Reduce costs, improve well testing, and maximize production

Integrated Well Testing Skid Solution
Proven automation solutions and local expertise to help you overcome your toughest challenges.
Tired of unnecessary spend, uncertain well test data, and missing production targets?

Whether you operate or are constructing an expansive onshore production field or offshore platform, the high costs and risks involved are pervasive. Project complexities and timing issues with new facility construction can cause higher CAPEX and unnecessary expenditures—extending the time to first oil. Once constructed, the ability to meet requirements of production well test frequency and accuracy is always a concern and if done manually, the possibility of human error and safety incidents increases. All of this, plus the high cost of reactive maintenance, can lead to potentially sub-optimal production decisions.

In process industries, maintenance costs and related lost production can add up to an amount equal to 6–48 percent of revenue.

– Hagerty, M., Linköping Institute of Technology, November 2004

“Technical professionals may be spending as much as 60 percent of their time managing data before they are able to focus on the more critical, ‘value-added’ work.”

– Krome, J., E&P Magazine 2006

Tired of unnecessary spend, uncertain well test data, and missing production targets?

Uncertainty in your well test data can impair your ability to make the right field management decisions.

Informed decisions—at less cost—for better reservoir management

Partnering with an automation supplier who will help you make the best facility decisions can greatly reduce project complexity, as well as CAPEX and OPEX spending. Emerson’s integrated well testing solution can help to dramatically reduce engineering, equipment cost, space, and weight in both onshore and offshore applications when compared to conventional automated manifolds. Accurate, reliable well test data is critical to getting the insight you need to make production and field management decisions.

Increase savings related to CAPEX and OPEX spending

• Reduce project complexity, integration time, and cost through the project lifecycle
• Reduce the overall well testing footprint
• Diminish the need for reactive maintenance services and human intervention

Operations can realize up to 90% CAPEX savings on initial well pad construction, switching from a separator per well to a multiphase meter per well.

Get reliable and immediate insight into your reservoir and wells

• Increase well testing frequency with reduced uncertainty
• Get real-time, well testing and production data you can count on
• Track changing well characteristics without manual intervention

Operations can see uncertainties as low as 2–3% for measuring liquid and gas with Emerson’s multiphase flow measurement technologies.

Maximize your production

• Quickly identify potential well problems such as water breakthrough
• Make frequent adjustments to choke settings and optimize artificial lift, secondary recovery, or EOR systems
• Protect well and facility integrity while extending service life

An oil producer with high sand production reduced annual maintenance costs by $500,000 per year and improved measurement accuracy by 80% with Emerson’s flow technologies.
With Emerson, you can overcome your well testing challenges

Design and specification
- Reduce CAPEX spend with less weight and smaller footprint. FEED p.5
- Shorten the time to first oil by reducing integration risks. FEED p.5
- Contact higher frequency well testing. FEED p.5

Manifold integrity
- Eliminate valves and leak points. Selectors p.7
- Increase well testing frequency. Selectors p.7

Measurement accuracy and process integrity
- Get accurate, reliable measurements of oil, gas, and water without separation. Metering p.9
- Improve stability of pressure and temperature measurements. Metering p.9
- Get real-time flow characteristics. Metering p.9
- Protect facility and well integrity with reliable data for chemical injection and sand production data. Monitoring p.9

Field management
- Automate well testing and track changing characteristics. Process p.7
- Get clear, up-to-date well dynamic information. Process p.7
- Increase well testing frequency. Process p.7
- Produce end-to-end performance insight. Process p.7

Front End Engineering and Design
By engaging with a single source supplier, you can significantly reduce project complexity and reduce CAPEX and OPEX spend. Learn more. p.5

Flow Selectors and Process Control
With the right flow selector and process control devices, you can replace the functionality of a conventional manifold arrangement and increase well test accuracy and efficiency—across your entire facility—for reduced CAPEX spend and optimized production. Learn more. p.7

Flow Metering and Corrosion/Erosion Monitoring
With well-suited flow meters and corrosion and erosion monitoring technologies, you can get accurate flow rate measurements and real-time data about the dynamics of each well for increased production and recovery by operating wells at their peak potential. Learn more. p.9
Front End Engineering and Design

By partnering with Emerson, you’ll have the support of a single supplier who understands your well testing requirements and considers your budget and time restraints.

With our broad network of manufacturing centers, your entire assembly will be handled in-house from design to delivery for simplified procurement, reduced program management costs, and better control over delivery. You’ll have access to application experts who can help you select process automation devices that reduce the number of valves, pipes, actuators, wiring, and installation time so you can reduce CAPEX and OPEX significantly, and increase the safety, reliability and performance of your structure. Local engineering and technical support are available during commissioning and startup throughout the lifecycle of your facility—so you can keep your skid performing at its best.

Consulting Services
• Wireless site surveys
• Modernization and migration planning
• Optimization services

Project Services
• Entire assembly handled in-house
• SCADA systems integration
• Instrumentation startup and commissioning
• Valve startup and commissioning
• Standardized components and documentation

Lifecycle Services
• Instrument calibration
• Uncertainty analysis and meter proving
• Engineering support for automation direct to EPC
• Valve diagnostic services
• Local repair and refurbishments

Educational Services
• Local and onsite technical courses offered anywhere in the world to help teams adapt to new technology or product

Engaging early with global, local automation and technology experts will help streamline project execution so you can focus on speed and quality.
Flow Selectors and Process Control

The use of multiphase flow metering and control units keep your skid performing reliably while relaying up-to-date data about your well tests. Selectors provide CAPEX benefits with a smaller footprint and considerably less weight. Operating expenditures are reduced with less maintenance due to one-third the valves necessary, and reduce the need to dispatch personnel to the site. Appropriate control logic and real-time, remote monitoring capabilities help increase well test frequency and accuracy. By guaranteeing well tests are performed accurately and on schedule, you’ll have the performance data you need to maximize production and minimize damage to the reservoir—without the need for manual intervention.

What’s your opportunity?

• Reduce CAPEX and OPEX spend with additional benefits over the lifetime of the equipment.
• Cost-effectively connect all wells in a wide area using wireless RTUs.

Measure and control liquid or gas flow to support fiscal measurement, custody transfer, batch loading, and more.

• Distributed RTU network capabilities for widely dispersed wells
• Compact size and weight for reduced footprint
• Field-adjustable seal/seat for various materials for adverse service conditions

Remotely monitor and control wells, field devices, and equipment.

• Open-standard interfaces provide business systems access to real-time historical and configuration data
• Integrates seamlessly with ROC and FloBoss RTUs
• Powerful reporting and trending tools
• Alarm and event manager with text messaging and email support

Get more reliable data and improve your operational flexibility. Connect with an Emerson expert.

Getting accurate, timely data from your flow selector and control management systems is important. Transforming that data into a strategy that gives you more operational flexibility and efficiency is even more critical. Emerson experts can help.

Related products

ROC and FloBoss Computers

Fisher Multiport Flow Selector

Bettis Electric Multiport Control Actuator

SmartProcess Oil & Gas Application Suite

Trunnion and Floating Ball Valves

Related products

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More featured products...
Flow Metering and Corrosion/Erosion Monitoring

Flow meters installed on your manifold provide critical data that helps you manage your reservoir. Management and monitoring of sand and other particulates is critical to maintaining integrity of your assets and production optimization. Emerson’s multiphase flow meter and corrosion and erosion monitoring technologies provide real-time information about the dynamic behavior of each well and help you identify changes in production characteristics. This allows you to act quickly and efficiently minimize integrity risks so you can make the right production decision.

What’s your opportunity?

- Measure the individual flow rates of oil, gas, and water without the need for any separation.
- Detect—in real time—sand and other particulates in any flow line.
- Ensure your flow measurement accuracy.

Services offered....

- Corrosion rogue
- Accredited calibration
- Critical spares
- Quick turnaround

Ensure your flow measurement accuracy. Connect with a local expert.

With a global network of Flow Service Centers, Emerson delivers a complete range of services that keep you running at your peak, while helping you get the most out of your people and process.

Featured flow metering solutions

**Roxar Multiphase Flow Meter**
- Measured and flows oil, gas, and water without separation, mixing, or moving parts.
- 80 percent less weight compared to traditional flow meters.
- Provides 3D interpretation of flow rates without any separation.
- Real-time trending.
- Rends hard-to-analyze bubbles and phase mixture with multi-velocity flow analysis.
- Interchangeable rotors to easily adapt to reductions in flow rates as field ages.

**Micro Motion Coriolis Flow Meter**
- Measures density and flows with high accuracy and detects gas, oil, and liquid contamination.
- Corrects for entrained gas volume for high oil production measurement accuracy.
- Highly reliable with no mechanical moving parts.
- Smart Meter Verification diagnostic ensures meter performance meets specification.

**Related products**

**Roxar CorrLog Corrosion Monitor**
- Measures corrosion on pipes or vessels.
- Calculates metal loss rate on the ROXAR corrosion probes for effectively reducing fluid corrosion from the well head.
- Increases positioning flexibility, optimum signal routing, and simplify maintenance and replacement with 20-meter cable.
- Wired or wireless connectivity.

**Roxar Acoustic Sand Monitor**
- Identifies in real-time sand production in any water, oil, gas or multiphase flow line.
- Non-intrusive for onshore and offshore locations.
- Listens to acoustics of sand hitting pipe wall, allowing accurate identification and quantification of sand in grams per second.
- Safe and easy to install on new or existing pipelines.
- Alarm setting helps implement sand management system based on no sand at all (Maximum Sand Free Rate) or a certain amount that is acceptable (Maximum Allowable Sand Rate).

**Roxar FieldWatch Well Test**
- Transmitter allows accurate, continuous, online monitoring of corrosion on pipes or vessels.
- Calculates metal loss rate on the ROXAR corrosion probes for effectively reducing fluid corrosion from the well head.
- Increases positioning flexibility, optimum signal routing, and simplify maintenance and replacement with 20-meter cable.
- Wired or wireless connectivity.

To learn more about Emerson solutions or get in touch with an expert, visit www.Emerson.com/Oil&Gas.
Get started

Emerson delivers time-tested and innovative integrated well test solutions designed to help you improve your operation's overall well test data and frequency. Contact us now for world-class technologies, and services that can maximize your production while reducing overall expenditures. Getting started is easy.
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