

BOSKALIS ENERGY SOLUTIONS

Boskalis is a leading global dredging and marine expert. With safety as our core value we provide innovative, sustainable and all-round solutions for our clients in the energy market. Realizing projects in remote locations with a heightened environmental focus is one of our specialties. Under the brands Boskalis, Dockwise, Fairmount, VBMS and Smit Lamnalco we offer more services than any other company in our industry, making us your next one-stop solution provider.

We support the development, construction, maintenance and decommissioning of oil and gas import and export facilities, fixed and floating exploration and drilling facilities, pipelines and cables, and offshore wind farms.

TAPIS CPP PROJECT

The Tapis enhanced oil recovery (EOR) project, off the coast of Terengganu, Malaysia, in the South China Sea, is one of the largest offshore EOR projects in southeast Asia and is Malaysia's first large-scale EOR project. It incorporates an immiscible water-alternating-gas process to recover remaining oil reserves from the Tapis field and will increase the overall field recovery. ExxonMobil Exploration and Production Malaysia Incorporated (EMEPMI) partners with Petronas Carigali in the project, each holding 50% participating interest.

EMEPMI contracted Malaysia Marine and Heavy Engineering (MMHE) for the fabrication of the Tapis R topsides.

FEATURES

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|------------------|---|
| From | Pasir Gudang, Malaysia |
| To | Tapis Field, South China Sea, offshore Malaysia |
| Client | Malaysia Marine and Heavy Engineering (MMHE) |
| Operator | ExxonMobil Exploration Malaysia Incorporated (EMEPMI) |
| Execution period | Q2 2014 |
| Vessel | Black Marlin |



- A Location map
- B Load-out at MMHE Pasir Gudang, Malaysia





Tapis R is a Central Processing Platform (CPP) comprising a large integrated deck structure, including gas compression and water injection facilities, production-processing equipment, utility systems and living quarters for 145 people. The deck structure is bridge-linked to the existing Tapis B Platform. The combined topsides and jacket weigh about 23,500 tonnes, making it the heaviest platform built in Malaysia by the company.

MMHE contracted Dockwise for the transportation and installation of the Tapis R topsides.

TRANSPORTATION AND INSTALLATION

The topsides had to be installed onto an 8-legged jacket using the float-over principle for which Dockwise deployed its Heavy Transport Vessel (HTV) Black Marlin.

The Dockwise Scope of Work included the following main activities:

- Project management services
- Marine-, transport- and structural engineering services
- HSE and QA / QC services
- HTV outfitting and reinstatement
- Engineering, procurement and delivery of LMU's, DSU's and stabbing cones
- Transport of topsides from Client's yard to the offshore site
- Discharge of the topsides by means of float-over method
- Welding of the topsides to jacket connection c/w scaffolding, riggers, welders, QC etc

After load-out at MMHE's yard and completion of all sea-fastening, the HTV transported the topsides to the offshore field. Upon arrival in the field, the mooring operation commenced. The HTV moved towards the jacket, started the removal of sea-fastening and docked inside the jacket. Subsequently ballasting took place and load-transfer operations began.

The topside installation was executed by lowering the fully-integrated topside units onto the pre-installed jacket. Once the topsides had been safely transferred onto the jacket, the two structures were welded together which completed the topside installation.

CARGO PARTICULARS

| | |
|--------|-------------------------------|
| Type | Enhanced Oil Recovery Topside |
| Weight | 19,000 t |
| Length | 120.00 m |
| Width | 70.00 m |
| Height | 60.00 m |

LOAD-OUT OPERATION

| | |
|-------------|-------------------------|
| Loading | Skid-On |
| Discharging | Float-over installation |



C Offshore mooring of Black Marlin
D Docking of Black Marlin
E Undocking of Black Marlin

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