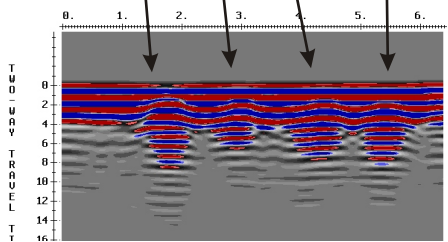


Ground Penetrating Radar

We are pleased to announce that Tekron Services has added ground penetrating radar technology (GPR) to its array of non-destructive testing techniques. This technology uses rapid pulses of radio waves to penetrate into the structural member being examined. Different materials and their various conditions reflect some of the radio waves back to the surface enabling identification of these materials or anomalies within them.

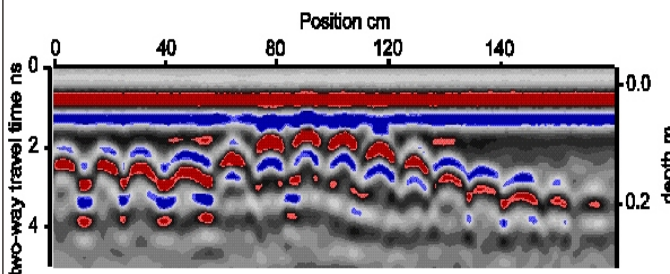
This technology compliments our impact-echo testing applications since it does not require direct surface contact and can be quickly passed across any quality of surface under test.

Detection of Non Ferrous Materials



Four PVC pipes 300 mm apart - 35 mm depth

Detection of Reinforcing Steel

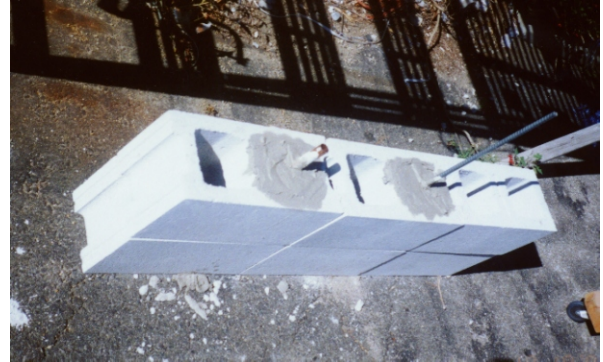


GPR scan through a structural concrete slab

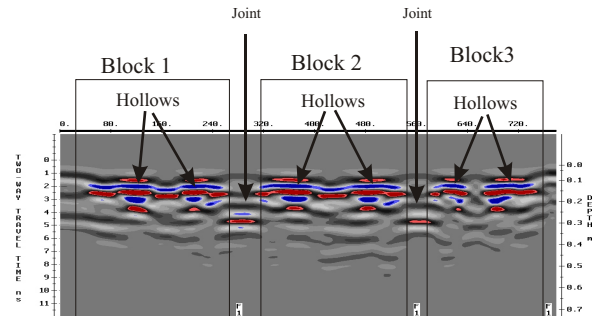
Note that each bar is clearly identified and the variable depth of cover readily quantified

Courtesy Sensors and Software

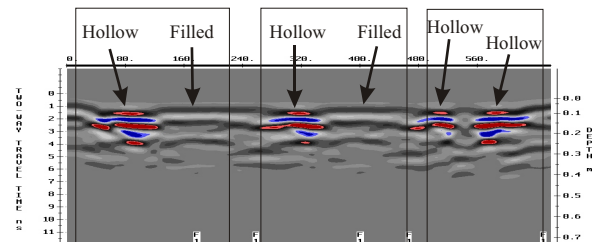
Detection of Voids in Concrete and Masonry



Hollow masonry units under test



Test scan of three hollow masonry units



Test scan of three partially filled masonry units

GPR ADVANTAGES

- Detection waves are not a health hazard
- Only one exposed surface required
- Rapid traverse over any quality of surface
- Detects reinforcing steel in concrete
- Detects voids inside concrete and masonry
- Detects voids below concrete and masonry
- Detects plastic pipe embedded in concrete

Specialists in NDT and Computer Monitoring of Structures

For Further Information Contact

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Company Profile

Tekron Services is a Canadian company providing specialized inspection and testing of construction materials. Incorporated in 1987, the company offers a wide range of inspection and non-destructive testing services to evaluate structures and construction materials. Since the formation of the company our goal has been to incorporate emerging technology into tools and techniques for the construction industry.

Data Sheets

To illustrate these technologies Tekron has produced a series of data information sheets and case studies. These data sheets are available on request and are posted on our web page from time to time.

Evaluation Techniques

Since 1987, our company has been involved in several notable investigations including earthquake damage, historical masonry and extensive water leakage, often requiring unusual field techniques to be used to evaluate the problems. Our methods often make use of advanced computerized systems including impact-echo technology which uses sound waves to evaluate defects deep within concrete structures, ground penetrating radar which uses electrical conductivity to detect dissimilarities and computer monitoring techniques using miniature data loggers or cellular connections to evaluate the dynamics acting upon a structure. A list of some of the techniques used and types of investigations completed are given below.

NDT Techniques

Impact-echo

- Thickness
- Delamination
- Honeycombing
- Voids

Ground Penetrating Radar

- Re-bar & post-tension cable detection
- Voids & honeycomb in concrete
- Voids below concrete
- Voids in masonry

Corrosion mapping

Boroscope

Moisture and humidity detection

Dynamic measurement of physical properties

- Linear displacement transducers
- Telltale
- Demeg gauge
- Vibrating wire strain gauge
- Vibrating wire water pressure transducers
- Vibrating wire tilt meters
- Miniature single and multiple channel data loggers including the following sensors:-
 - Temperature
 - Humidity
 - Light intensity
 - Voltage
 - Motor on/off vibration sensor
 - Motor on/offA/C sensor

Investigations

Concrete Structures

- Bridge decks
- Parking garages
- Reservoirs
- Dams
- Concrete pipes
- Tunnels and shafts
- Water retaining structures
- Pavements
- Foundations
- Historical structures
- Concrete protection
- Analysis of structural materials
- Monitoring of physical properties

Building Envelopes

- Roof inspection
- Anchor Safety Testing
- Masonry cladding
- Residential inspection
- Precast concrete
- Stone cladding
- Historical masonry

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