

Predictive Corrosion Management (PCM)

Problem

Corrosion monitoring on TSA coated pipes

Solution

Predictive Corrosion Management with installed sensors

Outcomes

- Ability to install on conductive coated pipes
- Proactively manage corrosion risk
- Make data-driven decisions
- Reduce total cost of operations



Customer need/application

PCM enables customers to continuously monitor wall thickness with installed sensors. Typically for installation, the pipe is polished to bare metal before installing sensors. A large oil & gas company wanted to evaluate the performance of ultrasonic sensors over TSA (Thermally Sprayed Aluminum) coated pipes as most ultrasonic measuring instruments today use Echo-to-Echo mode to measure thickness over coatings.

Solution/custom product

Two additional Rightrax PM sensors were installed on the same idle pipe at the 6 o'clock positions for comparison: one sensor with the TSA coating intact and the other sensor with TSA removed for evaluation. The application ran for 3 months with no issues. Signals are not as strong through the TSA as they are with TSA removed, but the signals are clean and more than measurable. The test installation validated that the small amount of SNR (Signal to Noise Ratio) is within limits to ensure benefits of PCM are fully realized in this type of installation.

PCM provides enhanced risk avoidance with a big picture view of operations conditions, leading to less downtime with continuous pipe monitoring via sensor data collection and proactive insights with powerful predictive analytics.

Part number(s) for the solution/accessories (list):

PCM is a custom solution, therefore, parts list of accessories and parts are defined during a site survey when the scope of work is assessed.

Application

Installed ultrasonic sensing to monitor pipes coated with TSA

Modality

Ultrasonic inspection

Industry

Upstream and downstream facilities