CASE STUDY • ONSHORE EXPLORATION AND PRODUCTION

OIL PRODUCER REDUCES MAINTENANCE COSTS AND OPTIMIZES WELL PRODUCTION WITH E-SERIES MAGMETERS

Application

Gross oil metering

Application Characteristics

80% water, 20% oil mixture with sand, rocks, and gas slugs

Customer

Oil producer in the United States

Challenge

This oil producer was having problems balancing the flow rates into and out of their treating facilities. Overall well and field performance depends on total flow rates. This producer was not confident in their field management decisions due to unbalanced flow rates between the production header and separator.

Turbine meters were being used for gross oil metering on the production headers within their treating facilities. The sand and rocks in the production slowly eroded the turbine blades and wore the bearings. This caused the flow meters to drift, and resulted in premature meter failure.

Questionable data quality from the turbine meters lead to unbalanced flow rates and prevented well optimization. Additionally, significant operations and maintenance costs were incurred maintaining and replacing the failed turbine meters to balance the flow rates. Safety risks were increased since field operators had to repair and replace the turbine meters near high pressure lines. Lastly, environmental risks were increased due to the potential risk of oil spills.

Results

- Reduced operations and maintenance costs
- Optimized well production
- Lowered safety and environmental risks

Rosemount™ E-Series provided the customer with greater flow rate accuracy, which helped balance production into and out of their treating facilities.

EMERSON™

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Solution

The Rosemount E-Series Magnetic Flow Meters solved the customer's challenge by providing an accurate and reliable measurement of production rates. Since the E-Series magmeter has no moving parts, it was not affected by the sand, rocks, and gas slugs within the production. This reduced maintenance costs because the field manager did not need to send the field operator out to the flow meter for cleaning or repair/replacement issues.

The Rosemount E-Series Magnetic Flow Meters helped this customer reduce the maintenance costs associated with mechanical meters. The improved quality of well production data resulted in balanced flow rates within their treating facilities and enabled production engineers to optimize production. This customer also lowered safety risks by reducing personnel time near high-pressure lines. Lastly, because less maintenance was required, the risk of an oil spill was greatly reduced.

The Rosemount E-Series Magnetic Flow Meter

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