applied in 6 load increments of equal size. Under each load step the settlement must come to a noticeable end (< 0.02 mm/minute). After the maximum load is reached the unloading procedure can begin. After that, the plate is reloaded in 5 steps. A loaded truck, an excavator or a roller usually serve as counterweight for the hydraulic jack

Diameter = 300mm

Loading	Load	Load	Stress	Dial 1	Dial 2	Dial 3	Sett. 1	Sett. 2	Sett. 3	Avg. Sett.
Stage No.	Bar	KN	MN/M2	mm	mm	mm	mm	mm	mm	mm
0.000	0.0	0.000	0.00	20.00	20.00		0.000	0.000		0.000
1.000	2.1	0.707	0.01	19.95	19.98		0.050	0.020		0.035
2.000	17.1	5.652	0.08	19.67	19.95		0.330	0.050		0.190
0.080	34.2	11.304	0.16	19.42	19.83		0.580	0.170		0.375
4.000	53.3	17.663	0.25	19.23	19.78		0.770	0.220		0.495
5.000	70.5	23.315	0.33	19.03	19.73		0.970	0.270		0.620
6.000	89.8	29.673	0.42	18.84	19.70		1.160	0.300		0.730
7.000	106.8	35.325	0.50	18.67	19.68		1.330	0.320		0.825
8.000	53.4	17.663	0.25	18.75	19.73		1.250	0.270		0.760
9.000	26.7	8.831	0.12	18.84	19.87		1.160	0.130		0.645
9.000	2.1	0.707	0.01	19.01	19.97		0.990	0.030		0.510
10.000	2.1	0.707	0.01	19.01	19.97		0.990	0.030		0.510
11.000	17.1	5.652	0.08	18.95	19.95		1.050	0.050		0.550
12.000	34.2	11.304	0.16	18.90	19.87		1.100	0.130		0.615
13.000	53.3	17.663	0.25	18.80	19.85		1.200	0.150		0.675
14.000	70.5	23.315	0.33	18.74	19.80		1.260	0.200		0.730
15.000	89.8	29.673	0.42	18.70	19.75		1.300	0.250		0.775

		s	ΔS	Δσ
0.7 σ_1	0.35	0.64688	0.295	0.2
0.3 σ_1	0.15	0.35188		
0.7σ_2	0.35	0.74	0.15	0.2
0.3σ_2	0.15	0.59		
D (mm)	300			
Ev_1	152.54			
Ev_2	300.01			
Area (Sq.m)	0.07065			

Ev2/Ev1	1.97		

$$E_v = 0.75 \cdot D \cdot \Delta\sigma / \Delta s$$

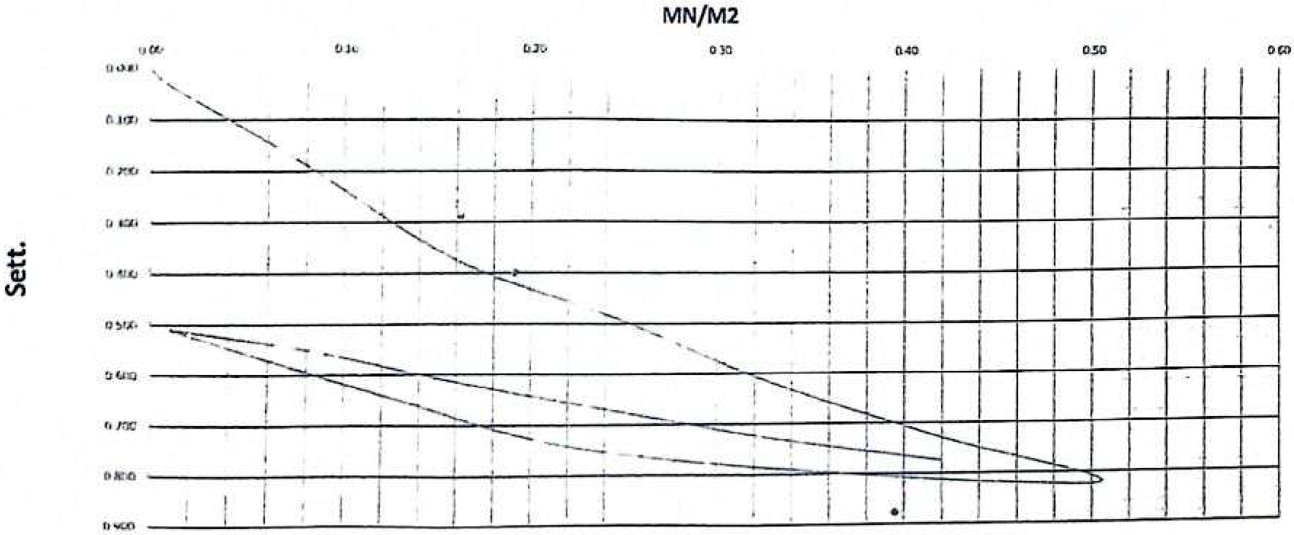
E_v = deformation modulus

$\Delta\sigma$ = load increment

Δs = settlement increment

D = diameter of the plate, generally 0.30 m

For this calculation $\Delta\sigma$ and Δs are usually taken from the load span between 0.3 σ_{max} and 0.7 σ_{max}.



Lab. Specialist	Lab. Engineer	Consultant Engineer
Name :	Name : Ahmed Haleem	Name : Hassan
Sign :	Sign :	Sign : 16/8/2023

CamScanner الممسوحة ضوئيا بـ