



STANGERS

Innovative Technology for Detailed Structural Surveys of Buildings

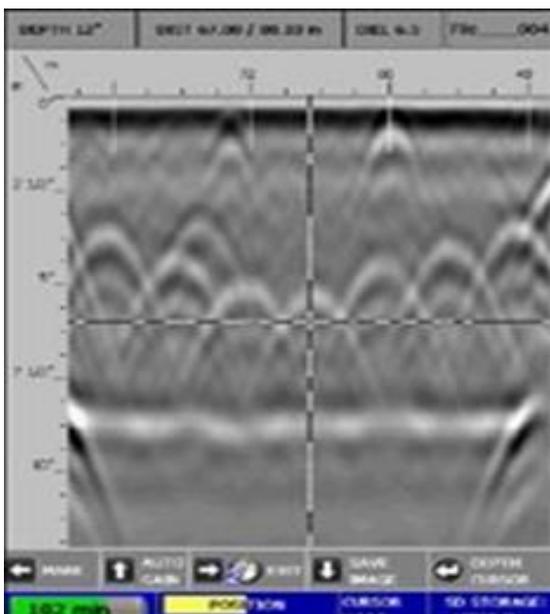
The proposed technology will reduce hazards to occupants and workers as well as reduce the risk of damage to the concrete structure during coring and opening up work.



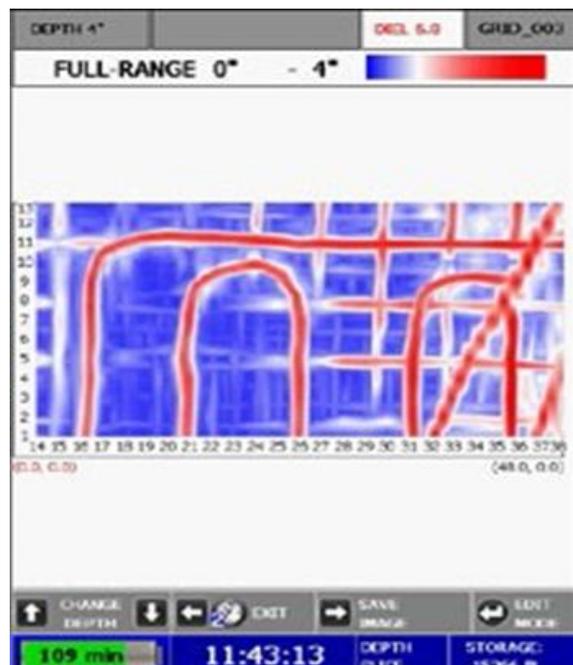
Using the Structurescan radar hand-held system which locates rebar, conduits and post-tension cables in concrete at depths of up to (40 cm), when coring and opening up concrete, will give extra confidence in the conditions immediately under the area to be cored or exposed.

For Concrete inspections - Structurescan can locate metallic and non-metallic targets in walls, floors and ceilings. A 3D image can be generated, for an x-ray like image. This is Ideal for complex areas where conduits are suspected or reinforcement is dense. When used by an experienced operator the technique is rapid and results can be seen on the display immediately upon completion of scanning the test area.

Below: Small pipes very close to surface



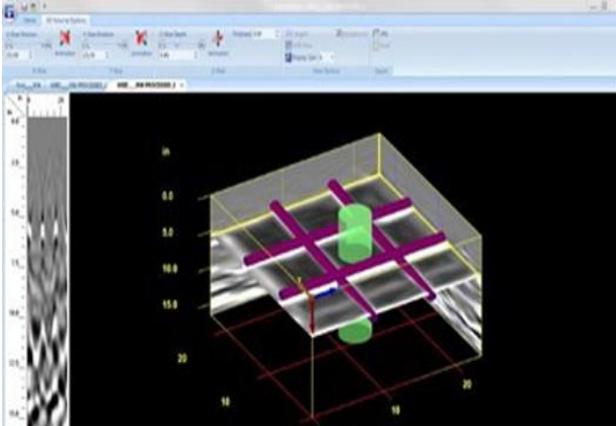
Above: Depth of slab also determined.



Above: Water pipes in concrete slab



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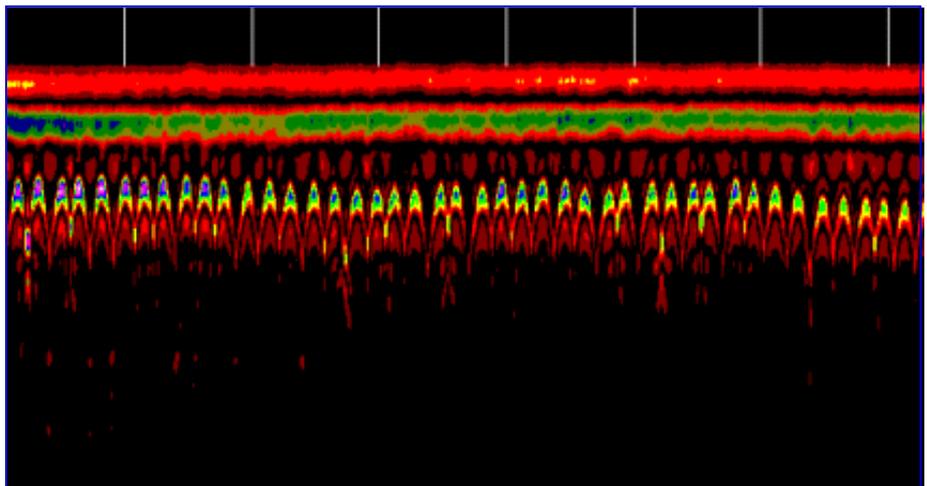
Left: Volumetric view of a rebar mat with user-defined virtual borehole location.

Results can be reviewed prior to coring to determine the location of both layers of reinforcement to ensure that the core hole will fit in the space available. Similarly when opening up rebar for inspection the location of all of the bars in the area can be determined.

Surface →

Reinforcement bars →

The radar scan on the right shows a mesh reinforced slab with 43 reinforcement bars of equal spacing and uniform cover except towards the right hand side where the concrete cover is comparatively greater.



Above: Rebar detail beneath the road surfacing of a bridge deck.

Structurescan radar is a quick, reliable and non-destructive method to evaluate concrete slabs , walls and other structural and non-structural elements of buildings, as well as estimate element thickness with data collection densities not obtainable by traditional labor-intensive methods, such as coring.

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