

University Improves Water Billing Accuracy with Meter Verification and High Accuracy Calibration

RESULTS

- Improved billing accuracy
- Decreased maintenance costs
- Increased billing revenue

APPLICATION

Chilled water billing meter

CUSTOMER

A large university in the United States

CHALLENGE

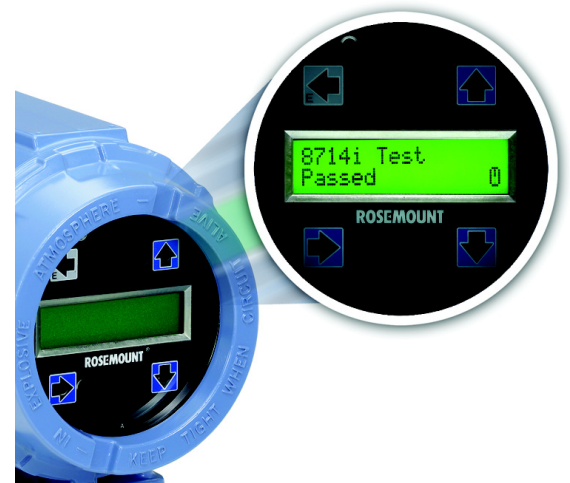
This university wanted to improve billing accuracy and reduce flowmeter verification costs on their chilled water billing meter.

The university was using a magnetic flowmeter with an accuracy of +/- 0.50% for billing chilled water usage. Since the flowmeter was being used for billing purposes, it was important to verify the flowmeter was operating correctly. Therefore, the university hired an outside contractor to verify the calibration twice per year. The contractor only verified the transmitter using a calibration standard and did not verify that the sensor calibration had not changed. By only checking the transmitter, the contractor did not provide a complete verification of the flowmeter performance.

In addition, the university had to pay \$2,800 per year for the verification service, resulting in increased maintenance costs. During the test, the meter needed to be taken offline and users were not billed for usage while the transmitter test was in progress, resulting in lost revenue. The existing flowmeter had an accuracy specification of only 0.5%. The low 0.5% accuracy specification resulted in higher variation in the flow rate measurement decreasing billing accuracy.



Meter verification diagnostic capability built into the transmitter eliminated the need for an outside contractor saving \$2,800 per year in maintenance costs.



Rosemount 8732 meter verification test result.

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SOLUTION

This customer replaced their flowmeter with a Rosemount 8700 Magnetic Flowmeter with the in situ meter verification diagnostic and the high accuracy calibration option.

The flowmeter verification diagnostic enabled the customer to perform a complete verification of both the sensor and transmitter, ensuring the calibration had not changed relative to the factory calibration. This was completed bi-annually per the university's quality plan. Using AMS® Suite: Intelligent Device Manager, a report was then printed for record keeping purposes.

By having the meter verification diagnostic capability built into the transmitter, an outside contractor was no longer required, saving \$2,800 per year in maintenance costs. In addition, the flowmeter remained online during the test, increasing billing accuracy by minimizing lost revenue due to downtime. The 8700 Magnetic flowmeter systems high accuracy option enabled this customer to improve flow uncertainty from 0.50% to 0.15%, further improving billing accuracy.

8700 Magnetic flowmeter systems 0.15% high accuracy specification improved billing accuracy for this customer.

RESOURCES

Emerson Process Management Alternative Energy Industry

<http://www2.emersonprocess.com/en-US/industries/Alt-Energy/Pages/AltEnergyIndex.aspx>

Rosemount E-Series Magnetic Flowmeter Transmitters

<http://www2.emersonprocess.com/en-US/brands/rosemount/Flow/Magnetic-Flowmeters/E-Series-Transmitters/Pages/index.aspx>

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