

Measuring Task

Flow measurements in the drinking water supply system
 Nominal pipe diameters: 110 mm to 330 mm outer diameter
 Pressure: up to PN 16

Instruments Used

Ultrasonic flowmeter FLUXUS® ADM 5107

Advantages

- Reliable non-intrusive measurement
- Simple installation of transducers
- Low space requirement of the measuring system
- High dynamic range

Selling Points

- High measuring accuracy even at low flow velocities and small flow rates
- Solid workmanship of the transducers

Description

The reduction of water loss due to leaks in the pipeline system is becoming increasingly important for water providing companies. For this reason, the EnBW Regional AG has developed an innovative system of monitoring and early alarm, through which occurring leakage can be recognized and repaired quickly. The principle of gapless monitoring of the system is simple: Occurring leakages raise the water consumption, and therefore mean increased flow in the supply system. If such sudden changes in the flow are observed, a leak can be assumed and looked for specifically.



The basis of gapless system monitoring consists of exact flow measurements in the water supply system. The experts from the EnBW have decided to use the ultrasonic flow meters FLUXUS® from FLEXIM. The clamp-on ultrasonic transducers are installed at various places in the distribution system and their measurements transmitted to a central control station via cell phone. With the data from all flow

measuring points of a supply zone, the area of damage can first be generally located and then — through conventional measuring procedures — precisely pinpointed. Repairs of the damage can be started immediately.

The advantages of non-intrusive flow measurement with the clamp-on procedure are obvious: Only a minimum of underground construction is necessary for the installation of the measuring equipment. The small ultrasonic transducers are easy to mount and can be installed in existing ducts without problem, without drilling and on lines of any material. For more than a year, the experts from the EnBW thoroughly tested comparable measuring systems by different manufacturers. Finally, they settled on FLEXIM as their technology partner. Solid workmanship of the transducers and best performance decided the outcome: FLUXUS® measures with high precision even in the case of very low flow volumes.

Fast Leakage Detection in the Drinking Water Supply System

EnBW Regional AG, Stuttgart

The EnBW Regional AG is the largest distribution system operator in Baden-Wuerttemberg. They operate the high, medium and low voltage systems as well as the water system. Additionally, they supply the state capital Stuttgart with drinking water. The wholly-owned subsidiary of EnBW Holding is associated with numerous municipalities and public utility companies in Baden-Wuerttemberg through concession contracts and shares.

The EnBW Regional AG bundles the communal corporate services and is a central services partner of municipalities and public utility companies.

In the area of water supply and waste water disposal, the spectrum of services offered by the EnBW Regional AG comprises the complete management of water supply and waste water disposal installations, evaluations of water supplies, disposal concepts, and the measurement of water loss.



Photo: EnBW

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