

Oil & Gas Company Reduces Uncertainty and Optimizes Chemical Injection with Micro Motion ELITE Flow Meter

RESULTS

- Annual savings of \$92,000 USD in cost of chemicals due to increased measurement accuracy using Micro Motion™ ELITE™ Coriolis flow meters
- Excellent turndown of Micro Motion ELITE Coriolis flow meter helped to minimize overdosing of chemicals and associated costs



APPLICATION

Offshore, Chemical Injection - Upstream Oil and Gas

CUSTOMER

Upstream Oil & Gas producer in Thailand

CHALLENGE

The company was aware that over injection of chemicals would result in financial loss and under injection of chemicals would result in infrastructure failure, therefore, they had to inject an optimum amount of different types of chemicals into the process lines for different purposes.

They normally used a biocide to combat growth of bacteria and production of hydrogen sulfide in the pipelines. The biocide injection was monitored and controlled at very low flow rates, sometimes as low as 5 lph. They were using positive displacement meters for mass flow rate measurement of biocide. PD meters were used for chemical injection applications because the users were familiar with the technology.

However, the minimum flow rate of biocide was not detected by positive displacement meters, which meant the oil and gas company was over injecting chemicals. The over-dosing of biocide not only resulted in financial loss and it also meant their chemical injection program was not effective.

SOLUTION

To solve this problem, the Oil & Gas Company decided to purchase two Micro Motion ELITE CMFS010M Coriolis flow meters and test them over a period of three months. The test results showed

The technology advances of Micro Motion Coriolis flow meter helped to eliminate the low flow cut off problem in biocide measurement and resulted in significant annual savings.



that the CMFS010M model was able to provide accurate and repeatable measurement across the entire flow range (5 lph – 90 lph) and the operators were able to reduce/eliminate over-injection of biocide into the process lines.

Once the initial test results proved to be satisfactory, they purchased twenty more units of the ELITE CMFS010M Coriolis flow meters with 2700 transmitters and standardized the configuration for biocide flow measurement. The Micro Motion Coriolis flow meter solution also helped the oil and gas company save \$92,000 USD annually in chemicals cost because the flow accuracy of Coriolis meters was $\pm 0.1\%$ of flow rate when compared with PD meters accuracy of $\pm 0.5\%$ of flow rate. The Coriolis flow meter solution is easy to maintain, does not require frequent calibration and has a sustainable measurement performance.

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MICRO MOTION™

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