LOW STRAIN

PILE INTEGRITY TEST

STRESS WAVE THEORY

ASTM/D5882 (2016)
Standard Test Methods for Low Strain Impact Integrity Testing of Deep Foundations

LSPIT-Testing is to determine the integrity of individual vertical or inclined piles by measuring and analyzing the velocity response of the pile induced by an (hand held hammer or other similar type) impact device usually applied axially and perpendicularly to the pile head surface.

Test Limitation

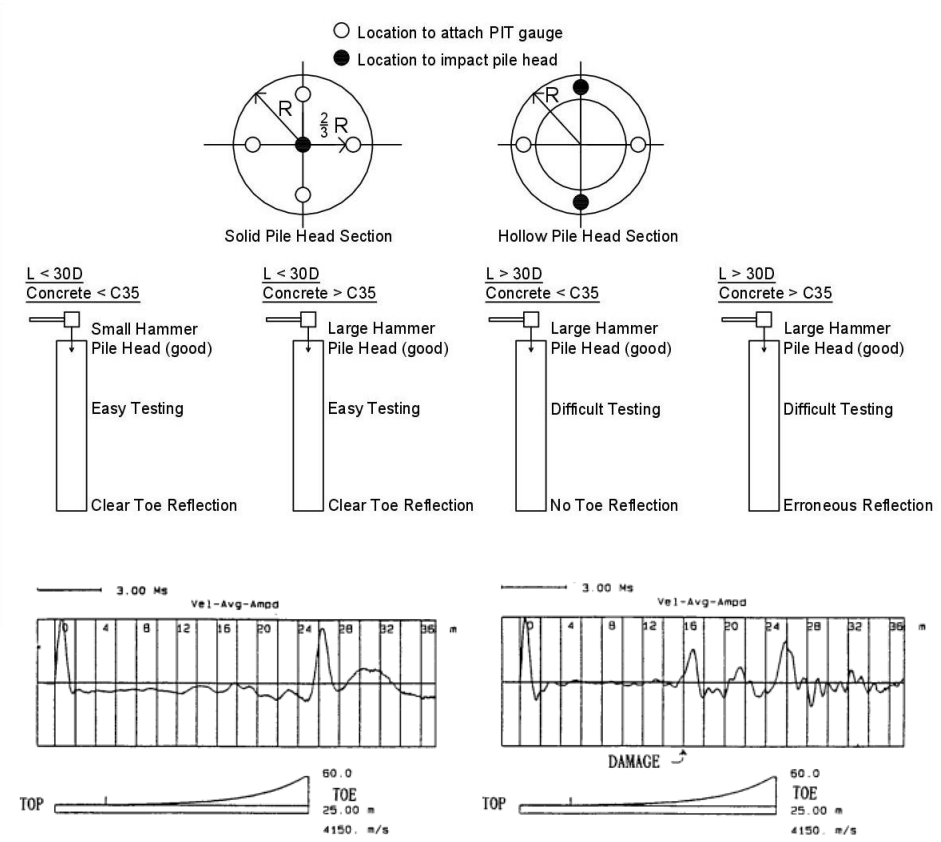
For spliced joint concrete piles, the results are not conclusive below the first joint location.

If the pile length, L > 30D, the signal below 30D may not conclusive; where D: diameter.

For large pile, D > 1200mm, the impact surface of hammer size shall be increased to ratio R(pile)/R(impact) > 4; where R: radius, otherwise may resulted erroneous reflection.

Low Strain Pile Integrity Test

The Low Strain Pile Integrity Tester (LSPIT) is a state-of-the-art testing equipment to perform low strain pile integrity test (LS) on deep foundation piles. The basic system is to test the pile with exposed pile head and available to attach gauges to measure velocity signal.



The low strain velocity response assists evaluation of pile integrity and pile physical dimensions (that is, cross-sectional area, length), continuity, and consistency of the pile material.

*Pictures are from Internet