



Clamp-On Flowmeters Perform Separator Control on Offshore Platform

Offshore drilling platforms supply about 24 percent of the oil production in the United States. Most of these are huge structures that include one or more modules or decks that support the process equipment, a drilling rig, utilities, and accommodations for personnel. With the introduction of new drilling technologies, drilling platforms can now operate in water as much as two miles deep putting tremendous stress on all of the equipment used onboard.

The Problem

A major engineering construction company for an Alaskan oil production group needed to specify flowmeters for use on an offshore drilling platform in the Beaufort Sea, off the coast of Alaska. The meters were needed for measuring flow on pipes carrying mixtures of oil, water, sand and gas.

The flow data will provide critical information for control of the onsite separators and movement of the product through the production process. Since the combination of water, oil and up to 30% gas causes problems for most flowmeters and particularly for meters having wetted components that would be eroded by sand and corroded by production water, finding the right meter for the offshore drilling platform was not an easy task.

The Solution

The customer consulted with the local Siemens representative, who recommended him a clamp-on ultrasonic flowmeter from Siemens.

One of the major benefits of the clamp-on ultrasonic flowmeters is that they provide accurate, non-intrusive flow measurement in larger pipes for a lower price than

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typical insertion-type flowmeters. As opposed to in-line meters where process shutdown is necessary during installation, clamp-on flowmeter transducers are mounted on the outside of the pipe. The result is that production can continue uninterrupted, saving customers substantial amounts in lost downtime and manpower.

The Result

After discussing the options, Siemens supplied the SITRANS FUH1010 high-precision clamp-on ultrasonic flowmeter. Designed specifically for hydrocarbon applications in which dynamic viscosity compensation that goes beyond the capabilities of standard ultrasonic flowmeters is a prerequisite.

As with any other clamp-on flow device from Siemens, it is not necessary to cut the pipe or shut down operations to install the flowmeter; the transducers are quickly and easily mounted on the outside of the pipe, minimizing maintenance expenses and preventing deposits from forming. The clamp-on design also eliminates the need to modify pipes or interrupt the flow.

The Product

- Hydrocarbon liquid measurement requires equipment you can rely on. With Siemens
- SITRANS FUH1010 flowmeters:
 - WideBeam ultrasonic transit time technology ensures
 - excellent accuracy
- Automatic zero adjustment makes installation and commissioning easy
- Choice between viscosity compensated gross volume and standard volume (mass) meters provides a solution for any application
- Multiple analog outputs enable interface and scraper distinction
- Accuracy tailored to application with option between dual, triple or optional four beam versions
- Three enclosures available to fit a variety of installation requirements
- No need to stop the flow or cut the pipe
- Price does not increase in proportion to the size of the pipe



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