

Petrochemical Plant Reduces Safety Incidents and Maintenance Cost on Steam Measurement

RESULTS

- Reduced energy waste
- Eliminated safety incidents
- Saved \$1000 per year in maintenance cost
- Improved plant availability

APPLICATION

Steam measurement

CUSTOMER

Petrochemical Plant in Northeastern China

CHALLENGE

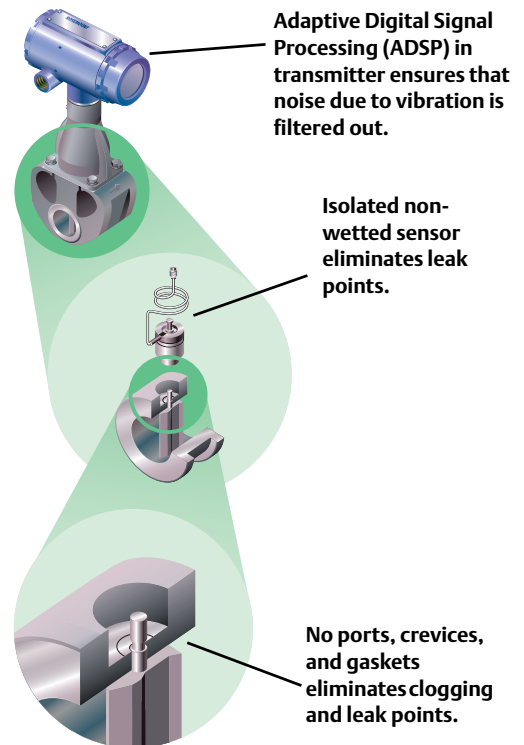
This petrochemical plant was experiencing reliability problems with their steam flow measurement. The plant needed a more reliable measurement solution in order to improve plant availability and eliminate steam leaks.

The plant's steam line was equipped with a traditional vortex flow meter that utilized a gasket to seal the interface between the vortex meter body and sensor body. Due to temperature cycling caused by the non-continuous process of the plant, the gasket experienced physical property changes with temperature. This would leave a gap between the body and the gasket during operation and resulted in steam escaping to the environment. In addition, when the steam wasn't clean, dirt and debris had the potential to clog the existing traditional vortex meter installation resulting in a faulty measurement.

In order to replace the gasket or clean the clogged meter, the steam line would need to be shut down resulting in reduced plant availability. Maintenance costs were incurred in order to replace the gasket as well as increased energy costs due to steam leakage. Since the steam leaks would occur at anytime and could not be predicted, it resulted in safety issues for plant personnel, especially during cold weather when the meter was more susceptible to leaks.



The all welded, gasket-free vortex design reduced plant safety risks.



Rosemount 8800 Vortex Flowmeter delivers reliability by design.

SOLUTION

The plant replaced their current vortex installation with a Rosemount 8800 Series Vortex meter. The Rosemount vortex meter has an all cast and welded design free from gaskets, eliminating any potential leak points for steam to escape. Also, the port-free, non clog, isolated sensor design ensures measurement reliability even in situations where the steam is not clean.

With the new Rosemount vortex installation, this petrochemical plant eliminated safety issues due to steam leakage and also reduced wasted energy. Maintenance costs were reduced by \$1000 per year by not having to change out faulty gaskets. Finally, by not having to shut down the process to repair the previously installed meter, plant availability was increased

RESOURCES

Emerson Process Management Chemical Industry

<http://www2.emersonprocess.com/en-US/industries/Chemical/Pages/index.aspx>

Rosemount 8800 Series Vortex Flowmeter

<http://www2.emersonprocess.com/en-US/brands/rosemount/Flow/Vortex-Flowmeters/8800-Series/Pages/index.aspx>



A Rosemount 8800 Vortex Flowmeter.

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