

## Modulift Lift for Exxon Mobil's Busiest Offshore Rig

- Modulift designed and manufactured two 550t WLL Spreader Beams for the Offshore Transportation & Installation of Pre Assembled Units onto Floating Production, Storage, and Offloading vessels
- Designed and built to the exacting QA requirements typically required for offshore projects
- Rig remained operational throughout the lift and installation
- Spreader Beams fulfilled all relevant design factors such as dynamic amplification and skew factors together with taking into account any additional factors required by the offshore design code



In recent years the number of projects requiring complex lifting solutions involving specialist QA requirements for the Oil & Gas industry as well as the Nuclear, Petroleum and Wind Energy industries has seen a vast increase around the world. Modulift has reacted to this by developing a specialist department to manage these projects from design to delivery.

One such example of these types of project was for Exxon Mobil. In late 2010 Modulift UK Ltd was awarded a contract to design, manufacture and supply two 550T WLL capacity Spreader Beams for use on a Project off the West coast of Africa. The Spreader Beams were necessary for the Offshore Transportation and Installation (OT&I) of the Pre-Assembled Units (PAU I) on Floating Production, Storage, and Offloading vessels (FPSOs) for the project. Due to the project being executed on Exxon's busiest rig, which was to continue operating throughout this project, these Spreaders were scrutinized at every stage to ensure the highest quality build to minimize any risk during operation. The Spreader Beams were built to the exacting quality requirements typically required for offshore projects which involved design, manufacture and inspection in accordance with a comprehensive and approved quality plan together with independent design review by an International Classification

Society against a stringent marine operations and relevant API / AISC design codes.



Having successfully undergone a full quality management system audit by the client and end user, relevant procedures were issued by Modulift for approval by the customer. These procedures included Materials Inspection & Storage Procedure, Material & Weld Consumable Handling Procedure, Fabrication & Testing Equipment Maintenance & Calibration Procedure,



Dimensional Control Procedure, Welding Procedures, NDT Procedure, Coating Procedure and Assembly Procedure. These procedures were complemented with a comprehensive ITP which identified critical points for Identification, Verification, Notification and Hold Points where the client, end user and third party surveyor would carry out inspections prior to work progressing further.

The production of the Spreader Beam components was started and first entailed full inspection of procured materials and material certification by Modulift's own QA Inspector, Classification Society Surveyor and End User's Inspector. By the time this phase was in progress Modulift's design team had already carried out and ensured that all verifications and calculations had been completed, that they satisfied the stated design criteria and

had been submitted for independent design review which confirmed that the Spreader Beams were in accordance with the specified standards and addressed and fulfilled all relevant design factors such as dynamic amplification and skew factors together with taking into account any additional factors required by the Offshore Design Code.

Manufacture of the Spreader Beams went exceedingly well and all applicable hold points were successfully reviewed and endorsed by the relevant parties involved. Hold points included the full assembly and weighing of the completed Spreader Beam components which were then individually weighed using a calibrated load cell. Also at this stage, whilst the beams were assembled, the distance between lifting points were measured and found to be extremely accurate which was in itself a testament to the emphasis on quality that had been invested throughout the manufacturing stage.

Once the Spreader Beams had been painted the final inspection phase was conducted over a two day period and involved final inspection of the actual Spreader Beam components themselves and a full review of the documentation and quality records that comprised the Manufacturing Record Book (MRB). Finally the Spreader Beams were assembled under the surveillance of a third party surveyor and final markings were applied before the beams were individually loaded and packed into bespoke, specially strengthened export packing cases which ensured that the Spreader Beams were fully compliant and ready to use when they reached their destination in Angola in the Autumn.



The project was completed on time and both Modulift and its lifting equipment passed with flying colours awarding them with continued worldwide vendor approval for its engineering and manufacture.

Modulift's continued dedication to supporting the Oil and Gas industry can be seen through a variety of projects and companies around the world, from Exxon to BP, Shell to Saudi Aramco and including projects such as the Pluto LNG project for Woodside Petroleum in Australia. Modulift also works with many of their contractors such as Saipem, Weldex, Technip, Aker Subsea, Atlas Copco, Mammoet and Al Jaber.