Process Water Line – Off Shore

Oil and Gas – Upstream
ARC S5 Coatings
Case Study 143

Challenge

Issue: Ultra high-pressure water blasting is required every 6–12 months to remove mineral scale buildup. This periodic blasting damages protective lining leading to reduced equipment availability.
Goal: Provide a protective barrier coating offering elevated immersion resistance to chemicals and permeation and reduce scale formation.
Root Cause: At elevated temperatures mineral solids lead to scale formation on internal surfaces, thus reducing flow and production rates.

Solution

Preperation

All surfaces were low-pressure water blasted with demineralized water to remove soluble salts, followed by grit blasting to Sa 2.5 cleanliness with profile of 3+ mil (75+ µm).

Application

ARC S5 was applied in a single coat at 20–25 mils (508– 635 µm) and allowed to cure for two days at 25˚C (77˚F) prior to being put back into service.

Results

Client Reported

After 27 months in service, the unlined sections of the spool showed signs of corrosion and scale buildup requiring UHPW blasting.

Sections coated with *ARC S5* showed no signs of corrosion, and the minimal scale present could be easily removed with a rag or low-pressure water blasting.

Spool sections

Dark scale formation on unlined section

ARC S5 prevented corrosion and scale formation after 27 months

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