

Paper Mill Utilizes DP Flow Meter Technologies for Greenhouse Gas Compliance and Verifying the Gas Company's Meters

RESULTS

- Improved accuracy of internal check meters
- Added ability to verify natural gas company's measurement and billing
- Reported more accurate data to the EPA



APPLICATION

Check meter in a natural gas line

APPLICATION CHARACTERISTICS

4-in. natural gas line

CUSTOMER

Coated paper manufacturer in the U. S.

CHALLENGE

A coated paper manufacturer, needed accurate and reliable flow meters for their natural gas lines feeding their boilers. These meters were needed for EPA 40CFR98 Greenhouse gas monitoring and were replacing less accurate orifice plates to be able to question the natural gas company meter.

To meet the EPA 40CFR98 Greenhouse gas regulation, the mill quickly had installed orifice plates to meet a short deadline. Once they were installed, they found that a measurement did not match the measurement from the natural gas company. The difference in measurement meant that they were either overpaying for their natural gas or their Greenhouse gas compliance meters were inaccurate.

SOLUTION

The paper manufacturer installed a Rosemount Compact Annubar Flow Meter to measure one of the natural gas lines between two raised face flanges and two Rosemount Conditioning Orifice Plates to retrofit the existing orifice plate installations. The Rosemount Compact Annubar Flow Meter provided accurate measurement with the required turndown and the Rosemount Conditioning Orifice easily retrofitted the existing orifice plate installations to provide accurate measurement.

As a result of the accurate measurements, the paper manufacturer was able to question their gas company's 12-in. rotary meter. Figure 1 was provided by the utilities manager and depicts the improved accuracies achieved by replacing the boiler and utility meters. The x axis lists days and the y axis compares the flowrate measurements of the boiler and

A more accurate billing was achieved using the Rosemount™ Compact Annubar™ Flow Meter.



Rosemount Compact Annubar Flow Meter installation between two raised face flanges

the gas company's utility meters. Near the end of November 2011, the 10-in. rotary meter (gas company's utility meter) was installed and resulted in more precise measurements. In February of 2012, the Rosemount Compact Annubar Flow Meter (boiler meter) was installed. Right away, the two meters were reading within 1.00 to 1.50 percent of each other.

As a result of the improved measurement accuracy of their internal check meters, the engineer was able to verify the natural gas company's measurement and billing. In the process, they negotiated with the gas company to change their billing meter to one that was better sized for their current usage of natural gas. They were also able to report more accurate data to the EPA.

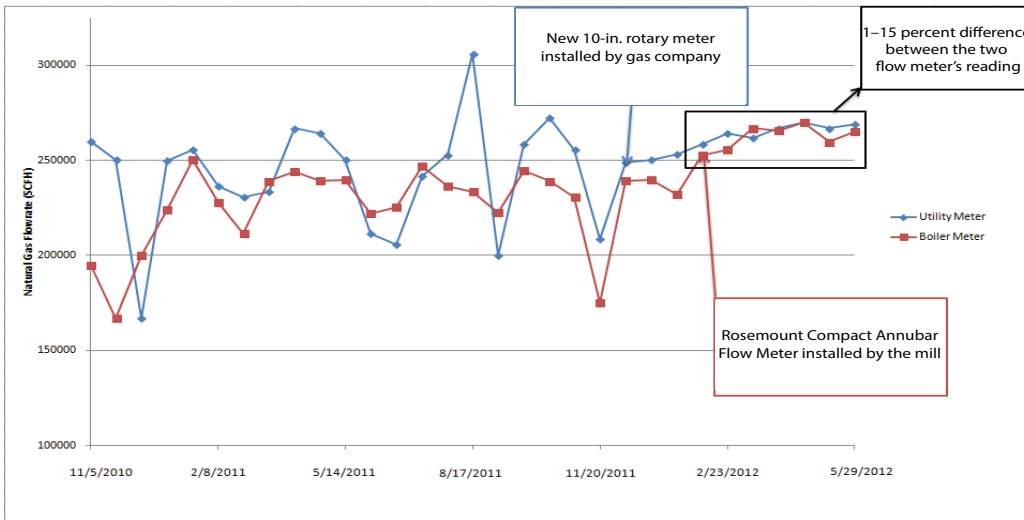


Figure 1: Chart comparing the gas company's meter and the mill's boiler meter. After both meters were replaced they were reading within 1–1.5 percent of one another, resulting in more accurate natural gas billing.



Rosemount Compact Annubar Flow Meter

RESOURCES

Emerson™ Pulp & Paper

Emerson.com/Industries/Pulp-Paper

Rosemount Annubar Flowmeter Series

Emerson.com/Rosemount/Rosemount-3051S-Flow-Meter

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