

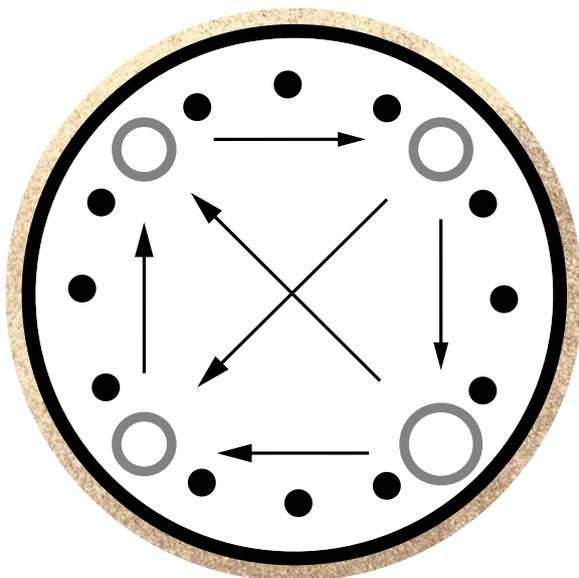
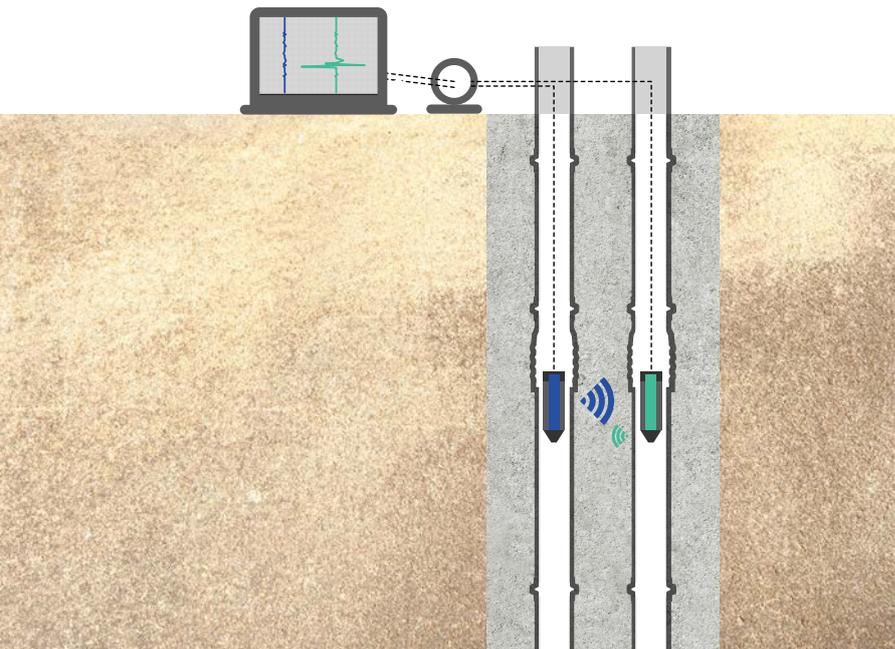
SONITEC

วิธีการตรวจสอบเข็มเจาะ และงานฐานราก
อย่างมีประสิทธิภาพ



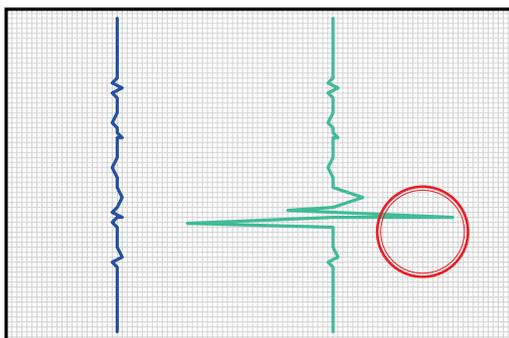
Dextra

www.dextragroup.com



● Steel rebar ○ CSL tubes ➔ Ultrasonic pulse

Typical tube configuration for a pile (diameter 1000 to 1400 mm)



Typical ultrasonic profile (response time and energy on damaged pile)

WHAT IS CROSS SONIC LOGGING ?

Definition

Crosshole Sonic Logging (CSL)

is an accurate method to determine the structural integrity and homogeneity of concrete within diaphragm walls, bored piles, drilled shafts, barretes, concrete piles or augercast piles.

This method is:

- Widely used for more than 30 years.
- Practical and economical for deep foundation integrity testing.

Method

The speed of sound wave propagation in concrete is dependent on the concrete material properties. Thus, the CSL measures the propagation time and relative energy of an ultrasonic pulse between an ultrasonic transmitter and receiver in two parallel water-filled tubes installed at a specific spacing within the deep foundation element during construction.

The transmitter and receiver ultrasonic probes are lowered and lifted in unison in their respective water-filled tubes to test the full shaft length from top to bottom.

ABOUT SONITEC

The most effective solution for drilled shafts integrity check

Product features

Sonitec are thin black steel tubes available in different diameters with an enlarged end in a bell mouth shape. This makes the connection between two tubes an easy process and minimises labour cost.

Product benefits

Smart manufacturing process:

- Rigid and robust tube connections, high resistance to shocks.
- Fully automated deformation with more precision and consistency.

Better sealing methods:

- The rubber gasket is replaced by an wiper seal.
- The wiper seal is installed inside the pipe and fully protected from UV & mishandling.
- Standard wiper seal, easy to replace (not glued).

Clear engagement for tube to tube connection:

- A physical and visual stopper.
- No sharp edges and much safer for the job operations.

Better end cap solution:

- Rubber end cap, designed with metallic insert, makes for quick and easy push-fit installation.
- High resistance to extreme temperature and UV.
- The cap performance is equivalent to tube to tube connections.



Foundation Type

Bored piles ($\varnothing < 1,000$ mm)Bored piles ($\varnothing > 1,000$ mm)

Diaphragm wall & barrettes

Product Specifications & Performance

Product Name	ST58TH
Nominal Diameter	58 mm
Wall Thickness	1.2 mm
Length	Up to 6 meters
Weight	10.3 kg
Waterproofness	Up to 98 m
Connection strength	40 kg
Fixing ear loading capacity	150 kg

End caps are made with high performance synthetic rubber, improving durability and UV resistance.
Welded steel cap available on request. Other wall thicknesses and lengths available upon request.

Quality Control

- Manufactured under Quality Management System - ISO 9001.
- Tested under supervision of Bureau Veritas & SGS.
- Compliant with ASTM D6760 – Standard Test Method for Integrity testing by ultrasonic crosshole testing.
- 100% verified in factory: each Sonitec is tested for leakage.



Recommendation for Storage

As Sonitec tubes are made of black steel, if subjected to normal weather conditions discoloration may occur.

To avoid this issue, please note the following instructions:

- Cover the steel tubes with tarpaulin or keep the steel tubes in a covered area or closed container.
- Avoid exposing them to environmental conditions (humidity, rain, heat ...).

For better storage conditions and easy tube management on site, storage containers are available upon request.



Assembly Instructions

01



Install the bottom cap onto the end of the lower tube.

02



Install the tube in the rebar cage and loosely fix it to the reinforcement by tying steel wire through the fixing ears.

03

Proceed with first cage installation.

Prepare the next section of the tube in the upper cage and fix it similarly as described in step 2.

Lift and approach the second cage. Connect reinforcement.



04

Simply push the upper tube section into the lower tube.

Secure full engagement until it reaches the stop-end.



05

Secure the assembly by connecting tightly the ears of both tubes with steel wires.



06

Repeat the process for all other tubes and cage segments.



Visit us on
www.dextragroup.com/sonitec





The Met Sathorn, Bangkok, Thailand



Bangkok MRT, Thailand



Commercial presence
in more than
55 countries



**HEADQUARTERS
THAILAND**
Dextra Manufacturing Co.,Ltd.
Tel: (66) 2 021 3800

CHINA
Dextra Building Products (Guangdong) Co.,Ltd.
Tel: (86) 20 2261 9901

HONG KONG
Dextra Pacific Ltd.
Tel: (852) 2511 8236

EUROPE
Dextra Europe SARL
Tel: (33) 1 45 53 70 82

MIDDLE EAST
Dextra Middle East FZE
Tel: (971) 4886 5620

INDIA
Dextra India Pvt.,Ltd.
Tel: (91) 22 2839 2694

NORTH AMERICA
Dextra America Inc.
Tel: (1) 206 742 6020

LATIN AMERICA
Dextra Latam
Tel: (507) 831 1422

BRAZIL
Dextra do Brasil
Tel: (55) 119 7577 8112