

Contactless flow measurement for Biwater Treatment Ltd. as part of a municipal project in Panama. The flowmeters had to be installed on existing and new pipes and flow data used for process regulation.

Specifications

- **Installation Type:** Permanent
- **Flow Channels:** Two
- **Outputs:** 2 x Current
- **Medium:** Raw Water
- **Pipe Material:** Carbon Steel with Cement Lining
- **Pipe Diameter:** 1,500 mm
- **Flow Velocities:** Various
- **Temperature:** Ambient

Application



Clamp-on sensors were installed on this existing feeder pipe of a water treatment plant supplying Panama City with water.

Instrument Solution



Fixed installed ultrasonic clamp-on flowmeter KATflow 150 as example of a suitable instrument.

Measurement Task

Biwater Treatment Ltd. was awarded a contract by the Panamanian Water Authority to build a new water treatment plant and to refurbish an existing one. Thereupon Biwater required a non-invasive flowmeter to measure the flow of raw water pumped into each of the two plants.

The decision to use clamp-on flowmeters had been made, as the existing plant is the main source of water to the capital Panama City. The plant could therefore not be shut down for maintenance or the installation of an invasive flowmeter. The two feeder pipelines were 60" (1,500 mm) in diameter and made of carbon steel. Furthermore, both of the pipelines are lined with cement mortar, with one of them having been in operation for over 27 years.

Solution

The solution came in the form of a fixed installed ultrasonic clamp-on flowmeter similar to the KATflow 150. Applying the clamp-on mounting technique, the sensors could be installed to the pipes without the need to interrupt the water supply of entire Panama City.

Biwater engineers were particularly impressed by the precision and reliability of Katronic's instrument. These two characteristics were crucial, as the data from the flowmeters was transmitted to the plant's process control system where it was used to regulate the dosing rate of water treatment chemicals.

Katronic could demonstrate its comprehensive project management experience by solving initial teething problems by providing excellent after sales services as explained by Mr. Juan Severino, Operations Manager for Biwater Panama: "The customer service while commissioning the flowmeter and any time after was excellent. The assistance provided went well beyond our expectations".

Advantages

- **Simple, quick and cost effective installation on existing pipeline**
- **No need to interrupt water supply during installation**
- **Accurate and reliable flow data for water treatment regulation**
- **Flowmeter easily embedded into existing control system**
- **No moving parts and thus no need for maintenance**
- **Excellent in-house commissioning and after sales service**

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