

Oil Company Simplifies Mass Flow Measurement with Compact Orifice Flowmeter

RESULTS

- Reduced maintenance
- Substantial cost savings in installation, labor, and down time
- Reduction in spare parts inventory



APPLICATION

Natural gas distribution lines to various facilities

CUSTOMER

European oil company

CHALLENGE

A European oil company provided natural gas to various facilities, but maintaining accurate measurement for the gas was not efficient or very effective. The application was a demanding flow measurement task due to the wide range of flows from 7,000 to 160,000 Nm³/day, pressure of 8 to 12 Kg/cm², and temperature of 10 to 40°C.

The previous methods consisted of an orifice plate and three different transmitters (DP, P and T). With multiple instruments, multiple impulse lines were required as well, which created an additional challenge due to maintenance requirements of this traditional set up.

With the various demands for natural gas between the facilities in the region, three different orifice plates were required to cover the flow ranges accurately. Stocking multiple orifice plates and transmitters on site to cover all the ranges created a large inventory of spare parts.

Measuring the natural gas through the many distribution lines to the various facilities in an efficient and effective manner was proving to be a challenge.

The oil company has reduced their transmitter requirements from three measurement points to one.

SOLUTION

Emerson Process Management provided a Complete Point Solution in one package with a Rosemount 3095MFC Compact Orifice Mass Flowmeter. This solution eliminated the need for three separate transmitters that were previously required with the traditional installation and incorporated the advanced multivariable transmitter technology in one installation.

The Rosemount 3095MFC Compact Orifice Mass Flowmeter was able to cover the entire flow range and reduce the number of orifice plates to just one size. The operators in the control room of the facility were given two separate flow configurations calculated within the Engineering Assistant (EA) Software that would cover the entire flow range needed on site. Emerson used their EA Software to determine an optimum flowmeter size for the conditions at the site. This enabled the operators to fully integrate their site programming for flow measurement, all in one installation.

CONCLUSION

With the integrated flowmeter offering, the oil company has reduced their transmitter requirements to an efficient and labor free measurement point. The cost savings in installation, labor and shut down time was substantial when only having one flowmeter to cover the changing operating conditions within the plant.

Also, with one integrated DP flowmeter the quantity of spare parts required to cover the flow ranges was reduced significantly. The customer saved both time and money with the superior performance and installation savings from the Rosemount 3095MFC Compact Orifice Mass Flowmeter.

RESOURCES

Rosemount 3095MFC Compact Orifice Mass Flowmeter

<http://www.emersonprocess.com/rosemount/products/flow/m405p.html>

Emerson Process Management was able to provide the oil company with a Complete Point Solution all in one package, a Rosemount 3095MFC Compact Orifice Mass Flowmeter.

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