TorcSill®

CASE STUDY

MARINE

TorcSill is the premier provider of engineered Helical Pile and Anchor solutions to clients in a broad range of industries

Project Type
Pipeline Buoyancy

Location
Louisiana

Executive Summary

TorcSill was given the opportunity to provide its customer with a fully-integrated and environmentally conscious AnchorPipe solution, solving pipeline buoyancy issues through 15 miles of water-inundated marshland in Louisiana.

Challenges

During a planned nitrogen purge and ultimate pipeline flow reversal for a 42-inch OD concrete- coated pipe, the owner required a substantial anchoring system to maintain pipeline integrity. Significant and variable buoyant forces, unfavorable marshy terrain, environmental and access concerns called for a helical anchoring solution rather than the use of great quantities of concrete weights or mats and sandbag applications.

What We Did

Working with the owner's engineering team and evaluating geotechnical data, TorcSill developed a multiple load-test program and Project Execution Plan for the most efficient helical anchoring system, maximizing the distance between anchor sets and reducing required materials and construction footprint.

Confirming designs for changing buoyant forces, tensile load tests were performed at specific intervals along the pipeline run. This resulted in project-specific manufacturing of variable anchor shaft diameters, lengths and helical flight configurations to meet engineered loading requirements and installation torque specifications.

Solution

The engineered, manufactured and project development solution called for the deployment of TorcSill's AnchorPipe TEAM. Often working from barges to complete over 400 helical anchor sets, the design and execution considerably reduced environmental impact and the materials required relative to alternative buoyancy-control methods. TorcSill Manufacturing produced and supplied all the anchors and pipe saddles for this Project.

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