

Smart Meter Verification identifies erosion in critical quality and efficiency control sensor

RESULTS

- Allowed maintenance to pinpoint the potential safety issue early and start resolving the problem more quickly than traditional reactive maintenance practices
- Proactively minimized off-spec product, avoided possible missed shipments and maintained plant efficiency
- Cost savings conservatively estimated to be \$125K annually



Smart Meter Verification detects critical tube wear

APPLICATION

Abrasive slurry with a Micro Motion® ELITE® Coriolis CMF200 flow meter enabled with Smart Meter Verification diagnostics.

CUSTOMER

A major international chemical manufacturer.

CHALLENGE

Fluid velocity of abrasive slurries is an important parameter to monitor in measurement devices. A discrepancy in typical flow was detected by an operator and then was later confirmed to be reading 11-13% higher when put in-line with a calibrated test meter. This incorrect measurement, if gone undetected, could have been the cause of poor quality product and low efficiency rates for this process.

SOLUTION

Smart Meter Verification software within the meter electronics was critical in early identification of tube erosion in an ELITE CMF200 on a critical quality and efficiency control loop that would otherwise be undetectable. Smart Meter Verification was able to detect this deterioration in the sensor after being installed in the process for approximately 8 months. With a flow velocity of approximately 6 ft/sec, and newly installed, “tube wear” would rarely be identified as the culprit.

As a short-term, immediate solution an adjusted meter factor was applied until a replacement sensor could be delivered to the site. Final solution was to install a larger sensor to further reduce the velocity of the process slurry.

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