

OFFSHOREMARINE

A newsletter of Keppel Offshore & Marine

10 YEARS OF
EXCELLENCE

May – June 2012

MICA (P) 137/12/2011

KEPPEL OFFSHORE & MA



CELEBRATING TEN YEARS OF GROWTH

Double Delivery for Ukraine

Seventh Semi for Ensco

CONTENTS

Keppel yards in US and Azerbaijan secure projects	3
Seventh success	4
Delivering for Ukraine	6
Strong support	8
Safe and timely progress	9
Abuzz with repairs and upgrades	10
New appointments	12
Fuelled by fundamentals	14
100-percent commitment	15
Enhancing capabilities	16
R&D partnership for Brazil	17
Vessels of precision	18
Long-standing partnerships	22
Setting standards	23
Sharing best practices	24
International ties	25
Specialist in LNG carrier repairs	26
Nostalgic return	27
Inspiring Keppelites	31
Developing a formidable workforce	32
Building communities	34

CENTRESPREAD

Ten Years of Excellence	19
-------------------------	----

PRODUCTIVITY & INNOVATION

Optimising painting operations	28
--------------------------------	----



Keppel O&M celebrated its 10th anniversary in style with many of its long-time customers on 1 May 2012 at its annual cocktail party held during the Offshore Technology Conference in Houston. The special relationships which Keppel O&M has built over the years have contributed significantly towards the company's healthy growth.

EDITORIAL BOARD

EDITORIAL ADVISOR

Tong Chong Heong

EDITOR

Lai Ching Chuan

ASSISTANT EDITOR

Eva Ho

SUB EDITOR

Lee Wan Jun

COMMITTEE MEMBERS

Chow Yew Yuen, Michael Chia, Nelson Yeo, Wong Kok Seng, Hoe Eng Hock, Dr Foo Kok Seng, Aziz Merchant, Vett Ramos, Ching You Yi, Hoo Yao Lin, Chin Sze Kiun, Alan I. Claveria, Betty Mok, Lucienne de Jong, Li Gang, Linda Mercado, Roy Tan, Wong Chai Yueh, Maria Magdalena

OffshoreMarine is a bi-monthly publication of Keppel Offshore & Marine Ltd
50 Gul Road, Singapore 629351

Tel: +65 6863 7200

Fax: +65 6261 7719 / 6265 1927

Company registration no. 199900642R

Keppel yards in the U.S. and Azerbaijan secure projects

Keppel O&M's yards in the U.S. and Azerbaijan have secured contracts for repair and upgrade and newbuilding respectively.

In the U.S., Keppel AmFELS LLC has secured a contract from Transocean Offshore Deepwater Drilling Inc. (Transocean) to repair and upgrade the semisubmersible (semi) rig Sedco 707.

Scheduled to arrive at Keppel AmFELS in July 2012, Sedco 707's major scope of work includes steel renewal of the hull, repair of the thrusters, refurbishment of the living quarters as well as electrical and piping replacement work. The semi is expected to leave the yard to return to work in offshore Brazil in 1Q 2013.

Mr Tan Geok Seng, President of Keppel AmFELS, shared, "We thank Transocean for their trust and

confidence in us and look forward to deliver another successful project to them safely and on time. Having built a long term relationship with Transocean, we are attuned to their needs and committed to support them in the renewal of their fleet.

"While we have a healthy base load of newbuilds, we have the capacity and expertise to undertake various repair projects which constitute an important part of our business. We are well-positioned to support operators requiring efficient repairs in the region."

The Sedco 707 is a self-propelled, twin hulled semisubmersible drilling unit with 8 thrusters designed to work in water depths of up to 6,500 feet. She has been working off the coast of Rio de Janeiro, Brazil.

Separately, Keppel O&M's shipyard in Azerbaijan, Caspian Shipyard Company (CSC) has also secured a contract to build a floating dock for Baku Shipyard LLC (BSC).

Expected to be completed in 4Q 2013, the floating dock will be 168 metres by 50 metres and equipped with two sets of 25-tonne jib cranes. It will have a maximum docking weight of 9,000 tonnes with a maximum docking draft of 6.5 metres.

CSC's scope of work includes steelworks construction and fabrication of the hull structure while BSC will provide overall project management. This arrangement will expedite the construction of the floating dock and demonstrates the synergy of Keppel O&M's shipyards.



The most well equipped offshore shipyard in the Gulf of Mexico, Keppel AmFELS has a healthy base load of newbuild projects as well as the capacity and expertise to undertake a variety of repair and modification work

Seventh success



Celebrating the naming of ENSCO 8506 are (first row, L-R) Dr Lee Boon Yang, Chairman of Keppel Corporation, Mr Peter Ong, Head of Civil Service and Permanent Secretary, Ministry of Finance; Lady Sponsor Mrs Christine Watson; Mr Pat Watson, Anadarko's US Gulf of Mexico Drilling Manager. (Second row, L-R) Mr Chow Yew Yuen, COO of Keppel O&M; Mr Mark Burns, Executive VP, EnSCO; Mr Tong Chong Heong, CEO of Keppel O&M, Mr Choo Chiau Beng, CEO of Keppel Corporation and Chairman of Keppel O&M

Keppel FELS has delivered ENSCO 8506, the seventh semisubmersible (semi) drilling rig built to the ultra-deepwater ENSCO 8500 Series® design to EnSCO safely, on time and within budget.

ENSCO 8506 has been contracted to Anadarko Petroleum Corporation for deployment in the US Gulf of Mexico in 4Q 2012.

A naming ceremony for the rig was held on 16 June 2012 at Keppel FELS with Singapore's Permanent Secretary for the Ministry of

Finance, Mr Peter Ong, as the Guest of Honour.

Mr Ong commented, "Keppel is today a global leader in the design and construction of offshore oil rigs because of the track record and long term partnerships it has established with international drilling contractors like EnSCO. Backed by Singapore's strong logistics and infrastructure, local shipyards have demonstrated their strength in providing customised solutions, value-added services as well as safe and timely deliveries

to their customers. This has helped enhanced Singapore's standing as an international maritime centre."

Mr Daniel W. Rabun, EnSCO's Chairman, President & CEO, said, "We are very pleased to receive our seventh ENSCO 8500 Series® rig. The earlier rigs delivered have proven to be a success whether deployed in Asia, North America or South America. This has been reaffirmed by our repeat customers. ENSCO 8506 is the third rig from the series contracted by Anadarko."

"In partnering with Keppel to build all seven rigs, we have been able to deliver to our customers high quality rigs on time and within budget. Keppel has been an excellent partner in delivering maximum value for us on the standardisation of the seven rigs. We are applying the same principles to the three high-specification KFELS Super A Class jackup rigs that they are currently building for us."

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.

Mr Tong Chong Heong, CEO of Keppel O&M, added, "ENSCO 8506 is our 16th newbuild rig for

Ensco and we are glad to be able to support the growth of their rig fleet by providing value-added and cost-effective solutions to meet their needs.

"We have established a track record with Ensco that has seen them entrust us with 19 major newbuild projects worth more than US\$4.8 billion. We are currently constructing three ultra-premium harsh environment jackup rigs for Ensco modeled after our proprietary KFELS Super A Class design. We are committed to delivering them to the highest satisfaction of Ensco."

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.

Apart from the three KFELS Super A Class jackup rigs, Ensco currently has a drillship, ENSCO DS-6, which is being modified at Keppel FELS. The three jackup rigs under construction, provide increased drilling efficiencies for multi-well platform programmes, ultra-deep gas drilling, and ultra-long reach wells of up to 40,000 feet drilling depth. The first jackup scheduled to be delivered, ENSCO 120, is already contracted for work in the Central North Sea.



Keppel FELS has built seven ENSCO 8500 Series® ultra-deepwater semisubmersibles for Ensco, worth about US\$3.5 billion in total

Delivering for Ukraine

The 34th KFELS B Class jackup rig NEZALEZHNIIST, which means independence in Ukrainian was named at Keppel FELS on 20 June 2012. The rig represents the country's aspirations to be energy self-sufficient.



Keppel, Chernomonaftogaz and Naftogaz celebrating the naming of Ukraine's second KFELS B Class jackup rig, NEZALEZHNIIST, at Keppel FELS

Keppel FELS is on track to deliver Ukraine's second KFELS B Class jackup rig ahead of schedule, within budget and with a perfect safety record. This follows the redelivery of their first jackup rig of the same design, in Ukraine in May this year.

Built to Keppel's proprietary KFELS B Class design, this second jackup rig will be deployed on the Ukrainian shelf of the Black Sea for its owner Chernomornaftogaz, a subsidiary of Naftogaz, the national oil and gas company of Ukraine.

According to Ukraine's official estimates in 2011, the country boasts proven reserves of natural gas (1,200 billion cubic meters) and oil and gas condensate (220 million tonnes). It currently produces 19 billion cubic meters of natural gas onshore and 1 billion cubic meters offshore.

The rig was named NEZALEZHNIIST at Keppel FELS on 20 June 2012. Mr Evgen Bakulin, Chairman of the Board of Ukraine's National Joint-Stock Company, Naftogaz was the Guest of Honour at the ceremony.

"Ukraine is rapidly growing and we are keen to further develop the country's significant oil and gas reserves. We partner the world's leading rig builder and designer, Keppel FELS, because they have an established track record of delivering high quality rigs on schedule and within budget", Mr Bakulin said.

"We witnessed this first hand when Keppel delivered our first KFELS B Class jackup rig some 45 days early in Ukraine in May this year (see box story for more details). The rig is successfully operating in the Black Sea and we are confident that this second rig will be just as successful. The KFELS B Class jackup rig is a proven design that will enable us to meet our goals."

“This latest KFELS B Class jackup rig will add to our capabilities in exploration and production and increase our energy self-sufficiency. We partner the world’s leading rig builder and designer, Keppel FELS, because they have an established track record of delivering high quality rigs on schedule and within budget”

Mr Evgen Bakulin, Chairman of Naftogaz

Mr Tong Chong Heong, CEO of Keppel O&M, added, “We are pleased to be able to support Chernomornaftogaz in expanding their E&P capabilities for Ukraine. With a global network of yards, we are committed to meet the needs of our customers wherever they are.

“With this rig, there are now 34 KFELS B Class jackup rigs in the

market and there are another 19 more on order. This clearly reflects the strength of the design which is today the industry standard for modern jackup rigs. It is also currently the most versatile and advanced rig to operate in the Black Sea region. We are privileged that Chernomornaftogaz has chosen to work with us and we look forward to continuing this win-win partnership.”

Innovating for the Black Sea

Piter Godovanets was the first KFELS B Class rig to be delivered to Ukraine by Keppel FELS. Having recently started operations successfully in the Ukraine Black Sea, Piter Godovanets was named on 26 April, 2012 with Mr Tong Chong Heong, CEO of Keppel O&M and Mr Wong Kok Seng, MD of Keppel FELS there to witness the ceremony.

A modification of an existing KFELS B Class jackup rig, Piter

Godovanets was a unique project where the upper sections of the legs had to be cut down from 517 feet to 221 feet and the upper part of the derrick dismantled. This was because the only route to the Black Sea was through the Bosphorus Straits and under the famous Bosphorus Bridge which has a clearance of 210 feet from the water level. In order to clear the bridge, the rig was unloaded from the dry tow vessel and had its legs lowered down into the water.



The first KFELS B Class rig for Ukraine, Piter Godovanets, had its legs cut off to pass under the Bosphorus Bridge before being reassembled



Mr Tong Chong Heong, CEO of Keppel O&M speaking at the naming of the first KFELS B Class rig for Ukraine, with Mr Valery Yasiuk (left), Chairman of Chernomornaftogaz, Mr Evgen Bakulin (second from left), Chairman of the Board of Naftogaz, and Mr Wong Kok Seng (right), MD, Keppel FELS

The rig was then reassembled in Giresun, Turkey, with close collaboration from Keppel FELS’ colleagues at sister shipyard, Caspian Shipyard Company in Baku. Despite being the first time such an operation was done by Keppel, the project team rose to the challenge and successfully delivered the rig 45 days ahead of schedule.

The success is testament to the synergy between Keppel’s sister yards, well-planned execution strategy and innovativeness in overcoming challenges.

Strong support

"I do appreciate that shipbuilding is not an easy task; there are many challenges, spanning from design, construction, outfitting and trial stages. For the MEGA BAKTI project, these challenges have been met based on the combined past experiences of Keppel Singmarine as the shipbuilder and my staff as mariners in managing this project."

*Dato Sofiadin bin Jaafar
Group MD, Target Group*



Keppel Singmarine and Target Resources celebrate the successful completion of the dive support vessel MEGA BAKTI

Fortifying its track record for customised ship solutions, Keppel Singmarine delivered the diving support vessel MEGA BAKTI safely, on time and within budget to its Malaysian customer Target Resources Sdn Bhd (Target Resources).

Mr Hoe Eng Hock, ED of Keppel Singmarine, shared, "The safe and steady progress of the MEGA BAKTI project is the result of excellent teamwork and strong alignment of goals and priorities between Keppel Singmarine and Target Resources. We look forward to more win-win partnerships with Target Resources."

The vessel was named at Keppel Singmarine on 15 June 2012 by the Lady Sponsor Datin Noraidah BT

Nordin, wife of Dato Sofiadin bin Jaafar, Group MD of Target Group. Target Resources is a business unit within Target Group.

Emphasising safety in all aspects of their operations, Keppel Singmarine and Target Resources have clocked a perfect safety record of more than 850,000 safe man-hours on the MEGA BAKTI project. In appreciation of Keppel Singmarine's commitment and efforts towards safety, Target Resources presented the yard with a safety performance bonus of MYR15,000.

The concept design for MEGA BAKTI was developed by Keppel Singmarine's design arm, Marine Technology Development, while detailed engineering for this

project was carried out by the yard's in-house Engineering Department.

Spanning 80 metres, MEGA BAKTI has a range of capabilities which includes submarine rescue operations, search and rescue operations, and disaster and humanitarian relief operations. This vessel is slated to operate in Malaysia.

Mr Hoe said, "At Keppel Singmarine, we pride ourselves on providing customised, value-added solutions that enable our customers to meet their operating needs in any part of the world. We are committed to continue to enhance our capabilities, and so deliver more quality solutions."

Safe and timely progress

In keeping with its reputation of execution excellence, Keppel O&M's yards worldwide celebrated the safe and timely progress of their newbuild projects with significant milestones.

Keppel FELS is undertaking three MSC CJ-70 jackup projects for its long-time customer Maersk Drilling (Maersk). The yard celebrated the keel-laying for Maersk Intrepid, the first of the three jackups, on 15 May 2012, and the strike steel for Maersk Interceptor, the second of the three jackups, on 2 May 2012. The rigs are expected to be delivered in the first quarter and third quarter of 2014 respectively.

Enasco is also collaborating with Keppel FELS on three jackup projects. Construction works for its third ultra-harsh environment KFELS Super A Class rig, ENSCO 122, has started; the strike steel ceremony for this jackup project took place on 16 May 2012. On the

same day, the yard laid the keel for ENSCO 120, the first of the three KFELS Super A Class jackups. The jackups are on track for delivery in the second quarter of 2013 and 2014 respectively.

Meanwhile, the keel-laying milestone was marked for Hakuryu 11, the first newbuild KFELS Super B Class jackup for Japan Drilling Company (JDC), and Qatar 2022, the first of two KFELS B Class Big Foot jackups for Gulf Drilling International (GDI), on 17 May. Both rigs are scheduled for completion in 2013.

Over at Keppel Nantong, Floatel International (Floatel) and Keppel FELS celebrated the keel-laying of Floatel Victory on 7 June 2012. This is the third accommodation semisubmersible (semi) that Keppel FELS is building for Floatel; Floatel Superior and Floatel Reliance were delivered in 2010. Earlier this year, Keppel FELS and Floatel inked a

Letter of Intent to build a fourth accommodation semi based on a DSS™ 20NS design, which is jointly developed by GustoMSC and Keppel FELS' Deepwater Technology Group.

More recently, Standard Drilling and Keppel FELS celebrated the launching of Standard Alliance, from Keppel Singmarine's slipway on 9 June 2012. The superstructures of this KFELS B Class jackup are being installed at Keppel FELS Pioneer Yard 2. The jackup is currently in its commissioning phase and will be delivered in the first quarter of 2013.

Keppel Singmarine also celebrated the launching of H355, a 50-tonne tugboat, on 21 May 2012. Developed by Keppel O&M's Marine Technology Development, H355 is the first tugboat built by Keppel Singmarine for its Indonesia customer PT Humpuss.



Floatel and Keppel FELS celebrated the keel-laying of Floatel Victory on 7 June 2012 at Keppel Nantong

Abuzz with repairs and upgrades



EnSCO DS-6 is undergoing modification and upgrades to meet BP's latest enhanced voluntary drilling standards



Hakuryu 10 was delivered three days ahead of schedule

In addition to the record orders for newbuild rigs at Keppel FELS, the yard has recently secured a variety of repair and modification projects including EnSCO's DS-6 drillship, Japan Drilling Company's (JDC) Hakuryu 10, Alaska Industrial Development and Export Authority's (AIDEA) Endeavor – Spirit of Independence, Seadrill's West Callisto and PetroVietnam Drilling's PVD I.

Mr Wong Kok Seng, MD of Keppel FELS, said, "Repair and modification projects are an essential part of our business. They are usually short-term works which complement our longer-term newbuild projects. Our yards are configured to be flexible in taking on repair work which sometimes includes emergency repairs. Our long-term customers come to us

not just for newbuilds but also because of our reliability and versatility in undertaking repair and modification work."

Chartered to BP, the EnSCO DS-6 drillship which arrived from a shipyard in Korea is undergoing modification and upgrades to meet BP's latest enhanced voluntary drilling standards. Part of the work scope includes upgrades to the blow-out preventer and controls, modifications to the accommodation, and installation of a 30 tonne winch. The drillship is scheduled to commence its five-year contract with BP in the fourth quarter of 2012.

Work on the project has received strong emphasis on safety with BP hosting a full day safety

workshop on 31 March 2012. The project teams of BP, EnSCO and Keppel FELS gathered to share on the safety aspects of the project and align to the goals of "No Accidents, No Harm to People and No Damage to the Environment".

Separately, JDC received its jackup rig, Hakuryu 10, three days ahead of schedule on 20 June 2012.

JDC's Director, Managing Executive Officer, GM (Project Engineering), Mr Hiromitsu Yamamoto, said, "We are pleased to receive Hakuryu 10 early as it is deemed important to us. I would like to thank the project teams for their excellent work.

Keppel FELS has always been a reliable partner for us in delivering to our satisfaction and

we look forward to continuing this win-win partnership.”

Arriving on 19 May 2012, Hakuryu 10 was docked on Keppel FELS' Can-Do Barge for upgrade and modification works. Built in 2008 to the Baker Marine Class (BMC) 375 design, the rig underwent blasting and painting of the hull, cleaning and inspection of spudcans and legs, fabrication and installation of diverter line supports and derrick cladding.

Mohd Sahlan Bin Salleh, GM (Operations) Keppel FELS, added, “We have established a good understanding with JDC having worked on several projects before and our good teamwork enabled us to complete this rig early thanks to the good planning right from the start. Before the rig arrived in May, we did a survey for Hakuryu 10 in March 2012 when the rig was in Spain which helped to clearly define the work scope. Working closely with JDC, we were able to prepare for the rig's arrival and execute according to plan.”

The jackup, Endeavor – Spirit of Independence, which was previously named Adriatic XI, is being modified and will undergo winterisation upgrades to drill for oil and gas in Cook Inlet and possibly other Alaskan offshore areas for the AIDEA. The rig is also undergoing a steel renewal and painting programme as well as refurbishment of its living quarters.

Another repeat customer, PetroVietnam Drilling, has sent its first jackup, PVD I, for spudcan repair and Special Periodic Survey (SPS) on its legs. The Keppel-built rig completed its short term repair at the end of June 2012 and headed back to offshore Vietnam.

In April 2012, Seadrill's KFELS B Class jackup rig, West Callisto, stopped by Keppel FELS for modification works on its way to Myanmar, where it will be drilling for TOTAL.

Dutch expertise for Norwegian client

Keppel Verolme in the Netherlands has delivered COSL Rigmar, an accommodation jackup, to COSL Drilling Europe AS, a subsidiary of China Oilfield Services Limited, on 20 June 2012. Deployed to the Ekofisk field in the Norwegian continental shelf, the rig was completed five days ahead of schedule and without any lost time incidents, earning the project team an early delivery bonus.

The rig arrived on 12 May 2012 and immediately underwent its five-yearly survey and life extension programme. Work on the rig included inspections, repairs and renewal of all anodes on the legs including spudcans and steel repairs to the hull. A tooth rack repair at a height of 85 meters was also conducted.

A full commissioning programme was completed prior to the rig's departure.



Keppel Verolme received an early delivery bonus for delivering COSL Rigmar five days ahead of schedule

New appointments

Governance and leadership continue to be strengthened across Keppel O&M.



BG (NS) Tay Lim Heng

ON BOARD

BG (NS) Tay Lim Heng, CEO of Keppel Integrated Engineering (KIE), became a member of the boards of Keppel Shipyard and Keppel Singmarine with effect from 18 April 2012.

BG (NS) Tay is also Head, Sustainable Development, of Keppel Group. Prior to joining the Group, BG (NS) Tay served in the Singapore Administrative Service as Deputy Secretary (Development) in the Ministry of National Development.

Before that, he was the Chief Executive of the Maritime and Port Authority of Singapore, where he was also a Board Member of the Singapore Maritime Foundation,



Mr Michael Chia

Centre of Maritime Studies (NUS), Tropical Marine Science Institute (NUS), a Member of Class NK Singapore Committee and a Vice President of the International Association of Ports and Harbours.

LEADING THE TECHNOLOGY DIVISION

Mr Michael Chia has been appointed as MD (Technology) of Keppel O&M with effect from 1 June 2012. He reports to Mr Chow Yew Yuen, COO of Keppel O&M. Mr Chia is also the Director (Group Strategy & Development) of Keppel Corporation, reporting to Mr Choo Chiau Beng, CEO of Keppel Corporation.

Prior to this, Mr Chia was MD

(Offshore) of Keppel O&M and Deputy Chairman of KIE. From 2002 to 2009, he was ED of Keppel FELS with responsibility for the overall management of the company.

Mr Chia has more than 25 years of management experience in corporate development, engineering, operations and commercial. He was the President of the Association of Singapore Marine Industries from 2005 to 2009, and is currently the Chairman of the Singapore Maritime Foundation.

HELMING OPERATIONS IN THE AMERICAS

Mr Tan Geok Seng has been appointed as President of Keppel Offshore & Marine USA (Keppel O&M USA) and Mr Tommy Sam has been seconded and appointed as VP of Keppel O&M USA with effect from 1 May 2012.

Mr Tan focuses on North and Central Americas and continues to serve as President and CEO of Keppel AmFELS. Mr Tan reports to Mr Chow Yew Yuen, COO of Keppel O&M and Chairman of Keppel O&M USA.

Mr Tan joined Keppel FELS in 1981. He was seconded from Keppel FELS to Keppel AmFELS as the Executive VP in 1997, after serving in departments such as Engineering, Commercial, Project Management and Operations. He returned to Keppel FELS in



Mr Tan Geok Seng

2001, and was seconded to Keppel AmFELS a second time in 2002. He was appointed CEO of Keppel AmFELS in 2007.

Mr Sam will oversee the finance functions for Keppel O&M's



Mr Tommy Sam

operations in the Americas. He will concurrently hold his appointment as VP of Keppel FELS Brasil and manage relations with Keppel FELS Brasil's customers based in the US. Mr Sam will report directly to Mr Chow.

Mr Sam joined Keppel FELS as an Accountant in 1994. He was seconded to Keppel FELS Brasil as CFO in 2003 and appointed as VP of Keppel FELS Brasil in 2009. He holds a Bachelor in Economics from Monash University in Australia.

HEADING OPERATIONS

Over at Keppel FELS, Mr Wong Fook Seng has been appointed ED (Operations). This new appointment took effect from 1 June 2012. Responsible for operations in the yard, Mr Wong also oversees the Planning and Control, Quality System and Process Excellence departments.



Mr Wong Fook Seng



Mr Mohd Sahlan Bin Salleh

Mr Wong started his career in the marine industry more than four decades ago and has been with Keppel FELS for 33 years. In the course of his work, he has set up and headed Keppel FELS' subsidiaries, including overseas companies, and served on their boards. He had also undertaken diverse overseas assignments in countries where Keppel operates, including Vietnam, Brazil and Kazakhstan.

Meanwhile, Mr Mohd Sahlan Bin Salleh has been appointed GM (Operations) of Keppel FELS. He was previously AGM (Operations). He was a recipient of the Outstanding Keppelite Awards 2012.

Fuelled by fundamentals

In an interview with *Reuters*, Mr Choo Chiau Beng, CEO of Keppel Corporation and Chairman of Keppel O&M, shared his perspectives on the offshore and marine industry.



CEO of Keppel Corporation and Chairman of Keppel O&M Mr Choo Chiau Beng, shares insights on the offshore and marine industry with *Reuters*

The performance of Keppel O&M has remained strong this year. In 1Q 2012, the group reported that its net order book stood at \$8.4 billion, with deliveries extending into 2015.

On the outlook of the industry, Mr Choo shared, "The fundamentals of the energy industry continue to be strong, primarily because energy demand has been growing.

"Many people are moving from poverty to the middle class in China, India, Brazil and many other countries. As people move into the middle class, they consume more energy."

Responding to expanding global energy demand as well as high oil prices, major oil and gas companies have reported that they would accelerate spendings on exploration and production (E&P).

Brazilian state oil company *Petróleo Brasileiro S.A. (Petrobras)*, for instance, has a US\$236.5 billion investment programme for 2012 to 2016; 60% of this sum will go to E&P activities.

Sete Brasil Participações S.A. (Sete Brasil), an associate of *Petrobras* which specialises in chartering drilling rigs for pre-salt exploration, has inked a Letter of Intent with Keppel O&M for the

design and construction of five *DSS™ 38E* drilling semisubmersible rigs. This is on top of the firm order in December 2011 for a rig of the same model.

On the shipping and marine industry, Mr Choo said, "Tighter global marine fuel emission standards will force some ship owners to convert their vessels to run on less polluting natural gas."

A shift from low-sulphur diesel – which is more expensive than gas – is expected to spur retrofit for vessels worldwide, which will create a new market for shipyards.

Mr Choo elaborated, "Right now, everybody is looking at gas for bunkering ships. It is already happening in Norway. Japan is looking at it and we are too. It does make sense because of the sulphur restrictions in many of these areas."

He also explained that oil refineries around the world today are not capable of producing enough low-sulphur diesel to meet the demand from ships.

100-percent commitment



Converted to a Floating Storage Unit (FSU) from a liquefied natural gas (LNG) carrier, FSU Tenaga Empat has been delivered by Keppel Shipyard to MISC Berhad

Keppel Shipyard handles eight to 12 Floating Production Storage and Offloading (FPSO), Floating Production and Storage (FSO) and Floating Storage and Re-gasification Unit (FSRU) conversion and upgrading projects at any one time. Committed to safe, prompt and quality deliveries, it continues to be the industry's preferred partner for such projects.

FPSO CIDADE DE PARATY

Keppel Shipyard completed its 100th FPSO/FSO/FSRU project recently. FPSO Cidade de Paraty had undergone a successful marine conversion at Keppel Shipyard and was transported to BrasFELS in Brazil in June 2012.

Vincent Koh, Senior Project Manager of Keppel Shipyard, said, "The SBM Offshore and Keppel Shipyard project teams share good rapport and understanding. As

such, effective decisions were made on all work activities, from engineering to construction. The success of the project was also due to the strong support that we had received from our stakeholders, including our subcontractors."

BrasFELS' work scope on the vessel includes the fabrication and installation of six process modules as well as the installation and integration of another six process modules supplied by SBM Offshore.

FPSO Cidade de Paraty has a production capacity of 120,000 barrels of oil per day and is capable of compressing five million cubic metres of gas per day.

FPSO CIDADE DE ANCHIETA

Keppel Shipyard has also completed the fast-track modification and upgrading of FPSO Cidade de

Anchieta, previously named FPSO Espadarte, for SBM Offshore. The FPSO was previously converted at the yard in 2000.

With safety as the top priority, more than five million safe man-hours were clocked on the project since it arrived at Keppel Shipyard in August 2011.

The FPSO has been chartered by Petrobras to support its production activities in Baleia Azul Field, in Espirito Santo Basin, offshore Brazil.

Anthony Maria, Senior Project Manager of Keppel Shipyard, said, "The project was challenging as it had a tight turnaround schedule. Strong teamwork and open communication between us and SBM Offshore facilitated good and timely decisions throughout the duration of the project. The project's success was also due to Keppel and SBM Offshore's effective work methodologies, which have been refined through multiple collaborations with each other."

FSU TENAGA EMPAT

On 24 May 2012, Keppel Shipyard delivered FSU Tenaga Empat to MISC Berhad. The vessel was converted to a Floating Storage Unit (FSU) from a liquefied natural gas (LNG) carrier. A good safety record of more than 1.5 million safe man-hours has been achieved on the project.

Owned by MISC Berhad, the FSU will operate in the newly-developed LNG Terminal in Melaka, Malaysia.

Enhancing capabilities

To ensure efficient operations, Keppel O&M continually upgrades the facilities and capabilities of its global yards.

BOOSTING DRYDOCK CAPACITY

In Singapore, Keppel Shipyard expanded its capabilities with Floating Dock 3, which has a lifting capacity of 12,000 tonnes. The 170 metres (m) by 26m drydock was constructed by Keppel Nantong in about 14 months.

The drydock received its first vessel on 28 May 2012. The dock's maiden unit, Seacor Valor, is a supply vessel owned and managed by Seacor Marine Asia Pte Ltd. The vessel will undergo mechanical, electrical, pipe renewal and underwater works at Keppel Shipyard.

Suitable for taking in vessels of up to 160m by 23m in size, Floating Dock 3 enhances Keppel Shipyard's capacity for repair projects.

With more than 100 years of experience in ship repair, Keppel Shipyard is trusted by new and repeat customers for a broad range of repair projects. About 80% of the company's repair work is for regular customers.

ADVANCING IN AZERBAIJAN

Over in Azerbaijan, Keppel O&M deepened its presence in the Caspian Sea region with the



Keppel Shipyard's new Floating Dock 3 measures 170 m by 26 m and has a lifting capacity of 12,000 tonnes

setting up of Baku Shipyard. Yard developments are progressing steadily and operations are expected to start in the third quarter of 2013.

The yard is jointly developed by Keppel O&M, State Oil Company of Azerbaijan Republic (SOCAR) and Azerbaijan Investment Company (AIC). Baku Shipyard will be equipped to undertake ship repair and conversion as well as construction of a variety of vessels, including offshore support vessels and tankers.

When completed, Baku Shipyard, which spans 52 hectares, will comprise a large dock, comprehensive panel line systems for steel block fabrication and a ship transfer system amongst other infrastructure.

The shipyard will be capable of building four tankers of 15,000dwt or four 100m long offshore support vessels at the same time, as well as repairing 80-100 ships annually.

Strategically located along the East-West energy corridor of the Caspian Sea region, Baku Shipyard will provide critical support to the local oil industry. It will help unlock Azerbaijan's vast offshore hydrocarbon potential and support the renewal of SOCAR's fleet.

With experience in operating 20 yards worldwide, Keppel O&M will help set up the systems and procedures necessary to successfully operate Baku Shipyard as well as recruit and train employees.

Operations at Baku Shipyard are expected to begin in the third quarter of 2013



R&D partnership for Brazil



(From left) Mr Aziz Merchant, ED of KOMtech (Deepwater), Keppel FELS (Engineering) and Keppel's Deepwater Technology Group, Professor Chan Eng Soon, Dean of Engineering of NUS, Mr Scott Cummins, Chairman, Board of Managers of FloaTEC, LLC, and Mr Wong Ngiam Jih, CFO of Keppel O&M, signed the MOU on 9 May 2012

Keppel Offshore & Marine (Keppel O&M), Keppel Offshore & Marine Technology Centre (KOMtech), National University of Singapore (NUS) and FloaTEC have signed a Memorandum of Understanding (MOU) to form a consortium that is committed to meet the challenges of deepwater developments in Brazil.

This consortium will explore collaborations with Brazilian universities, research institutions as well as offshore and marine industry partners to develop technologies and training opportunities.

Mr Wong Ngiam Jih, CFO of Keppel O&M; Mr Aziz Merchant, ED of KOMtech (Deepwater), Keppel FELS (Engineering) and Keppel's Deepwater Technology Group; Professor Chan Eng Soon,

Dean of Engineering of NUS; and Mr Scott Cummins, Chairman, Board of Managers of FloaTEC, LLC; signed the MOU on 9 May 2012. Also present at the signing ceremony were representatives from Singapore Maritime Institute.

The consortium will support both undergraduate and postgraduate engineering programmes at Brazilian universities. It will also identify potential applications of emerging technologies through the research projects of Brazilian universities. On the training front, the parties will work together to provide industrial attachments as well as seminars or workshops to Brazilian students.

Mr Merchant shared, "Keppel strives to improve its research and development efforts as well as innovations. This agreement

helps to ensure that we continue to offer value propositions to our customers that are second to none."

Mr Eric H Namtvedt, President of FloaTEC, LLC, explained that the unique skill sets of the MOU partners as well as their different positions in the R&D value chain enable the consortium to develop solutions for all phases of offshore deepwater field development for Brazil.

Professor Chan Eng Soon added, "The formation of the consortium is timely. Bringing together industry and tertiary institutions elevates to new heights the value proposition of our engagement. I believe our colleagues at the Brazilian universities are just as excited about possible collaborations."

Vessels of precision

Keppel Singmarine continues to build on its strong track record for delivering large and sophisticated projects such as ice-breakers for the Arctic region and Caspian Sea as well as purpose-built platform supply and rock dumping vessels. Mr Hoe Eng Hock, ED of Keppel Singmarine, shared with *Channel NewsAsia's Money Mind* the market outlook for offshore support vessels and specialised ships.



Mr Hoe Eng Hock, ED of Keppel Singmarine



Built by Keppel Singmarine for Royal Boskalis, the rock dumping vessel ROCKPIPER is capable of depositing rocks accurately at water depths of more than 1,000m

What is a rock dumping vessel?

Rock dumping vessels are special vessels capable of depositing large amounts of rocks in deep waters with great precision to protect and stabilise cables as well as oil and gas pipelines on the seabed.

Our recently delivered rock dumping vessel, named ROCKPIPER, has a carrying capacity for 24,000 tonnes of rock and is equipped to carry out precise rock depositing works at water depths of more than 1,000 metres (m).

This project demonstrates the competencies and capabilities of Keppel Singmarine. Besides

constructing the vessel, we also undertook detailed engineering and systems integration work.

What drives demand for specialised ships and offshore support vessels?

Present demand for specialised ships and offshore support vessels is driven by the need to provide support to the growing number of oil rigs in operation as well as replace aging offshore support vessels globally.

Increased work in deep waters and harsh environments continue to raise demand for specialised, technically-sophisticated offshore construction vessels that offer large accommodation facilities.

In addition, the stricter operating environments and regulatory frameworks further propel demand for offshore support vessels designed for enhanced operational efficiency and safety.

What is the outlook for Keppel Singmarine?

Our capabilities and experience in design, engineering and construction differentiate us from our competitors.

We will continue to enhance our competencies so that we can continue to meet the offshore industry's demand for innovative and cost-effective solutions.

KEPPEL OFFSHORE & MARINE

10 YEARS OF



Toasting to strong partnerships at Keppel O&M's 10th Anniversary Party in Houston were the Board of Directors and senior management of Keppel Corporation and Keppel O&M

CELEBRATION

"Since our integration ten years ago, Keppel O&M has been focused on harnessing the synergies and collective strength of our yards to maximise value. We are committed to sustain this into the future.

"To our customers and business partners, I like to express my heartfelt appreciation for your invaluable trust in us over the years. We will continue to work hard to ensure that we deliver on our promises to complete our projects safely, on time, and within budget."

*Mr Choo Chiau Beng,
CEO of Keppel Corporation & Chairman of Keppel O&M*



Ten years of excellence

Keppel O&M celebrated its 10th anniversary at its annual cocktail party in Houston. 1,000 customers, business associates, partners and friends had gathered to congratulate the directors and senior management of Keppel Corporation and Keppel O&M on 1 May 2012.

Details of the party as well as Keppel O&M's growth story were shared in the last issue of *OffshoreMarine*. In this issue, we share more photographs of the event as well as well-wishes from long-time customers and business partners.



1. (3rd from left to right) Mr Tan Geok Seng, President of Keppel O&M USA and President and CEO of Keppel AmFELS, Mr Tong Chong Heong, CEO of Keppel O&M, Mr Patricio Alvarez Morphy, President of Perforadora Central S.A. De C.V., Mr Foster Manning, Director of Definitive M & I, Mr Choo Chiau Beng, CEO of Keppel Corporation and Chairman of Keppel O&M, Mr Chow Yew Yuen, COO of Keppel O&M
 2. Ms Wang Look Fung (left), Director (Group Corporate Affairs) of Keppel Corporation and Mr Steven Roll, VP and GM of Atlantic at McDermott International Inc.
 3. Mr Wong Kok Seng (second from left), MD of Keppel FELS, with Mr Pharr Smith (right), Senior Vice President, Operations Support at Rowan Companies
 4. Mr Lee Kian Soo (left), Executive Chairman of Ezra, and Mr Nelson Yeo, MD (Marine) of Keppel O&M and MD of Keppel Shipyard
 5. Mr Michael Chia, MD, Technology Division, Keppel O&M, and Mr William Robinson, Senior Vice President of Sales, Marketing & Strategic Planning, McDermott
 6. Mr Tong Chong Heong (centre) with Mr John Banks, COO of Stena Drilling (right)
 7. (Left to right) Mr Tan Geok Seng, President of Keppel O&M USA and President and CEO of Keppel AmFELS, Mr Michael Holcomb, President/Director of Keppel Marine Agencies and Mr Bob McKechnie, Director at Transocean
 8. Mr John Irwin (left), former CEO of Atwood Oceanics and Mr Wong Kok Seng, MD of Keppel FELS

WELL WISHES



Mr Fernando Barbosa,
Director, Odebrecht (left)

"I am very happy to be a small part of the history of Keppel. We had our first partnership in 1990 where we built a very important project for Petrobras, and in the course of that we helped bridge Singapore and Brazil. I wish all the best to Keppel O&M for many, many years to come."



Mr Todd Grove,
Chief Technology Officer, ABS (right)

"I wish to thank Keppel for another great party at OTC. I've had the opportunity to attend for a number of years and this one is especially special. All the best wishes to Keppel O&M and I look forward to continue the great relationship that we have."



"I wish all the best to Keppel O&M for their 10th year anniversary. The party tonight is wonderful. SBM has had a long and successful relationship with Keppel and we look forward to continue that."

Mr Tony Quinn,
Operations Director, SBM Offshore (left)



Mr Frank Verhoeven,
Chairman, Smit (extreme left)

"Congratulations to Keppel. For years, both Smit and Boskalis have had a very good relationships with Keppel. We see a lot of opportunities to work together further."



Mr Keesjan Cordia,
MD, Seafox Contractors, BV (left)

"I would like to congratulate Keppel O&M for their 10th anniversary. As our partnership in building the Seafox 5 is coming to a close, I would like to say construction is going very well and the teams are working very well together. Hopefully, we can build more for the future."



Mr Peter Noble,
Chief Naval Architect, ConocoPhillips (extreme left)

"It is a very good party here with a lot of people from the industry and we are very happy to see old friends and meet new ones. We have a very close relationship with Keppel and look forward to strengthening our working relationship with them in the future."

Long-standing partnerships

Keppel Offshore & Marine celebrates 10 years of growth and excellence this year. A big part of its success is due to the strong partnerships and friendships built up with customers, associates, suppliers, government officials and community leaders. In this feature, we showcase some of Keppel's special relationships.



Mr Solomon P. Ortiz with Mr Choo Chiau Beng, Chairman of Keppel O&M

THE SOLOMON ORTIZ DOCK

Former U.S. Congressman Mr Solomon P. Ortiz was instrumental in helping to spark Keppel AmFELS' growth back in the 90's. In 1996, he facilitated Keppel AmFELS' acquisition of a 30,000-tonne floating dock, which previously belonged to the US Navy, from the Port of Brownsville.

The dock was named "Solomon Ortiz" and is currently the only one in the Gulf of Mexico capable of docking large semisubmersible rigs.

Over the years, the yard steadily nurtured a dynamic workforce, honed its capabilities and built up top-class facilities and equipment to become the most comprehensive shipyard in the Gulf of Mexico (GOM).

Mr Tan Geok Seng, President of



Mr Dan Rabun (left) with Mr Tong Chong Heong

Keppel AmFELS and Keppel O&M USA said, "It is with much support from the former Congressman and the local leaders that we have been able to successfully develop Keppel AmFELS and create many good jobs for the community for a long time to come."

On his visit to the yard in 2009, Mr Ortiz also shared, "I've had a very good relationship with Keppel AmFELS for many years and besides providing good jobs to several thousand people, they are an outstanding example of how a good company can also be a good corporate citizen."

MUTUAL GROWTH

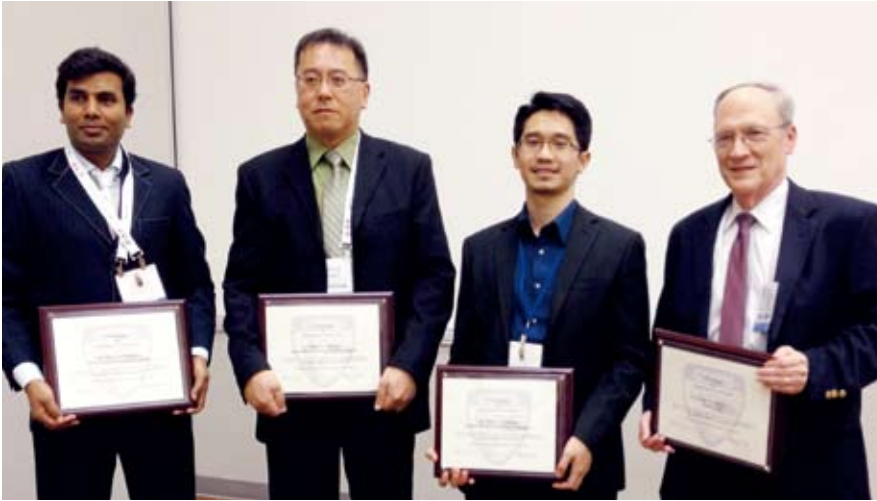
Enesco's and Keppel's more than two decades of partnership has helped them grow to become leaders in their respective industries.

In 2000, Keppel had built the ENSCO 101 on speculation and approached Enesco to buy the rig. That was the start of Enesco's jackup newbuilding programme and included several joint ventures with Keppel. Such close partnerships resulted in both companies finding numerous ways to help each other grow.

Mr Dan Rabun, Chairman, President & CEO of Enesco, said, "Our relationship has been a true partnership with mutual benefit. Keppel FELS has provided ENSCO with fleet enhancements at an attractive cost and consequently we provided them work when few had money to spend in the shipyard."

At the naming of the ENSCO 8505, Mr Tong Chong Heong said to Dan Rabun, "Thank you for your friendship and confidence in us. Under your leadership, Enesco and its partnership with Keppel have grown from strength to strength. You can count on our global network of yards to support Enesco, wherever and whenever you need us. We have developed a mutual understanding and similar set of core values that has propelled us in all our deliveries."

Setting standards



(from left) Co-authors Shazzad Hossain from University of Western Australia, Patrick Wong from ExxonMobil, Okky Purwana from KOMtech, Jack Templeton from Sage USA are proud that their paper has been conferred the Best Civil Engineering Paper Award by the American Society of Civil Engineers

Keppel Offshore & Marine Technology Centre (KOMtech), ExxonMobil, Sage USA, GustoMSC, Oxford University and University of Western Australia, have jointly produced a paper on the new international standards for the site-specific assessment of mobile jackup rigs, ISO 19905-1.

Their paper was awarded the Best Civil Engineering Paper Award by the American Society of Civil Engineers (ASCE) at Offshore Technology Conference (OTC), an annual event held in Houston, the United States.

Okky Purwana, Assistant Manager at KOMtech, and his co-authors, Patrick Wong, Geotechnical Advisor at ExxonMobil, Jack Templeton, President of Sage USA, Hugo Hofstede, Consultant at GustoMSC Engineers, Professor Chris Martin from Oxford University, Assistant Professor

Shazzad Hossain and Professor Mark Cassidy from University of Western Australia, received the award at Reliant Centre, the venue of OTC, on 30 April 2012.

Titled Foundation Modeling and Assessment in the New ISO Standard 19905-1, the paper addressed the most recent International Organisation for Standardisation (ISO) guidelines for site-specific (geotechnical) assessments of mobile offshore jackup rigs.

Okky Purwana shared, "For the past 15 years, there have been tremendous efforts by the industry to pull together the latest technologies and incorporate them into widely acceptable standard assessments for mobile offshore jackup rigs. Our team is honoured to have our contributions recognised with this award."

Model test

KOMtech, Keppel's Deepwater Technology Group and FloaTEC have successfully conducted the Extendable Draft Semisubmersible (EDS) and Deep Draft Semisubmersible (DDS) model tests. This is in collaboration with Petrobras and its research and development unit Centro de Pesquisas Leopoldo Américo Miguez de Mello (CENPES) in May 2012.

Classification societies, ABS and DNV, have also acknowledged the feasibility and reliability of the two concepts.

EDS and DDS are both cost-effective, ultra-deepwater, dry tree drilling and production system. These two designs can operate in water depth of 2,200 metres in the Santos Basin, offshore Southern Brazil.



KOMtech, Keppel's Deepwater Technology Group and FloaTEC have successfully conducted the Extendable Draft Semisubmersible (EDS) and Deep Draft Semisubmersible (DDS) model tests

Sharing safety best practices



Mr Yong Chee Min, GM (HSE) of Keppel O&M, conducted a safety workshop at Keppel AmFELS to align safety standards across Keppel O&M's yards

Keppel O&M promotes active sharing of safety ideas and best practices amongst its business units and departments, so that as a group, the company can further raise its safety standard.

Mr Yong Chee Min, GM of Health Safety and Environment (HSE) of Keppel O&M, and Marianne Goh, Senior HSE Executive of Keppel FELS, recently conducted a series of safety workshops at Keppel AmFELS in the United States, as well as BrasFELS yard and Keppel Singmarine Brasil in Brazil from 2 to 9 May 2012.

They shared on several safety initiatives and programmes such as High Impact Risk Activities, Cross Pollination programme, Plus 5 for Safety programme and the e-Safety Portal. These have been successfully implemented in Singapore as well as in other parts of the world.

Mr Yong shared, "We hope to see more overseas yards adopt these practices, adapting them to their local environment and culture. The process of sharing results helps us to better understand the challenges faced by each yard and

align our safety culture across Keppel O&M."

Mr Tan Geok Seng, President and Chief Executive Officer of Keppel AmFELS, said, "Though certain practices in Keppel AmFELS may differ from the Singapore yards, our safety core values are the same. Just like the others in the Keppel O&M family, we put safety above and beyond all other work priorities in our daily work."

Keppel also embraces opportunities to exchange ideas with the industry on safety. Mr Yong shared on Keppel O&M's experience in building a strong safety culture at the International Conference in Workplace Safety and Health for the Construction Industry jointly organised by the BCA Academy and Institution of Occupational Safety and Health (Singapore) on 4 June 2012.

Mr Yong said, "Keppel O&M currently has a global workforce of about 70,000, including subcontractors. At Keppel, safety is everyone's business. Keppel O&M will continue to enhance our partnerships with all stakeholders to implement an effective safety management system to ensure that everyone at our workplace goes home safely every day."

International ties

With world-class shipyards around the world, Keppel O&M often receives delegations who are keen to learn about the success of the Group. Yards in Qatar, Brazil and Singapore hosted a number of such visits over the last few months.

QATAR TIES

In Qatar, H.E. Dr Mohamed bin Saleh al-Sada, Minister of Energy and Industry and Chairman and MD of Qatar Petroleum, visited Erhama Bin Jaber Al Jalahma Shipyard, which is located in Ras Laffan Industrial City, in April 2012.

Nakilat's ship repair and shipbuilding joint venture companies, Nakilat-Keppel Offshore & Marine (N-KOM) and Damen Shipyards Qatar, form part of Erhama Bin Jaber Al Jalahma Shipyard.

Having toured the facilities, H.E. Mohamed bin Saleh al-Sada, shared, "Erhama Bin Jaber Al Jalahma Shipyard has brought world-class ship repair and

shipbuilding facilities to Qatar. The shipyard is crucial to the development of a strong and sustainable maritime industry in Qatar."

BRAZIL BECKONS

Over in Brazil, Singapore's Minister for Trade and Industry, Mr Lim Hng Kiang, who was there to promote trade relations, visited Keppel FELS Brasil's BrasFELS yard in Angra dos Reis, on 10 May 2012. In operation since 2000, BrasFELS has been a significant contributor to Brazil's oil and gas production as well as Singapore's economic collaboration with Brazil.

Minister Lim was hosted by Mr Choo Chiau Beng, CEO of Keppel Corporation, Chairman of Keppel O&M and Singapore's Non-Resident Ambassador to Brazil.

The delegation was led on a tour of the yard by Mr Kwok Kai Choong, President & CEO of Keppel FELS Brasil. The yard is currently working on key projects such as the P-61

tension leg wellhead platform, the Noble Roger Eason drillship, Floating Production Storage and Offloading (FPSO) vessels FPSO Cidade de Sao Paulo and FPSO Cidade de Paraty as well as the semisubmersible rig Ocean Star.

As the delegation learnt more about the yard's past and present projects, Minister Lim commented that the yard has a "very impressive spectrum of deep competencies."

US VISITS

Back in Singapore, Keppel O&M also hosted the United States Under Secretary of Commerce for International Trade Mr Francisco Sanchez and his delegation on 17 May 2012. The group was in town for the Trade Winds Asia event.

The delegation was welcomed by Mr Choo and Mr Chow Yew Yuen, COO of Keppel O&M, as well as other senior management representatives. The visit, which included a tour of Keppel FELS and Keppel Shipyard, gave the delegation a deeper understanding of Keppel O&M and its business in the US, which is represented by Keppel AmFELS.

AMBASSADORIAL VISIT

The Ambassador of the Republic of Angola to Singapore, His Excellency Dr Fidelino Loy de Jesus Figueiredo visited Keppel O&M on 6 June 2012, to better



Singapore's Minister for Trade and Industry, Mr Lim Hng Kiang (ninth from left), and his delegation visited BrasFELS where he was hosted by Mr Choo Chiau Beng (fifth from left), CEO of Keppel Corporation and Chairman of Keppel O&M, who is also Singapore Non-Resident Ambassador to Brazil, and Mr Kwok Kai Choong (seventh from left), President & CEO of Keppel FELS Brasil

Continues on page 26...

Continued from page 25...

understand Keppel O&M's operations and range of services.

H.E. Dr Fidelino was warmly received by Keppel O&M's senior management led by Mr Choo, Mr Tong Chong Heong, CEO of Keppel O&M, and Mr Chow.

Over the years, Keppel Shipyard has delivered a number of Floating Production Storage and Offloading (FPSO) projects bound for operations in Angola. The yard delivered FPSO Saxi Batuque in 2008, FPSO Mondo in 2007, Petroleo Nautipa in

1998 and Afran Ocean in 1982. Currently, there are a number of drilling semisubmersibles and semisubmersible drilling tenders constructed by Keppel FELS operating in Angola.

At the moment, Keppel Shipyard is working with SBM Offshore to undertake the upgrading and refurbishment of FPSO N'GOMA, which is slated for operations in Block 15/06 West Hub, Angola. The vessel has a production capacity of 100,000 barrels of oil per day.

Angola has become one of the largest crude oil producing countries over the last decade. In 2010, it was the second largest crude oil producer in Africa, according to the United States-based Energy Information Administration.



Ambassador of the Republic of Angola to Singapore, His Excellency Dr Fidelino Loy de Jesus Figueiredo (left), learnt about Keppel O&M's operations from Mr Chow Yew Yuen, COO of Keppel O&M

Specialist in LNG carrier repairs

Nakilat-Keppel Offshore & Marine (N-KOM) is poised to be a centre of excellence for the repair of liquefied natural gas (LNG) carriers. Since its inauguration 18 months ago, it has built up a strong track record of completing 31 LNG projects. Including the LNG carrier Al Gharrafa – which is managed by OSG Ship Management and delivered on 19 June 2012 – twelve LNG projects were completed this year.

Mr Abu Bakar Mohd Nor, CEO of N-KOM, shared, "We are encouraged by have the continuous support of

all our customers. Their confidence and trust in our ability to deliver quality and timely projects has

spurred us to further enhance our capabilities to provide value-added solutions."



N-KOM provides a wide spectrum of repair, fabrication, maintenance and construction works for the marine, offshore and onshore industry

Nostalgic return



Former President Mr S R Nathan (second from left) penning down his comments for Keppel O&M as he started his nostalgic visit to Keppel O&M hosted by Dr Lee Boon Yang (second from right), Chairman of Keppel Corporation, Mr Choo Chiau Beng (right), CEO of Keppel Corporation and Chairman of Keppel O&M, and Mr Tong Chong Heong (left), CEO of Keppel O&M

Former President of Singapore Mr S R Nathan returned to visit Keppel Offshore & Marine (Keppel O&M) after more than 40 years on 7 June 2012.

It was a nostalgic visit as Mr Nathan was a member of the Keppel Board in the early 1970s and bore witness to important milestones that took place in Keppel's early days. It was then that Keppel came under local management by a team led by Mr Chua Chor Teck and Mr Loh Wing Siew, with Mr George Bogaars and Mr Cyril Neville Watson at the helm.

Mr S R Nathan was also the former Chairman of Mitsubishi Heavy Industries Singapore, whose yard later became Keppel FELS's current Pioneer Yard.

Mr Nathan was warmly welcomed

by Dr Lee Boon Yang, Chairman of Keppel Corporation; Mr Choo Chiau Beng, CEO of Keppel Corporation and Chairman of Keppel O&M; Mr Tong Chong Heong, CEO of Keppel O&M; Mr Chow Yew Yuen, COO of Keppel O&M and other senior management.

On the guest book, Mr Nathan commented, "Delighted to re-visit a site which I have many memories. It is remarkable how the whole area has flourished and within it is Keppel O&M which has developed into an amazing organisation and a strong contributor to our economy. "

After the brief on Keppel O&M's latest developments, Mr Nathan expressed surprise at how extensive the group has grown in Singapore and overseas in the last four decades.

As a reflection of his strong ties to Keppel, Mr Nathan shared his concerns on the current challenges facing the group. With the labour intensive work involved in the offshore and marine business and the need to stay ahead of the competition, Mr Nathan highlighted the importance of attracting, retaining and grooming the right talents to drive Keppel's future growth.

Mr Nathan also offered suggestions on ways Keppel could attract and recruit more young Singaporeans, and to train and develop the early school leavers. He also highlighted the need to grow a pool of good people to work in Keppel's overseas yards.

The visit ended on a high note with a tour of the yards and a lunch where Mr Nathan and the Keppel management reminisced about the past and further

Optimising painting operations



Painting operations carried out during the block assembly stage of rigbuilding has been identified for improvements

With 30 newbuild rigs on order as of June 2012, Keppel FELS has to ensure high levels of productivity for the safe, on time and within budget execution of its projects. Through innovation and adoption of industry best practices, the yard continues to improve its production processes.

In this respect Keppel FELS and Keppel Offshore & Marine Technology Centre (KOMtech) are working closely together to further optimise painting

operations carried out during the block assembly stage of rigbuilding.

Before the hull of a jackup is erected, they are assembled as "module blocks". These blocks are painted manually. Presently, the manual spray painting process involves pre-mixing the paint before feeding to the nozzle through a hose. Workers then spray the paint onto the surfaces of the blocks by moving the nozzles in a pattern.

As it can be quite challenging to apply the paint consistently, repainting might have to be carried out to improve the paint work – this adds to the man-hours and resources needed for the job.

In order to improve the efficiency and quality of this painting process, KOMtech has re-designed and developed specific systems for painting the under-hull and side-shell of the blocks. These new systems are highly mobile and can accommodate variations in hull

surface heights and spray paint widths.

Several preliminary trials using the new systems were conducted. The results demonstrated that the spray width is wider than conventional spraying methods, and a Wet Film Thickness (WFT) was consistently within the acceptable range of 250 to 350 microns. WFT is a measure of the thickness of a wet coat of paint or protective material.

In addition, the Dry Film Thickness (DFT) of the paint was found to be consistently within the range of 150 microns.

As the new systems ensure a consistent distance between the nozzle and the surface of the blocks, there is a reduced probability of under-spraying or over-spraying, which in turn improves consistency in Dry Film Thickness (DFT). DFT is a critical measure of the coat application process. It provides vital information on the expected life of the substrate and ensures compliance with international standards.

The results show that the new systems designed by KOMtech not only reduce paint wastage by 20% but also require less manpower to complete a similar hull painting job. With more automation, Keppel FELS enjoys augmented productivity and cost savings.



The manual application of paint involves workers spraying paint onto the surfaces of the blocks by moving the nozzles in a pattern

Maximising operational processes

The rigbuilding process is usually project-centric, which enables high levels of customisation. On the other hand, a typical manufacturing process delivers high efficiencies and consistent quality.

Keppel FELS has succeeded in integrating the best of both types of approaches into its production processes. The yard has turned itself into a hub with many specialised work stations.

More specifically, structures which are used across multiple projects are produced at the same work station by the same crew. This is akin to an assembly

line in a manufacturing plant. This method of production ensures greater efficiency, quality and safety due to the crew's familiarity with the work and economies of scale.

This manufacturing approach has significantly shortened Keppel FELS' construction lead time and improved its overall efficiency over the years. Methodical and highly-evolved, the work station approach allowed Keppel FELS to optimise the use of its facilities, as well as minimise wastage of time, manpower and other scarce resources.

Recognising quality

Keppel O&M's yards continue to receive commendations for their high quality standards.

Lead Auditor of DNV Business Assurance Pte Ltd, Ms Gao Shennig, visited Keppel FELS for the first time on 18 May 2012 to conduct a periodic audit for Keppel FELS' ISO 9001:2008 certification. She was impressed by what she observed at the yard.

Ms Gao shared, "I have audited many shipyards; Keppel's yard is most impressive in many

ways. Despite the busy work schedules, the yard maintains good housekeeping and operation systems."

She added, "I am impressed by the automation of piping production; the millions of dollars invested in software and equipment reflects the foresight of the top management.

"Furthermore, I can feel that the people are truly passionate about continuous improvement. They are motivated and proud of what



A semi-automated pipeshop at Keppel FELS significantly increases productivity and quality assurance in pipe fabrication

they are doing. This is worthy of commendation."

Lifelong learning



Johari Bin Jamal (second from right), HSE Supervisor of Keppel Shipyard, received an NTUC May Day Model Partnership Award from Mr Stephen Lee, President of Singapore National Employers Federation

When Health, Safety and Environment (HSE) Supervisor Johari Bin Jamal joined Keppel Shipyard in 1994, one of the biggest challenges to his work was that he had difficulties communicating in English fluently.

Through language courses and on-the-job training, Johari's mastery over the English language has improved significantly. Keen to expand his knowledge and skills, he volunteered for additional responsibilities, taking on roles

which allow him to better understand fire-fighting and rescue operations.

Johari was recognised at NTUC's May Day Model Partnership Awards 2012. He was one of 39 Individual Category Award recipients, which commends individual efforts for their positive attitude towards learning and skills upgrading. Johari was nominated for this award as he generously shares his knowledge with his colleagues.

"We must not be afraid to face challenges and should constantly strive to improve and upgrade ourselves. I am thankful to be surrounded by mentors who have been very willing to share their experiences," shared Johari.

Inspiring Keppelites

Some 20 Keppelites from across Keppel Group were commended at the inaugural Outstanding Keppelite Awards, which was held in conjunction with the 9th Grow Beyond talk on 23 March 2012 at Carlton Hotel.

Mr Choo Chiau Beng, CEO of Keppel Corporation and Chairman of Keppel O&M, explained, "The Outstanding Keppelite Awards recognises Keppelites who exemplify our core values. In addition to consistent outstanding work performance, the winners and nominees are inspirational role models for all of us."

These model Keppelites share what makes them go the extra mile and inspire them to serve with passion.



Kee Huat advocates values that he feels are hallmarks of Keppel's success

Loh Kee Huat, GM of Prime Steelkit and Assistant Yard Manager of Keppel Singmarine, appreciates Keppel's enduring core values. He

observed that Keppelites possess the *Can-Do!* spirit and have no qualms about taking on difficult challenges, but are practical and prudent at the same time. He was thankful to have picked up a positive work attitude and sound values from his mentor early in his career. He now shares these values with the younger engineers that he works with. "Technical competence is easy to learn once you've acquired the right values", he explained.



Max thrives on the positive vibes generated at his workplace

Max Goh, Assistant Shipyard Manager from Keppel FELS, is motivated by the positive vibes generated by like-minded colleagues at his workplace. It is important to like what you do, he shared. He also appreciated the patience of his seniors when he was the new man learning the ropes. In turn, he has gladly taken

up the role of mentor to share his experience and help team members perform better.



With perseverance, Kok Weng believes that nothing is impossible to achieve

Leong Kok Weng, SVP at Keppel Subic Shipyard, started off as a safety officer 14 years ago when he joined Keppel. Since then, Kok Weng has had many opportunities to grow and learn through rotations and overseas postings. Committed and resilient, Kok Weng has overcome many project challenges. His journey has not been easy, but Kok Weng finds it fulfilling. "I feel a great sense of achievement whenever I secure or deliver a project successfully. My motto has always been to work hard, do my best, expect the worst and hope for the best!"

Developing a formidable workforce

With 20 shipyards around the world and over 30,000 employees, Keppel O&M has achieved good growth over the years and built up a robust track record. Mr Tong Chong Heong, CEO of Keppel O&M shares in an interview with Human Resources Management magazine that the achievements have been made possible by developing and retaining talent. *OffshoreMarine* reproduces highlights of the article based on the interview.



employees who share Keppel O&M's values. Reputed as an employer of choice, Keppel O&M has been able to attract like-minded individuals for its operations worldwide.

Building a talent pipeline is critical to sustain operations. Keppel O&M partners a select group of local and overseas tertiary and technical institutions, including National University of Singapore and Nanyang Technological University, to identify and recruit budding talents for its businesses. The group also offers scholarships and internship opportunities to attract young, dynamic individuals to the offshore and marine industry.

When Mr Tong took over the reins as CEO of Keppel O&M in 2009, one of the challenges that he faced was to execute the projects well, on time, within budget and safely. This objective was fulfilled through the efforts of Keppel O&M's committed and experienced workforce.

Mr Tong takes a hands-on approach to work as well as in people development. "I strive for excellence but I also empower my people. I allow my people to make

their own decisions and take ownership, but I also keep regular communication with them, so that if things are not right, we could solve it as a team," shared Mr Tong.

Keppel O&M constantly develops its people, empowering them with knowledge and skills to meet future challenges.

GUIDING NEW RECRUITS

Mr Tong shared that good retention starts with hiring

In addition, Keppel O&M takes in talents from the Institutes of Technical Education (ITE) in Singapore. Keppel O&M contributes to the training of the ITE students by hosting yard tours, participating in school talks, and providing internship opportunities. In 2008, Keppel O&M and ITE jointly set up the Marine Offshore Technology Workshop at ITE College Central.

While Keppel O&M believes in empowering its people, young hires are not thrown into the deep



The Global Management Programme hones the strategic thinking and management skills of younger talent

end. Induction programmes and guidance from more experienced colleagues help orientate new recruits into their roles. As part of the Keppel Group Orientation, recruits also have the opportunity to visit the other businesses in the Keppel Group.

GROOMING LEADERS

Keppel O&M also provides opportunities for training and development to employees at all levels. In 2011, the average Keppel O&M employee attended 74 hours of training and development sessions. These programmes range from improving technical skills to development of soft skills such as leadership, communication and team management.

Mr Tong noted, "Our focus on training has enabled us to reap the good returns of having well-trained employees."

Keppel O&M's Project Management Programme (PMP) is targeted at young managers, superintendents and engineers. The course's attendees are provided with an overview of the commercial aspects of the business, including principles

of negotiations, drafting and handling commercial contracts, and claims management.

"We select young and motivated employees for PMP," Mr Tong shared. "They are assessed on their knowledge and experience as well as how well they work with customers, vendors and peers."

Mr Tong added that the senior management team attends the presentation session at the end of the PMP course to note what the participants have learnt and evaluate their potential for further promotion.

There are also development avenues for senior employees. Mr Tong elaborated, "The Global Management Programme is for senior employees. As part of the programme, they are sent to Harvard Business School."

An ardent advocate of lifelong learning, Keppel O&M encourages the pursuit of further studies through its Employee Development Scheme (EDS) initiative. EDS covers a range of courses, including part-time diploma and master courses.

REWARDING SERVICE

Hard work pays off at Keppel O&M. Besides monetary rewards, Keppel O&M recognises its employees through awards. For example, Ministers and Members of Parliament have been invited to present long service awards to employees who have served for extended periods. Employees also receive rewards for safety, project completion and exemplary conduct.

RETAINING EXPERIENCE

Staff retention ratio at Keppel O&M is high as many employees have a strong sense of belonging to the group.

With experienced leaders at the helm and a strong, capable workforce, Keppel O&M has been able to successfully navigate the changing environment of the offshore and marine industry as well as chart new frontiers. Mr Tong himself as well as a handful of the other senior management have been with the group for over 40 years.

Building communities

Keppel-GK Eco Village is a 60-unit housing development project jointly undertaken by the local government of the Municipality of Bauan in Batangas, the charity organisation Gawad Kalinga (GK) and the Keppel Group.

The third and final group of 20 families has received homes at a handover ceremony held on 14 May 2012. The event was graced by Singapore's Ambassador to the Philippines, H.E. V P Hirubalan, Batangas Governor Ms Vilma Santos Recto, and GK Founder Mr Antonio "Tony" P Meloto, Jr.

Keppel donated a total of PhP 10.5 million to the development of Keppel-GK Eco Village. A part of it was raised from Keppel's business units and employees in Singapore through a fundraising activity organised by Keppel Volunteers and Keppel Young Leaders.

Over the past year, employees from Keppel Batangas Shipyard have actively volunteered in the construction works. They participated in the building of the homes after work, over weekends and during public holidays.

The local government of Bauan, led by Mayor Ryanh M. Dolor, had contributed the land for the project and provided guidance and support to the building process. Mayor Dolor commented, "I commend Keppel and GK for their hard work on Keppel-GK Eco Village, which provides a safe and healthy living environment to 60 needy families. It is heartening to have organisations with a strong sense of citizenry operating in Bauan."

Mr Nelson Yeo, MD (Marine) of Keppel O&M, MD of Keppel Shipyard and Chairman

of Keppel Philippines Marine, Inc. (KPMI), shared, "It is with the trust, confidence and support of the authorities as well as our partners, customers and friends in the Philippines that Keppel has been able to grow our operations here.

"We actively support social development and environmental initiatives. We are glad for the opportunity to join hands with the local government of Bauan and GK to participate in the meaningful Keppel-GK Eco Village project."

Apart from volunteers from Keppel, this project also inspired others from local and overseas to lend a hand. The beneficiaries of the Keppel-GK Eco Village too were actively involved in the construction.

"This is not a dole-out; beneficiaries work hard for their units," said Alan Claveria, Business Development & Corporate Affairs Manager, KPMI. He pointed out that beneficiaries must contribute 1,000 man-hours per family to the building process. In doing so, these families build a strong sense of belonging to the Eco Village.

Mr Tony Meloto, Founder of GK, shared, "GK strongly believes that together, we can end poverty and build a sustainable future for all. We are glad that GK's framework for community building has the blessings of the Philippine government and are embraced by responsible corporate citizens such as Keppel Group."



(From left) Head of GK Management Team in Batangas, Mr Julius Paradero; VP (Administration & Finance) of KPMI, Ms Agnes Barbara L Lorenzo; MD (Marine) of Keppel O&M, MD of Keppel Shipyard and Chairman of KPMI, Mr Nelson Yeo; Batangas Governor, Ms Vilma Santos-Recto; GK Founder, Mr Tony Meloto; Councilor of Bauan Mr Julian Bojie Casapao; and Singapore's Ambassador, H.E. V P Hirubalan

At the handover ceremony, GK presented the project's regular volunteers with tokens of appreciation.

Besides the Eco Village project, Keppel Group's other charity projects in Batangas include technical training for out-of-school youths, college scholarships to needy students and coastal clean-up activities.

For its community efforts, KPMI recently received an Outstanding Community Projects Award from the Philippine Economic Zone Authority during its 17th Anniversary and Investors' Recognition Night.

Over at Cisadane, about 45 minutes away from Jakarta, in Indonesia, Keppel Group has another housing development project with GK. The 20 homes in this estate were handed over to needy families on 19 May 2012.

Keppel had rallied customers, business associates and its employees around fundraising exercise to aid needy communities in Indonesia. A portion of the funds was then donated to GK Indonesia for the housing development in Cisadane.

The Group has been growing its footprint in Indonesia. It has developed quality homes, townships and offices in Jakarta, and operates a resort as well as a fabrication yard on Bintan Island.

Homes full of hope

The Straits Times recently reported on lives that have been transformed by Keppel-GK Eco Village. *OffshoreMarine* shares extracts of this article.

Being part of Keppel-GK Eco Village has transformed the lives of Renel and Eloisa Falla and their two young children.

Until three months ago, the Falla family lived in a single-room shack in a squatter settlement on the outskirts of the Province of Batangas, the Philippines.

"Our formal home was so small you could reach everything from just standing in the middle of the room," shared Eloisa Falla. Eloisa also recalled the frequent health problems suffered by her two young children as a result of the shack's proximity to a dusty, fumed-choked highway, and the dangers of living in a lawless squatter settlement.

Today, the Falla family has a tidy house surrounded by tall mango trees in the Keppel-GK Eco Village. This change in living environment puts Renel, the breadwinner of his family, in a far better position to find steady work. He elaborated, "Businesses usually refused to hire me even for part-time work because I had no permanent address."

Explaining the criteria for selecting residents, Julius Paradero, Head of GK Management Team in Batangas,



Renel and Eloisa Falla are glad to have been given the opportunity to raise their two young children in Keppel-GK Eco Village, a safe and healthy living environment

said, "We're looking for people with good attitude, who believe that with help, they can really improve the quality of their lives, and are able to convince us that they can."

Following the success of Keppel-GK Eco Village, Keppel Group and Gawad Kalina are planning to jointly undertake another housing project in the Philippines.

On our marks



Runners stretching their muscles in preparation for the 4.8km race through MacRitchie Reservoir Park

3.2km to 4.8km, depending on the race category.

Mr Balakrishnan Mahendran, winner of the men's open category, remarked, "This was a good chance for Keppelites to get together for fresh air and exercise. I've enjoyed pushing myself to do my best for the race."

TOP OF THE LEAGUE

Knocking down pins at the bowling alleys were 14 teams of bowlers who racked up tens of thousands of pin falls as they vied for the top prizes at the 10th KRC Bowling League.

The league, which commenced on 12 January 2012, is being held over 26 weeks. It will culminate in the finals in July 2012.

DRAGONS ON THE BAY

KRC's dragon boat team, Keppel Dragons, once again did the Group proud at the DBS Marina Regatta held on 5 to 6 May 2012 at Marina Bay Promontory.

Close to 100 international and local teams participated in this event. After a hard-fought race, the Keppel Dragons men's team clinched second place in the inter-corporate open category.



Keppel Dragons all set to row at the DBS Marina Regatta

Keppelite Recreation Club (KRC) led Keppelites in a series of sporting events over May and June this year.

BEST FOOT FORWARD

89 runners from across Keppel Group put their best foot forward for the KRC Annual Cross Country

Run, held at MacRitchie Reservoir Park on 20 May 2012.

Participants streamed in bright and early and were flagged off by the President of KRC and ED of Keppel Singmarine Mr Hoe Eng Hock. Competitive runners covered distances ranging from

Another team of paddlers took part in the national community mix category, and they advanced to the semi-finals despite fierce competition.

Olivia Lim, Senior Commercial Executive from Keppel FELS, was part of the mixed team. She shared, "It was a whole new experience

competing against tertiary schools, universities as well as various dragon boat clubs. Everyone gave their best, and we are very happy to have achieved such encouraging results."

RUNNING TO THE RESCUE

Keppel Corporation is an ardent supporter of Society for the Prevention of Cruelty to Animals (SPCA). It was one of the sponsors for the recent SPCA Fun Run event, an annual initiative to raise funds for animal welfare programmes.

Held at Macritchie Reservoir Park on 2 June 2012, the event attracted animal lovers of all ages; amongst them were Keppelites from across Keppel Group. KRC helped to coordinate the participation of Keppelites.

Ahead of the pack throughout the Fun Run race, Qian Xin Jian, a welder at Keppel Shipyard, completed the 4.8 kilometres route in 16 minutes 30 seconds and came in third for the event.



Qian Xin Jian, a welder at Keppel Shipyard, came in third at the Keppel-sponsored SPCA Fun Run race, which raises funds for animal welfare programmes

Stepping up for Singapore

A contingent of Keppelites will be marching with Keppel flags at Singapore's National Day Parade (NDP) 2012. Held at The Float @ Marina Bay on 9 August, NDP 2012's theme is "Loving Singapore, Our Home". 60 Keppelites from across the Group have poured their hearts and souls into the rigorous training sessions, perfecting the steps for the parade.

Chew Mei Yong, Executive Secretary at Keppel FELS, said, "My last march for Keppel was in 2002 and 2004. As I knew what was required of a contingent member, I was hesitant to join this year – I suffered an old knee injury. But inspired by the many enthusiastic Keppelites taking part, I am determined to put my best foot forward and endure till the end."

Clive Chng Kuan Nee, Management Trainee at Keppel Shipyard, shared, "This is the first time I am a Keppel contingent member. Being part of the Keppel contingent gives me a great sense of belonging to the Keppel family."

"A common characteristic of Keppelites is the *Can-Do!* spirit – this shows up in how Keppelites young and old are doing their best to march in sync and put up a good show at NDP 2012."



The Keppel contingent training hard for National Day Parade 2012

Diving for biodiversity

Passionate about the marine environment, avid diver Ching Youyi, Marketing Executive at Keppel Singmarine, seized the chance to participate in a coral nursery project supported by Keppel Group a few years ago.

Youyi shared his experience on the project at the Conserving our Biodiversity Symposium. Organised by the National Parks Board (NParks), the event aims to inspire efforts to sustain biodiversity. Youyi said, "I was enthusiastic about the coral nursery project as it provided me with opportunities to help protect the marine environment. Just by volunteering a bit of my time, I can help create a clearer and more vibrant underwater world around Singapore."

Keppel Group had supported a coral nursery located underwater

at a site off Pulau Semakau. Carried out in collaboration with NParks, National University of Singapore (NUS) and National Environmental Agency (NEA), the coral nursery project sought to enhance marine habitats by maximising the survival chances of naturally-occurring corals.

Keppel donated \$250,000 over two years to support the marine conservation project. Beyond funding, employees from across the Group saw to the maintenance and cleaning of the coral nursery from 2007 to 2011. In doing so, they have learnt more about marine life, forged new friendships and played a part in protecting the environment.

Khatty Yang, Production Officer at Keppel Singmarine, and a frequent participant of the Coral Nursery Project, said, "After many years of



Showing support to NPark's recent initiative to promote biodiversity were (from left) Edmund Lek, Senior GM (Operations) at Keppel Singmarine, Khatty Yang, Production Officer at Keppel Singmarine, Ching Youyi, Lead Marketing Executive at Keppel Singmarine, and Poon Tai Lum, GM (Commercial) at Keppel Singmarine

hard work, we have seen the coral fragments we cultivated become healthier and more beautiful. These have attracted marine species such as cuttlefishes and turtles. Perhaps, one day, there will be many attractive dive sites in Singapore waters!"

Sharing the science of oil and gas



Children learnt more about oil and gas at the Mobile Oilfield Learning Unit exhibit sponsored by Keppel AmFELS

Doing their part to educate children on the technologies and sciences involved in the oil and gas industry, Keppel AmFELS sponsored a travelling exhibition at the Children's Museum and the Harmony Science Academy in Brownsville, Texas, on 12 May and 14 May 2012 respectively.

The exhibit, a Mobile Oilfield Learning Unit (MOLU), features

six self contained learning centers with curriculum-based, hands-on activities about energy and the sciences used in the oil and gas industry.

Offshore Energy Center developed the MOLU as an education outreach tool to schools across Texas. In a day, about 200 students participated in the exhibition.

GLOBAL NETWORK

Keppel Offshore & Marine Ltd
(Head Office)
50 Gul Road Singapore 629351
Tel: 65 6863 7200
Fax: 65 6261 7719
www.keppelom.com

SINGAPORE

Keppel FELS Ltd
(Pioneer Yard 1 – Head Office)
50 Gul Road Singapore 629351

(Pioneer Yard 2)
55 Gul Road Singapore 629353
(Shipyard Road)
31 Shipyard Road Singapore 628130

(Crescent Yard)
60 Shipyard Road Singapore 628131

Tel: 65 6863 7200
Fax: 65 6261 7719
www.keppelfels.com
Email: marketing@keppelfels.com
Contact Persons: Wong Kok Seng, Managing Director
Aziz Amirali Merchant, Executive Director (Engineering)
Keith Teo, General Manager (Marketing)

Keppel Shipyard Ltd

(Tuas Yard – Head office)
51 Pioneer Sector 1 Singapore 628437
Tel: 65 6861 4141
Fax: 65 6861 7767

(Benoi Yard)
15 Benoi Road Singapore 629888
Tel: 65 6861 6622
Fax: 65 6861 4393

(Gul Yard)
55 Gul Road Singapore 629353
Tel: 65 6861 3007
Fax: 65 6862 3645/7

www.keppelshipyard.com
Email: ks@keppelshipyard.com
Contact Persons: Nelson Yeo, Managing Director
Chor How Jat, Executive Director
Louis Chow, Senior General Manager (Commercial)
Mah Chan Wah, General Manager (Commercial – Shiprepair)

Keppel Singmarine Pte Ltd

15 Benoi Road Singapore 629888
Tel: 65 6861 6622
Fax: 65 6862 1792
www.keppelsingmarine.com
Email: singmarine@keppelsingmarine.com
Contact Persons: Hoe Eng Hock, Executive Director
Poon Tai Lum, General Manager (Commercial/Marketing)

Keppel Offshore & Marine Technology Centre (KOMtech)

31 Shipyard Road Singapore 628130
Tel: 65 6591 5450
Fax: 65 6265 9513
Email: KOMtech@keppelom.com
Contact: Dr Foo Kok Seng, Executive Director
(Shallow Water Technology)
Aziz Amirali Merchant, Executive Director (Deepwater Technology)

Offshore Technology Development Pte Ltd

55 Gul Road Singapore 629353
Tel: 65 6863 7409
Fax: 65 6862 3465
Email: felsotd@pacific.net.sg
Contact Person: Dr Foo Kok Seng, Executive Director

Deepwater Technology Group Pte Ltd

50 Gul Road Singapore 629351
Tel: 65 6863 7163
Fax: 65 6863 1739
Email: aziz.merchant@keppelfels.com
Contact Person: Aziz Amirali Merchant, Executive Director
Email: anis.hussain@keppelfels.com
Contact Person: Anis Altaf Hussain, General Manager

Marine Technology Development Pte Ltd

15 Benoi Road Singapore 629888
Tel: 65 6860 2858
Fax: 65 6862 2562
Email: chenghui.tan@keppelsingmarine.com
Contact Person: Tan Cheng Hui, Senior General Manager

Asian Lift Pte Ltd

23 Gul Road Singapore 629356
Tel: 65 6668 4222
Fax: 65 6668 4333
Email: asianlift@asianlift.com.sg
Contact Person: John Chua, General Manager

Keppel Smit Towage Pte Ltd

23 Gul Road Singapore 629356
Tel: 65 6668 4222
Fax: 65 6897 8056
Email: kst@keppelsmit.com.sg
Contact Person: Ben Chew, General Manager (Regional)
Jerry Wong, General Manager (Singapore)

AUSTRALIA

Keppel Prince Engineering Pty Ltd
Level 2, Riverside Quay, 1 Southbank Boulevard,
Southbank, Vic 3006, Australia
Tel: 613 9982 4589
Fax: 613 9551 0624
Email: cchiam@ozemail.com.au
Contact Person: Charles Chiam, Director

AZERBAIJAN

Caspian Shipyards Company Ltd
South Bay, KMNF Basin, Baku AZ1023, Azerbaijan
Tel: 994 12 449 9930
Fax: 994 12 449 9931
Email: csc@csc.az
Contact Person: Chandru Sirumal Rajwani, President

BRAZIL

Keppel FELS Brasil SA
Rua da Quitanda, No. 86, Sala 301,
Centro CEP 20091-005
Rio de Janeiro, RJ, Brazil
Tel: 55 21 2102 9400
Fax: 55 21 2102 9425

Estaleiro Brasfels Ltda
Av. Conde Mauricio de Nassau, S/n - Jacuencanga
23914 - 460 - Angra dos Reis, RJ, Brasil
Tel: +55 24 3361 6000
Fax: +55 24 3361 6258

www.kfelsbrasil.com.br
Email: kaichoong.kvok@keppelfels.com
Contact Person: Kwok Kai Choong, President & CEO

Keppel Singmarine Brasil Ltda

Rua Prefeito Manoel Evaldo Muller, 3388,
Bairro Volta Grande, Navegantes, Santa Catarina,
Brasil. CEP88-375-000
Tel: 55 47 3342 6460
Fax: 55 47 3405 0170
Email: Chongkee.tan@keppelsingmarine.com
Contact Person: Tan Chong Kee, General Manager

BULGARIA

Keppel FELS Baltech Ltd
54 Debar Street, Varna 9000, Bulgaria
Tel: 359 52 684 250
Fax: 359 52 684 252 (Admin)
Email: office@fels.bg
Contact Person: Lyudmil Stoev, General Manager

CHINA/HONG KONG

Keppel Nantong Shipyards Co. Ltd
No. 9 Yan Jiang Road, Nantong City, Jiangsu Province
P.R. China 226005
Tel: 86 513 8530 0000
Fax: 86 513 8530 0011
Email: taikwee.lee@keppelnantong.com
Contact Person: Lee Tai Kwee, President

Keppel FELS Engineering Shenzhen Co. Ltd

3th Floor, Chiwan Petroleum Building
Chiwan Road No. 5, P.R. China 518068
Tel: 86 755 26851902, 86 755 26851959,
65 68637215 (Singapore Contact)
Fax: 86 755 26851670
Email(China): jiongheng.ho@kfelsshenzhen.com
Email (Singapore): jiongheng.ho@keppelfels.com
Contact Person: Ho Jong Heng, General Manager

INDIA

Keppel FELS Offshore and Engineering Services Mumbai Pte Ltd
Unit 3&4, 8th Floor, Prism Tower-A, Mindspace,
Link Road, Goregaon (West), Mumbai 400 062, India
Tel: 91 22 4001 8888
Fax: 91 22 4001 8898
E-mail: kabeer.syedahamed@keppelfels.com
Contact Person: Syed Ahamed Kabeer, General Manager

INDONESIA

PT Bintan Offshore
Jalan Nusantara KM 23, Kecamatan Bintan Timur,
Kabupaten Bintan, Propinsi Kepulauan Riau, Indonesia
Tel: 62 771 462 800
Fax: 62 771 462 575
Email: boonheng.kok@keppelfels.com
Contact person: Kok Boon Heng, General Manager

JAPAN

Regency Steel Japan Ltd
46-59 Nakabaru, Tobata-ku
Kitakyushu, Fukuoka 804-8505 Japan
Tel: 81 93 861 3103
Fax: 81 93 861 3114
Email: ws.chong@r-sj.com
Contact Person: Wong Chun Yu, President

KAZAKHSTAN

Keppel Kazakhstan LLP
SEZ "Seaport Aktau", Aktau 130001, Mangystau Region
Republic of Kazakhstan
Tel: 7 7292 571 100
HP: 7 300 528 4885
Fax: 7 7292 571 110
Email: pw.yick@kkl.kz
Contact Person: Yick Ping Wong, General Director

THE NETHERLANDS

Keppel Verolme BV
Prof. Gerbrandwyweg 25, 3199 KK Rotterdam-Boetle
Harbour no. 4550, P O Box 1001, 3180 AA Rozenburg
The Netherlands
Tel: 31 181 234300
Fax: 31 181 234346
www.keppelverolme.nl
Email: mail@keppelverolme.nl
Contact Person: Harold W.M. Linssen, Managing Director

THE PHILIPPINES

Keppel Philippines Marine, Inc
Unit 3-B Country Space 1 Building, Sen. Gil Puyat Avenue,
Salcedo Village, 1200 Makati City, Philippines
Tel: 63 2 892 1816
Fax: 63 2 815 2581
www.keppelphilippinesmarineinc.com
Email: mhq@keppelpm.com or commercial@keppelpm.com
Contact Person: Mok Kim Whang, President
Stefan Tong, Executive Vice-President

Keppel Batangas Shipyards, Inc

Keppel Philippines Marine – Special Economic Zone
BO, San Miguel, 4201 Bauan, Batangas, Philippines
Tel: 63 43 7271532 to 36
Fax: 63 43 72714885 or 63 43 7271453
www.keppelphilippinesmarineinc.com
Email: kbs@keppelpm.com
Contact Person: Poh Leong Kok, Senior Vice-President

Keppel Subic Shipyards, Inc

Subic Shipyards – Special Economic Zone
Cabangaan Point, Cawag
2209 Subic, Zambales, Philippines
Tel: 63 47 232 2380
Fax: 63 47 232 3350, 63 47 232 3883 to 84
Email: all@subicship.com or commercial@subicship.com
Contact Person: Mok Kim Whang, President & General Manager
Leong Kok Weng, Senior Vice President

QATAR

Nakilat-Keppel Offshore & Marine
Erhama Bin Jaber Al Jalahma Shipyards
Southern Break Water, Ras Laffan Industrial City (RLIC)
PO. Box 28388, Qatar
Tel: 974 4419 7300
Fax: 974 4419 7301
Email: commercial@nkom.com.qa
Contact Person: Abu Bakar Mohd Nor, CEO
Chin Sze Kiun, Senior Commercial Manager

UNITED ARAB EMIRATES

Arab Heavy Industries
P O Box 529, Ajman, UAE
Tel: 971 6 526 3232
Fax: 971 6 526 3233
www.ahi-uae.com
Email: ahiaeme@emirates.net.ae
Contact Person: Jimmy Loh, Managing Director

USA

Keppel Offshore & Marine USA, Inc
5177 Richmond Ave, Suite 1065, Houston, Tx 77056, USA
Tel: 1 713 600 8380
Fax: 1 713 600 8384
Email: tommy.sam@keppelfels.com
Contact Person: Tommy Sam, Vice President

Keppel AmFELS, LLC

20000 State Highway 48
Brownsville, TX 78523, USA
Cell: 1 956 592 6149
Tel: 1 956 831 8220
Fax: 1 956 831 6220
Email: g.tan@keppelamfels.com
Contact Person: Tan Geok Seng, President & CEO

FloaTEC, LLC

14701 St. Mary's Lane, Suite 250, Houston, TX 77079
Main Tel: +1 281 870 5200
Main Fax: +1 281 870 5210
Email: businessdevelopment@floatec.com
www.FloaTEC.com
Direct Tel: +1 281 870 5556
Mobile: +1 281 381 2781
Email: ehnamtvedt@floatec.com
Contact Person: Eric H. Namtvedt, President

Keppel Marine Agencies International, LLC

(Texas Office)
5177 Richmond Ave, Suite 1065, Houston, Tx 77056, USA
Tel: 1 713 600 8371
Fax: 1 713 600 8374
Email: mike.holcomb@kmaihouston.com /
Contact Person: Michael Holcomb, President/Director
Mobile 1 713 816 0438
Email: john.bajor@kmaihouston.com
Contact Person: John C Bajor, Marketing Manager
Mobile 1 713 922 3226

(New Jersey Office)
15 Huddy Avenue, PO Box 417, Highlands, New Jersey, USA
Tel: 1 7132 872 8800
Fax: 1 7132 872 8801
Email: keppelnj@comcast.net
Contact Person: John J. Bajor, Director

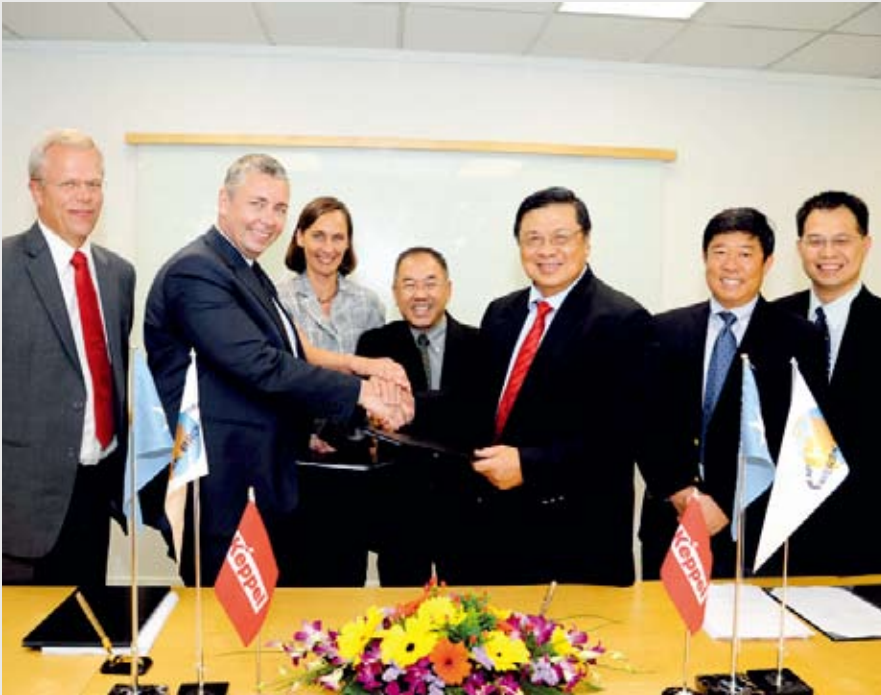
VIETNAM

Keppel FELS Limited
Petrovietnam Tower, Suite 150M
9 Hoang Dieu Street, Ward 1, Vung Tau City, S.R. Vietnam
Tel: 84 64 850098
Fax: 84 64 850098
Email: john.chin@keppelfels.com
Contact Person: John Chin, Country Manager

RUSSIA

Marine & Shelf Development Ltd
129090 Moscow, 12, B.Spaskaya str., office 101, Russia
Tel: 7 495 9378966
Fax: 7 495 9378978
Email: marketing@keppelfels.com
Email: marketing@keppelfels.com
sergel.vasnin@msn.com
Contact Person: Sergel Vasnin, General Director

Third ultra harsh environment jackup order from Maersk



Mr Jan Holm, MD of Maersk Drilling Holdings Singapore (second from left) and Mr Wong Kok Seng (third from right), MD of Keppel FELS signed the contract for the third Maersk CJ70 jackup rig

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, to build a repeat Gusto MSC CJ70 ultra harsh environment jackup rig.

Scheduled for delivery in 1Q 2015, the rig will be deployed in Dagny field in the Norwegian North Sea for Statoil when completed.

This is the third CJ70 jackup 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 jackup rig of the same design with Keppel FELS.

Mr Tong Chong Heong, CEO of Keppel O&M, said, "Our congratulations to Maersk for winning the confidence of Statoil. We are pleased to be given this opportunity to partner Maersk Drilling in their project for Statoil. Having developed a long-term partnership with Maersk Drilling, we have a keen understanding of their requirements, enabling us to support them in growing their rig fleet.

"We thank Maersk Drilling for entrusting us with their third harsh environment jackup. This repeat order is a testament to our ability to deliver high quality rigs on time, safely and within budget. I am confident that, like our previous

rigs for Maersk Drilling, the three CJ70 rigs will be a success when they are deployed."

Mr Claus V. Hemmingsen, CEO of Maersk Drilling and Member of the Executive Board of the A. P. Moller – Maersk Group added, "Maersk Drilling already operates six ultra harsh environment jackup rigs in Norway, and the addition of three more high specification units will further solidify our stronghold in this attractive market.

"We have chosen to work with Keppel FELS as they have proven to be a professional partner and supplier of state-of-the-art drilling units, helping us to meet the needs of our customers."

The CJ70 rigs are designed for operation in the harsh environment of the North Sea, at water depths 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.