Micro Motion® Coriolis Gas Allocation Meter Drives Operating Unit Cost Savings

RESULTS

- Reallocated 25% of costs for natural gas based on actual usage
- Enabled company to manage business units more effectively
- Natural gas measured accurately, regardless of variations in flow rate
- Provided additional function of a check metering system

APPLICATION

A manufacturer of kaolins uses natural gas-fired driers to process clays for different products. Natural gas is one of the largest expense items in its operations. Costs for natural gas were assigned by the company's accounting department to different business units based on allocation formulas, which were applied to total usage as reported by the gas utility.

CHALLENGE

Management recognized that the accounting assumptions underlying the formulas had become invalid over time. The assumed cost allocations caused low volume, high value products to subsidize the cost structure of other products. An actual usage cost model could provide much more effective management information. However, the costs of purchasing and installing traditional gas metering equipment might offset these benefits.

SOLUTION

Micro Motion® Coriolis flowmeters were installed in the natural gas supply for each of six operating units. On the basis of actual gas usage, 25 percent of natural gas costs were reallocated among the different units. (At current prices, this amounted to approximately $250,000 per month of reallocated costs.) Management could then correctly reflect the actual production cost of each product category. With this information, marketing and sales were able to redirect business focus on those products that produced the greatest profit.

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Micro Motion meters prove less expensive and easier to install than traditional gas measurement technologies.

Micro Motion®

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As an added benefit, the accurate measurement of gas usage across the business units made it possible for the company to compare its billings from the utility against actual usage, ensuring that gas was not being overregistered at the utility's metering station. Flow rates varied over a considerable range in each of the units. So one important factor in the company's selection of Micro Motion Coriolis meters over competing technologies was their superior rangeability.

The company also selected Micro Motion meters because they are less expensive and easier to install than traditional gas measurement technologies. Micro Motion Coriolis meters measure mass flow directly, so the need for temperature and pressure compensation is eliminated. Micro Motion flowmeters output in either mass or standard volume (SCF) without requiring a flow computer or compensation transmitters.

In addition, Micro Motion Coriolis flowmeters do not require straight pipe runs, so the meters were installed where space was available. Because factory calibration on water transfers directly to any process fluid, including gases, field calibration is not necessary at commissioning. Since there are no moving parts to cause drift, periodic recalibration is generally unnecessary.