Energy Company Reduces CAPEX with Advanced Phase Measurement

Results

- CAPEX reduction of $250K per facility
- Consistently accurate measurement for oil and water allocation metering
- Reduced need for measurement points

Micro Motion Coriolis, along with NOC capabilities, enabled us to effectively reduce our CAPEX while still maintaining accurate measurement.

Application
Two-phase flow oil and water measurement

Customer
Large energy producer based in Texas

Challenge
The customer operates wells on the South Texas, Eagleford shale fields. They wanted to reduce their equipment costs but were having trouble getting accurate two-phase flow measurements without adequate equipment up to the task. Two-phase measurements are not easy to obtain. There is a lot of different data that needs to be evaluated to get the input densities for water cut. However, the type of separator the customer was using didn't effectively separate out the oil and water. On a traditional three-phase separator the oil and water are separated and measured individually. This is time consuming and more expensive than the customer wanted.

Solution
An expert from Emerson trained the technicians using Emerson's operational procedures so they could be self-sufficient in setting up the Coriolis flow meter net oil calculation (NOC) function. By utilizing the NOC function of the Emerson Micro Motion Coriolis meter with 5700 transmitter, the customer was able to comingle wells. Applying the built-in advanced phase measurement meant they knew at each point what portion was water and what was oil. The two-phase method of measurement allowed them to reduce the measurement points, saving costs on additional metering, and reduce equipment such as tanks and heater treaters, while still having accurate and reliable measurements.

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Advanced Phase Measurement:

Advanced Phase Measurement (APM) is a patented algorithm available in the Micro Motion 5700 transmitter to enhance Micro Motion Coriolis meter performance with multiple phases. APM offers +/-3% liquid accuracy in up to 15% gas volume fraction and improved performance in wet gas applications.

Resources

Emerson Advanced Phase Measurement
Emerson.com/AdvancedPhaseMeasurement

AN-002565

Consider It Solved.

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For more information, visit Emerson.com/APM

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