



Cross-Hole Analyzer

Cross-Hole Analyzer: CHAMP-XV

Evaluation of concrete quality in deep foundations by the Crosshole Sonic Logging method (CSL)

Accurate. Reliable. Rugged.

The Cross-Hole Analyzer determines the quality and consistency of the concrete for drilled shafts, bored piles, cast-in-situ piles, slurry walls, and other types of concrete foundations. PDI's Cross-Hole Analyzer (CHAMP-XV) is ideal for testing shafts that are prepared by installation of steel or PVC tubes during their construction. The CHAMP-XV meets or exceeds the specifications of ASTM D6760 and several other crosshole sonic logging codes and standards.

CHAMP-XV:

- Assesses concrete quality and consistency of drilled shafts and other cast-in-place concrete structures
- Performs real-time analysis on site, as well as data transfer with CHA-W reporting software for additional analysis
- Offers PDI-TOMO 3-D tomographic software for superior tomographic results of questionable areas

Real-time Testing with CHAMP-XV

Once a shaft is prepared with steel or PVC tubes during construction, a transmitting probe is lowered into one tube sending an ultrasonic signal that travels through the concrete and is detected by a receiving probe in another tube. As these sensors are raised and/or lowered at the same speed along the length of the foundation, the CHAMP-XV displays and records the strength of the received signal, as well as the time from signal emission to signal arrival at the receiver, versus depth.

In CSL testing, scanning various tube combinations for the entire shaft allows evaluation of concrete quality and anomaly detection along the length and by quadrant.



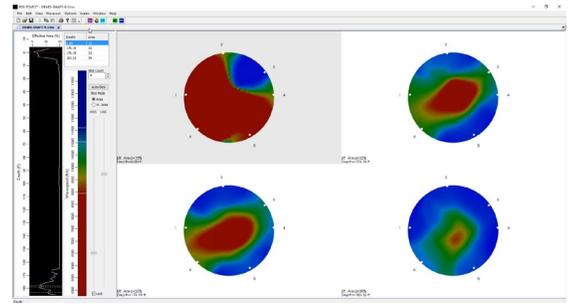
The tablet-like CHAMP-XV is portable, light and rugged featuring:

- Fast and accurate field measurements
- Large color LCD touch screen that is highly visible in all lighting conditions
- Optimized data entry for real time analysis onsite (waterfall diagram)
- Replaceable battery and USB ports for quick and easy data transfer



PDI-TOMO Software

PDI-TOMO is a 3-dimensional imaging tool that supplements the CHAMP output. It analyzes wave speeds, derived from FAT data, to yield a wave speed map of the entire shaft volume. PDI-TOMO is useful to obtain the extent of an identified defect within the shaft.



CHAMP's CHA-W Data Processing Software provides powerful tools for data analysis of:

- First Arrival Time (FAT) detection
- Easy defect identification
- Two methods of signal strength evaluation (energy or amplitude)

CHA-W reporting tools comprise of user customized graphs and tables:

- Sonic Map - Signal strength versus time and depth in traditional waterfall diagram
- First Arrival Time - Signal travel time from transmitter to receiver, versus depth
- Wave-Speed Plot - Wave-speed (an indicator of concrete strength) versus depth
- Wave-Speed Table - Wave-speeds, means and standard deviations
- Energy or Amplitude Plot - Signal strength versus depth
- Defect location graphically and in table format

Pile Dynamics, Inc. (PDI) is the world leader in developing, manufacturing and supplying state of the art QA/QC products and systems for the deep foundations industry. The company is headquartered in Cleveland, Ohio, USA, with offices and representatives worldwide. For additional information visit us at www.pile.com or contact info@pile.com today.



- CSL transmitter/receiver probes are offered in sturdy brass housing
- Motorized probe deployment system available for automatic cable pull
- Enhanced 3D tomographic analysis with PDI-TOMO
- Optimized data entry for speed of testing and minimization of erroneous input