Panametrics

Application note

Panametrics achieves challenging wastewater flow measurement on a lined ductile iron pipe

Benefits:

- Non-obtrusive measurement with no process shutdown required
- Easy to install and validate
- Robust technology with meaningful diagnostics

Existing DF868 with C-RS 401 on another influent wastewater line

Summary

A municipal wastewater plant in North America sought a reliable flow measurement for one of their key wastewater lines. The existing dual-channel ultrasonic flowmeter from a competitor had consistently failed to provide accurate readings. This application was particularly challenging as it involved influent wastewater that had already passed through a grit screen filter.

Application

Medium:	Wastewater
Pipe size & thickness:	48″ (DN1200) 0.58″ (14.73 mm)
Pipe material:	Ductile Iron
Lining mat. & thickness:	Mortar for 0.12″ (3.05 mm)
Flow rate:	~15 Mgal/d (56,781 m3/d)
Temperature:	Ambient

Challenges

This was a very difficult application for two principal reasons:

- The wastewater still contained solids, the volume percentage of which was unknown.
- The pipe was located in a vault with limited straight run and the possibility of some entrained air bubbles.

The competitor's meter had never performed correctly, leading the customer to suspect that this might not be a suitable application for an ultrasonic flowmeter, despite the competitor being a reputable brand.

Solution

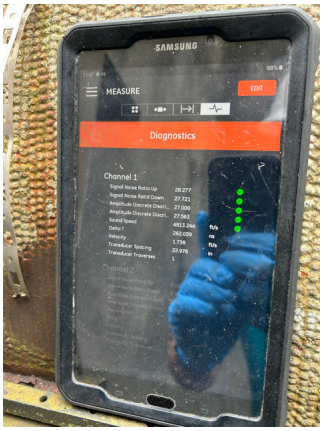
The customer was already benefiting from a dual channel Panametrics DF868 on a 48" mortar lined ductile iron influent line after a bar screen filter. As a result, convincing the customer to trial a Transport PT900 on this line, was relatively straightforward.

Once again Panametrics proved to be the premier ultrasonic flow meter solution provider in the market. The PT900 performed exceptionally well!

With the PT900 in place, the team monitored the flow for approximately 30 minutes and established that the competitor's flowmeter constantly recorded errors. However, the PT900 never missed a beat. The diagnostics were clear, as can been seen from the picture.

The customer was so impressed, recognizing the improvements to efficiency and productivity that accurate readings will deliver, that they immediately placed an order to equip this influent wastewater line with the Panametrics DF868 with CRS 401 transducers liquid permanent ultrasonic clamp on meter.

Pictures of the PT900 in a single traverse set up



Great diagnostics

Panametrics, a Baker Hughes business, provides solutions in the toughest applications and environments for moisture, oxygen, liquid and gas flow measurement.

Experts in flare management, Panametrics technology also reduces flare emissions and optimizes performance.

With a reach that extends across the globe, Panametrics' critical measurement solutions and flare emissions management are enabling customers to drive efficiency and achieve carbon reduction targets across critical industries including: Oil & Gas; Energy; Healthcare; Water and Wastewater; Chemical Processing; Food & Beverage and many others.

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