This year has so far seen new equipment launched in the foundations sector, while existing equipment has also been tested in new ways on a host of challenging projects around the world. Manufacturers of foundation equipment must produce equipment that is robust and reliable enough to be capable of working in hostile environments – at altitude, in poor soil conditions or even over water.

In addition, such equipment must be as flexible and, in some instances, as compact as possible to be able to perform a wide range of tasks in sometimes tight working conditions like city centres. Environmental concerns must also be taken on board, with many of the latest machines featuring new, low emissions engines, as well as a focus on reduced vibration and the introduction of energy saving modes.

(...)

Helen Wright looks at how foundation equipment manufacturers are focussing on reliability, robustness and energy efficiency to meet the challenges of today’s projects.
Pile Dynamics has released new accessories and software for its Pile Installation Recorder (PIR) – the PIR Viewer and a new version of its PIRPLOT data processing and reporting software.

The PIR is automated monitoring equipment that records and displays grout volume versus depth, along with other parameters that help the construction of augered cast-in-place and continuous flight auger piles.

The PIR Viewer is a handheld WI-FI device that allows a supervisor or inspector to see, in real time, the information that the PIR is displaying to the operator in the crane cab. This enables the supervisor to stop the rig operator sooner in case there is a concern.

In the past, the pile had to be completed and summary report generated before an inspector could review the installation details, but Pile Dynamics said the PIR Viewer allows grout return to be flagged with a push of a button, while each pump stroke can also be logged.

Once the pile is completed this information may be compared to the PIR summary report. Post processing with PIRPLOT is also said to generate presentation-quality tables and graphs for quality assurance and control.