

KEPPEL FELS SECURES THIRD HARSH ENVIRONMENT JACK-UP ORDER FROM MAERSK

Keppel FELS has been awarded a contract from Maersk Drilling Holdings Singapore Pte Ltd, a wholly owned subsidiary of A.P. Moller - Maersk A/S. The contract is for building a repeat Gusto MSC CJ70 ultra harsh environment jack-up rig worth about US\$560 million.

The A.P. Moller - Maersk Group owns one of the world's largest shipping companies, and is involved in a wide range of activities in the energy, logistics, retail and manufacturing industries. Maersk Drilling provides high-efficiency drilling services to oil companies around the world.

The rig is scheduled for delivery in 1st quarter of 2015. It will be deployed in the Dagny field in the Norwegian North Sea for Statoil when completed.

This is the third CJ70 jack-up rig that Keppel FELS is building for Maersk Drilling, following an order for two such rigs in February 2011. As part of this repeat order, Maersk Drilling will have an option to build an additional jack-up rig of the same design with Keppel FELS.

The CJ70 rigs are designed for operation in the harsh environment of the North Sea, at water depth of up to 150 metres. The high capacity features include offline pipe handling and simultaneous operations as well as an enlarged cantilever reach, which will significantly increase the drilling efficiency compared to conventional units. The enhanced design also includes multi-machine control on the drill floor that adds a degree of automation to ensure a safe operation

and consistent performance. A total of 150 people can be accommodated on board in single cabins.



The third Maersk CJ70 jack-up rig that Keppel FELS is building for Maersk Drilling is designed for operation in the harsh environment of the North Sea. When completed in 2015, the high specification jack-up will be deployed by Statoil on a four-year contract.

ST MARINE UPGRADES PIPE-LAYING VESSEL CASTORO 8

ST Marine completed a contract from Saipem (Portugal) Comercio Maritimo (Saipem) to upgrade the heating, ventilation and air conditioning (HVAC) system and accommodation piping system for pipe-laying vessel, *Castoro 8*. The project was delivered in April 2012.

ST Marine undertook the design development, engineering and supply of a new chilled water HVAC system. The upgrading ensured that the vessel met Saudi Arabia's requirements and complied with Australian Maritime Safety Authority (AMSA) regulations for noise, vibration, air exchange, flow rate and temperature.



ST Marine delivered the pipe-laying vessel *Castoro 8* in April 2012.

JURONG SHIPYARD DELIVERED INDONESIA'S FIRST FSRU FOR GOLAR LNG



Jurong Shipyard has delivered Indonesia's first Floating Storage and Regasification Unit (FSRU) for Golar LNG in April 2012. The vessel named *Nusantara Regas Satu*, is the first conversion project that Jurong Shipyard has undertaken for Golar LNG.

Converted from the 125,000-cbm LNG *Khannur*, the unit is capable of producing 500 million cubic feet per day of gas, with a regasification capacity of approximately 3.8 million metric tonnes per annum. The FSRU is installed offshore Muara Karang, Jakarta Bay, in Indonesia where it is contracted to operate until the end of 2022.

Jurong Shipyard has delivered Indonesia's first FSRU *Nusantara Regas Satu*.

SEMBAWANG SHIPYARD SECURES CONTRACTS WORTH S\$130M

Sembawang Shipyard has secured three major contracts totalling S\$130 million. The contracts are for the repair and upgrading of a Floating Storage Offloading (FSO) vessel and life extension of two LNG carriers.

The first contract was awarded by Sonangol Pesquisa e Produção S.A. (SNLPP) for the repair and upgrading of *FSO Palanca*. Sonangol is a state-owned company, and a subsidiary of Sociedade Nacional de Combustíveis de Angola, E.P. The contract calls for the major repairs and upgrading of the 20-year old *FSO Palanca*.

Major work scope includes the renewal of the vessel's cargo piping system and pumps, tank blasting and coating, and cables renewal for the entire electrical system. The existing 30-men accommodation block will be redesigned and rebuilt to accommodate 60 men. The new accommodation block will include a new helideck to meet the

vessel's operational requirements.

The vessel is expected to enter Sembawang Shipyard in August 2012. Upon completion, she will return to Palanca Terminal in offshore Angola.

Besides this contract, Sembawang Shipyard was also recently awarded two LNG carriers life extension projects from the shipyard's Favoured Customer Contract (FCC) client, North West Shelf Shipping Service Company, Australia (NWSSSC). NWSSSC is the shipping service provider to the vessel owner, International Gas Transportation Company Limited (IGTC), a North West Shelf Venture company registered in Bermuda.

The 20-year-old LNG vessels *Northwest Seaeagle* and *Northwest Sandpiper* are scheduled to enter the shipyard in June and September 2012 respectively for major repairs and upgrading which, when completed, will further extend

the vessels' trading lives for another 10 years or more. Sembawang Shipyard has previously executed similar life extension work for NWSSSC's *Northwest Sanderling* in 2009, *Northwest Snipe* in 2010 and *Northwest Shearwater* in 2011.

KEPPEL FELS TO DELIVER UKRAINE'S SECOND KFELS B CLASS JACK-UP RIG

Keppel FELS is on track to deliver Ukraine's second KFELS B Class jack-up rig ahead of schedule, within budget and with a perfect safety record. The rig was named *NEZALEZHNIIST*, which means independence in Ukrainian.

This jack-up rig will be deployed on the Ukrainian shelf of the Black Sea for its owner Chernomornaftogaz, a State Joint Stock Company in Ukraine. Chernomornaftogaz carries out offshore development in Ukrainian sections of the Black and Azov Seas.

The first jack-up rig of the same design was delivered in Ukraine in May this year and is successfully deployed in the Black Sea. Developed by Keppel's jack-up rig design arm, Offshore Technology Development, the KFELS B Class rig is able to operate in water depths of 400 ft with a drilling depth of 30,000 ft. It is designed for maximum uptime with reduced emissions and discharges.



Ukraine's second jack-up rig, *NEZALEZHNIIST*, is built to Keppel FELS proprietary KFELS B Class design.

ST MARINE DELIVERED LANDING PLATFORM DOCK TO THAI NAVY

Singapore Technologies Marine (ST Marine) delivered a 141m Landing Platform Dock (LPD) to the Royal Thai Navy (RTN) in April. *HTMS Anghong* is the first amphibious vessel in RTN's fleet of vessels.

HTMS Anghong is designed and built based on ST Marine's Endurance Class of LPDs. The LPD design is proprietary to ST Marine and is proven by the four 141m Landing Ship Tanks (LSTs) that ST Marine built for the Republic of Singapore Navy. The LSTs have been deployed successfully on many occasions to provide peacekeeping duties in the Gulf, humanitarian assistance and disaster relief efforts during the 2004 Indonesian tsunami and more recently as part of the international anti-piracy Combined Task Force in the Gulf of Aden.

With a displacement of about 7600 tonnes, the LPD has a well-dock with a



ST Marine delivered a 141m Landing Platform Dock *HTMS Anghong* to the Royal Thai Navy.

stern as well as a side ramp designed for expedience embarkation and disembarkation of equipment and personnel. This versatile vessel is capable of supporting myriad missions, ranging from sea transportation, naval support operations, civil search and rescue to disaster relief missions. To support these missions, its heli-deck can land up to two medium-sized helicopters of about 10-tonnes each.

ST Marine secured this contract worth some S\$200 million, to design and build this LPD as well as two units of 23m Landing Craft Mechanised and two units of 13m Landing Craft Vehicle and Personnel. Work for the LPD commenced in mid 2009 and the vessel was launched in March last year. After going through the mandatory and comprehensive acceptance sea trials, the LPD has since sailed off to its base in Thailand.

PPL SHIPYARD SECURES A US\$208M CONTRACT FROM PERISAI

PPL Shipyard has secured a US\$208 million contract to construct a Pacific Class 400 jack-up drilling rig for Perisai (L) Inc, a wholly-owned subsidiary of Perisai Petroleum Teknologi Bhd. The construction of the rig comes with an option to construct an additional unit of a similar specification jack-up rig for delivery in the second quarter of 2015. The price for the option rig is US\$210 million with adjustment to certain cost escalation.

Perisai Petroleum Teknologi Bhd is a Malaysia-based upstream oil & gas service provider listed on the Malaysian

stock exchange of Malaysia. The Perisai Group owns a fleet of strategic oil & gas vessels and facilities supporting the exploration, development and production phases of offshore oil & gas fields both in and out of Malaysia.

The Pacific Class 400 jack-up drilling rig is PPL Shipyard's proprietary design. This design is well established and is an enhanced version of PPL Shipyard's acclaimed and successful Pacific Class 375 design series, of which 27 units are now operating worldwide.

The Pacific Class 400 rig represents the

latest generation of high-specification jack-up rigs that are capable of operating in water depths of 400 feet and drilling to depths of 30,000 feet. The rig's maximum drill centre is cantilevered at 75 feet aft and it has a derrick hook load capacity of 1,500,000 lbs. The rig is equipped with full hotel services for a complement of 150 men on board in 1-man cabins and 2-men cabins.

This unit is the 8th unit of the Pacific Class 400 series since its launch in 2010. The rig is scheduled for delivery in end July 2014.

KEPPEL TO DELIVER SEVENTH ULTRA-DEEPWATER SEMI TO ENSCO

Keppel FELS is set to deliver *ENSCO 8506*, the seventh semi-submersible (semi) drilling rig in the ultra-deepwater *ENSCO 8500 Series*®, to EnSCO safely, on time and within budget. EnSCO plc is a global provider of offshore drilling services to the petroleum industry. *ENSCO 8506* is Keppel's 16th newbuild rig for EnSCO.

To date, EnSCO has entrusted Keppel with 19 major newbuild projects worth more than US\$4.8 billion. As the exclusive builder of the *ENSCO 8500 Series*®, Keppel FELS has consistently achieved process improvements to optimise efficiency. On both the *EnSCO 8505* and *ENSCO 8506*, a 19% productivity improvement was achieved from the first five rigs delivered.

The proprietary *ENSCO 8500 Series*® design is capable of drilling in up to 8,500 feet of water, and can be upgraded

to 10,000 feet water-depth capability. The design includes a 35,000' nominal rated drilling depth, six ram BOP, two million pound hoisting capacity, 8,000 tons of variable deck load and an open layout well suited for subsea completion activities. Improved visibility from the open deck configuration also enhances safety.

Designed to address some of the most demanding offshore drilling requirements at water depths of up to 8,500 feet, *ENSCO 8506* features a two million pound quad derrick, offline pipe handling capability, 35,000 feet drilling capacity and 8,000 tonnes of variable deck load.

ENSCO 8506 had been contracted to Anadarko Petroleum Corporation for deployment in the U.S. Gulf of Mexico in the fourth quarter of 2012. This is

the third rig from the series contracted by Anadarko.

Keppel FELS is constructing three KFELS Super A Class jack-up rigs, *ENSCO 120*, *ENSCO 121* and *ENSCO 122*, for EnSCO. The latter also has a drillship, *ENSCO DS-6*, being modified at Keppel FELS.

KEPPEL SINGMARINE DELIVERS MEGA BAKTI

Keppel Singmarine has delivered diving support vessel *Mega Bakti* to its Malaysian owner. The 80-metre ship is constructed based on Keppel's Marine Technology Development's new design. *Mega Bakti* is able to perform multiple functions including rescue and subsea operations.



Keppel Singmarine completed building *Mega Bakti* in June 2012.



ENSCO 8506 is the seventh semi-submersible drilling rig in the ultra-deepwater *ENSCO 8500 Series*® Keppel FELS has built for EnSCO.

ST MARINE SECURES \$880M CONTRACT TO BUILD VESSELS FOR OMAN NAVY

Singapore Technologies Marine (ST Marine) has secured a contract worth €543.8m (about S\$880m) to design and build four patrol vessels and the provision of associated logistic support for the Royal Navy of Oman.

This contract was awarded by the Ministry of Defence of the Sultanate of Oman through a competitive international tender. ST Marine will build four 75-metre patrol vessels based on its proprietary Fearless Class of patrol vessels. The project will commence immediately with the first vessel expected to be delivered in second quarter of 2015 and the final vessel in third quarter of 2016.

JURONG SHIPYARD UPGRADED FPSO MONTARA VENTURE FOR PTTEP

Jurong Shipyard has successfully upgraded *FPSO Montara Venture* for PTTEP. The FPSO was delivered in June 2012. Upgrading works for the vessel included changing the complete fire fighting piping system from mild steel to copper nickel, and adding fenders on the ship side. The vessel has a production capacity of 40,000 barrels per day and a storage capacity of 750,000 barrels of oil. The FPSO will be deployed in the Montara Field, offshore Australia.



FPSO Montara Venture will be deployed in the Montara Field, offshore Australia.

OFFSHORE MARINE CENTRE IN TUAS SOUTH

A new common waterfront yard facility has been developed in Tuas South in the western part of Singapore, to cater to the waterfront, berthing and logistics needs of the wide spectrum of manufacturing companies in the marine and oil & gas industries. Offshore Marine Centre (OMC) is an initiative by JTC to optimise the use of land in Singapore by providing a common user waterfront facility for companies in these sectors. The 13-hectare OMC is operational from June 2012.

Besides the quick start-up, companies can enjoy reduced capital costs and lower operating costs because of the shared facilities at OMC. With the global oil and gas industry boom in recent years, the marine and offshore sector is experiencing strong growth. This has led to an increase in demand for Singapore's waterfront land which is a critical resource for the marine and offshore industry players.

OMC is an infrastructure innovation conceived and developed by JTC to overcome Singapore's scarce waterfront resources and to tap into new growth opportunities in the marine and offshore industry. Located along the Tuas Basin, OMC leverages on its proximity to shipyards and key players in the oil and gas industry. The development is equipped with multi-user

facilities including a common waterfront and berthing facility. OMC is operated and managed by Jurong Port.

OMC has a wharf length of 320 metres offering three distinct 5-metre deep berth boxes. The hard-standing areas and wharf are designed and engineered to take loads of up to 60kN/sqm with designated loading in & out zones built to a maximum loading of 165 kN/sqm. This makes possible the deployment of cranes of up to 550 tons capacity alongside the wharf for loading and discharging of cargoes. Pre-fabricated structures such as topside modules can be loaded and discharged by RO/RO methods facilitated by self-propelled modular transporters and, where required, sheerlegs and floating cranes can be deployed for super-heavylift movements exceeding the capacity of the largest shore cranes.

Jurong Port, together with Bok Seng Logistics as the exclusive heavylift partners onsite, will offer an array of logistical provisions essential for the handling of throughput both in and around the base as well as services at wharf side. Equipment for rental range from compressors, lighting towers and forklifts to mobile cranes of 500 ton and crawler cranes of up to 550 ton capacities. Heavy transport trailers, self-propelled modular transporter and

crane-mounted lorries are also available.

OMC also offers solutions to ballasting calculations, rigging designs, heavylift analysis, safety & risk assessments, seafastening analysis and designs. Wharf side services provided include tug and barge chartering, mooring & unmooring, water sale and dispensation to vessels as well as general refuse disposal.

For more information on OMC, please visit www.omc.sg.



Offshore Marine Centre is operational from June 2012. (Photos Courtesy of Offshore Marine Centre.)

MAN DIESEL & TURBO SINGAPORE RECEIVES OUTSTANDING LEADERSHIP IN SUPPORTING FAIR EMPLOYMENT AWARD

ASMI Member MAN Diesel & Turbo Singapore Pte Ltd received an Award presented by the Tripartite Alliance for Fair Employment Practices (TAFEP) on 18 April 2012. The company was a Special Mention Recipient for the Outstanding Leadership in Supporting Fair Employment Practices category in the TAFEP Exemplary Employer Award 2012. The TAFEP Award was introduced in 2010 to recognise and applaud outstanding organisations that have implemented fair, responsible and inclusive employment practices at their workplaces.

MAN Diesel & Turbo Singapore had to be nominated by its employees to qualify for the Award. Then, it had to undergo rigorous assessments by the judging panel comprising representatives from TAFEP, Ministry of Manpower, National Trade Union Congress and Singapore National Employers Federation. After shortlisting by the panel, it had to undertake employee surveys and senior leadership interviews.

MAN Diesel & Turbo Singapore won the Award based on the following factors:

- Fair, responsible and inclusive recruitment and retention practices,
- Proactive efforts to support the employment of a diverse workforce (including older workers, women and persons with disabilities),
- Senior Management's support for fair, responsible and inclusive employment practices,
- Internal and external communication of fair, responsible and inclusive employment practices,
- Adoption and implementation of Tripartite Guidelines on Responsible Out-sourcing and Re-employment of Older Employees, and
- Proactive efforts in sustaining fair, responsible and inclusive employment practices.

employees from 13 different nationalities. Job vacancies are first announced internally to provide employees who wish to explore a different career track with the opportunity to do so. This approach has led to the development of a driven workforce constantly on the lookout for suitable internal opportunities to expand their horizons.

The company supports the Yellow Ribbon Project and offers employment to ex-offenders. It sends them to training programmes to upgrade their skills and be more productive. It also offers its mature employees re-employment and has retained eight employees above 61 years old.

Under its current Managing Director Mr Patrice Mauger, a full-fledged human resource department was set up to implement and enforce fair employment practices in the organisation. This has resulted in better employee morale and a more productive workforce. A Recreational Committee was set up to organise events for employees to bond with one another, thus creating a more inclusive 'family' culture.

The company has benefitted from the adoption of fair, responsible and inclusive employment practices. By adding the TAFEP Exemplary Employer Award to its accolade, MAN Diesel & Turbo Singapore has become a role model for other companies in the marine industry.

By basing its hiring criteria on merit, MAN Diesel & Turbo Singapore created a diverse and an engaged workforce made up of



FOSTER ASIA PACIFIC PTE LTD

21 Gul Avenue, Singapore 629661. TEL: 6861 6611 FAX: 6861 0222

Leading Insulation Manufacturer, Distributor & Applicator for Complete Range of Thermal Insulation, Refractories, Acoustical Lining, Fire Protection, Hot and Cold Insulation Within Asia Pacific Region.

MAIN PRODUCT RANGE:

- **Rockwool Products**
Roxul – Firesafe
KCC – Hi-Wool A-60 Bulk/Deck
- **Fiberglass:**
Blanket, Slab, Pipe Cover
Brand: Foster, Taita & Kimmco (Marine)
- **Multi Purpose Board:**
Foster Calcium Silicate Board
Cement Board
- **Foil / Tape**
Brand: Tac, Sisalation, Wintape
- **Polyurethane / PIR**
Foster "U" Form
Foster I-Foam
Versi Foam (Injection/Spray)
- **Calcium Silicate & Perlite**
Pipe Cover; Slab

- **Insulating Cement**
Limpet; BD6; Super Stik;
Quik-Cote
- **Foster Products:**
Mastics; Sealants; Adhesive
- **Jacketing**
Aluminium, S/S 304, S/S 316,
Galvanized
- **Phenolic**
- **High Temperature Textiles –**
Fiberglass Cloth, Lagging;
Rope, Tape
- **Gypsum Board UCC**
(Fire & Moisture Shield)
- **Ceramic Products: ISOLITE – Isowool**
Blanket; Board, Rope, Paper
- **Accessories –** Stainless Steel 304 / 316, Tie Wire, Screws,
Lacing Wire, Hook & Eye, Tonggle Latch, Roof Mesh 3315
- **Others:** Sound - WB Barrier & Pufn Foam - Wilhams



Pipe Cover, Valves, Elbows, Tees, Flanges

SPECIALIST IN:

- Hot and cold pipe line insulation
- Insulation construction on large scale storage tanks
- Foam in-situ polyurethane on pipe lines, buoys and pressure vessels
- Refractory linings for furnaces, heaters, ducts, stacks and incinerators
- Sound proofing and acoustics works
- Fire proofing (Licenced Applicators)
- Cryogenic insulation of LNG/LPG spheres and tanks on board ships



For Sales Enquiries: Fax: 6861 0222 For Engineering Enquiries: Fax: 6861 1098

For Complete Products & Services, Please Refer Our:

Website: <http://www.fostergroup.com.sg> E-mail: sales@fostergroup.com.sg / contracts@fostergroup.com.sg



CONFERENCE ON FAIR EMPLOYMENT

18 APRIL 2012



Mr Patrice Mauger, Managing Director of MAN Diesel & Turbo, receiving the TAFEP Exemplary Employer Award from Minister of State for Manpower and National Development Mr Tan Chuan Jin.