

Application Note – Residual load testing of anchor bolts

Customer Requirements

There are answers designers need to know when calculating required capacity for fastening beams in buildings or holding roofs on in high winds. For instance: How tight is that bolt? If it is this tight now, how tight will it be in one hour, one day, and one year?



A world-leading manufacturer of masonry fasteners needed as part of their product development to measure the peak installation load and to monitor how the load reduces as the newly installed fastener “beds in”. To capture the peak load, the logger is required to sample quite quickly, but since the test was required to run for days or weeks, if this sample rate was continued throughout the test period the amount of data would make it hard to handle and analyze.

Equipment

DT50
Panel Mounted Display
DeTransfer™

Sensors

Load cell

Datataker Solution

The *dataTaker* DT50 provided a cost effective solution. With the *dataTaker* data logger’s versatile alarms and schedule rates the DT50 samples rapidly at the start of the test cycle and then slows down the sample rate as the test continues. This unique ability reduces the volume of data collected making file size easier to handle. By using the internal calculation abilities of the *dataTaker* logger the peak load is recorded and the load drop off is monitored as a percentage of peak load. This value is both logged, for later analysis and displayed so the test progress is monitored without the need of connecting to the *dataTaker* data logger via computer and downloading the test results.

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