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Company registration no. 199900642R

# Keppel FELS to build Saudi Aramco's first jackup



Celebrating a golden partnership for Keppel FELS to construct Saudi Aramco's first purpose-built jackup are CH Tong (second from right), CEO of Keppel O&M and Ahmed M. Al-Zayyat, MD of Aramco Overseas Company

Keppel FELS has secured its first contract for 2010 from Aramco Overseas Company B.V., a subsidiary of Saudi Aramco, the world's largest producer and exporter of crude oil and natural gas liquids, to build a customised KFELS Super B Class jackup rig.

The contract is subject to a notice from the owner to proceed with construction by May 2010.

Upon delivery slated in the second half of 2012, the unit will be deployed by Saudi Aramco in the Middle East.

Wong Kok Seng, ED of Keppel FELS, said, "We are pleased to usher in 2010 with a newbuild

project for Saudi Aramco. This is an encouraging development, signalling that confidence is gradually returning to the industry.

"In the current market, owners and operators are on the look-out for even more innovative and cost-effective solutions that can be delivered as promised.

"With a record-setting number of 13 newly built rigs delivered in 2009, Keppel FELS has proved its ability to meet these requirements and more. Backed by strong in-house engineering expertise, these rigs were ready to start work as soon as they arrived on location.

"The fact that Saudi Aramco has chosen Keppel to build their very first purpose-built, nextgeneration mobile offshore drilling rig based on our proprietary design strongly endorses our reputation for excellence."

To date, 31 KFELS B Class rigs have already been delivered with another two under construction.

Owned by the Saudi Arabian Government, Saudi Aramco is a fully-integrated, global petroleum enterprise engaged in exploration and production, refining, distribution, shipping and marketing. The company manages proven reserves of 260 billion barrels of oil and manages the fourth-largest gas reserves in the world, 253.8 trillion cubic feet.

# Keppel-J. Ray bags P-61 contract



Sealing the billion-dollar P-61 deal are (seated from left to right), Joper Cesar de Andrade Filho, Petrobras Enterprise Manager – Papa-Terra, Tommy Sam, CFO of Keppel FELS Brasil, David P. Roquemore, Senior VP of J. Ray McDermott and Werner Bornstein, Director of Operations, FloaTEC LLC

"Brazil's offshore sector is embarking on a very exciting phase with many of Petrobras' new projects put on fast-track. There is an intensifying need for innovative and cost-effective solutions and local content, which Keppel, supported by our joint venture partner J. Ray, is well placed to offer.

Chow Yew Yuen President Keppel O&M USA Inc FloaTEC Singapore, an equal joint venture (JV) between Keppel FELS and J. Ray McDermott (J. Ray), has signed a contract worth about US\$ 1 billion with the Papa-Terra Joint Venture, consisting of PETROBRAS and CHEVRON, to build and operate the P-61 Tension Leg Wellhead Platform (TLWP).

This follows shortly after a Letter of Intention for the unit was issued by the Papa-Terra Joint Venture to FloaTEC Singapore in October 2009.

The project scope – comprising design, engineering, construction, maintenance and installation work, as well as a three-year contract to operate the TLWP – will be jointly undertaken by Keppel FELS and J. Ray.

Keppel FELS and J. Ray will also enlist the expertise of their US-based joint venture company, FloaTEC LLC, to perform global engineering and basic design work, as well as manage the supply of risers, well systems and tendon components for P-61.

Chow Yew Yuen, President of Keppel O&M USA Inc., said, "We are pleased that FloaTEC's strong bid for the P-61 project matched Petrobras' expectations. This contract affirms Petrobras' commitment to expedite the development of the sizeable Papa-Terra project, as well as its confidence in our JV's ability to deliver the best solution for the job."

Designated for Brazil's Papa-Terra field in the Campos Basin, the

P-61 TLWP will work alongside the P-63 Floating Production Storage Offloading vessel to handle up to 180,000 barrels of oil per day. P-61 will be built at Keppel's BrasFELS yard in Angra dos Reis, fulfilling local content requirements.

P-61's critical components such as the tendons, temporary buoyancy modules and piles will be fabricated at J. Ray's Morgan City facility in Louisiana, USA. Targeted for completion by mid-2013, P-61 will be installed on location in the Papa-Terra field by J. Ray.

Steve M. Johnson, President and CEO of J. Ray McDermott, said, "The P-61 project is a significant collaboration between J. Ray, Keppel FELS and FloaTEC LLC, and will bring together all our global engineering, project management, fabrication and construction resources to provide the best possible solution for the Papa-Terra field.

"This unique synergy and ability to offer proprietary technology and critical engineering expertise through FloaTEC will provide additional positive opportunities and will fortify our collective track record for offering innovative deepwater solutions."

Eric H. Namtvedt, President of FloaTEC LLC said, "This project underscores FloaTEC's ability to draw from its parents' global resources to offer a robust and cost effective solution. Almost the



The Keppel-J. Ray JV has affirmed its ability to deliver the best possible solution for the Papa-Terra field with the latest P-61 contract award

entire scope of the project will be implemented using the combined resources of FloaTEC, Keppel FELS and J. Ray.

"This is a key strength of our proposal, which should enable us to better manage risks, ensure the high integrity of the TLWP design and generate efficiencies in the work processes. Through the P-61, the first dry tree floater completion development offshore Brazil, we will be investing technology, know-how, and international performance standards in a sustainable way."

Papa-Terra is a heavy oilfield project located at the Exploratory Block BC-20 in Brazil's most important oil-producing region in the Campos Basin. The offshore field is located in a water depth of 1,180 metres.

Jointly owned by operator PETROBRAS (62.5%) and US-based international oil company CHEVRON (37.5%), the Papa-Terra field is expected to achieve first oil by mid-2013, and bring Brazil closer to its goal of becoming a net oil exporter.

# **Serving the Mexican Gulf**



The completion of Tuxpan augments Keppel AmFELS's track record and strategic presence at the gateway of the Gulf of Mexico

Keppel AmFELS Inc., the US whollyowned subsidiary of Keppel O&M, has delivered its first rig in 2010 to Mexico's Perforadora Central SA de CV, safely, on time and within budget.

Patricio Alvarez Morphy, President of Perforadora Central, said,

"Tuxpan is built to the highest standards of safety and quality under the expert project management and construction capabilities of Keppel AmFELS. We are confident that this fine rig will achieve a strong operational record when she begins work."

Tuxpan is the second jackup rig that Keppel AmFELS has built for Perforadora Central. Built to the LeTourneau Super 116E design and with leg lengths of 511ft, Tuxpan can drill wells up to 30,000ft in water depths of 375ft.

GS Tan, President of Keppel AmFELS, said, "With a strategic presence at the gateway of the Gulf of Mexico, Keppel AmFELS is in a prime position to serve one of the most important oil and gas markets in the world.

"The completion of Tuxpan, another well-executed project, augments our track record in this region and reinforces the strong partnership that we have built with good repeat customers such as Perforadora Central.

"With our close market insights and comprehensive suite of products and services, we seek to be the preferred solutions provider in this region."

Keppel AmFELS is currently constructing four other newbuild jackup rigs of the enhanced LeTourneau Super 116E design, for Rowan Companies. The construction of these rigs is progressing well.

# Starting early with first delivery of 2010



Keppel FELS delivers the first rig of 2010 seven days ahead of schedule and within budget

After wrapping up a record year of 13 rig deliveries in 2009 – all of them delivered on time and within budget – Keppel FELS kicked off 2010 by delivering the first rig of the year seven days ahead of schedule and within budget.

Keppel FELS delivered ENSCO 8502, the third of seven ENSCO 8500 Series® semisubmersible (semi) drilling rigs it has been contracted to build exclusively for Ensco International (Ensco).

The rig will commence operations in the U.S. Gulf of Mexico in the second quarter of 2010, under a two-year contract with Nexen Petroleum U.S.A. Inc. with term extension options.

Construction lead time for ENSCO 8502 was reduced by 1.1 million manhours, as compared to the first rig in the Series. This represents a 15% boost in efficiency.

Dan Rabun, Chairman, President

& CEO of Ensco International, said, "We are pleased that Keppel has remained an outstanding long-term supporter of Ensco's deepwater strategy. We commend the shipyard and management teams for managing the project schedule and resources very well even through challenging times, resulting in delivery of the rig early and within budget.

"With each consecutive rig, we have seen continuous improvement in the construction progress, reaffirming our decision to build the entire seven-rig series with a single yard to realise efficiencies and economies of scale. We are further convinced that Keppel FELS is the right choice as our trusted shipyard partner."

CH Tong, CEO of Keppel O&M, said, "Keppel has supported and moved closely in step with our customers as the offshore market's needs evolved over the years.

"In particular, we take pride in delivering to our customers, not only on time and within budget, but also quality products that are ready to be deployed for operations, smoothly and safely. We are confident that, like her sister rigs, ENSCO 8502 will be ready to drill on location shortly after she arrives in the Gulf of Mexico."

### Luxurious facelifts



After a successful refurbishment in Keppel Shipyard, Legend of the Seas was ready to pamper passengers over the Lunar New Year holidays

Keppel Shipyard's expertise in ship repair and upgrading is world-renowned, even in the luxury line.

Legend of the Seas, together with two other luxury cruise ships, Ocean Princess and Asia Star were given a new lease of life by Keppel Shipyard and were delivered right on time to roar in the Tiger year with their passengers.

Arriving on 18 January 2010, Legend of the Seas which measures about six Olympic-size pools, underwent steel renewal of its forward anchor pockets, and bottom plate of bilge tanks, overhaul of bow thrusters, hull hydroblasting as well as painting and renewal of the stern thruster.

Coincidentally, Keppel Shipyard's project manager, Tin Cheong Hoe was a patron of this luxury-liner when it first sailed into Singapore.

The luxury liner was then plying exotic routes in Alaska, the South Pacific as well as the Mexican Riviera and boasts of a 9-hole golf facility, an outdoor rock climbing wall, four whirlpools and a solarium with a sliding roof.

Little did Cheong Hoe expect that he would be managing her refurbishment at Keppel Shipyard just two years later. He said, "I'm glad to contribute to enhancing her lifespan. It's a lifetime opportunity to sail on the Legend as a passenger and then take charge of her dry-docking as Shiprepair Manager."

Another cruise ship returning to service is the Ocean Princess.
The 181-m long vessel arrived at Keppel Shipyard in November 2009 for service and maintenance works which included a single length anchor cable renewal of the port and starboard anchor chain, shipside blasting and painting as well as load tests of the embarkation and pontoon platforms.

She sailed from Keppel Shipyard to resume her tour of the French Polynesian islands, Society Islands, Cook Islands, Marquesas Islands, Hawaii and Alaska.

Meanwhile, Asia Star, a 129.5-m long vessel based in Hong Kong and operated by Asia cruises has also left the yard after repairs.

Works on Asia Star included renewal of hull anodes, bilge and sewage treatment plant pipes, repair of the air-duct ducting, overhauling of sea valves, overboard valves and engine room fans as well as high pressure washing and painting of the hull.

# **Testimony of teamwork**



Jiang Benhua, QA Superintendent from Keppel FELS and Craig Melvor, Oilfield Installation Manager, West Janus strikes up strong rapport during the repair of the jackup

A job well done deserves word of encouragement. That was exactly what the Keppel FELS team received from customer, Seadrill, for a well-executed repair job on a jackup rig, West Janus onsite in Malaysia.

In particular, setting a good example was Jiang Benhua, Quality Assurance Superintendent from Keppel FELS. He was commended for his professionalism and positive attitude by Seadrill.

Encouraged by the customer's appreciative words, Jiang shared the winning formula, "With limited time and limited manpower, the team put our hearts together and worked hard to complete the job safely and on schedule."

The work done on West Janus included repairs and partials renewals of the tank and one of the legs.

## The Fox returns to sea

Following a three-month makeover at Keppel FELS, Workships Contractors' (Workships) jackup, Seafox 6, is in mint condition and has returned to the seas.

Seafox 6 parted from the Singapore yard on 27 January 2010 for Thailand to serve a contract with NuCoastal Thailand Ltd, to supply well testing and production services to the Songkhla B field.

Jan Dirk Hudig, GM, Workships Contractors B.V. shared, "The Seafox 6 is operating offshore Thailand and performing to the expectations of our clients.

"I wish to take this opportunity to thank Keppel FELS' team of dedicated personnel for assisting us with first class service, as well as pragmatism and flexibility on the additional workscope."

Gerrit Jans Smans, Operations Manager from Workships summed up his experience working with the Keppel FELS team succinctly, "Keppel's performance was above my expectations!"

Mohd Sahlan Bin Salleh, AGM (Operations), Keppel FELS said, "The challenge was to ensure that Seafox 6 met all the requirements to be certified as a Mobile Offshore Unit by ABS. This was done through close cooperation and understanding between the Workships and Keppel FELS teams."

The scope of conversion work undertaken by Keppel FELS include

the lengthening and reinforcement of the four legs, closing up of the moonpool and installation of components.



Seafox 6 in mint condition after undergoing conversion works at Keppel FELS

# Honouring a great ship



Igniting brilliant beginnings for Greatship Maya – Lady Sponsor Hege Tiller bestows blessings upon the vessel prior to her maiden journey to Australia



Greatship Maya is the first state-of-the-art vessel that Keppel Singmarine is building for Greatship

Keppel Singmarine has delivered a platform supply geotechnical vessel on schedule to Greatship Global Offshore Services Pte. Ltd (Greatship).

Christened on 23 January 2010, the vessel has been bareboat chartered to GC Rieber Shipping Asia Pte Ltd (GC Rieber). The vessel will be deployed by GC Rieber and partner company Bluestone Offshore Pte Ltd in Australia in the first quarter of 2010.

She was named by Lady Sponsor, Hege Tiller, spouse of Finn Atle Hamre, Managing Director of GC Rieber.

Greatship Maya is the first state-of-the-art vessel that Keppel Singmarine is building for Greatship and customising for geotechnical services for GC Rieber.

Unlike standard platform supply vessels, the vessel is a multi-functional enhanced offshore support vessel equipped with drilling unit, which is capable of operating at water depths of up to 1,800 metres. She is also able to perform real-time in-situ tests from

downhole or seabed mode as well as various geotechnical laboratory tests onboard.

The 94-metre long vessel is equipped with two units of electrical driven 2600KW Azimuth thrusters and three units of 1050KW tunnel thrusters to achieve a Dynamic Positioning II capability. It has a moon pool and 1,000 sqm of clear deck space for the installation of drilling derrick, line tensioner winches, mud pumps, hydraulic unit and various specialised containers for performing geotechnical services.



Key representatives from Keppel Singmarine, Greatship, GC Rieber and Bluestone Offshore celebrate the naming of Greatship Maya

Hoe Eng Hock, ED of Keppel Singmarine, said, "We have worked hand-in-hand with Greatship over the last two years to deliver this fine vessel. Her successful completion reinforces Keppel Singmarine's ability and commitment to provide reliable and versatile solutions in meeting the needs of all offshore environments.

"With proven track record and expertise in the design and construction of specialised ships, we are well-poised to support Greatship in growing its modern fleet of sophisticated vessels." Greatship Maya is one of the few OSVs in the world to be certified as Special Purpose Ship under the IMO SPS Code 2008 to meet stringent standard for safety and stability for vessels carrying more than 12 special project personnel.

Venkatraman Sheshashayee, ED of Greatship, said, "We are very proud of the outstanding quality and capability of Greatship Maya, which has reinforced our decision to work with a world-class shipbuilder such as Keppel Singmarine. "As we look forward to the rest of our vessels this year, we are confident that they will perform to our customers' expectations and distinguish Greatship as a choice provider of innovative and versatile solutions for the offshore industry."

Just last year, Keppel FELS, a sister company of Keppel Singmarine, also delivered a KFELS B Class jackup rig, Greatdrill Chitra, ahead of schedule to Greatship.

## **Excellent start at Keppel Verolme**



The repair and modification works on trenching support vessel, Calamity Jane, were completed without incidents

Saipem's projects such as Castoro Sei were similarly completed safely and on time

The start of 2010 proved to be a busy period for Keppel Verolme as it continued to deliver all its jobs on time and safely.

Keppel Verolme's latest job involves the repair and modification works of a trenching support vessel, Calamity Jane, for Swiss-based Allseas Group S.A. It has completed the overhaul of the vessel's propulsion systems, steelwork and paintwork on the main deck as well as the reinstallation of four thrusters, propeller shafts and rudders of the vessel.

In addition, Keppel Verolme finished the repair jobs on a semisubmersible pipelay vessel, Castoro Sei and a heavy duty cargo barge, Castoro XI, for Italian customer Saipem.

Despite the adverse weather conditions, works on Castoro Sei were completed on time and safely. The yard has been tasked to overhaul four thrusters, install new stinger handling support rails and repair the onboard gantry cranes and fendering system.

The vessel will be deployed for the Nord-Stream project, a gas pipeline which will link Russia and the European Union via the Baltic Sea.

As for Castoro XI, she was completed for class survey and hull cleaning and preservation works within a quick turnaround time of 10 days.

# **Delivering hardy vessels**



Delivered on time by Keppel Singmarine, Hadi 27 is currently operating in Saudi Arabia



KST 54 is of the proprietary MTD 3265ST design developed by Keppel Singmarine's technology unit, Marine Technology

Keppel Singmarine and its sister yard Keppel Nantong demonstrated their commitment to meet the needs of their customers with the recent timely and safe deliveries of an Anchor Handling Tug Supply (AHTS) vessel and two tugboats.

On 1 January 2010, Keppel Singmarine delivered Hadi 27, an AHTS to Hadi H. Al-Hamman Establishment (Hadi). This 80-tonne bollard pull vessel is equipped with dynamic positioning system and Azimuth thrusters to enhance its position keeping and maneuverability as she performs various supply and support functions for the offshore installation and floating units.

Hoe Eng Hock, ED of Keppel Singmarine, said, "Hadi 27 has exceeded its contractual bollard pull and speed during its sea trial performance conducted in December 2009. We are also proud to announce that our projects and construction with Hadi have been on time and with zero lost-time incidents."

Hadi 27 is currently operating in Saudi Arabia. Since 2002, Hadi has awarded Keppel Singmarine a total of 12 AHTS orders. Hadi is one of the leading general contracting, trading and marine service providers to the oil & gas and petrochemical industries in the Middle East with its headquarters in Saudi Arabia.

Over in China, Keppel Nantong has also delivered two 65-tonne bollard pull twin-screw Azimuth Stern Drive tugboats to Keppel Smit Towage.

Both KST 54 and KST 55 are of the proprietary MTD 3265ST design developed by Keppel Singmarine's technology unit, Marine Technology Development. Both vessels also exceeded the contractual bollard pull and designed speed during its sea trial performance.

Keppel Smit Towage is a joint venture between Keppel and Smit International Singapore. The company operates a complete spectrum of towage.

# Missions accomplished



Noble Dave Beard on its way to BrasFELS in March 2009 for completion works

Ocean Quest returns to work earlier than scheduled as a result of BrasFELS's strong project management

2009 closed on a pleasing note for Keppel FELS Brasil's BrasFELS yard which completed two jobs and a major milestone to the satisfaction of its customers, Noble Corporation, Diamond Offshore and Petrobras.

KC Kwok, President of Keppel FELS Brasil shared, "We are glad to have delivered the projects safely, on time and within budget, affirming our customers' confidence in our yard as the most comprehensive offshore and marine facility in Latin America."

### **NOBLE MISSION**

Noble Corporation's Noble
Dave Beard, a semisubmersible
drilling rig, arrived at BrasFELS in
March 2009 for completion and
commissioning work prior to site
deployment.

The work scope included completion works on the thrusters' installation, architectural work on the accommodation and work spaces, piping, electrical, mechanical and other painting works, in addition to commissioning.

BrasFELS has since further secured three repair and upgrading jobs for Noble's Brazil-based drillships. Work for Noble Corporation will commence with the arrival of the first drillship by early 2011 and is anticipated to conclude during the second half of 2013.

### **QUEST ACCOMPLISHED**

Ocean Quest from Diamond Offshore arrived at BrasFELS on 18 November 2009, for structural repairs to its columns and other additional works including an installation of a higher capacity drillship compensator.

With BrasFELS's good project management, the repairs were completed ahead of schedule, thus enabling the rig to return to service earlier than planned.

John Baugus, Project Manager, Brasdril Sociedade de Perfuracao LTDA, a subsidiary of Diamond Offshore, commended, "The performance by BrasFELS team was excellent. The entire team, from the workers on the rig all the way up to upper management, combined to meet an extremely demanding delivery schedule while maintaining a commitment to safety and quality."

### **BUOYANT MILESTONE FOR P-56**

It was a majestic sight to behold as two giant 'C'-shaped blocks were simultaneously floated and undocked safely and successfully into the emerald waters of the Bay of the Kings (Angra dos Reis) on 29 December 2009.

With that, BrasFELS yard has achieved another important milestone on the construction of floating production platform (FPU), P-56, for Petrobras.

P-56's lower hull was built in two 'C' sections, which will be 'mated' later at sea. This innovative method was also used with great success on the preceding FPUs P-52 and P-51, and has enabled Brazil to undertake the construction of large-scale national projects on home ground.

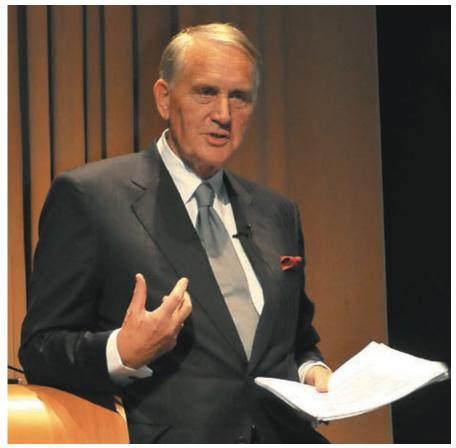
The flotation marks the commencement of the new construction phase, involving column erection, deck box skidding and subsequently, the marine mating. After the mating of the C sections, the consolidated pontoon hull will receive four columns to form the complete lower hull, a gigantic structure of 43-m.

The innovative method used to construct massive units attests to BrasFELS' technological capabilities and engineering expertise. Coupled with its project management strength, BrasFELS is well-poised to contribute national content towards Brazil's landmark offshore projects.



BrasFELS' technological capabilities and technical expertise are key in the successful joining of the two 'C' sections of the lower hull of P-56

# **Growing a global hub**



Sven Ullring sharing his views on Singapore's maritime sector's unique competitive edge and possible steps the country can take to maintain its global leadership in this area

With intensifying competition from other major Asian maritime powerhouses, Singapore needs to step up efforts by evolving its strong maritime cluster into a global maritime knowledge hub.

Speaking at the 24th Chua Chor Teck Memorial Lecture (CCTML) on 27 January 2010, Sven Ullring, Director of Keppel Corporation and Chairman of the third Maritime R&D Advisory Panel for the Maritime and Port Authority of Singapore, shared this message.

Sven Ullring elaborated that compared to an industrial cluster, a

knowledge hub has more extensive content and investment, as well as a higher density of knowledge networks.

To grow this hub, Singapore must embrace four key initiatives. These include giving the maritime industries the highest national priority, maintaining its position as the leading Asian port, investing heavily in maritime R&D and education, and making Singapore an international financial and maritime centre.

In line with this, Sven Ullring suggested that maritime technologies and operations be added to the National Research Foundation's list of Strategic Research Programmes, which focus on areas in which Singapore has unique competitive advantages to gain leadership positions.

He also recommended that a dedicated maritime institute as a centre of excellence for advanced maritime research be set up.
On top of that, Sven Ullring elaborated on potential strategies for developing the knowledge hub.

Organised by the Society of Naval Architects and Marine Engineers of Singapore and Keppel Offshore & Marine, the annual event commemorates the late Chua Chor Teck, former MD of Keppel Shipyard and a pioneer of Singapore's maritime industry.

# **Triple win for Keppel Nantong**



Keppel Nantong Shipyard's contributions to Nantong's growth and safety efforts gain recognition from the Nantong Municipal People's Government

Ushering 2010 on a positive note, Keppel Nantong Shipyard received three awards from the Nantong Municipal People's Government.

The company was ranked sixth among Nantong's Top 10 Export Enterprises for achieving an export value of US\$129 million from January to November 2009. This represented a 231% increase compared to the same period in 2008.

Keppel Nantong Shipyard was given a cash award of RMB769,000

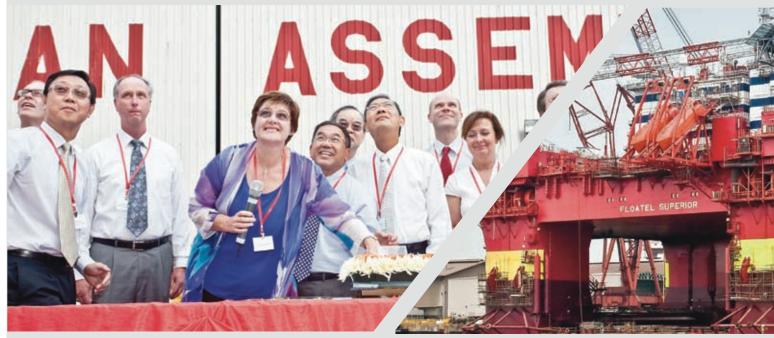
(approximately \$157,000) from the city's government for its contributions.

It was also lauded for implementing an excellent set of safety practices and policies by the Nantong Administration of Work Safety and received a Safety Excellence Award on 14 January 2010. The third award is on Keppel Nantong Shipyard being the top 50 tax contributors in 2009.

Lee Tai Kwee, President of Keppel Nantong Shipyard, said, "We are greatly encouraged by the government's recognition of our safety practices, as well as efforts in contributing to the export revenue and employment growth of Nantong. We will continue to tap opportunities and contribute more to the development of Nantong's marine industry."

Keppel Nantong Shipyard is located along the Yangtze River, within close proximity to supporting industries in the Municipality of Nantong, 100 km north-west of Shanghai.

# A superior accommodation premieres



Lady Sponsor Dr Dianne Tompkins, flanked by husband, Mark Tompkins, VP(Operations), Drilling & Supply Chain, CoconoPhillips Australia (left) and CH Tong, CEO of Keppel O&M (right), names the Floatel Superior

Floatel Superior – First and only newbuild floatel in full compliance with the latest rules and regulations for the Norwegian sector in more than 20 years

"Keppel FELS has designed and constructed some of the world's most robust harsh environment rigs. This has put us in a strong position today, to leverage our core competencies and experience, and extend them to offer a wider range of innovative and cost-effective solutions for various offshore applications. The possibilities are endless."

CH Tong CEO of Keppel O&M Oil and gas personnel who brave the elements in harsh offshore environments now have a new respite to look forward to.

Decked with integrated livework-and-play amenities, Floatel International's (Floatel) new generation accommodation semisubmersible (floatel), Floatel Superior, is the first to be purposebuilt to operate in the North Sea in more than 20 years.

When delivered in March 2010, the DNV-classed Floatel Superior, first of two floatels being built by Keppel FELS for Floatel, will be the only newbuild floatel in full compliance with all the latest rules and regulations for the Norwegian sector, one of the world's harshest offshore environments.

The rig's naming ceremony on 30 January 2010 was graced at Keppel FELS by Lady Sponsor, Dr Dianne Tompkins; spouse of Mark W. Tompkins, VP (Operations), Drilling & Supply Chain, ConocoPhillips Australia.

Peter Jacobsson, CEO of Floatel International, said, "Floatel International was formed to satisfy the increasing global demand for a new generation of accommodation and construction support vessels, floatels to serve in deeper waters and more hostile environments.

"Our vision is to own and operate the most modern, safe and reliable floatel fleet in the world. And we recognise the importance of working with the most reliable







Quality recreation and dining facilities help crew to feel at home

and experienced offshore rig designer and builder to achieve this."

With accommodation facilities for 440 persons in one-man cabins, Floatel Superior is also the first to be equipped with Dynamic Positioning 3 and 8-point mooring system capabilities, resulting in safe, environmentally friendly, and more optimal and reliable operations.

This new generation floatel is built to the DSS<sup>™</sup> 20NS design, developed and owned by Keppel's DTG and Marine Structure Consultants. This innovative design combines and enhances the tried and tested DSS<sup>™</sup> series semisubmersible drilling

rig and Keppel's SSAU<sup>™</sup> 3600 accommodation semisubmersible designs, to offer a unique solution for the North Sea.

It features full HSE compliance including strict noise level requirements, free fall lifeboats and escape chutes. In particular, the unit utilises a telescopic gangway for the safe transit of personnel and goods to and from a rig, with the ability to be extended or shortened by +/-7.5m, allowing the vessel to remain connected in severe weather.

The construction of Floatel's second accommodation semi, Floatel Reliance, is on track for delivery in the second half of 2010.

# Safety on the go



Keppel FELS's Project Manager, Chan Beng Guan (centre) and Assistant Project Manager, Roy Tan receive a \$\$20,000 safety bonus from QGOG's Project Manager, Marcelo Abreu (right) on 3 February 2010



QGOG's Gold Star arrives ahead of schedule in Brazil

Safety never takes a day off at Keppel O&M yards. Backed by a strong safety culture shared by its workforce, customers, vendors and suppliers, Keppel FELS and Keppel Shipyard recently celebrated safety milestones on its ongoing projects.

### **STELLAR PERFORMANCE**

Taking after its sister rig Gold Star, Alpha Star's construction is progressing on time and within budget and recently achieved four million manhours worked without lost-time incident (LTI).

The project teams from Keppel FELS and Brazilian operator and owner, Queiroz Galvão Óleo e Gás (QGOG) celebrated the alpha performance and hard work put in to build the DSS™ 38 deepwater rig, which is in the league of some of the world's most advanced semisubmersibles.

In the meantime, Gold Star, which was delivered last October six days early, has arrived ahead of schedule in Brazilian waters. There, it has successfully passed all tests and been accepted by Petrobras for deployment to support the company's exploration and production activities.

Jacking up safety standards
In addition, Keppel FELS and
Seadrill also celebrated one million
safe manhours achieved on the
construction of each of the KFELS B
Class jackup rigs, West Callisto and
West Juno, on 14 January 2010.

To commemorate the safety milestones, Seadrill presented a

bonus of S\$10,000 to Keppel FELS on 14 January 2010.

Keppel FELS has constructed four of Seadrill's world-class jackups. Construction of the seventh SSDT and the two jackups remains on schedule with expected deliveries extending from 2Q 2010 into 2Q 2011. When completed, Keppelbuilt rigs will make up 35% of Seadrill's premium fleet.

### **DELIVERING ON SAFETY**

With good safety records, BW Pioneer and Four Rainbow, two Floating Production Storage and Offloading (FPSO) vessels have left Keppel Shipyard for deployment in their respective fields.

BW Pioneer, which achieved over five million man-hours worked without LTI, left the yard on 8 January this year.

As it was the world's first FPSO to be deployed and operate in

the US Gulf of Mexico (GoM), the project team had to overcome the challenge of meeting the requirements of the US Coast Guard and Minerals Management Service.

Senior Project Manager, Jamil bin Abdul Ghani, said, "We ensured that all safety processes were in place and everyone on the project was aligned to the safety standards.

"It required good teamwork, continuous vigilance, perseverance and strict observance of the yard's 'Safety Starts with Me' and 'Together We Care' slogans. The time and effort spent in creating a safe and healthy work environment has been worth it."

In celebration of its safety achievements, the project team comprising BW Offshore, Keppel Shipyard and contractors donated close to \$9,000 to charity. At the one millionth and four millionth

man-hours achieved without LTI milestones, about \$4,500 and \$4,400 were donated to the Children's Cancer Foundation and the Sumatra Quake Relief Fund respectively.

Leased by Petrobras America Inc. to operate in the Cascade and Chinook fields of the US GoM, FPSO BW Pioneer will be turret moored at a water depth of about 2,600m – by far the deepest for an FPSO.

FPSO Four Rainbow left
Keppel Shipyard for the
Woollybutt field in Western
Australia on 31 December 2009
after completing its refurbishment
and life extension works with
almost half a million man-hours
without LTI.

Foo Kim Suan, Senior Project Manager, shared, "This record was accomplished due to teamwork and vigilance of everyone involved. As it was a fast-track project, one



BW Pioneer on its way to the US Gulf of Mexico, where it will be the first FPSO deployed there



Commemorating the safety milestones of the Bully drillships are (left) David Smallwood, Project Manager of Frontier Bully Projects and Spencer Leong, GM of Keppel Shipyard (Gul)

"Scheduling day and night shifts, we were constantly trying to make sure everyone was alert and vigilant at all times. Teamwork and coordination were vital to ensuring the operation was carried out smoothly and safely."

Low Kok Chiang Senior Project Manager of our challenges was to ensure all work processes were carried out safely even though the schedule was tight."

Work on the vessel included blasting and coating of cargo tanks and water ballasting tanks, installing a new gas lift compression module and desander skids, as well as upgrading of the accommodation.

### **BULLY SAFE AND SOUND**

The twin Bully drillships at Keppel Shipyard also celebrated significant safety milestones on 8 January 2010.

Bully I achieved zero LTI after three million man-hours worked while Bully II clocked over one million man-hours worked without LTI. Both vessels have zero reportable incidents since the project started.

With work on the drillships done simultaneously, it is twice the challenge for the project management team to ensure that safety vigilance is kept up on both projects.

Besides the manpower involved, installing Huisman's muilti-purpose tower (MPT), the world first enclosed steel structural drilling tower which weighs about 950 tonnes, involved precise planning between the clients, vendors and Keppel Shipyard.

Senior Project Manager Low Kok Chiang, said, "Both the floating cranes, Asian Hercules and Asian Hercules II, were utilised to lift and install the MPT onboard the drillship. Scheduling day and night shifts, we were constantly trying to make sure everyone was alert and vigilant at all times. Teamwork and coordination were vital to ensuring the operation was carried out smoothly and safely."

# Subic Shipyard keeps busy



Frontier Discoverer sails into Subic Shipyard for refurbishment

Subic Shipyard and Engineering, Inc. (Subic Shipyard) has continued to meet customer demand for newbuild and refurbishment jobs over the past few months. With a new contract secured recently for repeat customer Pt. Mitra Bahtera Segarasejati (Mitra), the yard will be kept busy in the coming months.

This latest contract involves building a RINA-classed non-propelled open sea floating crane barge at the yard. Subic Shipyard will provide the outfitting and fabrication of the crane columns as well as boom rest for this project.

Upon completion, the 3,600 dwt vessel of 60m by 22.6m, is designed to load and discharge cargo to and from vessels. It will have a loading capacity of about 22,000 to 24,000 tonnes per day in open sea transshipping operations.

To be named Princesse Rachel, this will be the second floating crane barge that Subic Shipyard is building for Mitra. The first floating crane barge, Princesse Abby, was completed and delivered in 2008.

"We thank Mitra for their vote of confidence in this second project. We remain committed to safety excellence and producing high quality of workmanship for our customers," said Mok Kim Whang, President and GM of Subic Shipyard.

In addition, Subic Shipyard has begun its work for the rig refurbishment project of Frontier Discoverer, an American drilling ship of Frontier Drilling. The work scope involves adding extra deck space, fabricating and installing urea storage tanks and platform for the scrubber equipment on the DNV-classed vessel. This project is expected to be completed within the first quarter of 2010.

# Pledge to bizSAFE

Keppel FELS, Keppel Shipyard and Keppel Singmarine have made a commitment as bizSAFE partners to help their contractors to achieve bizSAFE level 3 standards within a specific time frame.

Participating at the bizSAFE convention 2010 held on 4
February 2010, Abu Bakar,
Secretary to Keppel Corporation's
Board Safety Committee (BSC) and
GM HSE, of Keppel O&M said, "This programme will ensure that small

and medium enterprises (SMEs) have the resources to put safety as their top priority. We have made bizSAFE level 3 the target for all our subcontractors which is in line with our thrust of Safety Leadership and Ownership."

The convention, jointly organised by WSH Council and the Ministry of Manpower, provided a full day of activities for SMEs at varying stages of WSH development.



The bizSAFE convention held on 4 February 2010 aims to encourage contractors' participation in safety initiatives

# **Keeping pace**

Driven by a commitment to operational excellence, projects at Keppel FELS remain on track, with several milestones achieved in recent months.

### **STEELY BEGINNINGS**

Shortly after the celebration of one million manhours without lost

time incident on the construction of SKDP 3 in November 2009, the teams from Skeie Drilling & Production (Skeie) and Keppel FELS cheered to yet another milestone achievement.

On 18 December 2009, the keel was laid for the last of the trio of

KFELS N Class jackup drilling rigs being built by Keppel FELS for Skeie. Construction of all three rigs continues to be on track.

The trio are the world's first jackups to be designed and constructed to suit operations in the Norwegian Continental Shelf.

### **TEAMWORK THRIVES**

Following the finalisation of the contract to build Vietnam's first semisubmersible drilling tender for PetroVietnam Drilling and Well Services Corporation, Keppel FELS has struck first steel for the rig on 22 January 2010.

Targeted for delivery in the fourth quarter of 2011, this tender assist rig will be built to Keppel's award-winning KFELS SSDT™ 3600E design.

Wong Kok Seng, ED of Keppel FELS said, "We were able to achieve these milestones by consistently striving for operational excellence and innovation, backed by strong project management and close partnerships with our unions, customers, contractors and vendors.

"For 2010, we will remain focused on execution excellence and further improving efficiency to deliver superior solutions and services safely, on time, and within budget, while pursuing more projects."



Nguyen Quynh Lam, CEO of Bien Dong Production & Operating Company, activates the cutting of the first steel for the KFELS SSD™



Chia Chuan Beng, Senior Project Manager, Keppel FELS and Mark Aitken, Site Manager for SKDP, show solidarity in keeping construction safe, on time and within budget

# Four tugs launched in a day

February was certainly a month for celebrations at Keppel Singmarine with four vessels marking their launching milestones in the Benoi yard.

On 8 February 2010, four tugboats took to the waters amidst cheers from the Keppel Singmarine teams and customers who had worked hard for this red letter day.

Kicking off the ceremony was the 50-tonne bollard pull tugboat for PT. Pelayaran Trans Parau Sorat which was successfully lifted at the hullshop wharfside and launched into the water. Thereafter, the drydock area was abuzz with activity for the other three tugboats – two 45-tonne bollard pull tugboats for Keppel Smit Towage and the 50-tonne bollard pull tugboat for Port of Salalah.

The event marks the largest number of tugboats launched within a day by Keppel Singmarine. In preparation for this significant milestone, the project teams conducted numerous safety checks and successfully overcame the logistic challenge of fitting the three tugboats within the common dock space.

Toh Ko Lin, Senior GM (Commercial) of Keppel Singmarine said, "This is an exciting day for us. Given the good teamwork, we are proud to witness the success launching of the four tugboats. Even though we are given a short timeframe of about seven to nine months to complete these tugboats, we are confident of delivering them on schedule and safely."



The drydock was flooded for the launch of three tugboats for Keppel Smit Towage and Port of Salalah

### Another great ship takes to waters



H343,a platform supply vessel for Greatship Global Offshore Services made a mighty splash as she was launched into the water on 11 February 2010

During a separate occasion, Keppel Singmarine launched H343, a platform supply vessel for Greatship Global Offshore Services.

The 94-metre vessel is equipped

with an electric propulsion system as well as a dynamically positioned system (II). With a design speed of 14.5 knots and cargo capacity of 4600 dwt, the vessel is expected to be delivered in April 2010.

# **Gateway for business**

Dutch influences in the early days of Singapore's maritime history helped pave the way for our island-state to become, one of the busiest modern ports in the world today.

Decades since, Dutch businessmen and maritime community leaders continue to return to Singapore, an indispensable gateway of business and knowledge exchanges between the Western and Eastern markets, to glean current insights and knowledge about Singapore's port and maritime activities.

On 5 February 2010, a Dutch delegation from the Port of Rotterdam led by H.E. Johannes W. Gunivortus Jansing, Ambassador of the Kingdom of the Netherlands



CB Choo, CEO of Keppel Corporation and Chairman of Keppel O&M introduces Keppel FELS shipyard to Hans Smits, CEO of Port of Rotterdam

to Singapore and CEO, Hans Smits, paid a visit to Keppel O&M.

Senior management from Keppel led by CB Choo, CEO of Keppel Corporation and Chairman of Keppel O&M hosted the guests over lunch where they enjoyed a bird's eye view of the Keppel FELS yard and an introduction to the group's offshore and marine businesses.

# Safety share



Keppel Shipyard's HSE Officer, Crispin Balinas (right) elaborating on the Confined Space Status Chart to the MIndSET team led by PK Raveendra (centre) from Sembawang Shipyard

Key safety personnel from Sembawang Shipyard, Jurong Shipyard, Singapore Technologies Marine, Drydocks World-Singapore and Keppel FELS visited Keppel Shipyard (Tuas) on 2 February 2010.

They were members from the Association of Singapore Marine Industries (ASMI) participating in a self-regulatory programme called Marine Industry Safety Engagement Team (MindSET) which is supported by the WSH Council. The team members

conducted safety inspections and oberservations on WSH processes.

Representing Keppel Shipyard, Abu Bakar, Senior GM (Operations) and GM of Safety, Keppel O&M, shared the yard's WSH practices and experiences. Besides the participating shipyards, contractors and subcontractors also benefitted from MindSET.

Keppel Shipyard took the lead as the first host shipyard since MindSET was launched in November 2009.

# Nakilat-Keppel O&M gears up for business

The significance of the largest ship repair yard in Qatar, Nakilat-Keppel O&M received a boost when Qatar's Deputy Prime Minister and Minister for Energy & Industry, HE Abdullah bin Hamad Al-Attiyah visited the yard on 14 January 2010.

He was given a brief of the yard's facilities and progress by Nakilat's Director, Facilities Development, Stephen May and senior management from Nakilat-Keppel O&M, including its CEO, Yong Chee Min.

With development of the yard going well, HE Abdullah bin

Hamad Al-Attiyah was pleased to see many Singaporeans already working in Qatar and extended his warm welcome.

As they observed the progress of the fabrication work on the dock gates and steelwork facilities, the Minister and his delegation gave positive feedback on their yard visit, having gained insights into the work process.

With progress of the 80/20 joint venture shipyard between Nakilat and Keppel O&M on track, Phase One and Two of the yard is expected to commence business operations around 3Q 2010.

Located on a 43-ha site at the port of Ras Laffan, Phase One and Two of the yard's development includes two graving docks of 350,000 dwt and 450,000 dwt.

Once fully operational, Nakilat-Keppel O&M will, with the support of Keppel Shipyard's specialised LNG tanker repair teams from Singapore, handle the drydocking and repairs of LNG vessels as well as other commercial vessels in Qatar and the Middle East market. At the moment, about 1,000 workers have been recruited and this will be increased as the yard's business volume picks up.



When operational, Nakilat-Keppel O&M will operate in all sectors of the shiprepair industry and will have some 80 drydocking projects a year

# Safer and faster pipehandling

"The Rotaset Racker effectively doubles the speed of racking stands from the well centre to the setback, and allows the setback to be more densely filled."

Vertical pipe racking systems have been around in the oil and gas industry for many years. The drilling equipment industry has introduced the manual two-arm racker and the gantry racker in the 80's, semi automatic column racker in the 90's and fully automatic pipe handling machine with integrated offline stand building in the last decade. These rackers keep the people away from the racking area and further reduce the risk of the personnel working on the drill floor.

Most of the market available vertical racking machines available in the market are based on the concept of a stationary setback densely filled with stands, and two huge arms with a large reach that bring these stands from a storage position to the well centre. The racking arms of these machines need to travel long enough to reach every single slot and result in a slower operation speed. Due to this, actual trip out speeds of 30-40 stands an hour are common, while the drilling industry requires 45-60 stands an hour.

Besides that, the safety of all the personnel working on the drilling rig, especially on the drill floor, is one of the major concerns when such a heavy automated machine is operating. The vertical pipe racking system is one of the most hazardous systems on the drill floor. The hazards include dropped object problems, jammed pipe

situations and collision between men and heavy equipment.

To address this issue, KOMtech has developed a new Rotaset Racker pipehandling system, which improves vertical pipe racking systems to enhance their safety and speed.

This is a fully automated vertical pipe racking system with two rotating setbacks. Its name is originated from its configuration where Rotaset means rotary setback and Racker means racking machine. It can be categorised as a column type racker and is designed to fit into either a mast structure or a derrick structure.

To enhance the safety feature of a vertical pipe racking system, the fingerboards have a double barrier to prevent stands from falling out. This round shaped fingerboard is placed inside a guiding ring to prevent the stand escaping from the fingerboard by accident.

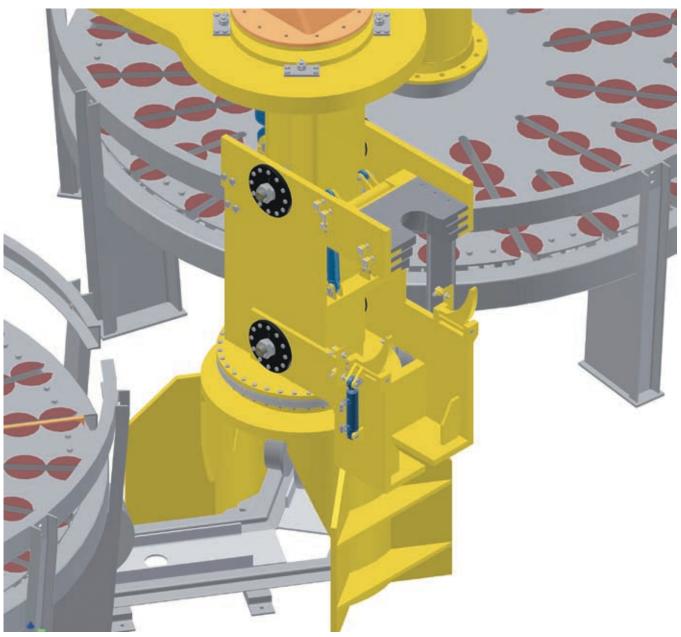
In terms of efficiency, the Rotaset Racker effectively doubles the speed of racking stands from the well centre to the setback, and allows the setback to be more densely filled.

Capable of working with dual well centres and bring casing and tubing stands from one side of the mast to the other, the Rotaset Racker is especially well-suited for deep water drilling units and subsea intervention drillships.

The Rotaset Racker has been proposed as part of an awarded front-end engineering and design study for Statoil ASA's upgrade of the Troll A platform.

The Rotaset Racker is aimed to be a

fast and safe vertical pipe handling machine. It has special features that allow it to optimise the racking time. The breakthrough technology is to break down the tasks of a conventional racking arm into smaller machines in order to speed up the racking time. With the innovative features described above, the Rotaset Racker is designed to achieve racking speed up to 45-60 stands per hour with improved safety.



Lower slot machine

# Pillars of strength and inspiration



Mohammad Abul Kalam Azad drew strength from the support he received from his wife and colleagues to overcome challenges

Exceptional people make the successes, big and small, at Keppel O&M. That is why the Group is committed to invest resources on training and development, equipping its people with a wide range of opportunities to build their careers of choice.

For Mohammad Abul Kalam Azad from Keppel FELS, Keppel O&M granted him a sponsorship to further this education in 2004. Grateful to Keppel's faith in him, Kalam who came to Singapore from Bangladesh, was determined to make the most of this

opportunity to expand his skill sets.

However, it was during this period when Kalam was pursuing a Diploma in Mechanical Engineering that he experienced some of the most challenging moments of his life.

In one of his semesters, his mother passed away and his wife had their first child. Struggling with a conflict of emotions, work and family commitments, his academic commitments had to take a backseat.

As a result, he was not able to perform in school and even failed two modules, which caused him to be barred from school.

Alerted to Kalam's plight, the Group Training Department of Keppel O&M quickly stepped in to persuade the school's administrators to review Kalam's circumstances and provide him with a second chance. Meanwhile, his peers at work helped to alleviate his work load during the crucial examination periods, so that he could better concentrate on his studies.

Kalam was able to draw his strength and inspiration from the support he received from his wife and colleagues. With their encouragement, he persevered and eventually completed his academic pursuit successfully.

Starting out his career as a Mechanical Fitter with Keppel FELS, he is now an Assistant Mechanical and System Manager.

Reflecting on the tough five-year period that it took to acquire his Diploma in Mechanical Engineering, Kalam said, "I am grateful for the chance given by Keppel O&M to upgrade myself. I am also very thankful to have had my wife and colleagues to lean on in my time of need. Without their support, it would have been much harder for me to deal with the multiple commitments and overcome academic setbacks."

# Joining the Fellowship



CH Tong, CEO of Keppel O&M receives the IMarEST Fellowship certificate from Admiral Nigel Guild, IMarEST President-Elect

Becoming a Fellow of the Institute of Marine Engineering, Science & Technology (IMarEST) is a strong recognition of CH Tong's rich experience and long time contributions as a marine specialist.

CH Tong, CEO of Keppel O&M, is an offshore and marine industry veteran who has served the Keppel Group for more than 40 years.

He was presented the Fellowship certificate by Admiral Nigel Guild, IMarEST President-Elect and his wife, Professor Felicity Guild on 20 January 2010, during their visit to Singapore.

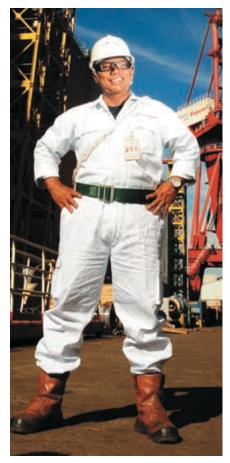
CH Tong shared, "I am honoured to receive the Fellowship certificate presented by IMarEST, an organisation that has contributed to the marine, maritime and offshore industry.

"My passion after 40 years in this industry is to attract more people of talent and ability, people who have a Can Do! spirit, to exploit opportunities and achieve breakthroughs in the areas of engineering, technology and the business of offshore and marine."

Based in the United Kingdom, IMarEST is an international professional membership body with a worldwide network of 49 branches and 15,000 members. Formerly known as the Institute of Marine Engineers, it is also the first professional institute to bring together marine engineers, scientists and technologists.

Endorsed by the leading international membership body and learned society for marine professionals, CH Tong's Fellowship status is acknowledged worldwide in the marine sector.

# Leading by example



All geared up for safety, Farid is keen to use his knowledge and skills to ensure a conducive working environment at Keppel Shipyard (Photo courtesy of Workplace Safety and Health Council)

Keppel O&M has always reinforced its commitment to keep its yard a safe workplace. OffshoreMarine takes a look at two employees who take efforts to ensure work safety is carried out and managed on site.

### TAKING THE SAFE PATH

As an industry leader, Keppel Shipyard's concerted efforts to ensure a secure work environment has resulted in numerous safety and training initiatives.

Part of its comprehensive safety training programmes in



Aminul believes that one of his foremost responsibility as a supervisor is to look-out for the safety of his team

collaboration with Singapore's Workplace Safety and Health Council includes getting workers to undergo the Professionals Conversion Programme (PCP) for WSH officers.

One such participant was
Mohammad Farid Bin Jaafar, a
former technical support officer.
When he was considering a career
switch, he did not expect to be
working in a shipyard, much less as
a safety officer. Since undergoing
the PCP course, he is now an
Assistant Safety Officer at Keppel
Shipyard.

He said, "Previously, I had not considered how complex safety could be but here in the marine industry, the set of safety regulations are so comprehensive that it is a specialised knowledge."

Having attended the Specialist Diploma in WSH at Ngee Ann Polytechnic, Farid is not only competent in marine safety but is also confident about advising companies on safety hazards as he has the necessary skills to handle safety procedures.

### **SETTING A GOOD EXAMPLE**

Mohammed Aminul Islam, technician at Keppel Singmarine, believes that one of his foremost responsibility as a supervisor is to look-out for the safety of his team. He shared, "As the supervisor, I am accountable for the safety of my team. To ensure that the workers under my charge do not get hurt, I make it a point to ensure my team follows proper safety procedures when carrying out our duties."

To foster a "safety first" mindset and impart knowhows of safety procedures, Aminul vigilantly conducts daily safety briefings with his team as well as regularly engages in risk assessment exercises and worksite inspections. Aminul also encourages his workers to speak up on safety issues as well as praises them when they display consideration for the well-being of other team members.

Aminul said, "The key to getting the respect from his workers is genuine concern for them. By sharing our experiences and giving them opportunity to speak up and showing our appreciation to them, we will be better able to motivate and garner support for safety from our workers."

# Lending a helping hand



Keppelites gave their time and energy to provide relief to victims of the landslide in Angra dos Reis, Brazil



Deepening community bonds – Artur Jordão (left), Mayor of Angra dos Reis and KC Kwok (centre), President and CEO of Keppel FELS Brasil

The Ilha Grande Island of Angra dos Reis, Brazil, suffered a landslide on 1 January 2010 destroying some houses and a hotel. Keppel FELS Brasil immediately mobilised a workboat and barge to assist in the transfer of equipment to the island to facilitate the search and rescue operations.

As the aftermath of the landslide gradually worsened with continuous heavy rain, KC Kwok, President and CEO of Keppel FELS Brasil, led 80 Keppelites in providing relief to the victims of landslides on 9 January 2010.

Working tirelessly with the authorities, the employees had taken the initiative to lend their time and efforts. KC Kwok said, "We are working in partnership with the City Hall. They have informed us of the biggest necessities needed and together, we will help in the recuperation of the city."

The Keppel volunteers donated basic necessities as well as helped in the distribution of the relief supplies. In addition, Keppel is refurbishing four buildings in Jacuecanga to accommodate 140 families displaced by the landslides.

In an appreciation letter to KC Kwok, Artur and Alessandra Jordão, Mayor and First Lady of Angra dos Reis respectively, wrote, "We are at a lost for words to express our gratitude during this period when we are working together to support our city. Rare are people like you, toiling side by side with the workforce, unloading donations, together with your marvelous team who have spared no effort to help us day today."

### **KEPPEL GROUP NEWSBYTES**



Keppel Corporation's senior management briefed media and analysts on the Group's full year performance and the opportunities to capture value for various business units

### **ACHIEVING STERLING RESULTS**

Keppel Corporation announced a good performance at its full year 2009 results conference despite the contraction and volatility in the global and domestic economy. Group's PATMI increased 15% to reach a new high of \$1,265 million.

EVA rose \$171 million to \$1,026 million, the highest ever attained by the Group.

### **EXPANDING PROPERTY PORTFOLIO**

Keppel Land has acquired a 30.3-ha site for RMB 884 million (\$180 million) in Shenyang, the gateway to Northeastern China.

The site will be developed into a residential township comprising about 6,000 waterfront apartments and will increase the company's portfolio in China to more than 30,000 homes.

Commanding a 900m frontage along the 400m wide Hun River, the new waterfront site is located in the Hunnan New District outside the Second Ring Road and a 20-minute drive from the city centre. It is also a 25-minute drive to the Shenyang Taoxian International Airport, the largest capacity and busiest airport in Northeastern China.

### **GREEN BUSINESS TRUST LISTING**

Keppel Integrated Engineering Limited will be sponsoring the listing of Units of a business trust, known as K-Green Trust (KGT), on the Main Board of the Singapore Exchange Securities Trading Limited (SGX-ST) by way of an introduction.

The investment objective of KGT is to invest globally in 'green' infrastructure assets in Singapore, Asia, Europe and the Middle East. KGT aims to provide long-term, regular and predictable distributions to its Unitholders.

### **GLOBAL NETWORK**

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# Keppel secures specialised shipbuilding contracts



The rock dumping fall pipe vessel to be built by Keppel Singmarine for Royal Boskalis Westminster N.V. is expected to be completed in late 2011

Keppel Singmarine, the whollyowned subsidiary of Keppel O&M, has sealed three new contracts.

The first contract was awarded by Dutch dredging and marine contractor, Royal Boskalis Westminster N.V. (Boskalis) for the construction of a 159-metre long rock dumping fall pipe vessel to be completed in late 2011.

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

The vessel to be built by Keppel Singmarine will have a carrying capacity for 23,000 tonnes of

rock. She will be installed with propulsion machinery and special rock handling equipment supplied by Boskalis to carry out precise rock depositing works at water depths of more than 1,000 metres with Dynamic Positioning (DP-2) capabilities.

Hoe Eng Hock, ED of Keppel Singmarine, said, "Rock dumping fall pipe vessels are a good example of highly specialised ships that require detailed engineering customised to the owners' requirements. Leveraging our proven track record and expertise in this area, we are confident of delivering a quality vessel to Boskalis' expectations."

Theodorus L. Baartmans, member

of the Board of Management, Royal Boskalis Westminster N.V, said, "At Boskalis, we have long experience of working with Keppel and are familiar with its quality of work.

"Keppel Singmarine is well known for its strong expertise in handling sophisticated vessels, especially those equipped with diesel electric drives and dynamic positioning capabilities. We are confident that they will be able to deliver on their promises as we work closely towards the success of yet another challenging project."

In addition to Boskalis' vessel, Keppel Singmarine has also secured another two tugboat contracts. The first is to build a 65-tonne bollard pull twinscrew Azimuth Stern Drive (ASD) tugboat with FiFi1 notation for firefighting for repeat customer, Smit International. This tugboat is based on the proprietary MTD 3265T design developed in-house by Keppel's Marine Technology Development unit.

The second tugboat contract involves constructing a 50-tonne bollard pull twin-screw ASD tugboat for an Indonesian customer PT. Pelayaran Trans Parau Sorat.

Both tugboats are scheduled for completion in 2010.