# **OFFSHORE**MARINE



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Keppel Singmarine celebrated its 125th anniversary with customers and business associates on 30 October 2012.

Formerly known as Singapore Slipway, Keppel Singmarine has come a long way from its humble beginnings of servicing boats and coastal vessels in 1887. Today, the company has completed some 400 newbuild projects for a global customer base, establishing itself as a reliable and versatile provider of newbuild solutions.

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# Sterling partnerships

Keppel Shipyard has delivered the Floating Production Storage and Offloading (FPSO) vessel Armada Sterling to joint venture partners Bumi Armada Berhad (Bumi Armada) and Forbes & Company, a wholly-owned subsidiary of the Shapoorji & Pallonji Group.

Bearing testament to Keppel's commitment to safe, prompt and quality services, FPSO Armada Sterling achieved an outstanding safety record of more than three million incident-free man-hours.

At the sailaway ceremony for the FPSO held on 27 October 2012 at Keppel Shipyard, Mr Michael Chia, MD (Marine and Technology) of Keppel Offshore & Marine (Keppel O&M), said he looked forward to the strengthening of relations between Keppel Shipyard, Bumi Armada and Forbes & Company.

Echoing his sentiments, Mr Hassan Basma, ED and CEO of Bumi Armada, added, "Friendships and relationships are very important to us. The successful completion of FPSO Armada Sterling is a testimony of our successful partnerships."

FPSO Armada Sterling has been deployed in the D-1 field, to the west of Mumbai, India, where it supports the production activities of the Oil and Natural Gas Corporation (ONGC).

Armada Sterling is the first FPSO for ONGC and the second unit to operate in India. It has a production capacity of 50,000

barrels of oil per day and storage capacity of 580,000 barrels of oil.

Besides FPSO Armada Sterling, FPSO Armada Claire is also currently docked at Keppel Shipyard and undergoing modification and upgrading works. FPSO Armada Claire is Keppel Shipyard's tenth and latest major project for Bumi Armada in their 15-year long partnership. Mr Chia said, "I would like to thank Mr Hassan Basma and the Bumi Armada team for their trust and confidence in Keppel Shipyard. The support and confidence of long-standing partners such as Bumi Armada have been instrumental to Keppel Shipyard's growth. Indeed, we feel privileged to have been entrusted by Bumi Armada to undertake all of its FPSO and FSO conversion projects to date."



Project teams have clocked more than three million incident-free man-hours on FPSO Armada Sterling

### Preferred provider for Mexico



Mexican Ambassador, H.E. Antonio Villegas Villalobos (3rd from left) and Mrs Claudia Villegas (2nd from left), senior management of Oro Negro, Keppel O&M, Keppel FELS and Lady Sponsor Mrs Brenda Gil (6th from right), jointly celebrate the naming of the KFELS B Class jackup rig, PRIMUS

Keppel FELS has emerged to become the preferred provider of drilling solutions to Mexico after delivering a jackup drilling rig and securing a contract to build two additional rigs for the country in late 2012.

#### **OPTIMUM PRIMUS**

On 4 December 2012, Keppel FELS delivered PRIMUS, a KFELS B Class jackup rig, to offshore Mexican oil field services company, Integradora de Servicios Petroleros Oro Negro (Oro Negro), seven days early and with a perfect safety record.

PRIMUS was named by Lady Sponsor Mrs Brenda Gil at Keppel FELS, in the presence of Mexican Ambassador H.E. Antonio Villegas Villalobos with his wife, Mrs Claudia Villegas. Mr Chow Yew Yuen, COO of Keppel Offshore & Marine (Keppel O&M) said, "This is a significant milestone in our partnership.
PRIMUS is the first rig that Keppel FELS has built for our new customer Oro Negro, and we are proud to be able to showcase the Keppel hallmark of delivering early – seven days to be exact – and with a perfect safety record.

"We are pleased to be able to support Oro Negro in expanding their fleet of high specification jackup rigs to provide premium oil field services to the offshore sector."

Mr Gonzalo Gil-White, Co-CEO of Oro Negro, said, "By partnering with Keppel FELS, we have been assured of receiving this premium rig without incident and ahead of time. This is a value-added service which our customers appreciate as well."

PRIMUS is the first of two rigs by Keppel FELS for Oro Negro after the Mexican company purchased them from Jasper Investments. It is also Oro Negro's first jackup rig and is suited for deployment in various parts of the world including the Gulf of Mexico.

### **RIG OF CHOICE**

PEMEX Exploracion y Produccion, a subsidiary of Mexico's national oil company, Petroleos Mexicanos (PEMEX), has signed a contract with Keppel FELS for two KFELS B Class jackup rigs.

Scheduled for delivery in 1Q 2015, the high specification rigs will be the 19th and 20th KFELS B Class jackup rigs on order, with 36 already delivered within the past decade.

When completed, the two rigs will join the list of KFELS B Class jackup rigs already built by Keppel for its Mexican customers. This includes the PRIMUS jackup rig delivered to Oro Negro as well as the Tonala rig operated by Peforadora Central.

Mr Wong Kok Seng, MD (Offshore) of Keppel O&M and MD of Keppel FELS, said, "We thank PEMEX for selecting the proven KFELS B Class design as the basis of their new rigs. With 36 rigs delivered and 20 on order, the KFELS B Class design has been the rig of choice for drilling operators in meeting the higher specification needs of their customers. We look forward

to delivering high quality rigs to PEMEX safely, on time and within budget.

"We are seeing more enquiries from Mexico for new rigs and we believe our KFELS B Class jackup design is well suited to meet the requirements of the Mexican market. Together with our Keppel AmFELS yard in Brownsville, Texas, we aim to boost our track record and establish ourselves as the foremost provider of drilling solutions in Mexico."

PEMEX is the world's fourth-largest crude producer at 2.5 million barrels per day. The Mexican national oil company has estimated that they will invest up to US\$2.4 billion in 2012 in exploration, and expect to have

40 rigs eventually operating in Mexican waters.

A senior official from PEMEX said, "The KFELS B Class jackup rig, such as the Tonala and Ocean Scepter, which are operating successfully in Mexico, has proven to be an efficient, high specification rig. The two new rigs will be an important addition to our fleet as we expand our exploration and production capabilities. We are confident that Keppel FELS will deliver the rigs to our requirement."

Developed by Keppel's Offshore Technology Development, the KFELS B Class jackup design is able to operate in water depths of up to 400 feet and drill to depths of 30,000 feet.



The bustling Keppel FELS yard will become even busier in 2013 – PEMEX's latest order of two KFELS B Class jackup rigs grows the order book for this proprietary rig design to 20 units

### Piping in successes



Saipem and Keppel celebrate the naming of Castorone: (L-R) Mr Mauro Piasere, Project Director, Saipem; Mr Pietro Franco Tali, CEO of Saipem; Mr Gallinari Dario, Senior VP (HR and Information Communications Technology), Saipem; Lady Sponsor Sabina Conserva Piasere; Mr Alberto Meomartini, Chairman of Saipem; Mr Chow Yew Yuen, COO of Keppel O&M; Mr Loh Chin Hua, CFO of Keppel Corporation; Mr Chor How Jat, MD of Keppel Shipyard, and Mr Hoe Eng Hock, ED of Keppel Singmarine



Castorone is one of the world's largest and most capable pipelay vessels

Keppel Offshore & Marine (Keppel O&M) and its Italian customer Saipem S.p.A (Saipem) have partnered on a chain of successful projects over the years. On 9 September 2012, the two companies came together to celebrate the naming of one of their latest collaborations, Castorone.

#### **WORLD'S LARGEST**

One of the world's largest and most capable pipelay vessels, Castorone was named by Lady Sponsor Mrs Sabina Conserva Piasere, wife of Castorone's Project Director Mr Mauro Piasere.

Mr Chow Yew Yuen, COO of Keppel O&M, said, "As a testament of Keppel and Saipem's common commitment to safety and strong teamwork, this project has an outstanding safety record.

"Indeed, I am pleased to note that at the Workplace Safety and Health Awards 2012 ceremony, the Castorone project received an award for exceptional safety and health performance from the Ministry of Manpower and Workplace Safety and Health Council."

Castorone had arrived at Keppel Shipyard in March 2011 for completion and integration works. In undertaking this challenging project, Keppel drew on the synergies and strengths of its global network of yards.

Keppel Singmarine contributed its extensive experience in engineering and constructing specialised ships, while Keppel Shipyard lent its expertise in managing large-scale projects. As such, Castorone reflects Keppel's ability to combine and customise the capabilities of its yards to better meet the needs of its customers.

### LONG TERM PARTNERSHIP

Besides Castorone, Saipem has entrusted Keppel's yards in Singapore with ship repair projects as well as the completion of Scarabeo 9, a semisubmersible (semi) drilling rig. Over in the Netherlands, Keppel Verolme's projects for Saipem include the drydocking of the semi crane and pipelaying vessel Saipem 7000, and the repair and modification of the semi pipelay vessel Castoro Sei. The yard also completed the upgrading of the semi drilling rig, Scarabeo 6, which had its first major upgrading at Keppel Verolme in 1998.

Scarabeo 6 left the yard on 2 December 2012.

Keppel continues to extend its ties with Saipem. It was announced in July 2012 that Keppel Kazakhstan and its consortium partner, Ersai Caspian Contractor have secured a contract for a KFELS B Class jackup from Teniz Burgylau. Ersai Caspian Contractor is a joint venture between ERC Technologies and Saipem.

Mr Pietro Franco Tali, CEO of Saipem also shared that the company is looking into several other projects and he believes that Keppel has the best yards to take care of these units.

### Speedy turnaround

Keppel FELS redelivered KS Java Star to KS Drilling and Indonesia state-owned group, Pertamina, on time and with a perfect safety record on 29 October 2012.

KS Java star is Keppel FELS' first project with KS Drilling and Pertamina. Despite the new partnerships, the refitted rig was turned around in just 70 days, bearing testament to the close cooperation between the teams.

Mr Wong Kok Seng, MD (Offshore) of Keppel Offshore & Marine and MD of Keppel FELS said, "I would like to commend the project teams from KS Drilling and Keppel FELS for being able to turn around a cold stacked rig to be fully operationally ready in just 70 days. This could only be done through the excellent teamwork between

deployed back to the West Madura oilfield, located off the coast of Java. The rig is capable of operating in water depths of up to 300 ft and



Keppel FELS redelivered KS Java Star to KS Drilling and Indonesia state-owned group, Pertamina, on time and with a perfect safety record



Project teams from Keppel FELS and KS Drilling celebrated a successful redelivery of KS Java Star on 29 October 2012

# Strengthening leadership and growth



Mr Michael Chia, MD (Marine) and MD (Technology) of Keppel O&M



Mr Chow Yew Yuen, COO of Keppel O&M, has been appointed Chairman of Keppel Singmarine



Mr Wong Kok Seng, MD (Offshore) of Keppel O&M and MD of Keppel FELS



Mr Chor How Jat, MD of Keppel Shipyard



Mr Poh Leong Kok, President of Keppel Batangas Shipyard



Mr Toh Ko Lin, Chairman and President of Keppel Philippines Marine and SGM (Commercial) of Keppel Singmarine



Mr Leong Kok Weng, President of Keppel Subic Shipyard



Mr Edmund Lek, President of Keppel Nantong Shipyard

Several new appointments were made across Keppel Offshore & Marine (Keppel O&M) as part of the group's ongoing efforts to put in place a strong team to reinforce growth strategies.

Mr Tong Chong Heong, CEO of Keppel O&M said, "As we grow

our competencies and reach worldwide, we also have in place the right set of people to take the Group to the next stage. The Board and I are confident that these new appointments will carry us forward stronger into the future. Michael, Kok Seng and How Jat have the experience and acumen to further

grow our competencies, increase our competitiveness, seize business opportunities and penetrate new markets."

#### MANAGEMENT APPOINTMENTS

Mr Michael Chia, 59, has been appointed MD (Marine) of Keppel O&M. In this position, he oversees Keppel O&M's Marine Division which includes Keppel Shipyard, Keppel Singmarine and other marine-related overseas yards. Mr Chia concurrently holds his appointments as MD (Technology) of Keppel O&M and MD of Keppel O&M Technology Centre. He reports directly to Mr Chow Yew Yuen, COO of Keppel O&M.

Mr Chia has held various appointments within the Keppel Group. He was Director (Group Strategy & Development) of Keppel Corporation, MD (Offshore) of Keppel O&M and Deputy Chairman of Keppel Integrated Engineering. From 2002 to 2009, he was the ED of Keppel FELS with responsibility for the overall management of the company.

Mr Wong Kok Seng, 62, has been appointed MD (Offshore) of Keppel O&M and has oversight of Keppel O&M's Offshore Division including Keppel FELS and related overseas yards. He remains MD of Keppel FELS and reports directly to Mr Chow Yew Yuen. Mr Wong started his career in Keppel FELS in 1977 and has previously held appointments in the Keppel Group

as ED of Keppel FELS, Project
Director of Keppel Land and ED of
Keppel Singmarine.

Mr Chor How Jat, previously
Acting MD of Keppel Shipyard,
has been appointed MD of Keppel
Shipyard. He reports directly to
Mr Michael Chia, MD (Marine) of
Keppel O&M. Mr Chor began his
career at Keppel in 1988 and his
previous appointments include
Shipyard Manager and GM
(Operations) at Keppel FELS.
He was appointed ED of
Keppel Shipyard from January
2011 before assuming the role of
Acting MD.

#### **OVERSEAS APPOINTMENTS**

Keppel O&M's operations in the Philippines also saw several new appointments. Mr Toh Ko Lin has been re-appointed as President of Keppel Philippines Marine. He is concurrently serving as the SGM (Commercial) of Keppel Singmarine.

Meanwhile, Mr Poh Leong Kok has been appointed President of Keppel Batangas Shipyard, and Mr Leong Kok Weng has assumed the role of President, Keppel Subic Shipyard.

Ms Agnes Barbara L. Lorenzo has been promoted to SVP (Finance & Administration) of Keppel Philippines Marine as well as Keppel Subic Shipyard.

Mr Edmund Lek, previously SGM (Operations) at Keppel Singmarine,

has been seconded and appointed as President of Keppel Nantong Shipyard. He takes over the baton from Mr Lee Tai Kwee, who took on his new appointment as Advisor of Keppel Nantong Shipyard.

#### **CHAIRMANSHIPS**

Besides the executive appointments, Keppel O&M has also made a number of appointments to the chairmanships of companies within the Keppel O&M Group.

Mr Chow Yew Yuen, COO of Keppel O&M has been appointed Chairman of Keppel Singmarine.

Mr Michael Chia has taken on the Chairmanship of several Keppel O&M's subsidiaries. They are: Keppel Smit Towage, Maju Maritime and DPS Bristol (Holdings).

Mr Toh Ko Lin, SGM (Commercial) of Keppel Singmarine has been appointed as Chairman of Keppel Philippines Marine, Keppel Batangas Shipyard and Keppel Subic Shipyard.

### Value-adding for Malaysia



Keppel Shipyard and BC Petroleum celebrated the naming of an EPV unit on 3 December 2012

Keppel Shipyard and BC Petroleum, a joint venture between Roc Oil Company, Dialog Group and Petronas Carigali, celebrated the naming of an Early Production Vessel (EPV) unit on 3 December 2012.

To date, the teams have clocked more than 700,000 safe man-hours on the project with zero lost-time incidents.

The Lady Sponsor, Puan Hatijah Abdul Latiff, wife of Encik Ramlan Abdul Malek, VP, Petroleum Management Unit, Exploration & Production, Petronas, christened the EPV, Balai Mutiara.

When completed, Balai Mutiara will proceed to the Balai Cluster oil fields, offshore Malaysia, to carry out extended well tests in the Balai, Bentara, Spaoh and West Acis fields.

Keppel Shipyard's work scope includes refurbishment and life extension works, fabrication and installation of the helideck and flare tower, upgrading of accommodation facilities, and

installation and integration of the process modules.

The conversion of Balai Mutiara is an extension of the Balai Cluster Risk Service Contract, which is the second contract to be awarded by Petronas under its new petroleum arrangement for the development and production of marginal hydrocarbon reserves in Malaysia.

The first Risk Service Contract had brought about the modification and upgrading of the Floating Production Storage and Offloading (FPSO) vessel, Berantai. This was also undertaken by Keppel Shipyard, and was completed a few months ago.

Over the years, Keppel Shipyard has had the privilege to participate in a number of projects for Malaysia and Petronas. Besides FPSO Berantai, Keppel Shipyard delivered the Floating Storage Unit, Tenaga Empat in 2012 and successfully completed the Floating Storage and Offloading unit, Sepat, in 2011.

# Leveraging global synergies



Completed by Keppel FELS in Singapore, the topside module of the P-61 Tension Leg Wellhead Platform (TLWP) has arrived in Brazil after a 17,000 km journey from Singapore. It will be joined to the lower hull which is being fabricated at Keppel FELS Brasil's BrasFELS yard in Angra dos Reis. When fully integrated, the P-61 will be the first such platform in Brazil and will be deployed to the Papa Terra field in the southern section of Campos Basin, 100 km from Cabo Frio, Rio de Janeiro.

### **Producing for Petrobras**

The Floating Production Storage and Offloading (FPSO) Cidade de Anchieta, which had its refurbishment and upgrading works completed at Keppel Shipyard in the second quarter of 2012, has started pre-salt oil production in the Campos Basin for Petrobras.

FPSO Cidade de Anchieta was upgraded from FPSO Espadarte, which was delivered to SBM Offshore by Keppel Shipyard in 2000 after undergoing a conversion from a tanker to an FPSO.

The facility, designed for pre-salt production of the Baleia Azul,
Jubarte and Pirambu fields, has a

capacity to process 100,000 barrels of oil and 3.5 million cubic metres of gas per day.



### Successful Venture



Keppel Singmarine and Straits Corporation Group celebrating the successful completion of Straits Venture II

Keppel Singmarine's delivery of Straits Venture II, the second transshipment barge it has built for the Straits Corporation Group, bears testament to the strong teamwork between the two companies. Mr Hoe Eng Hock, ED of Keppel Singmarine, said, "Together, we have ensured that the project is delivered on time and within budget, and without compromises to safety and quality." The vessel was named at Keppel Singmarine on 13 October 2012 by Lady Sponsor Ms Cecilia Lew, wife of Mr Richard Ong, Executive Chairman of Straits Corporation Group.

Straits Corporation Group presented Keppel Singmarine with a bonus of \$5,000 for its commitment to safety and contributions towards the project's perfect safety record.

Straits Venture II is capable of loading coal at a continuous rate of 40,000 tonnes per day into vessels of up to capsize dimensions. Equipped to operate in open seas and under challenging wave conditions, the barge can also support marine and offshore engineering operations.

### Solutions for the Black Sea

Keppel FELS delivered Ukraine's first two KFELS B Class jackup rigs, Piter Godovanets and NEZALEZHNIST earlier in 2012.

Piter Godovanets has been operating in the field of Odessa on the Black Sea successfully for the last six months while NEZALEZHNIST (Independence) started work at the end of 2012.

NEZALEZHNIST, the second KFELS B Class jackup rig for Chernomornaftogaz, a subsidiary of Naftogaz, successfully completed its re-commissioning in Giresun, Turkey, after crossing under the famous Bosphorus Bridge.

Due to height restrictions of the bridge, which has a limited clearance of 210 feet above water level, the upper sections of the

jackup rig's legs and the upper part of the derrick could only be installed after the crossing.

The leg installation and re-commissioning was fuss-free, owing to the seamless collaboration between Keppel FELS and sister shipyard, Caspian Shipyard Company in Baku, Azerbaijan.

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

In a letter to Keppel O&M, Mr Lars Bruun, Project Manager appointed by Chernomornaftogaz, commended the team, "I've rarely had a customer more satisfied with an overall project result and its total performance as this project."

"Keppel FELS' core values were deeply integrated through the project manager and then transformed to high project quality performance by the on-site team throughout the entire project scope of work. Individual skills and team competence provided qualitative work in all phases, adding value to the project for our ultimate customer."

Mr Evgen Bakulin, Chairman of Naftogaz, added, "The addition of these rigs to our fleet is part of our extensive programme to modernise our offshore exploration and production facilities. This will allow us to reach a new level of shelf development in the Black and Azov Seas, rapidly boost our oil and gas production and reduce our imports of natural gas.



### **Contributing to Navegantes**

Keppel Singmarine Brasil (KSM Brasil), Keppel Offshore & Marine's (Keppel O&M) shipbuilding yard in Navegantes, Santa Catarina, Brazil, is progressing well on its projects. The yard is also making an effort to contribute towards the wellbeing of the local community.

#### **SUCCESSFUL LAUNCH**

KSM Brasil successfully launched its first 45-tonne bollard pull twin-screw Azimuth Stern Drive (ASD) harbour tug in September 2012. The tugboat is built for SMIT Rebras and classed by the American Bureau of Shipping (ABS).

This is the first of six tug boats ordered by SMIT Rebras, and is scheduled for delivery in January 2013. The remaining five will be delivered every three months thereafter. These Robert Allandesigned tug boats will be deployed by SMIT Rebras to work at key ports across Brazil.

KSM Brasil's scope for the six tug boats includes detailed design and engineering work, and the purchase of all equipment. Spanning 24.4 metres(m) long and 10.25 m wide, the ASD tug is characterised by a half-height forecastle deck, providing bow height for improving operations in more exposed waters. The hull forms have been designed to provide better performance, both astern and ahead. The propulsion consists of two Z type Schottel azimuth drives located astern, and driven by two units of 1380 KW CAT main engines.



Launching of the first of six Azimuth Stern Drive (ASD) harbour tugs to be delivered to SMIT Rebras at Keppel Singmarine Brasil

"Keppel Singmarine has been building harbour tugs for the global fleet of SMIT in Singapore and Nantong, China, for the past 20 years. With the successful delivery of the first of six tug boats for SMIT Rebras, we are confident that the rest of the contract deliveries will be just as successful," shared Mr Hoe Eng Hock, ED of Keppel Singmarine and KSM Brasil.

#### **SHELTERING FOR A CAUSE**

For years, residents of the city of Navegantes have had to live with the inconvenience of waiting at open bus stops without shelters. KSM Brasil, after becoming aware of such a situation, immediately arranged for the construction of 10 units of public bus shelters

which it contributed to the community.

The completed bus shelters were officially handed over by KSM Brasil's ED, Mr Hoe Eng Hock, to the Navegantes city government represented by its mayor, Mr Roberto Carlos de Souza, in October 2012.

"KSM Brasil is privileged to be able to play a part in contributing to the local community of Navegantes. We believe the donation of the bus stops will go a long way in enhancing the quality of life of the city's residents," shared Mr Hoe.

### **Customised for Saudi Aramco**

Keppel FELS has delivered to Aramco Overseas Company B.V., a subsidiary of Saudi Aramco, its first KFELS Super B Class jackup drilling rig. The rig, named SAR 202 in Singapore on 29 September 2012, was delivered 13 days ahead of schedule, on budget and with a perfect safety record.

To be deployed in offshore Saudi Arabia, SAR 202 has been customised to Saudi Aramco's requirements. It is equipped with a high capacity hook load of two million pounds for operations in high temperature and high pressure wells. Capable of drilling down to 30,000 feet, the proprietary KFELS Super B Class design is a global benchmark for ultra deep well drilling rigs.

Mr Wong Kok Seng, MD (Offshore) of Keppel Offshore & Marine and MD of Keppel FELS, said, "This order was a win-win situation as Saudi Aramco gave us our first order in 2010 that kick-started the jackup building boom, while we have delivered their very first purpose-built, next-generation offshore drilling rig to their satisfaction.

"The KFELS Super B Class is a cost-effective and highly capable design ideally suited to meet the needs of the Middle East. The excellent completion of this rig is a demonstration of our ability to deliver value through leading edge technological as well as operational excellence."



Mr Chow Yew Yuen, COO, Keppel O&M (second from left) with Mr Khaled Al-Buraik (centre, seated), VP, Drilling and Workover, Saudi Aramco celebrate the delivery of SAR 202 together with the teams from Keppel FELS and Saudi Aramco



Following the delivery of SAR 202, Mr Khalid A. Al-Falih, President and CEO of Saudi Aramco (fourth from right) visited Keppel FELS on 30 October 2012 to reinforce the good relations and tour the vard

Mr Mohammad Al-Hattab, Manager, Department Head, Southern Area Oil Drilling Department, Saudi Aramco said, "We started this project during the downturn and navsayers said that it would be late and that we would overrun the budget. It has instead been delivered early and within budget.

"This was accomplished despite the fact that we changed the whole control system after the Macondo incident. In fact, the rig was fully upgraded to 100% API standards without any delay. Keppel FELS has

proven to be an excellent partner for us."

Besides the SAR 202, another KFELS B Class jackup rigs, West Callisto has also been chartered on a three year contract with Saudi Aramco.

The proprietary KFELS Super B Class design has been developed to meet the demand for more powerful jackups as the search for hydrocarbons moves into harsher environments and deeper underground. SAR 202 is the sixth such jackup built by Keppel FELS.

### **Sharing and connecting**



The Petrobras team led by President Ms Maria das Graças Silva Foster (fourth from right), giving the thumbs up to BrasFELS for the good progress of its projects

The final quarter of 2012 saw more visitors to Keppel's yards – a further testament to the continuing strong partnerships forged with our customers, as well as the growing reputation of Keppel Offshore & Marine (Keppel O&M).

#### **TIES THAT BIND**

Maersk Drilling's (Maersk) CEO
Mr Claus V. Hemmingsen and
his team visited Keppel FELS and
toured its yard on 31 October 2012.
They were warmly welcomed by
Mr Tong Chong Heong, CEO of
Keppel O&M, Mr Chow Yew Yuen,
COO of Keppel O&M, and Mr
Wong Kok Seng, MD (Offshore) of
Keppel O&M and MD of
Keppel FELS. The visit reaffirmed
strong ties built over years of
committed partnership.

Keppel FELS is currently building two high specification CJ70 jackup drilling rigs for Maersk, and to date, the yard has constructed three DSS<sup>TM</sup> 21 deepwater semisubmersible rigs for Maersk.

Over at Keppel Shipyard, SBM

Offshore's Supervisory Board and Board of Management visited the Floating Production Storage and Offloading (FPSO) unit, N'Goma (ex-FPSO Xikomba), docked at Keppel Shipyard for refurbishment and upgrading works. The FPSO is slated for completion in 3Q 2013 to be deployed in Angola, Africa.

Keppel FELS Brasil's BrasFELS yard in Angra dos Reis also hosted a visit by the President of Petrobras, Ms Maria das Graças Silva Foster and her management team, on 23 November 2012. Mr Kwok Kai Choong, President and CEO of BrasFELS, updated Ms Foster on the various projects currently under construction at the yard. These include the P-61 Tension Leg Wellhead Platform for the Papa-Terra field, the DSS™38E semisubmersible drilling rig for Sete Brasil, and FPSO Cidade de Paraty for SBM Offshore.

On 2 December 2012, BrasFELS hosted Dr Tan Lian Choo, Singapore's Charge d'Affaires ad interim/Minister-Counsellor to Brazil, accompanied by

Mr Choo Chiau Beng, CEO of Keppel Corporation and Singapore's non-resident Ambassador to Brazil. Dr Tan was given a tour of the yard, where she learnt how Singaporean expertise had helped shape the growth of BrasFELS and its reputation as the most established and reliable yard in the Latin American region.

#### **MYANMAR CONNECTION**

Twelve Burmese engineers from Keppel FELS had the opportunity to meet and greet H.E. U Myint Thein, Deputy Minister for Labour of Myanmar and his delegation when they visited the Keppel FELS yard on 10 November 2012. During the sharing session, H.E. U Myint Thein witnessed the confidence and capability of the Burmese engineers and expressed his appreciation of the training which Keppel O&M has provided for them. The Deputy Minister also commented that he believed there are further collaboration opportunities between Mynamar and Keppel.

#### **SUCCESS RECIPE**

As part of knowledge sharing,
Keppel FELS hosted a visit on
9 November 2012 for participants
of Manufacturing Excellence Award
(MAXA)'s Excellence Community –
a platform for participants to learn
from past MAXA winners. Being
the first local company to receive
the prestigious award in 2008,
Keppel FELS joins a select group of
companies recognised for attaining
the highest global standards in
manufacturing innovation and
excellence.

### Innovative deepwater solutions



KOMtech and FloaTEC have developed the Extendable Draft Semisubmersible (left) and Deep Draft Semisubmersible (right) to provide companies with alternative dry tree solutions

Keppel Offshore & Marine Technology Centre – Deepwater Technology (KOMtech – Deepwater Technology) has collaborated with FloaTEC LLC (FloaTEC) to jointly develop the designs for an **Extendable Draft Semisubmersible** (E-SEMI) and a Deep Draft Semisubmersible (DDS). These specialised floating production systems provide alternative and viable semisubmersible solutions for dry tree applications.

### **EXTENDABLE DRAFT SEMISUBMERSIBLE**

The E-SEMI is a hybrid design, conventional deep draft and truss structured semisubmersible. It was first proposed in 2004 as a feasible solution to dry tree application in deepwater drilling and production.

Since then, research and development has been carried out at different phases by KOMtech - Deepwater Technology and FloaTEC. The geometry and structural configuration of the E-SEMI have evolved into the improved 'radiated column E-SEMI' with the aim of improving its structural robustness and global performance.

Comprising a second tier pontoon (STP) connected to a conventional semisubmersible, the E-SEMI uses

extended-columns to reduce heaving motion. This reduction in heaving motion allows for the application of dry tree solutions (top tension rise) which require lower maintenance resulting in lower operating expenses, easier well intervention and reservoir access, as compared to a traditional wet tree solution.

Existing dry tree solutions, namely the Tension Leg Platform (TLP) and the Spar platform, both present challenges that are minimised in the E-SEMI. For the TLP, costs for the vertical anchors increase significantly with water depth, and its deployment in water

depths beyond 1,600 metres is still unproven. For the Spar, installation is cumbersome and expensive for payloads exceeding 25,000 tonnes. The E-SEMI, on the other hand, circumvents the limitations of the TLP and the Spar.

Currently, KOMtech is working together with FloaTEC on the improvements of the extended-column connector design in order to address the challenges of lowering and locking the STP.

#### **DEEP DRAFT SEMISUBMERSIBLE**

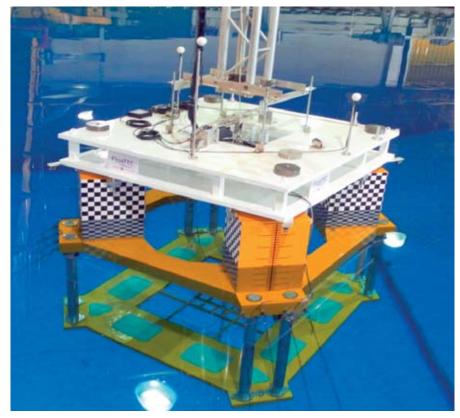
The DDS is a new concept developed as an ultradeepwater, cost-effective solution for production platforms to support dry tree systems.

It is designed to support the full drilling rig and Top Tensioned Riser (TTR) system for production, water injection, gas injection and drilling. It also supports Steel Catenary Risers (SCRs) for oil and gas export risers, and consist a hull that is optimised for riser performance and constructability.

This advanced deep water solution, like the E-SEMI, avoids the water depth limitation of the TLP as well as the installation challenges of the Spar. It is designed for the ultradeepwater region of offshore Brazil, West Africa and Australia.

#### STRENGTH IN PARTNERSHIP

The state-of-the-art E-SEMI and DDS wave model tests are the result of continued close cooperation between KOMtech, FloaTEC and Lab Oceano, the premier Brazilian laboratory at the Federal University of Rio de Janeiro. These tests have further enhanced the wave basin experience in Brazil through the use of feasible semi solutions for dry tree applications.



 $The \ E\text{-SEMI} \ is \ a \ hybrid \ design, \ conventional \ deep \ daft \ and \ truss \ structured \ semisubmersible$ 

# Delivering Paradise with passion



Keppel FELS delivered Paradise 400, a customised KFELS B Class jackup rig to Safin ahead of schedule and with a strong safety record

Keppel FELS has delivered Paradise 400, a high-specification KFELS B Class jackup rig to Safin Gulf FZCO (Safin) ahead of schedule and with a strong safety record. The rig is a refurbishment and upgrade of a KFELS B Class jackup rig that Keppel FELS purchased in 2011.

Developed by Keppel's jackup rig design arm, Offshore Technology Development, the KFELS B Class rig is able to operate in water depths of 400 ft with a drilling depth of 30,000 ft. It is equipped with a full 15,000 psi blowout preventor system, 70-ft cantilever outreach, with upgraded mud pit storage capacity of 4,000 bbls and accommodation for up to 150 personnel.

Mr Wong Kok Seng, MD of Keppel FELS said, "We are always on the lookout for ways to create win-win situations for our customers. When we saw the opportunity to provide a high quality rig within a compressed time frame, we knew that it would be an attractive option for our customers as such jackups are in high demand, especially for those scheduled for delivery in 2012.

"Leveraging our expertise as a designer and a builder, we are able to customise rigs to their requirements and deliver safely, within budget and ahead of schedule. We thank Safin for their confidence in us and look forward to supporting them as they grow their fleet of rigs."

Mr Raimonds Namikis, Executive VP of Safin said, "Ordering this rig has been a good investment for us. With the large orderbook that Keppel FELS has, we are pleased to have been able to receive a high specification jackup rig within about a year. This has enabled us to fast track our fleet expansion programme and put the rig out in the market ahead of other operators. We continue to see strong demand for such high specification jackups, from the Middle East to the Gulf of Mexico.

"The KFELS B Class is a proven design and with the Paradise 400's

increased specifications, we are confident that it will be a success wherever it operates. This jackup is testament to Keppel FELS' reputation as the world's leading rig builder and designer and the added value they give to their customers."

The new rig has been upgraded with two additional knuckle boom cranes installed on the port and starboard sides of the cantilever platform to improve efficiency for material handling and promote a safe working environment.

Besides the increased mud pit capacity to improve rig flexibility for mud mixing operations, the latest mud treatment technology such as balanced elliptical motion and cascade shakers have been installed to deliver better throughput capacity.

A compact, fit-for-purpose derrick mounted Bridge Crane has been installed to improve safety and efficiency for offline stand building and pipe racking. Its offline stand building capability enables it to handle drill pipes more efficiently.

Designed for maximum uptime with reduced emissions and discharges, the KFELS B Class rig received the Prestigious Engineering Achievement Award 2009 from Institution of Engineers Singapore for its environmentally-friendly features.

### **Trading industry insights**



Mr S. Iswaran, Singapore's Minister in the Prime Minister's Office and Second Minister for Trade and Industy, and Home Affairs, touring Keppel's exhibition booth at OSEA 2012 with Keppel O&M senior management including Mr Tong Chong Heong (third from left), CEO, and Mr Chow Yew Yuen (second from left). COO

Bolstered by healthy fundamentals, Singapore's offshore and marine sector remains strong, achieving a total turnover of \$13.3 billion in 2011, comparable to the \$13.5 billion achieved in 2010 despite the global economic downturn.

However, the industry needs to do more to meet the challenges of the future. This was shared by Mr Chow Yew Yuen, COO of Keppel Offshore & Marine (Keppel O&M) who was a keynote speaker at the 19th International Oil and Gas Industry Conference and Exhibition (OSEA) held from 27 to 30 November 2012.

He shared on the trends in the offshore industry, the challenges and the role Asian companies can play to grow the sector.

"Despite the uncertainty of the Eurozone, the Middle East and the recovery of the US economy, the oil and gas sector is likely to remain robust, backed by a steady oil

price. Asia and Latin America have continued to grow and countries with strong offshore and marine sectors will be well placed to service the market," said Mr Chow.

On challenges ahead, he shared, "Shale gas and renewables have the potential to reduce the demand for oil and gas as the dominant energy resource. That, however, is unlikely to happen in the near term and may in itself present opportunities for oil and gas players in the future.

"In the mean time, the offshore oil and gas market continues to expand and evolve as demand for new rigs with higher safety and environmental specifications increase. Exploration is moving into deeper waters with harsher environments and more advanced technology will be required to go into new frontiers."

He added that National oil companies such as Petrobras in

Brazil are taking more ownership of rigs and production vessels, and having operations in such regions will be beneficial to shipyards.

The Near Market, Near Customer strategy has served Keppel O&M well over the years.

Mr Chow later echoed these sentiments over at the Singapore Maritime institute's 2012 Forum held at Nanyang Technological University (NTU) on 29 November 2012.

He was among a panel of experts which included Professor Freddy Boey, Provost, NTU, Mr Andreas Sohmen-Pao, CEO of BW Maritime and Dr Claus Myllerup, MD, Lloyd's Register Group Technology Centre.

Mr Chow spoke on Keppel O&M's R&D strategy of setting up technology centres in key locations such as Brazil, Houston and Europe to collaborate with like-minded partners and remain plugged into pertinent market advancements.

### From strength to strength in 2012

Rooted in strong fundamentals, Keppel Offshore & Marine (Keppel O&M) continues to meet the needs of its customers, all the while exceeding expectations in the face of an increasingly challenging global environment.

2012 was an eventful year with numerous prompt and safe deliveries, new orders and partnerships to propel the company foward.

#### January

KV Ventus, a wholly-owned subsidiary of Keppel Corporation, acquired a 49.9% substantial stake in OWEC Tower, an industryleading designer of jacket foundation, to strengthen Keppel O&M's range of solutions for the offshore wind industry.

Keppel AmFELS secured a contract from Diamond Offshore to construct and upgrade a deepwater semisubmersible rig.

Keppel Singmarine celebrated the christening of ROCKPIPER, a new-generation rock-dumping fall pipe vessel that was delivered safely, on time and within budget to Royal Boskalis Westminster.

### **February**

Keppel O&M Technology Centre (KOMtech) and ConocoPhillips announced a joint project to design a first-of-its-kind ice-worthy jackup rig to operate in the Arctic Seas.

ENSCO 8505, the sixth of seven ENSCO 8500 Series®



Capping a great partnership between Keppel FELS and Ensco is the seventh and final rig in the ENSCO 8500 Series® of ultra-deepwater semisubmersible rigs, ENSCO 8506



ROCKPIPER, a new-generation rock-dumping fall pipe vessel was delivered by Keppel Singmarine safely and within budget to Dutch dredging and marine contractor, Royal Boskalis Westminster N.V. (Boskalis)

semisubmersibles for Ensco, was delivered on time, within budget and with a perfect safety record.

#### March

Mr Chow Yew Yuen was appointed COO of Keppel O&M.

#### **April**

Keppel O&M's Technology Division was established to bring existing and new research and process improvement units under one umbrella to fortify the group's commitment to advance its technology leadership.

Keppel AmFELS won a contract from its repeat customer Perforadora Central SA de CV to build a LeTourneau Super 116E jackup rig.

**Keppel Shipyard secured contracts** 

and Offloading (FPSO) upgrading projects from SBM Offshore and Bumi Armada.

for Floating Production Storage

#### May

Keppel FELS delivered Piter Godovanets, Ukraine's first KFELS B Class rig.

Keppel O&M celebrated its 10th Anniversary on 1 May 2012 at its annual cocktail party at the Offshore Technology Conference in Houston, US.

#### lune

Keppel FELS secured a third contract from Maersk Drilling Holdings Singapore, a wholly owned subsidiary of A.P. Moller - Maersk A/S, to build a Gusto MSC CJ70 ultra harsh environment jackup rig.

Keppel FELS celebrated the naming of NEZALEZHNIST, Ukraine's second KFELS B Class jackup rig which was delivered safely, ahead of schedule and within budget.

Keppel Shipyard delivered to its repeat customer SBM Offshore, FPSO Cidade de Paraty - the yard's 100th FPSO/Floating Storage and Offloading (FSO)/ Floating Storage and Re-gasification Unit (FSRU) conversion and upgrading project.

Keppel FELS delivered ENSCO 8506, the final unit in the series of seven ENSCO 8500 Series® semisubmersible rigs it was engaged to build for Ensco.

Keppel Kazakhstan and its consortium partner, Ersai Caspian Contractor, secured a contract for a KFELS B Class jackup rig from Teniz Burgylau.

Keppel FELS Brasil secured an FPSO topside contract from MODEC and Toyo Offshore Production Systems Pte Ltd, a joint venture of Toyo Engineering Corporation and MODEC, Inc.

Keppel Shipyard secured three conversion and upgrading contracts from PTSC Asia Pacific, Perenco Group and BC Petroleum.

#### **AUGUST**

Keppel O&M through its subsidiary Fernvale firmed up contracts for the design and construction of five additional DSS™ 38E semisubmersible drilling rigs for Sete Brasil Participações SA.

Continues on page 22...



Bumi Armada's FPSO Armada Sterling (on left) and FPSO Armada Claire (on right) are seen docked side by side at Keppel Shipyard. Armada Sterling is the tenth project to be completed by Keppel Shipyard for long-term customer Bumi Armada. FPSO Armada Claire is currently undergoing refurbishment and upgrading works at the yard

Keppel FELS Brasil clinched two contracts from Petrobrasled consortiums, Guara BV and Tupi BV, for the fabrication and integration of topside modules for the FPSO units P-66 and P-69.

Keppel FELS signed a contract to build for Floatel a DSS™ 20NS accommodation semisubmersible rig.

#### **SEPTEMBER**

Keppel O&M and its Italian customer Saipem S.p.A celebrated the naming of Castorone, one of the world's largest and most capable pipelay vessels.

Keppel FELS delivered Seafox 5, built to its proprietary Multi-Purpose Self-Elevating Platform (MPSEP) design, to the Seafox Group.

Keppel Shipyard delivered FPSO Cidade de Anchieta to SBM Offshore.

#### **OCTOBER**

Keppel O&M appointed Mr Michael Chia as MD (Marine) of Keppel O&M, Mr Wong Kok Seng as MD (Offshore) of Keppel O&M and Mr Chor How Jat as MD of Keppel Shipyard.

Keppel FELS delivered ahead of schedule and with a strong safety record, Paradise 400, the first highspecification KFELS B Class jackup rig for Safin Gulf FZCO.

Keppel Shipyard delivered FPSO Armada Sterling safely and promptly to Bumi Armada.



Keppel FELS delivered Seafox 5, one of the world's largest offshore wind turbine installers and the first to be built in Singapore, capable of operating in up to 65-metre water depth in harsh environments - the deepest for such vessels. Seafox 5 was delivered to the Seafox Group ahead of time and with an impressive safety record

Keppel Singmarine commemorated its rich history and strong shipbuilding capabilities at its 125th Anniversary, held on 30 October 2012.

#### **NOVEMBER**

Keppel Subic Shipyard announced its contract with Shell Philippines Exploration B.V. to build a depletion compression platform, while Keppel Verolme was engaged by Heerema Marine Contractors Nederland B.V. for the drydocking survey of a deepwater construction vessel.

Keppel O&M celebrated its 10th Anniversary on 26 November 2012 at Gardens by the Bay with Deputy Prime Minister and Minister for Finance, Mr Tharman Shanmugaratnam as Guest-of-Honour.

#### **DECEMBER**

Keppel FELS delivered PRIMUS, a KFELS B Class jackup rig, to offshore Mexican oil field services company, Oro Negro, seven days early and with a perfect safety record.

Keppel FELS won a contract from PEMEX Exploracion y Produccion, a subsidiary of Mexico's national oil company, Petroleos Mexicanos, to build two KFELS B Class jackup rigs.

### Shipshape execution



Mr Morten Poulsen, Senior Director of Maersk, presented Keppel FELS with a safety bonus cheque of US\$30,000 for the four million safe man-hours achieved on jackup rig B331



Commemorating two million safe man-hours on Project B333, Mr Yuichiro Ichikawa (left), Representative Director, Senior Managing Executive Officer of JDC presents Mr Wong Fook Seng (right), ED (Operations) of Keppel FELS with a plaque

Keppel Offshore & Marine (Keppel O&M) is bustling with activity as new projects pull in to the yards. By setting high standards in all areas of work, the project teams have achieved many safety milestones this year.

Double celebrations were held on 18 October 2012 for the safety achievements of Discovery Offshore's two KFELS Super A Class rigs under construction at Keppel FELS. A total of five million safe manhours were recorded on the jackup rigs, B322, Discovery Triumph and B323, Discovery Resilience.

In recognition of the project team's safety efforts, Mr Shannon Guidry, GM, International Operations, from Hercules Offshore (Houston) presented Mr Yong Chee Min, GM, HSE of Keppel O&M with a safety bonus of \$10,000. With more than 80% of construction completed, the new generation KFELS Super A Class jackup rig, Discovery Triumph, achieved 3.4 million man-hours without lost time incident (LTI). Discovery Resilience, which is nearing the half way point in its construction having reached a safety milestone of 1.6 million man-hours worked without LTI.

The next day, JDC and Keppel FELS jointly celebrated the achievement of two million safe man-hours on the project, B333, Hakuryu 11. On 19 October 2012, Mr Yuichiro Ichikawa, Representative Director and Senior Managing Executive Officer of JDC presented Mr Wong Fook Seng, ED (Operations) of Keppel FELS, with a safety bonus cheque of US\$10,000.

Longstanding customer, Maersk also marked two more milestones with Keppel FELS on 23 November 2012. The first was the strike steel of jackup rig B347, followed by an award ceremony for jackup rig B331 which achieved four million safe man-hours. Mr Morten Poulsen, Senior Director of Maersk presented Keppel FELS with a safety bonus cheque of US\$30,000 in commemoration of an excellent safety record.

On jackup rig B335 for Transocean, Keppel FELS also clocked in a total of two million safe man hours. To commemorate this achievement, Mr Ray Campbell, Transocean Project Manager for B335 presented Keppel FELS with safety bonus cheque of US\$10,000 on 11 December 2012. Mr Dan Farr, Director of New Builds at Transocean was also present to commemorate the safety collaboration between Transocean and Keppel FELS.

### Spurring research and innovation

The annual Keppel Offshore & Marine (Keppel O&M) Lecture is jointly organised by Keppel O&M and the National University of Singapore (NUS) under the auspices of the Keppel Professorship. Started in 2003, the lecture has grown in tandem with the partnership between both organisations to promote research into offshore and marine technology.

To commemorate the 10-year partnership, Professor Ho Teck Hua, VP (Research Strategy) of NUS presented a token of appreciation to Mr Choo Chiau Beng, CEO of Keppel Corporation, at this year's lecture held on 31 October 2012.

The guest speaker at this year's

lecture, Professor Kazuo Nishimoto, a Professor at the University of Sao Paulo, is also the latest appointed member of the Keppel Technology Advisory Panel (KTAP), having joined in January 2012. The KTAP comprises eminent business leaders, professionals and industry experts to guide and promote a culture of innovation in the Keppel Group.

The topic of the lecture was "Numerical Offshore Tank -A Deep Water Technologies Development Tool in Brazil". Designed to simulate deep sea drilling conditions, the model provides numerical and experimental analysis of offshore systems and offers a future vision



Guest speaker Professor Kazuo Nishimoto shares on deep-water technologies developments in Brazil at the 10th Keppel O&M Lecture

into oil and gas exploration in pre-salt Brazil.

This year's lecture also marked five years of valuable contributions made by Professor Andrew C. Palmer as Keppel Chair Professor. Professor Palmer was presented with a token of appreciation by Mr Choo in honour of his service.

### Pink of health

Keeping employees in the pink of health has helped the Keppel Group reap the benefits of a fit and productive workforce. For its efforts, the Group received recognition at this year's Singapore 'Helping Employees Achieve Life-time Health' (HEALTH) Awards which was organised by Singapore's Health Promotion Board (HPB).

Keppel Shipyard and Keppel FELS each received the Platinum Award, while Keppel Land and Keppel Logistics clinched Gold, with Keppel Corporation wining Silver. To be eligible for the Platinum

Award, the organisation must have won at least two consecutive Gold Awards.

Gracing the ceremony as Guest-of-Honour was Dr Amy Khor, Minister of State for Health and Manpower, who awarded the trophies to the winners.

#### **ACTIVE FOR LIFE**

The annual Keppel FELS Active Day, held on 30 November 2012, is one of the ways in which the company promotes a healthy lifestyle at the workplace. The slogan for the event, 'Be Kind. Be Safe. Be Healthy.' highlights the important link between personal acts of kindness and a healthy and productive workforce.

Over at Keppel Shipyard, health promotion campaigns such as smoking cessation programmes, coupled with counselling and support for smokers wanting to kick the habit are also in place. Regular talks on topics such as workplace communicable diseases, hypertension and cholesterol management are also conducted by the company throughout the year.

### **Nimble operations**

Flexibility in hiring workers helped Keppel Offshore & Marine (Keppel O&M) to quickly capture opportunities during the marine and offshore sector boom from 2007 and 2011, shared a report by Singapore's Ministry of Trade and Industry (MTI).

The MTI Occasional Paper on

Population and Economy published on 25 September 2012 explained that Keppel O&M's ability to grow its workforce readily enabled the company to meet hectic delivery schedules.

The paper also indicated that Singapore's two leading shipyard groups – Keppel O&M inclusive - were so successful during the period that they secured approximately 70% of global orders of jackup construction and Floating Production Storage and Offloading conversion projects.

# **Engaging young talents**

"How do we provide young Keppelites with opportunities to learn, receive training and be challenged?"

This was one of the topics discussed by Mr Tong Chong Heong, CEO of Keppel Offshore & Marine with management trainees at the CEO Dialogue Session held on 23 October 2012. Young Keppelites imbibed insights from senior management and shared their vision for the company, as well as expectations for their own growth.

Project manager at Keppel
Shipyard, Shawn Sdat, recounted
his career journey, sharing, "My
job at Keppel O&M is one of my
greatest assets. The company has
granted me many opportunities
beyond work, including
participation in the 2010 National
Day Parade's marching contingent.
I have learnt much through the



Management trainees in Keppel O&M interacted with the senior management, including Mr Tong Chong Heong, CEO (second from right), Mr Wong Kok Seng, MD (Offshore) (far right) and Dr Lee Chay Hoon, GM (Organisation Development) (second from left)

company over the years and look forward to contribute to its future."

Senior project superintendent at Keppel FELS, Tan Kiat Hui added, "This dialogue session reaffirms senior management's commitment to develop young Keppelites. It is one of the many examples of how management goes out of their way to encourage us and helps to build our morale and commitment to excellence."







(Top photo) Toasting to Keppel O&M's decade of excellence were (front row, L-R) Mr Tong Chong Heong, CEO of Keppel O&M; Dr Lee Boon Yang, Chairman of Keppel Corporation; Mr Tharman Shanmugaratnam, Deputy Prime Minister and Minister for Finance; Mr Choo Chiau Beng, CEO of Keppel Corporation and Chairman of Keppel O&M; Mr Chow Yew Yuen, COO of Keppel O&M, and the boards and management of Keppel Corporation and Keppel O&M;

(Bottom photos) Dr Lee Boon Yang, Mr Choo Chiau Beng, Mr Tong Chong Heong and Mr Chow Yew Yuen with Deputy Prime Minister Mr Tharman Shanmugaratnam at the celebration activities during the event

### Marking a decade of excellence



Deputy Prime Minister and Minister for Finance, Mr Tharman Shanmugaratnam (third from left) touring the exhibition hall of the Keppel O&M 10th anniversary celebrations with Dr Lee Boon Yang, Chairman of Keppel Corporation (second from left), Mr Choo Chiau Beng (third from right), CEO of Keppel Corporation and Chairman of Keppel O&M, Mr Tong Chong Heong, CEO of Keppel O&M (extreme left), Mr Chow Yew Yuen (extreme right), COO of Keppel O&M and Mr Wong Kok Seng (second from right), MD (Offshore) of Keppel O&M as hosts

Having commenced the first leg of celebrations commemorating 10 years of excellence at the Offshore Technology Conference (OTC) in Houston in May 2012, Keppel Offshore & Marine (Keppel O&M) brought the party home to Singapore on 26 November 2012.

The soiree, held at the newly opened Gardens by the Bay, saw the Keppel and Keppel O&M Board of Directors and senior management alongside customers, business associates and partners, former Keppel Directors and friends to celebrate the closing of a momentous year.

Gracing the party as Guest-of-Honour was Deputy Prime Minister and Minister for Finance, Mr Tharman Shanmugaratnam, who was brought through a colourful exhibition of Keppel O&M's past, present and future by the Keppel Board of Directors and senior management. Later, the group led the guests in a toast to Keppel O&M's continued success and growth.

During his address, Mr Choo Chiau Beng, CEO of Keppel Corporation and Chairman of Keppel O&M spoke on how Keppel O&M's decision to integrate had been strategically beneficial to both Keppel and its customers.

"The last 10 years have proven that this integration strategy is right for us. It has demonstrated that a united whole is far greater than the sum of the parts. "The confidence and support from all of you have made Keppel Offshore & Marine where we are today. My sincere thanks goes out to our customers and business partners."

Mr Tong Chong Heong CEO of Keppel O&M

"By eliminating duplicity and internal competition, streamlining our operations as well as harnessing synergies and combined strengths, we have maximised value for not only ourselves, but also our customers and business partners in more ways than one. In the process, we have grown from strength to strength," said Mr Choo.

Since 2002, the collective strength of Keppel O&M has delivered strong results. Revenue grew three-fold from \$1.9 billion in 2002 to over \$5.7 billion in 2011. For the first nine months of 2012, Keppel O&M has achieved over \$6.2 billion in revenue. Full year 2012 also saw healthy new orders at \$9.9 billion. These achievements were generated by a global workforce of over 30,000, a significant increase from around 14,000 in 2002.

Keppel O&M owes its success today to the passion, dedication and commitment of Keppelites, past and present, who contributed to the growth of the company with the Keppel hallmark *Can Do!* spirit.

Continues on page 28...

#### **CELEBRATING WITH FRIENDS**



Mr Choo Chiau Beng (centre) with Mr Foster Manning (left) of Definitive Management & Investment and Mr Goh Boon Kiat, former Keppel Singmarine Executive Director



(From left to right) Mr Alan Choe, former Director of Keppel Land; Mr Loh Wing Siew, former MD of Keppel Corporation; Mr Choo Chiau Beng; Mr Hwang Peng Yuan, former Director of Keppel Corporation; and Ms Wang Look Fung, Director of Group Corporate Affairs, Keppel Corporation



Mr Tong Chong Heong (left) with Mr David Chin (right), former Keppelite and Chairman of Keppel O&M Alumni, and Mrs Chin (centre)



Mr Chor How Jat (left), MD of Keppel Shipyard with Mr Neil Haworth (right), Director of Boskalis International



Mr Michael Chia (left), MD (Marine and Technology) of Keppel O&M with Mr Neil Glenn (right), MD of Swire Pacific Offshore



H.E. Tee Tua Ba (left), Non-Resident Ambassador of Singapore to United Arab Emirates; Mr Wong Kok Seng (right), MD (Offshore) of Keppel O&M and MD of Keppel FELS and Mr Tan Eng Bock (centre) of Kyowa Security

#### **WELL WISHES FROM CUSTOMERS**



One of our rigs recently completed works at Keppel FELS, and the rig has set sail. We are very pleased with the work and teamwork shown by Keppel O&M. Best wishes to Keppel O&M on its 10th anniversary.

Kris Wiluan, Chairman, KS Energy (second from right)



I would like to thank Keppel for being so committed to their customers and projects. Keppel has executed their projects for us with excellence every time and we are very happy. I'm also pleased that we will be working together again very soon. I wish Keppel O&M long term success and growth moving forward.

Cristina Pinto, MD, OSX (centre)



Maersk is a company that is accelerating our growth against the backdrop of the growing offshore and marine industry. We want to grow in size but we cannot do that without the help of Keppel FELS. We wish Keppel O&M all the best moving forward and hope that the company can grow with us.

Jan Holm, MD (Singapore), Maersk Drilling (left)

Keppel O&M is doing a fantastic job for us. If anyone can deliver 20 rigs next year, it's this yard, because they have a great team, they have great teamwork, and they have great processes. I wish Keppel O&M every success, this year, and for the next 50 years.

Mike Kelly, COO, Standard Drilling



We started working with Keppel two years ago, for a very difficult project – pipelay vessel Casterone. It was extremely challenging but I found that Keppel people never give up in the face of difficulties. Keppel is a great corporation and working with the company has been fantastic.

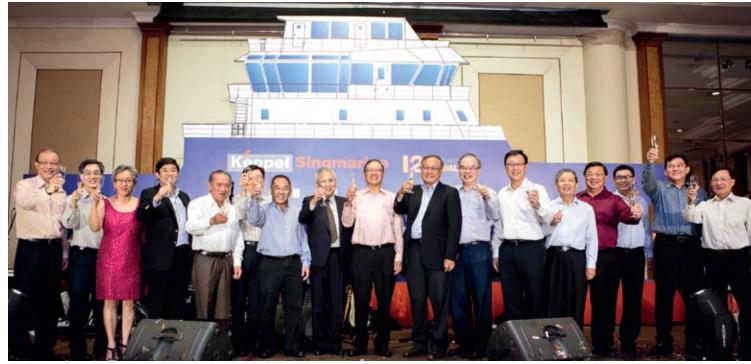
Mauro Piasere, Project Director, Saipem (right)

We rely on Keppel to deliver timely and safe projects to our clients in Malaysia. They have done a good job and are very responsive to our needs. We are happy to see how Keppel O&M has grown from strength to strength over the last 10 years alongside partners like us.

Murugan Pitchai, Executive VP (Engineering, Construction, Operations & Maintenance), Petrofac (Asia Pacific)

# 125 years of shipbuilding excellence

A warm celebration with rounds of toasts among old friends and staff from past and present mark Keppel Singmarine's 125th anniversary dinner on 30 October 2012.



The Board and Management of Keppel Offshore & Marine and senior management from Keppel Corporation raise a toast in unison to commemorate Keppel Singmarine's 125 years' journey to shipbuilding excellence



Mr Chow Yew Yuen, COO of Keppel O&M and Chairman of Keppel Singmarine emphasised the importance of people in Keppel Singmarine's success



Mr Choo Chiau Beng (right), CEO of Keppel Corporation and Chairman of Keppel O&M, presents a token of appreciation to Guest-of-Honour Mr Loh Wing Siew (left), former Chairman, Singapore Slipway, Singmarine **Industries and Keppel Marine Industries** 

2012 marks the 125th year since the beginning of Keppel Singmarine. From its humble start servicing boats and coastal vessels as Singapore Slipway in 1887, Keppel Singmarine has come a long way. Today, the company is an established shipbuilder with a track record of some 400 newbuild projects.

To commemorate Keppel
Singmarine's milestone
achievement, a celebration
dinner was held at Singapore's
Orchard Hotel Grand Ballroom
on 30 October 2012. More than
400 guests comprising customers,
business associates, past and
present employees of Keppel
Singmarine and former staff of
Singapore Slipway gathered in
an evening of camaraderie and
high spirits.

The Guest-of-Honour for the event was Mr Loh Wing Siew, former Chairman of Singapore Slipway, Singmarine Industries and Keppel Marine Industries. Citing achievements backed by 125 years of heritage, Mr Loh shared on the strong foundation laid by pioneering leaders that paved the way for Keppel Singmarine's success today.

Mr Loh said, "It is hard to imagine that Keppel Singmarine today, with its technologically advanced capabilities to provide

a comprehensive range of sophisticated vessels, started as a single slipway in the early 1880s at Sandy Point, better known as Tanjong Rhu today. The company's focus on developing human capital, and its efforts at forging a common bond, has led Keppel Singmarine to where it is today."

Echoing Mr Loh's thoughts on the contributions of dedicated men and women behind the company, Mr Chow Yew Yuen, COO of Keppel O&M and Chairman of Keppel Singmarine, said "Throughout Keppel Singmarine's history, we have been privileged to have strong boards, management teams and dedicated people who have diligently contributed to the growth and success of the company.

"They have worked together to steer the company through the difficult times of the industry, and each time, the company had emerged stronger."

Guests at the dinner enjoyed an inspiring video that illustrated Keppel Singmarine's transformation through time.

Many were glued to the screens as they witnessed Keppel Singmarine's journey from its rich past to the thriving present. For many of the older staff present, the video provided a cherished trip down memory lane.

Each guest was also presented with a complimentary commemorative coffee table book, which is a pictorial representation of Keppel Singmarine's 125 years of growth, as well as its future.

The night's celebration bore the strong mark of Keppel Singmarine's enduring legacy and was a fitting tribute to the past and present leaders who have contributed to its present-day success.

"Backed by a strong leadership, highly-skilled workforce and the Can-Do! spirit to meet our customers' needs, I am confident Keppel Singmarine will continue to be a success," said Mr Chow.

Indeed, Keppelites look forward to many more good years ahead for Keppel Singmarine.

### **Confidence in Keppel Verolme**



Keppel Verolme has secured a contract for the drydocking survey of the deepwater construction vessel Balder, its second visit to the yard

Keppel Offshore & Marine's (Keppel O&M) subsidiary, Keppel Verolme in the Netherlands, has secured a contract from its repeat customer Heerema Marine Contractors Nederland B.V. (HMC) for the drydocking survey of the **Deepwater Construction Vessel** (DCV) Balder. One of the largest crane vessels in the world, Balder measures 154 metres (m) in length and 86m in width, and is capable of lifting 6,300 tonnes.

The yard's work scope for this project includes the painting of the hull, bracings and cranes. It will also undertake steel renewals, as well as the maintenance and

repairs to the tanks, including piping and conservation works. The vessel is expected to be delivered in 1Q 2013.

This is Balder's second visit to Keppel Verolme; in 2001, it underwent an extensive conversion programme at the yard. The project work scope included the construction of facilities to receive the 120m-high pipe-laying tower and accompanying components.

Another project recently completed by Keppel Verolme for HMC was the life extension of the DCV Thialf, HMC's largest such unit. Over the years,

Keppel Verolme has undertaken several major projects for HMC.

Mr Harold Linssen, MD of Keppel Verolme, said, "Keppel Verolme is pleased to be of service to our repeat customer Heerema Marine Contractors again and look forward to delivering yet another high quality project to them safely, on time and within budget. We pride ourselves on our ability to respond swiftly to our customer's needs with innovative and cost-effective solutions."

### **Top honours**

A late senior executive and several Keppel Offshore & Marine yards received industry recognition in the last quarter of 2012 for their achievements.

#### A KEPPEL STALWART

For his significant contributions to the offshore and marine industry, the late Mr Nelson Yeo, former MD (Marine) of Keppel Offshore & Marine (Keppel O&M) and MD of Keppel Shipyard, was conferred the Lifetime Achievement Award at Lloyd's List Asia Awards held on 8 November 2012.

Mr Louis Chow, SGM of Keppel Shipyard, received the award on behalf of Mr Yeo's family.

#### **SHIPYARD OF THE YEAR**

At the same Lloyd's List Asia Awards, Keppel Shipyard was named Shipyard of the Year in recognition of its longstanding commitment to its customers.

The annual award is given to shipyards that have consistently delivered safe, high quality and prompt services. Mr Michael Chia, MD (Marine) and MD (Technology) of Keppel O&M received the award on behalf of the company.

#### **EXEMPLARY SERVICE**

Established just two years ago, Nakilat-Keppel O&M (N-KOM) in Qatar has swiftly established its reputation for quality operations in the Middle East. The yard was conferred the Ship Repair/Shipyard Award at Seatrade Middle East & Indian Subcontinent Awards 2012, which was held on 26 November 2012 in Dubai.
N-KOM was also named Shipyard of the Year at the Lloyd's List Middle East & Indian Subcontinent Awards 2012.

#### **COMMITMENT TO QUALITY**

Over in Brazil, Keppel FELS Brasil's BrasFELS was given the Quality and Sustainability Naval Award in the large-size company category by Brazil's National Union of Construction, Ship Repair and Offshore Industry (SINAVAL) and the non-profit organisation for sustainability, ARO Foundation.

Held on 12 November 2012 in Rio de Janeiro, the award ceremony aims to recognise and encourage sustainable practices in the global naval and offshore industry.

Separately, Seadrill's West Pelaut, a Semisubmersible Drilling Tender (SSDT) designed and built by Keppel FELS in 1994, has once again been awarded the "Best Performing Rig of the Year 2012" by Shell World Wide in the "Platform / Tender" category. The SSDT West Pelaut has won this accolade from Shell three times before in 2004, 2006 and 2008.



Mr Michael Chia, MD (Marine and Technology) of Keppel O&M, received the Shipyard of the Year award on behalf of Keppel Shipyard

### Striking start for Philippine offshore platform



(From left) Mr Sabino Santos, Asset Manager of Chevron Malampaya, Mr Tong Chong Heong, CEO of Keppel O&M, Ms Milagros Magsaysay, representative of the first district of Zambales, Mr Sebastian Quiniones, SPEX Asset Manager and MD, Ms Josefina Patricia Magpale-Asirit, Undersecretary for DOE, and Mr Gemiliano Lopez Jr., Chairman of PNOC-EC

Keppel Subic Shipyard in the Philippines has started construction of the first offshore platform to be fully built in the country. Together with its customer, Shell Philippines Exploration BV (SPEX), the yard marked the cutting of the first steel plate for a Depletion Compression Platform (DCP) on 7 December 2012.

Mr Tong Chong Heong, CEO of Keppel Offshore & Marine (Keppel O&M), shared, "Keppel has been present in the Philippines since 1975. Keppel Subic Shipyard is one of our two yards in the country. Over the years, the yard has grown its ship repair and fabrication competencies. As a key yard in Keppel O&M's global network, we continue to enhance its facilities and the capabilities of its workforce to take on more offshore projects.

"We are committed to extend and improve our services for our customers. With the strong support from the national and local government, and good teamwork between us and SPEX as well as their joint venture partners, we are confident that this project will progress safely and promptly."

Mr Leong Kok Weng, President of Keppel Subic Shipyard, said, "We are working as one team with SPEX towards our common goal of successfully completing the DCP. To ensure safe and efficient operations, we have been expanding our facilities and increasing the capabilities of our workforce."

When completed, the DCP will be deployed in the Malampaya gas field, near Palawan Island,

### Extending aid

Philippine President Benigno Aquino III was scheduled to attend the event but was called away to oversee the relief operations for the victims of typhoon Bopha, the strongest storm to hit the Philippines this year.

To assist the victims of typhoon Bopha, Keppel Philippines Marine and Keppel Subic Shipyard together donated PhP300,000 to the Philippine Red Cross.

Mr Tong Chong Heong, CEO of Keppel O&M, shared, "Our thoughts are with the families and victims of the typhoon. We hope that our contributions will go some way to provide them with comfort and assist them with recovery."

Philippines, where it will operate next to an existing shallow water production platform.

The development of the DCP forms Phase 3 of the Malampaya Deep Water Gas-to-Power project, which is led by the Department of Energy (DOE) and supported by the consortium comprising the Malampaya project operator, SPEX, and its joint venture partners, Chevron Malampaya LLC and the Philippine National Oil Company-**Exploration Corporation.** 

### Strengthening Singapore-Philippines Ties



Mr Choo Chiau Beng, CEO of Keppel Corporation and Co-Chairman of PSBC, delivered the opening remarks at the seminar

The economic forecast is looking good for the Philippines, providing opportunities for trade and collaboration with Singaporean companies. To boost business ties between the two countries, the Philippines-Singapore Business Council (PSBC) and the Makati Business Club jointly organised a mission to Singapore.

Mr Choo Chiau Beng, CEO of Keppel Corporation, in his capacity as Co-Chairman of PSBC, delivered the opening remarks at a PSBC Seminar organised by International Enterprise (IE) Singapore and the Philippines Department of Trade & Industry on 23 November 2012. The seminar, which was sponsored by Keppel Group, introduced investment opportunities in the Philippines, particularly Public-Private Partnership (PPP) projects.

"With the upcoming PPP opportunities in the Philippines, Singapore can play a role with our experience operating under the model," said Mr Choo, who also commented on Keppel's plans to further grow its shipyard operations in the Philippines.

### Delivered with pride

Keppel Batangas Shipyard celebrated the naming of its fifth crane barge project, named Toyo Simba on 11 September 2012, for its Japanese customer, Toyo Construction.

Mr Shunsuke Sugimoto, Executive Officer and GM, International Division, Toyo Construction, said, "We thank Keppel Batangas Shipyard for the timely and quality completion of Toyo Simba."

Mr Ramon M. Cornelia, VP (Operations) of Keppel Batangas Shipyard, added, "We are proud and honoured to have been been selected for the Toyo Simba project. This is an affirmation of

Toyo Construction's satisfaction in our services, and a great encouragement to us."

The RINA-classed crane barge, measuring 60 metres, is equipped with a crawler crane with a 400-tonne lifting capacity.

Toyo Simba sailed for Kenya to support the expansion of the Port of Mombasa, the largest port in East Africa.

Keppel Batangas Shipyard's strong track record of about 100 newbuild projects includes harbor tugboats, offshore support vessels, tankers, multi-purpose vessels and pontoon structure for offshore rigs. The yard also provides a comprehensive



(From left) Mr Poh Leong Kok, President, Keppel Batangas Shipyard, welcomes Mr Yoshikazu Katayama, Director and Senior Managing Executive Officer, Toyo Construction and Mr Shunsuke Sugimoto, Executive Officer and GM, International Division, Toyo Construction

range of ship repair and conversion services to its customers.

### Prepared at all times





ERM and BCM workshops have been rolled out across Arab Heavy Industries and Keppel Batangas Shipyard to bolster the Keppel O&M group's risk management culture and capabilities

To bolster the risk management culture at its overseas units, Keppel Offshore & Marine (Keppel O&M) conducted Enterprise Risk Management (ERM) and Business Continuity Management (BCM) workshops at Keppel Batangas Shipyard in the Philippines and Arab Heavy Industries (AHI) in Ajman, UAE.

Through interactive case studies and discussions, management

and supervisory staff familiarised themselves with the group's framework and approach to identifying, assessing and tackling risks.

Mr Poh Leong Kok, President of Keppel Batangas said, "It is good that my team was able to take time off to focus on ERM. ERM is a critical part of our

business unit here and I am

confident that the skills we have

learnt today will prove themselves useful."

Over at AHI, Mr L.H. Chan, GM, also commented, "The workshops were useful as they provided us with a proper framework to identify, assess and quantify our business risks and to prepare prevention actions and/or reactive actions."

# People-centric organisation



Dr Lee Chay Hoon, GM (Organisation Development) of Keppel O&M, shared on Keppel O&M's human resources management practices

Keppel O&M, which was conferred the title of Champion of HR at the HR Awards 2012, was invited to speak at the Human Resources Management (HRM) Awards Best Practices Congress.

Dr Lee Chay Hoon, GM (Organisational Development) of Keppel O&M, shared that employees of Keppel O&M hail from varied backgrounds but are united by the same core values. Dr Lee explained that this commonality comes from hiring people who display 'value fit' with the organisation, which is strengthened by initiatives and practices of the HR department.

Dr Lee also emphasised the group's mission to build a people-centric organisation, which has earned it generations of committed and passionate Keppelites.

# **Strong Brazilian capabilities**

BrasFELS receives US\$2 million in bonuses for safe and early delivery of FPSO Cidade de Sao Paulo.



The safe and early delivery of FPSO Cidade de Sao Paulo is the result of good teamwork between the BrasFELS and MTOPS project teams

Keppel FELS Brasil's BrasFELS yard in Angra dos Reis, Rio de Janeiro has delivered the Floating Production Storage and Offloading (FPSO) unit, Cidade de Sao Paulo 19 days ahead of schedule and with an excellent safety record.

It is the first of two FPSO projects
BrasFELS is undertaking for MODEC
and Toyo Offshore Production
Systems Pte Ltd (MTOPS), a joint
venture between MODEC, Inc.
(MODEC) and Toyo Engineering
Corporation (TOYO).

For achieving excellent safety performance throughout the two-year project, MTOPS awarded BrasFELS a safety bonus in addition to an early delivery bonus.

Having arrived at BrasFELS in 4Q 2011, FPSO Cidade de Sao Paulo will soon proceed to operate for Petróleo Brasileiro S.A. (Petrobras) and its partners in the pre-salt region of the Santos Basin. The FPSO has a production capacity of 120,000 barrels of oil per day (bopd) and is able to compress 5 million cubic metres of gas per day.

BrasFELS' work scope comprised the fabrication of its riser manifolds, laydown areas and the flare tower as well as the assembly and integration onboard the FPSO.

Mr Kwok Kai Choong, President and CEO of Keppel FELS Brasil, shared, "We appreciate our growing ties with MTOPS, MODEC and TOYO. The successful and early delivery of FPSO Cidade de Sao Paulo bears testament to the good teamwork and understanding between our companies and our ability to provide a high quality production vessel for Petrobras' operations. We are also thankful for these safety and early delivery bonuses, which provide affirmations to our efforts to ensure safe, prompt and high quality services for all our customers.

"As the most comprehensive yard in Latin America today, BrasFELS offers a full range of newbuild construction, conversion, upgrading, modification and repair services. We will continue to improve our infrastructure and capabilities to strengthen our strong track record for win-win-win collaborations – in other words, build synergistic partnerships between fleet operators, field operators and ourselves."

Mr Richard Matten, project manager of MODEC, noted, "We believe that working with established partners helps to ensure that our customers get their FPSO safely, on budget, to required quality level and on time to meet production targets. BrasFELS was our yard of choice for the FPSO Cidade de Sao Paulo project, and it did a remarkable job! BrasFELS worked very well with our project team to ensure the safe and prompt turnaround of this project.

"Presently, we are working with the yard on another project, FPSO Cidade de Mangaratiba. We are confident that this project too will be delivered to our highest satisfaction."

Scheduled to be delivered in 2014, FPSO Cidade de Mangaratiba will have a production capacity of 150,000 bopd and a storage capacity of 1,600,000 barrels of oil.

# **Building bilateral ties**

During the last quarter of 2012, the Keppel Group hosted government, business and media representatives from Latin America, contributing to the rapidly growing ties between the Latin American region and Asia.

### STRATEGIC DISCUSSIONS

Keppel Group was the strategic sponsor of the 10th run of the Latin Asia Business (LAB) Forum, a platform to foster investment, trade and thought-leadership between Asia and Latin America. Organised by International Enterprise (IE) Singapore, the Forum was held on 3 October 2012 at the Raffles City Convention Centre.

Prominent panelists shared their insights and expectations in areas of energy, finance and governance. They also delved into matters pertaining to growth and competitiveness. The Forum's

activities concluded with a Keppel-hosted cocktail reception attended by senior government officials and business leaders.

### **DEEPENING RELATIONS**

In conjunction with the LAB Forum, Keppel O&M yards also hosted a visit by ten prominent journalists from Latin America's broadcast and print organisations on 4 October 2012.

The journalists were in Singapore for the Far East Asia-Latin America Cooperation Journalist Visit Programme organised by the Ministry of Foreign Affairs.

Mr Chow Yew Yuen, COO of Keppel O&M, spoke to the journalists on Keppel O&M's businesses and his views on the market outlook.

## FRIENDSHIP THROUGH FILMS

Keppel's efforts in strengthening

relations between Singapore and Latin America continued into November 2012, with its support of the inaugural Keppel Latin American Film Festival (KLAFF) in Singapore.

Eleven award-winning films from six Latin American countries were screened at Golden Village, Vivo City from 14 to 20 November 2012.

The films were brought in by by the embassies of Brazil, Chile, Ecuador, Mexico, Panama and Venezuela. The festival brought together the Latin American ambassadors, communities and supporters at the opening day on 14 November 2012 to watch 'Our Father: The Last Meeting'. The Chilean film was chosen for its raw and honest portrayal of Chilean family culture. H.E. Chew Tai Soo, Singapore's Ambassador-at-Large was the Guest-of-Honour.



Keppel Group hosted the LAB Forum's networking reception with Mr Lee Yi Shyan (fourth from left), Senior Minister of State, Ministry of Trade and Industry as Guest of Honour. He was accompanied by (L-R) Mr Teo Eng Cheong, CEO of IE Singapore, Mr Chow Yew Yuen, COO of Keppel O&M, Mr Sunny George Verghese, Chairman, IE Singapore, Mr Michael Chia, MD (Marine and Technology) of Keppel O&M, and Mr Keith Teo, GM, Marketing of Keppel FELS



Mr Choo Chiau Beng (right), CEO of Keppel Corporation and Singapore's Non-Resident Ambassador to Brazil and Mr Luis Fernando de Andrade Serra (left), Head of Mission, Ambassador of Brazil at KLAFF Singapore 2012, a platform that strengthened cultural ties between Singapore and Latin America

Mr Choo Chiau Beng, CEO of Keppel Corporation, who is also Singapore's Non-Resident Ambassador to Brazil reiterated Keppel's support for the development of Asian-Latin American ties in his opening remarks.

He said, "This film festival is about bringing Singaporean culture and Latin American culture closely together. Latin America is an exciting region right now with possibilities extending beyond business. We have much to learn about their long history and cultural depth and are pleased to support the first Keppel Latin American Film Festival in Singapore."

## **Strong prospects in Latin America**

On the sidelines of the LAB Forum, Mr Chow Yew Yuen, COO of Keppel O&M, shared market insights on Brazil and Mexico with reporters.

On Brazil, he said, "Petrobras' new 2012-2016 business plan indicates that it will invest an amount of US\$236.5 billion, of which 60% is on exploration and production; this will lead to a ramp up in orders for deepwater rigs, Floating Production Storage and Offloading vessels and Offshore Support Vessels. With the new rounds of biddings and the participation of more oil companies like Shell, Repsol, Statoil and BP, we believe our business will grow."

In terms of infrastructure,
Mr Chow said, "Brazil's hosting
of the 2014 World cup and
2016 Olympics means that it
will need a significant amount
of investment to improve its
infrastructure. It has set up
trade missions such as APEX
Brasil to facilitate and promote
investments in Brazil. Keppel also
has the expertise to meet these
demands.

As for Mexico, Mr Chow also shared, "We have seen demand

"Latin America is an important market for Keppel. In Brazil, we identified the need to be there early on, even before their pre salt finds and before they had requirements for local content. To serve the Gulf of Mexico, we have a yard in Brownsville, Texas and we are also ready to support Mexico's oil and gas requirements in any way we can."

Mr Chow Yew Yuen COO of Keppel O&M

from the national oil company PEMEX for more rigs. At approximately 2.5 million barrels per day, Mexico is the world's eighth largest crude oil producer. PEMEX announced plans to increase the number of drilling rigs under operation in Mexican waters and around 40 rigs are said to be required over the next few years."

Mr Chow added, "I believe that operators will look to us because of our safety and delivery track record. They understand that reliability in a shipyard is of the utmost importance."

# After hours at the yard

After hours at Keppel FELS showed the fun-loving side of the yard's management and staff as they threw yet another entertaining party for customers and partners on 24 August 2012. These regular Sundowner evenings allow Keppel FELS to foster closer relationships with customers.

Themed "After Hours", the party saw representatives from Petrobras, Ensco, Rowan, Japan Drilling Company, Seafox, ABS and FloaTEC mingling amidst familiar tunes by well known musicians, Jack and Rai, and also being entertained by Singapore's famous comedian and drag queen, Kumar.

Mr Mohammed Sahlan, GM (Operations) at Keppel FELS, said, "Such events enable us to interact with them in a casual setting where we are able to put our

work aside and learn more about each other. Our customers also appreciate that we organise such regular engagement after a hard day's work."



Keppel FELS management with customers at the Sundowner event

# **Shooting for the stars**



Milton Tan, project superintendent at Keppel FELS, believes in aiming high and achieving excellence in all he does

In 2010, Milton Tan, project superintendent at Keppel FELS, armed with a sponsorship by the company, headed to the UK to embark on a degree programme at the Newcastle University for a Bachelor of Engineering in Marine Technology with specialisation in Naval Architecture.

He was one of those selected for leadership training under the Keppel Offshore & Marine Management Trainee (MT) programme.

With the Keppel Can-Do! Spirit and a mindset of excellence. Milton went on to achieve stellar academic performance, raking in seven awards for top performance.

These included Newcastle University's School Prize for Best Performance in Marine Technology with Naval Architecture, Society

of Naval Architects and Marine **Engineers Singapore (SNAMES)** Award for Top Overall Performance in Marine Technology with Naval Architecture, and the Institute of Marine Engineering, Science and Technology (IMarEST) Award for Top Overall Performance in Marine Technology with Naval Architecture.

Milton shared, "The decision to go back to study after having been out of school for five years was a difficult decision, but the work discipline and experience obtained from Keppel prepared me well. I also have my superiors to thank for their support."

# Vital alliances



(Front row) Mr Chow Yew Yuen (sixth from left), COO of Keppel O&M, Mr Wong Kok Seng (fifth from left), MD (Offshore) of Keppel O&M, Mr Aziz Merchant (third from left), ED (Engineering) of Keppel FELS with other Keppel senior management as well as the award recipients at Subcontractors' Night 2012

Keppel FELS' success and growth are underpinned by strong partnerships with its subcontractors and vendors. These relationships were strengthened on 29 October 2012 at Subcontractors' Night 2012, an annual event organised by the company for its subcontractors to provide their feedback and inputs to Keppel's senior management.

At the event, attended by some 200 Keppelites and subcontractors, Keppel FELS also showed its appreciation to subcontractors for their dedication, strong alignment to its values and goals, and outstanding operational performances.

Straits Innovation Pte Ltd received the 'Best in HSE' award, while

Fourseas Electrical & Engineering Company Pte Ltd and G&C General Contractors Pte Ltd were both conferred the '30-Year Partnership' Award.

# **Promoting a vibrant ecosystem**

Bringing in contracts from all over the world, Keppel Offshore & Marine (Keppel O&M) supports the growth of the value chain of local subcontractors and vendors who are critical members of the vibrant offshore and marine ecosystem in Singapore.

One long-time partner that Keppel O&M counts on since 1986 is Mectron Engineering Pte Ltd, which specialises in the design, installation and testing and servicing of electrical pump systems. Another is Aluminum Offshore, the world's largest helideck designer and builder which celebrates 22 years of valued partnership with Keppel FELS.

Subcontractors play a similarly critical role in Keppel's value chain, with some becoming resident contractors with offices in its yards. As subcontractors make up a significant portion of Keppel O&M's total workforce, their alignment to Keppel's values is vital for consistency in project delivery and quality.

With over 40 projects completed for Keppel to date, Heatec JieTong Holdings Ltd's (Heatec) commitment to safety, work excellence and timely deliveries have laid a strong foundation for partnership with Keppel. Heatec has supported Keppel since the late 1970s and became a resident contractor in 1996. They carry out piping and heat exchanger services and hydro-jetting services for Keppel Shipyard.

# United we stand

To overcome challenges in an everchanging global economy, unions, managements and the government must work in tripartite partnership and in support of each other to create a better workplace.

This was the message delivered by Mr Lim Swee Say, Minister at the Prime Minister's Office and Secretary General of the National Trade Union Congress (NTUC), at the 2nd Quadrennial Delegates Conference organised by the Keppel Employee Union (KEU). The conference, held on 29 August 2012 at Orchid Country Club, also marked the 44th Anniversary of KEU.

Minister Lim commended KEU's efforts over the years, saying, "KEU plans for leadership renewal



Guest-of-Honour, Minister Lim (3rd from right), with Mr Tong Chong Heong, CEO of Keppel Offshore & Marine (2nd from right), Mr Mohamed Yusop Bin Mansor, President of KEU (4th from right) and Mr Hoe Eng Hock (extreme left), ED of Keppel Singmarine at the 2nd **Quadrennial Delegates Conference** 

to ensure that the union remains strong with committed and passionate union members. I look forward to KEU's continued contribution to the labour movement".

Mr Hoe Eng Hock, ED of Keppel Singmarine, added "The volatile global business environment will

continue to be a challenge for us, but with the close co-operation, mutual understanding and strong partnership forged between the KEU and management over the years, we are confident that Keppel Shipyard and Keppel Singmarine will continue to do well in the future."

# Taking over the reins



Mr Razali Maulod, KEU's new President from 1 September 2012

Effective from 1 September 2012, Mr Razali Bin Maulod is Keppel Employees Union's (KEU) new President. He takes over from Mr Mohamed Yusop Bin Mansor, who served as President since 2007.

Mr Maulod joined Keppel Singmarine as a welder on 1 March 1979 and was subsequently promoted to senior welder.

He joined KEU and has served as

the Vice President of the union for more than ten years.

In his new appointment as President, Mr Maulod will oversee the interests of members from Keppel Shipyard, Keppel Singmarine and Keppel FMO. "I will do my best for the union and will continually find ways to better serve our workers. I am confident the committee members will lend me their fullest support in my new position", said Mr Maulod.

# Celebrating with solidarity and safety

In commemoration of Brazil's 109th Independence Day, Keppel's BrasFELS shipyard at Angra Dos Reis, Brazil, held an observance ceremony on 6 September 2012 with its employees and customers.

Mr Kwok Kai Choong, CEO and President of Keppel FELS Brasil, shared a message of solidarity and safety for the special occasion. He said, "I am very proud to be here as part of the BrasFELS family, especially because of the contribution we have made towards Brazil's oil and gas Industry and the country's economic growth through all the various projects that BrasFELS has delivered."

One of the highlights of the occasion was the celebration of the safety achievements of three projects; 1.5 million safe man-hours worked on the Noble Roger Eason drillship, three million man-hours safely worked on the Floating Production Storage and Offloading vessel Cidade de Sao Paulo and four million safe man-hours worked on the Tension Leg Wellhead Platform P-61.

Mr Kwok emphasised the need to always be vigilant and work safely together. "We have to ensure that we complete all our projects safely, without any lost-time incident, within schedule and within costs," he said.

Rewards were given out to personnel with exemplary safety

behaviour. One of them was Jorge William, a welder at BrasFELS, who had spotted a colleague coming down a gangway with both hands full of welding equipment, and immediately went up the gangway to help him and prevent a possible accident.



BrasFELS' employees rewarded for exemplary safety behavior



BrasFELS yard celebrates Brazil's 109th Independence Day

# Scaling new heights

Keppelites took on Malaysia's 1,276-m Mount Ophir as part of an adventure trip organised by the Keppel Recreational Club (KRC) from 21 to 23 September 2012. Keppel Shipyard's Stacy Lim, HR Executive and Amin Sugiri, Health, Safety and Environment Coordinator share how team spirit overcame the greatest challenge of the climb.

Setting out bright and early, our 42-strong group led by a park ranger and three local guides began our quest with energetic spirits.

Scaling boulders after boulders, some of which required the aid of ropes and ladders, many of us soon began to feel the physical strains of the challenging terrain. Fatigue set in but we shouldered on.

Our morale was always kept high, especially with leader of the pack, Mr Hoe Eng Hock, President of KRC and ED of Keppel Singmarine and the more experienced climbers taking great care to look out for all members of the team. They stopped the group intermittently to do headcounts and always made

sure everyone caught their breath before pushing the team to press on.

Mr Hoe was also tireless in going out of his way to guide us or looking out for those who tended to stray in excitement. His example bred within the group a sense of mutual responsibility in watching out for each other's safety.

We faced our greatest challenge before a four-storey high boulder, close to the peak and with no alternative route. With mutual encouragement and a can-do! spirit, each of us pushed through our individual fears and limits and made it to the summit.

Success was sweet and we rejoiced

at our accomplishment with cheers and high-fives all around. It was truly an exhilarating experience and we lingered at the summit, relishing the moment and taking photographs to capture memories.

Although the nine-hour hike up and down was extremely tough, the camaraderie we built with each other was well-worth the exhausting climb.

On our way back to Singapore, the stopover in Malacca offered us much needed rest and relaxation. We explored the town, taking in the sights and sounds of the historic city while sampling delicious local delights and shopping.



# **Breaking barriers in Brazil**



Open arms to welcome new experiences – Reagan Lim, Construction Manager at BrasFELS, visited the statue of Christ the Redeemer atop Corcovado in Rio de Janario

Working under foreign conditions in far-flung places while facing complex challenges is not new to Reagan Lim, 28.

He was a part of Keppel FELS's Flying Squad, an elite team of offshore repair specialists which can be activated at short notice and deployed to anywhere in the world to undertake emergency repair jobs. The work requires more than just technical expertise – the Squad is known to execute its missions with dedication and versatility even under critical conditions.

Packing in his passion for offshore repair work and well-honed resourcefulness, a vital knack from working in the Flying Squad, Reagan gamely took on a posting to BrasFELS in Angra dos Reis, Brazil, a year ago.

Today, Reagan is a Construction Manager at the yard, one of the leaders in the production team behind a drillship upgrade project. He and two other colleagues manage a workforce of 300 Brazilians who 'speak no English'. While language barrier was a challenge initially, Reagan has been able to build a good rapport with his colleagues.

"I assist the Construction
Manager Rodrigo Maillard.
We complement each other very
well. We are a good team," he
shared. "Necessity goes a long
way to help you overcome your
shortcomings. The first two weeks
were really tough. I had to
mull over even the simplest
of messages I wanted to put
across. But I just had to keep
trying because being able to
communicate effectively with

my team was key to getting my work done."

Harnessing the tools of technology, he picked up Portuguese quickly. Reagan elaborated, "The Apple iPhone, with its translation function, was of great help. I would ask my colleagues to write down essential Portuguese terms on a piece of paper, I would then translate these words using my iPhone."

Other than learning a new language, Reagan has come to appreciate the knowledge and cultural exchange offered by his stint, sharing, "I am open with all my colleagues – if they have a good solution, I will go with their ideas, but if I have a better solution, I will try to persuade them to they will listen to me."

He added, "In Singapore, the team I help manage might comprise foreign workers from India, Bangladesh and China. Because these workers are in our country, they have to adapt to our working style. Similarly, when we Singaporeans are in Brazil, we have to attune ourselves to the working style and culture of this country."

With his aptitude and experience in overcoming barriers, it is little wonder that barely one year into his posting, Reagan has adapted well to living and work in faraway Brazil and even forged strong bonds with his Brazilian colleagues.

# **Sporting spirit**

Keppel Verolme's inaugural soccer tournament kicked off on 7 September 2012, involving six teams and 72 players from various departments. The event drew hearty support from the rest of the company who were down at the competition venue to cheer their colleagues on.

After a series of exciting matches, the Pipe Fitter team emerged victorious. For their fair play, they were awarded the 'Sportsmanship Award'. A sumptuous barbeque dinner rounded up the evening's activities for everyone.

Separately, nine employees from Keppel Verolme joined the world's largest cycling squad of 12,000 cyclists in 'Ride for the Roses 2012' to raise funds for a Dutch charity group, KWF Cancer Society. Participating in the longest-distance category, they cycled across the Westland and Rotterdam region, covering 125 km each. A record of EUR2,100,000 was raised from the charity event.



Keppel Verolme soccer players, coaches and referees kicking off a fun-filled soccer tournament

# The coast is clear

Over in the Philippines, Keppel Batangas Shipyard honoured International Coastal Clean Up Day by cleaning up the shorelines of Batangas bay. 200 volunteers from Keppel Batangas Shipyard participated in the clean up, removing trash that could endanger marine life and other animals.

"Our actions speak of Keppel Batangas Shipyard's care for the environment and its support for responsible waste disposal and a cleaner coastline," said Ramon M. Cornelia, VP (Operations), Keppel Batangas Shipyard.



Keppelites clear the coastline in Batangas, Philippines

# **Enriching lives**

Karina Franco is one of seven students who received a Keppel AmFELS Dependent Scholarship on 16 August 2012. She is now into her junior year in the University of Texas at Brownsville where she is studying for her Bachelor of Business Administration.

Like Karina, all the scholarship recipients are children of Keppel AmFELS' employees who have been with the company for five or more years. The scholarship will help the students cover the costs of tuition and books. Karina is the daughter of Raul Franco, a 13-year Keppel AmFELS veteran.

"We want to send a message to the community, a message on the importance of education and its ability to improve lives – that education is the way to a better life," said Mr G.S. Tan, President and CEO of Keppel AmFELS, at the scholarship award ceremony.

Mr Gilberto Elizondo, Keppel AmFELS' VP of HR, added, "Keppel AmFELS is a long-time supporter of education in the Rio Grande Valley.

"This year, we added to our support by focusing on the sons and daughters of our



Mr G.S. Tan, President and CEO of Keppel AmFELS (3rd from right) and Mr Gilberto Elizondo (right), VP of Human Resources of Keppel AmFELS, presented cheques to the children of Keppel AmFELS employees to help further their studies

dedicated employees with the Keppel AmFELS 2012 Dependent Scholarships. We take pride in seeing these young men and women achieve their degrees and become positive leaders in our community."

# Championing education in Azerbaijan

As an advocate of Azerbaijan's long-term sustainable development, Caspian Shipyard Company (CSC) contributed

Mr Hafiz Pashayev (right), Rector of ADA greets Mr Chandru Rajwani (left), CSC President

175,000 Azerbaijani manats (\$275,000) to the Azerbaijan Diplomatic Academy (ADA) endowment fund.

The new campus of ADA in Baku was inaugurated by President of the Republic of Azerbaijan H.E. Ilham Aliyev, with Ms Mehriban Aliyeva, the First Lady of Azerbaijan, and ambassadors of various countries in attendance, on 21 September 2012.

Guests toured the newly opened state-of-the-art and green campus which is home to three schools:

School of Public and International Affairs, School of Business and School of Humanities and Sciences.

In recognition of CSC's generosity, one of the university rooms, the ADA Student Government Lounge, was christened 'Keppel Offshore & Marine' by President of CSC, Mr Chandru Rajwani at the ceremony.

CSC will be able to train its local employees at the university, empowering them to be effective and responsible contributors to the Azerbaijan community.

# Igniting hearts and lives



Dr Lee Boon Yang (right), Chairman of Keppel Corporation and Mr Choo Chiau Beng (left), CEO of Keppel Corporation and Chairman of Keppel O&M, presenting a token of appreciation to Guest-of-Honour Mr SR Nathan (centre) at the Keppelites Charity Concert 2012

It was a showcase of talents at the Keppelites Charity Concert 2012 as over 200 Keppelites from Keppel Offshore & Marine (Keppel O&M) put up performances in the name of charity on 9 September 2012. Themed 'Igniting Hearts', the highly-anticipated event drew a strong audience of some 1,600 Keppelites and their families.

The concert was organised as part of Keppel O&M's 10th anniversary celebrations and aimed to raise funds for the Association for Persons with Special Needs (APSN), Keppel's adopted charity, and The Straits Times School Pocket Money Fund.

The concert, as well as several fundraising activities by Keppel O&M over a period of a few months, raised a total of \$365,442 including

a dollar-for-dollar contribution from the company.

Former President of the Republic of Singapore, Mr S R Nathan, was the Guest-of-Honour. Mr Nathan was a Keppel Board Director in the early 1970s.

It was nerve-racking for the Keppelites involved, many of whom started practising several months prior to the concert, investing many evenings and weekends to perfect their moves or songs. Although most were firsttime performers, they captured the hearts of the audience with their sincere and creative performances.

Acts put up by the Keppelites in Singapore and overseas included percussion acts, Brazilian martial arts Capoeira, a line dance performance, a solo violin recital, energetic modern dances, songs by the Keppel Filipino Community and champions from various Keppel talent competitions.

The song performance by a group of twenty Keppelites' children and a jazz dance by the APSN also drew thunderous applause. Special video clips by several overseas business units which showcased the creative talents of Keppelites abroad were also screened at the concert.

The concert ended on a high note in front of a fervent crowd as Mr Michael Chia, MD (Marine and Technology), Keppel O&M, led a group of ten Keppelites in a rendition of old favourites such as 'Country Roads'.

Indeed, these efforts by Keppelites will go a long way in igniting the hearts and the lives of those in need.



1. Keppel senior management joined the line dance with Keppelites 2. A dynamic Capoeira performance by Team Viva La Keppel! 3. Keppelites and their children entertained audiences with the heart-warming song, 'Save my world' 4. Keppel O&M management trainees presented an energetic dance

# **Launch of Keppel Care Foundation**

The launch of the Keppel Care Foundation on 9 September 2012 marks a momentous event in Keppel's history of giving as the Group reinforces its philanthropy commitments.

Dr Lee Boon Yang, Chairman of Keppel Corporation, shared, "Over the years, the Keppel Group has actively engaged our community in Singapore and abroad where we do business. We have contributed to many charitable activities.

"With the Group's growing

businesses and presence around the world, there is a need to sharpen our focus and organise the efforts and contributions to worthy causes. Hence, we decided to establish a foundation to provide a more structured and sustainable framework for the Group's Corporate Social Responsibility work at home and abroad."

The Foundation aims to provide assistance for the needy and under-privileged, promote education and encourage eco-friendly mindsets and

initiatives. Keppel will commit up to \$50 million over the next ten years to the Foundation.

Mr Nathan witnessed the presentation of cheques from the Foundation totalling \$6.7 million to three organisations – National University of Singapore, Singapore University of Technology and Design and Singapore Polytechnic, in support of new and current programmes advancing education and supporting the underprivileged.

# Going the distance for charity



Keppel O&M emerged champion in the 57-storey vertical marathon 200 metres above the city with a combined time of 24 minutes and 26 seconds



A group of 30 Keppelites gathered at Clarke Quay for The New Paper's annual Big Walk on 2 September 2012

Keppelites have gone the extra mile for good causes through their participation in the Community Chest's (ComChest) Heartstrings Walk and The New Paper Big Walk.

### **SCALING HEIGHTS**

Spirits were high and cheers were loud at Marina Bay Sands on 26 August 2012 as close to 50 employees from Keppel Offshore & Marine (Keppel O&M) shed their boiler suits for their sports attire in the ComChest's Heartstrings Walk.

A record \$1.3 million was raised through this meaningful event, which includes a donation of \$50,000 from Keppel O&M.

The proceeds will help 300,000 people, including children with special needs, youths-at-risk, persons with disabilities, frail and vulnerable elderly and needy families.

Against the scenic backdrop of the Marina Bay waterfront, 6,000 participants put their best feet forward in the four-kilometre charity walk which was flagged off by Singapore's **Deputy Prime Minister and** Minister for Home Affairs Mr Teo Chee Hean.

Over 100 participants also took part in a 57-storey vertical marathon at the Marina Bay Sands hotel, with the iconic Sands SkyPark as the finish. Participants from Keppel O&M were the fastest team in the corporate category, completing the race with a combined time of 24 minutes and 26 seconds.

### **STRIDING FORTH**

Another group of 30 enthusiastic Keppelites also joined thousands in The New Paper's annual Big Walk alongside the Singapore River on 2 September 2012.

Held in conjunction with the Singapore Environment Council's Singapore G1 event which promotes green and healthy living, participants were flagged off by Guest-of-Honour and Minister for Education, Mr Heng Swee Keat, outside the Central Shopping Mall in Clarke Quay.

The five-kilometre charity walk ended at the Marina Barrage where a live bingo draw and other performances were held.

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Keppel Singmarine is today an established specialised shipbuilder with a track record of some 400 newbuild projects that includes pipelay and dive

# Capping 2012 with three new contracts

Ending 2012 on a high note, Keppel Offshore & Marine's (Keppel O&M) subsidiaries, Keppel Singmarine and Keppel Shipyard, secured three new contracts.

Mr Tong Chong Heong, CEO of Keppel O&M, said, "With the strong confidence and support of new and repeat customers, Keppel O&M continues to be the provider of choice for a broad range of offshore and marine projects."

One of Keppel Singmarine's two new contracts is from Hydro Marine Services, Inc., a subsidiary of McDermott International, Inc (McDermott), for the construction of a high-specification deepwater pipelay (S-Lay) vessel.

Developed by Keppel's Marine Technology Development (MTD), this 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.

Works for the pipelay vessel is scheduled to commence in 1Q 2013 and is expected to complete in approximately two and a half years.

Keppel Singmarine's other new contract is from Australia-based Bhagwan Marine Pty Ltd (Bhagwan Marine) to build a catamaran air dive support vessel (DSV). When completed in 1Q 2014, the DSV will be deployed in the north west of Western Australia to support the operations of Apache Energy Ltd. Designed by Incat Crowther Pty. Ltd, the DSV is of twin hull configuration (catamaran).

The third new contract was secured by Keppel Shipyard and is from **EMAS Offshore Construction and** Production Pte Ltd (EMAS Offshore) to modify and upgrade an existing Floating Production Storage and Offloading (FPSO) facility, Lewek Arunothai. The yard's workscope includes the installation of new structures, piping systems and deck crane, refurbishment of the living quarters as well as the fabrication and installation of the rigid arm and external turret mooring systems.

When completed in 2Q 2013, the FPSO will be deployed as an Early Production System in the Kamelia field, which is located in the North Malay Basin off Peninsular Malaysia. The upgraded FPSO will be capable of handling 175 million standard cubic feet per day (MMscfd) of gas, 1000 barrels per day (bpd) of condensates and 500bpd of water.