



Ethylene Measurement Solutions

Superior flow and density measurement

"I am unable to consistently meet my ethylene production plan."

Petrochemical companies are depending on Emerson to provide proven, repeatable solutions to ethylene production challenges while maintaining a healthy, safe and environmentally compliant facility. Emerson's flow and density measurement solutions provide unparalleled performance and can help improve furnace operations by improving yield and increasing uptime, while reducing energy cost and environmental impact. Improved control of furnace severity (or conversion), charge rate, steam-to-hydrocarbon ratios, pass outlet temperature balancing, and combustion control ensures furnaces can be operated at the target severity and extend your desired run length between decoke cycles. With access to the right data at the right time, you can extend intervals between decoking cycles, increase yield and quality, lower energy usage, and accurately measure fluids bought and sold.

What if you could ...

Ensure worker, community and environmental safety

- Reduced leak points and elimination of impulse lines reduces exposure and improves safety
- Critical alarms alert you to abnormal process conditions so you can address process upsets early
- In-situ meter verification protects workers by assuring meter performance online (extending SIS proof test intervals)
- Minimal calibration requirements eliminates unnecessary maintenance

Automatically compensate for feedstock, fuel and temperature disturbances to maintain a constant severity and yield across all the operating furnaces

- Instantaneous detection of fuel BTU changes, allowing feed-forward adjustments to minimize changes in coil outlet temperatures
- More stable energy input and lower impact of changing fuel composition with mass flow control of fuel

Reduce production costs and increase profitability

- No wearing parts in the meter minimizes the need for calibration and maintenance
- Extended time between decoking cycles increases throughput
- Precise custody transfer measurement capabilities ensure you are getting what you pay for

Ethylene Applications

- Custody Transfer (liquids and gases)
- Decoking Air
- Ethylene Measurement (including dense phase)
- Fired Heater /Furnaces
- Fiscal Transfer
- Fuel Quality
- Inhibitor Injection
- Process Control for Derivative Products (including liquid and gas reactor feeds)
- Mass Balance
- Quench Fluid
- Safety Shutdown
- Steam

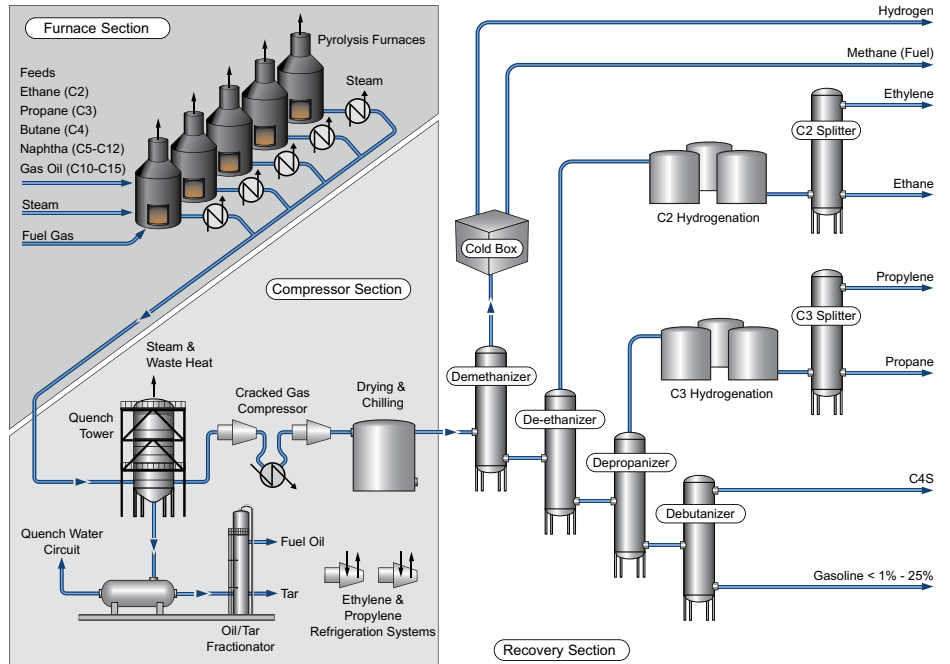


Pyrolysis Furnace Fuel Gas

- Eliminate 90% of variation in heat load by measuring mass directly
- Measure BTU and Wobbe Index with fast response to enable feed-forward adjustments to minimize changes in coil outlet temperatures

Pyrolysis Furnace Steam-to-Hydrocarbon Feed Ratio

- Eliminate maintenance associated with plugged steam impulse lines
- Reduce installation time and cost with dual vortex system for process control and safety system
- Tightly control steam-to-hydrocarbon ratio with accurate feed measurement to optimize yield or severity



Decoking Air

- Accurately measure decoking air over wide turndowns and reduce installation complexity

Inhibitor Injection

- Optimize decoking intervals without reducing downstream product quality through accurate and repeatable inhibitor injection

Custody Transfer

- Precise measurement of high vapor pressure liquids, cryogenics, supercritical fluids, and light gases help improve profitability

Process Control for Derivative Products

- Precisely control feedstock flow ratio to improve product quality (e.g. hydrogen-to-ethylene ratio for HDPE and LLDPE)
- Improve safety through precise measurement and control of feeds for exothermic reactions

Micro Motion® and Rosemount® Meters for Ethylene Measurement

For complete product specifications, visit www.emersonprocess.com in the Products link or contact your sales representative.



Micro Motion ELITE® Coriolis Flow and Density Meters



Micro Motion Specific Gravity Meter



Rosemount® 8800 Vortex Flowmeters



Rosemount® 8700 Magnetic Flowmeter



Micro Motion F-Series Coriolis Meters



Micro Motion R-Series Coriolis Meters

EMERSON WORLD-LEADING
FLOW AND DENSITY
technology

SETS THE STANDARD FOR
RELIABLE, REPEATABLE,
HIGH PERFORMANCE
MEASUREMENT



Emerson's Micro Motion and Rosemount devices
are known globally in over 85 countries for quality,
reliability, application expertise, and support
not available elsewhere.



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