

New software for Pile Integrity Testing simulation

Pile Dynamics, Inc. has developed a software that simulates a low strain Pile Integrity Test. These tests are performed with Pile Dynamics' Pile Integrity Tester (PIT) by attaching an accelerometer to a pile, impacting it with a hand-held hammer and drawing conclusions about the pile integrity from the analysis of wave propagation data collected by the accelerometer.

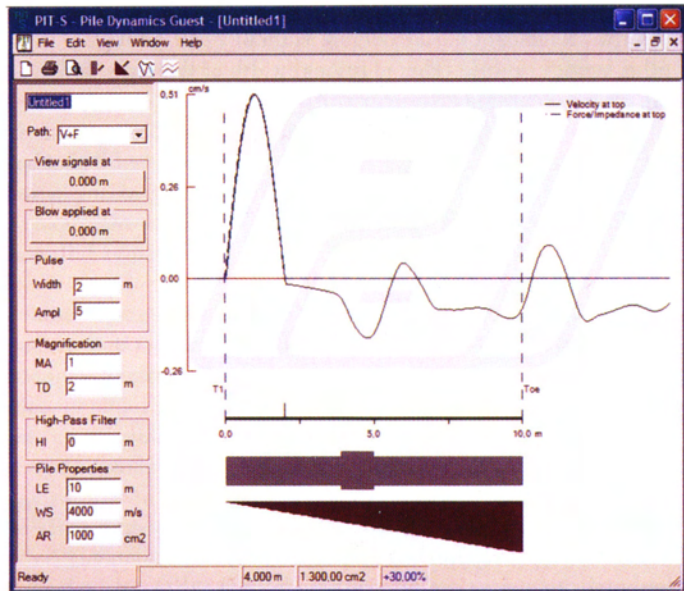
The new software programme, PITS-S, will be used for educational purposes to train new PIT users as well as to assist the existing users in their record evaluation.

The new PIT-S allows a user to enter the pile shape, realistic soil layer properties and characteristics of the low strain hammer impact, including point of impact. The programme then displays the velocity reflections against time and pile length that a PIT test under such conditions would produce. The display of force and velocity curves or of two velocity curves (integrity testing of piles integral to a structure is accomplished by analysing two velocity curves) simulates integrity tests performed with the PIT model FV.

The programme also shows acceleration and displacement data as well as includes a slow-motion animated display of the wave transmission and reflections that is particularly educational.

Current PIT users may overlay the curves simulated by PIT-S over measured curves for a simple signal matching process and simplified investigation of the cause of observed reflections. ■

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