NauticAWT has carried out Basic Design, FEED and EPCI Tender Package Preparation for a 30” subsea pipeline through a local engineering consultancy.

NauticAWT Disciplines:
Pipeline Engineering
Basic Design
FEED
EPCI Tender Package Preparation
Survey Work Technical Management

QUICK FACTS:
Location: The Middle East
Year: 2016

The Scope
- All the engineering work (including review of existing pipeline and design of new pipeline), tender package preparation and technical management of geophysical and geotechnical survey.

The Challenges
- The project scope included the study of the existing pipeline condition, occurred problems and defects and proposing the solutions and alternatives to either keep the pipeline in operation or to abandon it.
- The engineering services were carried out in conjunction with geophysical and geotechnical survey works, which meant the design information was not readily available at the beginning of the project and was to be completed within a very tight schedule.
- The vicinity of the platform was congested with existing pipelines and cables, which required detailed as-built drawings and very careful study to ensure a robust design of expansion spool layout that would minimize the spool length, the number of crossings, the requirement for pipeline supports and protection against drop objects as well as installation feasibility.

The Services
- The review of existing 30” pipeline between platform and Island, which has been suffering leakages at multiple locations and clamps, previously installed along the pipeline. The study includes review of all intelligent pig reports, ROV reports, material studies and engineering analysis on pipeline as per ASME B31G, DNV-RP-F101.
- Design of new pipeline including routing design, pipeline sizing and hydraulic analysis and flow assurance study, material selection, design of new riser and spool piece, hook up to pig launcher and piping, pipeline crossings, pipeline mechanical design, shore approach, Cathodic protection, on-shore pipeline and associated valves and fittings design up to existing pig receiver at Island.
Risk Assessment, drop object studies along the pipeline route and performing HAZOP/HAZID meetings.
Hydrodynamic studies to endorse metocean data along the pipeline route and Seabed and Coastal Morphology Study to predict the behavior of seabed sediment and effect on trenching and backfilling in the nearshore section.

Added Value

An integrated design of the new pipeline together with EPCI cost and time estimate, which gives a clear path to the client for decision making and how to approach and manage the EPCI project of the new pipeline.
Full studies on the existing pipeline which helps the client to have an engineered decision on whether to abandon the existing pipeline or invest more on maintenance activities.
Geotechnical investigation on shore approach section which helps the client to have a better view on feasibility of the surrounding shores.

NauticAWT comprises 200+ personnel and has the global reach of 12 offices across Australasia, the Middle East and Central America, providing a complementary technical and commercial offering unique to the oil and gas industry.

NauticAWT has established a QEHS Management System that conforms to the following standards: ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007 on 3rd February 2013. All certificates were issued by DNV, Singapore.

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