



“It’s challenging to keep a balance between operations, maintenance and compliance, while delivering production targets on budget and schedule.”

“Upstream plays are becoming more challenging, and downside risks growing to take them on.”

“Has Unconventional Oil Production Peaked?” Michael Hulbert, Forbes, Sept 2012

What if...

- You could **reduce OPEX and operational risk** in your asset?
- You could **optimize production for a well or asset** based on accurate, timely information?
- You could **diagnose separator issues** by simply checking meter diagnostics?

How confident are you in your data?

As a production manager, it’s your responsibility to run operations as cost-effectively and smoothly as possible. You face many challenges everyday including information barriers, production concerns, maintenance problems and regulatory compliance. You need accurate production information to gain operational insight and make informed decisions.

Your flow measurement technology must reliably deliver accurate measurement to avoid time-consuming and cost-absorbing problems. Choosing the wrong flowmeter technology can limit the efficiency and measurement reliability your operation demands. You need a measurement technology that can deliver flexibility and accuracy to compete safely and cost-effectively in this environment.

Production managers we talk to tell us about challenges like these:

“It’s a struggle to control rising OPEX and risk on assets with rapid production decline.”

In order to operate efficiently, safely and cost-effectively, you must be certain your flowmeters are up to the task. Frequent maintenance and/or recalibration increases downtime, which leads to higher costs. Your flowmeter has to be able to withstand erosive and corrosive environments, and if you are using PD or turbine meters, you’re going to be spending a lot of time and money on replacement parts. With rapidly declining production, you need a single meter that maintains accuracy throughout the life of the well, from initial production through decline.

“Inaccurate and delayed production information is preventing me from optimizing my field performance.”

It is important to get the most production you profitably can out of each individual well. And to do this successfully, you need timely, accurate information. Flowmeters need to accommodate a wide range of turndown, particularly in unconventional plays where initial rates are an order of magnitude greater than sustained rates.

“Phase carry over hampers the accurate collection of my production data.”

Low confidence in flow accuracy due to a gas break-out, slugging production, or frac-water cleanup can lead to downtime and higher costs. It’s important to have accurate data that you, your workers and your company can rely on.

UPSTREAM PRODUCTION

Upstream asset and production managers worldwide are choosing Micro Motion measurement technology from Emerson. With our meters, you'll gain an exceptional degree of flexibility, accuracy, and measurement precision while, at the same time, minimizing the risk to your workers, the environment, and the surrounding community.



Because our Coriolis meters measure mass directly, you won't need additional instrumentation to calculate flow rate, nor will you have to take your process down for unnecessary calibration. At the same time, you'll have the flexibility of a meter that can accommodate a wider range of flowrates to accommodate the lifecycle of your well. And, because our devices are designed with simplicity in mind—a single unit with process end connections—you'll eliminate up to 90% of potential leak points, dramatically improving safety and issues with regulatory compliance.

As a result, you'll be better equipped to maximize production while keeping risk and cost to a minimum.

REDUCE MAINTENANCE

No moving parts in Micro Motion Coriolis flowmeters means less maintenance and virtually no performance degradation over the lifetime of the instrument. This also means the costs and resources associated with maintenance are reduced. And with Smart Meter Verification, it is possible to check the status and perform diagnostics without removing the meter from service or shutting down the operation – saving time and money. This accurate, remote monitoring reduces hazardous trips to the field, improving safety for your employees and the community.

REDUCE INFORMATION BARRIERS, OPTIMIZE PRODUCTION

Micro Motion Coriolis flowmeters have the highest sustainable accuracy for almost any fluid and gas of any other flowmeter on the market. Micro Motion flowmeters have a wider range of turn-down, up to 100:1, compared to conventional flowmeters. And with no re-calibration required to accommodate the new flow rates, how could you go wrong with a Micro Motion Coriolis flowmeter?

DIAGNOSE OPERATIONAL ISSUES

With Micro Motion meter diagnostics, operators can use meter information to identify multiphase flow in separator legs, assisting in identifying inefficient separator operation. Micro Motion assisted diagnosis can get your measurements back on track, improving your operational efficiency.

An operator installed over 200 Micro Motion Coriolis meters on both the oil and water streams of the test separators. The meters sent real-time flow data for each stream to a central location. Because of the $\pm 0.15\%$ of rate volume flow accuracy and wide turndown associated with the Coriolis meters, the operator was able to size the meters to operate at flow rates that prevent sand erosion, thereby increasing meter reliability. Because the Coriolis meters have no mechanical parts, the long term measurement stability was significantly improved --thereby reducing the costs of ownership by \$100,000 per year for the operator.

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