



Application note

Panametrics technology helps track potable water leaks

Benefits:

- Easy to set up and program
- No process interruption
- Strong reputation and local support in water measurement
- Reliability and accuracy



Ronneby is a small Swedish city with 12,000 people. Its Local Authority was concerned about the volume of potable water losses through its pipeline network due to leakages. This is a problem not unique to Ronneby but applies to many cities in Sweden and around the world.

1 m³ of potable water is currently priced €1.50 in Sweden, meaning that the cost of any significant leaks can be huge (it is not uncommon to see millions of m³ worth of leakage across a water network not equipped with leak detection technology). Quite apart from the cost and efficiency, water is becoming scarce in many parts of the world, and in Sweden, greater attention is being taken to identify, track and remedy leakages.

Identifying leakages, in Ronneby, the Local Authority focuses on night flows, when people are generally sleeping, as the flow is expected to be very low. If the flow is unusually high, then it raises the likelihood of leakage.

The introduction of Panametrics flowmeters to map the municipal water network will help the Local Authority to rapidly identify leakages enabling quicker fixes.

Application

Medium:	Potable water
Pipe size and material:	PVC 160x7.7 mm (6.3"x0.3")
Flow rate:	Bi-directional -90 to 90 l/s (1426 GPM)
Temperature:	2-25°C (35-77°F)
Requested accuracy:	<±2% of reading

Challenges

Understanding how the water grid is mapped is key to identifying the optimum measurement locations are selected. These can include water towers, pump stations, boosting stations, etc. In this instance, as the city had already installed electromagnetic meters and Panametrics' Aquatrans meters at various points, it was decided to trial the installation of Panametrics' clamp-on ultrasonic flow measurement technology in a manhole.

The Panametrics Team had to find a way to install the meter in a very confined space. It was clear to the customer that installing any electromagnetic meter was not an option because of the burden associated with flow interruption that would have resulted in increased cost to consumers and the mechanical work required to install flanges on the PVC pipe. A clamp-on ultrasonic option was much more realistic and would prove to be effective.

Solution

Working in partnership with the customer, Panametrics' Aquatrans AT600 Clamp-on Ultrasonic Flow Meter with CRS 402 and submersible cable was selected. The AT600 electronics sits in the cabinet at street level as shown in the picture opposite.

The municipality is very pleased with the results. Better able to identify leaks, the customer is already improving efficiency and saving water. It now plans to purchase 10 additional meters to be used for the same application.

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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