

Reducer™ Vortex Minimizes Cost and Risk on Refinery Upgrade Project

Product

Rosemount 8800CR Reducer Vortex

Customer:

North American Refinery

Application:

Process Measurement with Impulse Line Plugging

Details:

Project targeted 8 meters with historic plugging issues to reduce maintenance costs.

Sizing suggested use of Reducer Vortex – saving additional \$800/point compared with traditional vortex installation.



A North American refinery applied Vortex flow meters as replacements for traditional DP-Orifice measurements where impulse line plugging has been an issue.

This project was justified as a significant cost-reduction with a quick ROI due to the expense associated with the impulse line maintenance on eight measurement devices.

SOLUTION

The use of Vortex was considered a good solution since it eliminates impulse lines. The Rosemount 8800 Vortex provided the additional benefit of having no ports that could clog when compared to other manufacturers.

It was recognized that vortex meters would not only be 'best practice' for new points, but would be justified as a replacement for existing lines by minimizing maintenance associated with the plugging and freezing of impulse lines.

The solution was Reducer Vortex for all the flow points. While sizing the meters for the application conditions, it was recognized that for all eight measurements the best meter size was less than the pipe size.

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The reducer vortex and traditional vortex have the same lay length. This provides the ability to size the vortex meters with no changes to the piping, which was recognized as a reduction in potential risk of cost over-runs or problems in the field. The comment was made that the ability to size the meters without effecting the piping made sizing vortex meters, "like sizing an orifice plate".

Reducer Vortex technology saved an average of \$800 per point in installation costs. They based the savings on the cost of materials and labor of welding in separate reducers, piping, and expanders for the 2, 3, and 4 inch line sizes involved in this project.

SUMMARY

A North American refining site adopted vortex technology to eliminate maintenance costs associated with impulse lines plugging. The use of Reducer Vortex was recognized as the lowest-cost, lowest risk approach.

RESULTS

Project was justified to eliminate maintenance spend on traditional DP-Orifice applications with impulse line plugging.

Reducer Vortex saved an average of \$800 per installation in the 2, 3, and 4-inch line sizes compared with traditional vortex installations.