APPLICATION NOTE

A Power Generation Company
ELECTROMAGNETIC FLOWMETER – BY FLOWLINE

BACKGROUND:

A Scottish Power Generation Company had a requirement to monitor all the effluent being process and pumped off site to the main water company sewer. The billing procedure previously had been by a consent discharge based on pump run times and pump calculations. The original requirement was to meter the flow from the existing pipe work without interrupting the flow, by using the Time of flight ultrasonic method.

THE PROBLEM:

After the pipe had been exposed, a trial and demo was required to check the ultrasonic meter was suitable. During this trial, the meter showed that the pipe was not running full so pipe modifications were required to get a good flow measurement.

FLOWLINE'S METERING SOLUTION:

Flowline offered their MAGFLO MAG 5000 and MAG 5100W Solution.

This was offered in place of the ultrasonic meter as the pipework was going to be modified, thus enabling an inline meter to be utilized.

The pipework was modified and arranged so that the meter would operate with the flow pumping up through the meter, and if over time the non return valve failed, the empty pipe detection on the meter would provide an alarm and ensure the meter read zero for an empty pipe condition.

The MAG5100W is a general purpose magnetic meter for drinking water, effluent and sewage applications. It has a high degree of accuracy and is widely used by the water companies and the Environment Agency.

The MAG5000 converter was supplied in an IP67 compact configuration, with the electronics sat on top of the sensor. The MAG5000 converters have most of the standard outputs required by industry, and it includes the digital display of rate and total.

Further Information

For Further information on the MAGFLO range of Flowmeters contact us on
T: 020 8207 6565
E: sales@flowline.co.uk

EQUIPMENT DESCRIPTION:

MAG 5000 Flow Converter With plug and play commissioning; Self-diagnostics with error reporting; Bi-directional flow; Flow limit switches; External input and empty pipe detection. Analogue 0-20mA or 4-20mA, Digital Output for Error signal, Flow direction of Flow limit switches
System Accuracy 0.5% (reference conditions)
Housing IP67 – "Plug in" module in Polyamide

MAG3100 Specifications

Size (mm)	DN 15-2000
Connection	Flange
Pressure (bar)	Max. 100
Temperature (°C)	-40 to 180
Liner	Neoprene,
Electrodes	316 with earthing electrode
Enclosure	IP 67 / 68

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SPECIALISTS IN FLOW MEASUREMENT

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