

OFFSHORE MARINE

A newsletter of Keppel Offshore & Marine

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SUPER DELIVERIES

CONTENTS

UMW Naga 5 delivered	3
New contracts for harsh and remote environments	4
Super delivery	6
Patriot for the North Sea	7
Ultra harsh, ultra safe	11
Noble visit with two rigs	12
New liftboat design	15
Inspiring leadership	22
Key appointments	27
Giving back in Baku	29
Passion for people	30

CENTRESPREAD

Building on strong ties	16
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INNOVATION

Optimising grit blasting	24
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Keppel management strengthened partnerships with customers and business associates at Keppel's annual OTC Houston party.

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UMW Naga 5 delivered

Keppel FELS has delivered its second project for Malaysia's UMW Oil & Gas Corporation Berhad (UMW O&G) 32 days ahead of schedule and with no lost-time incident on 29 April 2014.

For its outstanding performance, Keppel FELS was awarded an early delivery bonus of US\$480,000.

The vessel was named by the Lady Sponsor Puan Sri Habibah Mohd Salleh, wife of Chairman of UMW O&G, Yang Berbahagia Tan Sri Asmat Kamaludin.

Speaking at the delivery ceremony, Mr Chow Yew Yuen, CEO of Keppel Offshore & Marine (Keppel O&M), said, "Through good teamwork, Keppel and UMW's first two collaborations have been successful. Both UMW Naga 5 and our first project, UMW Naga 4, were completed safely and ahead of schedule.

A third KFELS B Class jackup for UMW O&G is under construction at Keppel FELS, and is on track for delivery in the third quarter of 2015.

"I would like to thank UMW O&G for repeatedly choosing Keppel and the KFELS B Class for the expansion of its premium fleet. Today, the KFELS B Class is the industry standard for robust, cost-effective drilling solution for shallow waters. The design has a proven track record for efficient operations in many parts of the world. As such, we are certain that UMW Naga 5 will also prove to be a valuable asset to UMW O&G as it continues to grow its presence in the Asia Pacific region."

UMW Naga 5 will be deployed by Nido Petroleum in the Philippines in 2013 while UMW Naga 4 is currently supporting the

operations of Petronas in Malaysia.

Developed by Keppel's jackup design arms, Offshore Technology Development and Bennett Offshore, the KFELS B Class rig is able to operate in water depths of up to 400 ft and drilling depth of 30,000 ft. The design incorporates Keppel's advanced and fully-automated high capacity rack and pinion elevating system and self-positioning fixation system.

In 2009, the KFELS B Class received the Prestigious Engineering Achievement Award from the Institution of Engineers Singapore for its environmentally-friendly features.

With strong market demand, the KFELS B Class makes up about 30% of the jackups to enter the global market since 2000.



Lady Sponsor Puan Sri Habibah Mohd Salleh (front row, centre) celebrates the naming and delivery of UMW Naga 5 with UMW management led by Yang Berbahagia Tan Sri Asmat Kamaludin (front row, third from right), Chairman of UMW O&G, and Keppel management led by Mr Chow Yew Yuen (front row, third from left), CEO of Keppel O&M

New contracts for harsh and remote environments

Keppel Shipyard and Keppel Singmarine have secured a new contract each for projects for the North Sea and the Caspian Sea respectively.

CONVERTING THE FPSO KRAKEN

The contract secured by Keppel Shipyard is for the conversion of a Floating Production Storage and Offloading (FPSO) vessel for Armada Kraken, a wholly owned subsidiary of Bumi Armada Berhad (Bumi Armada).

Mr Michael Chia, MD (Marine & Technology), Keppel Offshore & Marine, said, "We are pleased to be entrusted once again by our longstanding customer

Bumi Armada to be part of their significant FPSO Armada Kraken project. We are indeed privileged to have the opportunity to continue to contribute to the expansion of their FPSO fleet.

"We are seeing an increasing demand for more sophisticated FPSOs which can operate in harsher environments, more challenging and deeper oil and gas fields. Keppel Shipyard, with its strong and established delivery track record of over 110 conversion projects to-date, is well-positioned to capture the growing FPSO opportunities and serve the evolving needs of this market."

The new FPSO will be a harsh-environment unit that is designed for operations in the North Sea under a stringent regulatory regime. Work has commenced and the FPSO is scheduled for delivery in 3Q 2015. When completed, the FPSO will be capable of producing the heavy-oil (API degree 14) in the Kraken field, UK sector of the North Sea, over a period of 25 years.

Keppel Shipyard's work scope for this FPSO project includes refurbishment and life extension works, upgrading of living quarters to accommodate 90 personnel, installation of an internal turret mooring system as well as the installation and integration of topside process modules.

GETTING ONBOARD A SUBSEA CONSTRUCTION VESSEL

Meanwhile, Keppel Singmarine has secured a contract from Baku Shipyard to design and carry out fabrication and outfitting works for a Subsea Construction Vessel (SCV) which, when completed, will be deployed for the Stage 2 development of the Shah Deniz field that lies some 70 kilometres offshore in the Azerbaijan sector of the Caspian Sea. The project struck its first steel in a ceremony at the yard on 9 June 2014.

The SCV is a project that Baku Shipyard secured from BP Exploration (Shah Deniz), the operator of the Shah Deniz gas field development. It is the first



Keppel Singmarine secured a contract from Baku Shipyard to design and carry out fabrication and outfitting works for a Subsea Construction Vessel which, when completed, will be deployed for the Stage 2 development of the Shah Deniz field in the Azerbaijan sector of the Caspian Sea

major contract secured by the shipyard since its inauguration by President of Azerbaijan, H.E. Ilham Aliyev, in September 2013.

Baku Shipyard, located in Baku, Azerbaijan, was jointly developed by Keppel O&M, State Oil Company of Azerbaijan Republic (SOCAR) and Azerbaijan Investment Company (AIC).

Keppel Singmarine's work scope includes the design of the vessel, the fabrication of the hull strips and outfitting them with equipment and systems at its yard in Singapore. The hull strips will

be shipped to Baku Shipyard for integration with other components fabricated by Baku Shipyard, and completion after commissioning works and sea trials. The SCV will be built to the proprietary design by Marine Technology Development, the ship design and development arm of Keppel O&M.

Mr Michael Chia commented, "The Shah Deniz gas field development is a major project for Azerbaijan, and we are proud to be involved in the design and construction of the SCV, the country's flagship vessel for the development.

"As the first major contract for Baku Shipyard, a yard that Keppel has invested in and manages, the project also marks a significant milestone for Keppel as we continue to extend our *Near Market, Near Customer* strategy to bring our innovative solutions to the Caspian region. Earlier in 2014, we secured three contracts to build two ice-class supply vessels and an ice-class multi-purpose duty-rescue vessel which will be deployed in the Filanovsky oil field in northern Caspian Sea. We look forward to strengthening our track record in the Caspian region with the quality delivery of these projects."

Lauded for safety

Underscoring its commitment to safety, Keppel Shipyard celebrated the safety milestones for two of its Floating Production Storage and Offloading (FPSO) conversion projects in recent months.

On 30 April 2014, Keppel Shipyard was presented a cheque of US\$10,000 by M3nergy Offshore Limited (M3nergy Offshore) for achieving two million safe man-hours without lost-time incidents on the FPSO Ratu Nusantara project, while on 15 May 2014, the shipyard was presented with a cheque of \$15,000 by SP Armada Oil Exploration for



M3nergy Offshore Project Manager Robert Mountjoy (third from right) presented Keppel Shipyard with a cheque for the FPSO Ratu Nusantara project's achievement of two million man-hours without lost-time incidents

achieving one million safe man-hours without lost-time incidents on the FPSO Armada Sterling II project.

When completed, Ratu Nusantara and Armada Sterling II will be deployed offshore Indonesia and in the Cluster 7 Field in India respectively.

Super delivery

ENSCO 122, the third of four enhanced KFELS Super A Class rigs that Keppel is building for EnSCO has been delivered early.

Keppel FELS delivered ENSCO 122, the third ultra-premium harsh environment ENSCO 120 Series jackup rig, to EnSCO plc (EnSCO) ahead of schedule on 1 July 2014. Built to an enhanced version of Keppel's proprietary KFELS Super A Class design, the rig has been contracted to Nederlandse Aardolie Maatschappij B.V. (NAM), an oil and gas explorer and producer focused in The Netherlands.

Enhancements to the design include EnSCO's patented Canti-Leverage AdvantageSM technology, which provides cost advantages for customers by allowing them to drill more wells from one location when utilising the enhanced hoisting capacity at the farthest reach of the cantilever.

Mr Wong Kok Seng, MD of Keppel Offshore & Marine (Offshore) and Keppel FELS, said, "We are pleased

to deliver ENSCO 122, our third ENSCO 120 Series rig to EnSCO. Our partnership with EnSCO has enabled us to develop next generation rigs that have set industry benchmarks and we believe the KFELS Super A Class will be the standard bearer for rigs of its class in the North Sea. This is our 19th newbuild rig for EnSCO and we are committed to support them with strong designs and reliable deliveries as they grow their fleet of high specification rigs."

Featuring Keppel's proprietary and superior jacking and fixation system, the KFELS Super A Class jackup design can operate in a variety of environments in water depths up to 400 feet. The rig is designed to drill to depths of 40,000 feet for the most demanding large multi-well platform programmes, ultra-deep gas programmes and ultra-long reach wells.

The first two rigs in the series, ENSCO 120 and ENSCO 121, have been successfully operating in the North Sea. The fourth rig, ENSCO 123, is expected to be delivered in 2Q 2016.

"Over the past three years, we have successfully contracted our ENSCO 120 Series newbuild jackup rigs well ahead of delivery based on the advantages of our proprietary technology," said Mr John Knowlton, EnSCO's Senior Vice President – Technical. "Like other EnSCO rig designs, the 120 Series ultra-premium jackups incorporate detailed market analysis of customer preferences. These differentiated designs, coupled with our talented crews and proven safety and operating systems, allow us to deliver drilling services that have ranked EnSCO #1 in total customer satisfaction for the past four years."



Celebrating the delivery signing of ENSCO 122 are Keppel and EnSCO management led by Mr Chow Yew Yuen (sixth from left), CEO of Keppel O&M and Mr Brian Higgins (fifth from left), Director – Capital Projects, EnSCO

Patriot for the North Sea

Keppel FELS reinforces its reputation for excellent execution and customer focus with the successful rejuvenation of semisubmersible drilling rig Ocean Patriot.



Senior management and project teams from Keppel and Diamond Offshore celebrating the successful delivery of Ocean Patriot

At 31 years of age, Ocean Patriot could have been retired. However, after a year of rejuvenation at Keppel FELS' yard, the mammoth semisubmersible drilling rig is given a new lease of life, headed no less than for the harsh environment of the North Sea.

The rig had been undergoing refurbishment and upgrading works since June 2013 and was recently redelivered by Keppel FELS to Diamond Offshore.

Underscoring Keppel's emphasis on safety, the project achieved more than 1.6 million man-hours without lost-time incident.

A ceremony to mark the safe

completion was held on 9 June 2014, where Diamond Offshore expressed its appreciation for Keppel's safe and reliable delivery of Ocean Patriot.

Mr Anant Shukla, Keppel FELS' Senior Project Manager said, "This was a challenging project given the age of Ocean Patriot and the requirements needed for work in the North Sea.

"Our experience of constructing rigs suited for North Sea conditions and our understanding of Diamond Offshore's requirements from past projects enabled us to anticipate their needs and deliver it to their highest satisfaction.

"This success was possible due to the excellent team work between our companies, exemplary efforts and hard work throughout the duration of the project."

Work on the rig included the fabrication and installation of four 24-foot diameter stability columns and new lower hull inboard pontoon sponsons, as well as upgrading of the living quarters and the critical electrical and safety systems.

Following delivery, the rig will be chartered to Shell for work at the Fram field in the UK sector of the North Sea.

Strengthening heavy lift capabilities



Keppel FELS significantly increases its lifting capabilities with the new 700-tonne gantry crane (right) which adds to its existing 500-tonne crane (left)

Undergirding its commitment to improve construction capabilities, Keppel Offshore & Marine (Keppel O&M)'s business units continue to upgrade their facilities to take on bigger and more complex projects.

READY FOR HEAVIER LIFTS

A new gantry crane with a 700-tonne lifting capacity has been installed in Keppel FELS' Pioneer Yard.

It will add to the lifting capabilities of the yard's existing 500-tonne gantry crane and covers the fabrication and painting areas all the way to its drydock. The new lifting capacity will enable the yard to construct the modules of rigs in larger blocks which can then be lifted by the new crane from the fabrication area to the drydock for assembly. This will expedite the rig



BrasFELS' newly installed 2,000-tonne gantry crane is supporting the installation of megablocks for a DSS™ 38E semisubmersible project

building process and increase cost-efficiencies.

The installation started in June 2014 and the crane which is currently undergoing commissioning is expected to begin operations in August 2014.

BRAZILIAN HEAVYWEIGHT

Operational since April 2014, the newly installed gantry crane at BrasFELS, Keppel's yard at Angra dos Reis, Rio de Janeiro, has been busy with the lifting of various projects.

With a lifting capacity of 2,000 tonnes, the gantry crane has been supporting the installation of megablocks weighing 1,932 tonnes for the first of six DSS™ 38E semisubmersibles which Keppel O&M is building for Sete Brasil.

SUBIC GIANT

With a lifting capacity of 1,500 tonnes, the gantry crane at Keppel Subic Shipyard stands tall as among the biggest, if not the biggest, of its kind in Southeast Asia. The crane has an 87-metre span and a 104-metre effective lifting height.

Since the start of its operation in November 2013, the gantry crane has been supporting the installation works of the Depletion Compression Platform (DCP) that the shipyard is building for the Malampaya Phase 3 Project of Shell Philippines Exploration, lifting megablocks that weigh as much as 1,000 tonnes



The 1,500-tonne gantry crane at Keppel Subic Shipyard has been supporting the installation works of the DCP that the shipyard is building for Shell Philippines Exploration

Off to a striking start

Keppel FELS celebrated several strike steel and keel laying ceremonies in the month of June.

On time deliveries begin right from the start of a project and Keppel FELS is off to another good start on more of its projects.

Two jackup rigs for Transocean, B365 and B366 struck steel on 3 June 2014 while the jackup B364 had its keel laid the day before. The project team including Mr Doug Brown, Project Manager of Transocean and senior management of Keppel FELS were on hand to witness the ceremonies and celebrate the partnership.

The jackup rigs are part of a five rig order being built to Keppel's proprietary KFELS Super B Class design and are scheduled to be delivered progressively from 1Q 2016 to 3Q 2017.

Keppel FELS and Transocean have shared a long-standing relationship spanning several significant projects. The yard recently delivered three KFELS Super B Class jackup rigs to Transocean in 2013.

Another project which kicked off on 2 June was the construction

of the B369 jackup rig or ENSCO 123 for Ensco. Marking the strike steel ceremony were Ensco and Keppel FELS' management.

Scheduled for completion in 2Q 2016, it will be the fourth enhanced KFELS Super A Class jackup rig in Ensco's fleet. Keppel has built a long-term partnership with Ensco having delivered 19 newbuild projects to them.



The project teams of Keppel FELS and Transocean looking forward to another successful partnership on the construction of five more jackup rigs



The latest project, ENSCO 123, is expected to leverage the strong partnership and teamwork between Keppel and Ensco as it is the 21st newbuild project between them

Ultra harsh, ultra safe



Senior management from Keppel FELS and Maersk celebrating the safety milestones of the jackup rigs B332 and B347

Having already successfully delivered the first Gusto MSC CJ70 rig earlier this year, the second and third rigs in the series are progressing just as well. The ultra-harsh environment jackups, B332 and B347, achieved safety milestones of eight million and six million safe man-hours respectively.

In recognition of this achievement, Maersk presented the Keppel project teams with safety bonuses of US\$30,000 dollars for each project at a ceremony held on 20 June 2014.

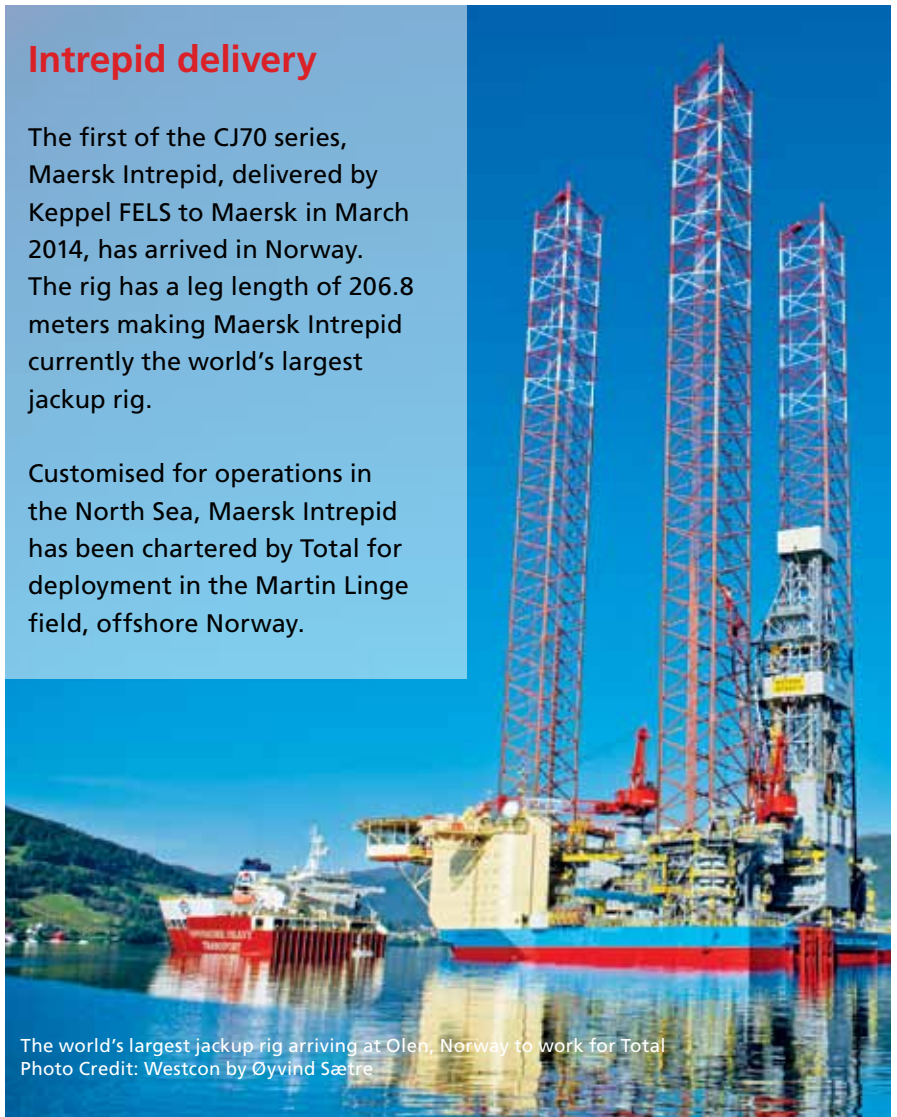
Mr Lars Ravn Hansen, Site Manager of Maersk, commended the project teams for their vigilance on safety and the close cooperation and hardwork in achieving this significant milestone.

Keppel and Maersk collaborations span the design, engineering, repair and construction of a variety of rigs and ships. Including the three CJ70 jackups, Keppel and Maersk have teamed up on 12 newbuilding rig projects to-date.

Intrepid delivery

The first of the CJ70 series, Maersk Intrepid, delivered by Keppel FELS to Maersk in March 2014, has arrived in Norway. The rig has a leg length of 206.8 meters making Maersk Intrepid currently the world's largest jackup rig.

Customised for operations in the North Sea, Maersk Intrepid has been chartered by Total for deployment in the Martin Linge field, offshore Norway.



The world's largest jackup rig arriving at Olen, Norway to work for Total
Photo Credit: Westcon by Øyvind Sætre

Noble visit with two rigs

With 20 yards worldwide, the success of Keppel Offshore & Marine's (Keppel O&M) *Near Market, Near Customer* strategy to cater to its customer's needs and contribute to local content has been exemplified by Keppel Verolme.

With one of the largest dry-docks in Europe and ideally located in Rotterdam, close to the oil and gas fields of The Netherlands, UK and Norway, with direct access to the North Sea, Keppel Verolme has been the choice yard for seagoing vessels and floating offshore units in the region.

The yard's repeat customer, Noble Drilling, recently sent two jackup rigs for modification works there.

The jackup rig, Noble Lynda Bossler, arrived in May 2014 for a complete renewal of her jacking system. During a four-week window between the rig's busy drilling schedule, Noble Drilling took the opportunity to dry-dock the rig at Keppel Verolme for routine maintenance work and underwater inspections.

The rig's hull, main deck and several working and storage areas were blasted and painted, including the cantilever deck and drill floor. In addition, the hydraulic system under the drill floor was completely renewed and the top part of the derrick was removed for maintenance and some renewals. An inclination test on the rig was then successfully carried out at Keppel Verolme's

quay before the rig departed the yard on 23 June 2014.

In mid-June 2014, another Noble drilling jack up rig, Noble Al White, was docked at Keppel Verolme's 405 meter long and 90 meter wide dock for an intensive two month maintenance period.

The yard's work scope includes structural modifications to the rig's spud cans and conservation works on the legs of the rig. The hull will undergo blasting and painting while maintenance work will be conducted in several areas of the rig. Steel renewals and conservation work in the preload

tanks and storage areas will also be conducted. Other activities include the installation of a new main crane on board the rig as well as fabrication and installation of the supporting structure and boom rest .

Noble Drilling will be spinning off its standard specification drilling units from 3Q 2014 to be managed by a new, independent company called Paragon Offshore. These includes the two drilling rigs mentioned above which will be renamed Paragon C461 (Noble Lynda Bossler) and Paragon C20051 (Noble Al White).

The jackup rig Noble Lynda Bossler had a successful repair and modification programme at Keppel Verolme



Ice-class vessel gets first cut

Construction of an ice-class multi-purpose duty-rescue vessel for Bumi Armada Berhad (Bumi Armada) kickstarted at Keppel Singmarine with a strike steel ceremony held on 20 June 2014.

The ceremony was attended by management from Keppel Singmarine, Bumi Armada, LUKOIL-Nizhnevolzhskneft, which will charter the vessel, and Senior Adviser (Trade and Economic Relations) to the Ambassador of the Russian Federation to Singapore, Mr Alexey Dakhnovsky.

Construction of the vessel, which was designed in compliance with the highest safety standards, will be carried out under the survey of Russian Maritime Register of



Celebrating at the strike steel ceremony are (from left) Mr Faslko Andrey, Manager, Russian Maritime Register of Shipping; Mr Hoe Eng Hock, MD, Keppel Singmarine; Mr John Bruinsma, Head of Offshore Support Vessels (Operations), Bumi Armada; Mr Yuri Berkuta, Deputy Director General, LUKOIL-Nizhnevolzhskneft and Mr Rezza Hassan, ED/Head of Offshore Support Vessels, Bumi Armada

Shipping. When completed and delivered in 2015, the vessel will support offshore platforms at the Vladimir Filanovsky field in the northern part of the Caspian Sea, providing year-round services such

as the delivery of cargoes, salvage, search and rescue functions, fire-fighting operations, and towing and tanker mooring operations.

Superior accommodations



The DSS™ 20NS accommodation semisubmersible Floatel Superior is supporting BP in its operations in the North Sea

Floatel International, a subsidiary of Keppel Offshore & Marine, has been awarded a contract to provide an accommodation and construction support vessel for the BP Magnus Life Extension Project, located in the North Sea.

The DSS™ 20NS accommodation semisubmersible Floatel Superior, jointly developed by Keppel's Deepwater Technology Group and partner GustoMSC, has been on charter for various projects since its delivery in 2010 and commenced its latest charter in February 2015.

International showcase



Mr Hoe Eng Hock, MD of Keppel Singmarine, shared his views on the offshore service sector at the Offshore Marine Forum 2014

Mr Hoe Eng Hock, MD of Keppel Singmarine, was one of the presenters and panelists at the forum, during which he shared on the specialised shipbuilding capabilities of Keppel Singmarine, as well as the challenges of designing and constructing pipelay vessels and specialised subsea construction vessels.

POSIDONIA

Over at Athens, Greece, Keppel O&M participated in Posidonia 2014, a biannual international shipping exhibition from 2-6 June 2014 which drew more than 1,850 exhibitors from 93 countries.

Represented by its business units including Keppel Shipyard, Keppel Verolme, Nakilat-Keppel Offshore & Marine and Blue Ocean Solutions, Keppel O&M joined eight other Singaporean companies at the Singapore Pavilion, which was graced by Senior Minister of State for Transport and Finance Mrs Josephine Teo.

Apart from showcasing its wide array of marine solutions, ranging from ship repair and conversion to emulsified fuel technology, Keppel O&M also took the opportunity to strengthen its ties in the global shipping and marine community.

CASPIAN OIL AND GAS

In Baku, Azerbaijan, Keppel O&M joined more than 400 companies from 29 countries in the participation of the 21st International Caspian Oil and Gas Exhibition held from 3-6 June 2014.



Mr Chor How Jat (centre), MD of Keppel Shipyard, introducing Keppel's marine solutions to Mrs Josephine Teo (left), Senior Minister of State for Transport and Finance, and Mr Andrew Tan (right), Chief Executive of Maritime and Port Authority of Singapore at Keppel O&M's booth at Posidonia 2014

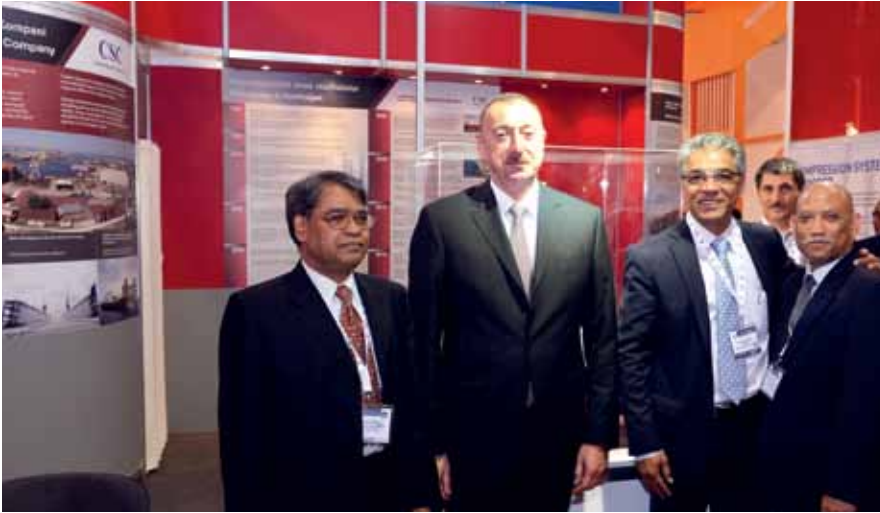
Keppel Offshore & Marine (Keppel O&M) continually engages and reinforces its ties in the international offshore and marine industry through participation in conferences and exhibitions, three of which took place in May and June 2014.

OFFSHORE MARINE FORUM

Keppel O&M was a platinum sponsor of the Offshore Marine Forum 2014, a platform that

brought together marine industry players for exchanges on offshore support services and solutions.

Over two days from 28-29 May 2014, delegates from various shipbuilders, offshore engineering companies and service providers in the offshore marine sector engaged in robust discussions on issues ranging from Asia's energy demand to technological breakthroughs and challenges.



Distinguished guests at the Keppel booth (from left to right): Ambassador of India to Azerbaijan, H.E. Mr B. M. Vinod Kumar; President of Azerbaijan, H.E. Mr Ilham Aliyev; President of CSC, Mr Chandru Rajwani; Ambassador of Indonesia to Azerbaijan, H.E. Mr Prayono Atiyanto

In recognition of Keppel O&M's presence in the region with its two yards in Baku - Caspian Shipyard Company (CSC) and Baku Shipyard, President of Azerbaijan, H.E. Mr Ilham Aliyev visited the booth where he was briefed on the ongoing projects at CSC and Baku Shipyard.

The Keppel O&M-CSC booth, which showcased the milestone projects of Keppel in the region, was awarded Certificate for the Best Shell Scheme by the organiser, ITECA Caspian.

N-KOM's new liftboat design

Strengthening its foothold in the offshore industry, Keppel's joint-venture operation in Qatar, Nakilat-Keppel Offshore & Marine (N-KOM), unveiled its liftboat design during the recent Offshore Technology Conference (OTC) in Houston.

The self-propelled and self-elevating platform has been customised for operations in the MENA and Indian subcontinent, with an operating depth of 65 metres and accommodation capacity for 130 men. Designed in collaboration with Bennett Offshore, a naval architecture and marine engineering arm of Keppel Offshore & Marine, the liftboat is a highly capable offshore structure

which offers spacious work and accommodation areas in addition to enhancing operational safety and minimising downtime arising from adverse weather conditions.

Mr Abu Bakar Mohd Nor, CEO of N-KOM, said, "We have seen an increasing number of greenfield developments in the region, with major oil players rapidly expanding their fleet in tandem with market demand. Having already established ourselves in the ship repair market, our next strategy is to capture the robust regional offshore market by leveraging on Keppel Offshore & Marine to provide our customers with more cost-effective and value-added proprietary offshore solutions."

N-KOM's new liftboat design is able to offer reduced down time and a stable work platform for a variety of offshore services





Keppel management networking with customers, business associates and friends at the company's OTC Houston 2014 party

Building on strong ties

Customers, partners and business associates of Keppel Offshore & Marine (Keppel O&M) from around the world gathered once again in Houston, Texas, US, at the company's cocktail reception held in conjunction with the Offshore Technology Conference (OTC).

Held on 6 May 2014, the cocktail party hosted by Keppel O&M's Board and Management, has become a flagship event at the annual OTC.

Over a thousand guests turned up

for the cocktail party where old friendships were rekindled and new contacts made.

Keppel O&M also used the opportunity to put up exhibits on its suite of solutions and global operations with a focus on its yards in the US and Brazil, as well as its commitment to move ahead with Mexico.

Upcoming new proprietary solutions, including the Can Do drillship, Seafox 8 accommodation jackup with plug and

abandonment features, as well as its Floating Liquefied Natural Gas conversion capabilities, were also showcased. Nakilat-Keppel O&M, Keppel's joint venture yard in Qatar, also introduced its new lift boat which is customised for service in the Middle East region.

Founded in 1969, OTC is the world's foremost event for the development of offshore resources in the fields of drilling, exploration, production and environmental protection.



Safety exchange

With safety as a core value, Keppel commits significant resources to raising safety awareness and competencies across its business units as well as in the industry.

WSH CONFERENCE

Playing its part to advance workplace safety and health (WSH) standards and practices in the industry, Keppel was once again a Gold Sponsor with a contribution of \$150,000 to Singapore's WSH Conference. Keppel has been a sponsor of the biennial event since it debuted in 2010.

Organised by Singapore's WSH Council, WSH Institute and the Ministry of Manpower, the conference was held from 7 to 8 May 2014 and attracted some 700 delegates from across the regions. This year, the theme was 'Integrating Safety and Health: Towards a holistic approach'.

Safety personnel from across Keppel's business units participated in the conference and picked up tips on improving the safety and well-being of the workforce.

BOARD SAFETY COMMITTEE VISIT

As part of its continual efforts to strengthen safety standards across Keppel's business units worldwide, Keppel Corporation's Board Safety Committee visited BrasFELS, Keppel Offshore & Marine's (Keppel O&M) yard in Brazil on 8 May 2014. The visit allowed the Board Safety Committee to better understand the yard's Health, Safety and Environment (HSE) programmes, initiatives and practices, and to recommend areas for improvement. Located in Angra dos Reis, Rio de Janeiro, BrasFELS has a workforce of around 7,200 and is currently working on a number of significant projects for Brazil.

During the visit, the Keppel Board Safety Committee, comprising Committee Chairman Mr Tan Ek Kia, members Dr Lee Boon Yang, Mr Loh Chin Hua and Mr Tan Puay Chiang, walked the yard and observed first-hand the workers' daily work practices. They also spoke to workers to gauge their understanding of good safety habits and procedures. Mrs Oon Kum Loon, Chairman of the Keppel Board Risk Committee, Mr Lim Chin Leong, Chairman of Keppel O&M's Board Safety Committee, Mr John Birchall, Keppel Group Safety Coordinator and Mr Yong Chee Min, Director (HSE & Special Projects) of Keppel O&M also participated in the yard walkabout.

LEARNING FORUMS

Keppel's business units also continue to foster a strong safety culture and engage in best practices through various learning platforms.



Keppel Corporation's Board Safety Committee, led by Committee Chairman Mr Tan Ek Kia, visited BrasFELS on 8 May 2014 to better understand the yard's HSE programmes and practices



Mr Yong Chee Min (right), Director (HSE & Special Projects) of Keppel O&M, speaking on a panel safety experts at the DROPS Forum

To better mitigate the potential hazard of being struck by falling objects, various industry players came together to share best safety practices at "Dropped Objects Prevention Scheme" (DROPS)

Forum co-sponsored by Keppel O&M on 22 May 2014, and the "Managing Workplace Safety and Health in Marine Industry" seminar organised by Association of Singapore Marine Industries

(ASMI) on 20 May 2014. Speakers from Keppel FELS shared their knowledge at both events.

Mr Yong Chee Min, Director (HSE & Special Projects) of Keppel O&M remarked, "It is imperative to raise awareness on the prevention of dropped objects in the offshore and marine industry, where risks are high if comprehensive preventive measures are not in place. These forums aim to review and enhance the industry's work processes in preventing dropped objects."

Nantong's first safety training centre

On 9 June 2014, Keppel Nantong became the first shipyard in Nantong, China, to set up a training centre that focuses on safety.

The safety training centre was opened by Mr Loh Chin Hua, CEO of Keppel Corporation and Chairman of Keppel O&M, at a ceremony attended by clients, contractors, and government officials from Nantong Safety Supervision Bureau, Nantong Gangzha District Government and Nantong Gangzha Economy Development Zone.

Located within the shipyard, the training centre will provide safety induction courses to all yard workers, including those employed by Keppel's subcontractors.



Keppel Nantong is the first shipyard in Nantong, China, to set up a training centre with a focus on safety. Mr Loh Chin Hua (centre, in light blue shirt), CEO of Keppel Corporation and Mr Tan Puay Chiang (centre, in dark blue shirt), Board Director of Keppel Corporation, attended its inauguration

The classes will cover knowledge of safety in specific work conditions, such as working at heights and in confined spaces.

Apart from safety trainings, the centre will also provide classes on

functional skills such as welding and Basic English.

The opening of the training centre also kickstarted a month-long safety campaign at the shipyard.

Insightful visits to Keppel yards

With its strong track record in delivering customised and cost-effective solutions, Keppel Offshore & Marine (Keppel O&M) continues to draw the interest of a wide spectrum of visitors, from government officials to students.

FORGING STRONGER RELATIONS WITH BRUNEI

As part of his eight day visit to Singapore from 18 to 25 May 2014 under the Lee Kuan Yew Exchange Fellowship, YB Pehin Dato Hj Abdul Rahman, Second Minister of Finance, The Prime Minister's Office, Brunei, visited Keppel O&M on 21 May 2014.

Keppel management led by Mr Loh Chin Hua, CEO of Keppel Corporation and Chairman of

Keppel O&M, and Mr Chow Yew Yuen, CEO of Keppel O&M, hosted the Minister and brought him on a tour around Keppel FELS.

A wide range of topics was also discussed, including Keppel's *Near Market, Near Customer* strategy, as well as opportunities for stronger relations with Brunei.

FRIENDS FROM NORWAY AND AFRICA

Having delivered numerous successful projects to the North Sea and the "Golden Triangle" of offshore oil production, which includes West Africa, Keppel O&M was the subject of interest from bankers and journalists from those regions.

The board members and executive management of one of Norway's largest financial groups, SpareBank 1 SR-Bank, visited Keppel O&M on 27 May 2014 to gain insight into Keppel O&M's business operations and track record.

Hosted by Mr Wong Ngiam Jih, CFO of Keppel O&M, and Mr Edmund Mah, GM (Finance) of Keppel O&M, the visitors also learnt more about Keppel O&M's relationships with Norway and Norwegian companies since the early 1980s and the strong support received from Norwegian customers.

On 5 June 2014, a group of editors and writers from Africa's top business publications were hosted



Mr Loh Chin Hua (right), Chairman of Keppel O&M and Mr Chow Yew Yuen (left), CEO of Keppel O&M, presents Brunei's Second Minister of Finance at the Prime Minister's Office, YB Pehin Dato Hj Abd Rahman Hj Ibrahim with Keppel's "More Than Mettle" book



The Keppel team hosted Norwegian guests at a yard visit organised for SpareBank 1 SR-Bank

by Mr Michael Chia, MD (Marine & Technology) of Keppel O&M as part of the African Journalists Visit Program. The journalists shared that they were impressed by Keppel O&M's global network of 20 yards and 40% share of the jackup market.

CONNECTING WITH STUDENTS

Some 40 students enrolled in the Institute of Technical Education (ITE) College (Central)'s Higher Nitec in Marine and Offshore Technology course had the opportunity to visit Keppel Shipyard on 15 May 2014.



Students from ITE College (Central) learnt about Keppel's Can Do! spirit and the company's commitment to safety, as well as career opportunities available in the industry

During the dialogue session, Keppelites shared their experience and insights on Keppel's culture, working environment and various career opportunities in the industry. Given Keppel's presence around the world, students were assured of the plentiful opportunities to work overseas should they join the company.

The highlight of the visit was the yard tour where students were

introduced to the yard's operations and the different types of vessels under repair or conversion. They were also brought on a tour of Keppel Safety Training Centre (KSTC) to learn about the various safety practices enforced in Keppel O&M. Describing the visit as "an eye-opening experience", the students shared that they enjoyed the yard visit immensely and gained a better understanding of Keppel O&M's operations.

Lim Jing Yuan, Keppel O&M scholar and Technician with Keppel Singmarine, who is also an ITE alumnus commented, "Sessions like this not only allow students to learn more about Keppel's culture but also allow them to witness operations which they typically only read about in their textbooks."

Inspiring leadership



Management from Keppel Group interacting with participants of the Inspiring Leadership Summit

To stay ahead of the game and bring Keppel to greater heights, we should never rest on our laurels.

This was the key take-away during Mr Loh Chin Hua's, CEO of Keppel Corporation and Chairman of Keppel Offshore & Marine, lunch time sharing to participants of the Inspiring Leadership Summit held on 21 May 2014.

Mr Loh also shared on the challenges and opportunities that

each business unit faced, while urging the Summit's participants to adopt an open mindset and tap on the synergy of the Group.

He emphasised the importance of people as the cornerstone of the Company's success and growth.

Organised by the Group Human Resources at Keppel Corporation, the annual Summit held from 19 to 28 May 2014 forms an integral part of Keppel's talent management programme. It aims to empower

Keppelites to become more effective and inspiring leaders.

Over 70 Keppelites from operations in Singapore, USA, the Netherlands, Brazil, Azerbaijan, China, Qatar, Philippines, Thailand, Germany, Vietnam and Indonesia immersed themselves in a series of workshops and team bonding activities to hone their skills in leadership and management.

One of the Summit's highlight was a two-day immersion programme at Keppel's four business units. Keppelites were able to interact with the management to gain valuable insights into their strategies.

This came in useful during their case study discussions which were presented to the Keppel Group Board of Directors and senior management at the end of the Summit on 28 May.

Monem, Ship Repair Manager of Nakilat-Keppel Offshore & Marine, said, "During the lunch sharing, Mr Loh highlighted that the *Can Do!* spirit defines the Company and is part of Keppel's DNA. I totally identify with that. Passion is a shared value embraced by all Keppelites across continents."

Labour award

Mr Chor How Jat, MD of Keppel Shipyard, was awarded the prestigious Medal of Commendation at the National Trades Union Congress (NTUC) May Day Awards held on 29 April 2014 at Orchid Country Club.

The award recognises Mr Chor's contributions to the labour movement and support towards NTUC's initiatives.

Over the last 10 years, Mr Chor has been working closely

with the Shipbuilding and Marine Engineering Employees' Union to improve the welfare of yard workers.

Individuals from Keppel FELS Employees Union (KFEU) and Keppel Employees Union (KEU) also received recognition for their efforts.

Mr Cheong Keng Yoong, VP of KFEU, and Mr Ho Thiam Ee, VP of KEU, were both conferred the Comrade of Labour award.



Mr Chor How Jat, MD of Keppel Shipyard, was awarded the prestigious Medal of Commendation at the NTUC May Day Awards held on 29 April 2014 (Photo courtesy of NTUC)

Model trainee



Muhammad Haikal Bin Shek Ahmad (right), Assistant Technical Associate from Keppel Singmarine, receiving the Lee Kuan Yew Model Trainee Award 2014 from Mr Bruce Poh, Director and CEO of ITE

Juggling a full-time job at Keppel Singmarine and classes at the Institute of Technical Education (ITE) was not an easy feat.

For Muhammad Haikal Bin Shek Ahmad, who decided to take

up Keppel Offshore & Marine's (Keppel O&M) Assistant Technical Associate (ATA) Scheme at the age of 22, his hard work paid off when he completed his Nitec in Fabrication Technology (Hulls & Structures) and was awarded the Lee Kuan Yew Model Trainee Award 2014.

The award recognises trainees who have not only excelled in their courses, but also displayed outstanding conduct worthy of emulation by others.

The father of two children shared, "It was challenging to work and study at the same time but I managed to pull through with the support of my family. My father, who has been working

in Keppel FELS for over three decades, has always been an inspiration to me."

In fact, it was Haikal's father who encouraged him to take up Keppel O&M's ATA Scheme. Driven by an interest in the offshore and marine industry, Haikal decided to apply for the scheme which would allow him to be placed in a structured traineeship programme in Keppel O&M.

"Over time, I managed to adapt to the work environment and also bonded with my colleagues of various nationalities at Keppel Singmarine. I'm excited to be able to apply the skills I've acquired during my course in the production facilities of the shipyard."

Optimising grit blasting

With a total daily workforce of between 15,000 to 17,000 direct and subcontracted workers, Keppel Shipyard has been working closely with its vendors and contractors to improve work processes and productivity, as part of its continuous efforts in innovation and operations excellence.

In early 2013, the shipyard rallied some of its contractors under the Partnerships for Capability Transformation (PACT) programme, an initiative by SPRING Singapore, to look into upgrading their blasting systems which are used to prime the vessels' surfaces for paint jobs.

This culminated in the development of a semi-automated system which reduced manpower required in a blasting operation by 30%, from 20 to 14 men. The improved system also led to a reduction in grit usage by 15-20%

as the release of blasting material is now better controlled by the new valve and used more efficiently.

The successful collaboration between the shipyard and its contractors, supported by a government agency, was highlighted by Mr Teo Ser Luck, Minister of State for Trade & Industry, in the Singapore Parliament in May 2014.

Koh Wei Hang, one of Keppel Shipyard's management trainees who initiated the review of the blasting operation as part of an Innovative Quality Circle (IQC) project, explained, "During a blasting job, abrasive medium or grit are shot at high speed from a blaster gun affixed to a hose to remove impurities such as barnacles and rust. One blasting system can support a number of blasters.

"The previous blasting system was not optimal as one or more workers were required to man the pot that contained the blasting material, depending on the size of the project. These workers had to manually turn on and off the valve that controls the release of grit to all the blasters at the same time, and to refill the pot when it is empty.

"Even though the blasting system is operated by our subcontractors, we took the time to experience the whole process first-hand so that we can understand and work with them to improve on it. Many of Keppel Shipyard's contractors are local small and medium enterprises (SME) which may not have the resources to focus on innovation, so government schemes like the PACT programme are helpful. With some innovation, we can in fact reduce our reliance on manual labour and increase productivity."

The solution turned out to be a simple but effective idea of replacing the manually operated on-off ball valve with an automatic plunger-type metering valve that can be controlled directly by the individual blasters.

To date, 64 such systems are being used in Keppel Shipyard for ship repair and conversion jobs. A second batch of 258 systems will be used by Keppel Shipyard's contractors after the application for co-funding by SPRING Singapore gets approved.



The new semi-automated blasting system allows workers firing the blasters to control output of the blasting material directly instead of relying on other workers to do that. This results in savings in grit usage as well as higher productivity

Makeover at Keppel Verolme



The Keppel Verolme building and its employees standing proud today and in 1961

To increase its office building's energy efficiency and create a better working environment for employees, Keppel Verolme renovated and refurbished its office building which was built in 1961.

Employees celebrated the completion of the renovations on

11 April 2014 and eagerly moved into their new offices with great anticipation.

Mr Harold Linssen, MD of Keppel Verolme, said, "We maximised the layout and doubled the number of desks so that all office employees are now under one roof. The air

climate has been improved with a new environment-friendly and energy efficient WKO (water heating and cooling) system. Our staff are really excited with the numerous improvements made but are also glad that the building's historical characteristics were retained."

Engineering summit

As part of its continuous efforts to enhance its engineering capabilities, Keppel FELS held an Engineering Summit on 8 April 2014.

The event was attended by representatives from Keppel FELS' Engineering Department as well as Keppel Offshore & Marine's (Keppel O&M) Engineering units in China, India and Bulgaria.

Together, the participants had rigorous discussions on how to bring the group's engineering capabilities to a higher level.



Representatives from Keppel FELS Baltech, Keppel's engineering unit in Bulgaria, at the Engineering Summit

They also took stock of the performance of Keppel O&M's various engineering teams

and gave suggestions to spur innovation and improve workflow and processes.

35 creditable years



Chairman of KCU Professor Bernard Tan (front row centre) celebrated the co-operative's 35th anniversary with Keppel senior management at an appreciation dinner

Keppel Credit Union (KCU) was started in 1979 as a co-operative within the Keppel Group of Companies. It celebrated its 35th anniversary with a dinner at Resorts World Convention Centre on 10 June 2014.

Besides the KCU board directors

and staff, the dinner was also attended by Keppel senior management, in appreciation of the support that the Keppel Group has been providing.

Indeed, KCU has much to celebrate for its 35 years of history. Over the years, KCU has expanded its range

of services and benefits to provide tangible financial support and security to its growing membership base. Membership strength had risen to a record high of 13,751 as at December 2013, as reported by Chairman of KCU Professor Bernard Tan during the Annual General Meeting that was held on the same day.

Gunna Saggaran, lifting foreman at Alpine Engineering Services, a unit under Keppel Offshore & Marine, has been a member of KCU for 22 years. He shared, "KCU has helped me to be a disciplined saver as I have chosen to have a portion of my salary automatically transferred to my KCU account every month. I also appreciate the good services that the co-operative provides, such as providing loans to members at good rates."

Security watch

Like safety, security is also the responsibility of everyone in the yards. To raise awareness on crime prevention, an exhibition with the theme: "Together a Safe and Secure Workplace" was organised by Keppel Offshore & Marine's security department and Jurong West Neighbourhood Police Centre under the Shipyard Safety and Security Watch Group (SSSWG).

Held over lunch from 19 May to 27 May 2014 across six of Keppel's yards, the exhibition attracted

a large turnout, with up to 700 employees and workers at some of the bigger yards.

Visitors learnt about the different crime prevention measures through interactive games and quizzes offered at booths represented by various agencies.

Chairman of the organizing committee, Mr Kanniah Appudy of Keppel Shipyard Gul (KSG) Security commented, "The planning team enjoyed close support from

stakeholders whose advice and suggestions were incorporated in our outreach efforts. It was truly a joint effort towards a safe and secure work place."



Workers from Keppel's yards testing their knowledge on crime prevention through quizzes offered at the exhibition

Key appointments



Mr Yong Chee Min

Keppel Offshore & Marine (Keppel O&M) continues to bolster its bench strength with key appointments of experienced senior management personnel.

YONG CHEE MIN

Mr Yong Chee Min's appointment as Director of Health, Safety & Environment (HSE) and Special Projects, Keppel O&M, took effect on 1 May 2014. Prior to this appointment, he served as GM (Projects and HSE).

Mr Yong has previously held various senior management positions across Keppel Group in Singapore and overseas.

Mr Yong was instrumental to the start-up of Nakilat-Keppel Offshore & Marine (N-KOM), serving as its CEO from 2008 to 2010. He was Deputy CEO of Keppel FELS Brasil from 2004 to 2006, ED of Shipping at Keppel Telecommunications & Transportation (Keppel T&T) from 1998 to 2004, Divisional Director of Shipping at Keppel T&T from 1996 to 1998, and Executive VP of Keppel Philippines Shipyard from 1988 to 1991.



Mr Chris Ong Leng Yeow

With vast industry experience, Mr Yong also contributes to the development and growth of the offshore and marine sector in his capacity as a Council Member of the Association of Singapore Marine Industries (ASMI), and Chairman of ASMI's Workplace Safety and Health Committee.

Mr Yong has a Master in Business Administration from the Ateneo de Manila University, and a Bachelor of Science (Naval Architecture) from the University of Strathclyde, UK.

CHRIS ONG LENG YEOW

Mr Chris Ong Leng Yeow was appointed ED (Commercial) of Keppel FELS on 1 May 2014. He oversees the Marketing, Estimating & Analysis, Logistics, Steel Stock, Purchasing and Subcontracts departments.

Mr Ong served as Acting ED (Operations) of Keppel FELS from October 2013 to April 2014, and GM (Engineering) of Keppel FELS from 2011 to October 2013.

Prior to joining Keppel FELS' Engineering Department, Mr Ong



Mr Mohd Sahlan Bin Salleh

was part of the Commissioning team at Keppel FELS and Keppel AmFELS in the US.

A Keppel Corporation Scholarship Award holder, Mr Ong graduated from the National University of Singapore in Master of Science (Electrical Engineering) and Bachelor of Science (Electrical Engineering) in 2005 and 1999 respectively.

MOHD SAHLAN BIN SALLEH

With effect from 1 May 2014, Mr Mohd Sahlan Bin Salleh assumed the role of ED (Operations) of Keppel FELS. Prior to this appointment, he served as GM (Operations) from 2012 to 2013.

Mr Sahlan joined Keppel FELS in 1996. Over the years, he has served in various leadership positions in the company's Production Department, ensuring the safe, on-time and within-budget execution of projects. Mr Sahlan holds a Bachelor of Engineering (Naval Architecture & Offshore Engineering) from the University of Strathclyde.

Teambuilding on high seas

The Operations team at Keppel FELS forged friendships onboard the Keppel Bay Sailing Academy's two racing yachts, conquering choppy waters as they exited Marina at Keppel Bay and raced towards sister marina Nongsa Point Marina and Resort (Nongsa Point) in Batam, Indonesia, from 30 May to 1 June 2014.

The teambuilding programme was held in conjunction with the team's strategy meeting in Nongsa Point, where veteran Mr Seow Tiang Keng, Senior Electrical and Instrumentation Manager at Keppel FELS, shared his diverse experience accumulated during his 44-year career with Keppel.

Apart from learning basic sailing skills, the team participated in teambuilding activities and brainstormed for innovative ideas that would further enhance their operational capabilities.

Mr Mohd Sahlan Bin Salleh,
Executive Director (Operations) of



Bonding over a sailing adventure across the Straits of Singapore, the Keppel FELS Operations team also learnt more about each other's leadership styles through the teambuilding programme

Keppel FELS commented, "Through working with each other on a novel activity, the team was able to gain a deeper understanding of each other's leadership styles. This will enable us to harness our collective strengths and spur the department forward."

Recreational retreats



A team of Keppelites conquered Xueshan or Snow Mountain, the second highest in Taiwan, at a trekking trip organised by Keppelite Recreation Club

Continuing to promote team spirit and personal well-being among Keppelites, Keppelite Recreation Club (KRC) organised activities in Singapore and abroad for its members in May and June 2014.

On 25 May 2014, a team of eight Keppelites from across the business units embarked on a two-day trekking adventure to Xueshan or Snow Mountain in Shei-Pa National Park, Taiwan. Led by Mr Hoe Eng Hock, MD of Keppel Singmarine, the team conquered the 3,886-metre peak, which is the second highest in the country.

Huang Huguang, Engineer (Production) from Keppel Singmarine recounted, "The final 400-metre ascent was the toughest as the air got thinner and the trek got steeper. Some members started to experience altitude sickness but no one showed signs

of giving up. The journey was tough, but it only made the victory at the summit sweeter."

Separately, on 1 June 2014, the annual KRC Fun Fishing 2014 was held at Pasir Ris Farmway. About 80 anglers and their families took part, with many of them walking away with novelty prizes and smiles on their faces.

The event culminated with the final weigh-in of the fishes, with Chan Beng Guan, Project Manager at Keppel FELS bringing home the "Heaviest Fish Caught" which tipped the scales at 5.26 kg.

Bossa nova at the park



President Tony Tan (left) and his wife (second from left) enjoying the smooth rhythms of Bossa Nova with Ms Wang Look Fung (centre), Director, Group Corporate Affairs of Keppel Corporation and Brazilian Ambassador H.E. Mr Luis Fernando Serra (second from right) and his wife (far right)

With picnic baskets in hand, more than 2,500 music-lovers turned up for 'PianoBotanica', an outdoor Brazilian Jazz concert at Singapore Botanic Gardens on 1 June 2014.

Singapore's President Tony Tan and his wife, Mrs Mary Tan, joined the public event, which was also attended by representatives from foreign embassies in

Singapore and Brazilian companies.

A seven-piece ensemble led by acclaimed jazz pianist, Jeremy Monteiro, serenaded the crowd with Bossa Nova and Samba tunes.

Picnic-goers were also treated to Capoeira performances by renowned martial art instructors.

'PianoBotanica' is supported by the Brazilian Embassy in Singapore and Keppel Offshore & Marine is the second-time sponsor, following the success of last year's inaugural event.

Giving back in Baku

In support of Keppel's commitment to give back to communities where it operates, Keppel's associate company Caspian Shipyard Company (CSC) in Baku, Azerbaijan, has been actively contributing to the local community through various initiatives.

At a Special Boarding School for children with speech impediment, volunteers from CSC helped to build a guard room and replaced the damaged main gate and tables in the school.

The school is situated at the Primorsk neighborhood of Baku

where the majority of CSC's local workers live. A volunteer from CSC, Mr Elkhan Zeynalov, said, "I live in the vicinity and this school is very close to my heart. I am happy to be able to contribute to the community and certainly hope to do more in the future."

Past initiatives of CSC volunteers with the school include bringing its children to the Baku State Circus and fixing the boiler house, tables and chairs in the school.



President of CSC, Mr Chandru Rajwani (fourth from right), with the Principal (fifth from right), staff and children of the Special Boarding School for children with speech impediment, in front of the guard room built with the help of volunteers from CSC

Passion for people



Keppel Volunteers and students from APSN Centre for Adults spotted mangrove denizens from the boardwalk at Sungei Buloh Wetland Reserve



First time volunteer Siow Zi Wei (left), Naval Architect, Marine Technology Development, Keppel Singmarine, befriending a HWA member

Keppelites are passionate not just about their work but also about helping others. They are an important part of how Keppel contributes to the community. On 3 May 2014, 15 Keppel volunteers led 10 students from the Association for Persons with Special Needs (APSN) Centre for Adults on an educational guided walk through Sungei Buloh Wetland Reserve.

Home to a wide variety of wildlife and lush flora and fauna, the group explored the various habitats at the Wetland Reserve, walking through a sea of green and saw unexpected 'guests' like crabs, mudskippers, and monitor lizards.

Keppel Volunteer committee member and event organiser Kue Kheng Zie, remarked, "The most exciting part of the excursion

was when we spotted a huge monitor lizard just a mere one metre away from the boardwalk. It was a first for many of us and everyone started snapping away on their cameras."

About two weeks later, on 18 May 2014, twelve Keppel Volunteers gathered at the Japanese Garden bright and early to take part in the 3.5km "Wheel, Walk or Jog" event organised by the Handicaps Welfare Association (HWA).

Shortly after the flag-off by Mr Heng Chee How, Senior Minister of State with the Prime Minister's Office, the walk was cancelled due to the heavy downpour. However, this did not put a dampener on the spirits of Keppel Volunteers who spent the morning befriending the HWA members while being entertained

by the various performances put up.

First time volunteer Siow Zi Wei, Naval Architect, Marine Technology Development, Keppel Singmarine, nonetheless completed the 3.5 km course at one of the member's request.

She said, "Despite the heavy downpour, the member I was wheeling suggested continuing with the course. I was concerned for her health and was worried that she might fall sick. However at her urging, we continued with the walk and I was impressed by her *Can Do!* spirit.

"Along the way, the member thoughtfully sheltered me under her umbrella as we wheeled to the finishing line. It was definitely great teamwork that we had."

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World's first FLNGV conversion



Golar LNG, Keppel Shipyard and Black & Veatch are working together to perform the world's first-of-its type conversion of an existing Liquefied Natural Gas carrier into a Floating Liquefaction Vessel which will offer a faster and more cost effective liquefaction solution when it is completed in early 2017

Keppel Shipyard has secured a contract from Golar Hilli Corporation (Golar), a subsidiary of Golar LNG Ltd, to perform the world's first-of-its-type conversion of an existing Moss LNG carrier, the Hilli, into a floating liquefaction vessel (FLNGV).

In carrying out the FLNGV conversion, Keppel Shipyard shall be responsible for the provision of the design, detailed engineering and procurement of the marine systems and all of the conversion-related construction services. Keppel Shipyard's scope also includes engaging Black & Veatch to provide design, procurement and commissioning support services for the topsides and liquefaction process. Black & Veatch's PRICO® technology has been selected for the liquefaction process because of its long-established record in the marketplace.

This contract, which includes

options for another two similar units, follows the completion of a year-long Front-End Engineering and Design (FEED) study by Keppel Shipyard and Black & Veatch. The FEED study was conducted as part of a term sheet agreement with Golar to convert up to three LNG carriers into FLNG vessels.

The conversion has been approved in principle by DNV in accordance with their classification rules and international standards. The FLNGV will take about 31 months to convert and is expected to be completed in the first quarter of 2017.

Mr Michael Chia, MD (Marine & Technology), Keppel Offshore & Marine, said, "The FEED study for Golar has come into fruition with the award of the world's first FLNG conversion project to Keppel Shipyard. We are excited to collaborate with trend-setting partners, such as Golar and Black

& Veatch. Keppel Shipyard had successfully delivered to Golar the world's first Floating Storage and Regasification Unit (FSRU) back in 2008, which was followed by two more similar units.

"It is an honour to be entrusted once again by Golar with this definitive FLNGV, which reaffirms Keppel's leadership in complex offshore conversion projects. We see this project as another excellent opportunity to offer innovative solutions to help address the growing midstream needs in bringing small and mid-scale LNG to market to meet the rising global demand for energy. Mid-sized FLNG solutions such as this one offer a faster and more cost effective liquefaction solution."

Detailed design and engineering activities will commence shortly, and the Hilli will be delivered to Keppel Shipyard within 2014 to initiate renewal of key marine systems onboard the vessel while the manufacturing of topsides commences.

According to the Douglas-Westwood World FLNG Market Forecast, the global FLNG industry is expected to attract more than US\$65 billion of investments through to 2020, driven by rising costs of onshore LNG terminals. Asia-Pacific, in particular, is expected to draw a majority of investments in the FLNG sector with its sizeable line-up of regasification and liquefaction projects.