



WASTEWATER TREATMENT PLANT SOLVES COATING ISSUES IN PRIMARY SLUDGE LINE WITH ELECTRODE COATING DIAGNOSTIC

Customer

Lower Berkeley Wastewater Treatment Plant in Goose Creek, SC

Application

Wastewater treatment plant primary sludge transfer measurement

Challenge

The Plant Electrical Maintenance Manager for the Lower Berkeley County Wastewater Treatment facility had problems with primary sludge coating the electrodes in the sensor causing the meter to fail. The process had to be shut down, the tube removed, cleaned and placed back in-line causing significant downtime and added maintenance costs. This was happening about every three months and they had to be reactive in their maintenance response because they never knew when the unit would fail.

Lower Berkeley Wastewater Treatment Plant primary sludge contained grease from industrial wastewater discharge which mixed with the sludge and formed a material that was coating the electrodes and solidifying to a paper mache-like consistency.

Because the amount of coating varied due to several factors, the amount of grease in the media and temperature, there was no way of knowing how much material was building up on the electrodes. The operators had to wait until there was a failure before they could service the meter. The line had to be shut down and the meter removed causing disruptions in operation. Maintenance schedules were also disrupted because personnel had to be pulled from routine maintenance to address the meter failures.

Results

- Eliminated meter failures
- Reduced operation and maintenance costs
- Reduced down time for maintenance and cleaning



The Rosemount magnetic flowmeter electrode coating diagnostic allows us to monitor the coating of the electrodes and warns us so we can clean the unit before a failure.



Steve Wolfensberger
Electrical Maintenance Manager



Image 1. Rosemount 8750W Magnetic Flow Meters for Utility Water Applications

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Solution

The Rosemount™ 8750W Magnetic Flow Meter solved the problem of electrode coating. The 8750W tube was replaced with a tube using bullet-nose electrodes. A transmitter with the electrode coating diagnostic was installed. The diagnostic monitors the electrode resistance value changes caused by build-up on the electrodes. By determining the electrode resistance value just prior to a failure, the meter was set to warn the operator before that value is reached.

Advance warning of a pending failure gives the operators the ability to schedule maintenance and service the meter before a failure occurs, thus eliminating down time and reducing maintenance headaches.

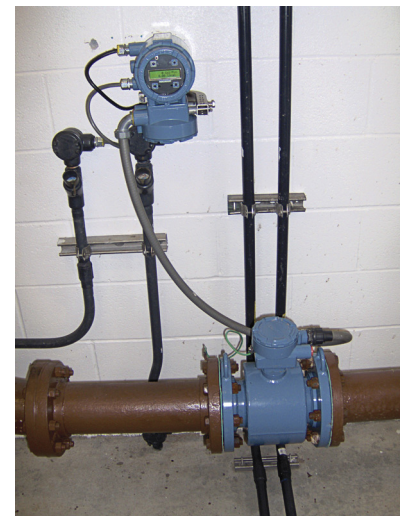
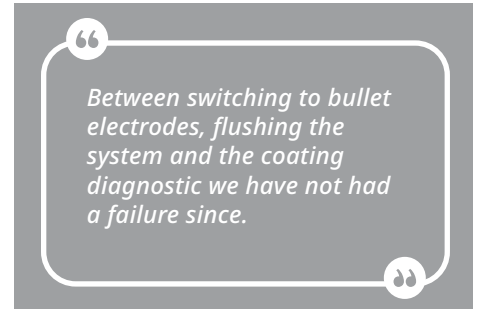


Image 2. Installed Rosemount 8750W Magnetic Flow Meter

For more information, visit
[Emerson.com/RosemountMagneticFlow](https://www.emerson.com/RosemountMagneticFlow)

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