

APPLICATION NOTE

Glaxo Smith Kline

MINISONIC CLAMP ON ULTRASONIC FLOWMETERS - FROM ULTRAFLUX



BACKGROUND:

Glaxo use a significant amount of WFI 'Ultra pure Water' within their manufacturing plant at Harlow. There is always a requirement for reliable flow measurement as this enables process monitoring for water quality and purification faults to be made. The process in its simplest form is to keep the water at a constant 85-90 C and to keep the water circulating in the ring main pipe work. This keeps the lines free from bacteria and foreign bodies. When the laboratories have a requirement, the water is fed through a chiller and is then delivered to the lab at a constant 15 C.

THE PROBLEM:

Prior to Flowline's involvement the process team were supplied with 4 turbine meters that were installed and promptly failed. The problem with turbines is the bearings need the fluid to be reasonably lubricating and Ultrapure water is extremely 'dry'. The solution to this metering problem was an obvious choice, the same supplier re specified the equipment and supplied ultrasonic meters. Clamp-On Ultrasonic meters require no process shut down so can be installed on a live system at any time, with interface to the control mechanism being done at a time of convenience.

This solution however was not straight forward; this particular manufacturer suffered 30-50% errors when the water was chilled prior to being delivered to the point of use.

So, the client, having purchased two sets of unreliable instrumentation was naturally very cautious. Flowline offered to trial the system and, subject to extremely rigorous testing proved that the MINISONIC is a very reliable, repeatable instrument, capable of handling these demanding process conditions.

FLOWLINE'S METERING SOLUTION:

The MINISONIC range of non intrusive flowmeters were selected for their range-ability and ease of installation. All pipework had been installed so clamp on meters were selected for the retrofit capability. Flows were not interrupted or by-passed and the installation could be easily checked by the in-built meter diagnostics. Temperatures to 180 C are available pipe sizes of 10-3300 mm are offered through firmware and sensor options. 2 channel and 2 chord versions are available. The 'ESC' autofocus function increases the performance of the meter in extreme conditions.

Further Information



For Further information on the MINISONIC range of Clamp on Ultrasonic Flowmeters contact Flowline on 020 8207 6565

www.flowline.co.uk
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EQUIPMENT DESCRIPTION:

EQUIPMENT SPECIFICATION:

MINISONIC 600 pipe i. d. up to 600mm,
MINISONIC 2000 pipe i. d. up to 3300 mm.
Single/Dual Channel/Chord Options.
Probe Types, Clamp On and Wetted.
Outputs
2x 4-20mA,
2 relays for
alarm, flow direction, flow threshold,
Totaliser, fault, RS232 and 485,
JBUS-MODBUS Protocol.
Power Supply 10-30 VDC, 9-18 VAC,
Consumption < 5W Typical Accuracy
+/- 1% of reading, repeatability +/-
0.05%

Now available with ESC (Echo Shape Control), and the new high technology probes for difficult applications.
These meters now have an integral keypad, display and an incredible autofocus/noise rejection capability. Full user lists and references are available.

flowline
SPECIALISTS IN FLOW MEASUREMENT

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