PDI-TOMO

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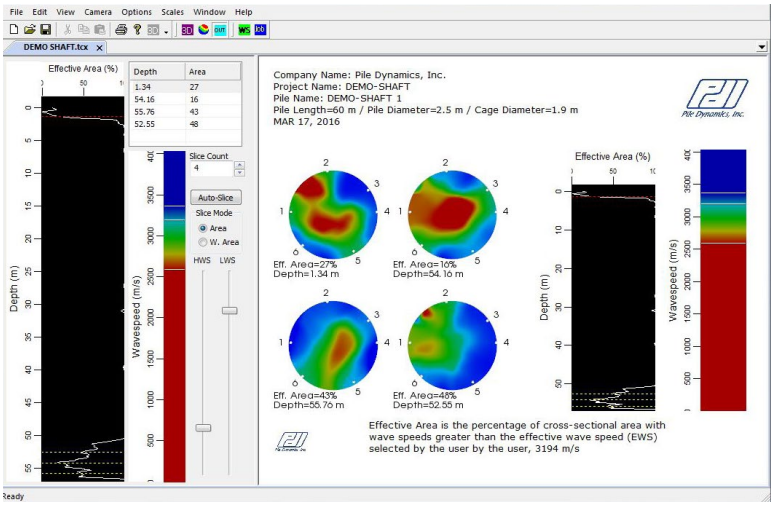
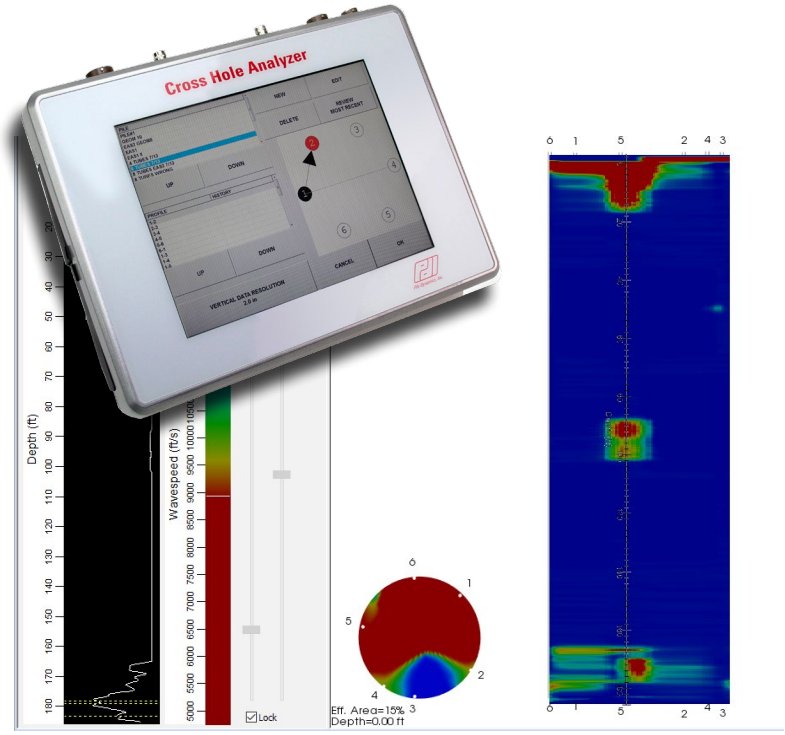
3D Tomography Software for Crosshole Sonic Logging (CSL)



Three-Dimensional. Accurate. Analytical.

PDI-TOMO is a 3D tomography imaging tool that supplements the CHAMP (CSL) output. It analyzes wave speeds (derived from first arrival time (FAT) data from the scans of all pairs of tubes) to yield a wave speed map of the entire shaft volume. Since concrete strength is related to wave speed, this analysis is useful in cases where CHA-W analysis reveals a defect but does not give a precise idea of its extent.

PDI-TOMO software yields superior tomographic results with intuitive 3D identification of questionable areas of a shaft, allowing for a quick and easy quantitative, comprehensive, engineering analysis.



PDI-TOMO Features:

- Accurate 2D and 3D results
- Seamless one-step operation from CHA-W export
- Significant reduction in analysis runtime, greatly improving productivity
- Smart user selection of "good" or "poor" concrete wave speeds
- Easily selectable wave speed limits to match typical CSL evaluation criteria
- Selection available in terms of percent reduction of average wave speed or absolute wave speed values
- Automatic critical slice detection
- User selectable number of slices for output reporting
- Effective area vs depth plot for easy evaluation of critical sections
- Customizable and professional output report to fit the needs of each user

FHWA GEC 010

The Geotechnical Engineering Circular Number 10 of the USA Federal Highway Administration states that Tomography "provides enhanced evaluation of potential defects" and is among techniques that, while requiring "specialized expertise for data interpretation", "may be warranted for large structures where the detailed information enables a more cost-effective design or eliminates uncertainty that may otherwise lead to construction cost overruns."

What is Tomography?

Tomography is a mathematical procedure that is applied to Crosshole Sonic Logging (CSL) data, providing the user with a visual image of a shaft's internal defects. The procedure involves solving a system of equations based on First Arrival Times (FAT) in order to calculate wave speeds at various points within the shaft. Tomography wave speeds distributed throughout the shaft are directly proportional to density, indicating concrete quality. PDI-TOMO is an extension of the CHA-W software designed for superior tomographic analysis results from CHAMP data with increased efficiency for the user.

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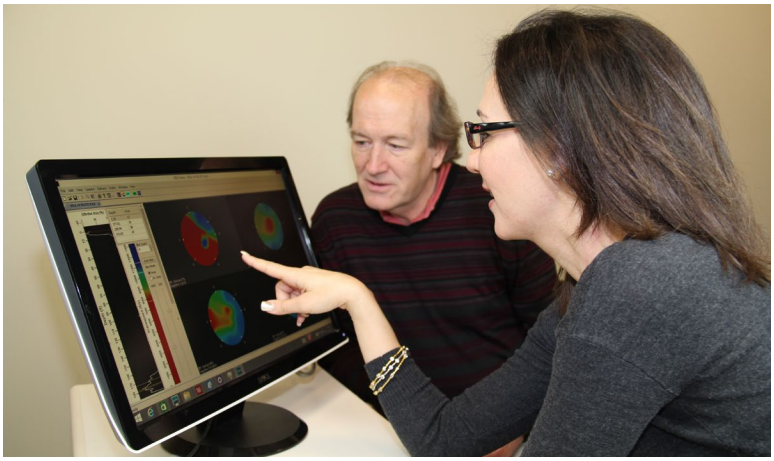

- Provides a more precise location and shape of a defect detected through CSL data
- Generates easily comprehensible and professional outputs of the engineering analysis
- Offers an intuitive visual identification of the damaged areas
- Provides a valuable add-on service for the testing engineer