

Application note



Waste water treatment plant

AquaTrans AT600 clamp-on flow meter measures waste water intake on a large pipe with tight available space

Problem

A company in Turkey has many waste water treatment facilities in the Istanbul district.

It mainly has open-channel flow meters at the inlet and outlet of its water treatment facilities. In one of them, flow measurements were quite unbalanced between inlet and outlet—up to 30%—which cannot be correct when the plant runs under normal conditions. After the open channel inlet, the pipe goes underground with very limited possibilities to make a flow measurement, even if the pipe is fully filled. The only opportunity is in the valve room. Most of the flow meter vendors didn't have a solution for making a measurement. In addition to this issue, the waste water has solid content up to 2% in volume.



Application

Pipe material:	Carbon steel, diameter: 2200 mm (88 in), thickness: 12 mm (~½ in)
Medium:	Waste water, temperature: 10 to 20°C (50 to 68°F)
Velocity:	0 to 2.3 m/s (0 to 7.55 ft/s)



Solution

Enotek proposed that the customer test Panametrics AT600 clamp-on flow meter for handling this application despite the short downstream piping run. The flow meter was installed in a single traverse as there was not enough available length to go for a dual traverse set up. The customer tested the meter for one full month to have enough time to evaluate its performance. The results matched their expectations.

As a public company, the customer had to issue a tender. Two other companies, tried to measure the flow at the same location. Neither of them were able to get stable readings and some exhibited severe fluctuations. As a result, the customer selected the Panametrics AT600 clamp-on flow meter for this harsh application.