SPECIALTY RTP
Technology to Flow Mature Wells

RTP-Rehab™ Case Study

Installation of 3” RTP Pipelines Inside Corroded Steel Flow Lines Under a Ship Channel in the Gulf of Mexico

Background

An operator in the Gulf of Mexico had several gas wells shut in due to multiple corroded pipelines. The two lines to be rehabilitated were approximately 1.7 miles (~ 9,300 ft) in length and between two platforms (Figure 1. shows view of one platform across ship channel). One line will flow gas the other line is for flow of produced liquids containing H2S levels as high as 4,000 PPM. The gas line was DOT jurisdictional. The company selected Specialty RTP’s reinforced thermoplastic pipe (RTP) as the best option to take advantage of rapid low cost installation and to minimize ongoing maintenance costs.

Figure 1. View of Platform Across Ship Channel

Figure 2. RTP on 12 ft OD Spools

RTP-Rehab™ System Selected

Due to the high levels of H2S:

- The RTP selected was comprised of a polyphenylene sulfide (PPS) liner, aramid reinforcement and a polypropylene jacket
- The union couplings to join two long lengths of RTP were constructed Alloy 625 inserts

In order to maintain critical velocity to move solids (sand) in the produced liquids line, and minimize pressure drop for the gas line, the optimal RTP size was determined to be 3” OD; with a design pressure of 1,600 PSI to be consistent with original steel line design pressure.

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Installation

The 3" RTP for each line was supplied on three 12 ft OD spools (see Figure 2), with one spool placed in an A-frame positioned on the mezzanine deck and the remaining two spools were staged on the platform's helideck (Figure 3 shows lifting RTP spool onto mezzanine deck).

A synthetic rope was utilized to pull the 3" RTP between platforms, through 6" steel pipelines from riser flange to riser flange (Figure 4 shows RTP being pulled from spool on mezzanine deck to riser flange). All work was performed from the decks of the platforms.

The total time required for pull through of each RTP line was 1 day.

A hydro test was performed on each RTP at 2,400 PSI for 24 hours, per the state regulators.

Figure 3. Lifting RTP Spool onto Platform

Figure 4. RTP Being Pulled from Platform

Benefits of the RTP-Rehab™ System

- Rapid, safe installation
- No chemical treatment to prevent corrosion of the line
- Generally, no maintenance pigging required
- Simple light duty installation equipment
- No lift boats or barges required as there was sufficient space on both platforms
- All gas wells **Returned to Production**
- > 70% lower cost compared to other options
    - For onshore, typically >50% cost savings
- Return on Investment > 900% (payback < 2 months) for this project

Contact Specialty RTP to Learn How RTP-Rehab™
Can Cost Effectively Rehabilitate your Corroded Pipelines
And Help "Return to Production" your Marginal Fields

Specialty RTP, LLC PO Box 7111 Wayne, PA 19087

(610) 557-1020

RTP-Rehab@SpecialtyRTP.com

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