

Water Treatment Case History

Online Degassing in North Sea

Challenge

In July 2004, BP was required to take its produced water degasser on the Schiehallion FPSO offline for essential upgrade work. Without a replacement technology, BP potentially faced a production shutdown during repairs. A large amount of oil wet solids are returned through the Schiehallion produced water system which contributes to oil-in-water handling problems.

CETCO Solution

CETCO Energy Services (CETCO) offered its CrudeSep® technology to BP as a temporary degasser vessel. In addition to oil and solids removal, CrudeSep® also acts as an effective degassing vessel. With the best available technology, CETCO was requested by BP to install the unit as temporary replacement to the existing degasser.

CETCO mobilised a 48" diameter vessel CrudeSep® skid to handle up to 40,000 bbls/day of produced water. Solids were monitored through the Jorin Visual Particle Analyser. CETCO's scope of work was to remove gas and ensure all produced water discharge overboard met the criteria of <40 ppm.

Outcome

The total volume of solids was decreased by over 98% from inlet to outlet. This volume reduction is equivalent to the removal of 3.5 L of solids per cubic metre of fluid processed with less than 50 mL per cubic metre remaining in solution.

"The package delivered on its promise and high expectations. After time spent on the initial set-up, the package ran almost trouble free. The unit was pushed beyond its design flowrate on several occasions yet it still managed to treat the incoming produced water to deliver on spec water overboard stream. Stable inlet conditions were the key to maximizing the performance of the package." – Mike Oxley, BP

