



CLAMP-ON TO CLEAN OUT? NON-INVASIVE FLOW MEASUREMENT FOR PIPEWORK REMEDIATION

MEASUREMENT TASK

The refurbishment specialist Stainless Restoration Ltd. needed to measure the flow of demineralised water in a project to clean and maintain heat exchanger pipework for one of the UK’s largest and most important engineering groups.

The project, for Rolls Royce, involves demounting pipework from large-scale heat exchangers and removing particulate deposits from the internal surface. Iron oxide, dust, atmospheric contamination and loose fibres are removed using fine filters, down to 3 micron, dislodged from the pipework’s internal surfaces by circulating clean, demineralised water at a high flow rate to create a turbulent flow to scour the pipe’s interior. A flow rate of more than 3.5 kg per second is required.

SOLUTION

A KATflow 200 portable non-invasive flowmeter was chosen for the task. Compact K4N transducers are easily fitted to the outside of the heat exchanger pipes using simple sprung chain mounts, and the KATflow 200 both measures the flow to confirm that the cleaning action is being achieved and also logs flow data for later analysis.

Stainless Restoration’s Managing Director Frank Morris commented, ‘We have found the KATflow 200 to be perfect for various chemical circulation projects we have undertaken. We like the easy set-up and reliability of the flowmeter, and we have had great support over the phone from the team in Coventry.’

ADVANTAGES

- Easy to set up and install
- No need to interrupt ongoing production processes
- Possibility of measuring on pipes with various diameters and liquids
- User-friendly operation
- Large data logger up to 100 000 measurements
- Robust, reliable and accurate instrument

SPECIFICATIONS

Installation type	Portable
Medium	Demineralised water
Pipe material	Steel
Pipe diameter	100 mm
Temperature	Ambient
Flow rate	3.5 kg/s

APPLICATION



Stainless Restoration needed an easily installed temporary flow measurement system.

INSTRUMENT SOLUTION



The hand-held clamp-on flowmeter KATflow 200 was the perfect combination of portability and reliability.