

## 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**  
Gulf of Mexico

#### Executive Summary

TorcSill and its AnchorPipe TEAM designed and installed helical anchors to provide offshore buoyancy control and stabilization for various pipelines at two pipeline crossings in the Gulf of Mexico.



#### Challenges

The owner required a method to stabilize its pipeline at two nearshore pipeline crossing locations, at which the pipelines would be subjected to buoyancy, current, wave and other hydrodynamic forces.

In addition to the engineering challenges, project schedule, budget, safe future pipeline operating conditions and an anchoring foundation design life of at least 50 years were factors in the material design and construction planning.

#### What We Did

Analyzing offshore soils data, pipeline materials and load requirements, TorcSill's Engineering TEAM delivered a complex design for tensile loads of up to 60 kips, supporting up to 42-inch diameter pipelines. Design and manufacturing required custom clamp fabrication to accommodate and secure up to (3) pipelines bundled together.

TorcSill's Project Execution TEAM coordinated and mobilized all equipment and material required to perform the pipeline stabilization Project. For the safest and most efficient installation, TorcSill utilized a vessel-mounted crane rigged to its unique twin-drive anchor installation system designed to install a complete anchor set (two helical anchors and pipeline clamp) in a single approach.



#### Solution

Working with its world-class marine partners and divers, TorcSill's AnchorPipe TEAM safely installed 140 helical anchor sets in approximately 40-feet of water.

Alternative to concrete set-on weights or concrete-coated pipe which can create installation and operational challenges and be compromised in extreme weather events, the custom-manufactured helical anchor sets provide a safe, secure and far more economically viable anchoring solution for the intended design life of these pipelines.

#### HELICAL PILE INSTALL NOTES:

MIN. TORQUE = 8000 FT-LB  
MIN. DEPTH = 15 FT  
MIN. PILE EMBEDMENT = 21 FT

BUNDLE PIPE ANCHOR SET  
SCALE: 3/4" = 1'-0"



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