

Reficar Refinery

Cartagena, Colombia

Helical piles were initially a small scope of the project's overall piling program. As the client became more informed of the schedule and cost savings that helical piles presented over CIP/CFA piles, they engaged Cyntech Group to value-engineer the foundations for helical piles.



The project

Design, fabricate, and ship 3,101 large diameter helical piles with all supporting parts to Colombia.

The challenge

Logistics, schedule, high loads, and varying soils across the site.

The solution

Large diameter helical piles.

- 3,101 large diameter helical piles manufactured in USA and shipped to Cartagena
- Total individual fabricated parts = 10,941 (not including fasteners)
- Total duration = 34 months
- Load tests successfully performed = 15
- 792-kip ultimate capacity of the largest helical pile designed for
- Over 6.9 million pounds of finished product were shipped to Cartagena
- Coal Tar Epoxy coating was utilized

Project facts

Owner(s)

Reficar

Keller business unit(s)

Cyntech Group

Main contractor(s)

CB&I

Applications

Helical pile foundations

Markets

Oil, gas and chemical

Techniques

Helical piles

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