Compression Test,

Tension Test and

Lateral Test

METHOD OF STATEMENT FOR STATIC LOADING TEST

According to the American Standards

ASTM D1143-07, ASTM D3689-07, ASTM D3966-07 and Euro Codes EC7

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Introduction

The **S**tatic **L**oading **T**est (**SLT**) involves the direct measurement of pile head displacement in the response to a physically applied test load. It is the most fundamental form of pile load test and
is considered as the bench-mark of pile performance. Testing has been performed in the load range 10 ton to 2000 ton.

Types of Static Load Tests

The SLT may be carried out for the following load configurations:

- **Compression**
- **Tension (i.e. uplift)**
- **Lateral**

Scope of Work

For the SLT the load is most commonly applied via a jack acting against a reaction beam, which is restrained by an anchorage system or by jacking up against a reaction mass (“Kentledge” or dead weight). The anchorage system may be in the form of cable anchors or reaction piles installed into the ground to provide tension resistance. The nominated test load is usually applied in a series of increments in accordance with the appropriate Code, or with a pre-determined load testing specification for a project. Each load increment is sustained for a specified time period, or until the rate of pile movement is less than a nominated value.
Static load testing methods are applicable to all pile types, on land or over water, and may be carried out on either Working piles or sacrificial Preliminary piles. Trial piles are specifically constructed for the purpose of carrying out load tests and therefore, are commonly loaded to failure. Testing of working piles however, is limited to prove that a pile will perform satisfactorily at the serviceability or design load, plus an overload to demonstrate that the pile has some (nominated) reserve capacity.

1. Static Load Testing (Compression)

This vertical compression pile maintained load test is usually carried out to ensure the structural and geotechnical soundness of the pile and also to predict settlement of other piles. The usual procedure is to increase the load in stages until the proposed working load and a certain factor of safety is reached and then to unload and to leave the load off until the rise or rebound substantially ceases. The pile may be tested in three standards cycles:

- The 1st cycle tests the pile to its 150% of the Design Load.
- The 2nd cycle tests the pile to its 200% of the Design Load.
- The 3rd cycle tests the pile to its ultimate load, defined as 250% -300% of its Design Load.

This pile shall be installed in accordance with good normal practice and without special care so as to simulate conditions close to normal working pile.

Varieties of test procedures have been developed for carrying pile load; among the most common procedures for pile load test are:

A. Kentledge System (for compression test only)

B. Reaction Frame System (for both tension and compression)

Pile Compression Load Test by Kentledge System or Reaction Frame System

i. General

The compression test using either the reaction frame or Kentledge system is undertaken on a test pile concurrent with the construction of the main piling works or for a preliminary pile outside the site. The test is used to validate the pile design.

ii. Frequency

The frequency of this test is one pile to represent the entire site including current and future pile installation. Engineer may increase no. of piles (Tests) as required.

iii. Prerequisite

The static axial capacity of piles typically changes as time elapses after pile installation, possibly increasing (setup) or decreasing (relaxation), depending on the soil or rock properties and the pore water pressure and soil structure disturbance induced by installation. This behavior may affect both driven piles and cast-in-place piles. The Engineer may specify a waiting period between pile installation and static testing to investigate time effects. The waiting period may range from 3 to 30 days, or longer, based on testing (for example re-driving piles) or prior experience. Also the concrete to be sufficiently hardened. This can be confirmed by the concrete test cube reports.

iv. Method

The pile head shall be prepared usually with casing (for cast in situ piles) to be above the ground by a sufficient length or a minimum of 300mm.

A. Assemble the Kentledge system as shown in the diagram with sufficient care when stacking and placing the I-beams the geometry of the arrangement should also aim to minimize interaction between the test pile, reaction system and reference beam supports. Allow a 10% to 20% margin on the capacity of the reaction against maximum test load.

Install two or more reaction piles, or anchors, for the reaction frame after the installation of the test pile. For driven piles, locate these reaction piles not less than (3 m) or the sum of 5 reaction pile diameters and 5 test pile diameters (whichever of the two criteria is the greater distance) from the test pile or reference beam supports. For drilled shafts or micro piles, locate these reaction piles not less than (3 m) or 5 reaction pile diameters (whichever of the two criteria is the greater distance) from the test pile or reference beam supports. These distances are measured between the faces of the test pile and reaction piles. Anchors, if used, must be designed with sufficient free length so as not to interfere with the load test pile or the reference system. Design the reaction frame and reaction piles to resist four times the pile design load indicated in the contract documents without undergoing a magnitude of deflection exceeding 75 percent of maximum travel of the jack.

B. A hydraulic jack and reacting against a set of steel beams tied to anchor piles is placed.

C. Fix (4 or 2) nos. Dial gauges on an independent ‘frame’ to measure the pile head displacement.

D. Movement of the pile head shall be measured using the dial gauge and checked with a leveling instrument and scale rules fixed to their holders. The scale rule shall have an accuracy of 1mm, visually interpretable to 0.5mm.

E. All testing equipment shall be protected from unnecessary disturbance prior to and throughout the load test.

F. The loading sequence shall follow the client’s specification including the step and duration.

G. Records shall be kept promptly throughout the testing period. A copy shall be extended to the Superintending Officer at the end of the test.

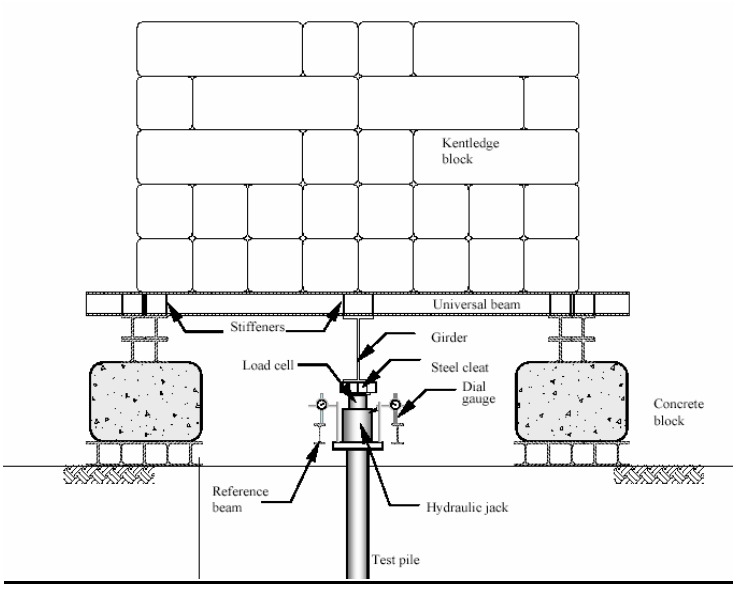

Diagram of Compression Load Test Setup using Kentledge System

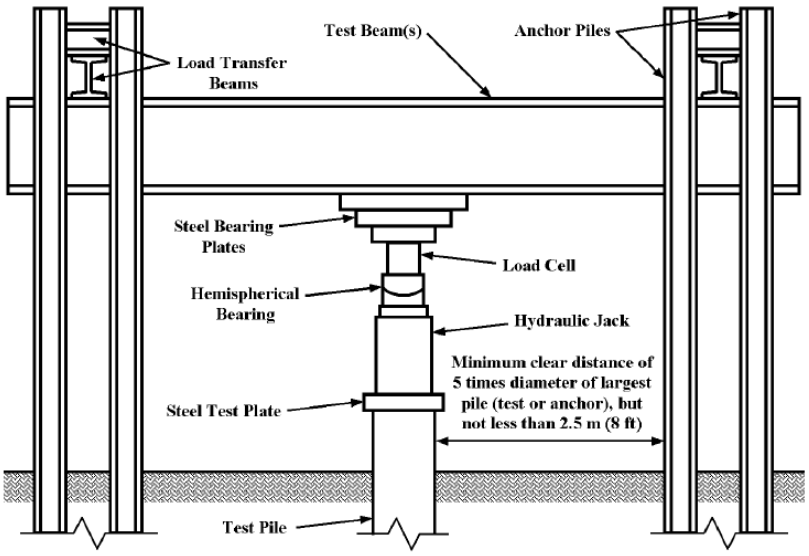

Diagram of Compression Load Test Setup using Reaction Frame System

v. Loading Sequence for Compression Testing

The Maintained Load Test Procedure for Compression will be used as follows

200% of the Designed Load
ASTM D1144-07

% of Designed Load	Minimum time of load holding	Reading Interval
0 %	-	-
25 %	1 hr.	10 min.
50 %	1 hr.	10 min.
75 %	1 hr.	10 min.
100 %	1 hr.	10 min.
125 %	1 hr.	10 min.
150 %	1 hr.	10 min.
175 %	1 hr.	10 min.
200 %	12 hr.	1 hr.
150 %	1 hr.	20 min.
100%	1 hr.	20 min.
50 %	1 hr.	20 min.
0 %	1 hr.	20 min.

300% of the Designed Load
ASTM D1144-07

% of Designed Load	Minimum time of load holding	Reading Interval
0 %	-	-
25 %	1 hr.	10 min.
50 %	1 hr.	10 min.
75 %	1 hr.	10 min.
100%	1 hr.	10 min.
125 %	1 hr.	10 min.
150 %	1 hr.	10 min.
175 %	1 hr.	10 min.
200 %	12 hr.	1 hr.
150 %	1 hr.	20 min.
100%	1 hr.	20 min.
50 %	1 hr.	20 min.
0 %	1 hr.	20 min.
50 %	20 min.	10 min.
100%	20 min.	10 min.
150%	20 min.	10 min.
200%	20 min.	10 min.
210%	20 min.	10 min.
220%	20 min.	10 min.
230%	20 min.	10 min.
240%	20 min.	10 min.
250%	20 min.	10 min.
260%	20 min.	10 min.
270%	20 min.	10 min.
280%	20 min.	10 min.
290%	20 min.	10 min.
300%	2 hr.	10 min.
225%	20 min.	10 min.
150%	20 min.	10 min.
75%	20 min.	10 min.
0%	20 min.	10 min.

150% of the Designed Load
Euro Code 7 (EC7)

% of Designed Load	Minimum time of holding load
0 %	
25 %	30 min.
50 %	30 min.
75 %	30 min.
100 %	6 hours
75 %	10 min.
50 %	10 min.
25 %	10 min.
0 %	1 hour
100 %	1 hour
125 %	1 hour
150 %	6 hours
125 %	10 min.
100 %	10 min.
75 %	10 min.
50 %	10 min.
25%	10 min.
0%	1 hour

250% of the Designed Load
Euro Code 7 (EC7)

% of Designed Load	Minimum time of holding load
0 %	
25 %	30 min.
50 %	30 min.
75 %	30 min.
100 %	6 hours
75 %	10 min.
50 %	10 min.
25 %	10 min.
0 %	1 hour
100 %	1 hour
125 %	1 hour
150 %	6 hours
125 %	10 min.
100 %	10 min.
75 %	10 min.
50 %	10 min.
25%	10 min.
0%	1 hour
100 %	30 min.
150 %	30 min.
175 %	30 min.
200 %	30 min.
225 %	30 min.
250 %	6 hours
150 %	10 min.
100 %	10 min.
50 %	10 min.
0 %	10 min.

Following each application of an increment of load the load shall be held for not less than the period shown in the above table .For any period when the load is constant, time and settlement shall be recorded immediately on reaching the load and prior to the next step of load.

2. Static Load Testing (Tension)

i. General

Field tests provide the most reliable relationship between the axial load applied to a deep foundation and the resulting axial movement. Test results may also provide information used to assess the distribution of side shear resistance along the pile shaft and the long-term load-deflection behavior. A foundation designer may evaluate the test results to determine if, after applying an appropriate factor of safety, the pile or pile group has an ultimate static capacity and a deflection at service load satisfactory to support a specific foundation. When performed as part of a multiple-pile test program, the designer may also use the results to assess the viability of different piling types and the variability of the test site.

ii. Frequency

The frequency of this test is one pile to represent the entire site including current and future pile installation. Engineer may increase no. of piles (Tests) as required.

iii. Prerequisite

The static axial capacity of piles typically changes as time elapses after pile installation, possibly increasing (setup) or decreasing (relaxation), depending on the soil or rock properties and the pore water pressure and soil structure disturbance induced by installation. This behavior may affect both driven piles and cast-in-place piles. The Engineer may specify a waiting period between pile installation and static testing to investigate time effects. The waiting period may range from 3 to 30 days, or longer, based on testing (for example re-driving piles) or prior experience. Also the concrete to be sufficiently hardened. This can be confirmed by the concrete test cube reports.

iv. Method

The pile head shall be prepared usually with casing (for cast in situ piles) to be above the ground by a sufficient length or a minimum of 300mm.

A. Prior to grouting the pile, 6-8 Nos of 0.6" anchor strands are embedded and tied to the last reinforcement cage of the pile at the top. The embedment or lap length of these anchor cables depend on the test load.

B. Install structural tension connectors extending from the test pile or pile cap, constructed of steel straps, bars, cables, and/or other devices bolted, welded, cast into, or otherwise firmly affixed to the test pile or pile cap to safely apply the maximum required tensile test load without slippage, rupture, or excessive elongation. Carefully inspect these tension members for any damage that may reduce their tensile capacity. Tension members with a cross-sectional area reduced by corrosion or damage, or material properties compromised by fatigue, bending, or excessive heat, may rupture suddenly under load. Do not use brittle materials for tension connections.

C. Place the hydraulic jack(s), hemispherical bearing(s), and bearing plates on top of the test beam(s). Center a reaction frame over the jack(s), and anchor it to the tension connections extending from the test pile or pile group. Design and construct the test beam(s), reaction frame, and reaction piles or cribbing, and arrange the jack(s) symmetrically so as to apply the resultant tensile load at, and parallel to, to the longitudinal axis of the test pile or pile group. Leave adequate clear space beneath the bottom flange(s) of the test beam(s) to allow for the maximum anticipated upward movement of the test pile or pile cap plus the deflection of the test beam(s).

D. Fix (4 or 2) nos. Dial gauges on an independent 'pipe frame' to measure the pile head displacement.

E. All testing equipment shall be protected from unnecessary disturbance prior to and throughout the load test.

F. The loading sequence shall follow the client's specification including the step and duration.

G. Records shall be kept promptly throughout the testing period. A copy shall be extended to the Superintending Officer at the end of the test.

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v. Loading Sequence for Tensile (Tension) Testing

The Maintained Load Test Procedure for tensile (Tension) will be used as follows

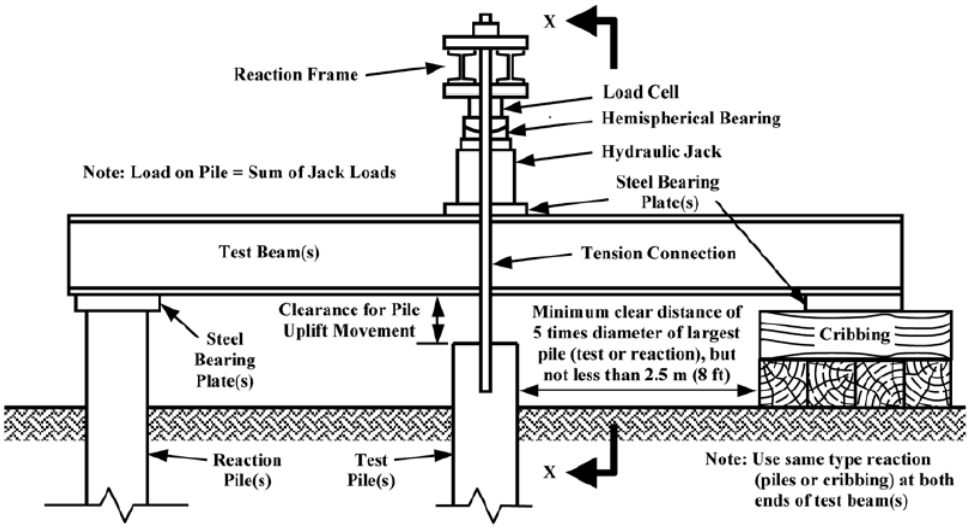
200% of the Designed Load (Tensile)
ASTM D3689 – 07

% of Designed Load	Minimum time of load holding	Reading Interval
0 %	-	-
25 %	1 hr.	10 min.
50 %	1 hr.	10 min.
75 %	1 hr.	10 min.
100 %	1 hr.	10 min.
125 %	1 hr.	10 min.
150 %	1 hr.	10 min.
175 %	1 hr.	10 min.
200 %	12 hr.	1 hr.
150 %	1 hr.	20 min.
100%	1 hr.	20 min.
50 %	1 hr.	20 min.
0 %	1 hr.	20 min.

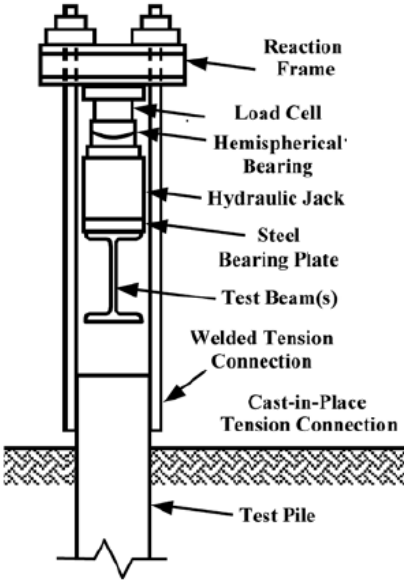
300% of the Designed Load (Tensile)
ASTM D3689 – 07

% of Designed Load	Minimum time of load holding	Reading Interval
0 %	-	-
25 %	1 hr.	10 min.
50 %	1 hr.	10 min.
75 %	1 hr.	10 min.
100%	1 hr.	10 min.
125 %	1 hr.	10 min.
150 %	1 hr.	10 min.
175 %	1 hr.	10 min.
200 %	12 hr.	1 hr.
150 %	1 hr.	20 min.
100%	1 hr.	20 min.
50 %	1 hr.	20 min.
0 %	1 hr.	20 min.
50 %	20 min.	10 min.
100%	20 min.	10 min.
150%	20 min.	10 min.
200%	20 min.	10 min.
210%	20 min.	10 min.
220%	20 min.	10 min.
230%	20 min.	10 min.
240%	20 min.	10 min.
250%	20 min.	10 min.
260%	20 min.	10 min.
270%	20 min.	10 min.
280%	20 min.	10 min.
290%	20 min.	10 min.
300%	2 hr.	10 min.
225%	20 min.	10 min.
150%	20 min.	10 min.
75%	20 min.	10 min.
0%	20 min.	10 min.

Following each application of an increment of load the load shall be held for not less than the period shown in the above table .For any period when the load is constant, time and settlement shall be recorded immediately on reaching the load and prior to the next step of load.



Section view of Tension Test Setup using reaction pile and a hydraulic jack.



View of Tension Test Setup system

3. Static Load Testing (Lateral)

i. General

This test method covers procedures for testing vertical and batter piles either individually or in groups to determine the load-deflection relationship when subjected to lateral loading. It is applicable to all deep foundation units regardless of their size or method

The actual lateral load capacity of the pile-soil system can best be determined by lateral testing. Such testing measures the response of the pile-soil system to lateral loads and may provide data for research and development, engineering design, quality control, and acceptance or rejection under specifications. Under the iterative elastic method of analysis that considers the nonlinear response of the soil, lateral testing combined with proper instrumentation can be used to determine soil properties necessary for the structural design of the pile to resist the lateral load to be applied

ii. Frequency

The frequency of this test is one pile to represent the entire site including current and future pile installation. Engineer may increase no. of piles (Tests) as required.

iii. Prerequisite

The Engineer may specify a waiting period between pile installation and static testing to investigate time effects. The waiting period may range from 3 to 30 days, or longer, based on the grouting to be sufficiently hardened. This can be confirmed by the grout test cube reports.

iv. Method

Lateral Load Test shall be performed when concrete has reached its required strength i.e. 28 days strength.

A. The Pile head to be chipped off up to 300mm above Cut-off- Level.

B. The test to be conducted at cut-off level.

C. The test area within a radius of (6 m) from the test pile or group shall be excavated or filled to the final grade elevation before testing the pile or pile group.

D. Lateral test loads shall be applied at approximately pile cut-off elevation.

E. Bearing plates shall be of adequate thickness to prevent bending under the applied load but shall not be less than (50mm) thick.

F. Lateral loads shall be applied using one or more hydraulic cylinders equipped with spherical bearings. If two or more hydraulic cylinders are to be used to apply the test load, they shall be of the same piston diameter, connected to a common manifold and pressure gage, and operated by a single hydraulic pump.

v. Loading Sequence for Lateral Testing

The Maintained Load Test Procedure for tensile (Tension) shall be used as follows

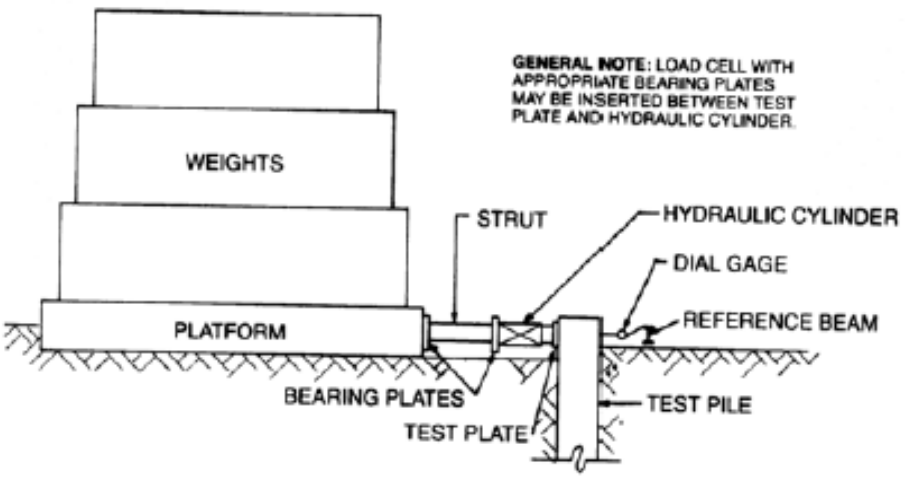
200% of the Designed Load
ASTM D3966 – 07

% of Designed Load	Minimum time of holding load
0 %	-
25 %	10 min.
50 %	10 min.
75 %	15 min.
100 %	20 min.
125 %	20 min.
150 %	20 min.
170 %	20 min.
180 %	20 min.
190 %	20 min.
200 %	60 min.
150 %	10 min.
100 %	10 min.
50 %	10 min.
0 %	10 min.

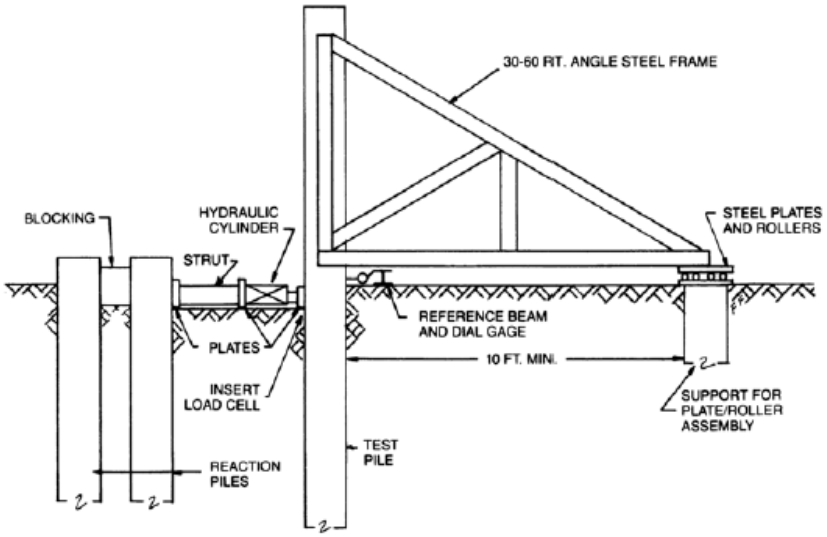
300% of the Designed Load
ASTM D3966 – 07

% of Designed Load	Minimum time of holding load
0 %	-
25 %	10 min.
50 %	10 min.
75 %	10 min.
100 %	10 min.
125 %	10 min.
150 %	10 min.
200 %	10 min.
210 %	15 min.
220 %	15 min.
230 %	15 min.
240 %	15 min.
250 %	15 min.
260 %	15 min.
270 %	15 min.
280 %	15 min.
290 %	15 min.
300 %	30 min.
225 %	10 min.
150 %	10 min.
75 %	10 min.
0 %	10 min.

Following each application of an increment of load the load shall be held for not less than the period shown in the above table .For any period when the load is constant, time and settlement shall be recorded immediately on reaching the load and prior to the next step of load.



Typical Set-ups for Applying Lateral Load with Conventional Hydraulic Jack



Example of Fixed-Head Test Set-up for Lateral Test on Individual Pile

TESTING APPARATUS

There are the minimum equipment shall be needed to complete the Static Loading Test

Kentledge System

Concrete brick of weight (5) ton, used as test load, with at least 10 % greater than the maximum anticipated test load. Not applicable in case of using frame reaction system method.

Reaction Beam

The main steel girder and Secondary girders will be laid across the test pile with system set up.

Hydraulic Jacks

Single acting Hydraulic Jacks (Different diameter) with Hydraulic Pump and Pressure measurement tools all calibrated.

Bearing stiffeners

Steel bearing plates are needed to spread the load from the outer perimeter of the jack(s), or the bearing surface of beams or boxes, to bear on the surface of the test pile or pile cap, also to spread the load between the jack(s), load cells, and hemispherical bearings, and to spread the load to the test beam(s), test pile, or pile cap. Bearing plates shall extend the full flange width of steel beams and the complete top area of piles, or as specified by the Engineer, so as to provide full bearing and distribution of the load

Dial gauges

Minimum tow dial gauges shall be provided to monitor the pile's head movements by mounting between the pile head and reference beams. The micrometer has a range of 0-100 mm (depending on the type of the test) and an accuracy of 0.01 mm.

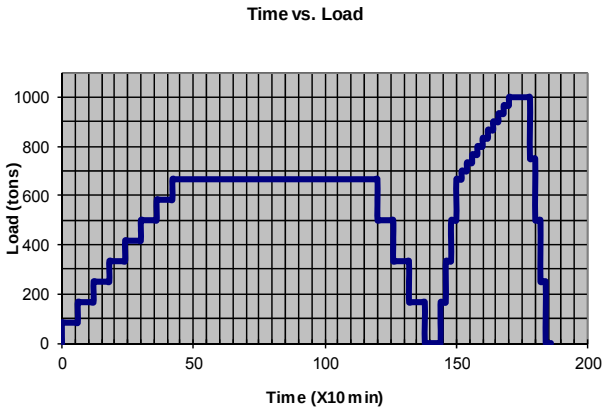
Reference Beam

Two reference beams (Steel channel) will be cross-connected and laid on support, firmly embedded in ground with one end fixed and the other end freed.

RESULTS OF TEST

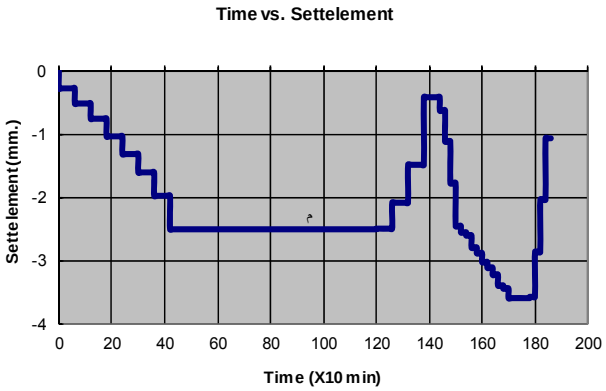
The test results will then be reported in the form of Time, load, and settlements

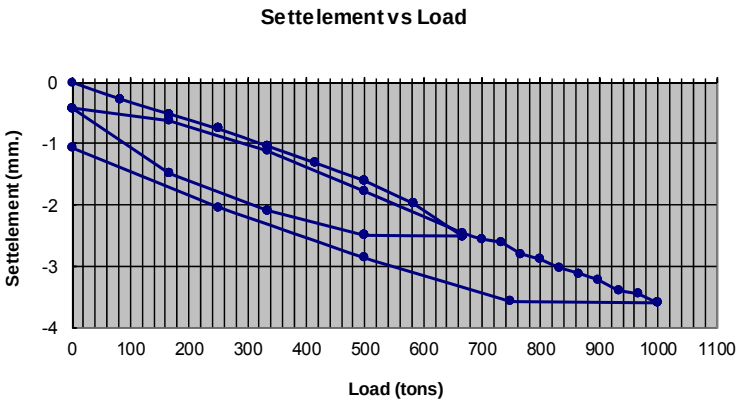
- Load vs. settlement curve.
- Time vs. settlement curve.
- Time vs. load curve.
- Report and recommendations on the ultimate pile capacity.
- Schedule of loading.
- Certification of calibration (Dial Gauges and Pressure measure)



Pile Test Results

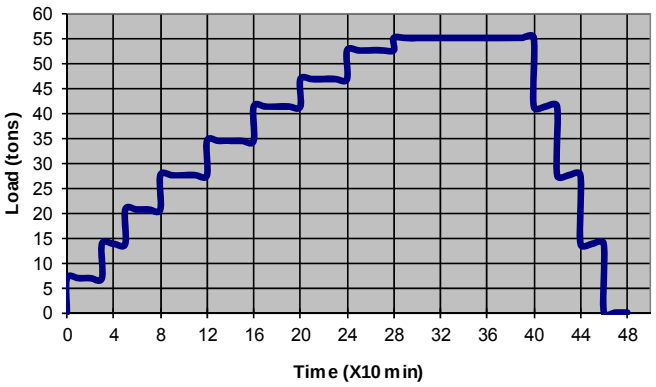
Site		Client	
Pile No.	Test pile No.1	Installation Date	20/12/2011
Type	Bored pile	Testing Date	23/01/2012
Pile Dimenssion	1.5 m dia	Working load	333 ton
Effective Length (m.)	28 m From N.G.L	Testing Load	666 - 1000 ton





Standard Graphical result for a compression test up to 1000 ton (300% of the designed load)

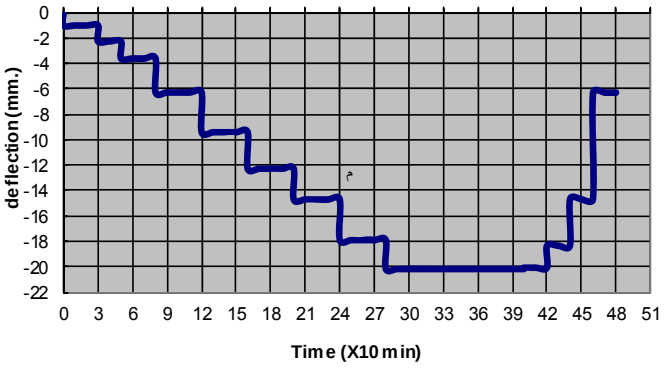
Time vs. Load



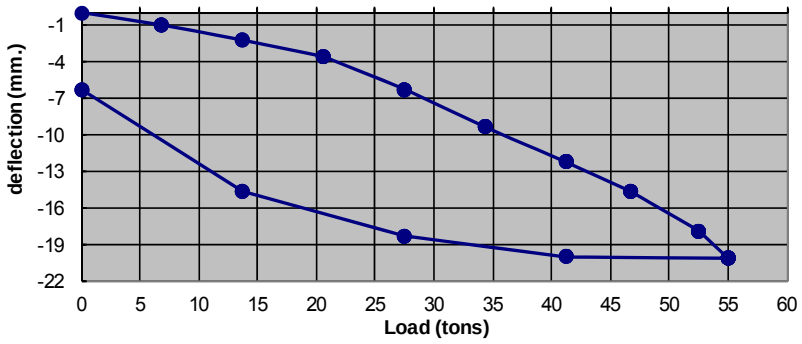
Pile Test Results

Site		Client	
Pile No.	T.P No. 3	Installation Date	13/8/2012
Type	Bore Pile	Testing Date	3/10/2012
Pile Dimenssion	100 cm dia	Working load	27.5 lateral
Effective Length (m.)	25 m From N.G.L	Testing Load	55 lateral

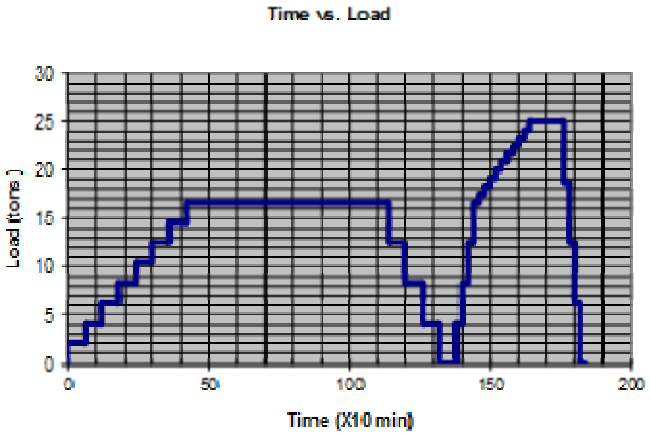
Time vs. deflection



deflection vs Load

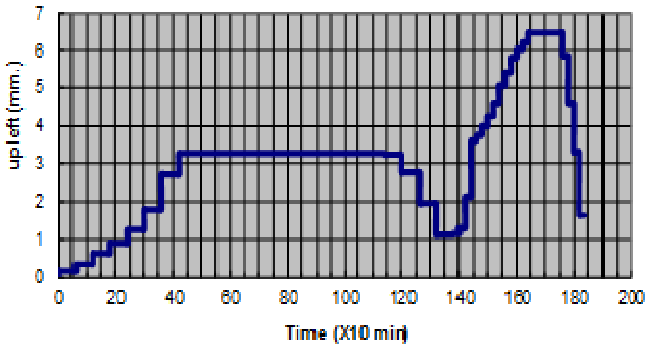


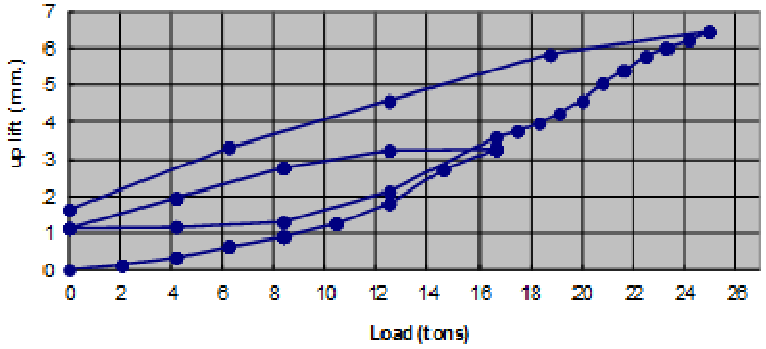
Standard graphic result for Lateral test up to 55 ton (200% of the Designed Load)



Pile Test Results

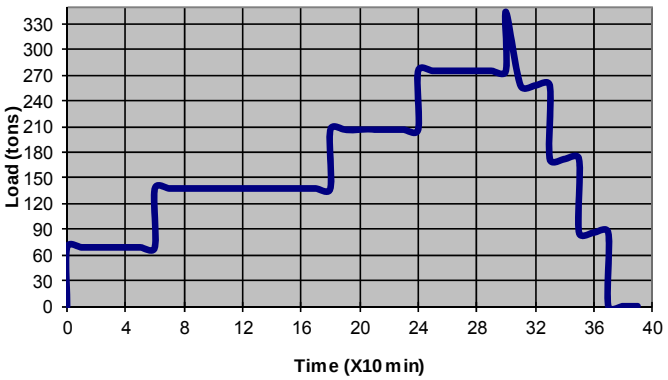
Site		Client	
Pile No.	T.F.No. 1	Installation Date	21.12.2011
Type	PRECAST	Testing Date	30.12.2011
Pile Dimension	[illegible]	Working load	[illegible]
Effective Length (m)	[illegible]	Testing Load	[illegible]





Standard graphic result for Tension test up to 25 ton (300% of the Designed Load)

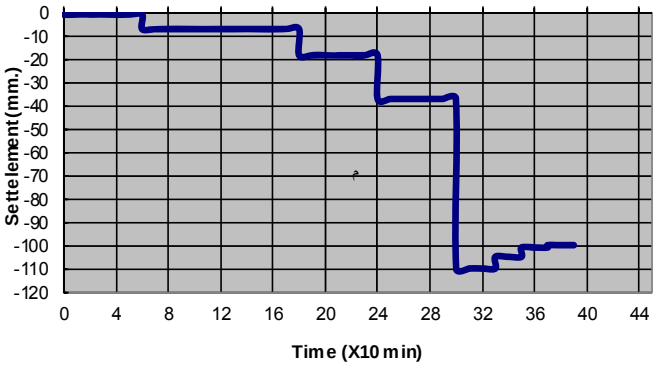
Time vs. Load



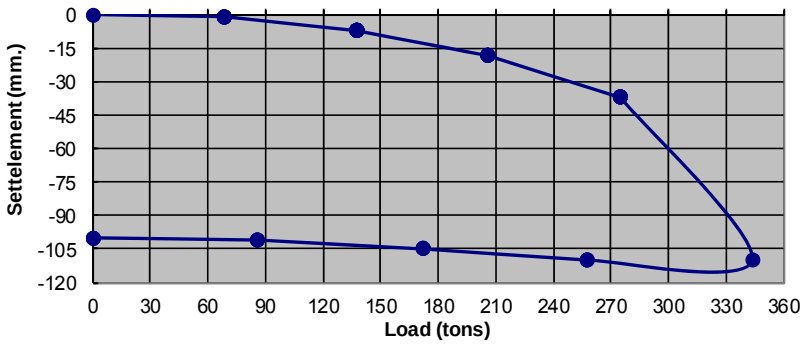
Pile Test Results

Site		Client	
Pile No.	T.P No. 1	Installation Date	16/8/2012
Type	Bore Pile	Testing Date	26/9/2012
Pile Dimenssion	100 cm dia	Working load	275 ton
Effective Length (m.)	25 m From N.G.L	Testing Load	550 ton

Time vs. Settelement



Settelement vs Load



Pile failed to reach Testing Load (550 ton, 200% of the designed load)

At 350 ton the settlement was 110 mm

REOPRT DATE	20 – 1 – 2010	مكتب اللقاء الهندسي لفحص الركائز	REPORT No	42

PROJECT		CLIENT	
PILE NO.	P 12 – 4	DATE OF INSTALLATION	30 / 12 / 2009
TYPE	BORE PILE	DATE OF TESTING	20 / 1 / 2010
SIZE	80 CM. dia.	WORKING LOAD	100 TON
DEPTH	18 M from C.O.L.	TESTING LOAD	200 TON

LOADING

DATE	TIME	TOTAL TIME PASSED 10 MIN	LOAD ADDED (TON)	TOTAL LOAD (TON)	SETTELMENT MML		
					A	B	AVERAGE
20 – 1	10.00	0	0	0	0	0	0
	10.00	0	+ 25	25	0.14	0.12	0.13
	10.10	1			0.14	0.14	0.14
	10.20	2			0.14	0.14	0.14
	10.30	3			0.14	0.14	0.14
	10.40	4			0.16	0.14	0.15
	10.50	5			0.18	0.14	0.16
	11.00	6			0.20	0.16	0.18
	11.00	6	+ 25	50	0.38	0.32	0.35
	11.10	7			0.38	0.32	0.35
	11.20	8			0.38	0.32	0.35
	11.30	9			0.40	0.34	0.37
	11.40	10			0.40	0.34	0.37
	11.50	11			0.42	0.36	0.39
	12.00	12			0.42	0.36	0.39
	12.00	12	+ 25	75	0.65	0.63	0.46
	12.10	13			0.65	0.63	0.46
	12.20	14			0.65	0.63	0.46
	12.30	15			0.65	0.63	0.46
	12.40	16			0.65	0.63	0.46

SUPERVISING ENG. ——— TESTING ENG. ———

METHOD OF TESTING	ASTM D1143 / 94	PAGE	1-5

REOPRT DATE	20 – 1 – 2010	مكتب اللقاء الهندسي لفحص الركائز	REPORT No	42

UNLOADING

DATE	TIME	TOTAL TIME PASSED 10 MIN	LOAD ADDED (TON)	TOTAL LOAD (TON)	SETTELMENT MML		
					A	B	AVERAGE
20 – 1	14.00	168			3.64	3.96	3.80
	14.00	168	- 50	50	3.13	3.13	3.13
	14.20	170			3.05	3.05	3.05
	14.40	172			3.05	3.05	3.05
	15.00	174			3.05	3.05	3.05
	15.00	174	- 50	0.0	1.88	1.86	1.87
	15.20	176			1.84	1.82	1.83
	15.40	178			1.78	1.76	1.77
	16.00	180			1.70	1.70	1.70

SUPERVISING ENG. ——— TESTING ENG. ———

METHOD OF TESTING	ASTM D1143 / 94	PAGE	5-5

Standard schedule table for Static Load Testing

Central Organization for Standardization and Quality Control

الجهاز المركزي للتقييس والسيطرة النوعية

P.O. Box13032 Aljadria street,Baghdad ,Tel:7765180 E-Mail cosqc@yahoo.com

CALIBRATION CERTIFICATE
شهادة معايرة

Calibration Certificate No.: D1193	رقم شهادة المعايرة:D1193
Client: Address: /	العائدية : مكتب اللقاء الهندسي لفحص الركائز العنوان: /
Date of object Receipt:29/11/2012	تاريخ استلام الطلب: ٢٠١٢/١١/٢٩
Calibration Object: Dial gauge	اسم الجهاز:مبين قياس
Type (Model):	الموديل او النوع :
Location of Instrument: length Lab	مكان وجود الجهاز : مختبر الطولية والبعدية
Manufactur: INSIZE	جهة الصنع : INSIZE
Instrument Serial No: 2334849	رقم تسلسل الجهاز :2334849
Range (Max capacity):10mm	المدى او السعة القصوى: ١٠مم
Division (Resolution):0.01 mm	قيمة التدريجة: ٠,٠١ مم
Calibration Date:29/11/2012	تاريخ المعايرة :٢٠١٢/١١/٢٩
Calibration Condition Temp.: 24 °C Humidity: 42 %	ظروف المعايرة الرطوبة ٤٢ % درجة الحرارة ٢٤ °س
Method of Calibration: According to COSQC working instruction(WI-M-05M-1)	طريقة المعايرة
	التنبيه والملاحظة: المبين صالح للاستخدام

-We certify that the above object was calibrated for specific calibration points using certified standards traceable to international standards

نشهد ان الجهاز أعلاه قد تمت معايرته في نقاط محددة باستخدام مراجع قياس معتمدة ذات سلسلة تعود الى المراجع الدولية

-Calibration result ,data and special conditions on the use of the object are stated in the corresponding page(2)

نتائج المعايرة و البيانات وظروف استخدام الجهاز مبينة في الصفحة المرفقة (٢)

Seal

Head of Metrology Department
Nada.K.Hamodi

Head of Mechanical Measurement Section
Hanan A.J.Al-Moudares

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لايمكن أعادة اصدار هذه الشهادة الا بموافقة الجهاز المركزي للتقييس والسيطرة النوعية تعتبر شهادة المعايرة بدون ختم او توقيع غير نافذة المفعول.

Example of a Dial Gauge Calibration Certificates

Central Organization for Standardization and Quality Control

الجهاز المركزي للتقييس والسيطرة النوعية

P.O. Box13032 Aljadria street,Baghdad ,Tel:7765180 E-Mail cosqc@yahoo.com

CALIBRATION CERTIFICATE

شهادة معايرة

Calibration Certificate No. : 367P	رقم شهادة المعايرة : 367P
Client: /مكتب اللقاء الهندسي Address: /	العائدية:مكتب اللقاء الهندسي . العنوان : /
Date of object Receipt : 10/7/2012	تاريخ استلام الطلب : ٢٠١٢/٧/١٠
Calibration Object :PRESSURE GAUGE	اسم الجهاز : مقياس ضغط
Type (Model) : BOURDON TUBE	الموديل او النوع : انبوبية بوردن
Location of Instrument: PRESSURE LAB	مكان وجود الجهاز : مختبر قياسات الضغط
Manufacturer: WIKA	جهة الصنع WIKA
Specifications: /	رقم الجهاز : /
Range (Max capacity): 600 BAR	المدى او السعة القصوى ٦٠٠ بار
Division (Resolution): 10 BAR	قيمة التدريجة : ١٠ بار
Calibration Date: 10/7/2012	تاريخ المعايرة: ٢٠١٢/٧/١٠
Calibration Condition: Temp.: 25°C Humidity: 13%	ظروف المعايرة : الرطوبة ١٣ % درجة الحرارة ٢٥ °س
نتيجة المعايرة : الجهاز صالح للاستخدام من الدقة الثانية وذلك لعدم تجاوزة الحدود المسموح بها 3 %	
Method of Calibration: According to COSQC working instruction(WI-M-04M-1)	طريقة المعايرة
-We certify that the above object was calibrated for specific calibration points using certified standards traceable to international standards نشهد ان الجهاز أعلاه قد تمت معايرته في نقاط محددة باستخدام مراجع قياس معتمدة ذات سلسلة تعود الى المراجع الدولية	
-Calibration result ,data and special conditions on the use of the object are stated in the corresponding page(2) نتائج المعايرة و البيانات وظروف استخدام الجهاز مبينة في الصفحة المرفقة (٢)	
Seal Head of Metrology Department Nada K Hamodi Head of Mechanical Measurement Section Hanan A. J. Al-Moudares	
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Example of a Pressure Gauge Calibration Certificate

ACCEPTANCE CRITERIA

The acceptance of a Static Pile Load Test will be based on the following:

- The pile was installed in accordance with its respective specification.

- The pile was tested in accordance with the test procedures contained in this Method of Statement.

- Telltale readings validate that no load was transferred to the soil in the bond breaker length (when a bond breaker is specified).

- The acceptable test pile meets any other criteria indicated in the contract documents, and All reports and certifications have been submitted as outlined in “Test Results”

For Contractor designed micro piles, acceptance of a Static Pile Load Test also requires that the micro pile was loaded and unloaded successfully to a minimum of two times the micro pile design load without attaining the failure criteria.

METHOD OF STATEMENT FOR STATIC LOADING TEST

According to the American Standards

ASTM D1143-07, ASTM D3689-07, ASTM D3966-07 and Euro Codes EC7

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Email: info@lptconsultant.com