

UPSTREAM OIL AND GAS CORROSION AND EROSION MONITORING

Unlock your production potential and safely optimize your operations with help from Emerson's reliable solutions and vast industry expertise.

Comprehensive Solutions for Corrosion and Erosion Monitoring to Help Maximize Performance

Constantly changing market dynamics make it difficult for upstream oil and gas companies to meet their business goals. Moreover, unmonitored solids production and erosion force operators to deploy conservative production strategies, reducing the reservoir's output by as much as 75%. Additionally, the total annual cost of corrosion equals \$589 million* on surface pipeline and facility costs and \$320 million* in corrosion-related capital expenditures just in the United States. Corrosion and erosion poses a major threat to achieving targets.

Benefits of Corrosion and Erosion Monitoring



Improved Profitability

Combining sand management for erosion control and tuning for maximum allowable production rates helps facilities see higher profits.



Operational Certainty

Gain better oversight and improve operations through controlling and verifying corrosion mitigation through chemical inhibitor injection.



Improved Safety

Industrial accidents are often related to uncontrolled or unexpected corrosion or erosion. Through online monitoring, elevated risk and damage are detected long before loss of containment, improving operational safety for the plant, personnel, and the environment.



Increased Uptime

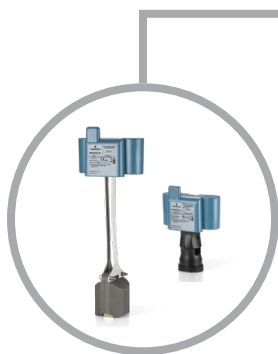
A data-driven corrosion and integrity management program will ensure that the conditions of the assets are known, and as a result, maintenance and repair strategies can be optimized in timing and scope, and unplanned outages can be avoided.

*Source: NACE - The United States Cost of Corrosion Study

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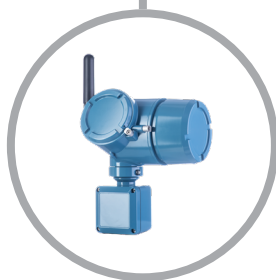
Real-time Monitoring of Corrosion and Erosion Risk and Asset Health

Emerson helps you transform the way you drive your production assets' operational reliability, safety, and profitability. By bringing together leading corrosion and erosion sensing technologies and class-leading visualization and analytics software, Emerson provides a comprehensive monitoring solution tailored to your toughest challenges. Combined with our vast industry expertise and local service capabilities, our solution is unmatched.



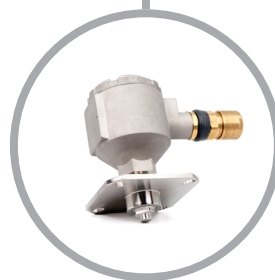
Rosemount™ Wireless Ultrasonic Thickness (UT) Transmitters

- Direct metal thickness measurement
- Easy to install, even on live plant: non-intrusive and cable-free
- Measures through



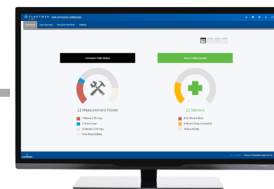
Rosemount 4391 Wireless Corrosion Transmitter

- Highest sensitivity (nano-meters) and fastest quantification/response to changed corrosion and erosion rates
- Full range of wireless, wired and offline options
- Unique Erosion probe with multiple elements for sand detection across the flow regime
- Retrieval operation up to 10k psi pressure



Rosemount SAM42 Acoustic Particle Monitor

- Immediate warning of solids production (risk of sand erosion)
- Useful for Acceptable Sand Rate (ASR) strategy
- Easy to install, even in live plant settings: non-intrusive



Emerson's Plantweb™ Insight can integrate your corrosion and erosion data into a software platform, providing a more comprehensive view with valuable insights.

Our Connected Services experts can help you maximize your investment by analyzing corrosion and erosion data to make more informed decisions.

For more information, visit [Emerson.com/Corrosion-Erosion](https://emerson.com/corrosion-erosion)

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