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Conquest – Ground Penetrating Radar

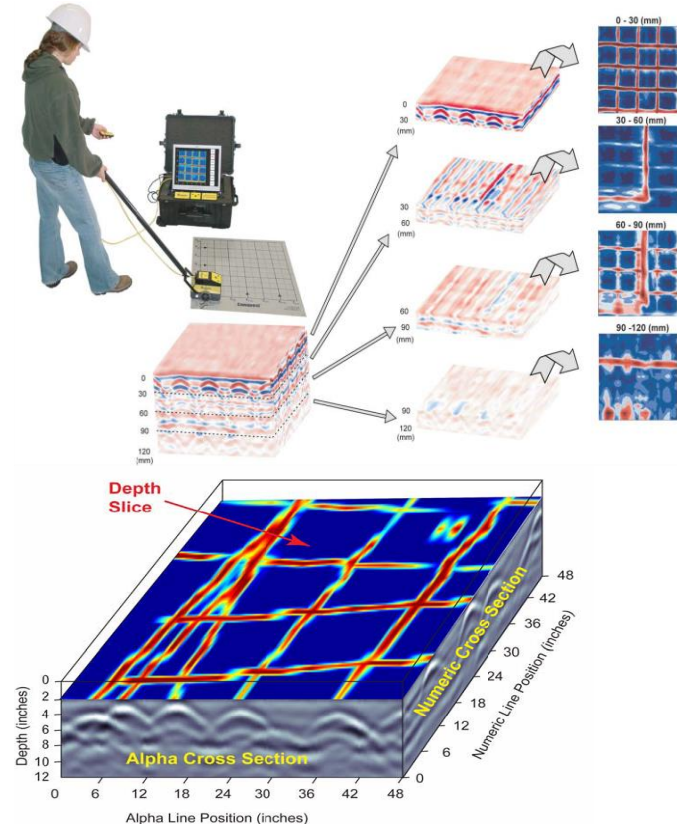


metals, and filling material can be located. The system can analyze concrete at depths up to 0.5-1m, unlike ferromagnetic equipment with limits of 150-200mm. The system is simple to use and only require one operator. Scans can be completed in reconnaissance mode (which provides a concrete slab profile) or along grid lines to create 3D models of the concrete. Conquest™ provides the best and most cost-effective non-destructive concrete evaluation solution on the market.

- safe and easy to use
- precise analysis of concrete at different "depth slices"
- on-site processing of data
- operators train quickly
- independent, completely self-contained operation
- rapid "return on investment"

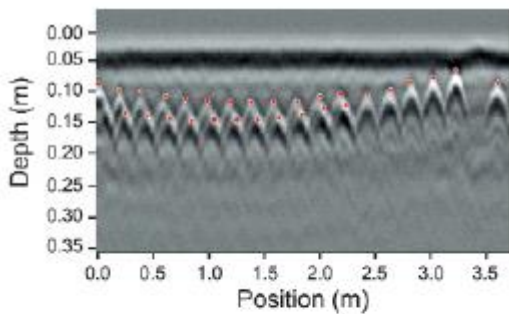
3D Mapping

Collecting a grid of data results using the grid maps creates a data cube or 3D volume that can be visualized as a series of 2.5 cm thick depth slices or as a solid.



Introduction

Conquest GPR is designed for safe, non-destructive evaluation of concrete structures. Conquest offers rapid on-site imaging for cutting, coring, drilling or characterization of concrete slabs with little or no design drawings. The Conquest uses radio waves to locate objects of differing dielectric constant. Therefore materials such as plastics,



Reconnaissance mode output showing overlapping reinforcing wire mesh



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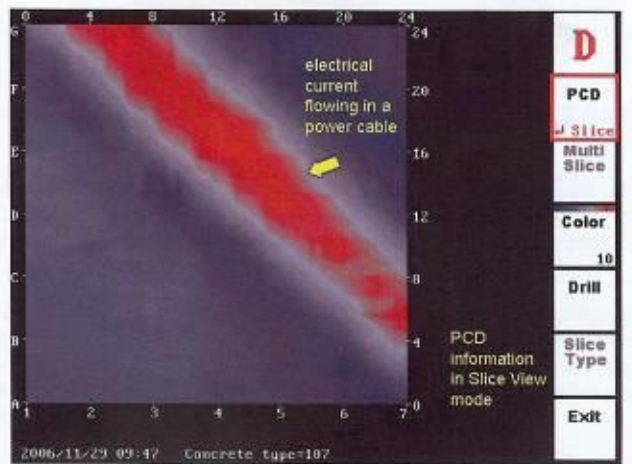
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PCD

The optional Power cable Detection maps the location of current carrying cables by detecting the magnetic field created when AC current flowing at 50 Hz. The Conquest detects current carrying cable best when the travel of the sensor head is perpendicular to the cable. In line scan mode the PCD profile appears under the GPR cross section image. A 2D image can also be constructed using Grid Scan data (shown below)



Data Transfer

Data saved on the Conquest can be exported to a flash card. The flash card can then be removed from the Conquest and transferred to a card drive on your PC. This simple USB/flash card system means that there is no limit to the amount of scans that can be taken on site.

Help and Training

Every Conquest system comes with a detailed help and training function which runs slides explaining the operation of every facet of the equipment. Everything from equipment set-up to image interpretation is explained in step by step instructions.

Battery

Whilst the Conquest is usually run using typical 240V mains power it can also be purchased with the Power pack option. This is can be used for at least 3hrs of use on sites which mains power is not available.

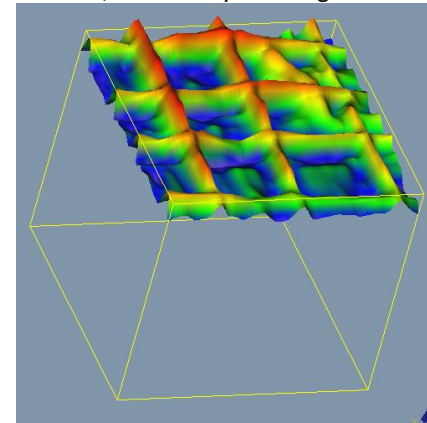
System Configurations

The standard Conquest system is optimal for applications which require quick on-site results. The Conquest Enhanced

system expands the standard system with post acquisition analysis and colour printing using the ConquestView PC software. This configuration supports users who prepare engineering reports on-site and in a hurry.

Software

The Conquest Enhanced comes standard with Conquest View software which emulates the firmware from the Conquest on your PC. This allows full engineering reports to be made from data enhanced in the office. The Ekkoview software included and is used for viewing line scans. The Voxler software takes this further and allows full manipulation of the 3D grid scans in multiple views. The Iso-surface scan shown below has the concrete eliminated, hence only showing the steel.



About PCTE

PCTE have over 30years experience in the measurement and testing of concrete. With experience in research, consulting and construction they are able to assist you in reviewing the issues and developing solutions. PCTE can provide more than just the equipment. They can provide leading technical support for your business.

Other Equipment

The full Proceq range of equipment is available for insitu non destructive concrete measurement, including Schmidt Hammers, Covermeters, Half Potentials, Resistivity, Ultrasonic's and Permeability.

We also supply Intelli-Rock maturity, temp and humidity logging systems, corrosion rate monitoring equipment, Ground Penetrating Radar.

Olson Instrument range also includes the CTG, Freedom Data PC, NDE360 and DAS as well as the resonance tester.

Our newest piece of equipment is the MIRA Ultrasonic Pulse Echo imaging system.