

Water Treatment – CETCO PROCESS EQUIPMENT Case History

Brownfield Improvements Rental and Permanent Solutions

Challenge

A platform in the South China Sea cracked its existing hydrocyclone vessel and contacted CETCO Energy Services for both a temporary and long-term solution for its onboard produced water treatment system.

CETCO Solution

CETCO mobilized a Hi-Flow™ rental package to replace the malfunctioning hydrocyclone and maintain the platform's production. Following the rental's success, CETCO's capital sales line, CETCO Process Equipment, designed and installed two 24" hydrocyclone's and a 48" CrudeSep® compact floatation vessel to solve the operators produced water treatment problem with a permanent solution.

The Hi-Flow equipment could accommodate flow rates of 70,000 bbl/d, treat produced water inlet flows up to 1,000 ppm oil-in-water and achieve overboard discharge quality of less than 40 ppm. Because the platform also experienced sanding issues, the hydrocyclone liners were coated with tungsten carbide to prolong their life span.

CETCO Process Equipment utilized and modified the existing platform structure while designing the new permanent equipment to fit in the select congested area. The Hi-Flow rental unit was in place allowing for uninterrupted platform production as the permanent equipment was installed in phases; first, installing the hydrocyclone vessels and then the CrudeSep polishing unit downstream.

Outcome

The effluent quality met and exceeded overboard discharge requirements and was subsequently discharged overboard. Throughout the process, and as a result of using the Hi-Flow rental package, the platform experienced no operating downtime before or during the replacement of the permanent water treatment package, thus preventing lost revenue. CETCO's performance was recognized by the operator for minimizing their chemical usage and allowing maximum production flow rates.