

ULTRA SONIC

PILE INTEGRITY TEST

SOUND WAVE THEORY

ASTM/D6760 (2016)

Standard Test Methods for
Ultrasonic Crosshole Integrity
Testing of Deep Foundations

The USPIT detects any defects between two profiles in cast in-situ bored piles, caissons, barrettes, diaphragm walls and other concrete structures.

Test Limitation

The signal cannot detect the pile defects outside the access tubes.

The signal cannot detect the pile defects at the 50mm pile base.

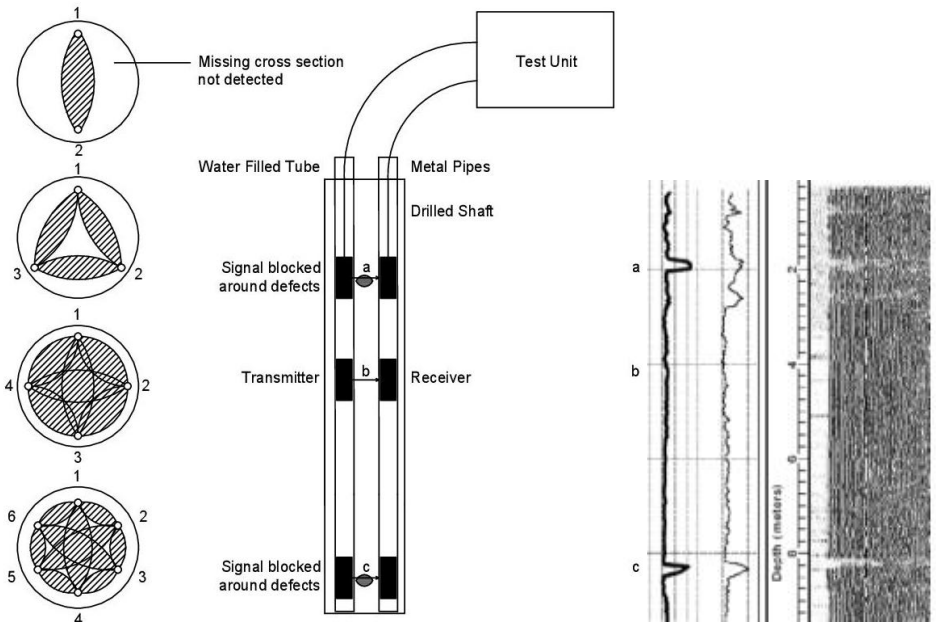
If the pile is too large and the access tubes are too few, then it may miss to detect some defects along the pile.

Tube Material

Metal Pipes (quantity : min 2)

Ultra Sonic Pile Integrity Test

The Ultra Sonic Pile Integrity Tester (USPIT) is a state-of-the-art testing equipment to perform ultra sonic pile integrity test (US) on deep foundation piles. With the advancement of the electronic components, now the system normally performed by multiple sensors with 1 pull to obtain 6 profiles.



Pile Size (bored pile)	Tube Quantity (ASTM/D6760)	Profile Quality (water fall)
≤ 600	2 Tubes	1 Profile
≤ 1,000	3 Tubes	3 Profiles
≤ 1,500	4 Tubes	6 Profiles
> 1,500	6 Tubes	15 Profiles

The ultra sonic signal assists evaluation of pile integrity, continuity, and consistency of the pile material. But do not assist evaluation of pile physical dimensions (that is, cross-sectional area).



*Pictures are from Internet

