NDT CORPORATION
Nondestructive & Geophysical Testing

Tomography

Paul S. Fisk, President NDT Corporation

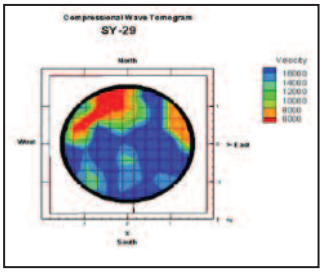
CLICK ON TESTING SERVICES

- BRIDGE TESTING
- PIPE TESTING
- TUNNEL TESTING
- SOIL & BEDROCK TESTING
- BUILDING TESTING
- PILES & DRILL SHAFT TESTING
- WALL TESTING
- DAM TESTING
- TOWER TESTING
- RAILROAD CROSS TIE TESTING
- TANK TESTING

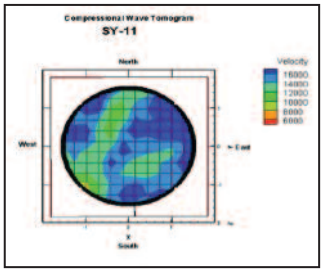
Integrity Testing of Switch Yard Piers

NDT Corporation conducted nondestructive sonic/ultrasonic measurements on 22 Piers in the switch yard of a Power Plant. The objective of this investigation was to obtain data to assist engineers in evaluating the structural integrity of the top 3 to 4 feet of the switch yard piers. Compressional wave velocity tomography was used for this investigation. This technique is used to construct a two-dimensional cross-section (slices) of the measured compressional waves through the interior of a concrete structure (see below). These tomograms can be used to locate and qualify local high and low velocity anomalies. Low velocity anomalies are indicative of zones of cracking, honeycombing, low strength concrete, and or voiding. The best results for this technique are obtained by numerous individual measurements with crossing wave-paths. Field recordings are obtained by position sensors on one side of a concrete structure and generating a signal with a projectile impact at multiple locations (independently) on the top and or opposing sides of a structure. This procedure is repeated switching the sensor array and energy source to the opposing side of the structure until multiple crossing signal wave paths have been obtained for the area of interest.

Pier in the power plant.



Tomography results:
Pier with weak areas



Tomography results:
Pier with no weak areas

NDT Corporation

We are nondestructive and geophysical testing experts with more than 700 projects across the US to our credit. Our geophysical tests assess soil and bedrock conditions to identify sinkholes, subsidence, shear zones and voiding. Our nondestructive concrete tests provide documented, cost-effective assessments of the integrity, as-built details and weakness or deterioration of concrete structures.

NDT CORPORATION
Nondestructive & Geophysical Testing