CASE STUDY

A world designed to last

BAPCO

Modernizing a refinery to boost efficiency and capacity



TECHNIP ENERGIES



Overview

The project involves a major expansion and upgrade of the Sitra oil facility, increasing its total refinery throughput up to 380,000 barrels per day (MBPD) and expanding its products with the introduction of a high conversion unit and the integration and upgrading of existing and new utilities and offsites in compliance with international safety and environmental standards.

This includes green field, brown field and offshore activities.

The new facility also will include a residual hydrocracking unit of 65 MBPD, a VGO hydrocracking unit of 58 MBPD and two hydrogen units of 125 MMSCFPD each.

380,000 BARRELS
CRUDE OIL PRODUCED PER DAY

21 PROCESS AND
UTILITIES UNITS INSTALLED

$4.5 BILLION
CONTRACT VALUE

Contract:
EPC

Award:
2018

Delivery:
2022

Client:
Bapco

Location:
Bahrain

Challenge

Technip Energies is providing advanced technologies to improve the capacity and efficiency of Bapco's Bahrain refinery.

This complex project has presented several challenges. First, we are coordinating engineering activities among three contractors to ensure the same design and project execution methodology. We also are correlating material suppliers across the globe from Italy and Spain to South Korea. And we are integrating experts from various domains and geographical areas to meet client specifications.



Solutions

State-of-the-art technology and expert project management

Technip Energies' involvement in Bapco's modernization program was not just to provide design, engineering and procurement support, but also to contribute to the plant's operations. We are one of three companies working to upgrade the plant alongside Korea's Samsung Engineering and Spain's Técnicas Reunidas. As the lead project contractor, we are using our extensive management expertise and worldwide network to coordinate work among top operating centers and maintain a high level of quality control for suppliers and construction materials.



Results

Three years into the project, of which more than a year was under Covid-19 pandemic restrictions, engineering is about 99 percent completed, procurement at roughly 90 percent and construction at 40 percent. Overall, about 70 percent of the project has been completed to date.

This high-profile, complex and challenging project has clearly demonstrated Technip Energies' leadership in the refining industry and our ability to work on projects of this scale. Thanks to our involvement in the Bapco modernization program, we are receiving additional requests for support from other refinery projects.

"The advanced technology, organization and coordination we have provided to this project has shown the refining industry that we have the tools and expertise to support even the largest and most complicated projects."

Alfonso di Mario

Fellow Executive Project Director, Technip Energies