

OFFSHOREMARINE

A newsletter of Keppel Offshore & Marine

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PRESIDENT'S VISIT

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Keppel O&M was a Principal Sponsor at the Sea Asia 2013, held from 9 to 11 April 2013, and co-hosted its welcome reception which was well-attended by its customers as well as industry and business associates. Mr Tharman Shanmugaratnam (fourth from left), Singapore's Deputy Prime Minister and Minister for Finance as well as Guest of Honour of Sea Asia 2013, and Mr Lui Tuck Yew (third from right), Singapore's Minister for Transport, visited the group's exhibition booth, which showcased Keppel O&M's global operations and range of solutions.

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Celebrating with Keppel Corporation



Soaring on Super B

Keppel FELS has secured a contract from Falcon Energy Group Limited (Falcon Energy) through its subsidiary, FTS Derricks, to construct a KFELS Super B Class jackup rig with delivery scheduled for 3Q 2015.

Mr Wong Kok Seng, MD (Offshore) of Keppel Offshore & Marine (Keppel O&M) and MD of Keppel FELS said, "Falcon Energy entered the offshore oil drilling business when they ordered two jackup rigs from China in 2011. We are delighted that Falcon Energy has chosen the KFELS Super B Class design for their new high specification jackup rig, which will be built at our yard in Singapore.

"So far this year, Keppel FELS has already delivered six rigs ahead of schedule, safely and on budget. With this new contract, we now have on order 21 KFELS B Class/ Super B Class jackup rigs, which is today the industry benchmark for premium jackup rigs. We look forward to providing Falcon Energy and their partners with a premium, safe and efficient rig with on-schedule delivery."

Customised to Falcon Energy's requirements, the KFELS Super B Class jackup rig is equipped with a high capacity hook load of two million pounds for operations in high temperature and high pressure wells. Developed by Keppel O&M's technology arm, Offshore Technology Development, the KFELS B Class/ Super B Class jackup design



Keppel FELS recently delivered two KFELS Super B Class jackup rigs ahead of schedule to Transocean. The yard has another 21 K FELS B Class/Super B Class jackup rigs on order

provides maximum uptime with reduced emissions and discharges.

This brings Keppel O&M's new orders as at 15 April 2013 to \$2.2 billion.

A new customer to Keppel FELS, Falcon Energy is a leading player in the regional offshore marine and oil and gas sectors. The company is listed on the Singapore Exchange.

Reaffirming partnership



Including the orders from Enesco, Keppel FELS currently has 28 jackup rigs in its orderbook with deliveries into 2015

Keppel FELS secured a contract on 9 April 2013 to construct a KFELS B Class jackup rig, ENSCO 110, from long standing customer Enesco.

When completed in 1Q 2015, it will

be the fourth KFELS B Class Bigfoot jackup rig in Enesco's fleet.

Keppel has built a long-term partnership with Enesco having delivered 16 newbuild projects to

them with another four on order, including this latest contract.

Mr Tong Chong Heong, CEO of Keppel Offshore & Marine said, "We are glad to have Enesco reaffirm their confidence in our capabilities and rig design.

"The KFELS B Class is a proven design which is today the industry benchmark. We are honoured that Enesco, one of the world's leading offshore rig operators, has been a tremendous supporter of our proprietary designs and look forward to supporting them in the growth of their premium rig fleet."

Customised to Enesco's requirements, the cost-effective and high-performance KFELS B Class Bigfoot rig is able to operate in water depths of up to 400 feet and drill to 30,000 feet deep. The rig's living quarters have also been upgraded to accommodate six one-person and 67 two-person rooms.

Mr Dan Rabun, Chairman and CEO of Enesco, said, "Our three KFELS B Class Bigfoot rigs have proven to be highly efficient drilling platforms with industry-leading features for safety and environmental friendliness.

"We have built a strong relationship with Keppel FELS and the three rigs they are currently building for us are testament to this."

Besides the ENSCO 110, Keppel FELS is also building three ENSCO 120 Series rigs for Enesco. The rigs are built to the KFELS Super A Class design.

Third delivery to Perforadora Central

Reinforcing Keppel Offshore & Marine's (Keppel O&M) strong relationship with Mexican drilling companies, Keppel AmFELS has delivered the jackup rig, Papaloapan, to Mexico's Perforadora Central SA de CV (Perforadora Central).

The rig was christened on 11 April 2013 at Keppel AmFELS in Brownsville, Texas by Lady Sponsor, Mrs Gabriela Jiménez de Alvarez Morphy, wife of Mr Luis Alvarez Morphy Camou, Director of Perforadora Central.

Papaloapan is the third jackup rig built by Keppel AmFELS for Perforadora Central and is based on the LeTourneau Super 116E design.

Mr G.S. Tan, President and CEO of Keppel AmFELS, said, "We are

glad to be able to deliver another high quality rig to Perforadora Central on time, on budget and in a safe manner. This is the third jackup rig we have delivered to Perforadora Central since 2004 and the fourth rig is in good progress with delivery in mid-2014. This is a result of our close partnership with Perforadora Central and our strong engineering and project execution expertise."

Papaloapan has been chartered by PEMEX, the Mexican national oil company, for work in offshore Mexico. Keppel AmFELS' close connection to PEMEX includes having built two 220-men accommodation modules for PEMEX in 2006 as well as repairing and servicing a total of 16 rigs that have been chartered by PEMEX from other companies over the years.

Mr Tan added, "Keppel has developed a strong partnership with Mexican companies. Besides the current rigs that we are building for Perforadora Central, we are also going to repair a jackup rig for PEMEX soon. PEMEX's demand for jackup rigs is expected to remain strong and Keppel's *Near Market, Near Customer* strategy has put us in a good position to benefit from it."

Mr Patricio Alvarez Morphy Camou, General Director of Perforadora Central said, "We are extremely happy with the job Keppel AmFELS has done not only in delivering the previous two rigs for us, but also in the excellent work done on Papaloapan. We have developed a great working relationship with Keppel AmFELS over the years, and can only look forward to accomplishing other great projects together, starting with the work-in-progress of our latest new build jackup, Coatzacoalcos."

Keppel AmFELS previously completed Tonalá, an ultra premium KFELS B Class jackup for Perforadora Central in 2004, followed by Tuxpan, a LeTourneau S116E rig in 2010.

The yard's current projects include the construction of a LeTourneau Super 116E jackup rig for Perforadora Central, which is scheduled for delivery in 2Q 2014 and the major upgrade of the semisubmersible rig, Ocean Onyx, for Diamond Offshore.



Celebrating the christening of the rig are the teams from Keppel AmFELS and Perforadora Central; Mrs Gabriela Jiménez de Alvarez Morphy, Lady Sponsor (second from left); Javier Alvarez Morphy Camou, Director of Perforadora Central (third from left); G.S. Tan, President & CEO, Keppel AmFELS (fourth from left); Patricio Alvarez Morphy Orvañanos, Senior Vice President, Perforadora Central (fifth from left); Luis Alvarez Morphy Camou, Director of Perforadora Central (6th from right); Patricio Alvarez Morphy Camou, Director of Perforadora Central (third from right); Francisco Lopez, Project Manager, Perforadora Central (second from right); Beto Sierra, Project Manager, Keppel AmFELS (far right)

Delivered 62 days early

Keppel FELS has delivered its second jackup rig, AOD II, to Asia Offshore Drilling (AOD) – which is majority owned and managed by Seadrill Limited – 62 days ahead of schedule, safely and within budget. In recognition of the achievement, AOD presented the yard with a bonus of US\$2 million.

Delivered on 15 April 2013, AOD II is the second of three KFELS B

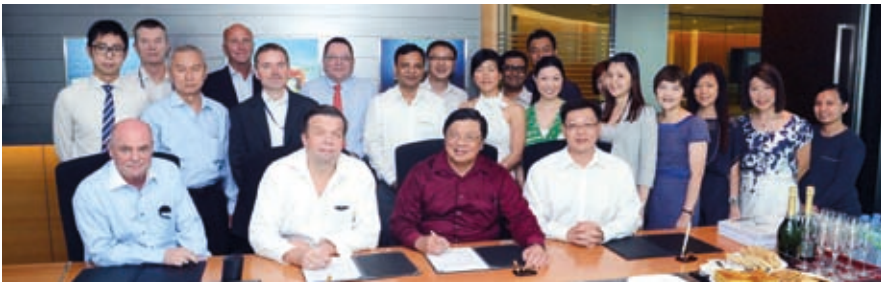
Class jackup rigs being built by Keppel FELS for AOD. It has been contracted by Saudi Aramco for work in the Middle East. The first rig, AOD I was delivered 29 days ahead of schedule on 30 January this year.

Mr Marlin Khiew, Senior Project Manager of Keppel FELS said, "Our team has been relentless in systematically executing

the projects. We have a good partnership with AOD and Seadrill, which enables us to understand and meet their needs. In fact, we strive to exceed their expectations. The third AOD rig is progressing very well and we look forward to delivering another high quality rig to their highest satisfaction."

The AOD series of KFELS B Class rigs is able to operate in water depths of 400 feet, drilling depth of 30,000 feet and accommodate 150 people.

Mr Pete England, Project Manager of AOD II, Seadrill Projects, added, "We are very pleased to receive another jackup rig in typical Keppel fashion – to receive AOD II 62 days earlier than contracted is indeed a testament to the Keppel FELS *Can-Do!* spirit."



Signing on another successful partnership are (seated, L-R) Mr Pete England, Project Manager of AOD II, Seadrill Projects; Mr Alex Monsen, VP Asset Development, Seadrill; Mr Wong Kok Seng, MD (Offshore), Keppel Offshore & Marine and MD of Keppel FELS; Mr Marlin Khiew, Senior Project Manager of Keppel FELS

Another FPSO for Brazil

The Floating Production Storage and Offloading (FPSO) vessel Cidade de Paraty left BrasFELS in April 2013 after completing the assembly and integration of its topside modules at the yard. BrasFELS had been awarded this project by SBM Offshore (SBM).

Demonstrating the synergy of Keppel O&M's global yards, the vessel had arrived at BrasFELS in mid-2012 after calling on Keppel Shipyard in Singapore for conversion works.

BrasFELS' workscope included the fabrication and installation of six process modules and a riser gantry, as well as the installation and integration of another six process modules supplied by SBM Offshore.

FPSO Cidade de Paraty has been chartered by Petrobras for 20 years to support operations in the Lula Nordeste development, in the pre-salt cluster of the Santos Basin in Brazil. The FPSO has a production capacity of 120,000



The delivery of FPSO Cidade de Paraty adds to BrasFELS' growing track record in FPSO projects

barrels of oil per day, and is able to compress five million cubic metres of natural gas per day.

Brilliant feats at BrasFELS

Several recent milestones were achieved at BrasFELS, Keppel Offshore & Marine's (Keppel O&M) yard at Angra dos Reis, Brazil, bearing testament to the yard's engineering capabilities and ability to innovate amidst challenges.

SUCCESSFUL UNDOCKING

Noble Roger Eason, the second drillship upgrade project awarded by Noble Corporation to BrasFELS, was successfully undocked on 6 March 2013. With detailed planning and seamless coordination, the undocking operation was completed safely. With the successful undocking, the drillship proceeded to the final phase of integration.

The scope of works for the upgrading project includes the fabrication and integration of the new port and starboard sponson blocks, a 36-men living quarter and a new bow thruster module. After fabricating these new blocks and modules, the vessel will then be lengthened by removing the old stern and replacing it with a new one. This process is known as "jumboisation".

QUEST FOR MORE

Separately, BrasFELS was awarded a contract by Diamond Offshore Netherlands B.V. (Diamond Offshore) to upgrade and repair the semisubmersible (semi) rig, Ocean Quest. The semi arrived at BrasFELS yard on 5 January 2013, and remained at the yard for around three months. The scope of work included the renewal of



Reflecting the strong teamwork between Keppel O&M's yards, work on Noble Roger Eason was carried out by Keppel FELS in Singapore and BrasFELS in Brazil

existing piping, deck steel plates and stiffeners, as well as column blasting and painting.

BrasFELS also integrated new owner-furnished living quarters aboard Ocean Quest, by lifting the module onto the vessel. The lifting of the living quarters, which weighed a massive 240 metric tonnes, was a challenging task.

Undeterred, BrasFELS came up with a good solution. It transferred the weight from the floating crane to strand jacks – mechanical jacks capable of lifting very heavy weights – to lift the living quarters onto Ocean Quest. With this innovative workaround, the planning and execution of the lifting operation – including the design and fabrication of the strand jack foundation – was completed safely and smoothly within a compressed time frame of 10 days.



Despite the complex task of lifting the 240 metric tonne living quarters onto the semi Ocean Quest, the BrasFELS team was able to think of an innovative solution and complete the lifting operation in just 10 days

Mr Ryan Matre, Project Manager at Diamond Offshore said, "Despite the challenge of lifting such heavy loads, the entire lifting operation went very smoothly. We thank BrasFELS for planning and executing the operation within a condensed time frame and for their innovative solutions."

Works on the semi have completed and it departed from BrasFELS on 17 April 2013.

Second Super B for Transocean



The successful delivery of Transocean Andaman is another example of the strong partnership between Keppel and Transocean. (L-R) Mr Ray Campbell, Project Manager, Transocean; Mr Dan Farr, Director of Newbuilds, Transocean; Mr Tong Chong Heong, CEO, Keppel O&M; Mr Wong Kok Seng, MD (Offshore), Keppel O&M and MD, Keppel FELS; and Mr Shawn Yeo, Project Manager, Keppel FELS

Keppel FELS has delivered a second KFELS Super B Class jackup rig, Transocean Andaman, to Transocean on 26 March 2013. The rig was delivered ahead of

schedule and with no lost-time incidents.

Customised to meet Transocean's requirements, Transocean

Andaman is contracted to Chevron for work in offshore Thailand.

The first rig, Transocean Siam Driller, was handed to Transocean 22 days ahead of schedule at the end of January 2013. Transocean Ao Thai, the third rig in the series, is expected to be completed by 3Q 2013.

Keppel has a long-standing relationship with Transocean spanning several significant projects. Since 1987, Transocean, through Global Santa Fe, and Keppel have cooperated and completed six new generation jackups that are now part of Transocean's fleet of highly sophisticated rigs.

Synergistic launch

With a record number of rigs being built at Keppel FELS, the yard has leveraged the synergies with its sister yard, Keppel Singmarine, for certain construction phases of its jackup rigs.

On 9 April 2013, the jackup rig B338, named Covadonga, was launched from the slipway of Keppel Singmarine's yard. The rig will be berthed at Keppel FELS' quayside as work continues on the formation of the jackup's legs. The rig, which belongs to Mexican customer CP Latina, is scheduled for delivery in November 2013.

Mr Ognian Todorov, Project Manager of GL Noble Denton, the company which is overseeing the construction of the rig, commended the Keppel team for the excellent progress of the rig and the collective capabilities of Keppel's yards.

CP Latina, which purchased the rig from Standard Drilling, also has another rig under construction at Keppel FELS which is slated for delivery in July 2013.



Keppel Singmarine launches jackup rig B338, Covadonga for Mexican customer CP Latina on 9 April 2013

Innovative solutions in The Netherlands

Keppel Verolme, Keppel Offshore & Marine's yard in the Netherlands, has built its reputation for quality deliveries as well as an ability to develop innovative solutions for customers.

Recently, the yard and Palfinger, an Austrian company, jointly developed a new technology for the maintenance and modification of jackup legs, which are often difficult to reach due to their high position. Traditionally, the rig legs are accessed by industry rope access techniques, or by building scaffolding towers.

The new technology, known as the JUMP (Jack-Up Maintenance Platform) system, is an integrated solution involving telescopic cranes, aerial platforms, and supply and rescue platforms. It has proven to be a safe, reliable and efficient alternative to the traditional methods of accessing rig legs. With a stable platform to work on, the JUMP system provides an added benefit of allowing work to be done even in poor weather conditions, thereby reducing project downtime.

The JUMP system was put under an extensive period of testing by Keppel Verolme before being integrated into the yard's operations.

This innovative technology was recently applied to the yard's work on Ezion Holding's jackup rig, Prime Exerter. Due to a compressed

project schedule, traditional methods to access the jackup legs, requiring building time, were not feasible.

In response to this challenge, Keppel Verolme installed two JUMP systems on the jackup. Each system allowed 10 qualified structural fitters and welders to work together on the rig legs, and this enabled the six-leg section to be lifted off in just 15 days, or five days per leg section.

In Singapore, Keppel FELS is currently in discussion with Palfinger to bring the JUMP system to its yards, and the technology could be implemented from May 2013.

Separately, Keppel Verolme

successfully conducted the maintenance and upgrading works on the heavy-lift vessel, Mighty Servant 1, for Dockwise. The vessel arrived at Keppel Verolme on 4 April 2013 for the repositioning of existing buoyancy casings and the installation of two new buoyancy casings.

The work was completed in just a week, facilitated by the completion of prefabrication works on the two new buoyancy casings before the vessel's arrival at the yard.

Following its redelivery to Dockwise, the heavy-lift vessel was used to transport Lucius project's truss spar from Finland to the Gulf of Mexico, with the truss spar floated off the vessel upon its arrival.



Keppel Verolme utilised to good effect the JUMP system, a new technology jointly developed with Austrian company Palfinger, to access and work on the rig legs of Ezion Holding's jackup Prime Exerter

Cutting edge pipelay operations

Keppel Singmarine has started the construction of the high-specification deepwater pipelay vessel – DLV2000 – for Hydro Marine Services, Inc., a subsidiary of McDermott International, Inc (McDermott). The contract was secured by Keppel Singmarine towards the end of 2012.

Developed by Keppel Offshore & Marine's Marine Technology Development, the vessel is designed to support advanced pipelay operations, in which pipelines are installed to depths of up to 10,000 feet. It is also capable of achieving efficient pipelay rates for long trunklines, operating in severe weather conditions, and providing significant thrust output and power distribution.

To mark the start of construction, the yard performed the cutting of the first steel plate for the vessel at a strike steel ceremony on 15 April 2013. Present at the ceremony were Mr Hoe Eng Hock, MD of Keppel Singmarine, Mr Toh Ko Lin, ED of Keppel Singmarine, Mr Scott V. Cummins, Senior Vice President and GM (Asia Pacific) of McDermott, Mr John A. MacPherson, Project Manager of McDermott, Mr Seon-Gyu Kim, Surveyor, the American Bureau of Shipping (ABS), and project teams from Keppel Singmarine and McDermott.

Participants at the ceremony also witnessed the signing of a stage certificate to officiate the start of construction of the vessel.



Signing the stage certificate to officially commence the construction of DLV2000 – a high specification deepwater pipelay vessel built for McDermott – are (from left) Mr Seon-Gyu Kim, Surveyor at the American Bureau of Shipping, Mr Hoe Eng Hock, MD of Keppel Singmarine, Mr John A. MacPherson, Project Manager of McDermott, Mr Scott V. Cummins, Senior Vice President and GM (Asia Pacific) of McDermott, and Mr Ben Goh, Project Manager of Keppel Singmarine



The participants at the strike steel ceremony of DLV2000 witnessed the cutting of the vessel's first steel plate

Mr Hoe Eng Hock, MD of Keppel Singmarine said, "We are pleased to commence the construction phase of this high-specification deepwater pipelay vessel. We will work closely with McDermott towards our common goal of successfully completing the vessel

safely, on time and within budget. With the support of all our stakeholders, our project teams will work hard towards a quality delivery."

Charting future growth



Top management of Keppel O&M engaging in discussions at the strategy meeting in February 2013 on how the company can continue to forge ahead in the longer term amidst intensifying competition

With the management team spread across 20 yards worldwide, Keppel Offshore & Marine (Keppel O&M) gathers its top executives in Singapore twice a year to review the group's business performance and to chart the way forward.

Such strategy meetings serve as useful platforms for the key executives to exchange ideas and share information. This is particularly important in the current climate as the group aims to align its business units to its focus on enhancing innovation and raising productivity.

At the recent strategy meeting held on 21 and 22 February 2013, the first for the year, the group

discussed how Keppel O&M can continue to leverage its strengths to capture further growth to shape the future.

Mr Choo Chiau Beng, CEO of Keppel Corporation and Chairman of Keppel O&M, shared that as the group moved ahead, it would need to continue to reinforce its *Near Market Near Customer* strategy, and to innovate to create value and differentiate itself from others. "We must maintain our readiness to face volatility and uncertainties ahead with resilience, and must imbue in our next generation of Keppelites with our core values and the *Can-Do!* spirit. We need to focus and work hard to fortify our competitive strengths

in project execution, innovation, and meeting our customers' needs for on time, on budget and safe deliveries," commented Mr Choo during the meeting.

Mr Tong Chong Heong, CEO of Keppel O&M, added that Keppel O&M would need to step up its productivity improvements and to continue investing in the expansion, upgrading and maintenance of its yards, both in Singapore and overseas. More importantly, he highlighted that the group must be on the constant lookout for new opportunities and capabilities to continue growing the business.

Strengthening friendships in Nantong



Mr Ding Dawei (right), Secretary of the Nantong Municipal Party Committee, presented a photo album titled "Nantong 2012" to Mr Choo Chiau Beng, CEO of Keppel Corporation and Chairman of Keppel Offshore & Marine, to mark the long-standing friendship between Keppel Nantong Shipyard and the Nantong Municipal government

Dawei, Secretary of the Nantong Municipal Party Committee, in Nantong. During the call, Mr Choo expressed his gratitude to Mr Ding for his long-standing support, and the two had an exchange on the latest developments and progress in the Chinese city.

In a gesture of friendship, Mr Ding hosted Mr Choo to a dinner and presented him with a photo album titled "Nantong 2012". Also present at the dinner were Mr Huang Aijun, Vice Mayor of the Nantong Municipal Government, Mr Qu Yongguo, Vice Secretary-General of the Nantong Municipal Government, and Mr Zhou Zhushan, Nantong Maritime Safety Bureau Chief.



Participating in a tree planting ceremony are (from left): Mr Cao Jinhai, Governor, Nantong Gangzha District; Mr Shen Hongxin, Party Secretary, Nantong Gangzha CCP; Mr Tong Chong Heong, CEO of Keppel Offshore & Marine; and Mr Edmund Lek, President of Keppel Nantong Shipyard

Separately, Mr Tong held a dialogue session with Mr Ding during his visit to Nantong on 18 March 2013. Mr Tong also participated in a tree planting ceremony with Keppel Nantong volunteers while inspecting the yard's new facilities.

Mr Chow Yew Yuen, COO of Keppel O&M, was also separately hosted to a yard visit led by Mr Edmund Lek, President of Keppel Nantong, on 21 March 2013.

To reaffirm the strong ties and long standing partnership between Keppel Nantong Shipyard (Keppel Nantong) and the Nantong Municipal government, Mr Choo Chiau Beng, CEO of Keppel Corporation and Chairman of Keppel Offshore & Marine (Keppel

O&M), and Mr Tong Chong Heong, CEO of Keppel O&M, called on the Municipal government officials during their visits to the yard in March 2013.

On 28 March 2013, Mr Choo paid a courtesy call on Mr Ding

The meetings underscored Keppel O&M's commitment to develop Keppel Nantong into a world-class offshore yard through enhanced facilities, improvements in production processes, a growing track record, and strengthened friendships with the Nantong Municipal government.

Deepening bilateral ties

Singapore's Minister of State for Trade and Industry Mr Teo Ser Luck and his delegation visited Keppel Nantong Shipyard (Keppel Nantong) on 25 April 2013 to gain a better understanding of Keppel's offshore and shipbuilding businesses in China.

This was part of Mr Teo's official visit to the Chinese cities of Nanjing and Nantong between 24 and 26 April 2013, with the aim of deepening relations between Singapore and the two Chinese cities. The delegation comprised officials from the Ministry of Trade and Industry and IE Singapore.

Mr Teo's visit to Keppel Nantong was hosted by Mr Edmund Lek, President of Keppel Nantong.



Singapore's Minister of State for Trade and Industry Mr Teo Ser Luck (fifth from right) and Mr Ong Siew Gay (fourth from right), Singapore's Consul-General in China, at Keppel Nantong with Mr Edmund Lek (sixth from left), President of Keppel Nantong, Mr Goh Toh Sim (third from left), Chief Representative (China), Keppel Corporation, Mr John Chua (fourth from left), GM of Asian Lift, Mr Chen Yixing (fifth from left), Vice Mayor of Nantong Municipal Government, and other Gangzha government officials

Mr Lek and his team briefed Mr Teo on the yard's track record, current and new projects being undertaken at the yard, as well as the development plans and growth strategies of Keppel Nantong. Mr Teo and his delegation were

then brought on a tour of the yard to have a close-up look at the operations. Nantong government officials led by Vice Mayor Mr Chen Yixing, and Singapore's Consul-General in China, Mr Ong Siew Gay, also joined in the visit.

Driving safety across borders

As part of ongoing efforts to align safety practices across the group's overseas operations, Keppel Offshore & Marine's (Keppel O&M) Health Safety & Environment (HSE) team conducted a safety workshop at Keppel Nantong Shipyard (Keppel Nantong) which was held between 9 and 11 April 2013.

The workshop was organised with the aim of inculcating good safety practices among the yard managers, supervisors and junior officers at Keppel Nantong. Mr Yong Chee Min, GM, HSE of

Keppel O&M, spoke on various topics including "Challenges of building a safety culture at Keppel Nantong", "Keppel O&M's Safety Initiatives" and "Alignment of Good Safety Practices".

Findings from an inter-yard safety cross audit conducted at Keppel Nantong in March 2013 were also shared at the workshop. This cross-business unit audit evaluated the maintenance of major equipment and overall safety culture of the yard. BrasFELS and Keppel Singmarine Brasil, two

other Keppel O&M overseas yards, participated in the cross audit programme earlier in the year.

Mr Edmund Lek, President of Keppel Nantong Shipyard, said, "At Keppel Nantong, we are committed to achieve a strong safety culture and an incident-free workplace. We are glad to have Mr Yong Chee Min share his valuable insights with us which inspires us to strive for higher safety standards in our operations."

Marking safety excellence

Keppel Offshore & Marine (Keppel O&M), as part of the Keppel Group, contributed to several milestones in the Group's continuing efforts to uphold best safety practices in its operations and to raise safety standards in the industry.

COMMITTED TO BIZSAFE

For the fifth consecutive year, the Keppel Group sponsored the annual bizSAFE Convention held on 22 February 2013 and organised by the Workplace Safety and Health (WSH) Council.

Seven companies under the Keppel Group are bizSAFE Partners, of which three, Keppel FELS, Keppel Shipyard and Keppel Singmarine, are subsidiaries of Keppel O&M.

As bizSAFE Partners, the companies participate actively in the safety initiatives of the WSH Council such as the implementation of risk and

WSH management systems to reduce injuries and illnesses. This helps to lower the cost associated with such incidents and also allow the companies to better assess the WSH performance of its contractors, suppliers and tenants.

Within the Keppel Group, Keppel Land has attained the highest recognition possible for a bizSAFE status – Mentor. The bizSAFE Mentor is accorded to companies that have consistently shown exemplary leadership in WSH management and performance, and share their practices with other small and medium enterprises participating in the bizSAFE Programme.

Mr John Birchall, Group Safety Coordinator for Keppel and Director of Safety & Health for Keppel Land, spoke at the convention on the topic of "The

bizSAFE Mentor and Industry" and encouraged other companies to strive for the mentor status.

DOUBLING UP ON SAFETY

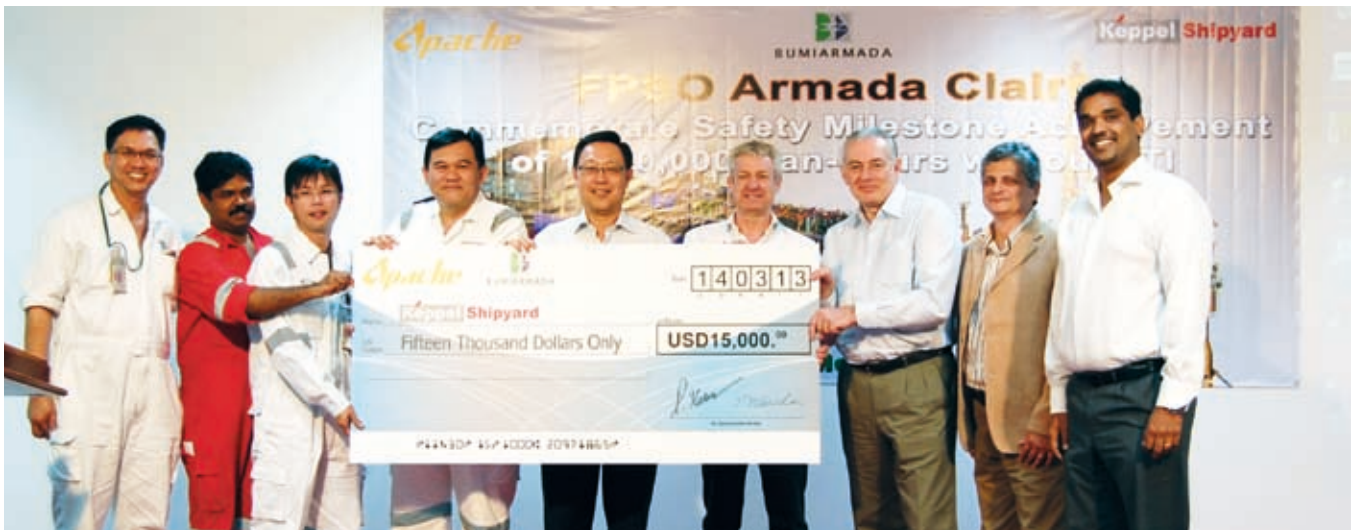
As Keppel FELS targets to deliver an unprecedented 20 rigs in 2013, the yard is focused on ensuring that every project is delivered on time and with an excellent safety record.

The two jackup rigs being built for Arabian Drilling Company (ADC), ARABDRILL 50 and ARABDRILL 60, achieved 2.5 million and 1 million safe man-hours respectively.

A double celebration was held on 26 February 2013 with Mr Mohamed Yusof Rafie, Chairman of the Board from ADC and Mr Tong Chong Heong, CEO of Keppel O&M joining the project teams in commemorating the milestone. ADC awarded the



Keppel FELS and Arab Drilling Company celebrate their strong partnership and the excellent safety performance on the two jackup rigs, ARABDRILL 50 and ARABDRILL 60



Keppel Shipyard and Bumi Armada jointly celebrate the achievement of one million safe man-hours on FPSO Armada Claire

Keppel FELS team a safety bonus of US\$10,000 in appreciation of their performance.

On 28 February 2013, Maersk Drilling presented Keppel FELS with a safety bonus of US\$30,000 for achieving 2 million safe man-hours on the construction of the CJ70 jackup rig, B332.

Celebrating the occasion were the project teams and senior officers, Mr Frederik Smidth, Chief Technical Officer from Maersk Drilling and Mr Wong Fook Seng, ED (Operations) of Keppel FELS.

Mr Wong Fook Seng said, "These achievements are a result of the strong vigilance and close team work by the project teams involved. We have built up a strong understanding with our customers on the shared vision of safety as a core value.

"Across the yards, we have

cultivated a strong safety mindset on all our projects. We have various initiatives to keep safety at the forefront of every process and special attention and education have been given to the High Impact Risk Activities."

CROSSING SAFETY MILESTONES

Keppel Shipyard recently marked safety milestones on three major projects.

The yard achieved one million safe man-hours on its latest Floating Production Storage Offloading (FPSO) collaboration, the FPSO Armada Claire, with its long time customer Bumi Armada Berhad. The partners celebrated this significant record for the project on 14 March 2013. Works on the FPSO is expected to complete in fourth quarter of this year.

Meanwhile, on 8 March 2013, 700,000 incident-free man-hours were clocked on a Floating Storage

and Offloading (FSO) project between Keppel Shipyard and Perenco Group, FSO Mayumba. This project is scheduled to complete in the second quarter of 2013, following which it will be stationed in the Lucina field, offshore Gabon.

Keppel Shipyard received US\$15,000 and \$10,000 in safety bonuses for its good performance on FPSO Armada Claire and FSO Mayumba respectively.

In addition, project teams from Keppel Shipyard and EMAS Offshore Construction and Production Pte Ltd came together on 26 March 2013 to mark 500,000 safe man-hours achieved on an FPSO project – the FPSO Arunothai is undergoing modification and upgrading works at Keppel Shipyard and is expected to complete in the second quarter of 2013.

Weld done

Keppel Singmarine continues to enhance its operational productivity through automation and mechanisation.

A robotic welding machine is giving a boost to Keppel Singmarine's productivity. Compared to when pipe spools are fabricated manually, the use of this machine helps to reduce the man-hours needed by 25%.

The adoption of this machine in 2012 resulted from a study done by a team of engineers from Keppel Singmarine over the previous year. As part of the study, the team visited Kranendonk, a specialist in robotics for the offshore and marine industry in Holland.

The robotic welding machine is able to fabricate four to five straight pipe spools – measuring one inch to 10 inches in diameters – in an hour. The machine only requires one operator.

Integrated with the Computer Numerical Control (CNC) bending machine, straight pipe spools welded by the robotic welding machine can be bent readily. This reduces usage of elbows in pipe spools fabrication, hence reducing man-hours used for production. As part of Keppel Singmarine's quest for continuous productivity improvements to its operations, the company is also in the process of incorporating more robotic applications to its steel cutting and fabrication processes. These enhancements are expected to bring about a 14% reduction in man-hours per annum.



Keppel Singmarine is in the process of incorporating robotic applications to its steel cutting and fabrication processes



The robotic welding machine at Keppel Singmarine uses 25% less man-hours compared to the manual fabrication of pipe spools

Process for welding of flanges

The pipe spools fabrication process begins with the operator selecting the desired spools to fabricate. He will then programme the machine to import the relevant data files from the engineering department through a shared network drive. Subsequently, the machine is activated for fabrication.

Once activated, the robotic welding machine will start to pick up the flanges from the material rack and align them to the pipe using a vision camera and an 8-point position sensor. Once the alignment is done, the flanges will be fitted and tacked to the pipe using the two arms of the machine. Finally, the flanges are welded to the pipe using all four robotic arms simultaneously.



1. During the pipe spool fabrication process, the operator selects the desired spool to fabricate and imports relevant data files to the machine to activate it for the production job



2. Robotic arms pick up flanges from the material rack



3. The flanges are aligned to the pipe using a vision camera (left) and an 8-point position sensor (right)



4. The flanges are then fitted and tacked to the pipe using two of the robotic arms



5. Finally, the flanges are welded to the pipe using all four robotic arms simultaneously

Anchored in the offshore and marine industry



Mr Tharman Shanmugaratnam (fourth from left), Singapore's Deputy Prime Minister and Minister for Finance as well as Guest of Honour of Sea Asia 2013, Mr Lui Tuck Yew (fifth from left), Minister for Transport of Singapore, and Chris Haywood (right), Managing Editor of Seatrade, were brought around the Keppel booth by (from left) Mr Michael Chia, Chairman of SMF and MD (Marine and Technology) of Keppel O&M, Mr Teo Soon Hoe, SED of Keppel Corporation, Mr Tong Chong Heong, CEO of Keppel O&M, and Mr Chor How Jat, MD of Keppel Shipyard

Ever ready to support the dynamism and growth of Singapore and Asia's offshore and marine sector, Keppel Offshore & Marine (Keppel O&M) was an active participant of Sea Asia 2013, held from 9 to 11 April 2013.

The group was the Principal Sponsor to the three-day event and co-hosted its welcome reception which was well-attended by its customers as well as industry and business associates. In addition, the group's management and staff shared their thoughts and insights at the event's conferences.

Keppel O&M showcased its global operations and range of solutions at its booth at the Sea Asia exhibition hall. Mr Tharman Shanmugaratnam, Singapore's

Deputy Prime Minister and Minister for Finance as well as Guest of Honour of Sea Asia 2013, and Mr Lui Tuck Yew, Singapore's Minister for Transport, visited the group's booth. They were received by Mr Tong Chong Heong, CEO of Keppel O&M, and senior management across Keppel O&M.

Mr Michael Chia, Chairman of Singapore Maritime Foundation (SMF) and MD (Marine and Technology) of Keppel O&M, said, "Sea Asia 2013 is staged as one of the anchor events of Singapore Maritime Week, organised by the Maritime and Port Authority of Singapore (MPA). The tripartite partnership amongst the government, trade associations and maritime players is a unique strength of the Singapore maritime

industry. It is this strong tradition of tripartism that has allowed Sea Asia to evolve and grow.

Incepted in 2007 and jointly organised by SMF and Seatrade, Sea Asia aims to stimulate developments and initiatives that would propel the region's offshore and marine industry forward.

WARMING TIES

There was a strong turnout at the Keppel O&M-sponsored welcome reception, held in the evening of the first day of Sea Asia 2013.

The gathering was a good platform for the group's management to catch up with long-time customers and industry partners as well as reach out to new and emerging offshore and marine companies.



Government and industry officials, offshore and marine representatives, as well as media and analysts converged at the Keppel-sponsored Sea Asia 2013 reception, held on the evening of 9 April 2013

STAYING ON THE PULSE

Representatives from companies and industry bodies were invited to explore pertinent maritime issues at Sea Asia 2013's conferences. Amongst them was Mr Chow Yew Yuen, COO of Keppel O&M, a panelist of the Offshore session, a platform to discuss the current and future prospects of the offshore and marine sector in Asia.

At the forum, Mr Chow reiterated, "The long term fundamentals of the offshore and marine industry are expected to stay intact. This is underpinned by the increasing demand for energy from a rapidly growing middle class as

well as increased urbanisation in developing countries."

Mr Chow further shared that to sustain its growth into the future, Keppel O&M will continue to enhance its businesses and solutions in line with evolving industry requirements.

Some of the key market trends highlighted by Mr Chow included the growing demand for newer, higher-specification rigs, which boast strong safety and efficiency features. Such preferences, he noted, further strengthened with the Macondo incident. In addition, he pointed out that despite the

record number of rig deliveries this year, industry reports point to a substantial shortage of such offshore rigs in the market.

Another notable market trend Mr Chow shared on is the acceleration of exploration and production (E&P) activities into more challenging environments. Deepwater regions such as Brazil, West Africa and Gulf of Mexico, and harsh environments such as the North Sea and Arctic regions have seen growing E&P activities.

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Mr Chow also elaborated on the rising demand for local content in offshore and marine solutions as countries with significant oil and gas resources seek to capture more economic value from these assets for their domestic economies.

Touching on the hot topic of shale gas, Mr Chow stated that it would be a "game changer" for the energy industry in the longer term. At the moment, the technologies and infrastructure to extract and export shale gas are limited.

Addressing the issue of competition from China and Korea, Mr Chow acknowledges that yards from the two countries are moving into the rigbuilding market, and that the Chinese in particular are able to offer competitive prices and financial terms for their services. In response to the rising competition, Keppel O&M will continue to focus on delivering value-added services and provide robust, market-relevant solutions as well as optimise its operations and raise its productivity.

Joining Mr Chow in sharing at the Offshore session was keynote speaker Mr Noboru Ueda, Chairman & President of ClassNK, and panelists Mr Paul Aston, Managing Partner of Holman Fenwick Willan Singapore LLP, Mr Lionel Lee, Group MD, Ezra Holdings, Mr Kenneth Richardson, VP, Energy Development, ABS and Professor Martin Stopford, President of Clarkson Research Services Ltd. Mr Matt Frei, journalist and broadcaster with ITN London, moderated the session.

SHARING ON SHIPYARD TECHNOLOGIES

Dr Basil Lui, Corporate and Technology Manager, Keppel Offshore & Marine Technology Centre (KOMtech), represented the group at the Technology @ Shipyards forum.

Dr Lui introduced Keppel O&M's research and development (R&D) and technology units and technology strategy. He explained that technology foresight, knowledge management and

innovation are critical to the group's growth as a technology-focused company.

Soon after KOMtech was formed in 2007, a technology foresight group was started so that Keppel O&M could more deeply understand the preferences and requirements of its customers, Dr Lui elaborated.

Regarding the group's knowledge management and innovation initiatives, Dr Lui shared that Keppel O&M encourages its people to actively participate in in-house and external discussion platforms to broaden their perspectives and get feedback for their ideas.

The group's concerted efforts to better understand its customers as well as engage in R&D and innovation has borne fruit. Today, the group possesses a range of proprietary solutions which enjoy wide market-acceptance.



Mr Chow Yew Yuen (third from left), COO of Keppel O&M, shared his thoughts on the outlook of the industry at Sea Asia's Offshore talk, which was moderated by Mr Matt Frei (left), journalist and broadcaster with ITN London. Other panelists include (second from L-R) Mr Paul Aston, Managing Partner of Holman Fenwick Willan Singapore LLP, Mr Lionel Lee, Group MD, Ezra Holdings, Mr Kenneth Richardson, VP, Energy Development, ABS, and Professor Martin Stopford, President of Clarkson Research Services

GROWING MARITIME KNOWLEDGE



Keppelites raring to go at the flag-off of the Amazing Maritime Adventure

Keppel Offshore & Marine (Keppel O&M) contributed to Singapore Maritime Week 2013 (SMW 2013) initiatives, doing its part to build the maritime knowledge-base in Singapore.

LEARNING THROUGH ADVENTURE

Keppel sponsored the Amazing Maritime Adventure – a series of fun maritime-themed games organised as part of SMW 2013. Some 120 Keppelites

participated in the event, which required teams to strategise and compete at various physical and mental challenges located across Singapore.

The event was flagged off by Mr Michael Chia, Chairman of the Singapore Maritime Foundation, MD (Marine & Technology), Keppel O&M and MD of Keppel Offshore & Marine Technology Centre (KOMtech).

OFFSHORE MODEL

Meanwhile, Keppel FELS provided its KFELS N Class jackup model for a public exhibition at Plaza Singapura from 1-7 April 2013.

Organised by the Maritime and Port Authority of Singapore (MPA), the exhibition served to stimulate interest and understanding of the offshore and marine industry amongst the general public.

Accolade in innovation



Mr Aziz Merchant (right), ED of Deepwater Technology Group, receiving the Outstanding Maritime Research & Development and Technology Award on behalf of Keppel Offshore & Marine Technology Centre, from Mr Lui Tuck Yew (left), Minister for Transport, at the Singapore International Maritime Awards 2013

For its achievements in developing innovative solutions for the offshore and marine sector, Keppel Offshore & Marine Technology Centre (KOMtech) was recognised at the 2013 Singapore International Maritime Awards (IMA) .

The R&D arm of Keppel Offshore & Marine (Keppel O&M) was awarded the Outstanding Maritime Research & Development and Technology Award for its contributions to the development of feasible solutions in deepwater drilling and production. Mr Aziz Merchant, ED of Deepwater Technology Group, received the award on behalf of KOMtech.

Specifically, KOMtech received this accolade for its design of the Extendable Draft Semisubmersible, or E-Semi, which is a specialised floating production system that provides alternative and viable

semisubmersible solutions for dry tree applications.

Comprising a second tier pontoon connected to a conventional semisubmersible, the E-Semi uses extended columns to reduce heaving motion. This allows for the application of dry tree solutions, which require lower maintenance and operating expenses, and easier well intervention and reservoir access compared to a traditional wet tree solution.

“We are pleased to be given this prestigious recognition from the Maritime and Port Authority of Singapore (MPA) for our research work on the E-Semi. This is a breakthrough development from KOMtech which will contribute significantly to the future landscape of deepwater drilling and production,” commented Mr Aziz.

Present at the event were 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, as well as senior management of KOMtech.

Held this year on 11 April at the Shangri-La Hotel, the biennial awards ceremony honours individuals and companies for their outstanding contributions to Singapore’s development as a premier global hub port and an international maritime centre. The event, organised by the Maritime Port Authority of Singapore, was held in conjunction with the eighth Singapore Maritime Week. It featured 10 award categories spanning areas such as offshore & marine engineering and training development.

Partner in marketing



Mr Hoe Eng Hock (right), MD of Keppel Singmarine, and Professor Minoo Patel (left), Director of BPP Cables, Board Director of Keppel Offshore & Marine, and Member of the Keppel Technology Advisory Panel, inking the partnership between Keppel Singmarine and BPP Cables

To broaden market opportunities for its cable laying vessels, Keppel Singmarine has signed a sales representation agreement with BPP Cables Ltd (BPP Cables), a subsidiary of Keppel Offshore

& Marine (Keppel O&M) which provides cable engineering and procurement services to the offshore energy sector.

The agreement, signed by Mr Hoe Eng Hock, MD of Keppel Singmarine, and Professor Minoo Patel, Director of BPP Cables, Board Director of Keppel O&M, and Member of the Keppel Technology Advisory Panel, marks the appointment of BPP Cables as Keppel Singmarine's marketing and sales representative to promote its export cable laying vessel and infield cable laying vessel for the offshore wind farm industry.

Taking the opportunity to tap

Professor Minoo's knowledge and expertise, Keppel O&M also invited Professor Minoo to conduct a one-day workshop on the market demand and opportunities for Keppel's inter-array and export cable laying vessels in the North Sea. An example highlighted by Professor Minoo was in the area of renewable energy applications in the maritime sector.

Attended by more than 30 engineers and researchers from Keppel Singmarine, Keppel Offshore & Marine Technology Centre and Marine Technology Development Group, the workshop proved to be an informative and insightful session.

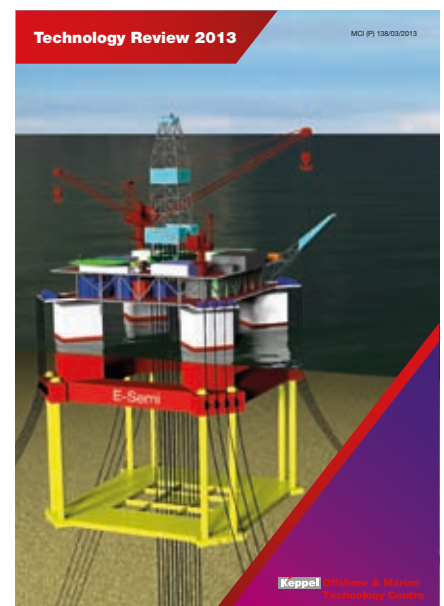
Technology thought leadership

Since its inception in 2007, Keppel Offshore & Marine Technology Centre (KOMtech) has been providing technology foresight into alternative energy applications as well as developing designs, systems and critical equipment for rigs and ships.

Furthering its role as a technology thought leader, KOMtech produces an annual journal, Technology Review, to showcase its multi-disciplinary forte and wide research coverage. Each year, a good sampling of the vast research work by KOMtech is showcased in the Technology Review, contributing towards stimulating ideas and spurring innovation in the offshore and marine sector.

For the 2013 publication, the journal focuses on the trends of computational fluid dynamics design and the optimisation of self-propelled jackups and semisubmersibles, tangible solutions to resolve constraints of LNG bunkering and the feasibility of the Extendable Draft Semisubmersible, or E-Semi, for dry tree application in deepwater.

Prior issues of the Review have generated significant interest from industry participants, including customers, professional institutions and the academia. Several of KOMtech's papers have also been presented at major offshore and marine conferences and seminars.



Technology Review 2013 is the fifth edition published by Keppel Offshore & Marine Technology Centre with the aim of sharing its research efforts to stimulate new ideas and innovations for the industry

Towards sustainable oceans

To raise awareness among companies and organisations on the issue of ocean sustainability, Mr Paul Holthus, CEO of the World Ocean Council (WOC), visited Keppel Offshore & Marine (Keppel O&M) on 28 March 2013 to discuss on possible avenues of collaboration.

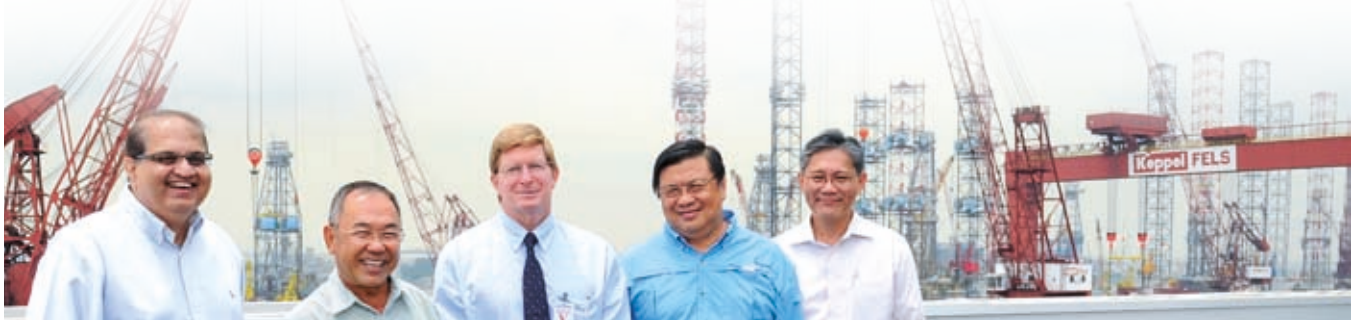
Meeting Mr Holthus at Keppel O&M were Mr Tong Chong Heong, CEO, Mr Chow Yew Yuen, COO, Mr Wong Kok Seng, MD (Offshore) of Keppel O&M and MD, Keppel FELS, Mr Aziz Merchant, ED (Engineering), Keppel FELS and

ED of Keppel Offshore & Marine Technology Centre (KOMtech) and Deepwater Technology Group, and Dr Foo Kok Seng, ED (Shallow Water Technology), KOMtech and ED of Offshore Technology Development. Together, they discussed potential business alliances, including possible collaborations on international ocean sustainability summits and corporate ocean responsibility initiatives.

The WOC brings together the diverse ocean business community on stewardship of the seas. Their

initiatives span ocean science development in support of safe and sustainable operations to public education about corporate environmental responsibility.

In support of WOC's efforts, Keppel O&M sponsored the Sustainable Ocean Summit 2013. Held from 22 to 24 April 2013 in Washington DC in the US, the Summit featured a series of panel discussions and open forum discussions on the importance of sustainability to the future of ocean industries.



Keppel O&M senior management meets with Mr Paul Holthus (third from left), CEO of the World Ocean Council, to discuss possible collaborations on ocean sustainability initiatives

Safe operation of cranes

Held on 21 March 2013 at The Chevrons, Mr Yong Chee Min, Chairman of the Association of Singapore Marine Industries (ASMI) Workplace Safety & Health (WSH) Committee, and GM, HSE & Projects of Keppel Offshore & Marine, chaired a question & answer session at a crane safety workshop co-organised by ASMI and the WSH Council.

Mr Benson Ho, HSE Officer of Keppel FELS, also participated in the workshop as a panel speaker and he shared on the topic of "Crane Safety Best Practices in the Marine Industry".

Attended by more than 120 people, the workshop gathered managers, engineers, operations and safety personnel from various

shipyards and offshore and marine companies to engage in dialogues and group discussions on safety best practices while operating cranes in shipyards. Topics discussed at the workshop included "WSH (Operation of Cranes) Regulations and Accident Case Studies" and "Fundamentals of Developing a Lifting Plan".

Boosting Group Security



Mr Phillip Mah

In recognition of the importance of enhancing operational resilience in an increasingly complex security environment, Keppel Offshore & Marine (Keppel O&M) has appointed Mr Phillip Mah, a police veteran, as its GM of Group Security.

Mr Mah, who joined Keppel O&M on 9 April 2013, will provide strategic guidance and oversee the readiness of the group in dealing with security challenges and contingencies. He will also drive efficient security operations, enhance security capabilities and strengthen preventive initiatives applicable to the group.

With more than 20 years of experience, Mr Mah joined the Singapore Police Force (SPF) in 1990 with key responsibilities in investigations, operations and security regulatory functions. He had held various senior positions including Head of Operations at the Traffic Police Department, Division Head of Aviation Security and Emergency Planning at the Civil Aviation Authority of Singapore. Prior to joining Keppel O&M, Mr Mah was the Deputy Commander and Head of Investigations at the Airport Police Division of the SPF.

Crisis-ready at Nantong

Following the emergence of the H7N9 avian influenza in mainland China, Keppel Nantong Shipyard (Keppel Nantong) has put in place several emergency response measures to enhance its preparedness, demonstrating the company's commitment to being crisis-ready at all times.

On 3 April 2013, an emergency drill exercise was held at the yard to familiarise its employees and subcontractors on the proper procedures to observe in the event of a contagion. Essential items such as thermometers and masks were stocked up and distributed to staff. Quarantine rooms were prepared.

Employees at the yard were also educated on the importance of good hygiene practices through email blasts and posters.

As an added measure, Keppel Nantong has also advised prospective visitors to reschedule visits to the yard until after the virus is contained. Some meetings were rearranged to take place over conference calls and web conferences instead.

Through these and other continuing measures, Keppel Nantong seeks to give reassurance to its employees and other stakeholders that robust business



Keppel Nantong Shipyard is well prepared to manage possible pandemic outbreaks through stringent temperature checks and the distribution of face masks to its employees and subcontractors on-site

continuity plans are in place. The yard will also adhere to advisories by the World Health Organisation and the Singapore Ministry of Health.

Keppel supports President's Challenge 2013

Beyond raising funds, President's Challenge champions the giving of time, knowledge and expertise to help the underprivileged – Keppel donates \$1.5 m to President's Challenge 2013 and pledges 5,000 hours of community service while Keppel Young Leaders will share experience with social enterprises.



President Tony Tan Keng Yam (third from left) and Mr Chan Chun Sing (fourth from left), Acting Minister for Social and Family Development and Senior Minister of State for Defence were hosted by (from left) Mr Tong Chong Heong, CEO of Keppel O&M, Dr Lee Boon Yang, Chairman of Keppel Corporation and Mr Choo Chiau Beng, CEO of Keppel Corporation, at the launch of the President's Challenge 2013

At the launch of President's Challenge 2013 at Keppel Offshore & Marine (Keppel O&M) on 22 March 2013, Keppel became the first donor with \$1.5 million support from Keppel Care Foundation. President Tony Tan

Keng Yam, on behalf of President's Challenge 2013 beneficiaries, received the cheque from Dr Lee Boon Yang, Chairman of Keppel Corporation, Mr Choo Chiau Beng, Chairman of Keppel O&M and CEO of Keppel Corporation and

Mr Tong Chong Heong, CEO of Keppel O&M and Senior ED of Keppel Corporation. Keppel O&M was privileged to host the President for a visit to its yards.

In addition to the cash donation,



President Tony Tan took a tour of the exhibition panels on Keppel Offshore & Marine's (Keppel O&M) history (left) and met with the beneficiaries from Children-At-Risk Empowerment Association (CARE) and Teen Challenge (right) who were thrilled to meet the President and tour the yard at Keppel O&M

Keppel Corporation also pledged 5,000 hours of community service in Singapore. Keppel Young Leaders will also assist social enterprises nominated for the President Challenge's Social Enterprise Award.

On Keppel's contributions, President Tan said, "Keppel Corporation has chosen to celebrate its 45th anniversary by giving back to society. I know that its contribution will bring relief, support and hope to many Singaporeans. I am also optimistic that Keppel and its employees will derive meaning and fulfillment from their involvement. I hope that more corporations will be similarly inspired to give back to the community."

Mr Choo Chiau Beng, Chairman of Keppel O&M and CEO of Keppel Corporation, said, "As President's Challenge has gone beyond the giving of money to the giving of

time and the imparting of skills to the disadvantaged, Keppel is likewise doing the same for worthy causes.

"At Keppel, employees are encouraged to care for the well-being of others, especially the less fortunate in society. Furthering our commitment to volunteerism, we will pledge 5,000 hours to community service in Singapore this year. Beyond our shores, our people in operations around the world will also be stepping up their community outreach activities, and we will share their stories in due course."

Amongst guests witnessing the cheque presentation at the Keppel yard was Mr Chan Chun Sing, Acting Minister for Social and Family Development and Senior Minister of State for Defence; members of President's Challenge Steering Committee as well as beneficiaries from Children-At-Risk

Empowerment Association (CARE) and Teen Challenge.

On supporting social enterprises, President Tan said, "This year, we will go beyond just recognising the social enterprises and the people behind them. We will create opportunities for the award winners to draw from the expertise and experience of industry leaders through mentorship and business advisory programmes, to provide support for the social enterprises to continue to grow and remain successful in their mission."

On Keppel's support to social enterprises, Mr Choo said, "We recognise that more concerted efforts should be made to help the nascent social enterprise sector in Singapore develop its capabilities, build robust networks, and better achieve its social missions.

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The President (third from right) and Acting Minister Chan Chun Sing (second from right), together with Dr Lee Boon Yang (fourth from right) and other Keppel senior management, were shown productivity enhancements at the pipe shop during the yard tour



The President was impressed that more women have joined Keppel Offshore & Marine in recent years

"In this regard, we have a team of high-potential employees in the Group, called the Keppel Young Leaders, who have embarked on a project to review and refine the business models of social enterprises, beginning with those under our adopted

charity, the Association for Persons with Special Needs. We are happy that our young leaders are provided with the platform to share their experience with the nominees of this year's President's Challenge Social Enterprise Award."

In conjunction with the launch of the President's Challenge 2013 at Keppel O&M, the President and Acting Minister Chan Chun Sing were introduced to the company's strong heritage and long journey to success through exhibition panels displayed at Keppel O&M. The President and his entourage were also brought on a tour of Keppel FELS' Pioneer Yard and Keppel Shipyard's Tuas Yard to gain a first-hand understanding of the operations at the two yards.

Among the facilities showcased were the automation at the Keppel FELS pipe shop and the Can-do barge, a 10,000 sqm platform which has enabled Keppel FELS to undertake more repair and upgrading works. These facilities are part of Keppel O&M's ongoing efforts in process and productivity enhancements.

President's Challenge 2012 raised over \$12 million in donations and introduced two initiatives – the President's Challenge Volunteer Drive and the President's Challenge Social Enterprise Award. Last year, nearly 6,500 people took part in over 300 volunteer activities organised by 120 non-profit organisations during the President's Challenge Volunteer Drive. The President's Challenge Social Enterprise Award received 37 applications last year, with four outstanding social enterprises eventually winning the award.

Partnership in work and play



The management of Keppel FELS and their subcontractors celebrate a win-win partnership

Subcontractors play an important role in Keppel FELS' success and over the years, the yard has forged close relationships with them based on mutual support and understanding. The strong partnerships formed with the subcontractors have helped to ensure smooth and safe work processes at Keppel FELS, enabling the yard to meet its record deliveries this year.

Such strong ties were reinforced at the Keppel FELS Subcontractors Executive Council's inaugural

Annual Dinner held on 14 March 2013. The Council, which was formed in 2008, represents over 150 subcontractors.

At the event, Mr Tong Chong Heong, CEO, of Keppel Offshore & Marine, paid tribute to the subcontractors for their dedication to Keppel FELS' projects. He noted that with the volatile global economy, increased equipment costs and reduced foreign worker quota in Singapore, companies would need to significantly increase productivity through

innovation and training. He shared that Keppel FELS would extend its support to subcontractors in terms of productivity training and advisory services, so that together, we can meet the challenges ahead.

The message was well-received by the subcontractors who pledged to work hand in hand with Keppel FELS. Following the speeches, it was a night of merriment with games and performances, bringing the participants closer together not just in work, but also in play.

Guiding younger generation

Ever ready to share his knowledge and industry experience to guide the future of Singapore's engineering community, Mr Seow Tian Keng, Senior Manager (Production) at Keppel FELS participated as a panelist at the PSB Academy's Industry Nite 2013 held on 14 March 2013 for the academy's students.

The panel, which discussed strategies for new graduates' job searches, comprised representatives from engineering, finance, marketing and human resources.

Mr Seow represented the engineering sector and shared with the students what Keppel looks out for in its search for talent. The panel also provided insights into the knowledge, skills



Mr Seow Tian Keng, Senior Manager (Production) at Keppel FELS (second from left) sharing his industry experience at the PSB Academy's Industry Nite 2013 held on 14 March for the academy's graduating students.

and competencies necessary for a successful career in their respective industries and job functions.

Following the panel discussion, PSB Academy students had the opportunity to interact with Mr Seow and other industry professionals during a speed networking session, to glean

deeper insights into the working community.

The PSB Academy, a corporatised spin-off from the former Singapore Productivity and Standards Board, is a private education institution in Singapore that offers a suite of certificates, diplomas, and degree programmes.

Rewarding excellence

The Keppel FELS Multi-Purpose Co-Operative Society Ltd (Keppel FELS Co-Op) held its 4th Bursary Awards and Education Grant Presentation Ceremony at the Keppel Offshore & Marine (Keppel O&M) Tower, Multi-Purpose Hall, on 16 March 2013.

The Keppel FELS Co-Op bursary awards aims to recognise and reward members' children who have achieved excellent academic performance and displayed good conduct in school. The Keppel FELS

Co-Op also offers education grants to Co-Op members who require financial assistance for their children's education.

The ceremony saw a total of 50 children receiving the awards. Presenting the awards at this year's ceremony was Mr Wong Fook Seng, ED (Operations) of Keppel FELS and Chairman of Keppel FELS Co-Op, and Mr Ng Seng Chong, Assistant Shipyard Manager at Keppel FELS and Chairman of the Keppel FELS Co-Op Bursary.

Each year, applications for the bursary awards are open to Co-Op members whose children are currently pursuing studies in a recognised local education institution or university.



A total of 50 children received the bursary awards at the presentation ceremony held at the Keppel O&M Tower on 16 March 2013

Galloping good time

Picking a winning race horse is more than just luck. You need good research into understanding the track record of the horse, its strengths, the jockey, as well as other factors for a calculated prediction – not unlike choosing the right yard to build quality rigs.

Keppel FELS' customers could draw the comparison when they exchanged tips during the Sundowner event at the Turf Club on 22 March 2013. Over 30 customers and representatives from Keppel FELS gathered at an exclusive VIP room to watch the

horse racing and exchange racing tips. It was an enjoyable night of building camaraderie.

Held several times a year, Sundowner provides a good platform for Keppel FELS and their customers to foster relationships in social settings away from the yard.



Keppel FELS and its customers and partners enjoying themselves at the races during the Sundowner event in March 2013

For the love of heritage

Mr Aziz Merchant, ED of Keppel Offshore & Marine Technology Centre (Deepwater), Deepwater Technology Group and Keppel FELS (Engineering), and his wife, Dr Reshma Merchant, Senior Consultant & Head, General Medicine at the National University Hospital and Assistant Professor at the National University of Singapore Medical School, are 'lifelong lovers of antiques'. They both developed and shared this passion since their university days in the UK.

Their love for history and heritage was captured in a Business Times Executive Lifestyle article published recently on 13 April 2013, which highlighted the Merchants as keen antique appreciators who are also strong supporters of the Asian Civilisation Museum (ACM) in Singapore.

While the Merchants' interest in antiques started when they were in university, what ignited their staunch support of the ACM was none other than their 10-year-

old daughter Farah. Farah had returned one day from a two-hour visit to the ACM and raved about the visit.

Dr Merchant recalled, "Farah was very excited about what she had seen and couldn't stop talking about it. Aziz and I became convinced that if two hours at the museum can instill such a passion for heritage and history in our daughter, imagine the multiplier effect it would have if more children got to see these extraordinary antiques and artifacts from the past."

At the time, the couple had just made a substantial donation to the ACM to help mount the Treasures of the Aga Khan Museum exhibition, a collection of Islamic art belonging to Prince Karim Aga Khan IV. However, the exhibition was not a permanent fixture at the ACM and was later moved to Canada.

The Merchants then sought to

make another donation that would become part of the museum's permanent collection. They eventually decided on an intricately carved 17th century Mughal cabinet made of rosewood, ebony and ivory. The cabinet purchased by the Merchants is likely to have been made at the Mughal court in Agra, India, and is similar to what Shah Jahan Agra had in the Taj Mahal.

Mr Merchant said, "Singapore is a multicultural society with a lot of exchanges and learning between the different races and religions, and we find that the museum is the best place to spread that philosophy of learning and exchange."

By displaying the rare antique cabinet in the museum, the couple hopes that their contribution will have a positive and lasting impact on future generations, providing them with a visual record of culture and history to enhance their learning experience beyond the classroom.



Singapore President Tony Tan Keng Yam (centre, in grey suit) expressing thanks to Mr Aziz Merchant (second from right) and his wife, Dr Reshma Merchant (right) at the National Heritage Board Gala Dinner on 15 March 2013, for their contributions towards the Asian Civilisation Museum in Singapore



Eager to promote multicultural exchanges and learning between the different races and religions in Singapore, the Merchants purchased and donated an intricately carved 17th century Mughal cabinet made of rosewood, ebony and ivory to the Asian Civilisation Museum

Benefitting Brownsville

In a show of continued support for higher education in Brownsville, Texas, Keppel AmFELS contributed US\$50,000 to the University of Texas at Brownsville (UTB), adding to the existing Keppel AmFELS Endowed Scholarship, a collaborative effort between Keppel AmFELS and UTB.

Mr Tan Geok Seng, President and CEO of Keppel AmFELS presented the cheque to Dr Juliet V. Garcia, President of UTB at a ceremony on 9 April 2013.

Commending Keppel AmFELS involvement in the local community, Dr Garcia shared, "Keppel AmFELS is just the kind of business every community wished they had. In addition to providing employees with good jobs, they have been funding scholarships at our university for many years."



Mr Tan Geok Seng (second from right), President and CEO of Keppel AmFELS, presented the cheque to Dr Alan Artibise (third from left), UTB Provost and Dr Juliet V. Garcia (third from right), UTB President. Joining them were scholarship recipient Phong Nguyen (fourth from right) and other representatives from Keppel AmFELS and UTB

Mr Tan said, "Keppel believes in giving back to communities wherever we operate. Through this scholarship, we are committed to invest in shaping the lives and building a skilled workforce. I am proud that Keppel AmFELS is a long-standing supporter of UTB."

Phong Nguyen, a mathematics

student en route to his Bachelor and Master degrees on an accelerated schedule, is one of the beneficiaries of the scholarship. He shared, "I am especially grateful to Keppel AmFELS for this scholarship, which has helped fund the courses I took last summer. I plan to apply for the scholarship again next semester."

Formula for speed

Always keen to give a boost to Singapore's engineering community, Keppel FELS was a Platinum Sponsor of the National University of Singapore's (NUS) Formula Society of Automotive Engineers (FSAE) team, in their effort to design and build a Formula One-style race car from scratch. With the successful completion of the race car, the project team is ready to compete in the annual FSAE competition, an engineering-design competition

organised by the Society of Automotive Engineers and held every May in Michigan in the US.

Through such involvement with NUS, Keppel FELS gains access to a group of top engineering students in Singapore. Tan Heng Lee and Nah Zhong Hui were former members of the NUS FSAE team who joined the Keppel FELS family in 2008. Today, Heng Lee and Zhong Hui are Project Superintendents at Keppel FELS. Following in their

footsteps are former FSAE team members Joshua Lim and Alvin Chia, who joined Keppel FELS in 2012 as graduate engineers.

The 2013 edition of the NUS FSAE Race Car proudly sports the Keppel FELS logo, and was launched on 22 March 2013. The car will be heading to Michigan for the FSAE competition from 8 to 11 May 2013, where it will compete against other cars built by teams from 120 universities around the world.

Winning eye

Impactful images taken at Keppel Offshore & Marine's yards have won photographer Stefen Chow international accolades.

In late 2012, Stefen was named winner of the American Illustration-American Photography (AI-AP) Latin American photography competition for photos he took at BrasFELS, Keppel's facility at Angra dos Reis, Brazil.

Juxtaposing BrasFELS' workers with the massive equipment and building materials that are used to construct or repair vessels, Stefen conveyed through these

images the sheer scale of offshore and marine projects. His images also depict the yard's workers going about their daily work, portraying the dedication of these unassuming men in their complex undertakings.

Stefen said, "I have worked with Keppel for five years and my experience with the Group has been an eye-opening and humbling experience. I witnessed for myself Keppel's relentless *Can-Do!* spirit. I have also learnt that people at Keppel's yards work very hard and meet challenges with passion, integrity and fortitude.

"Through my projects with Keppel, I have been provided with opportunities to meet many unsung heroes of the offshore and marine industry. I am grateful to have been privy to their lives and given the opportunity to share their unique stories."

Stefen's award-winning pictures were not just limited to those he took of BrasFELS – his pictures of Keppel Shipyard won the International Photo Awards (Los Angeles) in 2008 and Photographie de la Paris (Paris) in 2012.



Juxtaposing BrasFELS' workers with the massive equipment and building materials that are used to construct or repair vessels, award-winning photographer Stefen Chow conveyed the sheer scale of offshore and marine projects

Four more jackup rigs for Mexico

Keppel FELS secured contracts on 27 March 2013 from Mexican drilling company, Grupo R, to build four jackup rigs.

The jackup rigs will be built to Keppel's proprietary KFELS B Class design and are scheduled for delivery progressively from 2Q 2015 to 4Q 2015.

When completed, Keppel FELS will have built 10 KFELS B Class jackup rigs for Mexican customers since 2012. These include two for the Mexican national oil company, PEMEX, two for CP Latina and two for Oro Negro.

Mr Wong Kok Seng, MD (Offshore) of Keppel Offshore & Marine and MD of Keppel FELS, said, "Mexico is an important market for us and we are glad that Mexican operators have chosen the KFELS B Class as their preferred rig design and Keppel as the preferred shipyard.

"We look forward to support Grupo R as they expand their fleet of premium jackup rigs for the Mexican market, with safe, on time and on budget deliveries."

Customised to Grupo R's requirements, the rigs will be able to operate in water depths of up to 400 feet and drill to depths of 30,000 feet.

PEMEX has announced investment plans of US\$25.3 billion for 2013, of which US\$20 billion will be targeted at upstream activities.

On a visit to Keppel FELS on 30 January 2013, Mr Emilio Lozoya Austin, CEO of PEMEX, said that the company is embarking on its most ambitious drilling programme in decades and plans to add between eight and 12 offshore platforms to its fleet.

Mr Ramiro Garza Cantu, President

of Grupo R said, "PEMEX has indicated their aim to operate the biggest fleet of jackup rigs in the world and Grupo R is well positioned to support them with four premium jackup rigs. We chose the KFELS B Class jackup design for our first shallow water rigs because of their high specifications and their proven success for PEMEX.

"In choosing Keppel FELS, we are also partnering a shipyard which is able to meet the needs of our customers in terms of cost-effectiveness, time, technology, quality, and safety with environmental considerations. This will further enhance our capabilities as the leader in Mexico's onshore and offshore drilling industry."

Besides the Primus rig delivered to Oro Negro in December 2012, two other KFELS B Class jackup rigs, the Tonalá and Ocean Scepter, are operating successfully in Mexico.



When the rigs for Grupo R are completed in 2015, Keppel FELS will have built 10 KFELS B Class jackup rigs for Mexican customers since 2012