



Shaft Quantitative Inspection Device (SQUID™)

Shaft Quantitative Inspection Device (SQUID36™)

Assesses cleanliness and competency of the bottom of drilled shafts or bored piles

Fast. Economical. Dependable.

Pile Dynamics, Inc. has developed a new technology for quantitatively assessing the bottom surface of bored pile or drilled shaft foundations with a minimum diameter of 45 cm. SQUID36™ quantitatively measures the soft material or debris thickness that may be covering the bearing strata, at the bottom surface. Based on geotechnical theories, SQUID36 outputs force and displacement in numerical and graphical form. The entire test can be completed very quickly, typically less than 30 minutes – including attachment to the drill stem, testing and analysis.

The SQUID36 test consists of mounting the device on a Kelly bar and lowering it into a drilled hole. Once the SQUID36 is located at the bottom of the hole, the buoyant weight of the Kelly bar will transfer sufficient force for the penetrometers to penetrate the debris and bearing layers, and for the displacement plates to retract. Accurate, real time force vs displacement measurements are plotted and displayed digitally in the SQUID36 main unit.

SQUID36 does not require testing personnel to work near the excavation. The attachment to the end of the Kelly bar is relatively quick and safe procedure easily done by site personnel.

SQUID36:

- Measures thickness of soft material or debris covering the bearing strata of bored piles or drilled shaft foundations with diameter of 45 cm or larger
- Generates force vs displacement in both numerical and graphic form
- Provides real time, quantitative assessments through accurate displacement and penetrometers pressure measurements

An important part of bored pile construction is the cleaning and inspection of the bottom of the hole prior



to placement of reinforcement and concrete. To achieve cleaning once drilling is complete, a cleanout bucket is typically used to remove any material unsuitable for end bearing support. Bottom inspection is then performed with SQUID which takes accurate force and displacement measurements, providing an objective, quantitative assessment.

- SQUID36 can be deployed into excavations that are larger than 45 cm in diameter
- SQUID36 body includes quick attachment adapters for different sized drilled stems
- Three independent displacement versus pressure (from cone penetrometers) measurements
- The main unit receives data via a cable for real-time measurements

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.