



HEATER TREATERS

“Unreliable heater treater operations are making it difficult to effectively manage my field.”

“Erroneous measurement or incorrect allocation procedure, presents significant technical and financial risk to all the stake holders.”

PetroMin Pipeliner,
April-June 2012

What if...

- You could reduce your production allocation errors?
- You could determine the causes of production data anomalies without sending someone to the field?
- You could reduce emissions, fuel usage and gas sent to tanks?

To maximize production and yield, it's critical you're receiving timely, reliable production data – without the need to send employees to the field to validate measurements. Minimizing fuel waste, decreasing emissions and avoiding HSE risks enable you to meet production plans, maintain compliance and reduce your overall operating costs. With a wide range of technologies to choose from and limited resources, however, it can be a challenge to ensure you're utilizing the best technology to achieve improved heater treater efficiency.

Asset and production managers we talk to tell us about challenges like these:

“My production allocations are off and I find it difficult to improve the efficiency of my heater treaters.”

Improper heater treater operation leads to poor separation, increased fuel usage, loss of light ends and phase carryover/under that result in production measurement errors and reduced crude quality. Accurate, timely and representative well production rates are critical to enable effective production optimization strategies to meet production targets and mitigate royalty payment disputes. Suspect gas, oil and water production data hamper your ability to gain early insight into well production problems, manage your reservoir and maximize net revenue.

“I am spending too much of my budget sending people out to the field to check and maintain my heater treaters.”

When your heater treater is not operating correctly it compromises the availability of production data or creates suspect and incorrect data that requires someone to go to the field to check on operations. With a shortage of skilled people, coupled with remote field locations, it can be difficult to quickly diagnose the exact source of the problem. Once the problem is corrected, poorly separated crude must be reprocessed to meet custody transfer specifications decreasing efficiency.

“I must continuously monitor and improve my health, safety, and environmental performance.”

You want to maintain good community and regulatory agency relations by demonstrating your commitment to minimizing emissions, reducing traffic, and having insight to any potential hazards before they create an incident. Operating your heater treater at an improper temperature inhibits those goals through increased gas to tanks and emissions. You can't afford to be constantly reactive and in a balancing act of increasing the risk of injury, damage and environmental compliance.

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Integrated oil companies to independents are choosing to partner with Emerson Process Management to improve overall production management. With our range of technologies, application experience, and engineering support, you'll realize true operational improvements from accurate measurement and production data, robust and reliable devices, and remote diagnostics and insight.

IMPROVE PRODUCTION MANAGEMENT

Emerson offers an end-to-end integrated portfolio of solutions including RTUs, pressure regulators, and flow devices to ensure efficient and trouble-free heater treater operations that maintain crude quality. With industry expertise and effective technology utilization, Emerson can help develop best practices to reduce allocation errors, improve fuel efficiency, ensure you're meeting your production targets, and reduce reservoir characterization uncertainty. Reliable devices with diagnostic capabilities that detect and prevent heater treater upsets, coupled with remote verification of heater treater performance, give you confidence in your production management decisions and allow you to optimize your field.

REDUCE OPERATION AND MAINTENANCE COSTS

A broad range of Emerson technologies and engineering advice services ensure the selection of a robust and reliable heater treater control solution that can help you reduce your total cost of ownership, fuel cost, emissions, and improve overall efficiency. Reliable, field-proven devices reduce costly repairs and well production shut-in allowing you to focus on production optimization and increasing overall yield. With accurate pressure and level control and advanced diagnostic capabilities such as phase carryover/under detection, production data anomalies are detected remotely or even eliminated before they occur, reducing costly trips to the field.

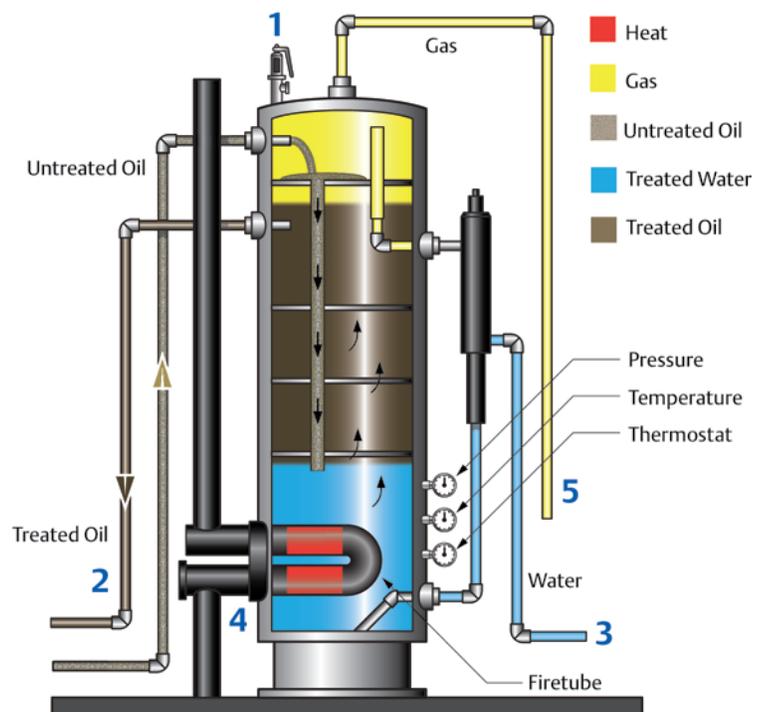
IMPROVE HSE PERFORMANCE

Emerson's reliable measurement and control devices improve heater treater performance so you can avoid sending people to the field for equipment repair thereby reducing their exposure to hazardous areas and injury. Remote operations and diagnostics improve insight to what is happening in the field, so corrective action can be taken before an incident occurs. Heater treater upsets are minimized and, if they do occur, are detected real-time, minimizing gas venting and flaring, reducing potential fines and hazards. Emissions and pressure relief events can be easily tracked to validate and ease any required environmental compliance reporting.

EMERSON FLOW SOLUTIONS

Take advantage of Emerson's wide range of Flow Solutions to select the right technology for your application. By incorporating industry-proven best practices, you can enhance the utilization of measurement data and advanced diagnostics to improve heater treater operation and eliminate production problems.

- 1. Pressure Release**
 - Relief Valves and Position Monitoring
- 2. Oil Outflow**
 - Flowmeters
- 3. Water Outflow**
 - Flowmeters
- 4. Fuel Gas**
 - Pressure Regulator, Relief Valves, Shutdown Valves
- 5. Gas Outflow**
 - Flowmeters, Back Pressure Regulator



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MEASURE & ANALYZE	UNIQUE FEATURES	OUTCOMES
 <p>Daniel Jr. / Sr. Orifice Meters Daniel Liquid Turbine Meter</p>	<ul style="list-style-type: none"> • Repeatable orifice plate alignment • In-situ field verification 	<ul style="list-style-type: none"> • Improved production planning • Reduced wellbore damage
 <p>Daniel Two-Path Ultrasonic Flowmeter</p>	<ul style="list-style-type: none"> • High turndown • Enhanced flow condition diagnostics 	<ul style="list-style-type: none"> • Less deferred / lost production • Improved environmental compliance
 <p>Micro Motion Coriolis Flowmeter Micro Motion Density Meter</p>	<ul style="list-style-type: none"> • Less sensitivity to changing flow parameters and fluid properties • Advanced sensor diagnostics 	<ul style="list-style-type: none"> • Reduced operation and maintenance events • Improved well and facility uptime
 <p>Rosemount Magnetic Flowmeter</p>	<ul style="list-style-type: none"> • Plug-free design • Field replaceable sensor 	<ul style="list-style-type: none"> • Early insight to operational / production problems • Enhanced safety and health performance
 <p>Rosemount Vortex Flowmeter</p>	<ul style="list-style-type: none"> • Multivariable measurements • Entrained gas and liquids detection • Liquid volume remediation for entrained gas • Easy wireless integration • Sand accumulation detection 	<ul style="list-style-type: none"> • Reduced proving cycle and cost • Lower emissions • Reduced fuel cost

FINAL CONTROL & REGULATE	UNIQUE FEATURES	OUTCOMES
 <p>Fisher Back Pressure Regulator</p>	<ul style="list-style-type: none"> • Superior materials compatibility • Sustainable operations in contaminated fluids 	<ul style="list-style-type: none"> • Improved separator efficiency and reliability • Improved environmental compliance
 <p>Fisher Position Indicator</p>	<ul style="list-style-type: none"> • Verification of field performance • Wireless indication and estimated volumes of pressure relief events 	<ul style="list-style-type: none"> • Increased data integrity • Improved fuel gas and pilot control
 <p>Fisher Pressure Reducing / Instrument Supply</p>		

OPERATE & MANAGE	UNIQUE FEATURES	OUTCOMES
 <p>FloBoss Flow Computers</p>	<ul style="list-style-type: none"> • Configurable systems • Intuitive applications software • HART pass through 	<ul style="list-style-type: none"> • Local and remote diagnostics and trouble shooting • Effective control and operations at remote facilities
 <p>ROC Remote Operation Controllers</p>	<ul style="list-style-type: none"> • Flexible data management options • Simple device and data interface 	<ul style="list-style-type: none"> • Reduced automation complexity and costs • Reduced production uncertainty