



SIEMENS



Food Processor monitors water usage and verifies meter calibration

Using Siemens SITRANS FM flow meter

Process Instrumentation



SITRANS FM MAG5100W
electromagnetic flow meter



Siemens Verificator for SITRANS FM
flow meters

Challenge

A food processing company in northern California has a small wastewater treatment plant to treat its wastewater before releasing it back to the local municipality. The customer needed a reliable way to monitor its effluent flow that is accurate and can be accuracy-verified twice a year.

Solution

At the request of the customer, the local Siemens representative installed a SITRANS FM MAG5100W electromagnetic flow meter that is now being used in the wastewater plant of this facility. The flow meter accurately measures the quantity of water being returned to the local municipality. The customer is now being billed based on the volume of treated effluent.

The SITRANS FM MAG5100W sensor tube is installed in a 4 inch pipe that occasionally becomes submerged, but the application of the Siemens Submersible Kit protects the sensor from water damage. The remotely mounted transmitter is mounted in a cabinet so they can easily see the flow rate and totalizer amounts, and have easy access to the output terminals. The flow signal and the totalizer values are recorded and reported to the city on a weekly basis.

This meter is tested twice a year by the representative using the Siemens Verificator. The Verificator is a device that tests all components to ensure that they are within factory calibration specifications. The fully automated verification only takes 15 minutes to perform and provides for a Certificate of Verification. This ensures compliance to the city's requirements.

Benefits

- **Convenience:** Support provided by the local Siemens representative and their field service department, backed by the 24/7 Siemens technical support hotline.
- **Reliability:** The Siemens flow meter maintains its accuracy of 0.2 % ±2.5 mm/s even when it's submerged. The submersible kit protects the meter from water and electrical damage.
- **Cost and Time Savings:** The verification service provided by the representative saved the customer both time and money by eliminating the need to have the previous meter uninstalled, shipped to the factory for recalibration, or to a service company to do a calibration check while having to install a temporary flow meter. This cost of this process was more than three times higher than on-site verification service. The Verificator's test certificate complied with the city's requirement to document performance and accuracy.

About the SITRANS FM Mag5100W flow meter

The SITRANS F M MAG 5100 W electromagnetic meter is designed for high accuracy of the flow rate measurement and is built with a durable wetted material liner of hard rubber, NBR or EPDM and Hastelloy-C electrodes - including two grounding electrodes. NSF 61 approved for drinking water, it also serves many other applications including ground water, wastewater and activated sludge applications.

The flow meter is designed to allow patented MAG in-situ verification using the SENSORPROM fingerprint.

Siemens meters feature a unique SENSORPROM memory unit which stores sensor calibration data and transmitter settings for the lifetime of the product.

About the Siemens Verificator

The SITRANS F M Verificator is a highly advanced instrument used to carry out the complex verification and performance check, according to unique Siemens patented principles. The Verificator checks the general operation conditions of the flowmeter and that the flow meter is within specification, including the sensor's magnetic integrity. The verification process takes only 15 minutes and is fully automated.

Key Features

- In-situ check of performance without interrupting the flow meter installation
- Fully automated – no manual set up or data input – with predefined factory accept levels
- No expensive removal or installation costs
- Full verification report to confirm meter performance according to quality standard ISO 9001 and management standard ISO 14001

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