Achieve accurate billing in Natural Gas commercial metering

A reputed lime plant manufacturer in the UAE was able to achieve peace of mind with accurate billing, and other benefits by using the highly robust gas specialist ultrasonic flowmeter.

Endress+Hauser
People for Process Automation

Industry:

- Mining, Minerals & Metal

Application:

- Flow measurement of Natural Gas from a Central Gas Authority to a lime plant consumer for commercial metering.

Original installation:

- Turbine meter is the flow metering instrument

Process description:

- A Lime plant manufacturer in the UAE was receiving Natural Gas from central gas supply authority on a 6" line.
- The consumption was measured and standardized in volume. The total was then advised to the central authority daily. The consumer was billed based on the consumption in MMBTU units (Energy flow).

The Challenges:

- Inconsistent billing amounts owing to unaccounted and uncorrected drifts in the metering systems.
- Turbine meter measures only operating volume. Additional Volume corrector is needed to convert to Standard Volume. Then a totalizer is needed to totalize and provide the final count to the Central Authority for them to convert to Energy units.
- Constant maintenance of the turbine meter and other instruments and the volume corrector.
- High maintenance and costs.
- No possibility of local verification.

The end user was not satisfied with the Turbine meter performance and was looking for a more viable and efficient solution.

Our Solution:

- Prosonic Flow G 300 with advanced gas analysis package with Heartbeat technology and WLAN.
- Overall length, wetted parts, and process connection of the flexible multipoint was chosen as per process requirements

Benefits:

- Cost saving – reduction in number of instruments/equipment
- Reliable and accurate billing
- Less maintenance - no moving parts
- Less failure possibilities – proven gas measurement technology
- Maximum reliability even with humid or wet gas – sensor design insensitive to condensate
- High-performance process control – real-time pressure- and temperature compensated values
- Efficient solution – multivariable, no pressure loss
- Full access to process and diagnostic information – WLAN: Without interrupting the process
- Integrated verification – Heartbeat Technology
- Advanced Gas Analysis package - Calorific Value measurement – Customer can assess the Gas quality in real time!

Prosonic Flow G is an extremely robust sensor for long-term operation. Its wetted materials are made of stainless steel and titanium Grade 2. The sensor has no moving parts and creates no pressure loss. The innovative design of the measuring tube ensures a high measuring accuracy (±0.5%) and a trouble-free measurement also with moist or wet gases:

- Active draining system for occurring condensate between sensor/housing
- Faultless continuation of ultrasonic measurement without impeding signal quality

Figure 1: Proline Prosonic Flow G 300 (9G3B) with flange connections for accurate measurement of natural and process gas

Scan the QR code and take a closer look at Prosonic Flow G

Figure 2: Prosonic Flow G 3D Model

Download your Prosonic Flow G eBook to receive general introduction

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