CASE STUDY

Canline pipeline solutions Ltd.

Cost-Effective Rehabilitation: Restoring a High-Pressure Pipeline for Sour Gas Transportation in the Persian Gulf

PROJECT OVERVIEW

INDUSTRY: Oil and Gas
PROJECT: Pipeline Rehabilitation

PROJECT CRITERIA

An 8” high-pressure, flexible composite pipeline used to transport sour gas from one platform to a second platform for re-injection into a well in the Persian Gulf had experienced a catastrophic failure. The client approached Canline Pipeline Solutions, seeking a cost-effective proposal to repair or replace the line and restore it to service in a timely manner. The pipeline spanned approximately 1.14 miles and operated at 1200 psi.

PROJECT CHALLENGES

The project presented several challenges that required innovative problem-solving and meticulous planning by Canline’s team and collaboration with the client. The corrosive effects of the Hydrogen Sulfide (H2S) required a pipeline product that could withstand the pressure, temperature, and destructive H2S. Inspection of the existing 8” pipeline was required to ensure there were no obstructions that would interfere with the restoration. The most crucial factor was the necessity for an expedited rehabilitation process to minimize disruptions in the pipeline’s operations.

PROJECT SNAPSHOT

Canline successfully achieved a cost-effective restoration of a high-pressure sour gas pipeline in the Persian Gulf, completing the project in an impressive turnaround time of just 7 days, resulting in substantial cost savings for the client.

Timeline of Project:

7-days from arrival on site to completion

Pipeline Project Details:

1.14 mile 8” 1200 psi, platform to platform pipe re-line

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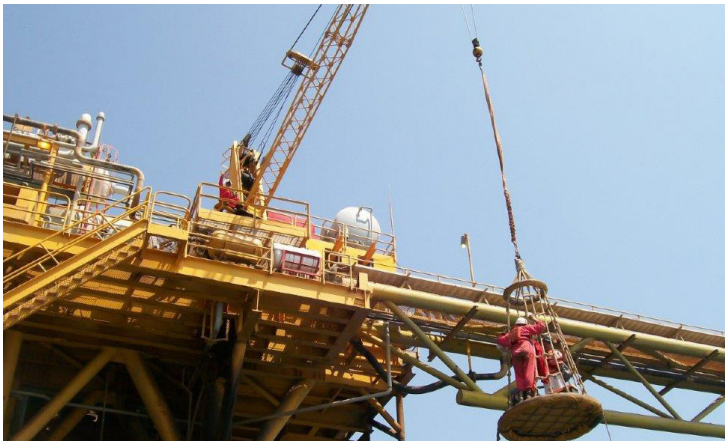
HOW THE CRITERIA WAS MET

To effectively combat corrosion caused by Hydrogen Sulfide (H2S), a 3.5” composite pipe was carefully chosen to ensure the longevity of the pipeline. Prior to the commencement of the rehabilitation work, the existing pipeline underwent thorough pigging to ensure there were no restrictions that would hinder the installation process.

A specialized pig was deployed to pull a customized rope through the host pipeline, requiring precise coordination and execution. Once the rope was successfully pigged through the existing pipeline, it was securely attached to the pipe, and the process of pullback began. Each reel of the pipe had to be carefully connected and pulled in until the entire length was installed. The ends of the pipe were then terminated, and rigorous pressure testing was conducted, subjecting the pipeline to pressures up to 1700 psi. The rehabilitated pipe passed the pressure test, was dewatered, and put back into service.



Throughout the project there was adherence to Canline’s high safety standards that included conducting ongoing Job Safety Analysis (JSA) and Job Hazard Analysis (JHA). At the completion of the project, the client received Canline’s standard Quality Control Package. This detailed package included job location, date, time, pipeline size, and the electronic run data logs.

By opting for pipeline rehabilitation instead of constructing a new pipeline, the client achieved substantial cost savings, estimated to be around 4-5 million dollars. The impressive restoration process not only resulted in significant financial benefits but also expedited the well’s return to production within a mere 7 days, eliminating the need for months of downtime that would have been incurred with the construction of a new pipeline. The successful completion of this Persian Gulf platform-to-platform pipeline rehabilitation project showcased the expertise and capabilities of Canline’s team.