STATNAMIC Load Testing


Hertz
200C LC

Purpose

- The STAT*NAMIC* load test was developed to meet the construction industry's demand for an accurate and cost-effective method of determining the load bearing capacity of caissons and high capacity piles.

Basic Concepts and Mechanics

- Solid fuel is burned within a pressure chamber causing an upward force to be exerted on a set of reaction masses while an equal and opposite force pushes downward on the pile.
- Loading is increased to a maximum before unloading by a controlled venting of pressure.
- Built-in instrumentation record load and displacement during entire test.

Basic Concepts and Mechanics

- Measured signals from the load cell and laser sensor are digitally recorded by TNO's Foundation Pile Diagnostic System.
- Over 2000 values of load and displacement are recorded.
- Load versus displacement results are presented on-site as well as graphs of load, displacement, velocity, and acceleration versus time.

Basic Concepts and Mechanics

- Straightforward methods of analysis are provided through easy-to-use software to determine any damping or inertial effects.
- Load-deflection behavior and the ultimate capacity of the foundation are clearly presented to the user.

SH 89 SB Mainlanes Chiltipin Creek Overpass Project

- The purpose of the Statnamic testing was to proof load the shafts to at least two times the design load which is understood to be 600 kips (300 tons).
- Shaft preparation prior to testing included chipping the top of the shaft flat and pouring a layer of high strength grout on the test surface of each foundation.


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CBS


TS1
16MM Axial at CorpusChristi
Digital Monitor 1
Tag I.D.
Data Value
Engr Unit
Tag Description
Tag I.D.
Data Value
Engr Unit
Tag Description
LOAD 392 kN 14 MN LOAD CELL
ACCEL_N 1.45 g's Capacitive Accel
ACCEL_2 1.08 g's Capacitive Accel
ACCEL_3 0.99 g's Capacitive Accel
ACCEL_4 1.09 g's Capacitive Accel
FLAG 0 On/Off Flag Used
INIXL 0 inss Initial Accelera
NEWXL 0 inss Used For Integra
OLDXL 0 inss Used For Integra
NEWVEL 0 in/s Used For Integra
OLDVEL 0 in/s Used For Integra
DISP 0 in Integrated Displ
FTONS 44 Tons Applied Force in
MAXLOAD 46 Tons Maximum Applied
MAXDISP 0 in Maximum Displace
PgUp/PgDn=More
F1 F2 F3 F4 F5 F6 F7 F8 F9 F10
PRINT CHANGE
IBM
NAMIC
AFT