

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

Project Type

PVC Dryer
Foundation

Location

South Louisiana

Executive Summary

TorcSill was approached by a petrochemical plant owner to provide a value-engineered foundation design and installation solution for a PVC Dryer to reduce the construction footprint while delivering verifiable load-bearing capacities required for a plant expansion.

**Challenges**

While value-engineering the appropriate helical alternative design for this Project, TorcSill had to account for a stringent maximum installation depth of 40 feet in very poor soil conditions while coordinating the construction amid a congested work site buzzing with various construction contractors and equipment.

What We Did

The first step for TorcSill's Engineering TEAM was to work closely with the facility's Engineer of Record to evaluate the foundation loads and geotechnical information. From here, TorcSill was able to determine the most efficient pile diameter and helical plate design to deliver appropriate axial, lateral and overturning performance within a maximum installation depth.

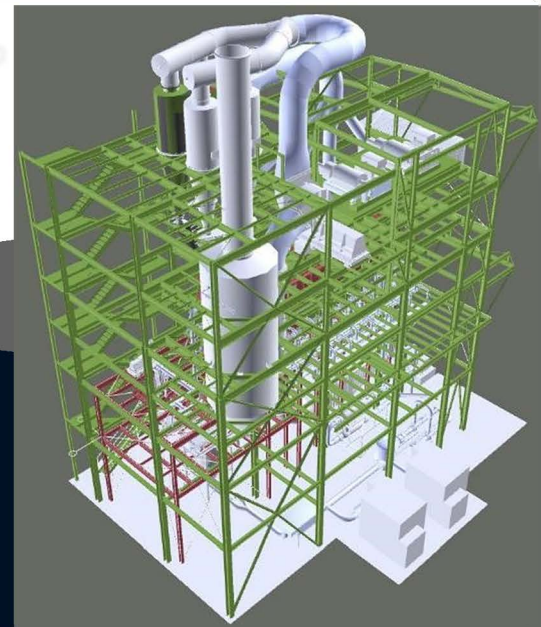
Upon completion of engineering and load testing specifications, TorcSill's Construction Services TEAM mobilized to performed site-specific load tests, ultimately verifying the pile design, which consisted of (6) 24-inch helical plates.

With the large-diameter helices on each of the piles, TorcSill's crew completed the 103-pile Project in six working days, spinning the piles to a terminated depth of 37 feet.

**Solution**

Given a stellar track record with the facility owner over years of installation Projects, TorcSill was asked to redesign an auger cast in place foundation for towering equipment during a plant expansion. Designing a series of large-diameter helical plates allowed each of the piles to generate considerable load-bearing capacities in poor soils, while meeting or exceeding loading requirements within the maximum allowable depth.

Beyond the adaptable design qualities of helical pile foundations, other intrinsic value delivered on this Project included a small footprint of only four laborers and one excavator, zero spoils (no contaminated soils removal required) and little to no vibrations during the rotated installation.



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