



## REDUCER VORTEX MINIMIZES COST AND PROJECT RISK WHILE MEASURING LOWER FLOW RATES

### Customer

North American Refinery

### Application

Various installations where impulse line plugging is a concern

### Challenge

This refinery had been experiencing maintenance issues with plugging and freezing of impulse lines in their plant. Plugging and freezing of impulse lines leads to loss of flow measurements, inaccurate measurements, and loss of process performance and process control.

### Solution

The company decided to apply vortex flow meters where they had traditionally installed traditional DP orifice plates. While the original justification for this project was to eliminate the plugged/frozen impulse line problem, additional savings were realized by the Rosemount Reducer Vortex Flow Meter offering.

During the sizing of the meters for this application, it was noted that the line size needed to be reduced to get an accurate measurement from the vortex meters. Normally, this would require welding reducers to the line and putting in a section of reduced-bore piping. With the installation of the Rosemount™ 8800 Reducer Vortex Flow Meter, the plugged/frozen lines in this plant were eliminated. By incorporating the line size reduction into the flange of the Rosemount 8800 Reducer Vortex Flow Meter, an additional \$6,300 in savings were realized by eliminating the additional installation costs normally associated with putting in a smaller line size meter.

### Results

- Eliminated downtime caused by frozen or plugged impulse lines
- Reduced installation costs by \$800 per flow point, \$6,300 overall
- Reduced maintenance costs
- Improved measurement reliability



*Historic installation, common practice installation, and "Best Practice" installation with the Rosemount 8800 Reducer Vortex.*

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In addition, this refinery was able to reduce operations and maintenance costs by reducing downtime and maintenance calls. The all-welded, non-clog design of the Rosemount 8800 Vortex Flow Meters were directly responsible for this benefit.

Lastly, this refinery was also able to better optimize their process because of the increased reliability of the flow measurement provided by the Rosemount 8800 Reducer Vortex Flow Meter.

The refinery realized \$6,300 in installation savings for this project alone.

The all-welded, non-clog design reduced maintenance costs and improved measurement reliability, resulting in better process optimization and availability.

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