

Customer Success Story:

Meeting BP's dimensional control needs



Valued Quality. Delivered.

Company
BP

Industry
Oil and Gas

Region
West of Shetland, UK

Intertek Solutions:
Dimensional Control Services
Precision surveying of critical components, at varying stages of fabrication, to ensure accurate installation resulting in clash free integration of the components to the FPSO hull.

“The turret was the most complex designed structure of its kind having to be installed to incredibly tight dimensional tolerances due to its requirements to function in the extremely harsh environment. Intertek was proud to provide surveying services on this successful project”.

Ian Urquhart
Intertek Project Dimensional Control Manager

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BP's Quad 204 field has been in operation since 1998. Appraisals in the early 2000s showed that the field held more reserves than originally anticipated. Utilising technological advancements, the redevelopment project to build and install a new Floating Production Storage and Offloading (FPSO) unit and its subsea structures is expected to produce 130 mbd of oil and 220 mmscfd of gas compression by 2017.



The Challenge

Located 150km west of Shetland in approximately 400m water depth, Quad 204 was an ambitious project to construct a new FPSO unit, Glen Lyon, to replace the existing Schiehallion FPSO. Conditions in this area are some of the harshest experienced in the UK oil and gas sector.

The accurate installation of multiple components during the construction of the FPSO unit required precise dimensional control. In particular, the tight specifications on the Turret Mooring System required close monitoring to ensure a smooth integration with the FPSO.

Therefore it was vital that BP secured the highly advanced offshore surveying services to ensure they met these engineering and construction challenges in building and installing a new FPSO.

The Solution

Intertek brought in a team of specialists from the UK, and they helped to monitor and control fabrication to ensure project tolerances were achieved. The benefit to the project was a “clash free” design and installation of components resulting in minimal hook-up work for structural, piping and equipment interfaces. Audits were carried out at the various fabrication yards to assess the competence of the contractors’ survey personnel, procedures and methods used to generate survey reports. Third party verification surveys were also carried out by the Intertek survey teams on all critical components and interfaces.

The main components included in the heavy lift schedule were: eight Process Modules (Gas Compression, Power Generation, Separation and Utilities), five Piperacks, Turret Cylinder, Turret Manifold, Turret Gantry and Turret Swivel Stack - approximately 30,000 metric tons total weight.