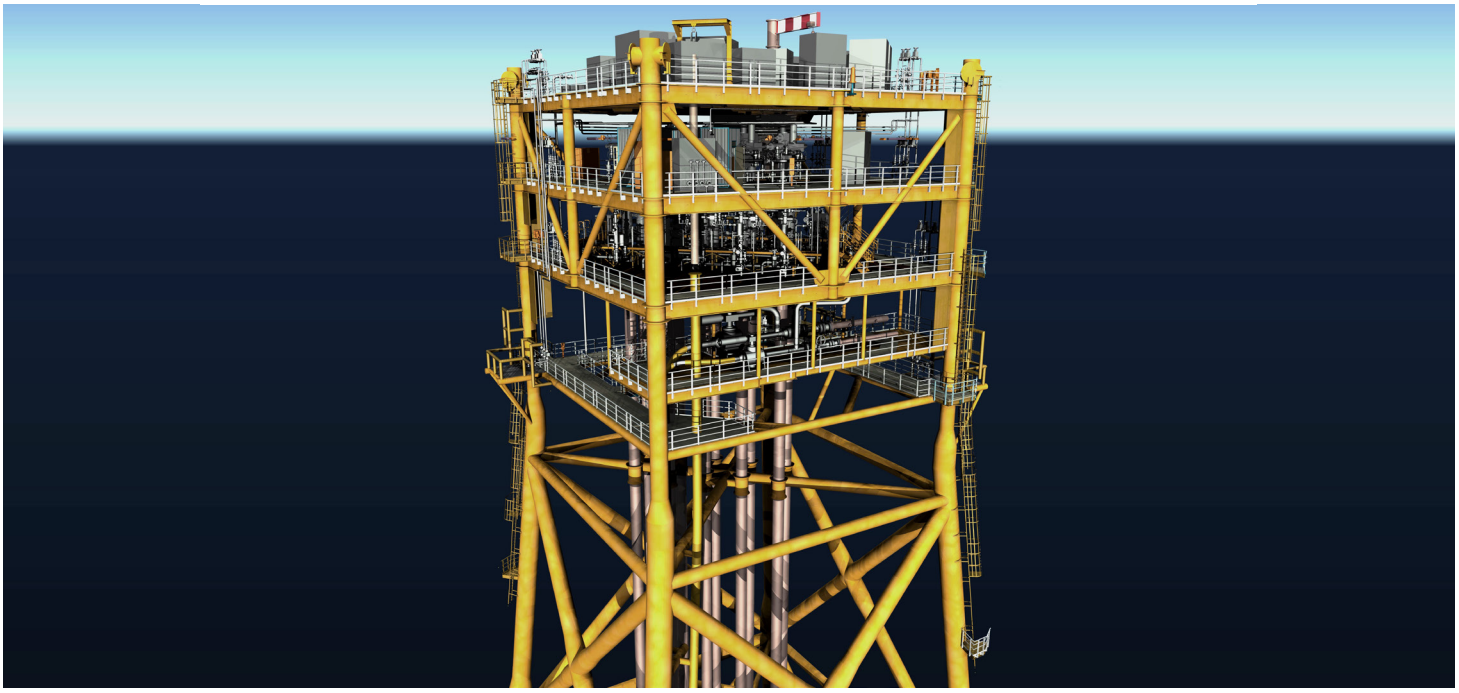
Dragados Offshore | BUILDING EXCELLENCE WORLDWIDE



OSEBERG UWP 30/6-H FEED

Client: Statoil
Location: North Sea
Construction Site: Cadiz - Spain
Completion Date: September 2015
Contract Type: Lump Sum

Project Description: Statoil's Oseberg Future Development - Phase 1 plans include the installation of an Unmanned Wellhead Platform (UWP) as a low-cost alternative to a traditional subsea installation. The concept chosen for UWP 30/6-H involves a totally unmanned, ultra-lean, high-reliability, low-maintenance wellhead platform designed to accommodate 10 well slots for production and gas injection. A steel jacket structure is being designed to support the topside in the 108m water depth found in the Oseberg Field area on the Norwegian Continental Shelf. The remotely-operated UWP will be tied back to the existing Oseberg Field Center through a 9.5" injection gas import pipeline and a 12" production export pipeline. The project presents special challenges to designers as the financial viability of the unmanned platform approach hinges on achieving extraordinary process up-time figures, while at the same time reducing scheduled maintenance hours to levels well below the current industry standard.

Scope of Work: Dragados Offshore's scope of work consists of developing the Front End Engineering Design (FEED) of the UWP and all related interfaces. The FEED study covers the complete platform design (topside, jacket, and foundation) including design of temporary structures, equipment and systems necessary for construction, yard assembly, load-out, transportation and installation, ensuring that the final design is safe, practical and operable and fully satisfies all functional requirements.

The engineering scope covers platform layout, structural engineering, process engineering, piping layout and engineering, electrical, instrumentation, and automation design, telecommunication design, material selection and corrosion protection, Operations and Maintenance engineering, Maintenance and Inspection engineering, material handling, technical safety and working environment. The FEED includes definition of all construction and installation activities, including mechanical completion, commissioning and start-up of the platform.

Process engineering includes process and utility systems design, generation of PFD's, UFD's and P&ID's, process simulation and equipment sizing. As part of the Technical Safety engineering, Fire and Explosion Strategy (FES), Evacuation, Emergency and Rescue Strategy (EERS) and Preliminary Design Accidental Load (DAL) are being developed based on the HAZID/HAZOP analysis, Total Risk Analysis (TRA) and Emergency Preparedness Analysis (EPA) performed during the FEED Study.