



SIEMENS

Local support saves time and money for municipal contractor while reducing customer downtime

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Situation

A general contractor specializing in municipal water and wastewater projects had purchased a number of electromagnetic flowmeters for various applications throughout many treatment facilities.

At one particular water treatment plant that provides drinking water for distribution to a large area of customers, the contractor had originally been using competitive magmeters but had decided to switch to SITRANS FM MAG 5100W flowmeters from Siemens due to their reliability and ease of use. The new magmeters would be used for measuring the flow of drinking water from the main plant to a regional water authority. The flowmeters would provide a 4-20mA

output signal to the plant's SCADA system for totalization and also to indicate the need for chemical dosing to maintain quality.

Challenge

While the local Siemens representative was installing the new flowmeters, including four 36-inch flow tubes and two 8-inch flow tubes, they noticed that the customer's site drawings showed cathodic protection on the piping where the magmeters were to be installed. Unfortunately, isolation of the meters had not been taken into account during the design and drawing preparation phase, but was necessary to prevent the protective electric current from affecting flowmeter performance.

Answers for industry.



Solution

To prevent operational and safety problems, the local Siemens representative consulted with Siemens Technical Support and then purchased the necessary components to provide isolation of the magmeters from the electrified metal pipes, including NEMA 4X stainless steel enclosures, isolation transformers, fuses, fuse holders and capacitors. The contractor provided the labor to install the components, and the flowmeters were then successfully put into service. The addition of the transformers and capacitors prevented the flowmeter's electronic signals from being affected by the cathodic protection energy, ensuring proper flowmeter operation.

The electrical contractor on the job was not only impressed with the Siemens transmitter package as compared to the previously used flowmeters, but was also grateful for the assistance of the local Siemens representative in facilitating the installation correction to get it done right.

Benefits

Cost savings:

- The local representative saved the contractor time and money by recognizing the need for the magmeter to be isolated from the piping protection before startup, which also saved the customer from added downtime.
- Built-in ground electrodes inside the sensor tube eliminate the need for grounding straps on steel pipes and grounding rings on plastic pipes.
- One flowmeter designed for every water and wastewater application means fewer stocked parts required in inventory.

Minimal maintenance requirements:

- Lack of moving parts ensures long-term performance of the sensor tube.

- The sensor is designed to withstand burial and constant flooding when the Submersible Kit is installed, so the customer can be assured of a long lifespan regardless of environment.

Outstanding support:

- Siemens representatives across the country provide local service and support when and where it is needed. Coupled with 24/7 Siemens Technical Support, the local representatives receive the right answers quickly.

About the SITRANS FM MAG5100W flowmeter

The SITRANS FM MAG 5100 W flowmeter, featuring high-durability liners and electrodes, is a cost-effective solution for all water applications, including groundwater, drinking water, wastewater, sewage and sludge. Its superior design results in increased accuracy of flow measurement, making it especially useful for leak detection.

Key features

- NBR Hard Rubber liner ensures consistent accuracy
- Highly resistant to a wide range of chemicals used in treatment plants
- Sensitive low-flow measurement for accurate totalization and leak detection
- Drinking water approvals
- Complies with most international standards and approvals

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