



THE JOURNEY OF SEWERAGE SERVICES TO DRINKING WATER SUPPLY

BACKGROUND

The Saalfeld-Rudolfstadt Association is committed to supply around 82,000 inhabitants in Germany with safe and clean drinking water. To allow for smooth processes, the customer focusses on cutting-edge technologies optimizing the flow measurement.

SIEMENS

CHALLENGE

High accuracy flow measurement is an essential requirement in this process of cleaning water. There were several challenges for the replacement of the existing 20 year old device. The first one was the challenging installation situation of the measurement point. In front of the built-in electromagnetic flowmeter, a T-piece with the feed from the first pump is located at a distance of 4 meters. This T-piece causes massive changes in the flow profile.

Another challenging aspect to this particular project was the location of the measuring point which was positioned 3 meters directly below the ceiling from the basement to the ground floor. Furthermore, numerous pumps were installed below the measurement point, which posed a particular challenge for a 1:1 replacement of an electromagnetic flowmeter (weighing about 500 kg). For this reason the association selected a clamp-on flow measurement solution to help alleviate these issues.

SOLUTION

To replace the defective electromagnetic flowmeter a Siemens SITRANS FS230 clamp-on ultrasonic flowmeter was installed, helpfully this was a swift process which only took a matter of minutes. This impressive flowmeter has an accuracy of 0.5 to 1% of flow rate and repeatability of 0.25% according to ISO 11631. Furthermore, with a 100 Hz data update rate even the miniscule and high-speed fluctuations in flow are detected with exceptional precision.

RESULT

Included in the SITRANS FS230 is a Digital Sensor Link which digitises the signal at the initial point of measurement for a strong signal-to-noise ratio and high-precision measurement. All changes can be tracked at any time on the display with up to six customisable views. Clamp-on systems in general can be mounted easily on the outside of the pipe, meaning a quick and straightforward installation.

The newly fitted SITRANS FS230 clamp-on is far more cost-effective than the previous defective flowmeter which was far outdated.

EQUIPMENT SUPPLIED

- **Siemens SITRANS FS230 clamp-on ultrasonic flowmeter**

