

# Customer case study

## Diagnostic Test Equipment



**BACHY SOLETANCHE**

Bachy Soletanche Limited is one of the UK's leading geotechnical specialists with a highly regarded reputation for quality and innovation within the field of foundation and underground engineering.

When faced with an extremely challenging testing requirement, Bachy Soletanche turned to the Webtec HPM6000 and six 1000 Bar pressure transducers to meet their challenge.

The team were looking to test the strength of three different 120mm diameter tie rod assemblies (each with a different anti corrosion treatment) and in order to complete the tests they used two 500 tonne hydraulic jacks per assembly to apply 270 Bar of pressure to an 8.5 Tonne concrete section which had the tie rods assembled through it.

One pressure transducer was applied to each jack to ensure that the applied pressure remained constant and that each jack applied the same pressure as the other and the two remained within tolerance to each other, the two transducers were connected to the HPM6000 data logger.

Continual measurement of the pressure applied by each jack and the ambient temperature was data logged by the HPM6000 which was connected to a dedicated PC via USB connection using the HPMComm software. Using the HPMComm software allowed the results to be written directly to the PC hard drive providing a complete record of all results captured throughout the program. The PC was configured with a static IP address meaning the data can be accessed from any computer in real time from any location.



This set up delivered considerable benefits to Bachy Soletanche including:

- Continual Data logging of pressure and ambient temperature throughout the test allowing the team to provide results for any point in the test program.
- Access to the data from any PC, from any location at any time meaning the system doesn't need to be continually monitored with results manually collated and distributed.
- Any effect of temperature change on pressure could also be captured reflecting the effects of temperature change in the final real world environment.
- No need for staff to take regular readings 24 hours a day, 7 days a week saving considerable overtime costs for the business.

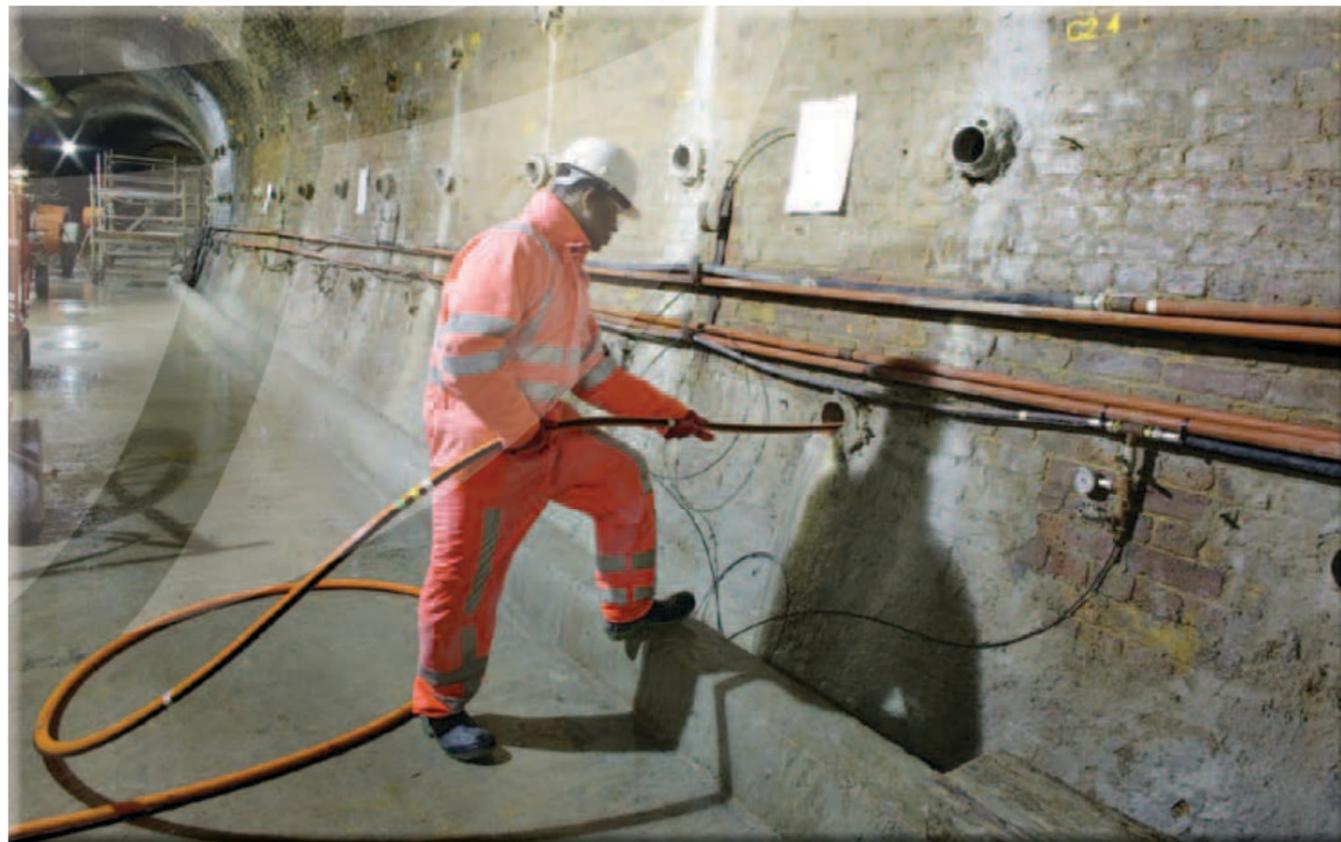
Initially a 30 day test, the test was then increased to one hundred days and had been running for nine months at its conclusion at the end of January 2015. The test has proved to be a total success for the structural design of the assembly, fully supported by the results captured by the Webtec HPM6000 data logger.



Typical screen shots taken from the HPM6000



Typical screen shots taken from the HPM6000



This program posed many challenges to the team from the start, one of which was how to organise the monitoring of the jacks throughout the test and the HPM6000 and pressure transducers proved to be ideal tool for the job.

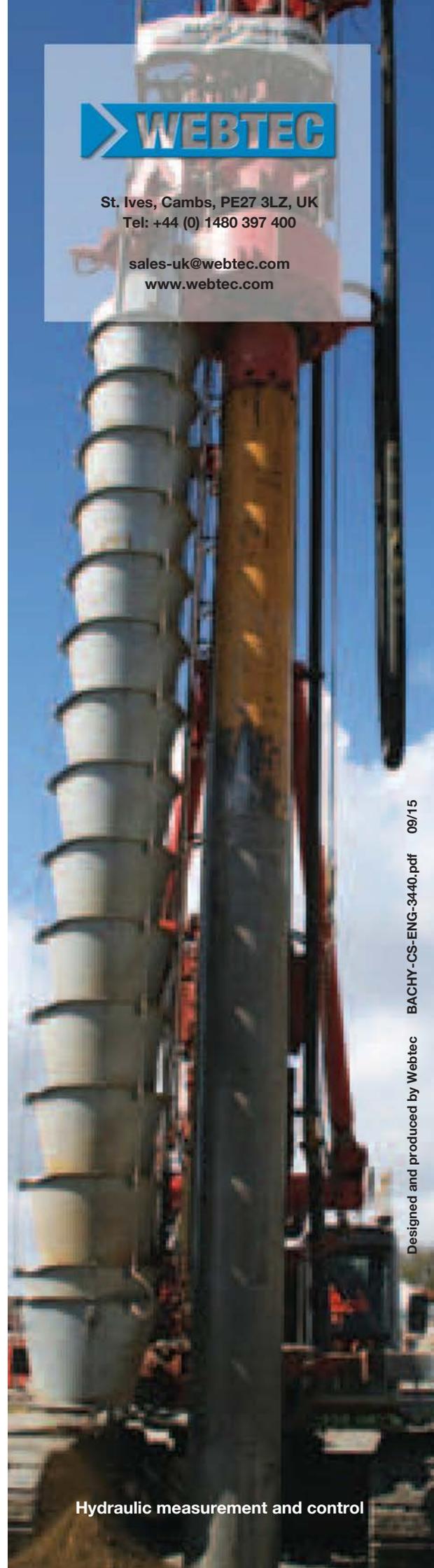
*“I have no idea how we could of performed this program without the Webtec HPM6000 and pressure transducers”* Ian McKenna, Plant Technical Support Supervisor, Bachy Soletanche.

Over the duration of the project Bachy Soletanche have been very impressed with the performance of the Webtec equipment and support provided by the team at Webtec and are almost certain to turn to Webtec for future projects.



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