

## Approval & Reception Procedure

DG – Geotechnical Department	
<b>Pile Integrity Verification Procedure A</b> <b>Pile Sonic Integrity Test</b>	Document no. <b>ARP/DG/09</b>
	Date: <b>2010/07/01</b>
	Page no. <b>1 of 1</b>

### 1. Reference standard

Regulamento de Fundações Artº 99, ASTM D5882-00, especificação LECM

### 2. Information to be submitted

- Pile characteristics (type, diameter and verticality)
- Pile installation records (location, contractor, length and embedded length)
- Pile driving records
- Site investigation results.

### 3. Preparation before test

Clean loose concrete and debris on pile head surface  
Repair smoothly pile head surface, if cut pile head.

### 4. Sampling amount

Select randomly 20% of driven piles or cast-in-place piles in normal condition. A sampling of 50 % - 100% can be decided if justified.

### 5. Acceptance criteria

The acceptance criteria are mainly based on LECM specification for pile sonic integrity test result classifications.

- If all the test result (Pile Sonic Integrity Test) of the piles comply with LECM specification, the piles of testing zone are considered acceptable;
- For every pile whose test result is not in accordance with the specification of LECM, additional testes will be carried out on other 10% of cast-in or driven piles of the same group.

In LECM specification for pile sonic integrity test result classifications, **CAT 1 – Normal Pile** means no abnormal reflection was found, that the testing pile will be considered as **Acceptable Pile**. **CAT 2 – Slightly Cracked** means that crack or defect reflections were found and supposed to be not very serious, the testing pile will be considered as **Acceptable Pile**. **CAT 3 – Serious Cracked** means that the testing pile will be considered as **Rejected Pile**. Verification can be performed by Pile Dynamic Load Test with/without Signal Matching. **CAT 4 – Abnormal Signal** means that it is necessary to repeat the test after a proper treatment at the pile head.