



Clamp-on Ultrasonic Flowmeter provides air usage information for billing purposes

Challenge

A large chemical company in the Southwest United States manufactures intermediate and specialty chemicals.

One of their operating units wanted to measure the incoming flow of a ten-inch plant air-header pipe and eight-inch instrument air-header pipe. Total monthly flow measurements of the plant and instrument air-header inlets to the operating unit are important in order to reconcile what the central utilities is billing the operating unit for air usage. With no adequate flow measurement devices in place, the operating unit did not know what their air usage was. They had to accept whatever the central utility was billing them.

System pressure is critical in gas service, and in this particular case those pressures ranged from 95 to 118 psig.

The engineer considered installing in situ turbine meters or orifice plates with DP cells, but concluded the installation costs would be around \$100K.

Solution

The local Siemens representative recommended the company install Siemens clamp-on flowmeters for the application. To prove that the solution would work, the representative offered to set up a trial with a SITRANS FUG1010 flowmeter unit. The customer agreed. The test was confirmed a success and the customer ordered two gas meters, the necessary transducers and a clamp-on RTD for real time temperature measurement. The flowmeters were installed on both the plant air-header pipe and the instrument air-header pipes for precise measurement of the air being used by the operating unit. Now they know exactly how much air they are using, and the central utility can bill them correctly.

Because the transducers “clamp on” to the outside of the pipes, there was no need to cut into the pipes and stop the air flow for any amount of time. The simple installation and start-up saved the company a considerable amount of money over their alternative in situ types of measurement.

Process Instrumentation and Analytics

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Benefits

Cost and time savings:

- No need to cut into pipe or shut down processes during installation.
- Simple installation and start-up saves money over alternative in situ types of measurement.
- Operating unit is now only billed for the air they use

Installation ease:

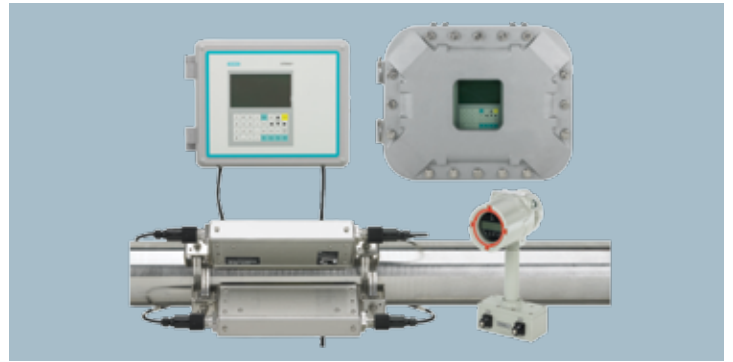
- Installation is done at a time convenient to the customer, no need to shut down flow or interrupt the process.

Reliability of the measurement:

- Siemens Si-ware analytical software analyzes the SITRANS FUG1010 flowmeter diagnostics, delivering crucial information about the application and flowmeter performance. The software runs on a PC and polls the data from the flowmeter for analysis and full system check.

Local service and support:

- Service and support are available in your neighborhood. Siemens extensive global coverage means you get support when and where you need it.



About the SITRANS FUG1010 Ultrasonic Clamp-on Flowmeter

The SITRANS FUG1010 clamp-on non-intrusive ultrasonic flowmeter is ideal for numerous natural and process gas applications, including air. It uses an internal AGA-8 table for fixed gas composition to compute standard volume and is in compliance with AGA-10 speed of sound measurement practices.

The meter is available in single, dual and optional four path configurations. There are three enclosures to choose from: NEMA 4X wall-mount, NEMA 7 wall-mounted explosion proof, and NEMA 7 compact explosion proof.

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