

Leading Oil & Gas Producer Reduced Production and Operating Expenses with Vortex Technology

RESULTS

- Decreased oil and gas field production and operating expenses
- Improved reliability of well test and production data
- Improved the health of personnel, safety of assets, and protection of the environment by lengthening maintenance intervals

APPLICATION

Production & test separator liquid flow lines

Application Characteristic: 20 - 1400 psi, 70 - 150 °F

CUSTOMER

A leading independent oil and gas producer with operations primarily focused in the United States & Canada.

CHALLENGE

This oil and gas producer has seen its production and operating expenses skyrocket the past 10 years, increasing almost 700%. This is not only due to the increased activity in the upstream segment and rising inflation costs within the industry, but the utilization of older technology such as mechanical meters.

All of their producing wells flow into either a production or test separator to separate gas from liquids. Then, the liquids flow out of the separator where the flow rates have traditionally been measured by turbine meters.

Due to debris in flow lines, mechanical meters required extensive maintenance to replace or clean the rotating blades. When these meters failed on test or production separators, the liquid production flow rates are not measured and must be inferred.

This resulted in unknown daily volumes until the next time it was placed on a scheduled well test. This failure is very costly, especially when the well experienced high water or low oil production and well intervention was required.

Replacement or cleaning of internal parts required mechanical meters to be removed from the line, typically once per year. Maintenance personnel would spend more time near open production lines, resulting in increased safety, health, and environmental risks.



Well test data is now more readily available to help determine if the well is producing as expected.



The Rosemount 8800 vortex flowmeter

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SOLUTION

The Rosemount 8800 vortex flowmeter helped solve the pains associated with this separator application. Production and operating costs were reduced with vortex technology with its longer operation lifetime relative to mechanical meters. Because the Rosemount 8800 has no moving parts, no routine replacement or cleaning is necessary. This reduced the amount of time maintenance personnel spent near open production lines, decreasing the risk involved with safety, health, and environmental concerns. In addition, it has a unique meter body design, which reduces plugging from sand and other material and also comes in a variety of connections and sizes, creating a drop-in replacement of most turbine meters.

The ease of replacement and long life of the Rosemount 8800 allowed for better availability of production and well test data for this producer. Production engineers now have the well performance data to determine if the well is producing as expected, or if it is producing excessive water. Field operations were also improved by reducing the time spent maintaining mechanical meters and reallocating this time towards other tasks, which increased production.

RESOURCES

http://www.emersonprocess.com/rosemount/industry/oil_gas/index.html

<http://www.emersonprocess.com/rosemount/products/flow/m8800c.html>

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