



CLEAR SOLUTIONS for complex fluids

Increasing Production Capacity -
Brownfield North Sea



CHALLENGE

- Space restrictions, installing through “live plant”, offshore reinstatement and contractor management



SOLUTION

- Dedicated project team, offshore laser surveys, 3d cloud scans, pipe stress analysis, close client interface, offshore management team



RESULTS

- ALE Program Sanctioned, 80,000BPD PWT Increased Capacity, Achieved Production Start-Date

SUCCESS STORY

Brownfield Optimization & Retrofit

Increasing Production Capacity - Brownfield North Sea

CHALLENGE

A North Sea producer had planned to undertake a major redevelopment in the late life of their field. The project goal was to extend life of field to 2030 with an additional 100 million barrels of recoverable oil through new fields tied-back to a new BLP. CETCO Energy Services (CETCO), was awarded a contract to provide new Produced Water Treatment facilities on-board the platform to help the client meet their ambitions. CETCO had already installed a CrudeSep® Induced Gas Flotation (IGF) package on the platform 7 years previous which provided reassurance that any new plant would be fit for purpose. The existing unit occupied the planned area for the eventual lay down of the project flotel's gangway. Additionally, the capacity of the unit was not sufficient to cater for future production profiles so a new bespoke package was designed to accommodate the requirements. The only available location for the new CrudeSep® IGF was in the existing WEMCO hall area, 'between modules'. The space restrictions would not facilitate the option of installation of a single integrated package.



CETCO SOLUTION

To cater for the new Produced Water flow rate of 60,000 bbls/d CETCO supplied a Bespoke Design Dual Vessel 48" IGF package in place of the existing single 48" IGF package. To resolve the access and space issues the package was designed, manufactured, tested and coated on-shore before been dismantled and transported offshore for re-assembly in the old WEMCO hall location. All Design and Engineering works were carried out in-house with fabrication being outsourced to a local fabrication company. Detailed offshore 'scanning' surveys of the planned installation area and planned installation route were carried out and in collaboration with CETCO design team, the appropriate design of the package was agreed. Continuous review and assessment of the 'developing' design against offshore survey details was carried out to ensure critical tolerances were maintained, culminating in manufacture of a timber 'template' vessel which was 'trialed' offshore through the planned installation route.

RESULTS

Once transported offshore, under the supervision of a CETCO installation and commissioning team, the package was successfully re-assembled and installed on the Platform without any re-work or schedule delays. The system came back into service on time delivering Oil-In-Water (OIW) overboard concentration target of under 20ppm.

