



Report to Stakeholders 2014





AGILITY Leveraging Innovation

Agility marks the ability of the Keppel Group to respond to market and environmental changes in ways that drive performance and build competitive advantage. We are configured with our financial and organisational strengths to navigate challenging terrain and scour new markets, and through innovation, offer new solutions, and execute with precision and enhanced productivity.

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VISION

Our vision is to be the provider of choice and partner for solutions in the global offshore and marine industry.

MISSION

Keppel Offshore & Marine is a global leader in offshore rig design, construction and repair, ship repair and conversion, and specialised shipbuilding. We harness the synergy of 20 yards worldwide to be near our customers and their markets.

OPERATING PRINCIPLES

- 1 Best value propositions to customers
- 2 Tapping and developing best talents from our global workforce
- 3 Cultivating a spirit of innovation and enterprise
- 4 Executing our projects well
- 5 Being financially disciplined to earn best risk-adjusted returns
- 6 Clarity of focus and operating within our core competence
- 7 Being prepared for the future

Key Figures for 2014

Net Orderbook

Strong net orderbook at end-2014 with deliveries extending to 2019



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Execution excellence as we delivered every project to our customers' satisfaction

Accident Frequency Rate

The latest accident frequency rate, down from 0.12 in 2013 and maintains the 0.11 in 2012

KFELS B CLASS Rigs Delivered



The number of our proprietary KFELS B Class rigs delivered since 2000 to end 2014 which accounts for a quarter of the jackups delivered to the market since then

Training Investment

The amount spent on training employees worldwide during the year

New Orders Secured

Healthy level of new contracts for the year

Chairman's Statement

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LOH CHIN HUA CHAIRMAN

To thrive, we must stay fighting fit and focused on adapting to market challenges with innovative and value-adding solutions. We believe that long-term industry fundamentals remain intact and that the current low oil price level is unsustainable in the long run.

Dear Shareholders,

2014 was a year of two very different halves. At the start of the year, the oil price was about US\$100 per barrel, a price at which it had been hovering around for about four years. In the middle of the year, however, the oil price began to decline, spiraling down to end the year at half the value of June 2014. This rapid fall has affected sentiments and activities in oil-related industries. It has led oil companies to review planned projects and also put some of them on hold.

As 2015 begins on a cautious note, centering on whether oil prices have bottomed and how long before it will recover and stabilise, Keppel Offshore & Marine (Keppel O&M) remains focused on ensuring our business remains robust and competitive, and that we continue to deliver operationally and financially.

Last year, we achieved revenue of \$8.56 billion, compared to \$7.13 billion in 2013. Net profit after revaluations, impairments and divestments (RID) crossed the one billion mark to reach \$1.04 billion, compared to \$944 million in 2013. Economic Value Added before RID remained healthy at \$764 million.

STAYING THE COURSE

At Keppel O&M, our excellent project execution has been fundamental to building trust with customers and sustaining market leadership. We have grown from delivering a few rigs annually to delivering a record 22 rigs from our global network of yards in 2013. In 2014, Keppel O&M's worldwide yards delivered seven rigs, seven FPSO conversion/upgrading projects and nine major specialised vessels in a timely and safe manner. In particular, the delivery of two of the world's largest jackups to Maersk Drilling further strengthened Keppel FELS' sterling rigbuilding track record.

Amidst a weakened market in the second half of 2014, Keppel O&M ended the year with \$5.5 billion of new orders, maintaining a healthy net orderbook of \$12.5 billion. The new orders include the world's first two Floating Liquefaction Vessel (FLNGV) conversion contracts, which were awarded by Golar LNG, as well as the first proprietary KFELS N Plus jackup for TS Offshore. Baku Shipyard in Azerbaijan, which was inaugurated in end 2013, also secured its first major newbuild contract - a subsea construction vessel for BP Exploration (Shah Deniz) Ltd. These orders are the fruition of our strategic positioning in key markets, constantly engaging our customers and staying ahead of market trends.

Our strong orderbook, secured from a mix of established customers and national oil companies, has deliveries extending into 2019. Besides newbuild projects, Keppel O&M also undertakes repair, upgrade and completion projects, and our track record sets us apart from others. Such projects are expected to increase as existing rigs will still need to undergo their regular Class surveys and maintenance programmes regardless of market conditions. This agility enables us to maximise our resources while providing value-added services to our customers.

ENHANCING BUSINESS ROBUSTNESS

We have begun to see a slowdown in order momentum and competition is expected to intensify. To thrive, we must stay fighting fit and focused on adapting to market challenges with innovative and value-adding solutions. We believe that long-term industry fundamentals remain intact and that the current low oil price level is unsustainable in the long run. We have also observed a higher pace of rig scrapping and write-downs of old rigs by several drilling contractors. With more than 50% of jackups and semisubmersibles currently 25 years old and above, these are positive signs that replacement demand will return in the medium to longer term. We are focused on ensuring our business remains robust as we build our bench strength and continue to deliver operationally and financially. 04

Chairman's Statement



To position Keppel O&M for the next cycle, one of our priorities will be to further improve our operational efficiency. Our operating units are actively reviewing their business processes, putting in place systems to better manage risks, increase productivity and sharpen our competitive edge. Over the years, we have grown our brand equity by delivering differentiated and cost-effective products and services through innovation and technology.

For example, the demand for natural gas, with its advantages of being cleaner and abundantly available, is an opportunity for growth. Keppel Offshore & Marine Technology Centre has commenced research projects covering natural gas liquefaction systems, Liquefied Natural Gas (LNG) fuelled vessels and a mini-LNG supply-chain for associated gas. We are confident that the FLNGV conversion solution, which we have commercialised, will be attractive for the market as it offers a cost-effective option for developing fields at remote locations where huge infrastructure investment is not economical.

THRIVING AMIDST CHALLENGES

As national oil companies are expected to anchor E&P spending in the future, our *Near Market, Near Customer* strategy has allowed us to extract value from meeting demands in captive markets, gather market intelligence from the ground, as well as harness synergy between our global yards. We will continue to deepen this strategy, especially in areas where we already have a presence.

In terms of new additions to our global network, we will continue to pursue the agreement with PEMEX, Mexico's national oil company, to jointly develop a yard in Altamira, Mexico, as well as our management services agreement to operate Titan Quanzhou Shipyard in Fujian Province, China.

There could also be good opportunities during this market weakness to strategically acquire or co-invest with like-minded partners in new capabilities and facilities. In an uncertain market environment, we will continue to be rigorous and disciplined in our evaluation and negotiation of deals to ensure that returns are commensurate with risks.

DRIVING SUSTAINABILITY

Accountability to our stakeholders is fundamental to the sustainability of our business performance. Our people are guided by our core values in striving to create and maximise value wherever we operate, with integrity and safety.

Our Near Market, Near Customer strategy has allowed us to extract value from meeting demands in captive markets, gather market intelligence from the ground, as well as harness synergy between our global yards. To maintain a sustainable and productive workforce, we nurture our global talent pool through continuous training, development and motivation to propel them to reach their full potential.

Safety is vital to our business and we spare no effort in entrenching a safety culture with zero tolerance for incidents. Despite our efforts, we suffered four fatalities in 2014. We take every incident seriously and are deeply saddened by the tragic loss of lives. Each incident was thoroughly investigated, with root causes clearly identified and swiftly followed with preventive measures. We have conducted safety reviews in our global yards to ensure best practices are shared and conducted campaigns to increase awareness of high impact risk accidents.

As a global citizen, we believe in contributing to the communities we operate in. In Azerbaijan for instance, Caspian Shipyard Company's (CSC) community outreach initiatives during the year included volunteering at a Special Boarding School for children with speech impediments situated at the Primorsk neighborhood of Baku, where the majority of CSC's local workers live.

STRENGTHENING LEADERSHIP

Having a strong and sustainable leadership team is pivotal to our ability to remain at the forefront of our industry. We continued to identify and groom competent leaders who will steer Keppel O&M into the next phase of growth. In 2014, we bolstered our bench strength with key appointments of experienced senior management personnel. Abu Bakar Mohd Nor was appointed as Managing Director of Keppel Singmarine, succeeding Hoe Eng Hock, who was appointed Managing Director (Special Projects) of our Marine Division. Over at Keppel FELS, Chris Ong was appointed Executive Director (Commercial), while Mohd Sahlan Bin Salleh assumed the role of Executive Director (Commercial). At Keppel Shipyard, Louis Chow was appointed Executive Director (Commercial).

ACKNOWLEDGEMENT

On behalf of the Board of Directors, I would like to thank all our valued customers, business associates, classification societies, vendors, suppliers and contractors for their continuing support. Our achievements are due to our dedicated and loyal employees who are our most important assets. I would also like to acknowledge the assistance and support of all local, state and federal authorities in the host countries where we have operations.

Keppel O&M has navigated through ups and downs and weathered difficult times in past cycles. We have emerged stronger each time and our people, more resilient. The challenging market outlook ahead will again test our core strengths. With a strong management team leading a committed workforce, and with the support of our partners, we are resolved, as we have been before, to come out from this storm more robust and fighting fit, ready to continue to shape the future.

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LOH CHIN HUA CHAIRMAN 31 March 2015

We continue to identify and groom competent leaders who will steer Keppel O&M into the next phase of growth.

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Backed by a strong orderbook, Keppel O&M continues to execute and deliver its projects well, improving operational efficiency and seizing new opportunities to grow. Interview with the CEO





What is Keppel O&M's outlook for the offshore and marine industry? How is this downturn different from what the company had experienced in the past?



As we move further into 2015, we are fully cognizant that we are heading into uncertain and uncharted waters, a situation which we have found ourselves in several times since the 1980s. Each downturn is different; we have learnt valuable lessons from all of them and emerged more robust and resilient each time. Keppel O&M today is in a much stronger position to withstand the industry headwinds.

The sharp decline in oil prices, which started in June 2014, has brought about significant challenges for the industry. As oil companies seek to cut costs, global exploration and production (E&P) spending is expected to be cut by about 9% this year, reducing orders for new equipment as well as putting pressure on charter rates for drilling rigs. Oil prices are expected to stay muted for a while, with some estimates suggesting the recovery could start in late 2015 or early 2016. The low oil prices we see today are not sustainable in the long run and the oil and gas sector will inevitably move towards a new equilibrium, driven by demand and supply dynamics. In this respect, National Oil Companies (NOCs) will be an interesting group to watch. With lower oil prices, NOCs, driven by their governments, will be pushed to maintain output and may even stimulate production growth in a bid to make up for the price declines with volume. Already, we see NOCs such as Saudi Aramco and PEMEX keeping their overall rig count in their respective regions steady in 2015.

In the global rig market, even as new rigs continue to be delivered in 2015, there is still a significant number of ageing rigs. Under the prevailing environment of lower dayrates, drilling contractors are

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What are your immediate priorities in navigating Keppel O&M through this challenging environment?



In terms of R&D, what are some of the newer growth areas that Keppel O&M plans to pursue? unlikely to spend to upgrade old rigs and scrapping the unproductive rigs with low returns may in fact be the more economical option for the long term. When the market improves, these contractors would then be ready to order new rigs that are more efficient and fetch higher day rates. In this lower oil price environment, E&P activities in certain shallow water regions, such as the Middle East, will continue as the breakeven cost to produce from these fields is much lower than the current oil price of about US\$50 a barrel. Other countries, such as Mexico and India, are also expected to continue with their E&P programmes, driven by their long term goal to achieve energy self-sufficiency.



We are entering this downturn with a strong orderbook of \$12.5 billion, which will provide us with a cushion to ride out this down cycle while we concentrate on improving what we do best; securing new orders, conserving and channeling our resources to priority areas, as well as seizing opportunities for growth. We will be focusing on five priority areas of safety performance, execution, productivity, supply chain management and research and development (R&D) that will enable us to continue providing the best propositions to our customers.

We aim to improve our safety performance, with the immediate goal to achieve zero fatalities and subsequently zero incidents. Keppel O&M has a solid track record for delivering all our projects either on time or ahead of schedule, within budget and with good safety standards and we remain relentless in keeping this up. In the same vein, we are looking to make our operations leaner and meaner, leveraging technology combined with our own innovations and process improvements to enhance efficiencies. We are also closely monitoring and managing our supply chain to ensure that we are equipped to respond to changes with agility.

We will continue to step up our R&D efforts to augment our pipeline of innovative and viable technology. As our customers are also facing challenges, Keppel O&M needs to stay agile and seek ways to better meet their needs for value-adding and cost-effective solutions. At Keppel O&M, we will not waste a good crisis. Leveraging our *Near Market, Near Customer* strategy and financial strength, we will seize opportunities to build and grow our businesses, while anchoring our position as the preferred solutions partner.



We continue to invest strategically in our R&D and innovation efforts to develop new solutions for customers as well as improve our productivity and work processes.

Even as we conceptualise new solutions, we are promoting the advanced and next-generation rig designs which we have introduced to the market. Besides our suite of jackup designs, including the state-of-the-art Plug and Abandonment jackup rig design we are working on with Seafox, we are also developing a revolutionary SMART semisubmersible capable of operating alongside an FPSO to provide maintenance and accommodation services. In addition, our multi-tasking CAN-DO drillship is progressing on track to be completed in 2016. We have also launched our own liftboat design, which was developed by Bennett Offshore, our naval architecture and marine engineering unit. Nakilat-Keppel O&M, our joint venture yard in Qatar, is undertaking the construction of its first liftboat to this design, with Keppel Singmarine in Singapore providing technical services. What differentiates our liftboat design from others in the market is that it can operate more efficiently and at a lower cost. Liquefied natural gas (LNG) is another area in which our R&D will continue to keep a keen eye on. Already, we are making satisfactory progress with the awards from Golar LNG for the conversion of two LNG carriers into Floating Liquefaction Vessels. We are further conducting our own R&D for more of such cost-effective, niche LNG solutions which will be able to meet market needs.

As part of our ongoing efforts to entrench a strong culture of innovation, in October 2014, we organised the second Keppel O&M Innovation Awards to recognise innovative projects and work process improvements. 25 awards were given out to a range of projects for their impact and scalability, alignment with Keppel's commercial objectives and sustainability of results over the longer term.

In the past four decades, we have gone through various cycles in the oil and gas industry. We will apply our experiences and feedback from customers accumulated over the years to our technological innovations to provide robust and resilient solutions to the market.

Interview with the CEO

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The mutli-tasking CAN-DO drillship is expected to meet market needs.





How will the Company leverage its network of yards to capture opportunities for further expansion in the present market environment?



Please provide an update on your projects in Brazil. How is Keppel O&M managing the challenges of operating in the country? Our Near Market, Near Customer strategy has equipped Keppel O&M with an unrivalled competitive advantage of a global network of 20 yards. Today, many of our yards are leaders in their regions, capable of providing a wide range of quality offshore and marine services while meeting local content requirements. A good case in point is our Keppel Subic Shipyard in the Philippines, which had, in February 2015, completed and delivered the Depletion Compression Platform to Shell Philippines Exploration BV, operator of the Malampaya Deep Water Gas-to-Pow

Platform to Shell Philippines Exploration BV, operator of the Malampaya Deep Water Gas-to-Power project in the Philippines, on time and with an excellent safety record. This is the first major offshore project ever to be completed by a shipyard in the Philippines. Keppel AmFELS, our yard in Brownsville, Texas, in the US, has recently been entrusted by a major operator to build one of the world's largest land drilling rigs, which will be capable of operating in harsh conditions. This is testament to Keppel AmFELS' established engineering and construction capabilities, which enable the yard to tap projects beyond the offshore industry.

We will also continue to develop the capabilities of our overseas satellite yards such as Keppel Nantong in China and Bintan Offshore in Indonesia which contribute significantly towards supporting our yards in Singapore, especially in light of the latter's tightening foreign labour quota. We have made substantial investments in the last few years to ramp up our satellite yards' capabilities, such as the installation of a 1,500-tonne gantry crane in Keppel Subic Shipyard and the expansion of the panel line workshop in Keppel Nantong to cater to offshore projects. Given the lower oil price environment, our discussions on the partnerships with Pemex to set up a yard in Mexico, and Titan Petrochemicals Group to operate a shipyard in China, have slowed but the plans are still in place. Both Mexico and China are expected to see growth in demand for offshore and marine solutions in the years to come and we as well as our partners are confident of the long-term viability of our ventures. Beyond these two upcoming yards, we will be open to opportunities to add to our network, should they make commercial sense and add value to the Company and our stakeholders.



The Brazilian oil and gas industry is facing enormous challenges. Besides the low oil price, the corruption scandal afflicting national oil company Petrobras has impacted the whole supply chain in the country. Notwithstanding this, we are confident that the country will continue to find a way to move forward to achieve its long-term aspirations to be a net oil and gas exporter. Keppel O&M has had a presence in Brazil since 2000 and we have been serving Brazilian customers since the 1970s. We remain committed to continue to grow with the country and our customers there.

BrasFELS, our yard in Angra dos Reis, is responding to the challenges by managing carefully its resources and operational costs. The BrasFELS team is in regular communication with our customers in Brazil so that it can respond swiftly to their needs. With the cooperation and support of the BrasFELS workforce and union, the yard is working towards the safe and timely completion of its ongoing projects.

Besides Sete Brasil and Petrobras, BrasFELS services a number of other customers. The integration of topside modules on the FPSO Cidade de Itaguai for MODEC and Toyo Offshore Production Systems (MTOPS) is also progressing well.



We do not expect any rig cancellations. Our customer base is made up of mainly bona fide drilling contractors or oil companies. We have a robust risk management system in place which guides us in taking on projects with well-defined contracts that ensure the Company would be adequately compensated for the risks that it assumes.

If there are customers who seek to defer their rig deliveries, we will review and re-allocate our work schedules and resources to minimise any impact on us. Such deferments could mean additional costs, and we would discuss with our customers how best to resolve such issues.



In both good times and bad, our people are our greatest assets. We are fully committed to developing a quality workforce to serve the needs of our global customers. At Keppel O&M, we have a sound human capital strategy with four key elements - to attract, engage, recognise and develop our employees, with the intention to cultivate a positive emotional attachment and commitment to the Company.

Every year, we invest significantly in the training and development of our employees. In 2014, we invested approximately \$16.3 million globally. We have a variety of programmes tailored for employees from various educational and skills backgrounds. The aim is to ensure that we tap the potential of each and every employee and support them to perform to the best of their abilities. This is because in the offshore and marine industry, we require talent and skill-sets across a wide spectrum of disciplines.

We have an unwavering focus on Health, Safety and the Environment. In 2014, we invested over \$44 million in safety infrastructure and training, and will continue to do more in the years ahead. The key is to ensure that at all levels of the workforce across our global network of yards, we inculcate a strong safety culture and all our employees recognise that safety is everyone's business.

On the environmental front, in the last year, we stepped up efforts to implement more energy saving initiatives across all our yards, particularly those in Singapore. This is in line with Singapore and the Keppel Group's commitment to cut greenhouse gas emissions by 16% from year 2020 on a business-as-usual basis. An energy saving initiatives workshop was organised in early 2015 with the aim of providing a platform to further consolidate our energy-saving ideas, and for all levels of staff to pledge their commitment to drive and cascade these ideas across the Company. In the area of community contributions, we encourage all our yards, in Singapore and overseas, to seek ways for our employees to participate in volunteer activities which help to benefit individuals from all walks of life. In 2014, we had many such volunteer activities organised by our yards in Singapore, Brazil, China, the Philippines, Azerbaijan and the US.



Do you expect any customers to cancel or reschedule projects which Keppel's yards are currently executing? What measures do you have in place to mitigate the contract risks?



With the current outlook, what is Keppel doing to ensure the company's sustainable development globally?

Group Financial Highlights

CONSOLIDATED BALANCE SHEET

as at 31 December 2014

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	2014 S\$′000	2013 S\$'000
Share capital	339,716	339,716
Reserves	2,095,722	2,144,405
Shareholders' funds	2,435,438	2,484,121
Non-Controlling interests	188,171	201,849
Capital employed	2,623,609	2,685,970
Represented by:		
Fixed assets	1,732,937	1,512,577
Associates	540,347	506,731
Loans receivable	97,085	92,027
Goodwill	36,363	36,363
Investments	124,098	83,062
	2,530,830	2,230,760
Current assets		
Stocks	163,111	218,473
Work-in-progress (cost > billings)	3,227,613	1,573,545
Related companies & associates	451,661	665,987
Other assets	113,333	264,950
Debtors	1,420,154	821,521
Bank balances, deposits & cash	1,712,563	2,256,894
	7,088,435	5,801,370
Current liabilities		
Creditors	2,249,487	2,056,747
Work-in-progress (billings > cost)	2,332,092	2,499,142
Related companies & associates	1,666,438	279,592
Other liabilities	338,688	93,314
Short term loans	35,201	36,265
Taxation	247,276	268,761
	6,869,182	5,233,821
Net current assets	219,253	567,549
Non-current liabilities		
Long term loans	115,749	111,281
Deferred taxation	9,339	(330)
Deferred liabilities	1,386	1,388
	126,474	112,339
Net assets	2,623,609	2,685,970

CONSOLIDATED PROFIT & LOSS ACCOUNT

for the financial year ended 31 December 2014

	2014 S\$′000	2013 S\$′000	Change %
Revenue	8,556,743	7,129,942	+20
Operating profit	1,220,226	1,044,031	+17
Net Interest / investment income	84,027	67,166	+25
Share of results of associates	57,346	75,508	-24
Profit before tax	1,361,599	1,186,705	+15
Taxation	(272,706)	(221,269)	+23
Profit after tax	1,088,893	965,436	+13
Non-Controlling interests	(53,116)	(36,408)	+46
Profit before non-recurring items	1,035,777	929,028	+11
Non-Recurring items	3,602	15,000	-76
Net profit	1,039,379	944,028	+10
Economic Value Added (Before non-recurring items)	764,076	701,436	+9

In a year which saw increasing headwinds in the industry due to plunging oil prices, Keppel Offshore & Marine achieved a strong set of results on the back of a healthy orderbook. Revenue increased by 20% to \$8.6 billion due to higher activity levels and timing differences on the recognition of jobs in hand. Operating profit of \$1,220.2 million was 17% above that of 2013 due to higher revenue. Net interest income was 18% higher at \$76.6 million, while contributions from associates of \$57.3 million was 24% lower. Profit after tax of \$1,088.9 million was 13% higher compared to 2013,

while net profit of \$1,039.4 million was 10% higher.

The Group's return on equity (before non-recurring items) was 42%, while Economic Value Added was a healthy \$764.1 million.

The Group delivered seven jackup rigs, seven FPSO/FSO conversion/ upgrade projects and nine specialised vessels in 2014. The total value of contracts secured for the year was \$5.5 billion, and the Group ended the year with a net orderbook of \$12.5 billion.

Group at a Glance

KEPPEL OFFSHORE & MARINE

Revenue (\$ million)



Global leader in offshore rig design, construction and repair, ship repair and conversion, and specialised shipbuilding.

Headquartered in Singapore, Keppel O&M integrates and harnesses the experience and expertise of 20 yards worldwide to optimise deployment of resources and effectively execute our *Near Market*, *Near Customer* strategy.

The head office serves two central functions, providing Operational Services including technology, design and development, engineering and procurement, as well as Corporate Services covering finance, legal, human resources, information services and corporate development.

Driven by innovation and a capable people with the *Can Do!* spirit, we strive to become a builder of distinction in every aspect of our business.

GLOBAL FOCUS FOR 2015/2016

FORTIFY CORE COMPETENCIES

• Build on operational excellence and raise productivity levels to deliver projects safely, on time and within budget.

LEVERAGE GROWTH PLATFORMS

• Extend expertise to offer a wider range of products, solutions and services for the offshore and marine industry through R&D.

HARNESS GLOBAL SYNERGIES

• Develop and draw on the collective strength of global yards and offices to reinforce *Near Market, Near Customer* strategy and deliver value to customers.

INCREASE BUSINESS ROBUSTNESS

 Seek opportunities to strategically acquire or co-invest with partners in new capabilities and facilities, and enter into new markets.

OFFSHORE

MARINE Shiprepair and Conversion

MARINE Specialised Shipbuilding



Leading designer, builder and repairer of high-performance mobile offshore drilling rigs.

The Offshore Division, helmed by Keppel FELS, is a leading designer, builder and repairer of high-performance mobile offshore drilling rigs.

The Division's portfolio of proprietary designs and floating production solutions meets a broad spectrum of operating requirements including deep waters and harsh environments.

With technology innovation and competent design and engineering capabilities, this Division offers viable, cost-effective and highly adaptable solutions for newbuilds and upgraded offshore units.



Trusted industry name for the repair, conversion and upgrade of a diverse range of vessels.

In the Marine Division, Keppel Shipyard is the trusted industry name for the repair, conversion and upgrade of a diverse range of vessels.

Keppel Shipyard is a leader in the conversion of Floating Production Storage and Offloading; Floating Storage and Offloading; Floating Storage Re-gasification; and Floating Liquefaction units. Its competencies include topside and turret fabrication.

With a strong commitment to Health, Safety and Environment and an established reputation of reliability, flexibility and quality for complex projects with quick turnaround, the Division continues to deliver high value to its customers.



Designer and builder of a wide spectrum of highly specialised ships for a global clientele.

The Specialised Shipbuilding arm in the Marine Division is led by Keppel Singmarine, which has a track record of some 400 newbuild vessels of diverse functions and sophistication.

Its portfolio of customised vessels spans Anchor Handling Tug/Supply vessels, multi-purpose Offshore Support Vessels and tugboats to highly advanced solutions such as ice-capable and subsea construction vessels.

Harnessing its suite of design and engineering solutions, strong logistics and infrastructure support in Singapore, Keppel Singmarine provides customers with one-stop value-added services.

Board of Directors



LOH CHIN HUA

Loh Chin Hua

Chairman Keppel Offshore & Marine Ltd Keppel FELS Ltd Keppel Shipyard Ltd Keppel Offshore & Marine Technology Centre Pte Ltd Keppel Land Limited Keppel Telecommunications & Transportation Ltd Keppel Infrastructure Holdings Pte. Ltd. Alpha Investment Partners Limited

Non-Executive Director KrisEnergy Ltd

Chief Executive Officer Keppel Corporation

Chow Yew Yuen **Chief Executive Officer** Keppel Offshore & Marine Ltd

Chairman Keppel AmFELS, LLC Keppel FELS Brasil SA Keppel Offshore & Marine USA, Inc. Keppel Singmarine Pte Ltd Keppel Philippines Holdings Inc Keppel Sea Scan Pte Ltd Deepwater Technology Group Pte Ltd Marine Technology Development Pte Ltd Offshore Technology Development Pte Ltd

Stephen Pan Yue Kuo

Chairman World-Wide Shipping Agency Limited, Hong Kong



CHOW YEW YUEN



STEPHEN PAN YUE KUO



PROF MINOO HOMI PATEL

Prof Minoo Homi Patel Professor of Mechanical Engineering and Director of Development School of Aerospace, Transport and Manufacturing

Dr Malcolm Sharples President Offshore Risk & Technology Consulting Inc, USA

Po'ad Bin Shaik Abu Bakar Mattar Independent Director Hong Leong Finance Limited



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PO'AD BIN SHAIK ABU BAKAR MATTAR



DR MALCOLM SHARPLES

Board of Directors



TAN EK KIA

Tan Ek Kia Chairman City Gas Pte Ltd Star Energy Group Holdings Pte Ltd

Independent and Non-Executive Director

Keppel Corporation Limited Transocean Ltd KrisEnergy Ltd PT Chandra Asri Petrochemical Tbk

Non-Executive Director SMRT Corporation Ltd

Lim Chin Leong Former Chairman Asia Schlumberger

Robert D.Somerville Vice Chairman Maine Maritime Academy Board of Trustees

Director GasLog Ltd Knightsbridge Tankers Ltd

Former Chairman and CEO American Bureau of Shipping



LIM CHIN LEONG



ROBERT D. SOMERVILLE



SIT PENG SANG

Sit Peng Sang Director Keppel AmFELS, LLC

Chan Hon Chew Chief Financial Officer Keppel Corporation Ltd

Chairman Keppel DC REIT Management Pte. Ltd. (Manager of Keppel DC REIT)

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Non-Executive Director Keppel Land Ltd Keppel Telecommunications & Transport Ltd Keppel Infrastructure Holdings Pte Ltd



CHAN HON CHEW

Key Personnel



OFFSHORE & MARINE

- 1. Abu Bakar Bin Mohd Nor Managing Director Keppel Singmarine
- 2. Wong Kok Seng Managing Director Offshore and Keppel FELS
- 3. Wong Ngiam Jih Chief Financial Officer
- 4. Chow Yew Yuen Chief Executive Officer

- 5. Loh Chin Hua Chairman
- 6. Michael Chia Managing Director Marine and Technology KOMtech
- 7. Chor How Jat Managing Director Keppel Shipyard
- 8. Hoe Eng Hock Managing Director Special Projects, Marine



- 1. Kenneth Chong Assistant General Manager Legal, Company Secretary
- 2. Dr Lee Chay Hoon General Manager Organisation Development and HR
- 3. Lai Ching Chuan Director Corporate Development
- 4. Yong Chee Min Director HSE and Special Projects

- 5. Jeffery Chow General Manager Legal
- 6. Edmund Mah General Manager Finance
- 7. Phillip Mah General Manager Security



KEPPEL FELS

- 1. Tan Leong Peng General Manager Engineering
- 2. Jay Singam General Manager Commercial
- 3. Keith Teo General Manager Marketing
- 4. Wong Fook Seng Executive Director Process Excellence and Planning
- 5. Mohamed Sahlan Bin Salleh Executive Director Operations

- 6. Wong Kok Seng Managing Director Offshore and Keppel FELS
- 7. Chris Ong Executive Director Commercial
- 8. Aziz Amirali Merchant Executive Director Engineering
- 9. Jerald Lee Financial Controller
- 10. Lim Ah Cheng General Manager Offshore Technology Development
- **11. Yeo Yue Ngiap General Manager** Commercial (Not in photo)



KEPPEL SHIPYARD

- 1. Ivan Lim General Manager Operations
- 2. S. Jayakumar General Manager Projects
- 3. Louis Chow Executive Director Commercial
- 4. Jim Lim Financial Controller
- 5. Chin Sze Kiun General Manager Commercial – Repair
- 6. Michael Chia Managing Director Marine

- 7. Burt Loh General Manager Operations
- 8. Chor How Jat Managing Director
- 9. Charles Sim General Manager Offshore Production
- 10. Boo Chin Tuan General Manager Operations Excellence/Talent Management
- 11. Tan Peng Pong General Manager Engineering and Systems Development
- 12. Jimmy Loh General Manager Projects and Control



KEPPEL SINGMARINE

- 1. Poon Tai Lum General Manager Commercial/Marketing
- 2. Diwakar Karri Yard Manager Completion and Commissioning
- 3. Edmund Lek Executive Director Operations
- 4. David Loh General Manager Operations
- 5. Abu Bakar Bin Mohd Nor Managing Director

- 6. Au Yeong Kin Ho General Manager Engineering
- 7. Toh Ko Lin Executive Director Commercial
- 8. Alex Neo Yard Manager
- 9. Chin Lik Kiong Senior Yard Manager



RESEARCH & DEVELOPMENT

- 1. Dr Matthew Quah Senior Programme Manager Offshore Structures and Analysis, KOMtech General Manager, Design Offshore Technology Development
- 2. Au Yeong Kin Ho General Manager Engineering, Keppel Singmarine
- 3. Dr Foo Kok Seng Executive Director Shallow Water Technology, KOMtech Offshore Technology Development
- 4. Charles Foo Director/Advisor KOMtech

5. Michael Chia

Managing Director Technology, Keppel O&M KOMtech

- 6. Aziz Amirali Merchant Executive Director Deepwater Technology, KOMtech Deepwater Technology Group Marine Technology Development
- 7. Charles Sim Technical and Projects Director FPSO and Offshore Production, KOMtech
- 8. Anis Altaf Hussain Programme Director Deepwater Technology, KOMtech



Key Personnel

OVERSEAS MANAGERS





- 1. Kwok Kai Choong Keppel FELS Brasil Estaleiro BrasFELS
- 2. Loh Kee Huat Keppel Singmarine Brasil





3. Harold Linssen Keppel Verolme

4. Chandru Sirumal Rajwani Nakilat-Keppel Offshore & Marine





- 5. Leong Kok Weng Keppel Subic Shipyard
- 6. Tan Geok Seng Keppel Batangas Shipyard





- 7. Simon Lee Keppel AmFELS
- 8. Lau Kuat Pin Caspian Shipyard Company





- 9. Edmund Lek Keppel Nantong Shipyard Keppel Nantong Heavy Industry
- 10. Michael Holcomb Keppel Marine Agencies International





- **11. Leong Siew Loon** Arab Heavy Industries
- **12. Lam Khee Chong** Baku Shipyard

Key Personnel

OVERSEAS OPERATIONAL CENTRES

Arab Heavy Industries PJSC Leong Siew Loon MANAGING DIRECTOR

PT Bintan Offshore Thomson Halim GENERAL MANAGER

Keppel Philippines Marine, Inc Toh Ko Lin PRESIDENT

Stefan Tong Wai Mun EXECUTIVE VICE PRESIDENT

Keppel Batangas Shipyard Tan Geok Seng GENERAL MANAGER

Ramon M. Cornelia VICE PRESIDENT Operations

Keppel Subic Shipyard, Inc Leong Kok Weng PRESIDENT

Leong Chee Wah, Spencer GENERAL MANAGER

Keppel Offshore & Marine USA, Inc Tommy Sam CHIEF FINANCIAL OFFICER Americas

Cheung Tak On VICE PRESIDENT Technology

Keppel AmFELS, LLC Simon Lee PRESIDENT

Eric Phua VICE PRESIDENT Commercial

Tom McCoy VICE PRESIDENT Production

Dennis Tan VICE PRESIDENT Finance Keppel FELS Brasil S.A. Kwok Kai Choong PRESIDENT AND CHIEF EXECUTIVE OFFICER

Tommy Sam VICE PRESIDENT

Marlin Khiew VICE PRESIDENT Operations

Gilberto Israel COMMERCIAL DIRECTOR

Low Han Kiat CHIEF FINANCIAL OFFICER

Alceu Mariano INSTITUTIONAL RELATIONS DIRECTOR

Luiz Caetano OPERATIONS DIRECTOR

Karina Stoff LEGAL AND HR DIRECTOR

Low Tiau Tong DIRECTOR Special Projects

Keppel Verolme BV Harold Linssen MANAGING DIRECTOR

Wong Wei Kei CHIEF FINANCIAL OFFICER

Caspian Shipyard Company Ltd Lau Kuat Pin CHIEF EXECUTIVE OFFICER

Elshan Gurbanov CHIEF FINANCIAL OFFICER Keppel Nantong Shipyard Co. Ltd Keppel Nantong Heavy Industry Co. Ltd Edmund Lek PRESIDENT

Wong Phuay Cheng VICE PRESIDENT Operations

Li Gang VICE PRESIDENT Commercial

Lim Kok Hwee VICE PRESIDENT Finance

Nakilat-Keppel Offshore & Marine Ltd Chandru Sirumal Rajwani CHIEF EXECUTIVE OFFICER

Albert Kee GENERAL MANAGER Operations

Regency Steel Japan Ltd Wong Chun Yu PRESIDENT

Shigeyuki Hatano CHIEF OPERATING OFFICER

Keppel Singmarine Brasil Ltda Loh Kee Huat GENERAL MANAGER

Baku Shipyard LLC Lam Khee Chong PRESIDENT/GENERAL MANAGER

ENGINEERING/ TECHNOLOGY CENTRES

Keppel Offshore & Marine Technology Centre Pte Ltd Michael Chia MANAGING DIRECTOR

Dr Foo Kok Seng EXECUTIVE DIRECTOR Shallow Water Technology

Aziz Amirali Merchant EXECUTIVE DIRECTOR Deepwater Technology

Charles Foo DIRECTOR/ADVISOR

Charles Sim TECHNICAL AND PROJECTS DIRECTOR FPSO and Offshore Production

Anis Altaf Hussain PROGRAMME DIRECTOR Deepwater Technology

Dr Matthew Quah SENIOR PROGRAMME MANAGER Offshore Structures and Analysis

Offshore Technology Development Pte Ltd Dr Foo Kok Seng EXECUTIVE DIRECTOR

Lim Ah Cheng GENERAL MANAGER

Dr Matthew Quah GENERAL MANAGER Design Deepwater Technology Group Pte Ltd Aziz Amirali Merchant EXECUTIVE DIRECTOR

Marine Technology Development Pte Ltd Aziz Amirali Merchant EXECUTIVE DIRECTOR

Blue Ocean Solutions Pte Ltd Dr Jerry Ng CHIEF EXECUTIVE OFFICER

Bennett Offshore, LLC Tommy Sam PRESIDENT/CHIEF EXECUTIVE OFFICER

FloaTEC, LLC TK Das PRESIDENT

Keppel FELS Baltech Ltd Lyudmil Stoev GENERAL MANAGER

Ivan Petrov Pelov SENIOR ENGINEERING MANAGER

Keppel FELS Engineering Shenzhen Co. Ltd Ho Jong Heng GENERAL MANAGER

Keppel FELS Engineering Wuhan Co. Ltd Ho Jong Heng GENERAL MANAGER

Keppel Offshore & Marine Engineering Services Mumbai Pte Ltd Syed Ahamed Kabeer GENERAL MANAGER

Keppel Singmarine Philippines, Inc Au Yeong Kin Ho PRESIDENT

REPRESENTATIVE OFFICES

Keppel Marine Agencies International, LLC Michael Holcomb PRESIDENT/DIRECTOR

Keppel Prince Engineering Pte Ltd Charles Chiam DIRECTOR

MARINE SERVICES

Asian Lift Pte Ltd John Chua GENERAL MANAGER

Keppel Smit Towage Pte Ltd Pieter Van Stein MANAGING DIRECTOR

Jerry Wong GENERAL MANAGER

Keppel Sea Scan Pte Ltd Gui Eng Hwee GENERAL MANAGER

EMPLOYEE UNIONS

Keppel Employees Union Razali Bin Maulod PRESIDENT

Mohd Yazam Bin Mahmood GENERAL SECRETARY

Keppel FELS Employees Union Vincent Ho Mun Choong PRESIDENT

Atyyah Hassan GENERAL SECRETARY

David Lim Kin Wai EXECUTIVE SECRETARY

Shipbuilding & Marine Engineering Employees Union Tommy Goh Hock Wah PRESIDENT

Eileen Yeo Chor Gek GENERAL SECRETARY

Mah Cheong Fatt EXECUTIVE SECRETARY



Leveraging Innovation

Innovation is at the heart of everything we do. In our product designs, processes and safety apparatus; in seizing opportunities and providing solutions to our customers, we are constantly adapting and innovating to better ourselves and meet the dynamic needs and challenges of the market.













ENHANCING PRODUCTIVITY AND SAFETY

Over the years, we have continuously leveraged the latest technologies combined with our own innovations and process improvements to enhance productivity and safety. We foster a culture of innovation through platforms that have generated numerous ideas adopted by our yards and translated into significant cost and time savings, as well as good safety performance.







SEIZING GROWTH OPPORTUNITIES

Backed by our robust financial position and leveraging our expertise and innovations, we are able to seize opportunities in new adjacencies and platforms for long-tterm sustainable growth.

EXPANDING

PROPRIETARY SOLUTIONS

designs that we customise and

We have over 30 proprietary

adapt to suit our customers'

requirements. With multiple

R&D arms, we collaborate

institutions to evolve and

develop new technologies

and solutions for the market.

with industry leading

Near Market, Near Customer

Keppel Offshore & Marine's network of yards worldwide are strategically located to meet the needs of our customers and bring our suite of proprietary solutions into more markets. By continuously strengthening our capabilities, we have the agility to take on a wider variety of projects as well as improve efficiency and safety.

From Singapore to China to Brazil, we have upgraded facilities or installed new equipment with greater capabilities to improve operations and enhance efficiency. The specifications of the individual yards can be found on page 96 of this report. We will continue to expand our yard network to where our customers require us, and will focus on markets which have growth potential and are commercially viable for us.







All Keppel yards in Singapore are within a 4km circle

KEPPEL OFFSHORE & MARINE (HQ) KEPPEL FELS KEPPEL SHIPYARD

KEPPEL SINGMARINE

FOUR FLOATING CRANES SUPPORT THE LIFTING CAPABILITIES OF THE YARDS IN SINGAPORE:

· Asian Hercules III (5000MT)

· Asian Hercules II (3200MT)

- · Asian Hercules (1600MT)
- · Asian Helping Hand III (400MT)

SINGAPORE

Singapore is the headquarters of Keppel Offshore & Marine which has seven yards in the country that are located within a 4km radius, enabling the yards to harness and share resources easily.



KEPPEL FELS ADDED A

Keppel FELS has delivered more than 100 jackup rigs to date.

Keppel FELS

Keppel FELS leads the industry in the design and building of high performance mobile offshore rigs. Our portfolio of proprietary designs and floating production solutions meets a broad spectrum of operating requirements including deep waters and harsh environments. Since 2000, it has delivered the most number of jackup rigs and semisubmersibles in the world.

Capabilities

- Design and construct jackup rigs, semisubmersible rigs, floating production systems and other advanced vessels such as drillships
- Repair, upgrade and conversion of offshore rigs
- Design and development of critical rig equipment
- Fabrication of offshore structures and rig components

Key equipment & facilities

- Two drydock goliath cranes: 700MT and 500MT
 - The two cranes cover the fabrication and painting areas all the way to the drydock. It enables the yard to construct the modules of rigs in larger blocks which can then be lifted from the fabrication area to the drydock for assembly.
- CAN-DO floating dock 138m x 78m
- Automated panel line workshop
- Automated pipeshop
- Development of Pioneer Yard 3

 Strategically located along the major sea lane in the Singapore Straits
 - Designed to take in deepwater vessels such as semisubmersibles and drillships
 - Optimised production process with a centralised integrated work layout

01

Floating Cranes Asian Hercules III and Asian Hercules II doing a combined lift of a semisubmersible platform at Keppel FELS.

02

Keppel FELS' pioneer yard.

Keppel Shipyard

Backed by over a century of experience, Keppel Shipyard is the industry's leading partner for the repair, conversion and upgrading of a diverse range of vessels. It has delivered over 110 FPSO/FSO/FSRU conversions.



- Conversion of
 FPSO/FSO/FSRU/FLNGV
- Repair and conversion of a diverse range and capacity of vessels such as LNG carriers, livestock carriers, drilling tenders, and derrick lay barges
- Topside engineering, fabrication and integration
- Fabrication, installation and integration of multiple mooring solutions such as internal and external moorings

Key equipment & facilities

- Semi-automated pipeshop
- Newly constructed load-out quay in Benoi Yard to undertake more fabrication work such as modules and turret construction projects

Keppel Singmarine

Keppel Singmarine has a strong track record for reliable and versatile newbuild solutions, having constructed some 400 ships of diverse types and sophistication levels for operations around the world.



 Design and build specialised vessels such as anchor handling tug/supply vessels, platform supply vessels, pipelay vessels, diving support vessels, diving support vessels, ice breakers & ice-class support vessels, cable laying vessels, floating storage & offloading vessels, rockdumping fall pipe vessels, well stimulation vessels, as well as harbour and terminal tugs



- Automated pipeshop with robotic profile cutter and 6-axis robotic welding
- Automated panel line workshop

KEPPEL SINGMARINE HAS CONSTRUCTED SOME

400 ships of diverse types

ships of diverse types and sophisticated levels for operations around the world

Keppel Shipyard has completed more than 110 FPSO/FSO/ FSRU conversion and upgrade projects.



01

Keppel Shipyard's Gul Yard.

02

Keppel Nantong Shipyard and Keppel Nantong Heavy Industry.

ASIA

Our yards in China, the Philippines and Indonesia have been configured to take on more complex projects as well as support our Singapore yards.



CHINA

Keppel Nantong Shipyard (KNS) and Keppel Nantong Heavy Industry (KHNI)

Keppel Nantong Shipyard (KNS) has received the Industrial Excellence and Safety Excellence award by the Nantong Municipal People's Government for five consecutive years since 2010. As part of ongoing plans to expand its production capacity to build bigger offshore support vessels and take on more offshore projects in China, Keppel established a new yard, Keppel Nantong Heavy Industry (KHNI), next to the existing shipyard in 2011, increasing total yard space of Keppel Nantong from 190,000sm to 430,000sm.

Capabilities

- KNS constructs a wide range of vessels and offshore structures
- KNS was the first shipyard in China awarded the highest grade of safety certification from the Chinese State Administration of Work Safety
- Located along the Yangtze River, about 150 km north-west of Shanghai with close proximity to supporting offshore and marine industries in the Municipality of Nantong
- KNHI supports Keppel O&M's construction work from China by producing up to 32,000MT of steel structures annually
- KNHI can undertake heavy offshore fabrication projects including jackup rigs and semisubmersibles.

KNHI SUPPORTS KEPPEL O&M'S CONSTRUCTION WORK BY PRODUCING UP TO 32,000 MT of steel structures annually

Keppel Nantong Shipyard (KNS) has received the Industrial Excellence and Safety Excellence award by the Nantong Municipal People's Government for five consecutive years since 2010.

Key equipment & facilities

- KNS has extensive berths, advanced mechanical transfer and launching systems, and comprehensive workshops
- Shoreline of 1,000m and wharf length of 535m
- KNHI has panel line fabrication workshops and a 600MT gantry crane
- With KNHI's newly established facilities, a complete upper hull for a semisubmersible can now be built and delivered in one single megablock

THE PHILIPPINES Keppel Batangas Shipyard

Started in 1975, Keppel Batangas is the first overseas venture of the Keppel Group. Its shipyard at the Keppel Philippines Marine – Special Economic Zone is strategically located along the main trading routes of vessels in the region.

Capabilities

- Offshore rig fabrication
- Ship repair and conversion
- Shipbuilding track record of more than 100 newbuilds

Key equipment & facilities

- Keppel Batangas operates a 200m x 38m, 50,000 dwt capacity handymax graving dock
- The yard is able to accommodate simultaneous repair projects using its shiplift system to bring vessels to any of its seven dry berths which are capable of docking vessels up to 20,000 dwt
- The newly-installed 300T gantry crane will facilitate the assembly of complete vessels at Berth 3 & 4
- Modern panel line workshop, hull shop and assembly slabs with 40T gantry cranes and sheds support efficient shipbuilding activities
- The yards' four assembly areas are equipped with mobile sheds and gantry cranes allowing for continuous production work on newbuild and fabrication projects

Keppel Subic Shipyard

Located in the Subic shipyard -Special Economic Zone, Keppel Subic Shipyard is the leading shipyard in the region providing greater flexibility and turnaround times for ship owners.



- Offshore structure/platform fabrication
- Topside module fabrication
- Ship repair, marine and FPSO conversion
- Successfully completed Depletion Compression Platform (DCP) for the Malampaya Phase 3 Project of Shell Philippines Exploration. It is the first such platform to be fully constructed in the Philippines

Key equipment & facilities

- Operates a 550m x 65m drydock, one of the largest in the Philippines capable of co-drydockings
- Carries out a wide range of repair and modification works on a variety of vessels with drafts over 8.5m alongside the yards' berthing quays with a total of 942m length
- Fabrication areas totalling to 94,000m² with a 1,500T capacity gantry crane, the biggest in the Philippines at the grand assembly area
- Services double-banked Panamax and Capesize vessels undergoing afloat repair using its 100m jib crane with lifting capacity of 35T

INDONESIA Bintan Offshore

Established in 2006, Bintan Offshore is supporting Keppel O&M in module blocks fabrication. It has a dedicated local Indonesian team which is able to undertake the construction of jackup legwell blocks, semisubmersible columns, pontoons and upper hull blocks, living quarters, crane columns and helideck trusses amongst other things.



- Fabricates module blocks for a variety of offshore projects
- Steel structure fabrication and outfitting work as well as piping work, including fabrication, installation and testing.

Key equipment & facilities

- Total yard area of 310,000sm
- Wharf length of 270m and depth 5m
- Dry dock with length 102m, breadth 33m and depth 4.5 m
- In-house welding training centre



AMERICAS

The Americas contains some of the world's largest hydrocarbon reserves and is dominated by National Oil Companies (NOCs) and oil majors. Keppel O&M's yards in USA (Brownsville, Texas) and Brazil (Rio de Janeiro and Santa Catarina) are strategically located to serve one of the most robust oil and gas markets in the world.



Keppel AmFELS

Strategically located at the gateway of the Gulf of Mexico, Keppel AmFELS is the foremost offshore shipyard in the Gulf of Mexico, backed by a confluence of strengths such as a sheltered waterfront area, a massive drydock and modern steelprocessing plant.

Capabilities

- Yard space of 555,438 sm
- Construction, refurbishment, conversion, life extension and repair of a complete range of mobile drilling rigs and production platforms

Key equipment & facilities

- Floating dry dock with a lift capacity of 37,000 dwt
- Manitowoc 21000 crane capable of lifting 1,000 short tonnes and with a maximum reach of 640 ft
- Floating crane, Atlantic Giant, has a lifting capacity of 700 short tonnes.

Keppel FELS Brasil/BrasFELS

The largest and best-equipped yard in Latin America, BrasFELS plays a key role in helping to meet Brazil's aspirations for greater local content.



- Yard space of 522,230sm
- Construction, refurbishment, conversion, life extension and repair of a complete range of mobile drilling rigs and production platforms



- Newly installed Goliath gantry crane with 2,000MT lifting capacity has been supporting the installation of megablocks and modules, including the installation of a megablock weighing 1,932MT for a DSS[™] 38E semisubmersible
- FS-1 floating dock (130m x 71m)
- Gantry crane with 660MT
 lifting capacity
- Assembly area with movable sheds
- 720m of berthing space integrated with customs clearance facilities

Keppel Singmarine Brasil

Located in Navegantes, Santa Catarina, Keppel Singmarine Brasil complements BrasFELS yard in offering a one-stop solution for customised vessels with local content.



- Construction of specialised ships ranging from anchor handling tug/ supply vessels to platform supply vessels, oil recovery support vessels and harbour tugs, among others
- Fabrication of offshore modules



- 300m long waterfront area
- CNC plasma steel cutting facilities with a 128m panel line fabrication shop
- Slipway with 120MT gantry crane
- 220m sheltered hull fabrication shop
- Pipe shop with CNC pipe bending machine
- · Semi-auto recovery blasting chamber

01

Keppel Subic Shipyard.

02

BrasFELS yard in Angra dos Reis, Rio de Janeiro.





EUROPE

Keppel Verolme

Keppel Verolme operates a comprehensive yard in Rotterdam, the Netherlands, which is in close proximity to the gas and oil fields of the Netherlands, UK, and Norway, and has direct access to the North Sea.

Capabilities

- Dry-docking, repair and maintenance, modification, conversion and construction of various vessel types and offshore units
- Support European offshore wind energy sector with value-added services and solutions

Key equipment & facilities

- Three graving drydocks with the largest drydock measuring 405m x 90m, with water depth of 11.6m
- 2,000m of quay side with a water depth of up to 12m

CASPIAN SEA

The Caspian Sea region is one of the oldest oil-producing areas in the world and is an increasingly important source of global energy production. The area has significant oil and natural gas reserves from offshore deposits. Azerbaijan is projected to account for increased levels of Capex over the next five years, derived mainly from the development of BP's Shah Deniz project.

Caspian Shipyard Company

Caspian Shipyard Company (CSC) in Azerbaijan is the first international rig construction, repair and conversion yard in the Caspian Sea region servicing the offshore oil and gas industry. It has a track record of delivering the first semisubmersible, jackup rig and ice-class Floating Storage and Offloading (FSO) vessel built in-country.

Capabilities

- Offshore rig construction, repair and conversion
- Able to support in the completion of rigs going to the Black Sea



- Quay berthing space: 250m
- Reinforced load-out quay area: 3,700m² (80t/m²)
- Workshop: structure, piping, electrical, mechanical
- Material handling equipment

Baku Shipyard

Baku Shipyard adds to Keppel's existing footprint in Azerbaijan. Responsible for the management of the yard, Keppel O&M has a 10% ownership while SOCAR and AIC owns 65% and 25% respectively.

Capabilities

- Construction of a wide range of specialised vessels and merchant ships including subsea vessels, anchor handling tug/supply vessels and multipurpose offshore support vessels
- Ship repair and conversion
- Able to undertake offshore structure construction and repairs
- When operating at full capacity, it is able to undertake up to 100 repairs and conversions per annum and is estimated to achieve an average annual steel output of 25,000MT



- Floating dry dock 168m x 50m
- 300m x 30m finger pier
- 450m of quay berthing space with 25MT level luffing crane
- 275m x 80m of new building berth
- 323m x 136m transfer slab for repair services
- Blasting and painting hall equipped with full abrasive recovery system, dehumidifier, silo and blast and paint machines
- Steel fabrication, pipe fabrication, mechanical and electrical workshop housing the most modern machines

MIDDLE EAST

The Gulf holds some of the world's largest oil and gas reserves, and is home to the biggest offshore oil and gas fields. It provides one of the best offshore environments in the world for oil and gas production, offering shallow, warm and relatively calm waters.

Nakilat-Keppel O&M

Nakilat-Keppel O&M (N-KOM) is a 508,000sm world-class shipyard facility located at the north-eastern tip of Qatar, next to the gas loading terminals in the Ras Laffan Port. In operation since 2011, the shipyard has delivered more than 350 marine and offshore projects. It is the leading provider of repairs and maintenance for gas carriers in the region, having completed more than 100 LNG carrier repairs.

01

Keppel Verolme in the Netherlands.

02

N-KOM yard in Qatar.

Capabilities

- Ship repair and conversion
- Construction and maintenance of offshore structures (jackup rigs, liftboats, jackets & piles, etc.)
- Provider of green shipping & gas-related marine solutions (e.g. BWTS installations, ME-GI conversion, etc.)
- Leading provider of repairs and maintenance for gas carriers

Key equipment & facilities

- Two VLCC-sized graving docks (400m x 80m and 360m x 66m),
- Q-max floating dock (405m x 66m)
- Six quays and piers with a total berthage capacity of 3km
- 150m loading quay, workshops and a massive warehouse
- Cryogenic clean room
- Over 300,000sm of fabrication area
- Dedicated facility (200m floating jetty
- & dry berth) for small vessel repairs • 300MT and 1,100MT mobile
- boat hoists

Arab Heavy Industries

Strategically located along the coast of the Emirate of Ajman, about 30 km from Dubai, Arab Heavy Industries (AHI) has built a reputation for being the preferred solutions partner for fleet owners and operators in the Arabian Gulf.



- Ship repair and conversion, shipbuilding, as well as offshore structures repairs and modifications
- Newbuilding of tugboats, supply vessels, barges, landing craft, coastal freighters, jetties and pontoons



- Yard area of 270,000sm
- 9,000sm covered workshop
- 75,000sm open fabrication area



Operations Review & Outlook

We continue to strengthen our operations while tapping into new markets and innovating new solutions for the industry.

SIGNIFICANT MILESTONES IN 2014

Secured order for ultra-high specification KFELS N Plus jackup design.

Delivered two of the world's largest jackups.

Signed agreement on engineering study of a Plug & Abandonment jackup.

Secured two contracts to perform the world's first-of-its-type floating LNG vessel conversions.

Secured contracts to build three ice-class vessels.

Secured two FPSO conversion contracts and completed seven FPSO conversion/ upgrading projects.

Expanded into new market with a liftboat order.

Secured first major new build contract in Baku.

Delivered nine major specialised vessels.

Secured orders for six KFELS B Class jackups.

STRONG ORDERBOOK

Backed by proven operational capabilities and extensive experience in a wide spectrum of offshore and marine projects, Keppel Offshore & Marine (Keppel O&M) remains the choice global partner for newbuilding, conversion, repair and upgrading services for owners and operators in 2014.

The group continued to stay ahead in the industry, delivering differentiated and value-adding solutions to a diversified customer base. During the year, Keppel O&M's worldwide yards delivered seven rigs, seven Floating Production Storage and Offloading (FPSO) conversion/upgrading projects and nine major specialised vessels with Keppel's hallmark execution excellence. The delivery of the world's largest jackup, Maersk Interceptor, to Maersk Drilling ahead of schedule and on budget attests to that excellence and further strengthens Keppel FELS sterling rigbuilding track record.

In 2014, Keppel O&M was entrusted with \$5.5 billion worth of new orders, bringing its net orderbook as at year end to \$12.5 billion, with deliveries extending to 2019.

Some of these new orders marked significant milestones for Keppel O&M as the group continues to develop new solutions, such as the world's first-of-its-type Floating Liquefaction Vessel (FLNGV) conversion for Golar LNG and the first KFELS N Plus class jackup design for TS Offshore. Baku Shipyard, which Keppel O&M has a 10% stake in, secured its first major newbuild contract – a subsea construction vessel – from BP Exploration (Shah Deniz).

STRENGTHENING GLOBAL FOOTPRINT

As part of its Near Market, Near Customer strategy, Keppel O&M has continued to look for opportunities to expand its global footprint during the year. In April, Keppel O&M signed a conditional 30-year management services agreement with Titan Petrochemicals Group (Titan) to manage the Titan Quanzhou Shipyard (TQS) in Fujian Province, China. Having this TQS yard will enable Keppel O&M to service the Chinese market with its suite of proprietary solutions while meeting the requirement of building in-country.

Apart from seeking opportunities to expand its global network of yards, Keppel O&M is focused on ensuring that all existing yards continue to perform well. Amidst a challenging macro environment in 2014, Keppel O&M's yards continued to invest judiciously to enhance their capabilities and upgrade their facilities for higher productivity and competitiveness. This enables Keppel O&M's strategically located yards around the world to stay well-equipped to better meet evolving market needs and seize growth opportunities in the industry.



SINGAPORE - CENTRE OF EXCELLENCE

In 2014, Keppel O&M's Singapore yards – Keppel FELS, Keppel Shipyard and Keppel Singmarine – continued to be centres of excellence, leading in the design and provision of high performance solutions for customers worldwide. During the year, the Singapore yards also stepped up efforts to improve its safety performance and renewed its focus on people development, innovation and community contributions.

01

Keppel FELS delivered the first two of the series of ultraharsh environment jackup rigs, Maersk Intrepid and Maersk Interceptor, to Maersk Drilling during the year.

MAJOR ORDERS SECURED BY KEPPEL O&M IN 2014

Business Unit	Contract	Customer	
1Q			
Keppel FELS	KFELS B Class jackup	UMW Oil & Gas	
Keppel FELS	Three KFELS B Class jackups	Fecon International Corp.	
Keppel FELS	KFELS N Plus jackup	TS Offshore	
Keppel Shipyard	Turret fabrication for FPSO	SOFEC	
Keppel Singmarine	Two ice-class supply vessels and one ice-class multi-purpose duty- rescue vessel	Bumi Armada Berhad	
Keppel Nantong	Two tugs	KSP Towage	
2Q			
Keppel Shipyard	FPSO conversion	Bumi Armada Berhad	
Keppel Shipyard	FLNGV conversion	Golar LNG	
Baku Shipyard	Subsea construction vessel	BP Exploration	
3Q			
Keppel FELS	KFELS B Class jackup	Gulf Drilling International	
Keppel Shipyard	FPSO conversion and turret fabrication	Bumi Armada Berhad	
N-KOM	Liftboat	Gulf Drilling International	
4Q			
Keppel FELS	KFELS Super B Class	BOTL	
Keppel FELS	Two semisubmersibles	Undisclosed	
Keppel Shipyard	FLNGV conversion	Golar LNG	
Keppel AmFELS	Land drilling rig	Undisclosed	
Keppel Nantong	Submersible barge	Smit Shipping Singapore	



Operations Review & Outlook



01

Keppel FELS successfully delivered its second KFELS B Class jackup to UMW Oil & Gas ahead of schedule and without lost-time incidents.

02

The robust KFELS N Plus jackup design is an enhancement of Keppel's proprietary KFELS N-Class design, three of which are already in operation.

KEPPEL FELS

2014 was overall a good year for Keppel FELS, the Singaporebased rigbuilding arm of Keppel O&M. Keppel FELS completed six rigs either on time or ahead of schedule for drilling contractors Maersk Drilling, ENSCO, UMW Oil & Gas, Gulf Drilling International and Star Drilling. Among these deliveries were the two mammoth XL enhanced jackup rigs for Maersk Drilling, which are the largest jackup rigs in the world to be built. The rigs are deployed on long-term contracts in offshore Norway for Total and Det norske oljeselskap ASA.

Keppel FELS also delivered 15 repair and upgrading projects to longstanding customers such as Diamond Offshore, ENSCO, Transocean, Seadrill, Japan Drilling and COSL, among others.

In new orders, Keppel FELS won the confidence of the market for both its

new and proven designs. The company secured a contract from TS Offshore to build a harsh environment jackup rig of the new KFELS N Plus class design, which can meet stringent operating requirements for some of the most challenging wells in the world. Keppel FELS also won contracts from a new customer, Fecon International, to build three proven and high-performance KFELS B Class jackups. Repeat customers which placed jackup orders with Keppel FELS in 2014 include UMW Oil & Gas and Gulf Drilling International.

In 2014, Keppel FELS continued to improve its facilities with the installation of a new gantry crane that has a 700-tonne lifting capacity at its Pioneer Yard. This enables the yard to construct rig modules in larger blocks which can be lifted easily from the fabrication area to the drydock for assembly, expediting the rig building process while also increasing productivity and cost efficiency.

Apart from productivity, Keppel FELS also maintained its focus and vigilance on safety when executing its projects, which led to it garnering a total of 18 awards at the 2014 Safety & Health Award Recognition for Projects (SHARP) organised by Singapore's Work Safety & Health (WSH) Council.

For its record deliveries of 21 rigs in 2013, Keppel FELS was conferred the title of "Largest Manufacturer of Offshore Rigs – Current" by the Guinness World Records.

KEPPEL SHIPYARD

In 2014, Keppel Shipyard maintained its position as a leader in the repair, conversion and upgrading of a wide range of vessels. As at end 2014, the company continues to be busy with ongoing projects that include six FPSO/ FLNGV projects; five turret fabrication projects and two mobile offshore production unit projects.

During the year, Keppel Shipyard repaired 418 vessels, which was a 9% increase compared to 2013. Tankers, gas carriers, drilling vessels and offshore supply vessels were the main contributors to Keppel Shipyard's repair business in 2014. During the year, the company secured a number of new repair businesses and renewed agreements with longstanding customers. New fleet repair agreements were signed with Delta Tankers and Koyo Kaiun, while NYK, JX Ocean, and McDermott International renewed their agreements with Keppel Shipyard. The company also signed new drydocking agreements with CGG Group and MISC.

Since 2006, Keppel Shipyard has delivered, on average, seven FPSO/ Floating Storage and Offloading (FSO)/ Floating Storage and Regasification Unit (FSRU) conversion projects a year. In 2014, the company maintained this track record by completing six FPSO conversion/ upgrading projects. This brings the total number of FPSO/FSO/FSRU projects which Keppel Shipyard has delivered to 116 as at the end of 2014.

REACHING NEW DEPTHS

Keppel FELS secured a contract from TS Offshore Limited (TS Offshore) to construct an ultra-high specification jackup rig, one of the first with the ability to work in 500-feet deep water depths. Scheduled for delivery in 1Q 2017, it will be the first jackup built to Keppel's new proprietary KFELS N Plus design.

With each of its legs measuring 678 feet or about 68 storeys tall, and a maximum combined drilling load of 3,860 kips, the KFELS N Plus is able to meet stringent operating requirements for the most challenging wells. It can work at a maximum water depth of 500 feet, drill to depths of 35,000 feet, and is equipped with a 100-feet cantilever outreach.

Dr Xiong Shaohui, Chairman of TS Offshore, said, "The KFELS N Plus rig is one of the world's most advanced rigs of its class with better drilling capabilities, a superior cantilever load performance, a larger deck space, a higher variable load and enhanced accommodations. We are confident it fills the gap for ultra-high specification rigs needed in the Eastern China Sea or anywhere else in the world."

Developed by Offshore Technology Development (OTD), Keppel's research and development arm, the robust KFELS N Plus jackup is an enhancement of Keppel's proprietary KFELS N-Class design, three of which have been successfully operating in the North Sea.

When completed, this first KFELS N Plus class jackup will be deployed by Xcite Energy to work in the Bentley field in the UK sector of the North Sea.





01

Keppel Shipyard and longstanding customer Bumi Armada celebrate their tenth successful collaboration.

02

Keppel Singmarine secured a contract from a subsidiary of Maritime Construction Services to build an ice-class multipurpose vessel. A significant development for Keppel Shipyard in 2014 was the securing of a firm contract to convert the world's first-of-its-type FLNGV for Golar LNG. The FLNGV project is the fruition of a year-long Front-End Engineering and Design study which concluded in 2013. Six months after the first FLNGV conversion contract was inked, Golar LNG exercised the first of two options for an identical unit at the end of 2014.

To improve workflow and enhance the safety and productivity of its yards, Keppel Shipyard extended and deepened its quays in Benoi Yard in 2014. Its commitment to execution and safety excellence was recognised when the shipyard garnered a number of awards in 2014, which include the Shipbuilding and Repair Yard award conferred by Seatrade Asia; nine SHARP Awards by the Singapore WSH Council; and two Gold awards for safety innovation by the Singapore WSH Council and the Association of Singapore Marine Industries.

KEPPEL SINGMARINE

In 2014, Keppel Singmarine successfully delivered two projects, Fly Challenger, the third bulk carrier in a series of vessels built for Ok Tedi Mining, and Bhagwan Dryden, a catamaran air dive support vessel (DSV) for Bhagwan Marine. Both vessels were delivered with a perfect safety record. A derrick pipe-laying vessel that Keppel Singmarine is building for McDermott was also launched safely at the end of 2014.

For new orders, Keppel Singmarine had a rewarding year. The new contracts which the company secured in 2014 include an order from repeat customer, Seaways International, to build a 100-tonne bollard pull anchor handling tug (AHT) vessel and a contract for hull construction and outfitting works for a subsea construction vessel from Keppel O&M's joint venture yard, Baku Shipyard, in Azerbaijan.

Keppel Singmarine continued to strengthen its track record in building ice-class vessels when it secured contracts for two ice-class supply vessels and an ice-class multipurpose duty-rescue vessel from Bumi Armada, and a contract to build an ice-class multipurpose vessel for New Orient Marine, a subsidiary of Maritime Construction Services.

During the year, Keppel Singmarine identified several opportunities for growth and expanded its suite of technology solutions to meet the demands of the specialised shipbuilding market. For instance, the company made its foray into the growing liftboat market when it was awarded a contract to provide detail and production engineering, technical and commissioning support, project management and procurement support for the construction of a liftboat.

To uphold high operational standards, Keppel Singmarine continued to invest in automated equipment to boost productivity and maintain quality, such as an integrated panel and assembly line which enable its yard to produce panels as well as double hull blocks more efficiently.

Keppel Singmarine also continued to achieve safety excellence and accolades during the year. In recognition of its commitment to safety and for consistently delivering vessels with zero lost-time incidents (LTI), Keppel Singmarine was conferred multiple WSH Awards, including six SHARP Awards in 2014.



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01

Keppel Nantong Shipyard delivered two submersible barges to Smit Shipping Singapore consecutively with excellent safety records and ahead of schedule.

02

Keppel FELS received the Guinness World Record for delivering 21 rigs in 2013 – the most by a yard in a single year.

GROWING SATELLITE YARDS

The record delivery of 21 rigs by Keppel FELS in 2013 is testament to the strong execution capability of the rigbuilding unit as well as its ability to leverage overseas satellite yards to overcome the limitations of physical space and manpower in Singapore. Keppel O&M continues to enhance and develop these satellite yards in China, Indonesia and the Philippines so that they can better complement Singapore's operations on top of tapping local demand and talents.

KEPPEL NANTONG SHIPYARD

In 2014, Keppel Nantong Shipyard delivered a number of projects ahead of schedule. These projects include two units of 50-tonne bollard pull ASD tugs to KSP Towage Sdn. Bhd., and Giant 5, a submersible barge, to Smit Shipping Singapore (Smit Shipping). Following the delivery of Giant 5, its sister vessel, Giant 6, was delivered shortly after in January 2015. Keppel Nantong Shipyard received a safety bonus for all these projects. The shipyard also received Smit Shipping's repeat order for a third submersible barge in 2014.

Other projects under construction during the year are two units of ice-class supply vessels for Bumi Armada and two units of 65-tonne Bollard Pull ASD tugs for other customers. In February 2015, it also completed Asian Hercules III, a 5000-tonne Offshore Heavy Lift Vessel for Asian Lift.

Besides being a robust builder of tugs and offshore support vessels such as Anchor Handling Tug/Supply, Keppel Nantong Shipyard is also an important satellite yard for the Singapore home base. To augment its capabilities, Keppel Nantong Shipyard will be constructing a new slipway in 2015, allowing it to launch and service larger and heavier offshore vessels.





On the safety front, Keppel Nantong Shipyard made significant advancements in 2014, such as becoming the first shipyard in Nantong, China, to set up a training centre that focuses on safety. Located within the shipyard, the training centre provides safety courses to all yard workers, including those employed by its subcontractors.

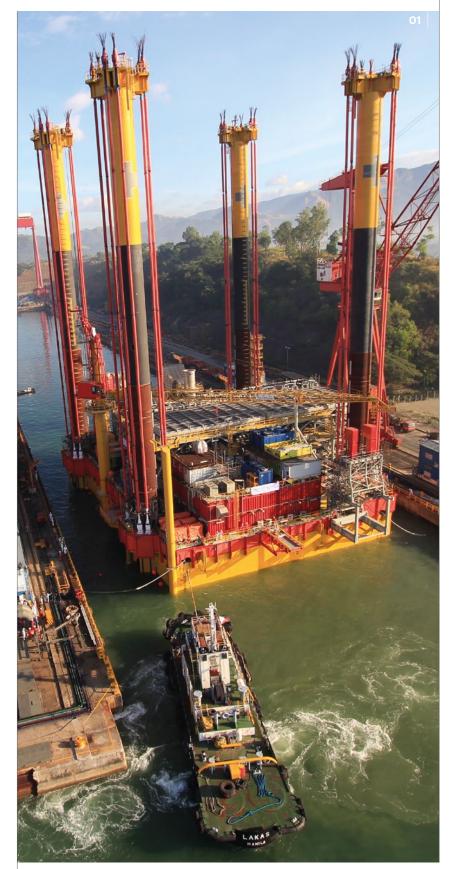
Recognising Keppel Nantong Shipyard's efforts and achievements made in safety, the Chinese State Administration of Work Safety issued the shipyard the "National Level-One Standardisation on Safe Work Practices" certification. This is the highest level of certification issued to companies for outstanding safety practices by the Chinese Central Government. Keppel Nantong Shipyard is the first Chinese shipyard to be awarded this certification.

KEPPEL NANTONG HEAVY INDUSTRY

Located next to Keppel Nantong Shipyard, Keppel Nantong Heavy Industry (KHNI) supports Keppel O&M in its offshore projects. KHNI is equipped with a full range of facilities such as blasting/painting workshops and mobile workshops. Since its commencement of operations in end-2013, KHNI has successfully completed two load-out operations from its public jetty in January 2014, and made its first delivery to Keppel FELS - 13 blocks of completed pontoons and spud cans for a floating accommodation platform and a jackup rig - in January 2015.

Total steel fabrication output in KHNI reached a commendable 32,000 tonnes in its first year of operation.

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KEPPEL PHILIPPINES MARINE

Despite a challenging year in 2014, the two shipyards under Keppel Philippines Marine, Inc. (KPMI) – Keppel Batangas Shipyard (Keppel Batangas) and Keppel Subic Shipyard (Keppel Subic) – leveraged the close business relationships forged over the years of operating in the Philippines to secure a healthy pipeline of repair projects, some of which are from new customers with foreign vessels. The two shipyards completed repair projects for 98 vessels, which is comparable to the year before.

During the year, Keppel Subic also delivered a coal transshipper crane barge, Ratu Giok 5, within budget and with a good safety record to Indonesian customer PT Pelayaran Kartika Samudra Adijaya (KSA). This is the first floating barge to be built in Subic for KSA that received certification from RINA Services, a widely recognised ship classification service provider.

For new orders, Keppel Batangas had actively pursued agreements for fleet drydocking with major domestic shipping operators, which would be a source of sustainable revenue and help to maximise the utilisation of dock space. As the Armed Forces of the Philippines embarks on its vessel acquisition programme for the Philippine Navy, Keppel Batangas will also actively tap the opportunities arising from this development.

Apart from marine projects, both yards have also been busy with offshore structures construction work. During the year, Keppel Batangas supported the construction of Keppel FELS' semi for Sete Brasil with hull fabrication work. Amidst the active work pace, the yard commemorated its safety milestone of 10 million safe man-hours without any LTI since 1 June 2013.

Similarly, Keppel Subic made significant progress in its offshore project. The Malampaya Phase 3 (MP3) Depletion Compression Platform (DCP) that the shipyard was contracted by Shell Philippines Exploration (SPEX) to build achieved over eight million safe man-hours without LTI during the year. With the successful delivery of the DCP in February 2015, Keppel Subic will capitalise on its upgraded yard facilities made in conjunction with the project to take on more major offshore fabrication jobs and also complement Keppel Shipyard in Singapore in executing FPSO conversion projects.

Keppel Batangas is also enhancing its capabilities to take on offshore support vessel projects by upgrading its facilities. The yard is converting a berth into an assembly area with mobile sheds, and installing a new gantry crane with a 300-tonne lifting capacity and a jib crane with a 50-tonne lifting capacity.

DEEPENING ROOTS IN THE AMERICAS

Operating BrasFELS in Brazil since 2000 and Keppel AmFELS in the US since 1990, Keppel O&M has continued to deepen its presence and leading position in the industry in the Americas with these two established yards. Well-positioned to tap local demand, Keppel O&M's Americas yards were kept bustling with activities during the year.

KEPPEL FELS BRASIL/BRASFELS

Keppel FELS Brasil's yard in Angra dos Reis (Rio de Janeiro), BrasFELS, was kept busy with newbuild and repair projects in 2014. Some of these repair projects were secured from repeat customers such as Ensco and Diamond Drilling, while others from new customers such as Aban Abraham. Providing its hallmark quality service and quick turnaround, BrasFELS completed most of these projects on time and within the year.

A significant project completed during the year was the FPSO Cidade de Mangaratiba, which was delivered 18 days ahead of schedule to the consortium MTOPS (MODEC and TOYO Offshore Production Systems Pte. Ltd).

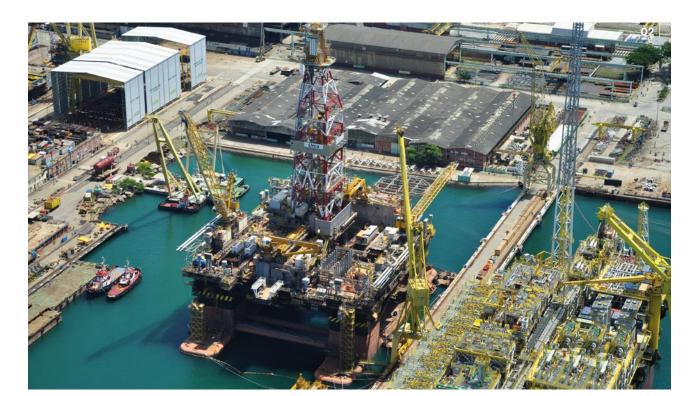
Leveraging the experience of delivering three large floating

01

Being towed out of Keppel Subic Shipyard's dock is the Depletion Compression Platform that the shipyard delivered to Shell Philippines Exploration BV (SPEX).

02

BrasFELS is making good progress on its first drilling semi for Sete Brasil.



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01



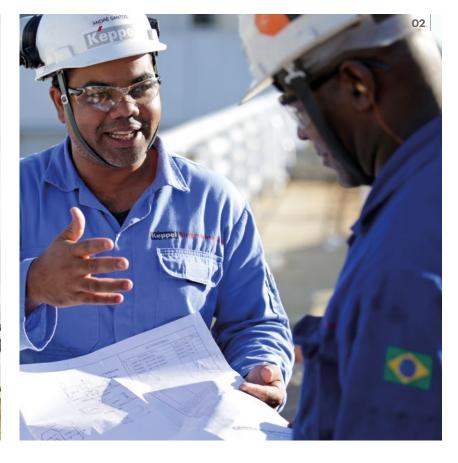
Keppel AmFELS delivered their fourth jackup rig, Coatzacoalcos. for Perforadora Central.

02

Clockwork operations at Keppel Singmarine Brasil as the yard completed a series of six harbour tugboats for SMIT Rebras.

03

The HILLI, a Moss LNG carrier, sailed into Keppel Shipyard's Benoi Yard on 8 September 2014 to undergo the world's first-of-itstype conversion into a floating liquefaction vessel.



production units in Brazil, construction of the first three DSS[™] 38E semi drilling rigs for Sete Brasil progressed well during the year. By the end of 2014, the first semi was over 85% completed and the second about 50% completed. The newly-installed 2,000-tonne gantry crane was put to good use to support the installation of megablocks for these semis.

The fabrication and integration of topside modules on the FPSO P-66 for a Petrobras-led consortium also made good progress, achieving three million manhours without LTI.

To enhance the flexibility and capabilities of the yard, BrasFELS completed the installation of the new 2,000-tonne gantry crane during the year, and also added a blasting hall, mobile sheds, storage areas, workshops, plasma cutting machines, plate blasting and priming machines, and a substation to its facilities.

KEPPEL SINGMARINE BRASIL

Keppel Singmarine Brasil is Keppel's second shipyard in Brazil. Located in Navegantes, Santa Catarina, Keppel Singmarine Brasil focuses on specialised shipbuilding projects. Deliveries of the harbour tugs continued apace at Keppel Singmarine Brasil as the shipyard delivered another three of the 45-tonne bollard pull ASD harbour tugs to SMIT Rebras in 2014. Keppel Singmarine Brasil's sixth and final harbour tug for REBRAS-Rebocadores do Brasil S.A. (SMIT Rebras) was also launched during the year and successfully delivered in 1Q 2015.

Other ongoing projects include two 4,500 dead weight tonne (DWT) platform supply vessels for Guanabara Navegacao Ltda. The first unit has completed its lightship survey and sea trial while the second unit is scheduled to be launched in 1Q 2015.

KEPPEL AMFELS

Keppel AmFELS has been actively supporting Mexican industry players over the years. In 2014, the yard fortified its longstanding partnership with Perforadora Central S.A. De C.V. (Perforadora Central) with the delivery of its fourth jackup rig on time, within budget and with zero LTI. Keppel AmFELS' fifth jackup rig for Perforadora Central is progressing well, and the teamwork and relationship cultivated over the years with the Mexican customer will help ensure another smooth delivery.

During the year, Keppel AmFELS diversified its solutions offerings by securing a contract from a major operator to build one of the world's largest land drilling rigs capable of operating in harsh conditions. Keppel AmFELS will be undertaking the engineering, procurement and construction of the rig.

SERVICING THE CASPIAN REGION

Keppel O&M services the Caspian market through its two joint venture yards in Azerbaijan – Caspian Shipyard Company (CSC) and Baku Shipyard. Leveraging the collective strengths formed with its local partner, the State Oil Company of Azerbaijan Republic (SOCAR), the two yards are well placed to support Azerbaijan and the region's growing oil and gas industry.

CASPIAN SHIPYARD COMPANY

2014 was a busy year for CSC. Reaping the synergies from Keppel O&M's global network, construction of the DSS[™] 38M semi for SOCAR is well on track. The columns and bracings arrived in the yard from Singapore for integration in October 2014. The first pontoon was then launched in Baku Shipyard in December 2014. The port and starboard pontoons were then also towed to CSC yard for integration works.

Besides newbuild projects, CSC also undertook several repair/ upgrade projects during the year such as providing shipyard services

CONVERTING THE WORLD'S FIRST FLNGV

In July 2014, Keppel Shipyard secured a contract from Golar Hilli Corporation (Golar), a subsidiary of Golar LNG Ltd, to perform the world's first-of-its-type conversion of an existing Moss Liquefied Natural Gas (LNG) carrier, the HILLI, into a Floating Liquefaction Vessel (FLNGV).

In carrying out the FLNGV conversion, Keppel Shipyard is responsible for the provision of the design, detailed engineering and procurement of the marine systems and all of the conversionrelated construction services. Keppel Shipyard's scope also includes engaging Black & Veatch to provide design, procurement and commissioning support services for the topsides and liquefaction process.

The FLNGV will take about 31 months to convert and is expected to be completed in the first quarter of 2017.

Shortly after the award of the first contract, Golar exercised the first of its two options in December 2014 for another similar unit to be converted from a second Moss LNG carrier, the GIMI.

The work scope for Keppel Shipyard in converting the GIMI is similar to that for the HILLI. Full construction activities of the GIMI will only commence when Keppel Shipyard receives a notice to proceed, expected to be issued no later than November 2015. This second FLNGV is expected to be delivered around 33 months after receipt of the notice to proceed.

Mr Michael Chia, Managing Director (Marine & Technology), Keppel O&M, said, "We are happy that Golar LNG is proceeding with their second FLNGV conversion, and would like to thank them for once again entrusting Keppel Shipyard as their lead contractor of choice. This second contract comes just six months after the first contract, and we are encouraged by this positive development. We, together with Golar LNG and our partner Black & Veatch, are confident that FLNGV conversion solutions are indeed the answer to a need to bring small and mid-scale liquefied natural gas supplies to market in a more timely and cost-efficient manner."



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01

Baku Shipyard secured its first major contract to build a subsea construction vessel for BP Exploration (Shah Deniz) Ltd.

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for Swire's Seabed Supporter vessel, repair and upgrade works for four of BUE Marine Limited's vessels, and engineering work for the Istiglal semi upgrade project. BP awarded a STB-1 removal of sponson tanks job to the yard and the removal scope was completed within schedule in 21 days.

To improve efficiency of the yard, CSC added new equipment including a CNC plasma cutting machine, rotary telescopic handler, forklifts, 15-tonne side loader and semi-automatic welding system. Upgrading of the blasting and painting halls started in September 2014 and is expected to be ready for operations in IQ 2015.

BAKU SHIPYARD

Since its inauguration in September 2013, Baku Shipyard has achieved several milestones, one of which is the first major contract secured from BP Exploration (Shah Deniz) Ltd, the operator of the Shah Deniz gas field development, to design and build a subsea construction vessel (SCV) in 2014. The project struck steel in August 2014, and the vessel will be deployed at the Stage 2 development of the Shah Deniz field when completed. Besides the SCV contract, Baku Shipyard also secured a contract to build three units of 80-men crew boat for Caspar.

Steadily building up its brand name for ship repair in the region, Baku Shipyard managed to secure and complete 27 repair jobs for customers such as Topaz Marine, Swire, Caspian Marine Services and Azerbaijan Caspian Shipping Company during the year.

Despite being a newly developed yard, the shipyard secured the ISO 9001-2008 certification for its quality management system in 2014 and received the Conversion, Repair and Modernisation and Ship-Building Yard certification from the



MAJOR PROJECTS DELIVERED IN 2014

	Quarter	Туре	Customer	Shipyard
Offshore				
Newbuild jackups				
Maersk Intrepid	1Q	XL Enhanced jackup	Maersk Drilling	Keppel FELS
UMW Naga 5	2Q	KFELS B Class jackup	UMW Oil and Gas	Keppel FELS
ENSCO 122	2 Q 3 Q	KFELS Super A Class jackup	Ensco	Keppel FELS
Maersk Interceptor	3Q	XL Enhanced jackup	Maersk Drilling	Keppel FELS
Dukhan	3Q 3Q	KFELS B Class jackup	Gulf Drilling International	Keppel FELS
Jindal Explorer	4Q	KFELS B Class jackup	Star Drilling	Keppel FELS
Coatzacoalcos	4Q 4Q	LeTourneau Super 116E	Perforadora Central	Keppel AmFELS
Upgrading and repairs	40	Leroumeau Super Troc	Ferroradora Central	Repper Amir LLS
Rowan Gorilla VI	1Q	laakun ungrada	Rowan	KappalVaralma
Regalia	1Q 1Q	Jackup upgrade Accommodation	Prosafe	Keppel Verolme Keppel Verolme
Regalia	ΤQ	semisubmersible repair	FIOSAIE	Repper veronne
Ocean Patriot	2Q	Semisubmersible upgrade	Diamond Offshore	Keppel FELS
Ocean Alliance	2Q	Semisubmersible repair	Diamond Offshore	Keppel FELS Brasil
Ensco 5005	2Q 3Q	Semisubmersible upgrade	Ensco	Keppel FELS
Hakuryu-5	3Q	Semisubmersible repair	Japan Drilling Company	Keppel FELS
Noble Al White	3Q 3Q	Jackup repair	Noble Drilling	Keppel Verolme
Ensco 5006	4Q	Semisubmersible upgrade	Ensco	Keppel FELS
Ensco 6001	4Q 4Q	Semisubmersible repair	Ensco	Keppel FELS Brasil
Hermod	4Q 4Q	Platform maintenance and repair	Heerema	Keppel Verolme
Polar Pioneer	4Q 4Q	Semisubmersible repair and	Transocean	Keppel FELS
Foldi Fioneel	4Q	upgrade	THEISOCEAL	Repper FELS
Marine				
FPSO/FSO conversions and upgrading				
PTSC Lam Son	2Q	FPSO conversion	PTSC Asia Pacific	Keppel Shipyard
N'Goma	2Q	FPSO upgrade	SBM Offshore	Keppel Shipyard
Armada Claire	2Q	FPSO upgrade	Bumi Armada Berhad	Keppel Shipyard
Cidade de Mangaratiba	3Q	FPSO module fabrication and integration	MTOPS	Keppel FELS Brasil
Ratu Nusantara	4Q	FPSO conversion	M3nergy Offshore	Keppel Shipyard
Armada Sterling II	4Q	FPSO conversion	Bumi Armada Berhad	Keppel Shipyard
Bertam	4Q	FPSO upgrade	Lundin Services	Keppel Shipyard
Specialised Shipbuilding				
Newbuild vessels				
Fly Challenger	1Q	Bulk carrier	OK Tedi	Keppel Singmarine
KST Virgo	2Q	Tug	KSP Towage	Keppel Nantong Shipyard
Smit Panara	2Q	Tug	Smit Rebras	Keppel Singmarine Brasil
Ratu Giok 5	2Q	Floating crane transhipper barge	KSA	Keppel Subic Shipyard
Bhagwan Dryden	3Q	Diving support vessel	Bhagwan Marine	Keppel Singmarine
KST Virtue	3Q	Tug	KSP Towage	Keppel Nantong Shipyard
SST Potiguar	3Q	Tug	Smit Rebras	Keppel Singmarine Brasil
Giant 5	4Q	Submersible barge	Smit Shipping	Keppel Nantong Shipyard
SST Paiter	4Q	Tug	Smit Rebras	Keppel Singmarine Brasil



Azerbaijan State Maritime Administration, and the certification of conformity from the Russian Maritime Register of Shipping. The yard also won an award for its contributions to the local heavy industry from Azerbaijan Ministry of Economic & Industry.

TRUSTED SOLUTIONS PARTNER IN EUROPE

Keppel O&M operates a comprehensive yard, Keppel Verolme, in Rotterdam, the Netherlands, allowing it to serve the European markets and field developments in the North Sea. Having one of the largest drydocks in Europe and a strategic location close to the oil and gas fields of the UK and Norway, Keppel Verolme is a natural choice yard for seagoing vessels and floating offshore units in the region.

KEPPEL VEROLME

Keppel Verolme undertook major offshore repair projects during

the year, including the Rowan Gorilla VI jackup, the Saipem 3000 heavy lift vessel, the Regalia semi accommodation rig and the Hermod semi crane vessel.

Besides repair projects, Keppel Verolme also carried out modification works for two jackups belonging to repeat customer, Noble Drilling in 2014. The first jackup, Noble Lynda Bossler, arrived in May for a complete renewal of her jacking system. The second Noble Drilling jackup, Noble Al White, docked at Keppel Verolme for an intensive two-month maintenance period starting in June.

Keppel Verolme also undertook maintenance and refurbishment works for the world's largest cruise ship, "Oasis of the Seas", during the year. The vessel arrived at the yard in end September and work at the yard was completed in about two weeks.

Given the yard's strong reputation and track record in the region,

Mr Harold Linssen, Managing Director of Keppel Verolme, was awarded the prestigious Port Personality of the Year 2014 by the Rotterdam-based foundation, Port Personality of the Year. Mr Linssen is the first recipient from the shipbuilding, ship refit, ship repair and maintenance industry to receive this title.

MEETING DEMAND IN THE MIDDLE EAST

Keppel O&M services the fleet owners and oil and gas players in the Arabian Gulf through its two yards – Arab Heavy Industries (AHI) and Nakilat-Keppel Offshore & Marine (N-KOM) – which were formed through landmark partnerships with the Ajman Government of the UAE and Nakilat, the world's leading transporter of LNG, respectively.

ARAB HEAVY INDUSTRIES

One of the most established shipyards in the Gulf region, AHI has built up a good track record as a service provider of choice in the region. In 2014, AHI repaired 113 vessels for a mix of international clients such as Boskalis, Smit Lamnalco and Van Oord Ship Management, and local customers such as Middle East Dredging Co. AHI also converted an offshore support vessel, Deep Cleaner, into a well-stimulation vessel for Navispec Marine Services during the year.

01

The world's largest cruise ship, "Oasis of the Seas", received a new lease of life at Keppel Verolme.

02

The liftboat that N-KOM was awarded by Gulf Drilling International to build is designed by Bennett Offshore, a naval architecture and marine engineering arm of Keppel O&M, in collaboration with N-KOM.

PROPELLING AHEAD WITH NEW SOLUTIONS

Nakilat-Keppel Offshore & Marine (N-KOM) was awarded a contract by Gulf Drilling International (GDI), a subsidiary of Gulf International Services (GIS), the largest oilfield service company in Qatar, to construct a self-propelled and self-elevating liftboat.

Designed by Bennett Offshore, a naval architecture and marine engineering arm of Keppel O&M, in collaboration with N-KOM, the LB310-design liftboat can undertake a wide range of services such as well servicing, commissioning, maintenance and decommissioning of offshore platforms.

When completed at the end of 2015, the liftboat, which is customised for field transit operations in the Middle East and North Africa (MENA) region in water depths of up to 65 metres, will provide accommodation and platform support services for a customer with operations in Qatar.

This is the first time that N-KOM is constructing a liftboat, adding to the suite of technology solutions that the shipyard is growing to meet the market's needs. Leveraging the synergy of Keppel O&M's global yards, Keppel Singmarine will provide technical services which include detail and production engineering, technical and commissioning support and procurement support for the construction of the liftboat.

Mr Chandru Rajwani, CEO of N-KOM, said, "We have seen an increasing number of greenfield developments in the MENA region, with major oil players rapidly expanding their fleet in tandem with market demand. Having already established ourselves in the ship repair market, our next step is to capture the robust regional offshore market by leveraging Nakilat and Keppel O&M's expertise to provide quality and value-added offshore solutions. In this regard, we are committed to deliver a high-quality liftboat to GDI to support their offshore fleet."



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01

N-KOM celebrating its 100th project milestone for LNG carrier repairs with its successful handover of Dukhan to MOL LNG Transport on 2 February 2015.

02

Asian Hercules III, which was built by Keppel Nantong and can lift up to 5,000 tonnes, doing a tandem lift with Asian Hercules II which can lift up to 3,200 tonnes, on a project for Keppel FELS.

NAKILAT-KEPPEL OFFSHORE & MARINE

Since its inauguration in 2010, N-KOM has undertaken more than 300 projects for the marine, offshore and onshore industries. Its regional market share by the number of ship repairs increased to about 18% in 2014.

During the year, N-KOM attracted new customers such as Odfjell, Dynacom, V Ships, Aegean Bunkering and Shelf Drilling, and continued to widen its solutions offerings and climb up the value chain. The yard was awarded contracts by Gulf Drilling International (GDI), a subsidiary of the largest oilfield service company in Qatar, Gulf International Services, for the construction of a customised liftboat designed by Bennett Offshore, and a six-year repair and maintenance agreement for GDI's existing fleet of jackups operating in the Middle East.

N-KOM was also awarded a contract by Qatar Primary Materials Company (QPMC) for the construction of a floating jetty, involving marine civil engineering and major steel fabrication work.

To tap the growing demand for sustainable solutions such as clean energy in the industry, N-KOM formed strategic partnerships with a number of companies during the year to bolster its offerings in this area. It signed a contract with DNV GL to co-operate on future LNG and Gas solutions projects, and collaborated with Al Haya Engineering to introduce tank cleaning services to tanker owners. N-KOM also continued to build up its track record in LNG solutions by signing a memorandum of understanding (MOU) with HeLenGi Engineering (Greece) for the conversion of Greek ferries to operate on LNG fuel as part of the European Union's Poseidon-Med project.





HARNESSING SYNERGIES

Keppel O&M's joint ventures in the offshore and marine support services sector is a win-win combination as it is able to harness the synergies to value-add to its core-business operations, while creating value for its customers and partners.

ASIAN LIFT

Asian Lift's fleet of specialised marine heavy-lift sheerleg cranes maintained a healthy average utilisation rate of over 70%, close to the utilisation rate in 2013. Construction of Asian Lift's new 5,000-tonne heavy lift sheerleg crane – Asian Hercules III – was also completed in 1Q 2015.

With a larger, enhanced fleet, Asian Lift will aggressively market its services to meet the demand for single lifts of up to 5,000 tonnes and tandem lifts of up to 7,000 tonnes in the region as the weight of modules and other rig component in new projects get increasingly bigger. The addition of the higher capacity Asian Hercules III would broaden Asian Lift's market coverage and opportunities beyond its traditional markets to include offshore installations and decommissioning work.

KEPPEL SMIT TOWAGE / MAJU MARITIME

2014 was a challenging year for Keppel Smit Towage's operations in Asia. In Singapore, the granting of an additional towage license in the midst of limited market growth in the harbor towage market had resulted in increased competition. Nevertheless, even though its market share and tariffs were negatively affected as a result, they were offset by increased towage work in the spot market. In China, Keppel Smit Towage similarly faced some challenges due to the lower level of activities at ports such as Dafeng Port and Nantong-Qidong/ Lusi Port.

On the other hand, activities in Malaysia were mostly stable, supported by the long-term charter contracts secured. Notably, the two new tugs constructed by Keppel Nantong Shipyard secured long-term charters in Malaysia upon delivery. Keppel O&M's joint ventures in the offshore and marine support services harness synergies to value-add to its core-business operations.

Operations Review & Outlook



Nonetheless, competition from new local and international towage companies is expected to remain keen.

Over in Indonesia, new charter contracts from companies in the offshore oil and gas industry – PGN and Conoco Philips – helped to drive growth. Likewise, towage activities showed significant growth in Taiwan's new Taipei Port following the completion of dredging works which helped drive higher transshipment volume into the port. The initial six-year exclusive contract with Taipei Port that ended in 2014 was extended for another six years till 2020.

REGENCY STEEL JAPAN

Regency Steel Japan's core competency is in producing high quality racks and chords for jackup rigs. In 2014, it produced 12 rig sets of racks and chords for Keppel FELS, or an average of one rig set per month. Besides racks and chords, Regency Steel also delivered four sets of Retort and Mag pipe, rotary kiln, offshore windmill main pipe and some special pipes for government projects.

INDUSTRY REVIEW & OUTLOOK

After an unprecedented long period of healthy oil prices at levels of above US\$90 - US\$100 per barrel for most of the last four years, oil prices declined sharply starting in June 2014 to less than US\$50 per barrel at the beginning of 2015. While the steep decline could be attributed mainly to a global oversupply in oil, geopolitical factors and events could have exacerbated both the pace and magnitude of the fall to a certain extent.

Consequently, upstream oil and gas companies are planning to reduce Exploration and Production (E&P) budgets by 8.8% globally in 2015, according to Barclays E&P Spending Outlook. These budgets were made based on the assumption that oil prices would average around US\$65 - US\$70 per barrel during the year.

Similarly, dayrates for drilling rigs have declined in 2014. Shallow water exploration drilling activity will likely stay muted in 2015. While, according to Pareto Securities, National Oil Companies (NOCs) such as Saudi Aramco and PEMEX are expected to keep their overall rig count in their respective regions steady in 2015, these NOCs will be looking to manage their costs by seeking reduced dayrates for the jackups they are chartering.

The floater chartering market is expected to be challenging in 2015 with RS Platou expecting a drop in demand of around 2% - 3%. Floater contract backlog will continue to erode as 40% of the actively marketed floater fleet comes off contract between 4Q 2015 to 2Q 2016. Moreover, more than 50 newbuild floaters are expected to enter the market in the next two years.

OFFSHORE RIGS

Despite the decline in oil prices, there are still pockets of opportunities for oilfield services in shallow water reservoirs where the breakeven oil price for production is much lower than the prevailing US\$50 - US\$60 per barrel price range. The Middle East oil and gas market, for instance, remains robust as many of its fields are in shallow waters, fully developed and have low marginal cost of production.

Other bright spots for the offshore and marine industry can be found in Mexico and India, where oil and gas exploration and development remains necessary for these countries to achieve their goal of energy self-sufficiency. Following the finalisation of its oil reform, the upstream licensing Round One in Mexico has forged on amidst a low oil price environment and kicked off the release of 109 exploration and 60 production blocks, including some shallow water acreage, to foreign oil companies. These block awards could stimulate rig demand in Mexico in the long term.

01

Constant customer engagement will enable us to anticipate the needs of the market and be ready for the upturn.

02

Keppel is an active participant at industry conferences such as OSEA 2014, where industry players discuss the outlook and future of the industry.





As the world's energy landscape continues to evolve, Keppel O&M will maintain its focus on research and development to meet customers' changing requirements for robust and costeffective solutions. In addition, according to Wood Mackenzie, the local content requirement in the offshore sector in Mexico is set to reach 35% by 2025.

Having kept a keen eye on the developments in Mexico over the years, Keppel O&M signed an MOU in late 2013 to jointly develop a yard in Mexico. This is a timely move which will enable Keppel O&M to better support Mexico's growing oil and gas industry.

Another opportunity comes from the visible acceleration in the replacement cycle for ageing rigs. 48 rigs alone were scrapped from 2011 to 2014, translating to an average attrition rate of 12 rigs per year in the last four years, compared to just four rigs per year in the preceding 11 years from 2000 to 2010. As older rigs due for the five-year special periodic surveys require massive investments to be upgraded, scrapping will become an increasingly attractive option for drillers seeking to preserve capital. In the longer term, such a trend bodes well for the rig building industry.

SHIP REPAIR AND PRODUCTION UNITS

As the shipping sector continues to grapple with issues such as overcapacity and mounting pressure on freight and charter rates, the ship repair market looks set to face another challenging year ahead. However, there is optimism for the tanker market as freight rates have been boosted due to higher demand for lower-price crude oil. Lower bunker fuel cost also translates to better margins for shipping companies, which could now have the financial capacity to look into repairs and upgrading of merchant vessels such as product and cargo tankers.

As for production unit conversion projects, the fundamentals of the market are expected to remain intact in the long run, although the recent sharp drop in crude oil prices is likely to delay oil field Final Investment Decisions. According to the Energy Market Authority of Singapore, the three active regions for production unit projects are Southeast Asia, Africa and Brazil.

The outlook of FLNGV conversions, which Keppel Shipyard has made a foray into, also remains promising. The FLNGV conversion which Keppel Shipyard is undertaking for Golar LNG is a near-shore vessel which has its niche in providing efficient alternative liquefaction solutions to piped gas from onshore terminals. Golar LNG exercised the first of its two options with Keppel Shipyard for an identical unit just six months after the first FLNGV conversion contract.

Similar to conversion projects, opportunities in turret fabrication for newbuild FPSO/FSOs are expected to remain healthy.

SPECIALISED SHIPBUILDING

Looking ahead, the maintenance or enhancement of production levels at existing fields would likely remain a key focus for operators. This entails the need for repair and maintenance of existing production platforms and a diverse range of offshore support vessels, liftboats and accommodation semisubmersibles. Versatile and experienced in building a wide spectrum of specialised ships such as offshore support vessels, Keppel O&M is well-placed to meet this demand.

THE NEXT LAP

Backed by a creditable orderbook that stretches into 2019, Keppel O&M will position itself to tide over a slowdown in the industry and make use of this period to develop and fine-tune new niche products that would be cost-effective and competitive even in a sustained low oil price environment. Keppel O&M would also leverage its global network of yards to tap demand in regions which are less affected by low oil prices.

As the world's energy landscape continues to evolve, Keppel O&M will maintain its focus on research and development to meet customers' changing requirements for robust and cost-effective solutions. Proprietary designs such as the harsh-environment capable KFELS E and J Class jackups for the North Sea and other upcoming designs for niche markets such as the Arabian Gulf and the Indian subcontinent will continue to be developed to widen Keppel O&M's solutions offerings.

Keppel O&M has successfully navigated numerous challenging cycles in the past four decades and has emerged stronger each time. Keppel O&M's strategy of delivering solutions that can create value for customers and meet the market's evolving needs will allow it to stay relevant and competitive amidst a challenging market environment.

01

In the marine sector, the outlook of FLNGV conversions market, which Keppel Shipyard made a foray into in 2014, remains promising.

02

Keppel Singmarine will leverage its track record and experience in building a wide spectrum of specialised vessels to capture more opportunities in this market.



Technology & Innovation

In our drive to sustain market leadership and be a solutions provider, we constantly adapt, innovate and leverage technology to meet and address the challenges of the industry. Striving to be the provider of choice and partner for solutions in the global offshore and marine industry, Keppel Offshore & Marine (Keppel O&M) works closely with customers and industry partners to enhance its design and engineering capabilities to deliver quality, innovative and value-adding solutions.

In difficult times, such as one driven by a low oil price environment, it is all the more important that investments continue to be made in technology and research and development (R&D) to bring about more robust and costeffective oil-production solutions for the oil and gas industry.

To this end, we have been prudently investing in R&D to expand our suite of proprietary designs and position Keppel as the preferred solutions partner in the industry. Our widened product offerings include the Floating Liquefaction Vessel (FLNGV) for Golar, the Plug & Abandonment jackup rig with Seafox, as well as our CAN-DO Drillship.

With our experience, expertise and infrastructure, we believe we have the design and engineering capabilities to meet the needs of the industry under any challenges.

AREAS OF COMPETENCIES

Established in 2007, Keppel Offshore & Marine Technology Centre (KOMtech) drives the group's technology innovation efforts as one of the key arms of its Technology Division, which also comprises Offshore Technology Development (OTD), Deepwater Technology Group (DTG) and Marine Technology Development (MTD).

In 2014, KOMtech continued to focus on its areas of competencies to innovate and develop new or enhanced products to address the needs and challenges of the industry – from drilling solutions in deepwater fields, environmentallyfriendly and fuel-efficient solutions to new products for the growing liquefied natural gas (LNG) market.

DEEPWATER TECHNOLOGY/SUBSEA

As the number of shallow water fields mature, we have worked with oil majors, drilling operators and vendors to come up with a range of solutions to address the challenges and needs in deepwater exploration and development projects.

The CAN-DO drillship, developed by KOMtech and its design partner GustoMSC, is a state-of-the-art deepwater solution capable of ultra-deep water exploration, development drilling, and extended well testing and completion activities. Equipped with features such as a large variable deck load capacity, high transit speed, high tank capacity and nextgeneration 20,000 psi blowout preventers, the CAN-DO drillship integrates a number of features considered exceptional by conventional drillship standards into one unique product. The construction of the drillship is progressing on schedule and is expected to complete in 2016.

Besides drillships, KOMtech has also leveraged Keppel's years of experience in building and

converting semisubmersibles (semi) to develop innovative semi designs, such as the KFELS 5000HE which is suitable for well workover (completion and intervention), exploration drilling and development drilling. It is designed for the purpose of providing higher variable deck load and payload to meet the client's requirements. The semi's column height is increased to accommodate deeper draft for enhancement of motion response and to provide better air gap, enabling it to operate in up to 1,500-ft water depth in the harsh environment of the UK sector of the North Sea.

SMART Semi is another innovative semi unit that can be used to maintain or upgrade the process systems on ageing turret-moored or spread-moored Floating Production Storage and Offloading (FPSO) vessels without causing any major interruption to their operations. Its unique column shape, large thruster power to displacement ratio, large open deck area and enhanced agility and stability enable it to have a higher operational uptime, keeping it ahead of other designs in the market.

With only 30 percent of land space on Earth, the continued exploitation of the land for mineral resources is not sustainable. As such, we have to look to the oceans for resources such as polymetallic nodules, which contain useful minerals including copper, nickel, cobalt, manganese and rare earth minerals.

At 4,000 to 5,000 metres below sea level on the ocean bed, these resources are located at a depth greater than any existing operations in the offshore industry. To address the challenges of a relatively new frontier in subsea nodule collection, Keppel Corporation has entered into a joint venture with UK Seabed Resources Ltd (UKSRL) to set up Ocean Mineral Singapore Pte Ltd (OMS). In July 2014, OMS received approval from the International Seabed Authority (ISA) on its application for its first seabed

KEPPEL OFFSHORE & MARINE

KOMTECH'S AREAS OF COMPETENCIES



Deepwater Technology/Subsea



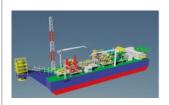
Shallow Water/Arctic/Wind



Drilling & Critical Equipment



Marine Technology



LNG/FPSO



Environmental



Shipyard Technology



2 Anchor Handling Tug/ Supply Vessel (AHTS) (All waters)

 Equipped for emergency stand-by/rescue, oil recovery and fire fighting

4 Semisubmersible

Accommodation Unit (SSAU) (All waters) Floating unit that provides accommodation for crew
 SSAU™ 3600

- SSAU™ 5000NG

6 Multi-Purpose Self-Elevating

Platform (MPSEP) (Shallow water - 213 ft) A wind turbine installation vessel which can also support oil and gas activities operation uptime – SMART Semi

(Shallow water - 500 ft)
Self-elevating mobile drilling unit that stands on its legs on the seabed during operation
KFELS MOD VI - KFELS A Class KFELS A Class
KFELS B Class
KFELS Super A Class
KFELS Super B Class
KFELS C Class KFELS C Class
KFELS G Class
KFELS N Class
KFELS N Plus
KFELS J Class
KFELS E Class



1 Drillship

13 Floating Production Storage and Offloading Facility (FPSO)

14 SPAR



15 Floating Storage and Re-gasification Unit (FSRU)



16 Semisubmersible Floating Production Unit (FPU)

10 Semisubmersible Drilling Rig

9 Semisubmersible Drilling Tender (SSDT)

A floater that operates alongside SPARs and Tension Leg Platforms
 SSDT™ 5000NG
 SSDT™ 3600E

O Semisubmersible Drilling Rig (Deep water – 10,000 ft)

 A floating unit which can perform deepwater drilling operations

- DSS™20 DSS™38 DSS™38M

- DSS™51 DSS™38E DSS™51HE DSS™60HE SSDU 5000

11 Drillship

(Ultra-deep water – 12,000 ft Able to undertake

12 Extended Tension Leg Platform (ETLP)

ultra-deepwater drilling – CAN-DO Drillship

 Extended Tension Leg Platform (ETLP) (Deep water - 8,000 ft)
 A vertically moored floating structure used for the production of cill or erection oil or gas

13 Floating Production Storage and Offloading Facility (FPSO) (Deep water)

Ship-shaped facility used for the processing of oil or gas, storage and offloading of oil or condensate

14 SPAR

(Deep water - 8,000 ft)A large cylindrical unit which supports a rig platform, and cables and chains

15 Floating Storage and Re-gasification Unit (FSRU)

(All waters)

Able to receive LNG from a carrier, re-gasify to natural gas and send out through risers and pipelines

6 Semisubmersible Floating Production Unit (FPU) (Deep water)

A floating platform used to

produce oil and gas in deepsea – DeepDraft Semisumbersible

17 Floating Liquefied Natural Gas Facilities (FLNG)

19 Icebreal

18 Ice-class Floating Storage Offloading vessel (FSO)

20 Ice-worthy Mobile Offshore Drilling Unit

17 Floating Liquefied Natural Gas Facilities (FLNG)

- (All waters)
- Able to treat and liquefy Natural Gas as well as store and transfer LNG at sea

Ice-class Floating Storage Offloading vessel (FSO) (All waters)

- Ice-resistant vessel that
- receives crude oil from a fixed platform and offloads it to shuttle tankers

19 Icebreaker

- (All waters)
- A support vessel that forges passages through icy waters





01

The KFELS 5000HE is a novel drilling semi capable of operating in the harsh environment of the UK sector of the North Sea.

02

SMART Semi is a robust semi unit that allows for high operational uptime when used to maintain or upgrade FPSOs. exploration licence for a site in the Clarion-Clipperton Fracture Zone of the Pacific Ocean.

To develop effective and commercially viable solutions to harness deep seabed resources, we will leverage KOMtech's deepwater R&D expertise and Keppel O&M's engineering and construction capabilities as well as collaborate with partners such as the National University of Singapore (NUS) through the Keppel-NUS Corporate Laboratory set up in September 2013.

SHALLOW WATER/ARCTIC/WIND

In the shallow water market, we have continued to work on enhancing our existing jackup designs to increase their efficiency and capabilities. A significant advancement has been made in the large-size jackup market with the further development of the KFELS NE-Class jackup design. An extended version of the KFELS N-Class, this design allows for even greater elevated weight and/or deeper water depths. The design has been targeted for use as a drilling and production facility for North Sea conditions.

In the Arctic drilling market, KOMtech works closely with oil majors to understand and meet their needs for mobile drilling units in the Arctic region. In 2014, KOMtech completed a concept study on an ice-class (I-Class) jackup for Russia's Arctic waters and a novel winterised self-propelled jackup for Arctic drilling. The I-Class unit is currently undergoing further development and is expected to be approved by ABS in 2015.

DRILLING AND CRITICAL EQUIPMENT

We have been working on the enhancement of our drilling and critical equipment designs to add value for our clients. This includes the multi-direction cantilever skidding systems that we have patented. One of these systems, the dual T-cantilever skidding system, has been conceptually integrated into a series of new jackup designs to further the capabilities of Keppel's harsh environment jackups.

Other ongoing projects include a jetting line deplugging system, heavy duty traction winch and a Liquefied Natural Gas (LNG) offloading system.

MARINE TECHNOLOGY

The implementation of stricter air emissions legislation by the International Maritime Organisation for vessels travelling in Emission Control Areas has resulted in an increase in the number of marine vessel owners considering using LNG as fuel.

To capture the opportunities arising from this trend, we are designing a range of vessels to meet the needs in the LNG value chain. For instance, we have developed LNG-fuelled tugs with a 65-tonne bollard pull capacity in both single-fuel and dual-fuel versions, as well as LNG bunker vessels with 5,000 cubic metres capacity. As small-scale LNG transportation is getting popular in isolated and shallow water regions, we have further developed small-scale LNG transportation vessels of different sizes and types based on the locations and market demand.

Besides the LNG market, we have also developed a number of vessel designs to support offshore activities such as an offshore power cable laying vessel, a multi-purpose field development vessel, a transporter capable of carrying rigs to their drilling locations in the Arctic regions, and other specialised vessels to meet the needs of the market.

LNG/FPSO

In addition to LNG support vessels, KOMtech is also making inroads in the development of a suite of products with LNG applications. Its proprietary PreNEx LNG process technology



Technology & Innovation

was further developed in 2014 and is now at an advanced stage. For instance, the technology has received independent third party recognition for its viability as well as endorsement in being free-fromfatal-flaws. KOMtech has also entered into a mutual agreement to grant a licence to a leading Asian cryogenic industry player to build the first PreNEx technology based small-scale LNG plant in the region. Upon completion, KOMtech will be able to showcase its PreNEx technology via the plant to potential users.

On the other spectrum of LNG applications, KOMtech has completed the design of an LNG vaporiser and fuel gas system for tugboats. The LNG fuel system solution developed by KOMtech has also received marine Classification Approval in Principle (AiP) from ABS.

ENVIRONMENT

With increasing demand for sustainable development solutions, KOMtech has been developing innovative products that provide environmentally friendly and fuel-efficient solutions. To help vessels comply with IMO's emissions rules that were implemented in the beginning of 2015, KOMtech is close to completing the development of a proprietary seawater scrubber solution that enables sulfur dioxide removal with consistent performance under all possible water conditions.

SHIPYARD TECHNOLOGY

KOMtech works with Keppel O&M yards to increase productivity, improve quality and safety while minimising repetitive and hazardous jobs. One of its new projects is a collaboration with NUS to develop and apply robotics and automation solutions to Keppel O&M's yard processes. These enhancements would enable Keppel O&M to be more efficient and meet the labour and technical challenges of the future.

LEVERAGING PARTNERSHIPS

As part of its ongoing efforts to foster a culture of continuous improvements and leverage industrial knowledge through collaborations, KOMtech engages in studies with renowned organisations such as Lloyd's Register Global Technology





Centre (Lloyd), American Bureau of Shipping (ABS) and Det Norske Veritas (DNV), as well as educational institutes such as NUS.

KOMtech and Lloyd are collaborating in a Joint Development Project (JDP) using the mathematical model of extreme wave, "NewWave", developed by the latter, to understand the non-linear effects of waves to floating platforms under extreme sea conditions. KOMtech is also engaging ABS in a JDP that looks into optimising a drillship's moonpool design with the Computational Fluid Dynamic (CFD) tool.

Collaborations with NUS are conducted through the Keppel-NUS Corporate Laboratory which was set up as an industry-university partnership to pursue three research themes centred on Future Systems, Future Yards and Future Resources. As part of the Future Resources theme, which focuses on the development of core competencies in environmental impact assessment, environmentally-benign exploration and collection of minerals resources in deep oceans, a group of scientists and researchers from the laboratory embarked on a 47-day research voyage to the Clarion-Clipperton Zone in the Pacific Ocean in February 2015.

The voyage was part of Ocean Mineral Singapore's (OMS) – a subsidiary of Keppel Corporation – initial process for the exploration of polymetallic nodules. Scientists from leading academic and research institutes such as the University of Hawaii, Woods Hole Oceanographic Institution, Senckenberg Research Institute, and London Natural History Museum also took part in the voyage.

01

A researcher examining polymetallic nodules during the research voyage in the Pacific Ocean conducted by Ocean Mineral Singapore.

02

A 12,000 cubic metres capacity self-propelled LNG carrier is one of the new vessel designs developed as the global demand for LNG as a marine fuel rises.

Sustainability Report

Keppel Offshore & Marine believes that what is good for the community is good for our business. We are committed to conducting our operations in a sustainable and socially responsible manner which positively impacts society, the community, the environment, employees and all other stakeholders.



SUSTAINING GROWTH PAGE 68-79

The success of our business is underpinned by an unwavering focus on Health, Safety and Environment, meticulous project management as well as prudent risk management.

Through an ongoing process of optimising resources and increasing productivity, we continue to deliver innovative projects with strong value offerings and hallmark quality to create value for customers worldwide.

EMPOWERING LIVES PAGE 80-87

People are the heart of our business. As an employer of choice, we are committed to grow and nurture our talent pool through continuous training and development to help our people reach their full potential.

We seek to develop a formidable and resultsdriven workforce with strong leaders imbued with our core values to take the company into the future.

NURTURING COMMUNITIES PAGE 88-93

As a global citizen, we aim to give back to communities wherever we operate in a variety of areas spanning knowledge building and education, social development and environmental protection.

We encourage employees to contribute actively as change agents to effect improvement in their surroundings and in the lives of those around them.

Managing Sustainability

As an industry leader operating in 15 countries, we have developed guidelines in being a responsible corporate citizen, positively impacting all our stakeholders, in health and safety, risk management, productivity, people and community development.

MANAGEMENT STRUCTURE

Keppel Offshore & Marine's (Keppel O&M) sustainability issues are rigorously managed and communicated across all levels of our business units. We are guided by our parent company, Keppel Corporation's Sustainability Steering Committee.

The Committee comprises senior management from across the Keppel Group and sets our sustainability

strategy. Supporting the Steering Committee is the Working Committee that executes our sustainability strategy and reports our performance.

CORE VALUES

Our employees are guided by our core values and the Employee Code of Conduct, which addresses standards of acceptable and unacceptable behaviour, personal decorum and ethical business behaviour.



Accountability Responsible to all Stakeholders

Safety Zero Accident, Zero Loss

Agility & Innovation



Global Mindset Innovate for Growth and Teamwork



SUSTAINING GROWTH

Safety is a Keppel core value and we are committed to doing all we can to ensure an incidentfree workplace for all our stakeholders, protecting people, property and the environment.

35 Workplace Safety and Health Awards received

S44M spent on Health, Safety and Environment globally in 2014

01

Our workforce is regularly briefed and trained on the latest safety measures and best practices.

Safety Excellence



DILIGENCE AND VIGILANCE

In everything that we do, the safety of our people comes first. We also believe that a strong safety culture brings about a more productive workforce and reduces business risks. This is our "Duty of Care" philosophy and forms the foundation of our safety efforts. Across all levels of the company, from senior management to our workers on the ground, we instill the mindset that safety is everyone's business and encourage everyone to look out for each other.

In 2014, we invested around \$44 million to improve our infrastructure as well as to engage the right talent and train our people so that we remain at the forefront in implementing safety measures and strategies.

In terms of the number of incidents in 2014, Keppel Offshore & Marine's (Keppel O&M) Accident Frequency Rate (AFR) of 0.11 per million man hours worked was reduced slightly from our AFR of 0.12 in the previous year. However, our Accident Severity Rate (ASR) in 2014 rose to 132 man-days lost per million man-hours worked compared to 67 in 2013.

This was due to the four fatalities we suffered; three in Singapore

and one overseas. Each incident was thoroughly investigated, with root causes clearly identified and swiftly followed with preventive measures. We take every incident very seriously and constantly explore better ways to prevent fatalities and injuries.

ROBUST FRAMEWORK

Keppel Group's Workplace Safety and Health (WSH) 2018 strategy provides a structured framework for our safety measures and strategies. The four areas of focus across our yards and offices worldwide are:

- Having an integrated WSH framework
- Implementing an effective management system
- Promoting safety ownership
- Enhancing partnerships across our yards and offices worldwide

VISIBLE LEADERSHIP

Visible safety leadership impacts the safety culture of our yards. From management to workers, all employees are empowered to highlight any unsafe work environment where hazards must be removed before work can commence.

The Keppel O&M Board Safety Committee (BSC) formed in 2012 sets the safety directives for our yards around the world. In 2014,

one of the focus areas was tackling serious injuries and fatal incidents at the fundamental level. Relevant cases were presented at quarterly meetings where key lessons learnt were also shared with all our yards.

To better understand the challenges faced onsite and to recognise positive safety efforts by employees on the ground, BSC members conduct regular visits to work sites globally. In May 2014, Keppel O&M's parent company, Keppel Corporation's BSC visited Keppel's BrasFELS yard in Angra dos Reis, Brazil.

CULTURE AND INNOVATION

For a robust safety culture, safety ownership is not only driven from the top down but laterally across all levels.

Keppel FELS' annual HSE Excellence Promotion Campaign for 2014 was led by its operational personnel. The month long campaign titled, "Safe Culture, Save People" reminded workers on important safety practices.

To communicate lessons learnt on incidents and near misses, Keppel Shipyard initiated a safety awareness campaign for Dropped Objects and collaborated with Keppel Subic Shipyard to heighten prevention of Dropped Objects awareness. This campaign was in line with Keppel O&M's safety efforts led by Mr Yong Chee Min, Director of HSE and Special Projects, Keppel O&M and Secretary to the Keppel O&M BSC, who communicated to yards across Keppel O&M on topics such as Fire and Smouldering as well as Dropped Objects.

Bintan Offshore's safety campaign, "Think Safety First, Wear Your PPE", helped educate employees and contractors on the importance of donning safety equipment correctly.

Safety innovation continues to be a driving force in improving safe work habits. At the annual Keppel Group Safety Convention, out of 43 Safety Innovation projects submitted group wide, Keppel O&M business units picked up six Gold, six Silver and nine Bronze awards, paving the way for innovative solutions that may be further developed into actual safety products used in the yard.

To stay abreast of a constantly evolving safety environment, several business units have garnered key WSH certifications. Keppel FELS received certification for the Singapore Standard on Occupational Safety and Health management system (SS506) which is in alignment with Keppel Shipyard and Keppel Singmarine's compliance to the standards.

In Houston, Keppel AmFELS embarked on acquiring ISO 9001 Quality Management System, ISO 14001 Environmental MS and OHSAS 18001 Safety/Health MS certificates. The yard is expected to be certified in February 2015.

Keppel Nantong achieved the highest grade of safety certification from the Chinese State Administration of Work Safety. Besides being the first shipyard in China to achieve this certification, Keppel Nantong has also set up a training centre focused on creating safety awareness and practices.

In June 2014, Nakilat-Keppel Offshore & Marine (N-KOM), our joint venture yard in Qatar, launched a Safety Excellence 2020 campaign. The campaign aimed at providing a vision for the company to achieve an incident and injury-free work environment where 'Nobody Gets Hurt'.

Beyond implementing safety practices, we also recognise the importance of employee well-being in fatigue management. In 2014, Keppel Shipyard completed the construction of a Well-Being and Support Centre, which will provide holistic health and medical services, as well as counselling for workers.

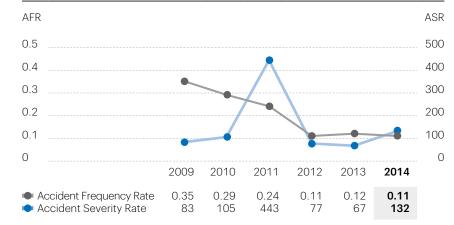
For a conducive environment for the workers to rest and have their meals, Keppel Shipyard will also build three 4-storey rest areas. The first rest area was completed in February 2014 and can accommodate up to 2,000 workers. Another two such rest areas are currently being built. On top of this, health and wellness initiatives including exercise programmes, distribution of fruits and healthy lifestyle campaigns are made available to employees across Keppel O&M.

ACTIVE COMMUNICATION

While each of Keppel's global yards operate independently, the Keppel O&M HSE department ensures that safety messages, programmes and practices are readily shared.

Keppel BrasFELS shared a fatal fall from heights case that occurred

KEPPEL O&M SAFETY STATISTICS



01

Keppel Corporation's Board Safety Committee (BSC), which includes some members of Keppel O&M's BSC, visited the BrasFELS yard in Brazil to better understand the yard's HSE programmes and practices.

02

For its high safety standards, Keppel O&M clinched 35 Workplace Safety and Health Awards at WSH Awards 2014, topping last year's record of 29 awards.

Safety Excellence

in another shipyard while Keppel Verolme shared a dropped objects case. To strengthen Keppel Nantong's safety culture, Mr Yong conducted safety workshops for Keppel Nantong's management and sub-contractors.

Lessons learnt from High Impact cases and analysis of recurring near miss categories were also disseminated to all yards via electronic Safety Alerts and Advisories.

Another key initiative rolled out was for all yards to adhere to requirements laid out by Keppel O&M's Vessel Safety Coordination Committee (VSCC) regardless of the country they operate in.

HSE personnel in Singapore are assigned to overseas yards to guide, support and align safety standards. A three month audit and mentoring exercise in Baku Shipyard was conducted and an HSE officer from Baku Shipyard was attached to Keppel FELS for two weeks. Keppel FELS also supported Bintan Offshore with training for their workers such as Lifting Supervisors and Risk Assessment classes. HSE personnel have also been seconded to Keppel O&M's shipyards in the Philippines to review and support their safety management efforts.



STRONG PARTNERSHIP

Keppel O&M shares a close working relationship with all our stakeholders, including our subcontractors. Subcontract workers undergo the same safety training as direct employees to ensure that those who work in our premises adopt similar high standards of safety.

Keppel Shipyard has equipped over 44,000 direct and contract workers with knowledge on various safety core competencies since 2007. At Keppel FELS, the Subcontractors Executive Council Safety Committee, comprising different trade sections' representatives, meets regularly to discuss safety initiatives and share best practices.

To raise overall industry standards, we work closely with Singapore's Ministry of Manpower (MOM) and WSH Council to roll out safety initiatives and to encourage our subcontractors to equip themselves with relevant safety certifications from WSH Council. As a Group, Keppel has also been a regular contributor of annual national safety events, including WSH Conference, National WSH Campaign and bizSAFE Convention.

Keppel FELS and Keppel Shipyard, as bizSAFE partners, actively encourage their contractors to progress through the various levels of the bizSAFE programme. Since 2013, Keppel Shipyard has imposed a bizSAFE Level 4 certification requirement for their resident contractors before work can be undertaken.

To share safety best practices with the industry, Keppel O&M conducts regular sharing at seminars and forums. At an ASMI seminar held in May 2014 for the marine industry, Keppel O&M shared about the different measures that Keppel has in place to reduce the incidence of dropped objects in the shipyard environment. Keppel O&M also co-sponsored the Dropped Objects Prevention Scheme (DROPS) Forum



where Keppel FELS shared their approach to building rigs with designs catering to DROPS in mind.

A number of Keppel's management sits in various committees of the WSH Council and the Association of Singapore Marine Industries (ASMI). Mr Yong Chee Min is the Chairman of the ASMI WSH Committee, as well as a member of the WSH National Work at Heights Safety Taskforce and the WSH Council (Marine Industries) Committee. Mr Wong Kok Seng, Managing Director (Offshore), Keppel O&M, and Managing Director of Keppel FELS, as well as Mr Chor How Jat, Managing Director, Keppel Shipyard, both sit on Singapore's WSH Council (Marine Industries) Committee.

Strengthening Keppel's contribution to Singapore's safety landscape, Mr Chow Yew Yuen, CEO of Keppel O&M was appointed to the WSH Council on 1 April 2014. Mr Chow also chairs the WSH Council National Work at Heights Safety Taskforce.

RECORD OF EXCELLENCE

Holding true to our core value of upholding high safety standards, Keppel O&M clinched 35 Workplace Safety and Health (WSH) Awards at the event ceremony held on 18 July 2014. Keppel O&M secured 33 awards in the Safety and Health Award Recognition for Projects (SHARP) category. Keppel Shipyard also bagged the WSH Innovation Award for implementing an improved method in lifting thrusters and Keppel Singmarine clinched the WSH Performance (Silver) award for its strong workplace safety and health management system.

This year's win topped last year's record of 29 WSH awards affirming our commitment to upholding high safety standards.

We will continue to refine our safety process and build a robust safety culture at the workplace where everyone looks out for each other's safety. Through continuous improvements and innovations, we increase productivity and raise quality to optimise our operations and sustain our competitiveness.

Productivity and Quality



At Keppel Offshore & Marine (Keppel O&M), our strong track record for safe, on time, within budget and high quality deliveries is a result of our execution excellence and continuous drive to improve efficiency.

To stay ahead of the competition, we leverage technology and innovation to enhance our infrastructure and processes. In addition, Keppel O&M actively organises and participates in various productivity, quality and innovation initiatives to gain ideas and refine solutions for better operations.

OPTIMISING OPERATIONS

In 2014, we made significant upgrades to our infrastructure, equipment, processes and systems across our yards worldwide to sustain high-performing work environments.

Our yards in Brazil, China and Singapore have expanded our heavy-lift capacity with new gantry cranes, increasing the flexibility and productivity of our construction processes.

In Angra dos Reis, Rio de Janeiro, Brazil, BrasFELS' 2,000-tonne gantry crane started operations in April 2014, and has already been busy with the lifting operations for various projects. At 147 metres, the new crane is the tallest in South America, and has one of the most powerful lifting capacities.

In China, as part of Keppel Nantong's infrastructure upgrades, a new 600-tonne gantry crane was installed to support in the construction of offshore structures. With Keppel Nantong Heavy Industry's newly established facilities, the yard has more flexibility to build in larger blocks, saving both time and cost.

Over in Singapore, Keppel FELS' Pioneer Yard officially inaugurated a 700-tonne gantry crane in September 2014. The crane which operates along the fabrication, drydock and assembly area has enabled the yard to build in bigger blocks, reducing construction time.

In addition, since 1Q 2015, Keppel O&M's Singapore operations have been supported by Asian Hercules III, a 5,000-tonne sheerleg crane which was constructed in Keppel Nantong.

Apart from expanding its lifting capacity, Keppel FELS has also introduced more automation and mechanisation to its processes.

A new automated panel line workshop was inaugurated in

July 2014. The existing panel line workshop was reconfigured, upgraded and refurbished to enhance its efficiency. Flip-over machines were installed so that the panels can be turned over easily and moved from station to station using a conveyor system. The mechanisation of the turning and moving of the panels also reduce manual handling, further improving safety and productivity. All the new enhancements to the workshop have reduced man-hours taken to produce a panel by about 48%.

Similarly, Keppel Singmarine continued to invest in automated equipment to boost productivity, installing an integrated panel and assembly line, which allows the yard to produce not only panels but also double hull blocks more efficiently. The newly integrated system incorporates a conveyor style production line so that each work piece moves from one work station to the next in a process that is safer, faster and requires less manpower to complete.

Keppel Shipyard, too, has been making improvements to its infrastructure and operations. At its Benoi Yard, Keppel Shipyard has extended and deepened its quays, improved its infrastructure for better workflow, and further enhanced the safety and productivity of its workforce. The load-out quay at Benoi Quay 1 was completed in early 2014 and was utilised for the loading out of the Ichthys Turret.

In addition, Keppel Shipyard increased efficiency by evolving various operational activities. For instance, it has changed its methodology for the testing of lifeboats. It has introduced a stationary davit platform located at the quay side in the testing of lifeboats instead of using the vessel's lifeboat davit. The project not only reduces man-hours for testing by 20% but also cuts 01

BrasFELS' new 2,000-tonne gantry crane provides more flexibility to the yard for working with larger and heavier modules.

02

Keppel Singmarine continuously invests in automated equipment to boost productivity.



SUSTAINING GROWTH

01

At Keppel FELS, the panels are now turned using a flip-over machine and moved from station to station using a conveyor belt system.

02

The second Keppel Offshore & Marine Innovation Awards recognised the ideas and solutions which have helped put Keppel O&M at the forefront of the industry.

Productivity and Quality

down resources needed such as safety boats and crane time for such operations.

Keppel O&M continues to garner positive feedback from the industry and its customers for its exceptional services and solutions. For example, Keppel Shipyard was presented with the Shipbuilding & Repair Yard Award at Seatrade Asia Awards 2014.

FOSTERING PRODUCTIVITY & SPURRING INNOVATION

Keppel O&M actively encourages its business units and employees to participate in platforms to foster a culture of productivity.

A sponsor of the inaugural National Productivity Month in 2014, an initiative by the Singapore Business Federation and the Singapore National Employers Federation, Keppel O&M shared ideas and learnt from thought leaders and subject matter experts. The initiative seeks to encourage companies to raise productivity through new and existing technologies, enhanced organisation methods, better rationalisation of manpower as well as collaborations with other companies and organisations.

Keppel O&M is also a keen participant of Singapore's Workplace Safety & Health' Innovation Awards. In 2014, Keppel Shipyard clinched the top prize for developing an improved method for lifting thrusters.

The various business units across Keppel O&M also hold regular productivity and quality events. Keppel FELS participated in the National Innovation and Quality Circles (iQC) held in January 2015 which assesses projects undertaken in 2014. Keppel FELS' submissions garnered one Star award, eight Gold awards and one Silver award. Most of these projects focus on the use of technology to





improve the efficiency of yard processes as well as to enhance engineering systems.

A second run of Keppel O&M's Innovation Awards event in 2014 recognised ideas and solutions which have put Keppel at the forefront of the industry. These included enhanced construction and conversion processes and methodologies to ensure optimal operations. One such award was to the team behind Keppel Shipyard's enhanced constructability method in the conversion of the world's first Floating Liquefaction Vessel.

Keppel O&M also rallies its subcontractors and vendors in efforts to improve productivity. Keppel Shipyard, for instance, participates in SPRING Singapore's Partnership for Capability Transformation (PACT) programme which encourages collaborations between companies and their subcontractors. SPRING Singapore is a statutory board with the mission to enhance Singapore's competitiveness and economic growth.

An example of a PACT collaboration is the upgrading of the manual on-off ball valve to the metering valve. This project was started as an Innovation Quality Circle (IQC) project by a Keppel Shipyard team. The team subsequently roped in the subcontractors during the feasibility studies and eventually turned it into a yard-wide initiative to replace and upgrade all the on-off ball valve to an automatic plunger-type metering valve. The new valve reduces grit usage by 15-20%.

Keppel O&M also pursues informal channels to exchange ideas on productivity and quality. For example, Keppel FELS frequently participates in knowledge exchanges and sharing with other organisations including shipyards and manufacturing companies in Germany and Italy.

We are committed to play our role in protecting the environment by reducing carbon emissions from our worldwide operations through innovative

energy saving initiatives.

768TCO₂ Estimated CO₂ savings from projects implemented in 2014 in Singapore

\$370K Estimated energy cost savings from projects implemented in 2014

in Singapore

Eco-Consciousness



With footprints across 20 yards and offices worldwide, Keppel Offshore & Marine (Keppel O&M) is committed to incorporate environmentally responsible practices in our business activities. As part of this effort, we are constantly looking at ways to improve our work processes and infrastructure to conserve energy, thereby minimising greenhouse gas (GHG) emissions.

In 2014, Keppel Group, which Keppel O&M is part of, pledged to reduce its GHG emissions by 16% from the 2020 business-as-usual (BAU) level. This is in line with Singapore's aim for a similar reduction from year 2020 but below levels deemed as BAU, contingent on a legally-binding global agreement.

INTEGRATING ENERGY EFFICIENCY

Apart from the environmental benefits, greater energy efficiency through improved technology or work processes translates to higher cost savings for the organisation. Keppel O&M's energy saving efforts started since 2009 have accumulated a significant amount of savings.

In 2014, Keppel FELS' efforts included the use of an additive treatment to one of its air-cooled chillers, achieving savings of more than 100,000 kilowatt - hour (kWh) of electricity per year. The additive allowed higher chiller efficiency which translated into energy savings.

Keppel FELS had also installed skylights at selected workshops, achieving savings of more than 30,000 kWh of electricity per year. Skylights are translucent roofings which allow natural daylight to penetrate and illuminate the work spaces, reducing the need for electrical lightings, hence saving energy.

Over at Keppel Shipyard, the company had implemented regenerative energy systems in their cranes, specifically on their hoist drives, luffing drives and slewing drives, achieving approximately 13%, 32-37% and 66% of regenerated electricity respectively. In general crane drive systems, energy loss through braking is identified as potential energy recovery areas. By implementing regenerative energy systems, the recovered energy can be re-channelled back to the power grid.

Keppel Shipyard also achieved further savings by replacing the halogenbased lights at the bottom of the drydocks with induction lights, achieving 80% of energy savings per set of lights replaced. This resulted in more than \$120,000 worth of cost savings per year.

At Keppel Singmarine, the use of non-powered exhaust extractors – instead of the conventional loud portable ventilators requiring 220V of power - to provide ventilation to its workshops has completely reduced energy consumption and noise emissions.

Another initiative of Keppel Singmarine was to install a 10-tonne gantry crane to complement its 100-tonne gantry crane. The smaller capacity gantry crane is able to undertake drydock lifting activities freeing up the larger capacity 100-tonne gantry crane to focus on other heavy lifting applications.

These projects have augmented Keppel O&M's energy savings and the company is committed to continuing its efforts to further reduce its carbon footprint.

MANAGING IMPACTS THROUGH TECHNOLOGY INNOVATION

Keppel Offshore & Marine Technology Centre (KOMtech), Keppel O&M's research and development arm, has successfully developed exhaust gas desulfurisation through a sea water scrubber system, enabling ship owners to continue powering their ships using heavy fuel oil in all Emission Control Areas (ECAs) after 2015.

The system is capable of handling gas emissions from 1 MW to 30 MW engines using a single scrubber. The waste effluent discharged from the scrubber is decontaminated by an effective separation process that removes all lighter and heavier ends of the captured pollutants. As a result, the system can be operated in all ECA waters under the most stringent regulations.

KOMtech has completed a detailed installation exercise on a container ship and is ready to offer complete engineering solutions to all types of ships.

ENGAGING STAKEHOLDERS

In order to inculcate a green mindset amongst stakeholders, business units across Keppel O&M have established corporate policies which provide guidance and strategic directions on achieving greater eco-consciousness. Some of the initiatives include mandatory switching off of lights, air-conditioning and other electrical devices when not in use, paper recycling programme, and regular participation in annual Earth Hour activities.



01

Keppel Shipyard reduces use of energy in its operations by using regenerative energy systems for their cranes and Halogenbased lightings at their drydocks.

02

Keppel Singmarine saves energy by streamlining the operations of the gantry cranes at its yard. A robust risk management system and well-managed processes equip us to respond effectively to shifting business demands and create value for our stakeholders.

RISK MANAGEMENT STRUCTURE

Keppel Offshore & Marine's (Keppel O&M) Enterprise Risk Management (ERM) framework provides a holistic and systematic process for identifying, analysing and managing risks to better prepare the company to respond to uncertainties, as well as to better manage new business opportunities. It outlines the reporting structure, monitoring mechanisms, specific risk management processes and tools, as well as policies and limits, in addressing the key risks in the company.

The Board of Directors, assisted by the Keppel O&M Audit Committee (AC), is responsible for overseeing ERM for Keppel O&M. The management team discusses Keppel O&M's key risks, significant project issues and mitigating actions with the Board and AC on a regular basis. Keppel O&M's risk tolerance guiding principles, adopted from Keppel Corporation, are:-

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In August 2014, a joint security exercise in compliance with the International Ship and Port Security Code was held with the Singapore Civil Defence Force and the Singapore Police at one of Keppel O&M's yards in Singapore.

Business Continuity



- Risk be taken should be carefully evaluated, commensurate with rewards and be in line with the company's core strengths and strategic objectives
- No risk arising from a single area of operation, investment or undertaking should be so huge as to endanger the company
- The company adopts zero tolerance towards safety incidents, non-compliance with laws and regulations, as well as acts such as fraud, bribery and corruption

Risk management is an integral part of the strategic, operational and financial decision-making process at all levels of the Company, wherever we operate. Guided by the ERM framework, Keppel O&M practices a 5-step process as seen in the diagram.

Significant risks are identified and reviewed regularly. Mitigating actions are then established and closely monitored. The risk assessment takes into account both the impact and likelihood of occurrence, and covers the financial, operational and reputational dimensions. Tools such as risk rating matrix, key risk indicator and risk register are used as part of the process.

The framework is reviewed regularly by Keppel Corporation, taking into account changes in the business and operating environments and taking reference

5-STEP RISK MANAGEMENT PROCESS



KEPPEL OFFSHORE & MARINE LTD Report to Stakeholders 2014

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from the Singapore Code of Corporate Governance, ISO 31000 standards for Risk Management, ISO 22301 for Business Continuity Management (BCM) as well as the Guidebook for Audit Committees (2014).

All investment proposals include an assessment of key risk factors such as alignment with strategic objectives. operational controls, financial viability, potential contingent liabilities, specific country laws and regulations, technical competency and available resources. Keppel O&M manages different types of risks which include competition, market volatility, relevance of technology, capital investment, challenging contractual terms, counter-party default, changes in laws and regulations, shortage of skilled workers and succession planning. Other risks include project execution issues such as cost escalation, non-performance of suppliers and subcontractors, disruptions to supply chain and natural disasters, security of yard operations, and IT systems, among others, which have implications on project schedule, cost and quality.

MANAGING PROJECT RISKS

Many of Keppel O&M's projects are executed over an extended period of time. A standardised risk assessment and monitoring process help manage the key risks throughout the projects. During the pre-contract stage, the project evaluation team identifies and evaluates key risks concerning the market, customers, engineering expertise and challenges, contractual terms, cost estimation, resource availability and other specific project structure and conditions. Mitigating actions are identified to address these potential risks.

At the execution stage, key risk areas involving costing, scheduling, planning, engineering, procurement, quality control, health, safety and environment (HSE) management are closely monitored to ensure that pre-emptive measures are taken and appropriately implemented. Project teams use Key Risk Indicators (KRIs) as early warning signs of related execution risks. These systems have been established to ensure that projects are completed on time, within budget and safely, while achieving the quality standards and specifications defined in the contracts with our customers.

In 2014, we streamlined the project risk reporting and review process, enhanced risk analysis and provided training to project teams in the understanding and use of risk management and monitoring tools. Lessons learnt in challenging projects are also shared across the business units.

STRONG RISK-CENTRIC CULTURE

To heighten risk awareness and build risk competencies, Keppel O&M emphasises continuous education and communications. New employees are briefed on risk management framework and practices as part of Keppel O&M's orientation programme.

In 2014, Keppel O&M's ERM Team conducted training and risk assessment workshops for key operating units in Singapore, US, China, the Philippines, Azerbaijan and Indonesia. These workshops served as good platforms for reinforcing ERM efforts across the company. Company-wide surveys are also conducted to gauge the level of risk awareness. The company also seeks to raise staff accountability and ownership of risk management through the performance evaluation process.

RESILIENT OPERATIONS

Business Continuity Management (BCM) is part of Keppel O&M's ERM initiatives to ensure that key business operations can respond quickly to a broad spectrum of external events and resume operations within a pre-established target time frame. The BCM Steering Committee oversees the implementation of Keppel O&M's BCM programme and provides guidance in establishing robust business continuity plans.

On a half-yearly basis, the BCM Steering Committee reviews the potential threats and the BCM programmes undertaken in its business units. Each business unit is responsible for the identification, assessment, and mitigation of threats and sets up specific task forces to handle disruptive events such as epidemic outbreaks, natural calamities, terrorist attacks, critical facilities damage, loss of critical supporting infrastructure and key personnel. All business continuity plans are required to be reviewed, tested and refined regularly.

Some of the BCM exercises performed in 2014 include pandemic flu/MERS exercises conducted in Singapore, the Philippines, Qatar and China; a ioint security exercise in compliance with the International Ship and Port Security (ISPS) Code held with the Singapore Civil Defence Force, Jurong **Division Police, Special Operations** Command and Police Coast Guard at our Singapore yard; various fire and evacuation drills carried out across the company's facilities; haze preparation and contingency plans in Singapore's operations; disaster recovery testing of critical IT application systems and operating systems supporting the business operations.

For overseas operations such as in the Philippines and the US, procedures on emergency preparation, evacuation and resumption of operations are also carried out yearly to address possible impacts caused by typhoons and hurricanes. Crisis communications procedures from Singapore and overseas yards are also established to ensure responses and recovery procedures are coordinated and carried out as planned.

CONTINUOUS AGILITY

Risk management is an integral part of the strategic, project and operational decisionmaking process at all levels of Keppel O&M. The ERM system and processes are also cascaded to smaller overseas operating units and key functional departments to further strengthen the risk management processes in the company.

While we do our best to minimise risks, we recognise that risks can never be entirely eliminated, especially in an evolving landscape of uncertainties and vulnerabilities. Moreover, the cost of minimising these risks may also outweigh potential benefits. A robust and effective risk management system will strengthen Keppel O&M's operational resilience and equip us to respond to challenges in a vigilant manner and capitalise on growth opportunities in these uncertain times. 80

People Development

TALENT DEVELOPMENT FRAMEWORK

We are committed to be a choice employer, attracting the best, while nurturing all our employees and fostering a conducive environment for a sustainable workforce to drive the growth of the company.





With a structured and comprehensive training development framework, Keppel O&M is committed to developing the skills and capabilities of our workforce.

At Keppel Offshore & Marine (Keppel O&M), we nurture our employees through a variety of structured programmes and initiatives to develop a high-performing and engaged workforce.

Every year, Keppel O&M makes significant investments in the training and development of our employees. These programmes range from improving technical skills to developing soft skills, such as leadership, communication and team management. In 2014, we invested \$16.3 million on the learning and development of our global workforce of 36,000. This equates to an average of 32.8 learning hours per employee.

TRAINING FRAMEWORK

Keppel O&M is committed to developing a competent, capable and motivated workforce that can lead the company in meeting the business challenges of today and tomorrow. We guide and groom all Keppelites around the world by developing our human capital through a structured and sustainable approach. Our talent development framework aligns the development of the organisation and employees, addressing both organisational needs and employees' aspirations.

Employees are nurtured through on-the-job training (OJT), blended learning and e-learning developed by Keppel O&M Group Training Centre. The nature of our industry is such that we require specialist technical expertise and in-house courses are customised for niche skills sets. We draw on the skills and knowledge of Subject Matter Experts (SMEs) and identify the best in-house facilitators to conduct the courses. Across Keppel O&M, we have more than 150 SMEs identified for various competencies within the organisation. In 2014, an e-learning Advisory Committee was set up to provide direction for e-learning policies, course contents and target audiences.

In 2014, a total of 11 new in-house courses were introduced, benefiting 358 staff who clocked a total of 234 training hours. Courses covering Floating Liquefied Natural Gas (FLNG) and Floating Storage & Regasification Unit (FSRU) fundamentals, as well as commissioning systems and sequences, were delivered by our internal SMEs. Keppel O&M continues to partner with the institutions and our industry partners to develop up-to-date and effective training curriculum for the organisation.

Recognising that exposure to a range of different experiences builds well-rounded individuals, we offer individuals opportunities to broaden their exposure by rotating them to different job scopes and offices, both locally and globally. We currently have more than 200 employees of varying nationalities seconded from our offices to different overseas operations.

COLLABORATIVE LEARNING

Sharing sessions across our business units are conducted on a regular basis to allow our employees to draw on the collective strength of our global operations.

Keppel O&M Group Training actively collaborates with overseas yards, such as Bintan Offshore, Keppel Nantong and Baku Shipyard to help them develop training courses that are specific to the needs of their yards. Under the Train-the-Trainer Programme for Baku Shipyard, trainers were attached to Keppel O&M Training Centre for a few months to learn various training frameworks. This equips our overseas operations with the capability and flexibility to train their local workforce in a timely manner and support the Group in rapidly reskilling our global employees to suit our business needs.

Keppel O&M has also partnered Ngee Ann Polytechnic (NP) for the second year to conduct a 15-week Diploma (Conversion) in Marine & Offshore Technology (DCMOT) course for high-performing staff from our overseas and local business units. In 2014, we brought together outstanding Keppelites from Brazil, USA, Netherlands, the Philippines, China and Qatar to attend the programme in Singapore. Comprising a series of structured classroom courses at NP and customised OJT at Keppel O&M's local yards, the DCMOT course aims to provide a platform for Keppelites to learn and share best practices.

ATTRACTING TALENT

Recruitment is the first and one of the most vital steps in building a pipeline of talent. Keppel O&M regularly holds

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To nurture our employees, Keppel O&M brought together Keppelites from all over the globe to attend a 15-week Diploma (Conversion) in Marine & Offshore Technology (DCMOT) course.



People Development

recruitment drives, career fairs and road shows in the various education institutions to create interest and attract the brightest.

We offer scholarships to diverse and well-rounded individuals with excellent academic and co-curricular records, who not only demonstrate capability and commitment to excellence but are keen to have a long-term career in the industry.

Underscoring our commitment to nurture human capital in the offshore and marine industry, Keppel O&M renewed a training partnership Memorandum of Understanding (MOU) with the Institute of Technical Education (ITE). The MOU is a pioneer training partnership that aims to build a steady pipeline of talent for the offshore and marine industry.

PROVIDING MERITOCRATIC OPPORTUNITIES

By providing opportunities for employees across all levels to upgrade themselves, Keppel O&M strives to create a nimble workforce that is adaptable to an ever-changing environment.

Keppel O&M's progressive human resource management system was recognised during Singapore's National Day Rally 2014 by Prime Minister Lee Hsien Loong (PM Lee) who cited Keppel O&M as a company which believes in its people and provides employees both opportunities and support for them to perform, regardless of their starting points.

This meritocratic approach by Keppel O&M in our human capital strategy of attracting, engaging,



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Keppel O&M's progressive human resource management system was recognised during Singapore's National Day Rally 2014 by Prime Minister Lee Hsien Loong who cited Keppel O&M as a company which believes in its people and provides employees with opportunities for them to perform. recognising and developing people has been key to the company's success in developing our people. There are different structured development schemes catered to the needs of new hires

from varying educational backgrounds from ITE and diploma holders to university graduates.

Our long-standing and successful Management Trainee (MT) scheme is a 2-year intensive development programme that provides holistic training for fresh graduates with either diploma or degree qualifications. Designed to expose them to the wide spectrum of our businesses and operations, it comprises classroom trainings, cross department rotations, OJT, mentorship programmes and networking sessions with senior management. Since the scheme's inception in 1986, more than 1,500 MTs have benefitted from it. This scheme has successfully produced a pipeline of young talent who have progressed to various management positions within Keppel O&M.

To develop trainees with GCE 'N' Level, GCE 'O' Level and ITE qualifications, we designed the Assistant Technical Associate (ATA) and Technical Associate (TA) schemes in collaboration with ITE.

In 2014, a TA Discovery Programme was introduced to help our TAs and ATAs achieve a smooth transition into the workforce after their studies. Through team bonding exercises as well as self-discovery activities, the programme aims to equip TAs and ATAs with the necessary soft skills needed to progress and excel in their careers. On top of workshops, selected TAs and ATAs from Keppel FELS were also given the opportunity to take on a 6-month job attachment at our Bintan Offshore yard. Other programmes, such as engagement sessions with senior management and veterans, are also conducted periodically to offer young Keppelites guidance.

MULTIPLE PATHS TO SUCCESS

Keppel O&M's commitment to nurture our employees was shared during PM Lee's National Day Rally. He said, "I [am] deeply impressed both by what they had achieved, and also their Can Do! spirit and confidence. Keppel illustrates that you can progress by acquiring deep skills and knowledge throughout your career."

Three interviews which PM Lee personally conducted with Keppelites were also aired during National Day Rally 2014. The Keppelites featured are Abu Bakar Mohd Nor, Managing Director, Keppel Singmarine; Roy Lim, Shipyard Manager (Production), Keppel FELS; and Dorothy Han, Section Manager (Engineering), Keppel FELS. All three of them share one common background: They joined Keppel without a degree and yet have risen through the ranks to take on managerial positions.

Abu Bakar joined Keppel Shipyard as a diploma-holder and started his career as an Assistant Safety Officer in 1990. Through the years, he held various leadership positions both in Singapore and overseas, including CEO of Keppel's joint venture shipyard in Qatar, Nakilat-Keppel Offshore & Marine.

From an apprentice with Keppel FELS' predecessor, Far East Levingston in 1977, Roy Lim has likewise proven his capabilities and is currently a shipyard manager overseeing 12,000 employees.

Dorothy Han has come a long way since she joined Keppel FELS as a trainee draughtsman in 1989 after completing an Industrial Technician Certificate in mechanical and electrical drafting and design. She now oversees a department of over 60 people while also studying for a part-time diploma course in Engineering (Marine, Offshore Technology).

Besides Bakar, Roy and Dorothy, Keppel O&M has many other success stories. We foster a conducive culture and provide opportunities to spur Keppelites to reach their maximum potential and grow the company.



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EMPOWERING LIVES

People Development





01

Active mentorship by Keppelites helps accelerate the transfer of skills, knowledge and experience.

02

Keppelites worked up a good sweat with vigorous kickboxing at the annual Active Day. Keppel O&M provides scholarships to Keppelites who have excelled in their work and exemplify strong core values, to pursue further studies. A congratulatory ceremony was held on 28 August 2014 for 73 Keppelites to mark the completion of their studies under scholarships offered by the company. Having earned qualifications ranging from Higher Nitec to Master degrees, the employees were presented with congratulatory letters by Mr Chow Yew Yuen, CEO of Keppel O&M.

FOSTERING CONDUCIVE LEARNING

Our employees' mindset and attitude towards change are critical to the robustness of Keppel O&M's organisational agility. As such, a comprehensive suite of engagement programmes are lined up to actively reach out to employees.

The Keppel College formed in 2007 is a key initiative of our talent development strategy to offer leadership and people development programmes for our employees. It serves as a central platform to Educate, Empower and Energise Keppelites group-wide. Initiatives driven by the College include the Global General Management Programme (GGMP) for Keppelites across the Group. This programme seeks to hone the business acumen, as well as strategic thinking and management skills of our employees.

We also continue to run the Leadership Excellence Programme which was launched in 2011 to hone the leadership and management skills of our newly-promoted managers. This programme comprises four courses conducted over a year, with coaching and review sessions done after each course to ensure the optimal transfer of knowledge. Since 2011, we have trained 48 young managers under this programme.

In 2014, Keppel O&M also organised nine Learn & Lunch sessions to tap on the past experiences of our senior leaders and enable them to share their knowledge with younger Keppelites.

As part of our continuous efforts to enhance our engineering capabilities, Keppel FELS held an Engineering Summit on 8 April 2014, which was attended by representatives from Keppel O&M's engineering units in China, India and Bulgaria. The event saw participants discussing how to bring the Group's engineering capabilities to a higher level and improve workflow and processes.

CHAMPIONING WORKPLACE WELLNESS

Keppel O&M also believes that a healthy and fit workforce is not only beneficial for employees but also contributes to the productivity of our business.

To promote the health and well-being of our workforce, our Workplace Health Programmes (WHP) committee organises various programmes throughout the year for all Keppelites.

In Singapore, our yards organise regular health talks on topics ranging from weight management to chronic diseases throughout the year. These programmes are aimed at increasing overall awareness on ways to keep fit and stay healthy. At 2014's Active Day, a key health promotion event at Keppel O&M, more than 4,000 Keppelites participated in an energetic kickboxing workout.

Over in the Philippines, Keppel Batangas conducts regular health talks, complimentary dental consultations and eye checks for all employees. Keppel FELS Brasil also organises health talks on topics such as influenza and hypertension, so that employees are well-informed about the causes and symptoms of various illnesses.

Over in the Netherlands, Keppel Verolme employees participated in its annual "Go Fit, Go Healthy" programme where they exercised regularly under the guidance of a physiotherapist. In the United States, Zumba classes were organised for Keppel AmFELS employees to help them stay healthy and active.

In China, Keppel Nantong Shipyard and Keppel Nantong Heavy Industry organised a sports meet for 200 employees and subcontractors to promote sportsmanship and athleticism.

Various sporting facilities in the yards, such as a street soccer pitch, a gym, as well as foosball and pool tables, help encourage employees to keep fit and bond after work.

PARTNERING UNIONS

To develop a motivated and productive workforce, Keppel O&M actively engages our unions. We maintain good relations with our unions through luncheons and regular dialogue sessions on a range of topics concerning the welfare of employees, such as dormitories, the quality of food served in the yards' canteens and transport for workers.

Keppel FELS Employees Union (KFEU) also introduced a new executive committee for the 2014 to 2018 term at the 10th Quadrennial Delegates Conference Dinner.

In September 2014, the NTUC Industrial Relations Department, led by Mr Heng Chee How (Deputy Secretary-General, NTUC; Advisor, KFEU), visited KFEU to discuss industrial relations between KFEU, NTUC and Keppel management.

Mr Chor How Jat, Managing Director, Keppel Shipyard, who has been working closely with the Shipbuilding and Marine Engineering Employees' Union to improve the welfare of yard workers, was awarded the prestigious Medal of Commendation at the National Trades Union Congress (NTUC) May Day Awards for his efforts.

Individuals from KFEU and Keppel Employees Union (KEU) have also received recognition for their efforts. Mr Cheong Keng Yoong, Vice President, KFEU and Mr Ho Thiam Ee, Vice President, KEU, were both conferred the Comrade of Labour award.

Our overseas business units are also focused on maintaining good industrial relations. 2014 saw the signing of

FRESH INITIATIVE

On 7 March 2014, 16 young Keppelites from Keppel Verolme, benefitted from the robust sharing of insights from the company's senior management at the official launch of the "Keppel Verolme Young Professionals Programme". The budding initiative is part of Keppel Verolme's talent and succession management framework to develop a capable team with a continuous pipeline of future leaders.

It aims to create greater interaction among promising talents while harnessing their youthful energy and fresh perspectives.



People Development

a new Collective Agreement (CA) between Keppel Subic Shipyard and Keppel Subic Shipyard Workers' Union (KSSWU), which is effective from 1 July 2014 to 30 June 2019.

In Keppel Batangas Shipyard, Dir. Gil Caragayan of the National Conciliation and Mediation Board-Regional Branch IV facilitated a seminar on Labour Management to maintain the harmonious relationship between unions and management. Representatives from the Association of Professional, Supervisor, Office, Technical Employees and Union (APSOTEU), Christian Labour Organisation at Keppel Philippines Shipyard (CLOKPSI) and Keppel Batangas Shipyard's management attended the event.

INTEGRATING A MULTINATIONAL WORKFORCE

At Keppel O&M, we are committed to looking after the well-being of our foreign workers in Singapore. We were the first company in Singapore to provide highly subsidised dormitories for our foreign workers, and we continue to improve the facilities in our dormitories to better meet their needs.

Our five dedicated dormitories – Acacia Lodge, Juniper Lodge, Lantana Lodge, Kian Teck Dormitory and Cassia@Penjuru – offer modern amenities such as canteens, minimarts, barber shops and wet markets that cater to the daily needs and well-being of the residents. The dormitories are also



01

Mr Heng Chee How (Deputy Secretary-General, NTUC; Advisor, KFEU), visited KFEU to discuss industrial relations between KFEU, NTUC and Keppel management.

02

The Keppel Housing Talent Search gave workers an opportunity to showcase their talents and bond with fellow residents.



equipped with a wide range of recreational facilities, such as multi-purpose halls, gymnasiums, basketball courts and computer facilities.

In addition, activities are organised regularly at the dormitories to promote harmonious living and bonding among foreign workers. These include sports competitions such as a body building competition, bazaars and road shows promoting safety and anti-gambling. We also organised the second Keppel Housing Talent Search 2014 which provides a platform for the workers to showcase their talents in singing, dancing, drama and stand-up comedy. As the workers are living in a foreign land away from their families, Keppel O&M has initiatives to help them acclimatise to Singapore and to ensure that the mental and emotional well-being of our foreign workers are taken care of. Keppel Housing provides counselling services, including a 24-hour emergency helpline, which is manned by trained counsellors.

Our management, union leaders and human resources representatives visit the various dormitories regularly to gather feedback from the workers to continually improve their living conditions. Keppel O&M provides yard workers with quality housing and strives to foster a strong community spirit amongst residents. We believe in contributing economically, socially and culturally wherever we operate around the world.

274

internships offered to students from both local and overseas educational institutions

OVER



scholarships awarded to outstanding students passionate about the offshore and marine industry

Community Development



In line with Keppel's key thrusts of Sustaining Growth, Empowering Lives and Nurturing Communities, Keppel O&M is strongly committed to developing the communities where we operate in. In 2014, we contributed to a variety of causes including knowledgebuilding, disaster relief support, education, social development and environmental protection.

FORTIFYING OUR INDUSTRY

As a market leader in the offshore and marine industry, Keppel O&M plays an active role in participating in various knowledge-sharing platforms which help to promote and grow the company as well as the local industry.

GROWING THE KNOWLEDGE RESERVOIR

Keppel O&M participated in Singapore's push towards productivity by sponsoring the inaugural National Productivity Month, a national-level initiative co-organised by the Singapore Business Federation and the Singapore National Employers Federation. The conferences and overseas training missions showcased the incentives and schemes available to companies to help them boost productivity.

Annually, Keppel O&M also sponsors the Chua Chor Teck Memorial

Lecture, a platform for industry leaders and experts to share their insights on a variety of offshore and marine-related topics. Professor Chua Chee Kai, Chair of School of Mechanical and Aerospace Engineering and Professor of Mechanical Engineering at Nanyang Technological University, spoke on the applications of 3D printing in the offshore and marine industry.

Underscoring our commitment to nurture human capital in the offshore and marine industry, Keppel O&M renewed our training partnership Memorandum of Understanding (MOU) with the Institute of Technical Education (ITE) in January 2014. The MOU aims to build a steady pipeline of talent for the offshore and marine industry.

DEVELOPING THE TALENT POOL

To develop a sustainable pipeline of young talents, we partner educational institutes to offer scholarship and internship opportunities. We also host yard tours regularly to raise awareness of career prospects within the industry and to attract young talents.

Keppel O&M actively offers scholarships, prize medals and book prizes to students from universities, polytechnics and ITEs. At the end of 2014, Keppel O&M had awarded more than 350 scholarships to outstanding students who have a passion in the offshore and marine industry. During the year, Keppel O&M also offered internships to 274 students from both local and overseas educational institutions.

In the U.S., Keppel AmFELS collaborated with Texas Southmost College, Workforce Solution Cameron and the Brownsville Independent School District to introduce a welding programme for high school students that offers entry-level job certification. In September 2014, the first cohort of ten students was taught welding skills by the yard's master welders.

To alleviate the plight of motivated but disadvantaged out-of-school Filipino youths, Keppel Batangas Shipyard offered 25 scholarships in structural welding, marine metal scaffolding, rigging and signaling courses in 2014. These scholars will undergo classroom and technical laboratory training and apprenticeship under the guidance of qualified trainers and mentors at the Keppel Batangas Training Centre.

CONNECTING THE GLOBAL INDUSTRY

As a global leader in the offshore and marine industry, Keppel O&M is a regular participant in trade and industry conventions and exhibitions around the world.

The annual Offshore Technology Conference (OTC) in Houston, Texas is one such platform that Keppel O&M regularly participates in to showcase our award-winning products and to network with our customers and business associates.

Since 2010, Keppel O&M has been representing Singapore in the ASEAN Council on Petroleum (ASCOPE). To strengthen synergy and foster cooperation in the Southeast Asian petroleum sector, we hosted the 77th ASCOPE meeting in 2014. We also participated in the biennial ASCOPE Games which provides a platform for friendly competition and seeks to strengthen regional ties.

01

Keppel Batangas sponsored the participation of Keppel-Gawad Kalinga (GK) Eco Village in the 1st GK Southern Tagalog Kapitbahayan Congress, which aims to promote the spirit of volunteerism and to share best practices among the GK sites in the region.

02

Keppelites flew the Singapore and Keppel flags high with their sporting spirit at the 25th ASCOPE Games held in Ho Chi Minh City, Vietnam in October 2014.



Community Development

01

As an active participant in Keppel Volunteers, Keppel O&M regularly contributes to community events, including taking the elderly out for excursions.

02

Volunteers from Caspian Shipyard Company brought cheer to children with speech impediment by bringing them to watch a circus show. At the Pareto Securities Oil & Offshore Conference, the largest oil and offshore investor conference in Europe, Mr Chow Yew Yuen, CEO, Keppel O&M, was the only speaker representing a rig-builder from Asia who spoke at the conference.

To foster thought leadership on investment and trade between Africa and Asia, Keppel O&M supported International Enterprise (IE) Singapore's Africa Singapore Business Forum (ASBF) as a Gold Sponsor. Keppel O&M was also a platinum sponsor of the Offshore Marine Forum 2014, a platform that brings together industry players to exchange ideas on offshore support services and solutions.

In Brazil, Keppel O&M exhibited at Rio Oil & Gas (ROG), a prominent Latin American oil and gas event. Over at Athens, Greece, Keppel O&M participated in Posidonia 2014, an international shipping exhibition. To further strengthen our presence in Baku, we participated in the 21st International Caspian Oil and Gas Exhibition at the Baku Expo Center. On top of being an active contributor in conferences and exhibitions, Keppel O&M also hosted international government, industry and business delegates who were keen to learn more about our operations.

ENRICHING OUR COMMUNITIES

To create long-term bonds with the community, we encourage our employees to initiate and participate in community activities that benefit individuals from all walks of life.

LENDING A HELPING HAND

Keppel O&M reached out to numerous social groups in 2014 through donations, as well as various community outreach initiatives.

Passionate volunteers from Keppel O&M participated in a flag day organised by the Disabled People's Association (DPA) and the Muscular Dystrophy Association (Singapore) (MDAS), which raised approximately \$90,000.

As a continuation of the community outreach programme initiated in 2013, volunteers from Keppel Singmarine raised funds for the Boys' Town.





The funds will be used to assist the institution with its operational costs and help finance its community service and school-based programmes for youths-at-risk.

In response to Typhoon Ondoy that hit the Philippines, Keppel Subic Shipyard employees delivered materials to Filipinos for rescue and retrieval operations. Throughout the year, volunteers also assisted in setting up lighting fixtures for the safety of residents. They also donated vests to the police department and rescue equipment to the Subic Public Order and Safety Office.

In Keppel Singmarine Philippines, Keppelites donated toys and gifts to cancer-stricken children from the Children Cancer Foundation. Separately, employees from the different yards also volunteered to clean up and repair the facilities in the schools which are within their communities. Over at Keppel Subic Shipyard, volunteers donated to the Zambales Mango Festival 2014 and Subic Ay! Festival 2014.

In Azerbaijan, Baku Shipyard and Caspian Shipyard Company (CSC) embarked on several charity initiatives in 2014. Volunteers from Baku Shipyard presented New Year presents to the less privileged from the Board School for Blind People. Volunteers also repaired the sanitary facilities in an orphanage and bought baking utensils for the Home for War Veterans and Aged People. Baku Shipyard also took part in the "Green Football Tournament" and all proceeds from the tournament were donated to various charity organisations.

At neighbouring CSC, volunteers brought children with speech impediment from Special Boarding School to watch a circus show and also gave the children presents. They also built a security guard house and replaced the damaged main gate of the school. Together with the International Women's Club, CSC volunteers delivered consumables, warm clothing and wheelchairs to the Neurological Boarding House which houses 140 disabled patients.

In recognition of a donation of over a million dollars, Keppel AmFELS received the Million Dollar Club plaque from the United Way of Southern Cameron County. Employees also pledged over US\$60,000 to the less privileged from 14 beneficiaries in October 2014 during the campaign organised by United Way. Keppel AmFELS employees also donated presents and festive food to the less privileged during Thanksgiving Day and Christmas. Their efforts saw over 450 gifts being collected and presented to children who are under state care or belong to low-income and broken families.

Over in China, employees from Keppel Nantong volunteered their services at the Nantong Tianshenggang Old Folks Home by cleaning the home, exercising with elderly residents and bringing them gifts. Besides donating a wheelchair to the Affiliated Hospital of Nantong University, volunteers also set up a green-channel at the hospital's Emergency and Rescue department.

In aid of victims of a fatal explosion at a manufacturing plant in Kunshan, Keppel Nantong organised a blood donation drive on 9 August 2014. More than 50 Keppel Nantong employees stepped forward to donate blood for victims in need of transfusions.

Community Development



To extend the festive cheer to the less privileged, volunteers from Keppel Singmarine Brasil celebrated Christmas with children from Izilda Reiser School. In collaboration with the Navegantes City Hall, Keppel Singmarine Brasil also sponsored a wooden bridge that allowed residents to gain access to the beach in Mei Praia, Navegantes.

Approximately \$2,000 was raised by employees from Keppel FELS Baltech to fund the purchase of equipment for prematurely born babies at Varna Regional Hospital.

SUSTAINING THE GREEN INITIATIVE

Keppel O&M strives to be an active partner in environment protection and preservation programmes in the community.

Keppel O&M became a member of the World Ocean Council (WOC) in January 2014, joining a growing international business leadership alliance on ocean sustainability, science and stewardship.

Keppel Batangas sponsored the participation of Keppel-Gawad Kalinga (GK) Eco Village in the first GK Southern Tagalog Kapitbahayan Congress, which aims to promote the spirit of volunteerism and to share best practices among the GK sites in the region. Additionally, seedlings were planted in support of the Clean and Green project of the local government of Bauan, Batangas. To protect the marine environment, Keppel Batangas joined the Philippines Navy in the annual International Coastal Cleanup (ICC) along the coastline of Batangas Bay.

To raise funds for environmental programmes, such as coastal cleanup and mangrove reforestation in the Subic Bay area, Keppel Subic volunteers took part in a fund raising activity, "Run for Love of the Sea", organised by Subic Bay Integrated Fisheries Aquatic Resources Management Council.

Over in Qatar, volunteers from Nakilat-Keppel Offshore & Marine (N-KOM) organised the 3rd Annual

01

To spread Christmas cheer to the less fortunate, volunteers from Keppel AmFELS donated presents and festive food to less privileged children.

02

Sporting enthusiasts from Keppel Verolme joined former world champion, Leontien Zijlaard van Moorsel, in a 115km cycling tour to raise funds for The Leontien Foundation as well as the upgrading works of various infrastructure in the community. Beach Clean Up campaign to support marine biodiversity and to increase awareness of saving marine habitats.

In Brazil, Keppel Singmarine Brasil also participated in the "Clean Up the World" initiative, an international project to collect and clean the waste for recycling at the central beach of Navegantes. In the spirit of National Tree Day in Brazil, BrasFELS joined hands with a day-care centre and three schools in Angra dos Reis to nurture environmental awareness and cultivate a greener landscape. Together with the students and teachers, the yard's employees helped transplant 40 fruit-bearing plants to the day-centre and school compounds.

CHAMPIONING HEALTHY LIVING

Committed to promoting active lifestyles, Keppel O&M contributes to the health and well-being of the communities by supporting a range of sporting activities.

Keppel O&M sponsored the 2014 Archery Tag tournament organised by ITE College Central, which saw over 60 participants from Keppel O&M joining. Keppel O&M was also the platinum sponsor of the Jurong Lake Run for the second consecutive year.

In Texas, USA, Keppel AmFELS sponsored the annual Relay for Life walk which seeks to honour cancer survivors and promote healthy living to reduce cancer risks. Over the past few years, Keppel AmFELS participated in the Sombrero Festival 5K Run and also sponsored the 2014 Charro Days Poster, where volunteers paraded a Keppel AmFELS float. Charro Days is a celebration between Matamoros, a city in Mexico, and Brownsville that began 77 years ago during the Great Depression to lift community spirits during difficult times. In addition, Keppel AmFELS employees raised over US\$100,000 during the annual golf tournament for different organisations, including Brownsville Literacy Center, Ozanam Homeless Shelter, Brownsville Museum of Fine Arts and University of Texas at Brownsville.

To raise funds for charity organisations, employees from Keppel Verolme joined former world champion, Leontien Zijlaard van Moorsel, in a 115km cycling tour. €30,000 was raised and donated to The Leontien Foundation and for the upgrading works of various infrastructure in the community. To create long-term bonds with the community, we encourage our employees to initiate and participate in community activities that benefit individuals from all walks of life.



Global Network

YARDS & OFFICES

Harnessing the synergy of 20 yards worldwide keeps us Near Market, Near Customer.

HEADQUARTERS

SINGAPORE

 Keppel Offshore & Marine Ltd (Headquarters) Global leader in offshore & marine

OFFSHORE & MARINE

AZERBAIJAN

- Caspian Shipyard Company Ltd Builder & repairer of rigs & ships
- Baku Shipyard LLC
 Builder & repairer of offshore
 support vessels and tankers

BRAZIL

- Keppel FELS Brasil SA/BrasFELS Most established offshore yard in the Latin American region
- Keppel Singmarine Brasil Ltda Builder of offshore support vessels & tugboats

CHINA

- Keppel Nantong Shipyard Co. Ltd Builder of offshore support vessels & tugboats
- Keppel Nantong Heavy Industry Co. Ltd Offshore construction facility

INDONESIA

• **PT Bintan Offshore** Offshore fabrication facility

JAPAN

 Regency Steel Japan Ltd Manufacturer of large, high-quality steel structures

QATAR

 Nakilat-Keppel Offshore & Marine Ltd Comprehensive service provider of marine and offshore solutions

SINGAPORE

- Keppel FELS Ltd World leader in design & construction of mobile offshore structures
- Keppel Shipyard Ltd Leader in the repair & conversion of all kinds of vessels
- Keppel Singmarine Pte Ltd Leading builder of offshore support vessels & tugboats

THE NETHERLANDS

• Keppel Verolme BV The most established offshore & marine yard in Europe

THE PHILIPPINES

- Keppel Philippines Marine, IncKeppel Batangas Shipyard
- Repairer & builder of small to medium-sized vessels & offshore fabrication facility
- Keppel Subic Shipyard Provider of ship repair, conversion, offshore fabrication & construction solutions

UNITED ARAB EMIRATES

 Arab Heavy Industries PJSC Repairer & builder of small to medium-sized vessels

USA

- Keppel Offshore & Marine USA, Inc Solutions provider for offshore structures
- Keppel AmFELS, LLC Best-equipped offshore yard in the Gulf of Mexico

ENGINEERING/R&D CENTRE

BULGARIA

• Keppel FELS Baltech Ltd

CHINA

 Keppel FELS Engineering Shenzhen Co. Ltd

United States

Brazil

Keppel FELS Engineering Wuhan
 Co. Ltd

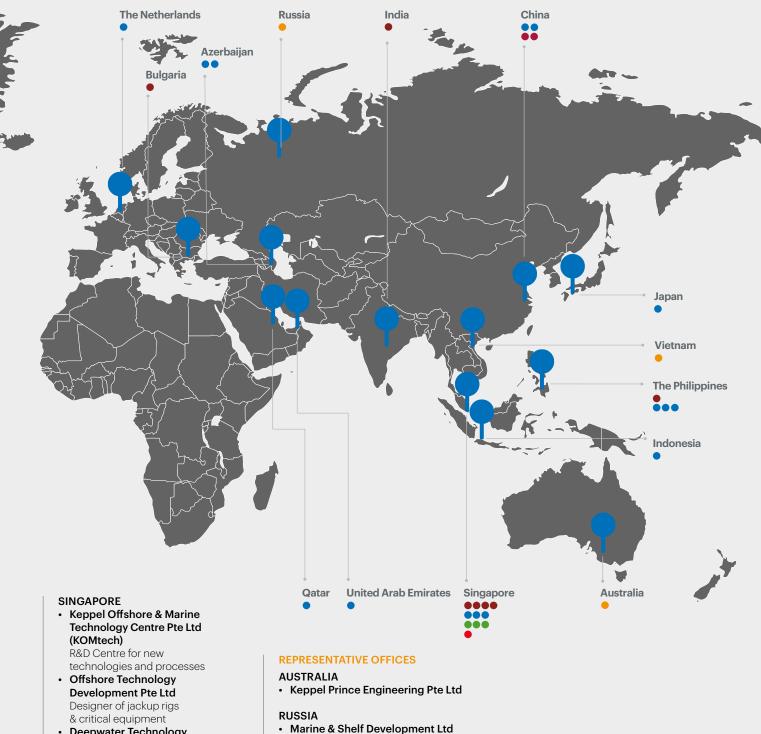
INDIA

Keppel Offshore and Marine
 Engineering Services
 Mumbai Pte Ltd

PHILIPPINES

• Keppel Singmarine Philippines, Inc

95



- Deepwater Technology Group Pte Ltd Designer & developer of deepwater semisubmersible solutions
- Marine Technology Development Pte Ltd Designer of offshore support vessels & tugboats

USA

- Bennett Offshore, LLC Offshore & marine design and engineering company
- FloaTEC, LLC Solutions provider for floating production units

USA

 Keppel Marine Agencies International, LLC

VIETNAM

• Keppel FELS Ltd (Vietnam)

MARINE SERVICES

SINGAPORE

- Asian Lift Pte Ltd Specialist in heavy lift
- Keppel Smit Towage Pte Ltd Towage solutions provider
- Keppel Sea Scan Pte Ltd

Headquarters • Offshore & Marine Engineering/R&D Centre ● Representative Offices • Marine Services

Global Network Facilities

	Total land area	Туре	Dock capacity		Berthage			Outfit quay	
	(square metres)		Capacity (dead weight tonnes)	Size (metres)	Length (metres)	Draft (metres)	Building berth (capacity)	Length (metres)	Depth (metres)
SINGAPORE									
KEPPEL FELS LTD (PIONEER)	284,292.3								
Admiral Dock		Drydock	400,000	380 x 80	380	13			
FELS CAN-DO		Semisubmersible Barge	30,000 lifting	138 x 78					
		Berth space						1,400	8 – 10
PIONEER YARD II	139,073	Berth space						350	4.5 - 6
SHIPYARD ROAD	88,289	Berth space						500	4.5
CRESCENT YARD	98,919	Berth space						740	7
TUAS SOUTH YARD KEPPEL SHIPYARD LTD (TUAS)	131,289 443,423	Outfit Quay			2,507			300	4 - 5
Tuas Dock	440,420	Drydock	360,000	350 x 66	2,007	6.6			
Raffles Dock		Drydock	400,000	400 x 64		6.6			
Temasek Dock		Drydock	150,000	301 x 52		7.4			
Temasek Pier East		Berth space			280	7.2			
Finger Pier West Finger Pier East		Berth space			350 370	9 8.5			
Raffles Pier West		Berth space Berth space			430	8.5			
Raffles Pier East		Berth space			230	6.1			
West Quay		Berth space			450	7.1			
South Quay		Berth space			177	8			
Raffles Dock Entrance	250.000	Berth space			220	7.1			
KEPPEL SHIPYARD LTD (BENOI) Drydock No. 1	350,000	Drydock	300,000	350 x 60	1,737	5.5			
Drydock No. 2		Drydock	170,000	300 x 60		5.5			
No.1 Quay		Berth space	., 0,000	000,000	217	7			
No.2 Quay		Berth space			220	8			
No.2 Quay/Extension		Berth space			340	12			
No.3 Quay		Berth space			280	8 7			
No.4 Quay No.5 Quay		Berth space Berth space			224 156	7			
Dock 1 Entrance		Berth space			200	8			
Landing Quay		Berth space			100	5			
Building Berth		Slipway		230 x 70					
KEPPEL SHIPYARD LTD (GUL)	140,000		4.4.000 1:5:	400 00	530				
FD No. 1 FD No. 2		Floating Dock Floating Dock	14,000 lifting 5,000 lifting	190 x 32 114 x 27					
FD No. 3		Floating Dock	12,000 lifting	170 x 27					
North Quay 1		Berth space	,		177	6.5			
North Quay 2		Berth space			193	6.6			
North Quay 3		Berth space			160	6.6			
KEPPEL SINGMARINE PTE LTD	146,794	Duvida ali	F 000	405 ··· 40 F		0.0			
Drydock in Benoi 5		Drydock	5,000	105 x 18.5 225 x 38.5(min)		8.2			
Building Berth in Benoi 15		Slipway		72.5(max)					
Building Berth in Benoi 5		Slipway		120 x 27.5					
Wharf in Benoi 5		Wharf			60	5			
Quay 5 in Benoi 15		Berth space			156	7			
	714.000								
BAKU SHIPYARD LLC 28 May Floating Dock	714,000	Floating dock	16,000 lifting	168 x 40					7.5
Repair Slab		Berth space	5,000 lifting for	250 x 140					7.5
		on Land	transfer mode						
East Quay		Berth space			100				7.5
West Quay		Berth space Berth space			350				7.5 7.5
Finger Pier CASPIAN SHIPYARD COMPANY LTD	60.000	benth space			300				7.5
Yusif Ibrahimov (Hull 901)	00,000	Floating Dock	15,000	128 x 74.5		6.5			
Floating Dock (Hull 953)		Floating Dock	5,000	128 x 21.7		6.5			
Floating Dock (Hull 806)		Floating Dock	4,500	102 x 20		6.5			
Jetty 3								280	6.5
Jetty 4								100	4.5
BRAZIL KEPPEL FELS BRASIL SA	522,230								
(BRASFELS YARD)	322,230								
Drydock		Graving Dock		125 x 70					
FS1 Floating Dock		Floating Dock	22,000	120 x 57		10			
Slipway No. 1		Slipway	35,000	174 x 30					
Slipway No. 2		Slipway	150,000	310 x 45					
Slipway No. 3		Slipway Outfit Quay		185 x 70	360	12			
Finger Pier East									

	Total land area	Туре	Dock capacity			Berthage		Οι	utfit quay
	(square metres)		Capacity (dead weight tonnes)	Size (metres)	Length (metres)	Draft (metres)	Building berth (capacity)		Depth (metres)
BRAZIL (cont'd)									
Outfit Pier Fast		Outfit Quay			300	6 - 7			
Outfit Pier West		Berth space			120	7 - 8			
Slipway 2 Pier		Berth space			160	8 - 9			
Slipway 3 Pier 1		Outfit Quay			160	8 - 9			
Slipway 3 Pier 2		Outfit Quay			160	8 - 9			
KEPPEL SINGMARINE BRASIL LTDA	76,000	,							
Slipway No. 1		Slipway		130 x 28					
Quay No. 1		Berth space			300	6			
CHINA									
KEPPEL NANTONG SHIPYARD	190,000								
CO. LTD	,								
Slipway No. 1		Slipway	3,000	90 x 33					
Wharf No. 1		Wharf			80	7			
KEPPEL NANTONG HEAVY	235,900								
INDUSTRY CO. LTD									
Slipway No. 2		Slipway	24,000	140 x 84		_			
Wharf No. 2		Wharf			80	7			
THE PHILIPPINES									
KEPPEL SUBIC SHIPYARD, INC	666,933								
Pacific Dock		Graving Dock	550,000	550 x 65					
C Quay					279	9			
E1 Quay					351	9			
E2 Quay					312	9			
KEPPEL BATANGAS SHIPYARD	353,000								
President Dock		Graving Dock	50,000	200 x 38					
Ship Lift System		Lift Platform	20,000	172 x 28					
D: N 1/4		Dry Berth: 8 off	Dry Berth: 8 off		00 0	0			
Pier No. K1					68 x 2	6			
Pier No. K2 Pier Block No. 1					83 x 2 183	6 8			
Pier Block No. 2					160	8			
Pier Block No. 3					70	8			
Pier Block No. 4					155	8			
THE NETHERLANDS									
KEPPEL VEROLME BV	554,000	Berth Space			1,600	9 - 12		400	9 - 12
Dock No. 5	334,000	Graving Dock	65,000	230 x 35.5	1,000	9 - 12		400	9 - 12
Dock No. 6		Graving Dock	130,000	275 x 41		10.3			
Dock No. 7		Graving Dock	500,000	405 x 90		11.60			
QATAR		oraving book	000,000	100 100					
NAKILAT-KEPPEL OFFSHORE	508,000				3,000				
& MARINE LTD	000,000				0,000				
Dry Dock No. 1		Drydock	350,000	360 x 66	360	11			
Dry Dock No. 2		Drydock	450,000	400 x 80	400	12			
		Floating Dock	120,000	405 x 66					
1 Quay					400				11
1 Quay					400				11
Loading Quay					150				11
1 Pier					400				11
1 Pier					400				11
1 Pier 1 Pier					400 400				11 11
1 Floating Pier					200				11
1 Quay					400				11
					-00				
UNITED ARAB EMIRATES ARAB HEAVY INDUSTRIES PJSC	273,000								
Al Zora Drydock	2/3,000	Graving Dock	30,000	175 x 32		7			7
Slipway No. 1		Slipway	*1,500	175 x 32 120 x 16		/			/
Slipway No. 2		Slipway	*1,500	120 x 16		5			
Slipway No. 3		Slipway	*2,500	120 x 16		0			
Slipway No. 4		Slipway	*3,000	120 x 16		5			
Al Zora Wharf		Wharf	2,220		250	2			7
East Wharf		Wharf			200				5
West Wharf		Wharf			83				5
USA									
KEPPEL AMFELS, LLC	555,438								
Floating Drydock		Floating Drydock	37,594	94 x 111		10			
Launching Way					380	9.14			
West Dock Quay					153	9.14		153	9.14
East Dock Quay					297	10.67		297	10.67

* Light Displacement Tonnage

SINGAPORE

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Corporate Structure

-Keppel Offshore & Marine Limited

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SINGAPORE Keppel Shipyard Ltd	AZERBAIJAN Caspian Shipyard Company Ltd	USA Keppel Offshore & Marine USA, Inc	USA Keppel AmFELS, LLC	USA Keppel Marine Agencies International, LLC
SINGAPORE Asian Lift Pte Ltd	INDIA Keppel Offshore & Marine Engineering Services Mumbai Pte Ltd	NORWAY OWEC Tower AS	USA FloaTEC, LLC	-
SINGAPORE FELS Offshore Pte Ltd	CHINA Keppel FELS Engineering Shenzhen Co. Ltd		USA Offshore Innovative Solutions, LLC	USA Bennett & Associates, LLC
	JAPAN Regency Steel Japan Ltd	BRAZIL Keppel FELS Brasil SA	BRAZIL Estaleiro BrasFELS Ltda	
SINGAPORE Keppel Offshore & Marine Technology Centre Pte Ltd	INDONESIA PT Bintan Offshore	BRAZIL Keppel Singmarine Brasil Ltda		
SINGAPORE Offshore Technology Development Pte Ltd	BERMUDA Floatel International Ltd	AZERBAIJAN Baku Shipyard LLC		
SINGAPORE Deepwater Technology Group Pte Ltd	SINGAPORE Keppel Singmarine Pte Ltd			
SINGAPORE KS Investments Pte Ltd	SINGAPORE Blastech Abrasives Pte Ltd			
SINGAPORE Keppel Sea Scan Pte Ltd	SINGAPORE Keppel Smit Towage Pte Ltd	MALAYSIA KSP Towage Sdn. Bhd		
	SINGAPORE _ Maju Maritime Pte Ltd	MALAYSIA Kejora Resources Sdn. Bhd		
	UAE Arab Heavy Industries PJSC	UAE Arab Eagle Marine Engineering LLC		
	SINGAPORE Alpine Engineering Services Pte Ltd			
	PHILIPPINES – Keppel Philippines Marine, Inc	PHILIPPINES Keppel Batangas Shipyard		
	SINGAPORE Marine Technology Development Pte Ltd	PHILIPPINES Keppel Subic Shipyard, Inc		
	CHINA – Keppel Nantong Shipyard Co. Ltd			
	CHINA Keppel Nantong Heavy Industry Co. Ltd			
	QATAR Nakilat-Keppel Offshore & Marine Ltd			
	SINGAPORE _ Dyna-Mac Holdings Ltd			
	SINGAPORE Blue Ocean Solutions Pte Ltd			

KEPPEL OFFSHORE & MARINE LTD

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