

# Digging deep



**Most projects start from the ground up, and a variety of equipment can be used to create the base.**

**Sandy Guthrie delves into the world of foundations.**

**T**he quality of the foundations of any building project is key to its success, but there are many different ways to achieve the stability necessary for a safe and lasting structure.

Efficiency and operator safety are, of course, important and there have been a number of new launches this year in all sectors of the foundations world.

(...)

**PDI's TIP measurements can be used to estimate the actual shape of a shaft.**

(...)

New quality control devices have also been launched this year. The Thermal Integrity Profiler (TIP) from Pile Dynamics (PDI) and Foundation & Geotechnical Engineering (FGE), for example, uses the heat generated by curing cement – hydration energy – to assess the quality of cast in place in concrete foundations such as drilled shafts, bored piles, augered cast-in-place, continuous flight auger piles and drilled displacement piles.

PDI said that because temperatures within the concrete foundation were dependent on its diameter and distance to the centre of the shaft, TIP measurements can be used to estimate the actual shape of the shaft, including the previously difficult to determine thickness of concrete cover.

The TIP assesses the concrete quality of the entire cross-section and along the entire length of the foundation. PDI added that test results were available as early as 12 hours after concrete is poured, allowing construction to continue.

