DATS Case Study

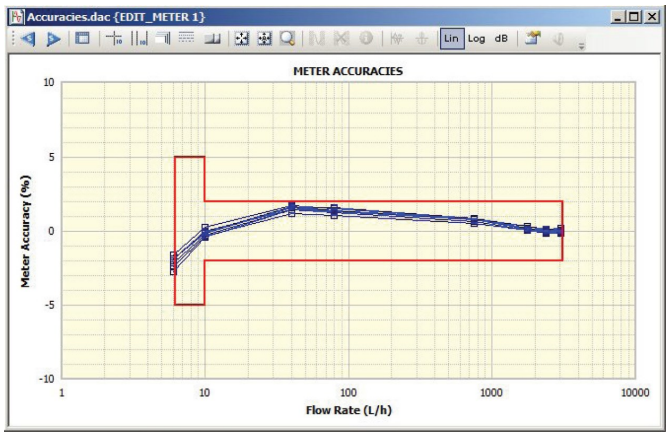
Water Meters

End of Line Vibration Testing

- **Flexible & customisable test system**
- **Custom user front end**
- **Speeded up design cycle for new products**
- **Reduced customer returns**



A major UK manufacturer of domestic and industrial water meters wanted to automate the testing of samples of their meters taken from production. These meters have to be accurate within statutory limits so that neither the customer is charged too much nor the supplier underpaid. To make things even more difficult, the meters have to be accurate when operating over a wide range of flow rates.



Prosig was asked to supply a multi-channel data acquisition system that would handle a variety of input signals such as analogue pulse measurement signals, weigh scale voltages, temperatures and pressures. In addition, the system had to interface with a programmable logic controller (PLC) through digital control lines that synchronised the starting and stopping of individual tests.

Custom application software was supplied with the system to enable automated, unattended capture, analysis and statistical reporting of a sequence of simultaneous tests on up to ten meters at a time. Innovative analysis techniques were developed by Prosig engineers to handle the extreme variations encountered in the pulse detection signals as the flow rate was varied.

A simplified variant of this system with support for barcode scanning to identify individual meters is currently being used in a production line environment in the Far East. The test system has proved so flexible and fast that every meter could be checked prior to shipping and faulty meter shipments were reduced to zero.



About Prosig

Prosig is a UK company specialising in the testing and monitoring of complex machinery, vehicles and structures in the advanced engineering, automotive, aerospace and industrial sectors. It offers a wide range of system capabilities, experience and innovation, with a particular focus on advanced vibration and acoustic monitoring and analysis techniques. Prosig is part of CMTG (Condition Monitoring Technology Group), an international group headquartered in the UK.

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