

A detailed view of an offshore oil and gas platform. The image shows a complex network of white pipes, valves, and large cylindrical tanks. Yellow safety railings are visible throughout the structure. The background features a clear blue sky and the ocean. A dark blue rectangular box is overlaid on the top left of the image, containing the title text.

## Upstream Corrosion and Erosion Monitoring

## Comprehensive Solutions for Corrosion and Erosion Monitoring to Help Maximize Performance

Emerson combines the broadest technology portfolio with vast industry expertise to help oil and gas companies unleash production potential and safely optimize operations.

# Upstream Corrosion and Erosion Monitoring



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 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 US. 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, facilities can 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.



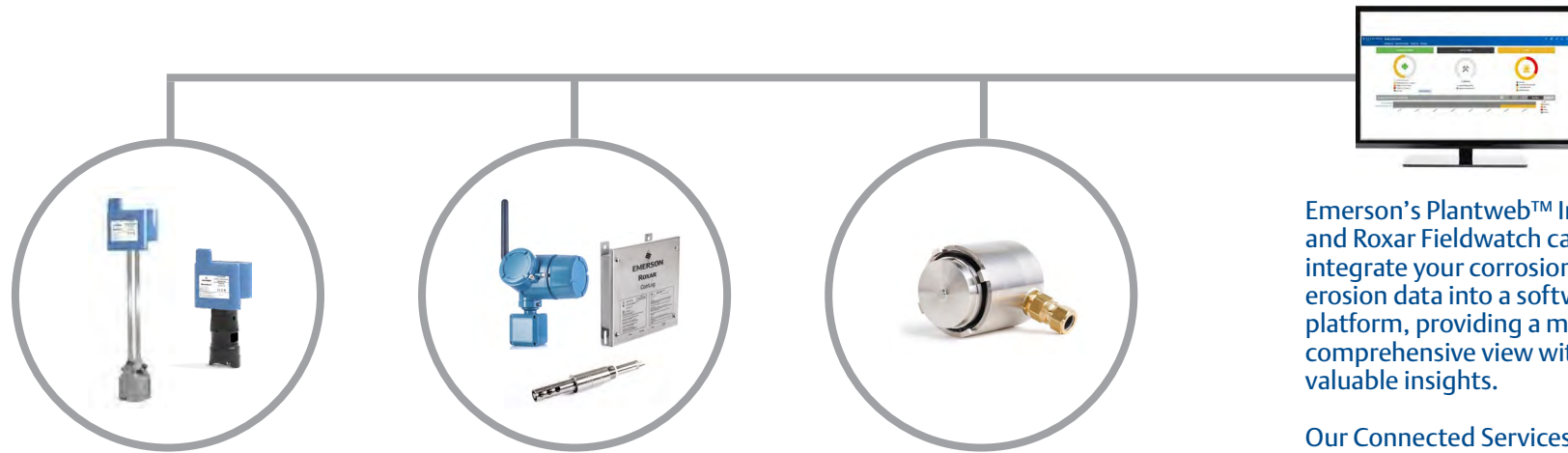
### INCREASED UPTIME

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

\*\*NACE - The United States Cost of Corrosion Study

# 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, 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 Permasense Sensors

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

## Transmitters and Inline Corrosion and Erosion Probes and Coupons

- Highest sensitivity (nanometers) 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

## Roxar™ SAM Acoustic Sand 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 and Roxar Fieldwatch 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.

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