Pile Dynamics, Inc.

pile.com

Quality Assurance for Deep Foundations

Driven Piles

Drilled Shafts/Bored Piles

ACIP/CFA/DD Piles

Micro Piles

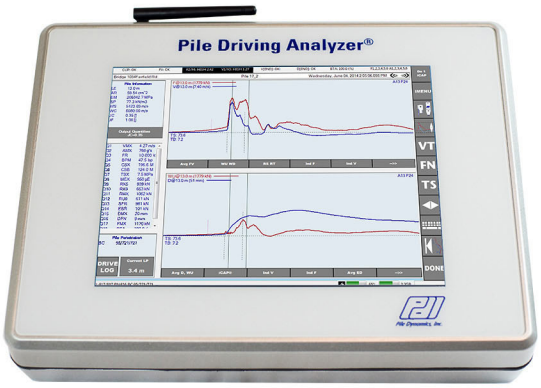
Helical Piles

Pile Driving Analyzer® (PDA-8G)

High strain dynamic load testing and pile driving monitoring system

Perform dynamic load testing on most types of deep foundations

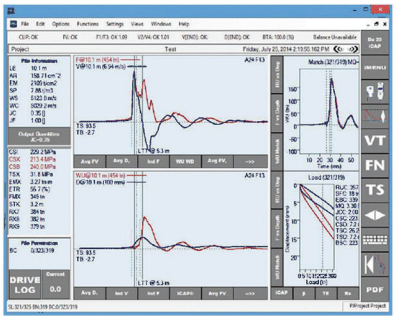
- Calculate bearing capacity and assess structural integrity
- Assess driving stresses and hammer performance
- Available in cabled or wireless versions
- Complete with CAPWAP®, GRLWEAP, and iCAP® software, as well as PDIPLOT to summarize results



CAPWAP®

Signal matching software that uses force and velocity data measured by the PDA to:

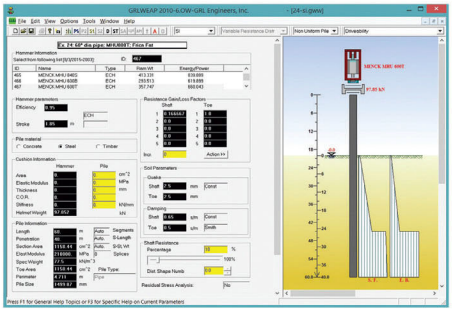
- Simulates a static load test in compression and tension
- Predicts the load displacement behavior
- Determines stresses at each depth along the pile



Wave Equation Analysis of Pile Driving (GRLWEAP)

Pile driving simulation software

- Simulates the pile response to pile driving equipment
- Calculates driving resistance, dynamic pile stresses and estimated capacity based on field-observed blow count
- Helps select appropriate hammer and driving system with known piling, soil and capacity requirements
- Determines pile drivability and estimates total driving time
- Available in standard and offshore wave versions



Cross-Hole Analyzer (CHAMP)

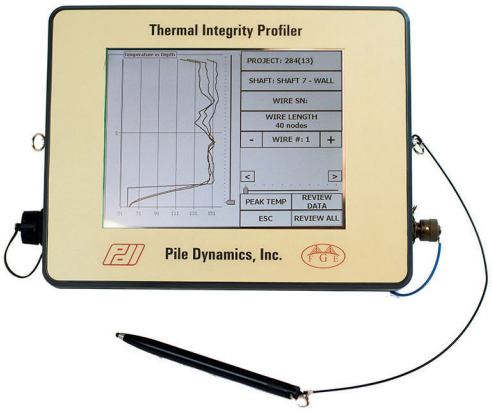
Evaluation of concrete quality in deep foundations by the Crosshole Sonic Logging method (CSL).

- Assesses concrete quality and consistency of drilled shafts, slurry walls, bored piles, cast-in-situ piles and other types of concrete foundations
- Performs real-time analysis on site, as well as data transfer capability to a PC for further analysis with CHA-W reporting software
- PDI-TOMO software available for superior tomographic results providing intuitive 3-D identification of questionable areas, as well as allowing for a quick and easy quantitative, comprehensive, engineering analysis

Thermal Integrity Profiler (TIP)

Evaluation of the entire cross-section and the entire length of the deep foundation element using heat generated by curing cement to assess the quality of drilled shafts/bored piles, augered cast-in-place (ACIP) / continuous flight auger (CFA) or drilled displacement piles, slurry walls, barrettes, soil nails, and jet grouted columns.

- Evaluates concrete quality inside and outside the reinforcing cage
- Accelerates construction with tests conducted during concrete curing
- Reveals necking or inclusions, bulges, variations in concrete cover, shape of shaft and cage alignment
- Thermal Wires® can replace access tubes



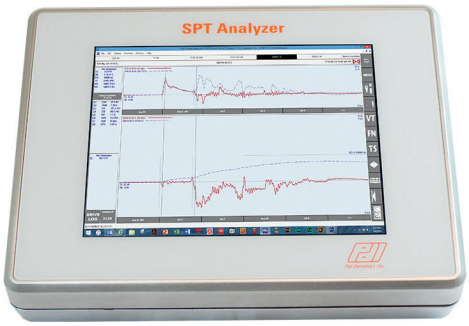
Pile Integrity Tester (PIT)

Low strain integrity testing by pulse echo or transient response methods.

- Reveals potential shaft or pile defects such as major cracks, necking, soil inclusions or voids
- May determine unknown pile lengths
- Available in three versions (cabled and wireless): velocity only, force and velocity, or two velocity channels
- Complete with PIT-W Standard or optionally with PIT Professional reporting software

SPT Analyzer

- Determines energy transferred by SPT Hammers using force and velocity measurements
- Measures N Value to help improve reliability of soil strength estimates in goetechnical applications
- Multi-touch gesture and screen color scheme options for better data view



Shaft Quantitative Inspection Device (SQUID)

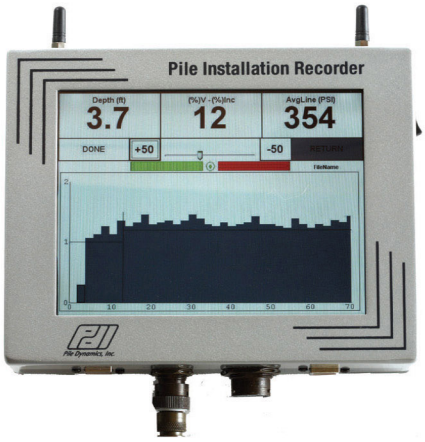
A new technology for quantitatively assessing the quality and strength of the bottom surface of a bored pile or drilled shaft.

- Measures both the thickness of soft material or debris on top of the bearing strata and the strength of the bearing layer, providing a strength versus penetration output in numerical and graphical form
- An objective, quantitative assessment is reported through accurate displacement and penetrometer pressure measurements, digitally processed and sent wirelessly from the drilling location to the SQUID tablet
- Quickly and efficiently attaches to any drill stem or Kelly bar by site personnel

Pile Installation Recorder (PIR)

An Automated Monitoring Equipment that assists in the installation of augered cast-in-place (ACIP) / continuous flight auger (CFA) and drilled displacement piles by displaying pumped grout/concrete as a function of depth in real time.

- Records and displays accurately measured, pumped grout volume and auger depth in real time, optionally with grout pressure or torque measurements and RPM
- Installation log results printed immediately on a small field printer
- May be installed in any type of dedicated or general purpose rig equipment
- Can be used in low headroom applications
- Optional PIR viewer allows inspector or supervisor to simultaneously monitor each installation



E-Saximeter

Handheld instrument registering relevant pile driving parameters, calculating diesel hammer stroke or hammer blows per minute (BPM), for an accurate pile driving log.

- Counts hammer blows, and computes blows per minute for all hammer types; calculates stroke height for diesel hammers
- Provides a drive log of blow count as a function of depth
- Optional accessories allow for impact velocity measurements to compute kinetic energy and depth measurements

Length Inductive Test Equipment (LITE)

Evaluates the length of existing steel piles (steel sheet piles, H-piles, pipe piles, cased drilled shafts and highly reinforced drilled shafts) using the inductive field method.

Software and Accessories

Most of PDI's products include a dedicated software program or suite for reporting purposes. Many software add-ons are available for increased data mining and analysis. Hardware replacement parts or a variety of accessories are "on the shelf" and immediately available. See our full offering of software and accessories at www.pile.com.

PDI Products are used on a variety of deep foundations. Please refer to the pile icons for reference.

Driven Piles | Drilled/Bored/Micro Piles | ACIP/CFA/DD Piles | Helical Piles

OUR STORY

In the mid-1960s, at what is now known as Case Western Reserve University in Cleveland, OH, Professor George G. Goble, became the principal investigator of a research project to develop new technologies of pile testing. The Ohio Department of Transportation and Federal Highway Administration funded the initial study, entitled "Dynamic Studies on the Bearing Capacity of Piles", which resulted in an electronic testing device displaying the bearing capacity of a pile based on fundamental stress wave theory. During that time, as a graduate student, Dr. Frank Rausche developed the Case Method and CAPWAP® analysis. A short time later Garland Likins, also a graduate student at Case, joined in both the software and hardware development efforts. In 1972, the trio came together to form Pile Dynamics, Inc. (PDI), a firm dedicated to developing quality control instruments for the deep foundation industry, most notably, the Pile Driving Analyzer® (PDA).

PDI continues to innovate the deep foundations industry through the development of quality assurance/quality control testing equipment and technologies. Our technologies are used worldwide on various types of deep foundation structures, both on- and off-shore. We offer customized training in the use of our equipment, as well as certified continuing education through foundation testing workshops, seminars and webinars around the world. Visit our extensive resource library at www.pile.com.

Today, more than ever, Pile Dynamics is committed to quality, research, innovation and superior customer care. And, every PDI instrument includes technical support. Headquartered in Cleveland Ohio, USA, PDI products excel in quality, reliability, accuracy and durability.

"We not only build pieces of equipment and perform testing, we are actually developers of the testing methods themselves."

Frank Rausche, PhD, Founder

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Pile Dynamics, Inc. (PDI) manufactures industry-standard, high quality Deep Foundation testing equipment. Since 1972, PDI has been the world leader in developing, manufacturing and supplying state-of-the-art QA/QC testing and monitoring products and software for the deep foundations industry.

Supplying Testing Instrumentation in Over 100 Countries

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