Flow Measurement of Triethylene Glycol

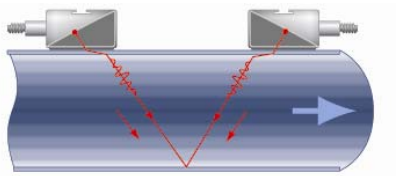
Non-invasive measurement, therefore applicable to all types of sensitive, ultrapure, chemically aggressive or toxic fluids

Measuring task	Method	Medium
Flow measurement	Ultrasound	Triethylene glycol (TEG)

Features

- Medium: triethylene glycol (TEG)
- Pipe: ø 34 mm / 1.3 in
- Pipe material: steel
- Wall thickness: 6 mm /0.24 in
- Temperature: approx. (20 to 70)°C / (68 to 158)°F
- Pressure: 170 bar
- Flow rate: (0 to 4) m³/h / (0 to 141) ft3/h
- ATEX Zone 1

The EEx-pert: FLUXUS® 8027 ultrasonic transmitter for use in explosive atmospheres



Non-invasive flow measurement with ultrasonic clamp-on technology: no changes to the piping, and therefore no approval procedure.

Measuring task

Natural gas that has been stored in underground reservoirs has to be dried prior to distribution to the consumer. To do so, triethylene glycol, a strong hygroscopic substance, is sprayed in the absorber towers of the gas dehydration facility and extracts humidity from the gas. For optimal operation of the gas dehydration facility, the injected TEG has to be precisely dosed. The gas dehydration facility is of course an area with a potentially explosive atmosphere. All invasive work on the existing system is subject to a strict approval and inspection procedure. The existing measuring device is an old turbine counter with insufficient accuracy, and its reliability is decreasing.

Solution

The non-invasive flow measurement with ultrasonic clamp-on technology works without any contact with the media involved. Installation and commissioning is fast and easy: The ultrasonic transducers are simply clamped onto the outside of the existing pipes. This means that no changes to the piping are necessary, and therefore also no inspection and approval procedures.

Advantages

- No contact with the medium during measurements.
- Non-invasive installation and commissioning of the measuring equipment; no work on the piping required, no downtimes and no approval procedures.
- Easy, fast commissioning

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