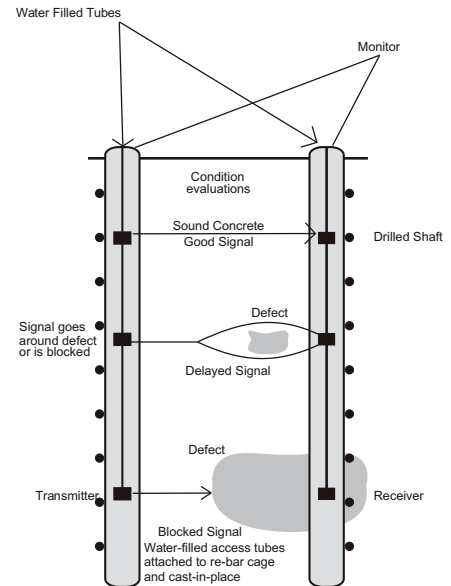


# CROSSHOLE SONIC LOGGING TUBES



CSL tubes packed for transportation



HMECO Crosshole Sonic Logging (CSL) tubes provide an accurate, cost effective and non destructive means of investigating the integrity of concrete in drilled shaft foundations. Specially designed rubber gaskets for the intertubular joints ensure perfect sealing and quick installation.

## Salient Features

- No welding required at jobsites.
- Quick installation with rebar cage.
- Each tube is pressure tested against any leakages.

## Main Objectives of Testing

When cast-in situ piles are constructed, the following defects may occur, hence the main objective in the testing is to provide the clients/ consultants information about:-

- Honeycombing due to inadequate vibration.
  - Segregation due to over vibration and improper concrete placement methods.
  - Washout of cement due to groundwater flow.
  - Cracks in pile shaft due to shrinkage.
  - Inclusion of foreign material causing contamination of the concrete.
  - Necking of the pile due to collapse of sidewalls during withdrawal of the temporary casings.
- This method on integrity testing requires prior pile preparation in that pipes need to be installed together with the steel reinforcement bards. There is no limit in the depth where the pile profile can be logged.

# CROSSHOLE SONIC LOGGING TUBES

## CSL Integrated Parts



## CSL Specifications and Test Results

Diameter	50mm (2")
Wall Thickness	From 1.0 mm to 2.0 mm
Standard Length	5.8 m
Water Proofness	Until 200 m
Pull out Strength on Bell mouth	40 kg(12 m of water filled tubes)
Fixing Ear Loading Capacity	70 m of water filled tubes

## Quick Fix System Of CSL

### Economic, Safe and Quick to Fix in Three Easy Steps

#### Step 1:

Install the bottom cap on to the end of the first tube if necessary.  
 Install CSL tube in the rebar cage.  
 Fix assembly to the cage by using steel wires with the fixing ears.  
 Ensure the free length is 10cm to move the tubes side ways as well as upward/downward.



#### Step 2:

Position two tubes one after the other to mate them.  
 Push them together. Ensure that the rubber gasket is not pinched.



#### Step 3:

Verify engagement by coinciding rubber gasket with the top mark on the sond tube.  
 Ensure that both ears are aligned.  
 Connect tightly the ears of both tubes with a steel wire.

